UNIVERSITY OF CHICHESTER

WIRED SUSSEX

Report for Coastal West Sussex to develop a strategic plan for the facilitation of an advanced creative digital economy

Developing the Opportunity

Final Version 1

December 2021

Contents

Introduction

The purpose of this report is to build on the evidence base arising from the research undertaken into the regional creative digital economy and skills provision and develop an outline of what a potential plan for the facilitation of an advanced creative economy along the West Sussex Coastal strip could look like. This document was further refined in response to input provided by participants at a facilitated workshop on 18th November 2021.

The document addresses the opportunity from three linked perspectives:

- Establishing a CreaTech Open Innovation Network to enable knowledge and resource sharing between regional organisations and facilities
- Delivery of a 'flagship' Virtual Production studio complex, with integrated large-scale production and research & innovation components.
- Enhancing local educational and skills attainment utilising a range of approaches such as Sports, Games Design, Digital skills and e Sports cafes.

Across the UK, cities and regions have established significant industrial and cultural development plans. There are many common themes and approaches to support the strategic direction and economic growth for the Creative Industries, with varying levels of intent and vision. Widely recognised as a significant sector for the UK's future economic growth and for the potential for high skilled employment opportunities, many of the plans put Digital, Creative & Culture at the centre.

Currently almost every region or city of the UK has a defined industrial strategy to support and build their creative and cultural industries. Many are low cost and lack ambition, therefore will struggle to ultimately make significant impacts on increasing opportunity, inward investment and high skilled employment.

Approaches do vary. However, there are a lot of thematic commonality and concerns. Actions to create bridges between creative sectors and the use of creative clusters are proposed across the country. These interventions can offer some clarity and opportunity moving forwards, and should enhance productivity and regional identity.

The most powerful strategic approaches and those that would appear to have greater impact, are bold and ambitious visions for what their region or city can be. The focus is on enhancing existing creative digital activity that can be strategically significant; building and facilitating significant growth engines to fast-track longer term sustainability; integrating education across all levels of the plans and matching taught skills with industry needs regionally. In effect, there is a holistic recognition of the creative industries as a key sector from which to build economic security and attract inward investment.

The most explosive UK growth is in content production for Film and High-End TV (F&HETV). Growth in this sector was very apparent pre-Covid and our subsequent changes in consumption of screen-based material has turbo-charged the future for this sector beyond any pre-Covid predictions.

We have picked out four brief case studies from across the country as a way of illustrating the current situation.

Thames Estuary Production Corridor

One of the most exciting and dynamic regional strategies is the Thames Estuary Production Corridor. The plan[1] is bold and coherent, already drawing down significant funding and support, and provides a clear interconnecting of existing creative and cultural ecosystems with new projects integrating skills development, infrastructures and investment opportunities. The project unites education, industry, tech development and investment in to a singular definable goal; making the Thames Estuary a world class leader for production in the creative and cultural industries. It is a vast intersecting plan covering a multitude of commercial and educational assets across Kent, Essex and London. Central to their plan is the development of places, clusters and infrastructure with a mixture of projects as either growth engines (larger scale initiatives with transformational potential) or local sparks (smaller scale projects focused on activities within places).

Stoke-on-Trent

Stoke-on-Trent utilise a more compact approach with a very specific cultural focus. Building on their heritage as a city of 'makers' much of their vision is to interconnect existing cultural assets to promote the city to a wider audience of users and participants[2]. Their approach is more traditional, cluster focused and shows an awareness of the region's identity. It aims to develop a more unified image and support framework for their existing assets whilst recognising the advantages that are emerging through the digital sectors to enhance the city and region. Their plan makes use of significant existing assets and recognises the importance of their two universities, Keele and Staffordshire. Both offer significant research opportunities and Staffordshire are a leading Esports, Gaming and tech institution.

