That’s not all folks: Developing the Animation Sector

INTERREG IVA REGION

Northern Ireland (excluding greater Belfast), western Scotland and the six Republic of Ireland border counties
© 2015 Honeycomb partnership comprised of Ulster University, Creative Skillset, Dundalk Institute of Technology and University of the West of Scotland.

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Written by Dr Aisling Murtagh and Dr Colm Murphy, School of Media, Film and Journalism, Ulster University with Dan Wilks, Creative Skillset and Dr Douglas Nanka-Bruce, Dundalk Institute of Technology.

Front cover images:
Top left (larger image): The Great Fall – short film in development by Zink Films, Republic of Ireland border counties. Photo courtesy of Zink Films.
Top left (smaller image): The modern animation studio – animators at work on Puffin Rock, Northern Ireland eligible area. Photo courtesy of Dog Ears.
Top right: Characters from Sidekicks - Toon Platoon's comedy superhero animated series in development and produced in the western Scotland eligible area. Photo courtesy of Toon Platoon.
Middle: Characters from Puffin Rock, co-production from the Northern Ireland eligible area. Photo courtesy of Dog Ears.
Bottom middle: Scene from Lily's Driftwood Bay, series produced in Northern Ireland. Photo courtesy of Darren Vandenburg.

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Middle: Photo by Ed Gregory from stokpic.com
Bottom: Photo by Ed Gregory from stokpic.com

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Animator at work in the Dog Ears studio in Derry City, Northern Ireland eligible area. Photo courtesy of Dog Ears
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Appendix 1: The Honeycomb Creative Works Team
This report seeks to explore if regional animation can be further developed, supported by and supporting the further development of world standard animation emerging from the countries the eligible areas are based. The Honeycomb eligible areas have a number of advantages that animation production could capitalise on, such as lower overhead costs and a local film and broadcast sector. However issues also exist around talent availability, adequate broadband speeds and networking opportunities. The report therefore also develops recommendations on how the animation sector’s potential in the eligible areas could be realised.

This report constructs a profile of the animation sector in each of the Honeycomb eligible areas. In Northern Ireland, Belfast is a noted centre for animation, but animation studios are sparse outside of the Belfast area in Northern Ireland. Reports have suggested the talent pool in Northern Ireland’s animation sector is growing, but still not keeping up with the demand for skilled graduates, slowing the sector’s growth potential.

Research has noted that most Scottish animation companies work in television (primarily service work rather than intellectual property development) and few develop feature films. Dedicated animation studios appear almost absent from the western seaboard of Scotland. Ireland’s animation sector is an internationally recognised and growing sector. The achievements of independent companies in Ireland’s animation sector have been noted. Dublin also appears to be a hub of activity with a concentration of studios and a number of animation events. Animation studios do not appear to exist across the Honeycomb eligible area of the Republic of Ireland.

Skills issues are also dealt with in the report. The presence of the correct balance of skills in the workforce can support the growth of the animation sector. Skills shortages limit sector development. Existing data on skills issues in the animation sector highlight a range of skill gaps and issues filling a range of roles. Skills in using software packages emerged as an area of significant need, in particular CelAction, Maya, Flash and Nuke. Roles that emerged as particularly difficult to fill were storyboard artists, production managers and screen writers. More widely, the development of business and marketing skills emerged as important. It also emerged that new animation graduates can be more generalist than specialist and facilitating new entrants to gain studio experience and develop a skills specialism is needed.

In addition to this, the need for continuous learning, underpinned by learning through practice and sharing expertise, appears to underpin the animation sector.

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Animated content emerging from the UK and Ireland, such as Wallace and Gromit, Peppa Pig, Doc McStuffins and The Secret of Kells, is some of the best and most successful in the world. Alongside successes in animated content development, the heritage of myths, legends and storytelling in the Republic of Ireland, Northern Ireland and Scotland also gives these places an inherent cultural strength in the animation sector – 4 –
Executive Summary

The key challenge emerging from this report was funding animation productions. Finance for animation is often raised from a number of sources. Issues are also exacerbated by the fact that animated programmes often have a long production cycle and therefore also a long revenue cycle. A series can take two years or more to be completed. The importance of competitive tax incentives has been argued as a central support underpinning the animation sector. Also vital in developing the animation sector is collaboration and network building, locally, nationally and internationally. Strong networks appear essential to be a successful freelancer in the industry. Industry conferences are central to the animation sector. Attendance at such events is costly and the report found this can be challenging for small, developing studios to invest in. Networking can also be a greater challenge in the eligible areas where animation professionals are more peripherally located geographically. High speed broadband also becomes an even more essential infrastructure in this context.

The report also explores relevant research and data to suggest how the sector may develop in the future. Key findings included the inherent export potential in the animation sector giving it commercial advantage. Productions can be effectively dubbed or re-versioned to the needs of new markets or broadcasters. It also appears that the nature of the animation industry in Ireland, Northern Ireland and Scotland could also be a competitive advantage. Relatively small, independent studios dominate which could concentrate to some degree on producing animated content for niche markets. One key opportunity for the sector is the potentially high level of long term brand value to be captured from intellectual property exploitation generated through secondary sales from merchandise and multi-platform content development. Cross platform opportunities are very important in the modern animation industry. Web series, apps, books and games are all areas of cross platform potential. The value of the intellectual property created by the animation sector can also overspill into the tourism sector. However, potential to generate significant tourism from animated content may only emerge when productions are particularly successful. International co-productions are growing increasingly important in the animation sector. A number of factors impact on being an attractive co-production partner, such as domestic financial incentives, existing business reputation and skills base.

The report finally outlines a series of evidence based recommendations. Some relate to the wider animation sector and others are specific to the eligible areas. The central emerging recommendations are as follows:

- Further assess the potential to developing satellite clusters in the eligible areas (e.g. around Derry city, Dundalk, Skye) linked to central clusters in animation sector (e.g. Belfast, Dublin, Edinburgh), based around sub-contracting work to the eligible area satellite clusters.
- Introduce incentives to catalyse business development in clusters in the eligible areas to develop the animation studio base, such as an animation foreign direct investment incentive and a scheme to encourage economic migrants from the eligible areas to return and establish animation studios.
- Skills shortages limit sector development. Improve opportunities and supports for new animation graduate skills development, as well as continuous professional development for more established animation professionals.
- Strong local, national and international networks are a crucial part of the animation sector. Support agencies could look at strengthening supports to assist networking, particularly in more peripheral regions, such as the Honeycomb eligible areas.
Honeycomb - Creative Works is a £3.58 million programme targeted at the digital content sector across the INTERREG IVA region of Northern Ireland, the six border counties of the Republic of Ireland and the western seaboard of Scotland, part-financed by the European Union’s INTERREG IVA Cross Border Programme, managed by the Special EU Programmes Body.

1.1 THE HONEYCOMB PROGRAMME

Honeycomb - Creative Works is being delivered by a partnership led by Ulster University and comprising Dundalk Institute of Technology (DKIT), Creative Skillset and the University of the West of Scotland (UWS). Honeycomb addresses the economic, educational, social and cultural needs of the sector by focusing on SMEs, organisations and individuals in the following digital content sub-sectors:

- film and broadcast
- animation
- computer gaming
- interactive media
- music technologies

Through its comprehensive networking programme, Honeycomb aims to develop networks of scale, building the capacity of and establishing greater links between, digital content SMEs, freelancers and start-ups across the three regions. Honeycomb also works to develop skills to address the shortfall in sector specific training for the digital content sector. A seed funding programme and investment fund for early stage digital content projects run by both freelancers and creative enterprises is also part of the programme.

The intelligence gathering aspect of Honeycomb aims to monitor developments in the sub-sectors of the digital content industry and devise a range of studies to inform policy, industry and the Honeycomb programme design. This report forms part of the intelligence gathering element of the programme. This report on animation is one of a series of sector specific reports produced by Honeycomb’s research group. Five sector development reports will be produced focusing on each of the digital content sub-sectors detailed above.

1.2 PURPOSE AND OVERVIEW OF THIS REPORT

This report constructs a profile of the animation sector in each of the Honeycomb eligible regions. The focus is on animation in terms of animated content for the screen sector, such as television and film. The research identifies key challenges hampering development, explores case studies of animation activities and trends on the evolution and growth of the sector. The report is also informed by a review of existing evidence and semi-structured interviews carried out with nine industry practitioners, educators and organisations across the three regions, as well as in areas adjacent to the Honeycomb eligible area. The report is limited in terms of the
scope of the primary research conducted. However it is also informed by a review of wider existing evidence on the animation sector, which is combined with the primary research findings. Informed by this evidence, recommendations on how to support the animation sector’s sustainable future development are made in the final section.

Animated content emerging from the UK and Ireland is some of the best and most successful in the world. For example:

- Worldwide successes emerging from the UK animation sector include: Thomas the Tank Engine, Wallace and Gromit, Bob the Builder, The World of Peter Rabbit, The Snowman and Chicken Run.
- Peppa Pig has been described not as Entertainment One’s golden goose, but their platinum piglet. Aired in over 180 countries, in 2014 the Peppa Pig brand generated over £640 million in revenue from its merchandising and television revenue (Thompson, 2015; Investors Chronicle; 2015).
- Oscar nominated animation emerging from Ireland include the films The Secret of Kells and Song of the Sea and shorts Give Up Yer Aul Sins and Granny O’Grimm’s Sleeping Beauty.

Alongside successes in animated content development, the heritage of myths, legends and storytelling in the Republic of Ireland, Northern Ireland and Scotland also gives these places an inherent cultural strength in the animation sector. Developing and supporting the animation industry is also important because of its heritage in Ireland and the UK. Culturally, arguments have been made around the importance of children being exposed to animated content emerging from their own culture (Fraser, 2015; Kenny and Broughton, 2011). It can contribute to cultural identity formation (Kenny and Broughton, 2011). The animation sector is of cultural and economic importance and thought to have significant potential for growth. With the correct local conditions more of this growth can be captured.

This report seeks to explore if regional animation can be further developed, supported by and supporting the further development of world standard animation emerging from the countries the eligible areas are based. The Honeycomb eligible areas have a number of advantages that animation production could capitalise on, such as lower overhead costs and a local film and broadcast sector. However issues also exist around talent availability, adequate broadband speeds and networking opportunities. The report therefore also develops recommendations on how the animation potential in the eligible areas can be realised.

In light of the vital role played by animation in the European audiovisual sector, the need for better data on the structure, operation and performance of the European animation industry has been noted. This can help to illuminate the challenges and opportunities in the animation sector. Carried out for the European Commission to help refine EU animation policy support, two studies are due to be published in mid and late 2015 on the European animation industry to help begin to address the poor levels of existing research and data (European Audiovisual Observatory, 2015). This report also aims to add to the animation sector’s knowledge base.
A profile of the animation sector

The European animation sector is predominantly made up of independent animation studios. In this section we profile the animation sector in Scotland, Northern Ireland and the Republic of Ireland, as well as the Honeycomb eligible areas.

Animation is not a domestically focused sector. This is more true in economies such as Ireland, Northern Ireland and Scotland, where the domestic market for animation is very small. Kenny and Broughton (2011) argue animation is thoroughly international and to a greater degree than other sectors of television. It also has short and long term revenue generating potential. In the short term from the production itself, and in the long term from sales to additional broadcasters as well as licensed products such as books, toys and DVDs (Kenny and Broughton, 2011). It is also a sector with export and job creation potential.

The predominant structure of the European animation sector is made up of independent animation studios, also thought to be underpinned by freelance staff (Wescott, 2011). The animator sector’s labour force can be characterised as both skilled and artistic (Yoon and Makecki, 2009). Technological development, the move away from hand drawing and to computer graphics has impacted priorities and opportunities in animation. Digitisation has made the animation process faster (Yoon and Makecki, 2009; Wescott, 2011).

In the report European Animation Industry Strategies, Trends and Opportunities, strong growth in animation in Europe is noted alongside a worldwide boom in animation. The report also notes growth in Europe has been focused on television, supported by the growth in demand for animated television content. Key facts relating to European animation include:

- Animated series and films account for about 10% of total broadcast airtime.
- Of the approximately 6,500 entertainment channels in Europe, 259 are dedicated children’s channels.
- Daily across Europe about 1,561 hours of animated content is broadcast, but 321 hours of this is new animated content.
- Around 80% of content is 2D and 20% is 3D.

While noting some exceptions, such as Chicken Run and Wallace and Gromit, the report also notes that major global successes in animated feature film have been concentrated with American studios. The number of European animated feature films produced over the 1998 to 2002 period was 34, which is more than the US and Japan together. However in terms of market share European animated feature film is low because films produced are small scale and shown only in their own market or in a limited number of markets. European animated feature films have not been widely released in the US. Some key
The characteristics of the European animated feature film industry include that most are independent films and budgets are much lower than American blockbusters. Budgets for European animated feature films vary from around €5 to €10 million. Budgets for Hollywood animated films can be around 10 times this amount (Digital Vector, 2015).

2.1 THE ANIMATION SECTOR IN THE UK

A strong heritage of animation exists in the UK. Globally successful TV series emerging from the UK include Peppa Pig and Bob the Builder (Olsberg·SPI and Nordicity, 2015). The UK animation sector is made up of relatively new and small companies competing in the global market in areas such as television and advertising. There are also larger film centred companies such as Aardman (Creative Skillset, 2011c). The achievements of relatively small companies in the UK’s animation industry have been noted. For example Creative Skillset (2011c) notes the success of Blue Zoo and Passion Pictures in the global marketplace, as well as harnessing cross platform opportunities such as in music promos, TV and advertising. The UK animation sector is linked with other creative media sectors such as TV, VFX and games, therefore also impacted by changes in these sectors. Competition from economies producing lower cost quality animation is also highlighted, such as China, Korea and Singapore as well as other places with tax benefits such as Canada. Growth in CGI is noted to have opened new markets and a revitalisation of stop frame animation (Creative Skillset, 2011c).

The European Animation Industry Strategies, Trends and Opportunities report identifies around 480 animation studios in the UK with an average turnover of approximately £750,000. In 2014 the UK animation sector was valued at US $219 million. According to the 2015 report the Economic Contribution of the UK’s Screen Sectors, in 2013 the animation programme sector is relatively small. It contributed £54 million in direct GVA to the UK economy. When multiplier and spillover effects are included, the figure increases to £171 million (£12 million TV broadcast, £41 million production, £0.4 million video platforms, £72 million merchandise and £45 million multiplier effects). The full economic impact from the distribution of 2013 animated programmes will emerge in subsequent years.