Space Studios Manchester

Manchester, much like London, has many advantages over other regions with their international reputation for the creative industries and large-scale inward investment in this sector by amongst others the BBC relocation to MediaCityUK. The city also has a very well-established performing arts and night time economy to underpin the cultural aspects of current strategies.

It is clear from the Future of the Creative Economy in the North of England[3] report that Manchester despite all its apparent advantages has similar CreaTech/creative industries problems to resolve as the CWS region. The skills shortage in games creatives for example, has led to international recruitment due to a lack of talent pipeline from school, colleges and Universities. The Games sector suffers greatly from a lack of positive perception in educational environments and the substantial drop in students studying creative and arts subjects in schools is generating significant issues and widening the skills gap. We also share many of the strengths and range of creative industry subsectors, which in turn leads to genuine opportunity through support for innovation, content production and R&D.

One of the largest investments in the Manchester creative sector has been Space Studios (Film & TV), which originally opened in 2013 but is now being expanded due to increased

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[1] https://www.london.gov.uk/sites/default/files/tepc_case_for_investment_2020.pdf
[2] MAKING THE CREATIVE CITY A cultural strategy for Stoke-on-Trent
[3] https://www.businessgrowthhub.com/media/1068653/2674-creative-industries-report-2021-final.pdf

demand. The studios are part of a wider regeneration of the Sharp Electronics warehouses and is owned by Manchester City Council.

Space Studios Manchester

Bristol One City

Economic Recovery and Renewal Strategy is an all-encompassing plan for Bristol City[4] that integrates creative and cultural assets, industry, education and environment. Themes include connecting places, being people centric and enhancing educational development through targeted skills training and opportunities.

It is a diverse, thriving and dynamic city with a young, growing population and internationally recognised strengths in innovative and high value industries, including advanced engineering, the low carbon sector, professional and financial services, and the digital and creative industries.

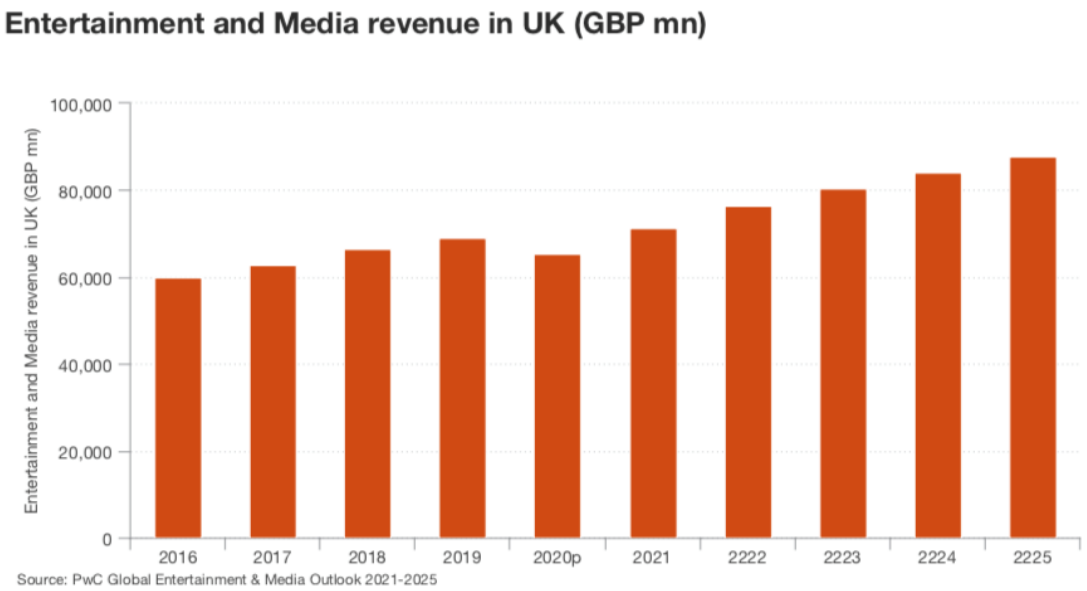
Bristol has a strong heritage of digital design, arts, animation and film/TV production. There is a real sense of identity and clarity within their strategic plan.

Aims include the development of a long-term skills pipeline in creative and production occupations targeting young people through entry level roles, apprenticeships and work experience. Improving the alignment of qualifications and research to regional specialism to support high value business and product development. Targeted national and international marketing to promote film, TV and digital production facilities in South Bristol.

[4] https://www.bristolonecity.com/wp-content/uploads/2021/06/Bristol-One-City-Plan-2021-2050-1.pdf

Bristol City Council are also very much involved with the expansion of Film & HETV studio space in the area. "*While there are weaknesses, South Bristol offers significant potential to develop existing assets in film and TV production and associated supply chain. The increasing global demand for content means that this sector is likely to see significant growth in future years. A new site for the expansion of the existing Bottle Yard Studios has been purchased by the council nearby at Hawkfield Business Park, and is driving current work on a strategic justification and framework to deliver a long-term programme of investment on both sites. If both sites are developed to the maximum potential (11 studios), it has been estimated that around 700 new jobs could be created over a 10 year period (338 directly and 362 indirectly in supply chains and increased local spending). Even if only 50% of the indirect or induced job creation benefited South Bristol residents, it would have a substantial economic impact."*

Bottle Yard Studios[5] are a refurbished series of factory and warehouse spaces that due to their construction and original use are not ideal for content production mainly as they are not 'clear span' spaces. The new investment will allow for new purpose-built spaces and to remove the steel pillars in existing to create 'clear span' studios. Generally refurbished studio spaces are not as attractive to external investors and rental fee income is significantly lower that purpose built new stages.



If we take a step back from what the regions and cities are doing in terms of creative and cultural strategies, and it should be noted most were originated 2016-2019, there has been a clear revolution, expansive, and most predictions agree, sustainable growth, within the film and HETV sector in terms of international relevance, GDP and potential for inward investment. This is not going away. Only this month, Facebook announced that it was rebranding itself and creating 10,000 jobs in the EU associated with developing and refocusing on the Metaverse[6]. Virtual production is at the heart of this concept.

[5] https://www.thebottleyard.com/
[6] https://www.bbc.co.uk/news/technology-58749529

Establishing an Open Innovation Infrastructure for CreaTech Growth

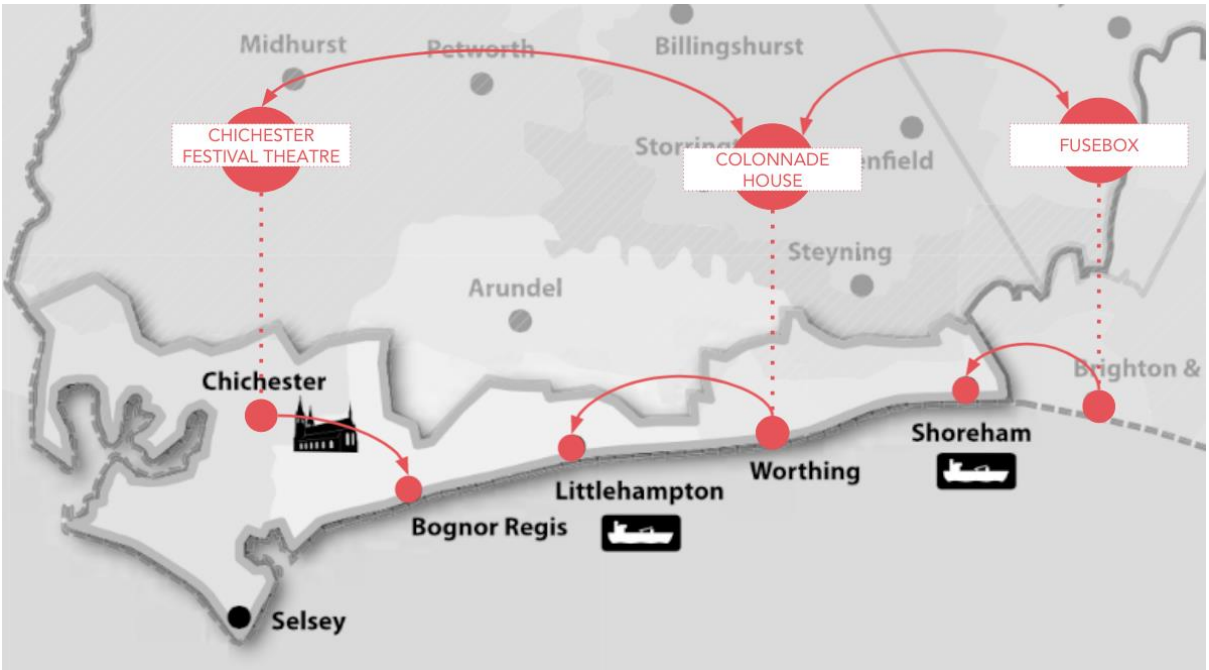
Technological developments, along with the shift in working practices demanded by the pandemic, has created an opportunity to promote the adoption of virtual, distributed production practices as a way to maximise both the potential for cross-sectoral fertilisation and connection between companies across the region.