Employment in the UK animation sector has grown in recent years. The sector directly employs 1,300 full-time equivalent employees. This figure increases to 4,700 when direct and indirect employment is included (Olsberg·SPI and Nordicity, 2015). Creative Skillset estimates from 2004 indicate that around 3000 were employed in the sector. A higher proportion of men than women make up this workforce – 40% of the workforce are female. The workforce is also concentrated in the London area, with 56% based here (Creative Skillset, 2012c). Evidence has also suggested the animation workforce has a high level of educational attainment. One UK based survey found that 92% of animators are educated to degree level (Accelerate Animation, 2013). Creative Skillset research has found that across creative media industries animators are most likely to be educated to degree level (Creative Skillset, 2015b).

Freelancers are a significant part of the UK’s animation workforce (Accelerate Animation, 2013). In 2014, 30% of those employed in the sector were freelancers (Creative Skillset, 2015b). The proportion of freelancers has decreased since 2009 when 46% were freelancers. An increase in large productions in the London area is cited as the main reason for the shift (Creative Skillset, 2012a). Industry groups also exist such as the Animation Alliance UK, the advocacy group for independent animation professionals and Animation UK, the animation trade body that campaigns for fairer trading conditions for animation producers.
Despite the strong heritage of animation in the UK, reports in the late 2000s suggested that the UK animation industry was in decline. Iconic British programmes such as Bob the Builder and Thomas the Tank Engine were not being produced in the UK and Aardman studios was reported to be considering moving production overseas. High costs, competition from tax reliefs internationally and reduced licence fees from broadcasters were impacting on competitiveness (BBC Breakfast, 2009; Youngs, 2012; Olsberg·SPI and Nordicity, 2015). The international nature of the animation sector means that if national support for the sector differs between countries, this can give one economy a greater advantage in international markets than others not enjoying such support (Kenny and Broughton, 2011). This was part of the argument made by Animation UK to support the introduction of a tax credits for UK animation, to ensure the UK could compete on a level playing field in terms of tax relief around the world. The UK government introduced tax relief for animation production in its 2012 budget, effective from April 2013 (Brown, 2014). This has provided an important boost to the sector, helping to stem the decline (Olsberg·SPI and Nordicity, 2015). However the future for a strong original children’s content sector remains uncertain in the UK (Westminster Media Forum, 2015).

Spend on original children’s content by UK public service broadcasting (PSB) has declined over the last decade (Ofcom, 2014). A report commissioned by PACT and the Ragdoll Foundation argues that PSB quotas should be introduced for original children’s programming (Kenny and Suter, 2015). See section 4.1 for further discussion of these issues.

2.1.1 THE ANIMATION SECTOR IN NORTHERN IRELAND

Creative Skillset statistics from 2012 showed that just 3% of the UK’s animation workforce is based in Northern Ireland. It also found that representation of women in animation was lower than the UK average (40%) where 29% of the workforce was female in Northern Ireland. Its estimates found that in 2010 there were fewer than 25 animation companies in Northern Ireland. Change appears to be afoot however. Creative Skillset found that in 2009, just 17% of the workforce was identified as freelance, lower than the UK overall which was 46%. However a significant change in workforce structure is found in 2012 figures which indicate that 76% of the workforce was freelance, much higher than the UK average of 30% (Creative Skillset, 2011a; 2012c). This potentially indicates that contract work is increasing requiring a greater proportion of freelance staff.

Reports have suggested the talent pool in Northern Ireland’s animation sector is growing, but still not keeping up with the demand for skilled graduates, slowing the sector’s growth potential. This talent pool, along with funding supports, such as from Northern Ireland Screen, has attracted companies to Northern Ireland. Jam Media is one example, with a studio in Dublin, but also now in Belfast (BBC Newsline, 2014; Cooper, 2013).

Belfast is a noted centre for animation in Northern Ireland. The UK animation tax relief’s importance in boosting the sector is recognised, as well as the establishment of the animation department at Ulster University (Cooper, 2013). Jam Media produces ROY, which received two BAFTA nominations last year. The company also planned to expand its workforce in 2015 (Weir, 2014). Other companies based in the Belfast area include Sixteen South and Flickerpix. Sixteen South was established in 2008 and produced the animated series Lily’s Driftwood Bay with a budget of £2.5 million. Since 2014, the series has been broadcast globally including in the UK, Ireland, Finland, Germany, Brunei, Hong Kong, Australia and Sweden. It has also picked up awards, such as at the 2015 Irish Animation Awards and Broadcast Awards (Houston, 2013; Northern Ireland Screen, 2015a;
Based in Holywood, Flickerpix produces stop motion animation such as the popular show On the Air, as well as 2D animation such as Five Fables which brings five medieval Scot fables translated by Seamus Heaney to life. Flickerpix is coproducing the new Zig and Zag series due to air in 2016. The company also gained the much sought after BFI Vision Award in 2013, which aims to assist companies develop feature film (Northern Ireland Screen, 2013b; 2014b; 2015f).

2.1.1.1 THE HONEYCOMB ELIGIBLE AREA - NORTHERN IRELAND (EXCLUDING BELFAST AND GREATER BELFAST)

Animation studios are sparse outside of the Belfast area in Northern Ireland. Straandlooper is located on the Ards Peninsula in the east of the eligible area. In the north-west of the eligible area, Dog Ears is located in Derry city. This children’s media company has very successfully established itself over the last five years (see Company Case Study, page 13). Dog Ears also collaborates with other creative industry companies in its locality, such as in music production for the Puffin Rock animated series. In addition the company coordinates the Humdinger Children’s Book Festival in Derry city which has run for the last three years. A number of companies with strong links to the animation sector can be identified in the Derry city area, such as the multimedia production company Uproar Comics and the game development studios Troll Inc and Blurry Games. Freelancing is a key part of the animation sector and broadband assists freelancers living in the Northern Ireland eligible area to work on projects across Northern Ireland and internationally. For example the co-director of Sixteen South’s globally broadcast Lily’s Driftwood Bay worked on the series freelance from the Northern Ireland eligible area.

2.1.2 THE ANIMATION SECTOR IN SCOTLAND

According to BOP Consulting (2014) Scottish films have not in recent times achieved significant success. However one exception is the Scottish –French production directed by Sylvain Chomet, the 2010 animated feature film the Illustionist. The film was Oscar nominated and received a number of awards such as Best Animated Film in the 2010 European Film Awards and the 2011 César Awards (IMDB, 2015). In 2012, the Scottish highlands were brought to life through 3D animation in the film Brave from Disney Pixar. Released in 72 countries Brave was also expected to positively impact Scotland’s tourism and the nation’s general image (Carrell, 2012).

Successful animation studios in Scotland include Red Kite Animation and Ko Lik Films. Edinburgh based Red Kite Animation co-produce the animated TV series Dennis the Menace and Gnasher which has been broadcast by CBBC, ABC and Network Nine (Red Kite Animation, 2012). Ko Lik films was established by former Red Kite workers (The Scotsman, 2008). In 2014, the Ko Lik Films co-production Monkey Love Experiments won a British Academy Scotland award for animation (BAFTA Scotland, 2014). The company is also part of the animation team producing OOgiles for BBC Scotland (BBC, 2009). An industry group has also formed in Scotland, the Scottish Animation Network. Its aims include encouraging networking and investment in the sector.

Research has indicated that the work of animation companies in Scotland can be focused outside of the Scottish market and companies can produce of a range of content (television, film, advertising, visual effects, gaming and online). However it is observed that most Scottish animation companies work in television (primarily service work rather than intellectual property development) and few develop feature films. Low budget animated features are said to cost between £5 million and £20 million, a high cost compared to...
Characters from Puffin Rock, co-production from the Northern Ireland eligible area. Photo courtesy of Dog Ears.
The Derry city based children’s media company Dog Ears produces the animated series Puffin Rock, broadcast in the UK and Ireland.

Featuring a family of puffins and their friends, the animated series Puffin Rock is focused on the adventures of brother and sister Baba and Oona on an island off the coast of Ireland. The show has been described as a charming mix of natural history facts, pre-school learning, relationship dynamics and humour. Narrated by Chris O’Dowd of Bridesmaids and Moone Boy fame, Puffin Rock is not just an animated television series, it is a multi-platform brand. This includes the animated series of 39 episodes each seven minutes long, digital books and print books. Funding animation productions is challenging and developing ancillary products such as books and games is important to a commercially successful production.

Collaboration appears central to Puffin Rock’s development. The series is co-produced by Dog Ears, Penguin Books and Cartoon Saloon. For a company established in 2010, working with Penguin Books, the leading UK children’s book publisher, as well as Cartoon Saloon, an Oscar nominated animation studio based in Kilkenny in the Republic of Ireland, is speedy progress. Conferences, such as the Sheffield-based Children’s Media Conference and the Kidscreen Summit in Miami, are an important part of the animation sector facilitating networking and pitching of ideas to commissioners. It was at the Children’s Media Conference that Dog Ears pitched Puffin Rock to Penguin and where their collaboration first began. The series has also received funding support, such as from Northern Ireland Screen and the Irish Film Board.

Dog Ears is responsible for producing half of the animation for Puffin Rock, as well as scripting, voices and music recording. Dog Ears works with other local companies and groups such as Blast Furnace Studios to record scripts, as well as Smalltown America, the Ulster Orchestra and BBC Blackstaff Studios to develop the music for the series.

For a stronger animation sector in Northern Ireland, increasing the talent pool is vital. Learning as part of productions provides invaluable experience for animators, but it can be challenging for companies to provide quality mentoring in the midst of demanding production deadlines. Dog Ears is also working to help build the animation talent pool in Northern Ireland by providing internships. Last year, Dog Ears availed of funding available through Creative Skillset’s Skills Investment Fund facilitating the company to offer a number of internships in 2014.

Puffin Rock is aimed at pre-school children from ages two to six years. The series launched on RTÉ in January 2015 and has been commissioned for a second series. Puffin Rock is also being broadcast on Nick Jr and will premiere on Netflix in September 2015. Penguin will publish Puffin Rock books in 2016.

Sources: Digital Derry, 2012; Northern Ireland Screen, 2013a; Northern Ireland Screen, 2014a; Dog Ears, 2014; Dog Ears, 2015b; Northern Ireland Screen, 2015c; Wolfe, 2015.
A profile of the animation sector

low budget feature film. Raising funding for animated features is difficult because funding for productions of this scale is low (BOP Consulting, 2014).

In 2009 to 2010 the animation industry in Scotland was composed of around 50 companies employing around 500 people, making up 12% of the UK animation industry workforce (Creative Skillset, 2011b). The growing concentration of the industry in London is evidenced by workforce statistics. In 2009, 20% of the workforce was in London, while in 2012 this had increased to 56%. The proportion of the workforce based in Scotland decreased to 5% (Creative Skillset, 2011b; 2012c). Creative Skillset (2012c) found that representation of women in animation was higher than the UK average (40%) in Scotland where 53% of the workforce was female.

Creative Skillset data has indicated that freelancing is a central dynamic of the workforce. In 2009 almost half (49%) of the workforce were employed on a freelance basis. This however reduced significantly according to 2012 figures where 19% of the workforce was freelance (Creative Skillset, 2011b; 2012c). This is in contrast to patterns in Northern Ireland where the proportion of freelance workers increased dramatically over the 2009 to 2012 period. This potentially indicates that contract work is decreasing, requiring a smaller proportion of freelance staff.

In the 2014 report Review of the Film Sector in Scotland it is observed that compared to the success of small companies in Northern Ireland and the Republic of Ireland in international children’s television, Scotland has low levels of similar animation activity (Bop Consulting, 2014). Some have been critical of the lack of support and focus on the development of the animation sector. Fraser (2015) highlights that the 2010 Oscar nominated animated feature the Illusionist could have been a catalyst for the animation industry in Scotland. However it is argued the talent and international attention generated from the production was not harnessed as best it could have been. Poor understanding and support for the sector by public agencies is reported. Better support for the sector is also argued to be of cultural importance so that Scottish children view animation that reflects their own culture.

The animation sector is beginning to receive greater attention at government level. On Screen, Creative Scotland’s film strategy for 2014 to 2017 identifies a need to develop and produce more animated films and to prioritise support for animation, through sourcing increased funding for production (Creative Scotland, 2014). The Economy, Energy and Tourism Committee of the Scottish Parliament recommended in March 2015 that Creative Scotland undertakes a review of the animation sector to better understand its needs to support growth, which the Scottish Government accepted and has advised Creative Scotland to lead on this review. The Committee also recommended Creative Scotland review its criteria for the Market Leaders Scotland Initiative, which supports attendance at international events, with view to including the animation sector, which the Scottish Government also accepted and has advised Creative Scotland to review its criteria (Scottish Government, 2015b; Scottish Parliament, 2015). Also in 2015 a £2 million tax credit loan fund was introduced in Scotland to assist film, animation and high end TV producers finance their projects and a £1 million screen skills fund (Scottish Government, 2015a).

2.1.2.1 THE HONEYCOMB ELIGIBLE AREA - WESTERN SEABOARD OF SCOTLAND

Dedicated animation studios appear almost absent from the western seaboard of Scotland. One animation studio was identified just outside the eligible area, West Highland Animation, located near
Stirling. One start-up company Toon Platoon (see Company Case Study, page 16) was identified in the eligible area. Interviews conducted for this research indicate that film and TV production companies in the eligible area can produce small amounts of animated content. Broader areas with links to animation such as fiction and comic book writing were also identified in interviews. Potential for development of animation in the western Scotland area has been highlighted by interest from the BAFTA award winning company King Rollo Films in producing an animated TV series on the Isle of Skye. An initial seminar was held in 2015 to help link King Rollo Films with local talent (Highlands and Islands Enterprise, 2015).

2.2 THE ANIMATION SECTOR IN THE REPUBLIC OF IRELAND

The beginnings of Ireland’s animation industry is linked to the opening of Sullivan Bluth Studios in Dublin in the 1980s, attracted to Ireland by incentives offered by the Industrial Development Authority. While the studio closed in 1995 its presence was important in stimulating the industry. Also central was Jimmy T. Murakami who established the Murakami Wolf Dublin studios in 1989. The studio founders were involved in establishing the Ballyfermot College of Further Education and Dun Laoghaire Institute of Art Design and Technology animation courses. Graduates from these courses created their own opportunities and set up their own companies, instigating a new generation of independent animation studios in Ireland, emerging in the 1990s (O’Brien, 2012; Animation Ireland and An Post, 2015). It has been suggested that around 70% of Ireland’s indigenous animation studios were started by Ballyfermot College graduates. Networks in Ireland’s animation industry have been built nationally and internationally since the industry’s origins in the 1980s (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015).

Today, Ireland’s animation sector is an internationally recognised and growing sector (Audiovisual Strategic Review Steering Group, 2011; MerrionStreet, 2015). The achievements of independent companies in Ireland’s animation sector have been noted, such as Brown Bag, Cartoon Saloon, Kavaleer Productions, Jam Media, Caboom and Boulder Media, to name a few. The reputation of Ireland’s animation industry is also contributing to its continued success.

International recognition includes Oscar nominations for Kilkenny-based Cartoon Saloon’s animated feature films The Secret of Kells and Song of the Sea, as well as Brown Bag’s Peabody Award for Doc McStuffins and Oscar nominations for its animated shorts Give Up Yer Aul Sins and Granny O’Grimm’s Sleeping Beauty (O’Brien, 2012; Cartoon Saloon, 2015; Hosford, 2015). Special tribute was paid to the Irish animation sector at the 2012 renowned Annecy International Animation Film Festival as a cultural hotspot because of its original productions, artistic success and distinctive cultural identity (Kelly, 2012). In 2015, Ireland’s postal service, An Post launched a stamp series featuring Irish produced animation to celebrate its successes and history (Animation Ireland, 2015).

Festivals and groups have also emerged. Established in 2006, Animation Ireland is the umbrella body under which Ireland’s animation companies market themselves internationally, which also lobbies for change to support the sector. Its mandate is to promote Ireland as the best country in the world to produce animation (Animation Ireland, 2015). The first Irish Animation Awards took place in 2015 as part of the Animation Dingle festival, which sought national and international submissions and winners included Republic of Ireland and Northern Ireland based animation studios (Irish Animation Awards, 2015). Dublin also appears to be a hub of activity with a concentration of studios and a number of animation
Toon Platoon

toonplatoon.co.uk

Based in Lochaber in western Scotland, Toon Platoon is a start-up animation company established in 2014.

Toon Platoon is currently a two man team, each with different skills that complement each other well. The children’s book author Barry Hutchison forms one half of the team who has also worked as a scriptwriter on the ITV children’s comedy Bottom Knocker Street starring Phil Jupitus, as well as a writer for the Beano. The animator Edward Lopez, who has worked on animated content development for Nickelodeon, forms the second half of the Toon Platoon team.

Toon Platoon is working on development of the comedy superhero animated series Sidekicks and Hutchison is the writer behind it. The animation studio is developing pitch materials, such as a trailer and series bible, to present the idea to potential funders. Hutchison describes how the Sidekicks concept is inherently suited to animation: “I tried writing it as a book to begin with. After that initial attempt I knew it wasn’t going to be a book, animation was the big obvious one that was screaming out to me. It felt like it had to be animated as a TV series or a web show or perhaps as a comic as well.”

Animation workshops in schools also form part of Toon Platoon’s work focused on for example writing stories, creating and designing characters. This also helps the company understand their audience. During workshops they can use their current ideas as examples to stir the imagination, but also to gauge children’s reactions. Hutchison explains: “If it is a good idea you’ll hear a little gasp going around the room. Then you know, right, I have nailed it.”

While animation studios are an uncommon business in Lochaber, Hutchison does identify potential talent which the company can collaborate with locally, such as theatre groups for voice work and musicians when scoring a series. Toon Platoon has had initial conversations with a number of interested parties and is optimistic about the future development of Sidekicks.
Characters from Sidekicks - Toon Platoon’s comedy superhero animated series in development and produced in the western Scotland eligible area. Photo courtesy of Toon Platoon.
A profile of the animation sector

events. The VFX and Animation Summit has been held in Dublin, as well as the Dublin Animation Film Festival, which showcases Irish and international animated film and celebrates its 5th year in 2015 (VFX and Animation Summit, 2014; Dublin Animation Festival, 2015).

Recent estimates have valued the sector at €110 million (Animation Ireland, 2012). Animation has been a fast growing sector in recent years, having doubled in value from 2009 to 2011, reported to account for one third of the overall audio visual sector in Ireland in terms of expenditure on production. It is also an indigenous industry with all animation studios Irish owned (Animation Ireland, 2012). Numbers employed in the sector have increased substantially. While figures quoted differ, the sector employs from around 1,500 to 2,300 people (Animation Ireland, 2012; MerrionStreet, 2015; Oireachtas Committee on Jobs, Enterprise and Innovation, 2015). It is highly export focused with international links developed with for example Disney, Nickelodeon, Cartoon Network and the BBC (MerrionStreet, 2015). Exports account for 90% of turnover from Ireland’s animation and VFX companies (Gaffney, 2015). In 2011, 68% of the production funds raised by the Irish animation sector were from international broadcasters and distributors (Animation Ireland, 2012). Around the world each year in over 140 countries 100 million people watch animated programmes produced in Ireland (Animation Ireland, 2015).

2.2.1 THE HONEYCOMB ELIGIBLE AREA – REPUBLIC OF IRELAND BORDER COUNTIES

Animation studios do not appear to exist across the Honeycomb eligible area of the Republic of Ireland. A presence exists in county Louth with animation studios Zink Films (see Company Case Study, page 20) and Magic Hill Studios located here.
Zink Films

Zink Films has worked on developing CGI television commercials for Guinness, Topaz, Tayto, Yoplait, Berocca and Gateaux, to name a few. Some commercials, such as for Tayto and Berocca, are a mix of CGI and live action. Zink Films also provides a range of animation services such as 2D animation and develops a variety of animated content. This includes web animation in the form of web banner content and interactive CGI environments, as well as branding including character and brand identity development. Zink also has a number of TV series in development.

O’Neill has worked in the Irish animation industry since the late 1980s: “I personally started in 1988 in Sullivan Bluth Studios.” Established in Ireland in the 1980s, Sullivan Bluth Studios co-produced animated features such as An American Tail and The Land Before Time, which is said to mark the beginning of Ireland’s animation industry.

The company also tailors its office space to align with the contract based nature of the animation sector, which makes commercial sense. At busy times when the company has a greater number of freelancers working on projects Zink expands its office space.

Zink Films successfully gained Frameworks funding in 2014 to produce the animated short The Great Fall, directed by O’Neill, produced by Michael Algar and written by Ben Cleary. It will premiere at the 2015 Galway Film Fleadh. Frameworks is an animated film funding scheme aiming to develop the skills of young animators, as well as support the production of innovative and original content. O’Neill comments on the importance of the scheme: “It is great for a small company to develop a flagship piece because it is difficult to convince broadcasters of your capabilities. They might look at Zink and say well you can do some nice commercials…you don’t have any long format animations so they might look elsewhere…you have got to try and convince them.” The Frameworks scheme is funded by the Irish Film Board and RTÉ (Irish Film Board, 2015b).
The Great Fall - short film in development by Zink Films, Republic of Ireland border counties. Photo courtesy of Zink Films.
Evidence suggests the skills of animators are in high demand across the UK and Ireland. With the introduction of tax relief for UK animation, this was also predicted to increase the demand for animation talent (Creative Skillset, 2012b).

Despite advances in efficiency that digital technology has brought, the production of animation is still a labour intensive process. Being able to quickly mobilise trained animators to staff productions has been described as an advantage held by Asian studios, which in some cases have the ability to produce a 26 part animation series in 60 to 70 weeks, which could take a western studio 80 to 90 weeks (Westcott, 2011). The presence of the correct balance of skills in the workforce can support the growth of the animation sector. Skills shortages limit sector development.

Developing animation skills does not just support the animation sector. Skills are not just in demand the animation sector itself, but are also transferable across other creative media sectors such as advertising, visual effects, film, music videos, games, web and graphic design (Audiovisual Strategic Review Steering Group, 2011; Creative Skillset, 2011c; Kenny and Broughton, 2011; Accelerate Animation, 2013).

Existing data on skills issues in the animation sector highlight a range of skill gaps and issues filling a range of roles. Relevant available research is focused on the UK animation sector and predominantly structures this section. However it is also supplemented with interviews across the eligible areas, which reveal similar patterns and that skill shortages are wide ranging.

### 3.1 BROAD SKILLS NEEDS AND TRAINING ISSUES

Creative Skillset (2014a) data shows a significant 30% of animation companies have reported workforce skills gaps. Just over half of companies with vacancies indicated they were hard to fill. Creative Skillset’s latest creative media employer survey identified skills in using software packages as the greatest area of need in the animation sector (see Table 3.1, page 23)

Training is not uncommon in the animation sector, however this does not mean current needs are met and there are also barriers to access. The Accelerate Animation (2013) survey found that 35% of animators surveyed had undergone training in the last two years. Creative Skillset research showed that 39% of those working in animation had undertaken training in the last 12 months, but this was the lowest level among the creative media sectors surveyed. However the average number of training days was high compared to other sectors. The average number of training days undertaken in the last 12 months by those working in animation was 23. In terms of how training was delivered, Creative Skillset (2015b) research has shown it is most often formal/classroom training (44%) or on the job training (43%), while online courses were lowest (15%).
Creative Skillset (2012b) research has also found that many animation producers were running their own in-house training, mostly in pre-production training where work begins on a production early to bring crew up to speed. Other Creative Skillset research also supports the assertion that animation companies invest in training. Creative Skillset (2011c) found funding or the organisation of learning and development was carried out by 44% of animation employers, with over 50% of fees associated with this paid by the employer. Unsurprisingly, cost was identified as a major barrier to investing in training (Creative Skillset, 2011c). Creative Skillset (2012b) has also found however that training was seen as a necessity and cost effective when linked to a specific production, but also an additional cost stretching already tight budgets. It is also highlighted that pre-production training is difficult to plan because of the nature of TV production, such as often with changing start dates and close run finalising of finances.

Our research interviews also show that skills needs can be specific to a particular studio, such as to serve a specific production. The comments of Gareth Lee, Animation Skillnet Network Manager help to illustrate:

"Across studios, core skills come up again and again, things like storyboarding, storytelling and project management. Then also you have very studio specific specialist skills, such as rigging, lighting or a particular piece of software."

Gareth Lee, Animation Skillnet Network Manager

This also makes funding for in-house training important to support animation sector growth.

The most recent Creative Skillset (2015b) workforce survey identified a high proportion (61%) reporting they had experienced a barrier to training in the last twelve months and 51% reported that they had a learning or skills need. Other earlier Creative Skillset (2012b) research has observed that training support schemes exist, but it is more difficult for smaller studios to access them as they lack the resources and planning capacity that larger studios have. In addition, some skilled roles, such as production team, CGI craft and technical roles are highlighted as more challenging to train in the short term and need more planning (Creative Skillset, 2012b). Accelerate Animation (2013) also found that existing support for professional development can be hard to find.

**TABLE 3.1**

Areas of skills need – animation

<table>
<thead>
<tr>
<th>Skills in using software packages</th>
<th>55%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Craft or technical skills</td>
<td>27%</td>
</tr>
<tr>
<td>Creative talent</td>
<td>26%</td>
</tr>
<tr>
<td>Leadership and management skills</td>
<td>13%</td>
</tr>
<tr>
<td>Business skills</td>
<td>16%</td>
</tr>
<tr>
<td>Sales and marketing skills</td>
<td>3%</td>
</tr>
</tbody>
</table>

SOURCE: CREATIVE SKILLSET 2015b
3.1.1 DEVELOPING THE SKILLS OF NEW ENTRANTS

Specialist skilled workers are of particular importance as part of the animation workforce (Creative Skillset, 2011c). New animation graduates can be more generalist than specialist. They need to develop their overall skills before developing specialisms. Accelerate Animation (2013) found that in the animation sector support for professional development after third level education can be too generalised rather than being focused on specialist skill needs. A number of skills gaps for new entrants to animation were also pinpointed, of which the following were identified as most important: understanding how the industry works; finance and funding; how to get freelance work; different business models; intellectual property/copyright knowledge; practical business skills and gaining initial professional experience. Creative skills gaps identified were writing, pitching, cross/multi-platform projects, directing and collaboration with others. Our industry interviews also point to the importance of ‘soft skills’, which are developed in practice. For example:

“Hitting deadlines…teamwork under pressure…”
---
Gareth Lee, Animation Skillnet network manager, Republic of Ireland.

“Your ability to know when something looks good in terms of when the light is working, when the characters are coming across…”
---
Alastair McIlwain, Straandlooper, Donaghadee, Northern Ireland eligible area.

“A strong understanding of how a production works...an ability to stick to deadlines…”
---
Laura Campbell, editorial director, Dog Ears, Northern Ireland eligible area.

“They have to network and understand how networks operate. They have to gain experience in setting up projects.”
---
Jason Robertson, lecturer, School of Media, Culture and Society, UWS.

New entrants can be supported in a number of ways. The Accelerate Animation (2013) report identifies initiatives that facilitate experienced animators to share their experience with less experienced new entrants as a priority need. Developing shorts is important to assist animation talent development, as well as to showcase talent and pitch ideas (Bop Consulting, 2014). The need for animation graduates to gain studio experience to better shape them for industry is a key issue (Accelerate Animation, 2013).

Creative Skillset’s (2012b) research with the animation industry found most offered internships however they could be long or short, paid or unpaid. Creative Skillset research has also shown that across the creative media sector, numbers undertaking work experience in animation was in line with the overall average, but the number of days of work experience was lowest in animation compared to other creative media sectors. For example those working in the games sector had 60 days of work experience while those working in animation had 34 (Creative Skillset, 2015b).
Our interviews with industry highlight the importance of hands-on studio experience. For example:

> The best way to learn is in production. You can look at other people’s work on the project and be inspired or simply ask them how they do it so well? It’s really important to talk to each other on the project so everyone can improve.”

Darren Vandenburg, freelancer, Northern Ireland eligible area.

Internships can offer studio experience, but their structure is also important. Talents need to ideally work on real world projects and for a good period of time. The following comments help to illustrate:

> We need quality apprenticeships and graduate placements. Over the last few years we have taken on interns. They come for the entire summer. Then they go back and report on their professional work and experience in the studio. They could be here for four or five months.”

Paul Young, chair of Animation Ireland and CEO of Cartoon Saloon.

An awareness of the importance of developing hands-on experience was also found to exist within animation education. Placements are often a key part of courses. Funding for new entrant training is important because budgets for TV series are tight and unlikely to be able to sustain assistant roles on productions. It also has the benefit of bringing new entrants to the next level of skill, improving the overall industry talent pool (Creative Skillset, 2012b). The importance of funding is also underscored by the fact that Creative Skillset (2015b) has found 78% of those working in animation have undertaken unpaid work experience.

A number of useful initiatives work to assist this process, such as Northern Ireland Screen’s Creative Animation Scheme and The Bridge in the Republic of Ireland (see Case Study on Developing Emerging Talent, page 26). The continuance and enhancement of such schemes would be valuable to the animation sector. Appetite exists among third level colleges teaching animation to develop similar projects. For example, Ballyfermot College in the Republic of Ireland has called for further education colleges to be eligible for the Innovation Voucher initiative to enable the development of hubs to allow students to work on industry level projects while studying (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015).