Virtual production uses software tools to enable the combination of live-action footage and computer graphics in real-time. Contributors across multiple locations can create and render digital environments, while cast members are physically working on set. This approach can be applied beyond the broadcast environment in ways that are yet to be fully explored. It offers huge potential for innovation - and makes use of skills currently siloed in individual sectors. The pandemic saw many companies which traditionally produce and deliver content from a studio setting move to a distributed approach, with different parts of the process happening from different locations but with a centralised technological infrastructure.

This mode of production might see a games studio in Brighton & Hove working with a TV production company based in Chichester, utilising the prop-making skills of a freelancer in Bognor with the huge digital files generated being processed at a render farm in Shoreham.

To make this possible requires awareness of what's possible, collaborative relationships, technical infrastructure, foresight and commitment to economic development based on the existing assets of the region.

More than the sum of its parts



The CWS geographical area has no identity as a single place, but is rather a collection of towns each with their own individual identities. Companies and organisations that make up

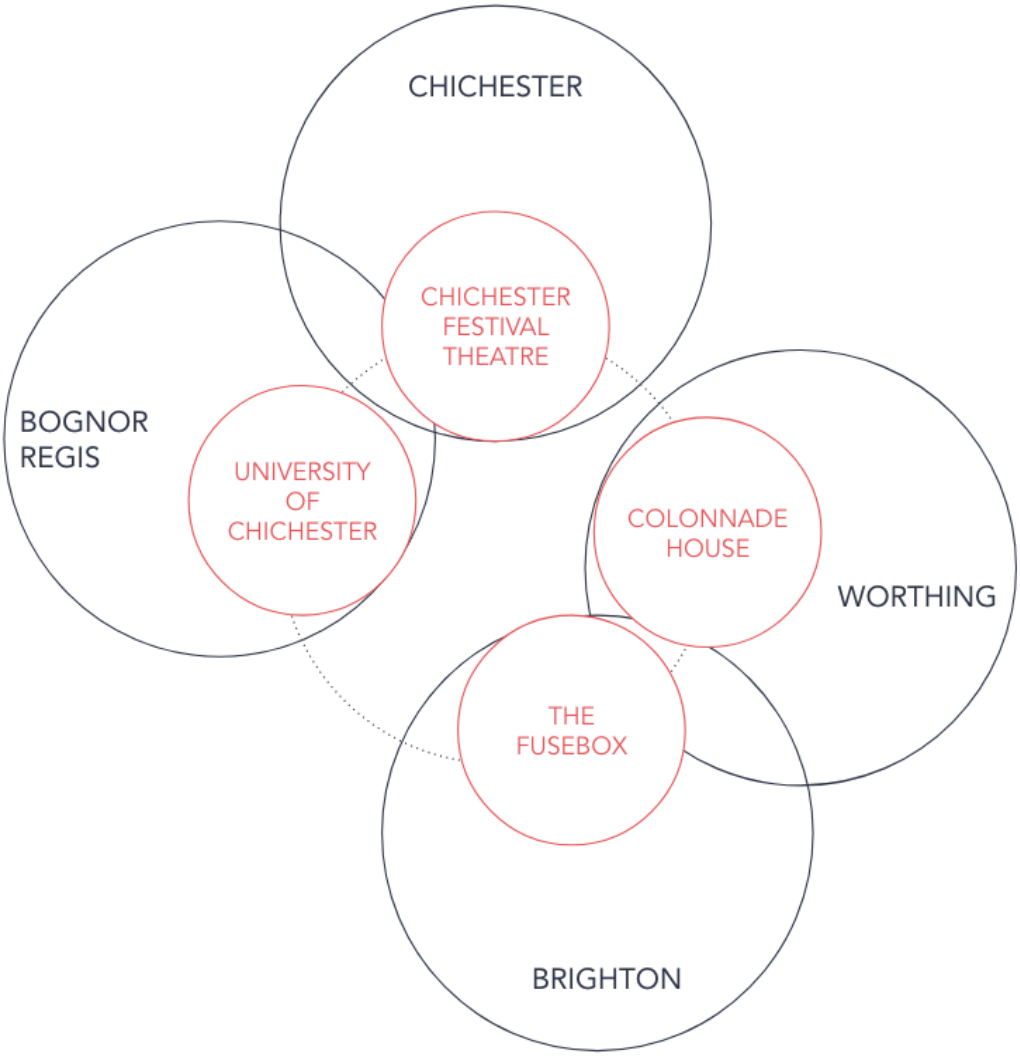
the creative digital sector tend not to identify themselves in relationship to Coastal West Sussex, but instead with their nearest town.

In terms of innovation clusters, the nature of the geography is also unusual - typically clusters are characterised as circular with activity radiating out from a centre. This is not possible in an area with only 180 degrees of land and then the sea (or, to the north, a national park). It is better to conceptualise the area instead as a strip. Our research has highlighted that there is not a natural connection between the towns that exist along this strip - as proximity dwindles so does connection.