3.1.2 PROFESSIONAL DEVELOPMENT AND UP-SKILLING

The need for continuous learning, underpinned by learning through practice and sharing expertise, appears to underpin the animation sector. For example the comments of Gary O’Neill from Zink Films help to illustrate:

> The learning curve is never-ending... There is a good spirit in the animation industry in Ireland. We are helpful towards each other, sharing knowledge and information.”
Evidence suggests that animation studios require specialist skills. Emerging animators can have more all-round training and need to develop specialist skills to suit industry needs. Initiatives have emerged that aim to correct this imbalance and their importance is clear. Supports to develop young and emerging animators exist internationally in countries with a strong heritage and success in animation, such as the Young Animator Training Project initiated by the Japanese Animation Creators Association in 2010 (Anime News Network, 2010).

Internships offer really valuable experience for junior animators. Across creative industries opportunities are increasing, such as the internship programme launched by the Arts Council of Northern Ireland in 2015 (Arts Council of Northern Ireland, 2015). Funding is available in Northern Ireland and Scotland through Creative Skillset’s Skills Investment Fund for mentoring programmes to enable upskilling (Creative Skillset, 2015a). Creative Scotland’s graduate internship programme funds paid internships in small creative businesses (Creative Scotland, 2015a).

One such initiative in the Republic of Ireland is The Bridge. The programme was pioneered by Ballyfermot College and Dublin Business Innovation Centre where Ballyfermot College students worked with studios at the Guinness Enterprise Centre over their summer break. The Bridge is now open to all recent or unemployed graduates of animation, games and VFX related courses. Up to 30 participants will take part in the 2015 programme over an intensive eight weeks, with a number of placements available abroad in European countries. Participants work on real projects in real studios. Participating studios in recent years have included Brown Bag Films, Jam Media and Treehouse Republic. The success of The Bridge can be seen from the fact that 80% of participants have gained full-time or contract work or continued third level studies (Animation Skillnet, 2015).

In Northern Ireland the Creative Animation Scheme for junior animators run by Northern Ireland Screen is another valuable initiative. It facilitates animation studios in Northern Ireland to work with junior animators to develop a short character based animation by part funding projects up to a maximum value of £30,000. The studio will have identified emerging talent and ideally the project idea is generated by the junior animator. The scheme is premised on the idea that the time and expense in developing animation shorts limits opportunities available to junior animators. The scheme benefits junior animators by developing their skills and involving them in intellectual property generation and studios by developing intellectual property that could be developed into an animated series. At least two places on the scheme were available in 2015 (Northern Ireland Screen, 2015d).
Education and skills issues

The UK based study from Accelerate Animation (2013) found that support for tailored professional development is not just needed for new entrants but also mid-career and established animation professionals. Creative Skillset (2012b) also found concern among the animation industry about senior production team members such as producers, production coordinators and executive producers. This issue also emerged in industry interviews. While development of new entrants is vital, so is the continuing improvement of those with higher level expertise. Professional development can also be challenging for animation professionals to engage in. Flexible course delivery options are important. For example the following comments help to illustrate:

Having the luxury of taking a whole year off to do a masters may not happen if you are scrabbling for work. But being able to do a ten credit module which would be a six week course, mostly based online or possibly compressed into a week residential could be possible.”

Jason Robertson, lecturer, School of Media, Culture and Society, UWS.

3.1.3 SOFTWARE

Digitisation has had major implications for the skill needs of the animation sector. Creative Skillset research has highlighted software skills shortages. From a survey of UK based creative media employers, Creative Skillset (2014b) assessed skills gaps in a range of animation software. Software that less than a fifth identified as an area of skill gap were StopMotion Pro (14%) and Lightwave (19%). Key findings were:

- CelAction - 41% indicated skill gaps existed, with 27% indicating this was to a great extent.
- Storyboard Pro - 41% indicated skill gaps existed, with 14% indicating this was to a great extent.
- Maya – 38% indicated skill gaps existed, with 5% indicating this was to a great extent.
- Flash – 33% indicated skill gaps existed, with 14% indicating this was to a great extent.
- Nuke – 24% indicated skill gaps existed, with 5% indicating this was to a great extent.

Other Creative Skillset (2012b) research helps to illustrate why CelAction is a particular skill need. Overall use of CelAction software is increasing by UK animation producers, noted as being important in facilitating the increased cost competitiveness of the industry. Training skilled animators to be production ready on CelAction can take place one to four weeks before production starts. If a production is more complex, a longer period may be required however (Creative Skillset, 2012b). CelAction2D was developed by CelAction Ltd, a London based animation industry technology services company. In 1997, the company was working on a television series for the BBC but animation software available couldn’t fulfil requirements. There was a risk that animation could be outsourced to another country. In house tools were adapted and CelAction2D was the result, which focused on producing quality animation in a time efficient way. The software is now used by the wider animation industry and is said to be a driving force behind the 2D animation industry’s development in the UK. The company has also developed the storyboarding programme CelAction Animatic (CelAction, 2015).

The cost and pace of change emerged in industry interviews as an issue limiting software access and skills development. Software can be project specific and the costs of having access to a range of software is challenging, in particular for colleges and small studios. A popular software this year may change next year, which makes investment in software and
teaching resources tricky for colleges with already limited resources. Small studios are also at a disadvantage as they may need to invest in software to support one particular production, while larger studios could potentially make the same investment but have use for the software across a range of projects.

3.1.4 DEFICIENCIES IN SPECIFIC ROLES

Creative Skillset (2012c) identifies the five major occupational groups in the animation sector and proportions as follows: animators (18%); production (16%); business management (16%); strategic management (13%); art and design (10%). Other less dominant roles identified were creative development (4%), distribution, marketing and sales (4%), legal (3%) and editing (2%).

Creative Skillset (2014b) research has identified visual storyboarding as a key vacancy that is difficult to fill, highlighted by more than half of respondents surveyed. Other Creative Skillset (2012b) research also identifies storyboard artists as an area of significant concern. Storyboarding is also dependent on good drawing and storytelling skills. Knowledge of Storyboard-Pro and Red-Board were highlighted as software needs relating to storyboarding. Storyboarding is highlighted as a crucial skill at the beginning of a career path towards directing (and transferable from TV series, potentially to commercials, features and live-action productions). The research also found that storyboarding is not focused on to a great degree in colleges and should be enhanced. Creative Skillset (2012b) also suggest to develop storyboarding talent funding for productions to take on assistant storyboard artists could be effective to develop skills in a cost effective way. Creative Skillset (2012b) also highlight that storyboarding is valued by buyers, in particular children’s networks in the US, which makes this skill an important broader asset. While not required in such numbers (around one to every four storyboard artists), animatic editors also emerged as a significant concern from Creative Skillset (2012b) research. It is also highlighted that these skills could also be developed in existing off-line editors, rather than training of specialist animatic editors. Our research interviews with practitioners also confirm storyboarding as a difficult role to fill. It was felt that becoming a skilled storyboard artist comes with experience and can take time to develop.

Creative Skillset (2014b) also found trainee/assistant roles (38%) and editors (32%) were in significant deficit. Just under a quarter noted CGI animators (24%) and compositing artists (23%) were difficult to fill vacancies. Rigging (18%) was highlighted by the lowest proportion of respondents.

3.1.5 BUSINESS SKILLS

Business skills are of growing importance in the animation sector. The Accelerate Animation (2013)
Education and skills issues

report identified opportunities to develop business skills as a priority need. Creative Skillset (2011c) identified business skills around marketing and financial management as lacking. While the craft of animation is still pivotal to animation companies, so too is efficient workflow and pipeline management (Creative Skillset, 2011c). Creative Skillset (2012b) found concern among the animation industry around the tax credit scheme, the skills and knowledge required to avail of it. Training was identified as needed and assistance from agencies such as Creative Skillset or film production accountants familiar with the film tax credit scheme to help navigate it. The complexity involved in funding animation production will be discussed in the next section. This complexity adds to the importance of broad business and marketing skills, such as negotiation and pitching, in the animation sector.

To assist their growth, the need for business skills development for small start-up studios emerged as important from industry interviews. The need for development of business acumen as part of third level education also emerged. The following comments help to illustrate:

“It tends to be creative people that set up animation studios. Somebody assumes a marketing and business development role whereas I think there is a real need for people to be really skilled in that role.”

Gareth Lee, Animation Skillnet Network Manager, Republic of Ireland.

“This business of international animation is one where you have to be able to create an idea and then communicate that idea well to buyers - you have be creative and be able to talk to people at the same time.”

Gráinne McGuinness, Indee Productions, Northern Ireland.

While they are learning their craft it really needs to be supported by enterprise learning. What is intellectual property, how do they protect it, how do they commercialise it, how do they set up their own company, also where do they go to sell?”

Jason Robertson, lecturer, School of Media, Culture and Society, UWS.

Rather than these skills developing by chance, a greater direct focus on developing business skills could aid growth in the animation sector. In the Republic of Ireland’s animation sector for example leading companies, in combination with their other strengths, are noted to be particularly business savvy. Access to advice also emerged as important where studios have access to good business advice from mentors, such as from enterprise or screen development agencies. It was also emphasised that if business skills are focused on in third level education the approach should also be practical, such as through student enterprise competitions, business incubation or replication of real world animation project scenarios. For example, Alastair McIlwain, based in the Northern Ireland eligible area who has worked as an external assessor with Dundee University describes how they adapted project work to replicate real world scenarios:
In the industry very seldom do you get offered to produce your own film. In Dundee we introduced this project where students worked as a team. Six or seven students would come together and the responsibilities reflected the sort of responsibilities you would get in a studio, you know producer, line manager, layout department and art direction. They developed more specialised skills and left the course knowing what it was like to work as a team and to fulfil certain roles. In the normal course of events people would only get access to this when they move into studios.”

**3.1.6 EDUCATION WITH CLOSE INDUSTRY LINKS**

Creative Skillset (2012b) identifies the view among animation industry professionals that the quality of higher education animation courses in France and Germany is an issue compared to UK courses. The need for production ready CGI artists and technicians is also highlighted and French colleges’ success in this area is noted. These insights are focused on the experience of larger VFX houses. It also emerged that talent shortages could inhibit such VFX houses from gaining work on animated feature films. The complexity of this issue is also noted. French or German educational funding and organisation is different to the UK and difficult to compare. Industry interviews also add insight here. Paul Young, chair of Animation Ireland and CEO of Cartoon Saloon explains that comparing colleges in Ireland for example with those in France is potentially an unequal comparison:

> There are a lot of factors that play into that. We do get students of world class ability from Irish colleges, but obviously the amount of students is much less than France for example. The European schools draw from a wider talent pool of people. I think in France there is much more of a visual culture from an earlier age than in the UK or Ireland, with Band Desinée and comics of a much greater variety. Kids in France and Belgium are exposed to a much wider variety of illustration in books and comics from an early age.”

Creative Skillset (2012b) also highlights a possible lack of coordination between educational institutions and industry. To allow the UK animation industry to fully capitalise on animation growth opportunities, overall the need for a more coordinated, collective approach to training has been highlighted. It also highlights a limited number of colleges were teaching CelAction and that broader integration such as work placements and industry lectures would be beneficial. The research suggests Creative Skillset could play an enhanced role in communicating animation industry needs to colleges. In the Republic of Ireland context another relevant organisation, such as the Irish Film Board or Animation Ireland, could play such a role. Within the broader digital media industry, the need for stronger industry and education links has been highlighted as an issue in Ireland (Forfás, 2006). Industry interviews also shed some light on this issue, finding that colleges do make efforts to link with industry. Developing strong industry links appears to need a proactive approach by colleges. But even when such a proactive approach is taken, budgetary resources can limit industry links, such as animation professionals delivering guest lectures and masterclasses. In addition undergraduate courses are time limited and need to focus on developing all round skills as well as specialist, so can only cover specialist skills to a certain degree. The need for specialist skills development after undergraduate education appears essential to support the growth of the animation sector. A good case study demonstrating this is Animation Skillnet operating in the Republic of Ireland (see Case Study on Animation Skillnet, page 32).
Very importantly the Skillnet network is industry led, delivered by industry specialists and designed in response to industry needs. Its steering committee and annual training needs analysis helps to identify priority needs. There are 40 partner studios in the network, which has delivered training to over 400 people and over 4000 training days. Animation Skillnet receives funding through the Skillnets scheme, supported by the National Training Fund through the Department of Education and Skills. Any group of enterprises based in the Republic of Ireland can apply for funding through the scheme.

Animation Skillnet runs subsidised specialist training courses and can subsidise in-house training in studios. Free places are available on some courses to the unemployed. Courses range in length, such as from one day to three days. Training has focused on software such as TVPaint, Toonboom Harmony, Anime Studio Pro and CelAction, as well as broader skills development such as storyboarding, script development, business and production skills. It is also involved with and part funds ‘The Bridge’ a scheme aiming to bridge the gap between leaving education and becoming industry ready through an eight week intensive programme (for more on The Bridge see the ‘Developing Emerging Talent’ case study, page 26).

Animation Skillnet aims to development member skills at all levels, from entry level and to experienced professionals. Gareth Lee, Animation Skillnet Network Manager explains: “We are trying to support every level of the animation profession. We can support CEOs if they were to do something at a very high level. We can support people who want to upskill, move up the ladder or change direction. We are also targeting entry level people in terms of getting their first job in the industry in a specialist area.” Animation Skillnet can also help fund and organise conferences and networking events for network members, as well as support members to attend education and training events internationally.

Important in the success of the initiative is its emergence from the bottom up and continuing industry connectedness. Before the initiative first developed Lee found through his broader industry engagement from working at Ballyfermot College that: “The industry was changing, it was growing rapidly and more and more specialist skills were needed.” Lee could see that animators need to continue learning after college because of the specialist nature of the industry. The Skillnets scheme appeared to offer a key opportunity to support continued and specialist learning. Dublin Business Innovation Centre came on board and the scheme was first funded in 2013.

The value of and need for Animation Skillnet is clear. Ireland’s animation sector has grown significantly and developed a strong international reputation in recent years. Tax incentives applicable to animation have been extended to 2020 which will assist continued growth. In this context Lee comments: “Animation Skillnet is needed at the moment and I think will be even more needed over the years to come.”

Sources: Animation Skillnet, 2013; Oireachtas Committee on Jobs, Enterprise and Innovation, 2015; Skillnets, 2015.
CASE STUDY –

Training event run by Animation Skillnet. Photo courtesy of Animation Skillnet.
3.2 EDUCATION PROVISION AND BROAD SKILLS ISSUES SPECIFIC TO NORTHERN IRELAND AND THE NORTHERN IRELAND ELIGIBLE AREA

Creative Skillset (2011a) identified the key issue in growing the animation sector in Northern Ireland was skills and talent development. Murphy's (2014) survey of computer graphics skills in Northern Ireland identifies much higher numbers of GFX motion graphics animators/compositors when compared to VFX compositors. It is noted that the region’s strength is in CGI generalism and future training should build on this, such as through developing Lighting and Look Development, FX or Creature Design. Murphy (2014) also identifies a need for development of production management and business skills to support the development of the games and animation sectors in Northern Ireland in attracting foreign investment.

Another weakness identified is the rate of turnaround for CGI production work, which is not seen to be at an adequate level to compete with the wider UK and globally. Overall the need for skills development was identified to create an industry that is equipped to service future projects.

Ulster University’s animation department is a needed resource in the region. In 2012 it took in its first students on its degree in animation and the first graduates will emerge in 2016. Murphy (2014) notes that Ulster University’s animation department is leading in its approach to CGI teaching, being practice led and offering depth and specialism. The department has also run continuous professional development (CPD) short courses, such as in Autodesk Maya. Animation education provision in Northern Ireland is concentrated in the Belfast area. Ulster University’s animation degree is located in Belfast and the Belfast Metropolitan College offers a diploma in visual effects and animation. Courses available in the Northern Ireland Honeycomb eligible area do have relevance to the animation sector such as those focused on illustration, interactive media and games development. For example a degree in computer games, modelling and animation is offered in Ulster University’s Magee campus in Derry city. The North West Regional College offers a higher national certificate in graphic design (illustration and animation) and higher national diploma interactive media, which focus to some extent on animation.

In our interviews with animation studios and freelancers based in Northern Ireland the need for experienced animation professionals appeared at the core of the skills issue. Good working knowledge of CelAction emerged as a key software skills gap. While some talent was sourced locally, sourcing talent, such as animators and storyboard artists, from outside of Northern Ireland to work on productions did emerge. However if studios do bring more experienced talent from Spain, London or Dublin for example, junior level staff will learn from this international expertise. As the number of animated series produced in Northern Ireland increases, this will also facilitate the development the local talent pool’s depth and experience. Studios also wished to develop the local talent pool and planned to or already had trained interns.
3.3 EDUCATION PROVISION AND BROAD SKILLS ISSUES SPECIFIC TO SCOTLAND AND THE WESTERN SCOTLAND ELIGIBLE AREA

BOP Consulting (2014) observes good animation training in Scotland, but that employment opportunities in the Scottish animation sector are few. It is noted that animation talent in Scotland can move into the games sector. This also emerged in our research interviews. Developing better linkages between education and the animation sector itself was seen as an important strategy to help filter animation graduates into animation rather than getting drawn into the games sector. The fact that two of Scotland’s animation schools are listed in the top 100 international animation schools in the Animation Career Review’s 2014 list provides further evidence of the quality of animation training in Scotland. The SAE Institute London also has a campus in Glasgow and it is ranked in 37th place in the top 100 international animation schools in the Animation Career Review’s 2014 list. The Duncan of Jordanstone College of Art and Design at the University of Dundee in Scotland is listed in 52nd place of the top 100 international animation schools. Its degree in animation is described as focusing effectively on both 2D and 3D animation and the quality of facilities are noted. Students have access to an animation studio, Autodesk 3D Maya labs, rostrum camera and a green screen visual effects studio (Fronczak, 2014).

Dundee and Glasgow appear to have particular concentrations of animation related courses. In addition to the University of Dundee, animation sector related courses in computer arts and design are taught at both Abertay University, as well as at Dundee and Angus College. The University of the West of Scotland’s Paisley campus close to Glasgow offers a degree course in computer animation with digital art. Glasgow Caledonian University offers a degree in computer games art and animation. Animation is also taught in Edinburgh, such as at the Edinburgh College of Arts at the University of Edinburgh which offers degree and masters programmes in animation. Edinburgh College offers a higher national diploma in animation. Courses available in the western Scotland Honeycomb eligible area do have relevance to the animation sector such as those focused on digital media and visual communication. At the University of the West of Scotland’s Ayr campus a degree course is offered in digital art.

Also emerging from industry interviews in Scotland was the issue of balance between technical and creative skills development in animation/games courses. The importance of creative content development and producing intellectual property that can be marketed was highlighted as important to animation sector development to stimulate an enterprise base rather than graduates being attracted to technical roles in large games companies or to other roles outside of Scotland.

3.4 EDUCATION PROVISION AND BROAD SKILLS ISSUES IN THE REPUBLIC OF IRELAND AND THE BORDER COUNTIES

Because of the recent fast pace of growth of animation in Ireland, reports suggest animation skills are in short supply (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015; O’Brien, 2012). To facilitate growth, the need for training and skills development has been highlighted, such as through graduate placements, technology apprenticeships and digital media literacy programmes in schools. Training is described as a major issue impacting Ireland’s animation sector (Gaffney, 2015; Oireachtas Committee on Jobs, Enterprise and Innovation,
Education and skills issues

The Dublin based animation studio Brown Bag Films opened a studio in Manchester last year employing 40 staff, with difficulties recruiting staff in Ireland the major reason for its Manchester location (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015). In a recent Oireachtas Committee discussing the creative economy in Ireland and job creation, the issue of educational resources emerged. Ballyfermot College explained how it could train greater numbers of students in animation to degree level if its teaching and infrastructure resources were increased (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015). In our research interviews, the issue of resources also emerged in terms of how education can better link with industry. Budgets can limit the number of external industry speakers who can deliver masterclasses. Industry lectures were also described as motivating and providing inspiration. Paul Young, chair of Animation Ireland and CEO of Cartoon Saloon explains:

> Looking at a professional in the industry, working in a big studio at the height of their game, the big thing is that it is inspirational to students. When I was a student we had the odd masterclass in animation. It lifted people's spirits. It got them to do better work.”

The challenge of producing specialist skills for the animation industry from third level education has also been highlighted. Ballyfermot College noted at the 2015 Oireachtas Committee on the creative economy that it produces generalists and that specialists are very difficult to produce in line with industry needs (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015). Professionals in the animation sector also make a similar argument. The comments of Paul Young, chair of Animation Ireland and CEO of Cartoon Saloon, in relation to specialist software knowledge help to illustrate:

> It is the principles of animation they need to learn. While it is best to know as many as possible, we use certain software, other studios use different ones again.”

During the wider discussion at this Oireachtas Committee the complexity of the skills issue also emerged (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015). From the discussion earlier in this section, this complexity is also clear. A more comprehensive response is required than simply increasing graduate numbers. There appears a need for research focused on skills gaps and shortages in Ireland’s animation sector, similar to what Creative Skillset produce for the UK.

It has been argued educational institutions have not been able to keep up with the pace of growth in Ireland’s animation sector, producing the required amount of skilled graduates. A number of degree courses are available such as at Dun Laoghaire College of Art, Design and Technology and Ballyfermot College in Dublin. Dun Laoghaire College of Art, Design and Technology in Dublin is listed in 96th place and Ballyfermot College of Further Education also in Dublin is listed in 86th place in the Animation Career Review’s 2014 list of the top 100 international animation schools (Fronczak, 2014). Limerick Institute of Technology and Tralee Institute of Technology
also offer degree courses in animation. A number of certificate courses are also available across Ireland. We identified 16, such as at further education colleges in Limerick, Castlebar, Tipperary and Dublin.

Talent is also being developed in the Honeycomb eligible area. Letterkenny Institute of Technology in county Donegal runs a degree course in animation. DKIT has a certificate course in 2D and 3D Digital Animation Production. These courses combined offer 40 places annually. Other courses in the eligible area will also have relevance to the animation sector, such as the games development degree at Sligo Institute of Technology, the computer games development certificate at Cavan Institute as well as the games certificate and degree in film/television production at DKIT.

3.5 KEY SKILLS ISSUES AND RECOMMENDATIONS

3.5.1 OVERALL SKILLS ISSUES AND RECOMMENDATIONS

• Animation skills are transferable to other parts of the digital content sector, such as games and interactive media.
• Strong supports for CPD appears an inherent necessary part of an animation sector growth strategy. Basic skills need to be learned and education is said to produce generalists. These generalists then need to become specialists developed through hands on industry experience and additional specialist training.
• Enhanced support for animation studios to work with junior animators to develop their skills, through internships, or funding for specific projects would assist local emerging talent development. Good practice case studies, such as The Bridge in the Republic of Ireland and the Creative Animation Scheme in Northern Ireland have been presented in this report.
• CPD training is also fundamental for more experienced animation professionals. Higher level CPD courses delivered with the option of participation via a webinar would facilitate animation professionals to address skills gaps.
• Key roles where deficits were identified to exist were storyboard artists, production managers and writers. CPD training could focus on these areas.
• There is a need for business skills development in the animation sector, in particular to support the expansion of small start-up studios.
• Education with close industry links should be fostered. This also needs to be resourced.
• International exchange programmes between animation colleges in Ireland and the UK would help young animators gain understanding of the wider animation sector and its international nature.
Education and skills issues

3.5.2 NORTHERN IRELAND

- Developing the experience of new entrants would strengthen Northern Ireland’s talent pool. Measures to assist this could include expansion of Northern Ireland Screen’s Creative Animation Scheme and development of an animation graduate work placement scheme similar to the Bridge, combining specialist CPD training and work experience.
- Third level education in animation is focused in Belfast. The need for an increase in the number of animation graduates should be assessed and the potential for the development of an animation degree in Derry city.
- Strong provision of CPD training for animation professionals could be developed in Derry city to help attract companies to the area and support cluster development.

3.5.3 SCOTLAND

- Forging of strong links between the animation and education sector in Scotland should be encouraged. Incentives could stimulate this such as initiatives similar to Northern Ireland Screen’s Creative Animation Scheme.
- A particular focus on business and entrepreneurial skills development for animation could help foster animation studio development.
- Strong provision of CPD training for animation professionals could be developed in Ayrshire or Skye to help attract companies to the area and support cluster development.

3.5.4 REPUBLIC OF IRELAND

- Research is needed to provide detailed information on the nature and extent of skills deficits in Ireland’s animation sector, similar to what Creative Skillset produce in the UK.
- The Animation Skillnet training network is vital to the animation sector in Ireland.
- Strong provision of CPD training for animation professionals could be developed in Dundalk or Letterkenny to help attract companies to the area and support cluster development.
Scene from Cartoon Saloon’s Oscar nominated feature The Secret of Kells, produced in the Republic of Ireland. Photo courtesy of Cartoon Saloon.
This section assesses broader challenges impacting the development of the animation sector in Honeycomb eligible areas.

Funding animation production is a major challenge for the animation sector. Westcott (2011) identifies a ‘funding crisis’ in animation, linked to the broader competition in broadcasting, the decline in broadcaster spend and the fact that the European animation sector relies greatly on commissions from broadcasters. Domestic support schemes are identified as very important to the animation sector to support future growth (IFTN, 2011; Westcott, 2011). Sourcing finance to develop animation projects is a universal issue across the animation sector. Content is costly to produce and funding often comes from a number of sources (O’Brien, 2012; Brown, 2014). The need to raise finance from a number of sources, such as through co-productions, equity financing or other forms of loans, is also noted in the report European Animation Industry Strategies, Trends and Opportunities (Digital Vector, 2015). Receipt of funding in advance of production and licensing content to other broadcasters can be crucial to fund productions (Olsberg SPI and Nordicity, 2015). Research has shown that animation companies do seek funding from a wide array of sources. In the report Securing the Future of UK Animation, eight areas are listed which are: domestic broadcasters; pre-sales to overseas broadcasters; co-productions; advances from distributors; advances on ancillary revenues; bank loans or finance from specialist financiers, loans from own funds or family/friends and government funding. Gaining funding from a diverse range of sources is time consuming, as well as being embedded with uncertainty and risk as some components may not come to pass (Kenny and Broughton, 2011).

These issues are also exacerbated by the fact that animated programmes often have a long production cycle and therefore also a long revenue cycle. A series can take two years or more to be completed and involves concept development, financing, production, post-production and distribution (Animation Ireland, 2012; Olsberg SPI and Nordicity, 2015). Compared to other television genres, the animation programme business model is said to gain a larger revenue share...
from downstream programme sales and licensing of intellectual property for merchandising. Recouping costs invested in production can also take time (Kenny and Broughton, 2011). This is also a reason why investment in animation is not attractive for most investors. Return on investment can be slow because of the time lapse between development and when a producer begins to generate a return (Westcott, 2011).

The importance of competitive tax incentives has been argued as a central support underpinning the animation sector. Simmons (2014) describes how the Canadian animation industry’s success is attributed to a number of things, including the animation entrepreneurs that established studios, but also the broader facilitative environment of tax incentives, supportive broadcasters and local talent. Public policy support for the industry, such as through tax breaks is described as a ‘game changer’ for the industry. Even when all other elements are in place, such as a well-developed talent pool, reputable studios and supportive broadcasters, incentives remain vitally important.

4.1 FUNDING AN ANIMATION PRODUCTION IN THE UK

Broadcasters are a central source of finance for animation in the UK. Research has also identified that grants, crowdfunding and self-funding are important sources of finance. Accelerate Animation (2013) research found that 86% of respondents self-fund their work and the most significant barrier to the development of independent animation projects was a lack of funding. Evidence from industry interviews, media and research reports highlight that broadcasters are investing less in animation, investing in a portion of production costs or expecting content produced for less (Youngs, 2012; Olsberg·SPI and Nordicity, 2015). Spend on PSB children’s content (first run hours) has fallen by 95% since 2003. The volume of PSB children’s content (first run hours) has fallen by 68% since 2003. The BBC accounts for the vast majority of spend on children’s content. In 2013 it spent £84 million on children’s content (first run hours), while ITV/ITV Breakfast, C4 and C5 spent £3 million (Ofcom, 2014). Restrictions on advertising to children have also been implicated in the decreasing revenues available for children’s programmes (Creative Skillset, 2011c; Kenny and Suter, 2015).

In the 2012 budget the UK government introduced tax relief for animation production, effective from April 2013. Reliefs are said to amount to about 20% of production costs. Reports suggest its positive impact began to emerge in 2014 (Brown, 2014). A number of TV series planning to start production in 2013 delayed their commencement in anticipation of the tax credit’s introduction (Creative Skillset, 2012b). The exact impact of the animation tax relief hasn’t yet been definitively measured, but it is improving competitiveness, also generating interest in the wider animation sector, including animated film. In research carried out by Creative Skillset the issue of the sustainability of the tax credit is highlighted and that an important measure of its success is creating jobs in the UK that can benefit UK taxpayers (Creative Skillset, 2012b). Available data does show positive
Broader challenges in the animation sector

impact. In the 2015 report Economic Contribution of the UK’s Screen Sectors it was found that tax reliefs encouraged £1.5 billion investment in the sector, with £5 million of this in animation programmes. The report also found that for each pound of animation tax relief granted since its introduction in 2013 an additional £1 in GVA was created from direct and multiplier effects of animation programme production, as well as £0.32 of additional tax revenue. It is also noted that these are extremely conservative figures and are likely to increase because of the length of the production process, as well as downstream programme sales and licensing activities. Overall the report notes the current impact of animation tax relief has been to help stabilise a sector in difficulty, assisting a base to develop for further growth, which is expected in the future (Olsberg·SPI and Nordicity, 2015). However uncertainty still persists in the UK animation sector according to industry advocates. The re-introduction of quotas for spend on children’s content is one key measure put forward to help secure the future of children’s content being produced in the UK (Kenny and Suter, 2015; Westminster Media Forum, 2015).

4.1.1 NORTHERN IRELAND

Northern Ireland Screen is a key provider of animation supports in Northern Ireland. Production loans are available to commercially viable projects with at least 65% of funding in place to a maximum of £800,000 or 25% of the project budget. Other supports include script, project and slate development funding (Northern Ireland Screen, 2015e). Its Creative Animation Scheme facilitates animation studios to work with junior animators to develop a short character based animation (see Case Study on Developing Emerging Talent, page 26). Animation studios can also make use of its more specific funds. For example the Ulster Scots Broadcast fund helped fund the Flickerpix animated production Five Fables (Northern Ireland Screen, 2014b).

Domestic support for animation appears well developed in Northern Ireland. In our research with practitioners in Northern Ireland, the vital importance of supports provided by agencies such as Northern Ireland Screen and Invest NI is recognised. In addition a desire for strengthen supports emerged in some areas such as greater support for development and attendance at international markets. Another advantage of developing animation in the Northern Ireland eligible area is the proximity with the Republic of Ireland eligible area. Developing co-productions with Republic of Ireland partners allows studios to access supports and incentives in both jurisdictions.
Animation productions in Northern Ireland are also eligible for the UK tax incentive. Studios and freelancers interviewed for this report comment on its vitally positive role. One drawback noted was that it is paid as a rebate at the end of the production period. A tax credit advance facility similar to what is operated in Scotland (discussed below in section 4.1.2) could be due consideration in Northern Ireland. For example, the comments of Gráinne McGuinness, Indee Productions, Northern Ireland help to illustrate:

The UK tax incentive is great, it is a significant percentage of your UK spend, and it can mean a lot to your production - but you don’t get that money until the end of your production period. So we have to find a way to cash flow that money which comes at a cost.”

One advantage held by the Northern Ireland eligible area emerging from interviews was the wider supports available, combined with lower operating costs. For example, Laura Campbell, editorial director with Dog Ears explains how being located in Derry city in the north west of Northern Ireland can make travel to meet business partners inconvenient at times, but the company gains other benefits from its location:

London costs are skyrocketing. It is much cheaper to run a studio here but the downside is the shortage of experience. Lower running costs will attract companies in but then what? They can’t bring the talent in from London all the time. It is one of these things where more investment is needed to train people so the city can catch up.”

Darren Vandenburg, freelancer, Northern Ireland eligible area.

4.1.2 SCOTLAND

BOP Consulting (2014) found low levels of funding for animation in Scotland resulting in difficulties competing in this global sector where better incentives exist in other countries. Fraser (2015) argues a respected animation talent pool exists in Scotland, however poor understanding of and support for the sector by public funders is identified as a central issue impeding development. In this context it is suggested that animation companies survive but the environment is not conducive to growth. Creative Scotland simplified its funding schemes in 2014. It now operates three main funding programmes: regular funding; open project funding and targeted funding (which includes a screen fund). Funding for the animation sector is available through these schemes.
UK animation tax incentives are available to Scottish animators. A positive measure introduced in Scotland is the tax credit advance facility (applicable to film, high-end TV and animation) available for producers to access an advance payment against receipt of their UK tax credit. This helps assist producers move projects into production. A £2 million tax credit loan fund is available to fund the tax credit advance facility and is administered by Creative Scotland (Creative Scotland, 2015b; Scottish Government, 2015a).

Another issue with developing the animation sector in the western Scotland eligible area is the lack of existing studios where emerging talent can gain experience. Finding placements can be challenging across Scotland where the industry is small. For example:

*Trying to place students all at the one time in what is essentially a tiny industry can be very difficult. Sometimes a little bit of scheduling has to occur, also a bit of creativity. There may not necessarily be enough animation companies, but there may well be for example social organisations, charities or local groups that require animation work.*

— Jason Robertson, lecturer, School of Media, Culture and Society, UWS.

### 4.2 FUNDING AN ANIMATION PRODUCTION IN IRELAND

Section 481 tax relief is of vital importance to the competitiveness of the Irish animation sector (Animation Ireland, 2012). Improvements to the scheme were introduced in 2015, increasing tax relief from 28% to 32% of eligible expenditure, as well as extending eligible expenditure to workers of any nationality and not just EU citizens (Hickey, 2015). Stability is also important to improving international attractiveness and the Section 481 tax relief has been extended to 2020. In addition another benefit of the Irish scheme is that companies can opt to receive their rebate either on completion of the project or alternatively they can receive 90% of the credit due on securing finance (or credit is guaranteed by a financial institution), with the remaining 10% paid on completion (Irish Film Board, 2015a).

Recognition exists for the supports provided by agencies such as the Irish Film Board and Enterprise Ireland to assist Ireland’s animation sector, as well as finance available from broadcasters, but also that it could increase (O’Brien, 2012). Irish Film Board funding for animation includes loans for development (to a maximum of €100,000 per project), production of TV series (up to €300,000), feature film production (up to 65% of the budget dependent on certain conditions) and feature film completion (up to €50,000) (Irish Film Board, 2015c). Its Frameworks scheme supports animated short film production up to a maximum budget of €46,000 (Irish Film Board, 2015d). The Broadcasting Authority of Ireland’s Sound and Vision scheme is also a funding source for animated television programmes (Broadcasting Authority of Ireland, 2015). Animation Ireland has argued a greater focus on slate development funding would assist the sector’s growth, helping companies move from developing one project at a time and towards slate production. In addition the organisation advocates for the Irish Film Board’s mandate to be updated. It is currently only officially mandated to support film, however it does support the wider screen sector including animation. Animation Ireland advocates however that its mandate needs to be officially changed and clarified (Gaffney, 2015; Oireachtas Committee on Jobs, Enterprise and Innovation, 2015).
The low percentage of RTÉ’s spend on independent commissioned animated programmes has been highlighted by the animation sector in Ireland, with calls made to increase funding. It has been claimed that over the 2007 to 2010 period 1% of RTÉ’s spend on independent commissioned programmes was on animation and that the majority of animated content broadcast on RTÉ was imported from the US and Europe. In this context, Animation Ireland called for an increase to 5% spend on animation from its independent commission budget. RTÉ has argued it must support and broadcast a mixed schedule across genres, which guides how resources are allocated (IFTN, 2010). While the proportion of spend has increased, it continues to be a debated issue. In a recent Oireachtas committee on job creation and the creative economy the issue was discussed that less than 3% was spent by RTÉ on children’s programming. Animation Ireland called for an amendment to the Broadcasting Act requiring RTÉ to allocate a minimum amount of its independent commissioning budget on children’s programming (Gaffney, 2015).

Also at the Oireachtas Committee held in April 2015, the high risk nature of animation sector from the investor perspective of producing film, television and animated content was discussed, which makes gaining private investment challenging. The need for capital investment at the front end of production was also highlighted. In light of these factors, the importance of funding supports and the public broadcaster spend on independent animation commissions were highlighted as doubly important.

4.3 NETWORKS AND CLUSTERS

While the screen industries, such as film and television, often require collaboration between numerous players with different skills and resources, the animation sector is said to depend to an even greater extent on collaboration. According to the UK based study by Accelerate Animation (2013: 10) “making animated films with any scale and ambition relies not just on one artist, but dozens.” The Accelerate Animation (2013) study also found that local networks between animators are strong, but the animation sector needs a national framework and voice to advocate for the sector, highlighting its economic and cultural value in order to gain greater recognition for the sector by audiences, investors and in public policy. The study identified the need for consolidation, strengthening and extension of existing networks as a key priority. Garmann Johnsen (2011) also identified that networks are an important resource underpinning the animation industry in Oslo, important in the establishment of projects, to source information and establish contacts across a range of specialist areas that could be important in the project’s delivery. Networks are activated further in the execution of projects, such as setting up short-term contract based project teams with the correct mix of specialist knowledge that work closely together during the project’s delivery. It is also suggested the existence of strong networks can make up for a lack of formal organisation in the animation industry.
Broader challenges in the animation sector

Broad business development patterns on the geographic level have shown similar companies can locate closer together developing into a cluster. Companies are likely to be drawn to locate as part of the existing cluster, because of the benefits of being part of an established cluster such as improved access to specialist knowledge and increased productivity because of cooperation between companies (Porter, 1998). Physical proximity between actors involved in animation can also be important. Garmann Johnsen (2011) identify that this creates a ‘buzz’ locally around the industry. Proximity can assist in the establishment of projects. It strengthens ‘know-who’ knowledge, helping to identify potential collaborators which can be reinforced by their reputation in terms of reliability and performance on other projects. Proximity can also assist with delivery such as allowing for face to face meetings, better communication between project members and better quality delivery. However this research is based on a case study of the Oslo animation industry and it is also noted that the wider European animated film sector has been found to be based around small clusters which also have important long distance connections outside of this. A more locally focused animation sector has stronger local networks, while an internationally focused one will likely be both networked locally and internationally. The importance of international and local networks also emerged in our interviews. For example, it can stimulate creativity, facilitate knowledge sharing and development of expertise:

If you can work in a studio once or twice it is a really good experience... You learn a lot from others. There could be someone sitting next to you and they are checking out a new networking hub or free software that you haven’t heard about and you go wow that is great... If you work in a studio you’ll know the speed you have to work and the time that it takes to deliver something for the deadline because you have worked at that pace in the studio. This comes in handy later on when you’re working from a home studio.”

Darren Vandenburg, freelancer, Northern Ireland eligible area.

Strong networks appear essential to be a successful freelancer in the industry, as well as for studios to source the talent they need. Creative Skillset research has shown that finding work in animation is often through informal methods, such as being approached by a company, by word of mouth or
approaching a company directly. A high 73% had heard about their current or most recent role through these methods, while only 8% through an advert (Creative Skillset, 2015b). Our interviews with industry also show that social networks are vital to freelancers sourcing work and companies sourcing staff. The following quotes illustrate this well:

“So many people in this industry are freelancers, if they can’t network they are not going to work.”
——
Jason Robertson, lecturer, School of Media, Culture and Society, UWS.

“It’s a good investment to keep people informed of what you are doing. On a freelance basis the wider your client base the less chance you have of having weeks or months with no work coming in, you can always rattle cages and that reminds employers that you are there. Building a network of potential sources of work is generally a good idea.”
——
Alastair McIlwain, Straandlooper, Donaghadee, Northern Ireland eligible area.

In the report European Animation Industry Strategies, Trends and Opportunities, in relation to animated feature films the importance of having access to a marketing, promotion and distribution budget when films are produced is important, as low budget films will often exhaust their budgets in production (Digital Vector, 2015). Attending international conferences such as the Annecy International Animated Film Festival and MIP Junior in France, the Kidscreen Summit in Miami and the Children’s Media Conference in Sheffield provide an important forum for animation studios to connect with international buyers. They provide access to key decision makers for emerging studios seeking to grow. For example:

“Once you get that first job you start to make contacts. It is all about those contacts. The more you keep in touch with people and keep yourself known the greater the chances you’ll stay in work.”
——
Darren Vandenburg, freelancer, Northern Ireland eligible area.

“Attending the Children’s Media Conference led to our co-production relationship with Penguin... at that early stage in our company’s development, it would have been very difficult to arrange a meeting with a company like Penguin to pitch our project, so the conference helped us to fast-track our plans.”
——
Laura Campbell, editorial director, Dog Ears, Northern Ireland.

“International markets and conferences are the places to connect with people who can help bring your idea out into the world. They are really exciting place to be - and you have to learn how to work them. It isn’t easy! You have to sell your creation to people who are being pitched to all day long, so it’s about trying to find a way to make sure your idea is heard. Not only the right idea for the right audience - but one that breaks through the noise at a market, that stands out and fires the buyer’s imagination.”
——
Gráinne McGuinness, Indee Productions, Northern Ireland.
Broader challenges in the animation sector

Attendance at such events is costly and industry interviews reveal this can be challenging for small, developing studios to invest in. Attendance fees alone can cost in the region of £450/€650 to £1000/€1400. Companies can access funding support to attend conferences, however through our interviews the view emerged that these supports could be strengthened. Organisations can play a role in collectively representing the industry of particular places at such events, particularly in earlier years of industry development when costs can be particularly inhibitive. For example Animation Ireland has worked to collectively represent Irish animation at international conferences and continues to promote the sector internationally.

In the wider creative industries, dedicated creative industry incubators have been successful in assisting micro enterprises to grow where clusters exist, or to assist a potential cluster in development to emerge. However it is thought incubators alone are not likely to lead to the development of a creative cluster (Creative Growth, 2011).

4.3.1 NETWORKS AND CLUSTERS - NORTHERN IRELAND AND THE ELIGIBLE AREA

Developing the animation sector in the Northern Ireland eligible area could be inhibited by the concentration of animation companies in the Belfast area. Being part of a cluster has advantages for businesses such as animation studios. The freelance nature of the workforce also means that animation clusters have the added advantage that freelancers can potentially move between companies when short term contracts begin and end.

That said, once the animation sector in the Northern Ireland eligible area is strongly internationally networked, this should help overcome the disadvantage of being outside the Belfast area. Derry city could potentially be developed as a satellite cluster linked to the existing Belfast animation cluster. Interviews with studios and freelancers in the eligible area show how they are outward looking. Their networks are not just in Northern Ireland, but are international. Northern Ireland Screen and Invest NI supports emerged as important in supporting international networking and pitching, which is costly.

High speed broadband is also an essential infrastructure. It facilitates freelancers and studios to work remotely to their clients and collaborators. Key tools cited included Skype, file hosting services such as Dropbox and project management tools such as Basecamp. Compared to broadband speeds available in cities such as Belfast, this did emerge as an issue in the eligible area. For example:

“For remote working, broadband speed can definitely be an issue. I work in Donaghadee, which is about 18 miles from Belfast. The maximum download speed I get is about three megabits per second. If I was in the centre of Belfast it would probably make quite a big difference...you should have speeds that do not compromise what you do...The job that I am doing at the moment I need to load stuff up on to an FTP site and the upload speeds are half what the download speeds are.”

Alastair McIlwain, Straandlooper, Donaghadee, Northern Ireland eligible area.
Broadband is hugely influential in the animation sector. The Kelvin project in Northern Ireland, which is a direct fibre optic link to the US and the northwest of the UK, has made Belfast very efficient in the media industry. They can upload a HD episode of Game of Thrones that is filmed here to HBO in less than half an hour. That could be a huge attraction for the animation business."

Darren Vandenburg, freelancer, Northern Ireland eligible area.

Collaboration with sectors outside of animation, but closely linked, such as games, advertising, children’s publishing and education, also appears important in the eligible area. For example the children’s media company Dog Ears located in Derry city organises the children’s book festival Humdinger in partnership with local bodies such as the Arts Council of Northern Ireland and Libraries NI (Dog Ears, 2015a). Another company producing animated comics in Derry city runs workshops in schools and community groups (Uproar Comics, 2014).

4.3.2 NETWORKS AND CLUSTERS - SCOTLAND AND THE ELIGIBLE AREA

Similar to the points made in relation to the concentration of animation studios in Belfast, the concentration of companies in the Edinburgh and Glasgow areas could impact the development of the animation sector in the western Scotland eligible area. Our industry interviews indicate that the animation sector is not well developed in the western Scotland eligible area, which could further exacerbate the draw to locate as part of existing clusters. However, based on education provision in Scotland, the talent pool in the wider Scotland area is potentially reasonably well developed. If development of the animation sector can be realistically encouraged in the western Scotland eligible area, which could further exacerbate the draw to locate as part of existing clusters. However, based on education provision in Scotland, the talent pool in the wider Scotland area is potentially reasonably well developed. If development of the animation sector can be realistically encouraged in the western Scotland eligible area, which could further exacerbate the draw to locate as part of existing clusters. However, based on education provision in Scotland, the talent pool in the wider Scotland area is potentially reasonably well developed.

Industry interviews indicate that animation career options in the eligible area are very limited and talent from Scotland is drawn either into the games sector or to other parts of the UK for work.

"They gain the skills; then they don’t know where to go. They can end up going to a games company...The very best will end up probably recruited by a company down south or abroad because there is no base here."

Jason Robertson, lecturer, School of Media, Culture and Society, UWS.

Similar to observations made in Northern Ireland, collaboration with sectors outside animation appear important in the western Scotland eligible area. Maintaining an adequate level of work for start-up animation companies in the eligible areas can be challenging. Diversity and not having a complete focus on animation for broadcast appears an important strategy for start-up animation businesses. Toon
Broader challenges in the animation sector

Platoon for example also works with the education sector delivering workshops in schools. While local collaboration is possible in less specialist areas, such as music or voice work, working to develop the animation sector in the western Scotland eligible area could also need engagement with more experienced studios and specialist professionals outside of the locality. For example, the comments of the start-up animation studio working to develop an animated TV series based in Lochaber helps to illustrate:

"We would be looking at bringing in some freelance help or working with some other companies with a bit more experience. That would have to be out from the area because there is nobody here who is doing it or at that level."

Barry Hutchison, Toon Platoon, western Scotland eligible area.

The importance of high speed broadband also emerged in Scotland in relation to developing the animation sector. It is possibly doubly important because of the particularly peripheral nature of the area in terms of travel, as the following comments help to illustrate:

"One of the problems I would say being up here is we are so isolated. It is three hours to Glasgow from here by car. That is often the start of your journey. As we are looking to do more networking with other production companies and broadcasters there is going to be a lot of time and expense involved...Having access to things that are on is the big problem, which makes missing events even more of a blow...With live streaming the beauty is it can be available afterwards...But what you lose is the networking element."

Barry Hutchison, Toon Platoon, western Scotland eligible area.

4.3.3 NETWORKS AND CLUSTERS - REPUBLIC OF IRELAND AND THE ELIGIBLE AREA

The development potential in Ireland’s animation sector has been noted. Industry interviews indicate that with the correct kind of government supports its development potential can be maximised. Interviews show that a particular strength and expertise has been developed in TV and Ireland’s reputation in this regard is also an added strength. If some of this growth can be realistically encouraged in the border areas remains unclear, however with the correct supports development could be stimulated. As has been noted in relation to the other Honeycomb eligible areas and the draw to existing clusters, the concentration of companies in the Dublin area could also impact on the development of the animation sector in the eligible areas. However successful animation studios can develop outside the Dublin area. While not in the eligible area, Oscar nominated Cartoon Saloon based in Kilkenny provides an
interesting case which the eligible area can learn from. It has successfully established itself in an area where there are no other animation studios. Cartoon Saloon is also networked internationally. Their business is not local, it is national and international so their location becomes less relevant, rather it is the networks they are part of that are most important. Being outside of the Dublin cluster does bring a disadvantage in terms of the short-term freelance nature of employment in animation. Staff can’t move from one company in the cluster to another. However Cartoon Saloon has benefited from talent developed in the Dublin cluster where people have moved to work at their studios. Even though the company is not located in the Dublin cluster it can benefit from its existence. The company’s success shows what is possible and others across the animation sector are aware of this. For example:

“Cartoon Saloon in Kilkenny have proven you don’t have to be in a massive metropolis to make a production of quality.”

Darren Vandenburg, freelancer, Northern Ireland eligible area.

The same can be said in relation to Zink Films, located in the Honeycomb eligible area. For example the company can draw on Dublin networks when trying to source skilled staff. Gary O’Neill from Zink Films explains:

“We had a hard time finding animators for a short we are working on. I contacted one of the other 3D animation studios and they gave me a list of guys they recommend. Then I would pass on the list of guys that I was working with to the same company.”

The type of animation production can also support a more flexible, less centrally located workspace. Producing animated commercials has different needs in terms of client engagement and online tools such as Skype can support meetings. O’Neill explains:

“The projects are small and there is a big turnaround. Most of the jobs we get are required in two or three weeks as opposed to a year. Clients are happy enough to Skype and have a look at a couple of QuickTime movies as it progresses.”

The quality of broadband is therefore important to support animation sector development in the Republic of Ireland eligible area. Developing clusters in particular areas could be an approach meriting further consideration. A small number of animation companies were identified in the Dundalk area. This could potentially be developed as a satellite cluster linked to the existing Dublin animation cluster. The presence of DKIT and its focus on digital media also provides a potential talent pool. Another potential resource locally is the Creative Spark workspace facility and the Regional Development Centre at DKIT. Resources exist that could support the animation sector in Letterkenny, such as animation graduates from Letterkenny Institute of Technology and business supports such as the CoLab Innovation Centre. Potential may exist to develop an animation cluster in Letterkenny with a cross border strategy where Derry city and Letterkenny are developed in tandem as animation clusters fostering co-productions that could benefit from supports available in both regions.
4.4 KEY ISSUES AND RECOMMENDATIONS

4.4.1 OVERALL ISSUES AND RECOMMENDATIONS

- Because of the long production and revenue cycle in animation, domestic funding supports for animation are vital, such as development funding and low/no interest production loans.
- Cost competitiveness is a central issue in animation sector development. Incentives offered impact this significantly. The background to the introduction of the UK tax credit (discussed in section two and four) shows competing with other economies is growing more challenging. Incentives on offer can impact this to a great degree. Screen and creative development agencies need to ensure they have a competitive offering in terms of incentives and regularly assess what is happening in closely competing economies to help shape their future supports.
- Screen support agencies should work with investors to increase understanding of the animation revenue model and longer term potential benefits of investment.
- Broadcasting regulators should evaluate if PSBs could be more supportive of children’s content development and introduce measures as appropriate.
- Strong local, national and international networks are a crucial part of the animation sector. Support agencies could look at strengthening supports to assist networking.
- Because of the growth potential in the animation sector, existing business incubation centres based at third level institutions with animation courses should directly work with animation students to encourage start-up development. A mentoring programme linking existing studios with start-ups would also assist new entrants navigate the complex world of animation funding.
- Incentives to catalyse business development in clusters in the eligible areas would help to develop the animation studio base. This could include:  
  - An animation foreign direct investment incentive.
  - A scheme to encourage economic migrants from the eligible areas to return and establish animation studios.
  - Broadcasters with public service obligations could be obligated to spend part of their commissioning budgets in the eligible areas.
- Growth of the animation sector in the eligible areas would provide opportunities for ‘far north sourcing’ – this is sub-contracting work to the eligible area from animation clusters, such as London or Dublin, due to the cheaper cost of production. A scheme to promote the benefits of this out-sourcing approach would encourage this type of sub-contracting.
- Animation businesses in the eligible areas appear to harness links with and develop crossovers with other sectors such as education. An important part of a strategy developing animation business in the eligible areas would be to strategically encourage the development of links with closely linked sectors such as games, advertising, children’s publishing and education.
- In the eligible areas strategic alliances should be built between animation and other digital content sectors such as interactive media, film and games to assist better skills sharing and cross-sector working.
- Better use of digital tools by animation studios, such as video/telecommunications, file hosting and project management, to enable freelancers to work remotely to more centrally located studios.
4.4.2 NORTHERN IRELAND

- Introduction of a similar measure to the tax credit advance facility which is available in Scotland would assist Northern Ireland animation producers access an advance payment against receipt of their UK tax credit and move projects into production.
- Assess the potential of developing Derry city as a satellite cluster linked to the Belfast animation sector. The cheaper cost location and resources such as Ulster University, the North West Regional College and the Innovation Centre at the Northern Ireland Science Park could facilitate cluster development.
- Assess the potential of developing cross border animation clusters linking Derry city and Letterkenny.

4.4.3 SCOTLAND

- Sector specific supports for animation in Scotland appear to be low. Creative Scotland’s targeted funding under its screen fund could potentially focus specifically on animation, such as developing schemes to support developing emerging animation talent which have been observed in Northern Ireland and the Republic of Ireland (see Case Study, page 26).
- Assess the potential of developing Ayrshire or Skye as animation clusters in western Scotland. These are cheaper cost locations than Glasgow or Edinburgh.

4.4.4 REPUBLIC OF IRELAND

- Assess the potential of developing Dundalk as a satellite cluster linked to the Dublin animation sector. Its proximity to Dublin, cheaper cost location and resources such as DKIT and Creative Spark could facilitate cluster development.
- Assess the potential of developing cross border animation clusters linking Letterkenny and Derry city.
It appears that succeeding in the animation sector is closely linked with being competitive enough to gain a growing proportion of available market share. Surprisingly, according to Westcott (2011) in the last decade the size of the animation industry globally has been relatively stable. While there has been an increase in specialist children's broadcasters, it has been argued this hasn’t resulted in an increase in funding as networks can buy in volume, repeat content and drive a hard bargain (Westcott and Stuart, 2014). Forecasts for the sector do predict growth. For example Digital Vector (2014) forecasts the UK’s animation sector to grow from a value of US $219 in 2014 to US $246 by 2017, with the number of studios increasing from around 480 to over 500. In the Digital Vector report European Animation Industry Strategies, Trends and Opportunities growth is forecast in Europe in the number of children’s channels and hours devoted to animation up to 2017 (see Table 5.1, page 55).

From this year until 2017 Digital Vector predicts there will be an extra 28 children’s television channels and an increase in demand for new animated content by 33 hours. While 2D currently makes up most animated content in Europe (80%), it is also predicted that demand for 3D animation will increase to a greater extent than demand for 2D animation (see Table 5.2, page 55).

Key growth opportunities identified in the Digital Vector European animation report as follows:

- Co-productions that combine talents and stories from different markets are both a necessity and an opportunity.
- Existing relationships with international studios such as in the US and Japan could be better leveraged.
- The UK is noted as having expertise in 3D animation. This specialist edge needs to be maintained to effectively compete against other countries entering the 3D animation market.
Future growth opportunities

**TABLE 5.1**

Animated content demand forecast – TV channels in Europe

<table>
<thead>
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<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tbody>
<tr>
<td>ENTERTAINMENT CHANNELS (TOTAL NUMBER)</td>
<td>6578</td>
<td>6592</td>
<td>6605</td>
<td>6618</td>
</tr>
<tr>
<td>ENTERTAINMENT CHANNELS ANIMATION AIRTIME (HOURS)</td>
<td>79</td>
<td>79</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>CHILDREN'S CHANNELS (TOTAL NUMBER)</td>
<td>259</td>
<td>272</td>
<td>286</td>
<td>300</td>
</tr>
<tr>
<td>CHILDREN'S CHANNEL ANIMATION AIRTIME (HOURS)</td>
<td>1556</td>
<td>1634</td>
<td>1715</td>
<td>1801</td>
</tr>
<tr>
<td>TOTAL ANIMATION AIRTIME (HOURS)</td>
<td>1635</td>
<td>1713</td>
<td>1795</td>
<td>1881</td>
</tr>
<tr>
<td>NEW CONTENT (HOURS)</td>
<td>327</td>
<td>343</td>
<td>359</td>
<td>376</td>
</tr>
</tbody>
</table>

SOURCE: DIGITAL VECTOR 2015

**TABLE 5.2**

Content demand forecast in Europe by TV channel – 2D and 3D animation (000' minutes)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>2D ANIMATION</td>
<td>4474</td>
<td>5001</td>
<td>4913</td>
<td>4873</td>
<td>399</td>
<td>9%</td>
</tr>
<tr>
<td>3D ANIMATION</td>
<td>1193</td>
<td>1250</td>
<td>1638</td>
<td>1991</td>
<td>798</td>
<td>67%</td>
</tr>
</tbody>
</table>

SOURCE: DIGITAL VECTOR 2015
Future growth opportunities

• An increasing focus should be put on ownership of intellectual property and brand building.
• Better exploitation of intellectual property and revenue generating opportunities from merchandise such as toys and books, particularly in the pre-school animated content sector.
• Better leveraging of cultural histories in animated content.
• Production of high quality animation that is appealing to a global audience to maximise revenue generating opportunities.
• Increased use of virtual studio tools and new animation technologies so that a number of small teams can work together to produce content of a quality to rival large studios.
• Internet based platforms present new revenue opportunities. Distribution channels such as YouTube remove the need for an intermediary and allow direct distribution (Digital Vector, 2015).

Globally competition in the animation sector has intensified and it is observed that Asian countries such as India and China are moving away from being a service focused industry and to also focusing on the generation and exploitation of intellectual property. The cost of production is a key challenge for the animation sector. Attempts to produce lower cost but high quality animation using new technology is a growing trend, however this requires investment in terms of facilities and software (Animation Ireland, 2015; Digital Vector, 2015).

5.1 STRONG EXPORT POTENTIAL, NICHE MARKETS AND GENERAL TRENDS

The animation sector is one with inherent export potential. The export potential of the Ireland’s animation sector has been noted (Audiovisual Strategic Review Steering Group, 2011). However, the potential is not just in Ireland, but across the animation sector because of the nature of animated programmes. They can be effectively dubbed or re-versioned. This is an important commercial advantage allowing programmes to be adapted to the needs of new markets or broadcasters (Olsberg·SPI and Nordicity, 2015).

The pre-school and under 10s market appears particularly strong for animated content. Eurodata TV Worldwide (2013) note that some animated productions have appeal to a wide age range of children, such as Tom and Jerry and Shaun the Sheep, while it notes that animation is particularly strong among younger children. It is also noted that putting a new spin on a classic favourite can tap into a pre-existing fan base and gaining inspiration from the past can provide production ideas.

5.2 OWNERSHIP AND EXPLOITING INTELLECTUAL PROPERTY

Animation studios can focus on delivering service work for other companies. This approach can be very competitive as studios compete with lower cost economies. They can also generate their own intellectual property by developing their own animated content and retaining ownership of it. Studios may also combine a mixture of both. There is a greater potential future economic value to be captured from intellectual property generation.
Compared to the wider film and broadcast sector, animated productions potentially have a high level of long term brand value (Animation Ireland, 2015). The animation sector: “continues to create characters that will be the global brands of tomorrow” (Kenny and Broughton, 2011:7). Exploiting intellectual property can generate secondary sales from merchandise and multi-platform content development (Audiovisual Strategic Review Steering Group, 2011; Olsberg·SPI and Nordicity, 2015). Consider that of the £171 million GVA of the UK animated programme sector, £72 million is composed of merchandise sales. In addition, this impact may only be fully felt a number of years after the programme’s first broadcast (Olsberg·SPI and Nordicity, 2015). Generating downstream revenues has been described as key to generating substantial financial success from animated programmes. However this is dependent on the success of the programme and therefore is uncertain (Kenny and Broughton, 2011; Olsberg·SPI and Nordicity, 2015).

5.3 CROSS PLATFORM DIGITAL CONTENT

Animation is becoming a more pervasive form of media. It has been noted that the animated documentary is an expanding genre and animated content is used in for example in computer games and advertising (Chen and Rascaroli, 2014). Partnerships between animation content producers and game producers are highlighted an area of potential collaboration. Rovio’s Angry Birds and the 20th Century Fox film Rio’s cross promotion where a Rio version of the Angry Bird’s game was developed for mobile devices is one example (Digital Vector, 2015). In the 2015 report Economic Contribution of the UK’s Screen Sectors it is noted that digital content sectors are growing closer and particularly the animation, games and visual effects industry are expected to increasingly converge in future (Olsberg·SPI and Nordicity, 2015). Yoon and Makecki (2009) argue it is possible for studios to shift among markets (e.g. television, mobile content). Studios need not be locked into one market. The final step can be to upgrade to feature film production.

Cross platform opportunities are important in the modern animation industry. On demand TV is one area. Westcott (2011) argues that the internet hadn’t delivered new revenue streams to animation productions by 2011 and that children’s TV viewing had remained mostly linear. However this is changing. For example, in 2013 in the Brazilian market a dedicated on demand children’s content service YouYn was launched and its offering included games, music, animated series and books (PwC, 2014). Our interviews with the animation sector also reveal that companies providing streaming services, such as Netflix and Amazon are of growing importance to the animation sector. That said, it is also important to note that while decreasing, traditional TV remains an important device for children’s viewing (Eurodata TV Worldwide, 2015).
Future growth opportunities

Children are early adopters of connected devices such as tablets and many children use these devices (Westcott and Stuart, 2014). Developing cross platform content, such as books and apps, adds to the complexity of animation production. An awareness of challenges can help when developing cross platform content. At the Belfast Media Festival at CultureTech 2014 the Derry city based company Dog Ears highlighted issues encountered while developing animated content across platforms. The Dog Ears animated series Puffin Rock is being developed as a book, app and TV series in co-production with Cartoon Saloon in Kilkenny. Producing the book resulted in animators having to think about framing and freezing the emotions they were capturing. Producing the app needed consideration of interactivity when tapped (Dog Ears, 2014).

The growing importance of cross platform content is also evidenced by the dedicated pitching event held by Cartoon, the European animation industry organisation in 2015. Cartoon 360 brought together experts from new platforms and cross media fields including augmented reality, connected toys, apps, games and e-books (Cartoon, 2015).

5.4 TOURISM SPILOVER EFFECTS

The value of the intellectual property created by the animation sector can also overspill into the tourism sector. For example Beatrix Potter’s Peter Rabbit is used to market the Lake District of England and as a tourist attraction (Frederick Warne and Co., 2015). When Disney produced the animated feature film Brave, focused on the adventures of a princess in the Scottish Highlands, Visit Scotland invested £7 million in a global advertising campaign to coincide with the film’s launch (Carrell, 2012). The landscape featured in Cartoon Saloon’s Oscar nominated feature film Song of the Sea is based on Glencolmcille in county Donegal, located in the Honeycomb eligible area of the Republic of Ireland, which could attract additional tourists to the area to explore its cultural landscape (Oireachtas Committee on Jobs, Enterprise and Innovation, 2015). It has been argued however the potential to generate significant tourism from animated content emerges when productions are particularly successful (Olsberg·SPI and Nordicity, 2015).

5.5 CO-PRODUCTIONS

A key market trend in animation is the rise of co-productions (Eurodata TV Worldwide, 2013). Increasing collaboration among European studios is observed (Animation Ireland, 2012; Digital Vector, 2015). The international co-production is also identified as increasing opportunities in animation, supported by new markets and technologies (Yoon and Makecki, 2009). The cost of producing animated content also makes international co-productions very important (IFTN, 2010). There are also important factors at play in being an attractive co-production partner, such as financial incentives, existing business reputation and skills base. Examples of co-productions between companies based in Northern Ireland and the Republic of Ireland include Puffin Rock (Dog Ears and Cartoon Saloon) as well as Zig and Zag (Flickerpix, JAM Media and Double Z Enterprises) (Northern Ireland Screen, 2013a; Northern Ireland Screen, 2015f). At a 2015 Oireachtas Committee Animation Ireland recommended that co-production treaties are expanded to as many countries across the world as possible in order to expand international sales opportunities (Gaffney, 2015).
5.6 KEY TRENDS

- There is inherent export potential in the animation sector giving it commercial advantage. Productions can be effectively dubbed or re-versioned to the needs of new markets or broadcasters.
- The nature of the animation industry in Ireland, Northern Ireland and Scotland could also be a competitive advantage. Relatively small, independent studios dominate which could concentrate to some degree on producing animated content for niche markets.
- Animated productions potentially have a high level of long term brand value to be captured from intellectual property exploitation generated from secondary sales from merchandise and multi-platform content development.
- Cross platform opportunities are very important in the modern animation industry. Web series, apps, books and games are all areas of cross platform potential.
- The value of the intellectual property created by the animation sector can also overspill into the tourism sector. Potential to generate significant tourism from animated content may only emerge when productions are particularly successful.
- International co-productions are important in the animation sector. However a number of factors impact on being an attractive co-production partner, such as domestic financial incentives, existing business reputation and skills base.
Based on the evidence reviewed in this research, a number of recommendations have emerged. Some relate to the wider animation sector and others are specific to the eligible areas.

6.1 TRAINING AND SKILLS RECOMMENDATIONS

• Strong supports for CPD appears an inherent necessary part of an animation sector growth strategy. Basic skills need to be learned and education is said to produce generalists. These generalists then need to become specialists developed through hands on industry experience and additional specialist training.
• Enhanced support for animation studios to work with junior animators to develop their skills, through internships, or funding for specific projects would assist local emerging talent development. Good practice case studies, such as The Bridge in the Republic of Ireland and the Creative Animation Scheme in Northern Ireland have been presented in this report.
• CPD training is also fundamental for more experienced animation professionals. Higher level CPD courses delivered with the option of participation via a webinar would facilitate animation professionals to address skills gaps.
• Key roles where deficits were identified to exist were storyboard artists, production managers and writers. CPD training could focus on these areas.
• There is a need for business skills development in the animation sector, in particular to support the expansion of small start-up studios.
• Education with close industry links should be fostered. This also needs to be resourced.
• International exchange programmes between animation colleges in Ireland and the UK would help young animators gain understanding of the wider animation sector and its international nature.
6.2 WIDER RECOMMENDATIONS

- Cost competitiveness is a central issue in animation sector development. Incentives offered impact on this significantly. The background to the introduction of the UK tax credit (discussed in section two and four) shows competing with other economies is growing more challenging. Incentives on offer can impact this to a great degree. Screen and creative development agencies need to ensure they have a competitive offering in terms of incentives and regularly assess what is happening in closely competing economies to help shape their future supports.

- Screen support agencies should work with investors to increase understanding of the animation revenue model and longer term potential benefits of investment.

- Broadcasting regulators should evaluate if PSBs could be more supportive of children's content development and introduce measures as appropriate.

- Strong local, national and international networks are a crucial part of the animation sector. Support agencies could look at strengthening supports to assist networking.

- Because of the growth potential in the animation sector, existing business incubation centres based at third level institutions with animation courses should directly work with animation students to encourage start-up development. A mentoring programme linking existing studios with start-ups would also assist new entrants navigate the complex world of animation funding.

- Incentives to catalyse business development in clusters in the eligible areas would help to develop the animation studio base. This could include:
  - An animation foreign direct investment incentive.
  - A scheme to encourage economic migrants from the eligible areas to return and establish animation studios.
  - Broadcasters with public service obligations could be obligated to spend part of their commissioning budgets in the eligible areas.

- Growth of the animation sector in the eligible areas would provide opportunities for ‘far north sourcing’ – this is sub-contracting work to the eligible area from animation clusters, such as London or Dublin, due to the cheaper cost of production. A scheme to promote the benefits of this out-sourcing approach would encourage this type of sub-contracting.

- Animation businesses in the eligible areas appear to harness links with and develop crossovers with other sectors such as education. An important part of a strategy developing animation business in the eligible areas would be to strategically encourage the development of links with closely linked sectors such as games, advertising, children's publishing and education.

- In the eligible areas strategic alliances should be built between animation and other digital content sectors such as interactive media, film and games to assist better skills sharing and cross-sector working.

- Better use of digital tools by animation studios, such as video/telecommunications, file hosting and project management, to enable freelancers to work remotely to more centrally located studios.
Recommendations

6.3 SPECIFIC RECOMMENDATIONS FOR THE HONEYCOMB REGIONS

6.3.1 NORTHERN IRELAND

• Introduction of a similar measure to the tax credit advance facility which is available in Scotland would assist Northern Ireland animation producers access an advance payment against receipt of their UK tax credit and move projects into production.
• Assess the potential of developing Derry city as a satellite cluster linked to the Belfast animation sector. The cheaper cost location and resources such as Ulster University, the North West Regional College and the Innovation Centre at the Northern Ireland Science Park could facilitate cluster development.
• Assess the potential of developing cross border animation clusters linking Derry city and Letterkenny.

• Developing the experience of new entrants would strengthen Northern Ireland’s talent pool. Measures to assist this could include expansion of Northern Ireland Screen’s Creative Animation Scheme and development of an animation graduate work placement scheme similar to the Bridge, combining specialist CPD training and work experience.
• Third level education in animation is focused in Belfast. The need for an increase in the number of animation graduates should be assessed and the potential for the development of an animation degree in Derry city.
• Strong provision of CPD training for animation professionals could be developed in Derry city to help attract companies to the area and support cluster development.

6.3.2 WESTERN SEABOARD OF SCOTLAND

• Sector specific supports for animation in Scotland appear to be low. Creative Scotland’s targeted funding under its screen fund could potentially focus specifically on animation, such as developing schemes to support developing emerging animation talent which have been observed in Northern Ireland and the Republic of Ireland (see Case Study, page 26).
• Assess the potential of developing Ayrshire or Skye as animation clusters in western Scotland. These are cheaper cost locations than Glasgow or Edinburgh.
• Forging of strong links between the animation and education sector in Scotland should be encouraged. Incentives could stimulate this such as initiatives similar to Northern Ireland Screen’s Creative Animation Scheme.
• A particular focus on business and entrepreneurial skills development for animation could help foster animation studio development.
• Strong provision of CPD training for animation professionals could be developed in Ayrshire or Skye to help attract companies to the area and support cluster development.
6.3.3 REPUBLIC OF IRELAND BORDER COUNTIES

- Assess the potential of developing Dundalk as a satellite cluster linked to the Dublin animation sector. Its proximity to Dublin, cheaper cost location and resources such as DKIT and Creative Spark could facilitate cluster development.
- Assess the potential of developing cross border animation clusters linking Letterkenny and Derry city.
- Research is needed to provide detailed information on the nature and extent of skills deficits in Ireland's animation sector, similar to what Creative Skillset produce in the UK.
- Strong provision of CPD training for animation professionals could be developed in Dundalk or Letterkenny to help attract companies to the area and support cluster development.
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References


References


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References


Appendix 1
The Honeycomb Creative Works Team

STAFF AND MANAGEMENT COMMITTEE
David Brown, Scottish Programme Coordinator,
Creative Skillset
Dr Paul Beaney, Project Director,
Ulster University
Deirbhile Doherty, Finance Assistant,
Ulster University
Professor Sarah Edge, Skills Director,
Ulster University
Kevin Fearon, Networks of Scale Coordinator,
Dundalk Institute of Technology
Professor Nick Higgins, Research Associate,
University of West Scotland
Ian Kennedy, Management Committee,
Creative Skillset Northern Ireland
Camilla Long, Skills Coordinator,
Ulster University
Irene McCausland, Management Committee,
Dundalk Institute of Technology
Fiona McElroy, Programme Manager,
Ulster University
Stephen Michael, Web Developer,
Ulster University

Dr Colm Murphy, Intelligence Director,
Ulster University
Aisling Murtagh, Research Associate,
Ulster University
Dr Douglas Nanka-Bruce, Research Associate,
Dundalk Institute of Technology
Caroline O’ Sullivan, Skills Coordinator,
Dundalk Institute of Technology
Maria Prince, Programme Administrator,
Ulster University
Alasdair Smith, Management Committee,
Creative Skillset Scotland
Agnieszka Walsh, Project Administrator,
Dundalk Institute of Technology
Dan Wilks, Research Associate,
Creative Skillset London

LEAD PARTNER
Ulster University

PARTNERS
Creative Skillset
Dundalk Institute of Technology
University of the West of Scotland

DELIVERY PARTNERS
Creative Scotland
Letterkenny Institute of Technology
MG Alba
Regional Development Centre, Dundalk Institute
of Technology
ScreenHI
The Nerve Centre
About Honeycomb

The Honeycomb – Creative Works programme is a collaborative project led by Ulster University, in partnership with Dundalk Institute of Technology, Creative Skillset and the University of the West of Scotland.