This leads us to conclude that connection needs to be built in a different way - by thinking of each town as a link in a chain. The towns at the furthest ends of the chain have no real connection, instead Brighton links naturally with Worthing, and Bognor Regis to Chichester. *To connect the chain more fully needs the active engagement of key creative organisations or 'anchors' in building stronger bonds within their own town networks and bridges across to their neighbouring networks.*

To deliver this we propose that a selected group of these anchor organisations based in the key locations across the coast be commissioned to develop and manage a CWS-wide Open Innovation programme. This network will help the creative and digital sector regionally to collaborate through their engagement with CreaTech and Virtual Production.

Building bonds and bridges - the Creative Connectors



For the purposes of this paper, we define these creative digital anchors as organisations that have:

- A presence in their town, and are known to the creative digital community
- A space or venue that can be utilised to host events or other activities
- A significant network of relevant contacts within CWS
- A specific attribute, that other anchor partners don't have
- A willingness to support the long-term economic development of the region.
- An appetite to engage in the CreaTech / Virtual Production space

As an example of the kind of group of anchors we believe would be effective together, Chichester Festival Theatre could be the anchor for Chichester, University of Chichester Tech Park as the anchor for Bognor Regis, Colonnade House as the anchor for Worthing and the FuseBox as the anchor for Brighton & Hove. We should stress that at this time, these are examples of potential anchor institutions and we should not fixate on who they are but on the paradigm. It is likely that the names will change during inception.

The anchors would be commissioned as a collaborative group, whose role would be to work together, initially over a two-year period, to stimulate a chain reaction of connections across the creative digital sector of coastal West Sussex.

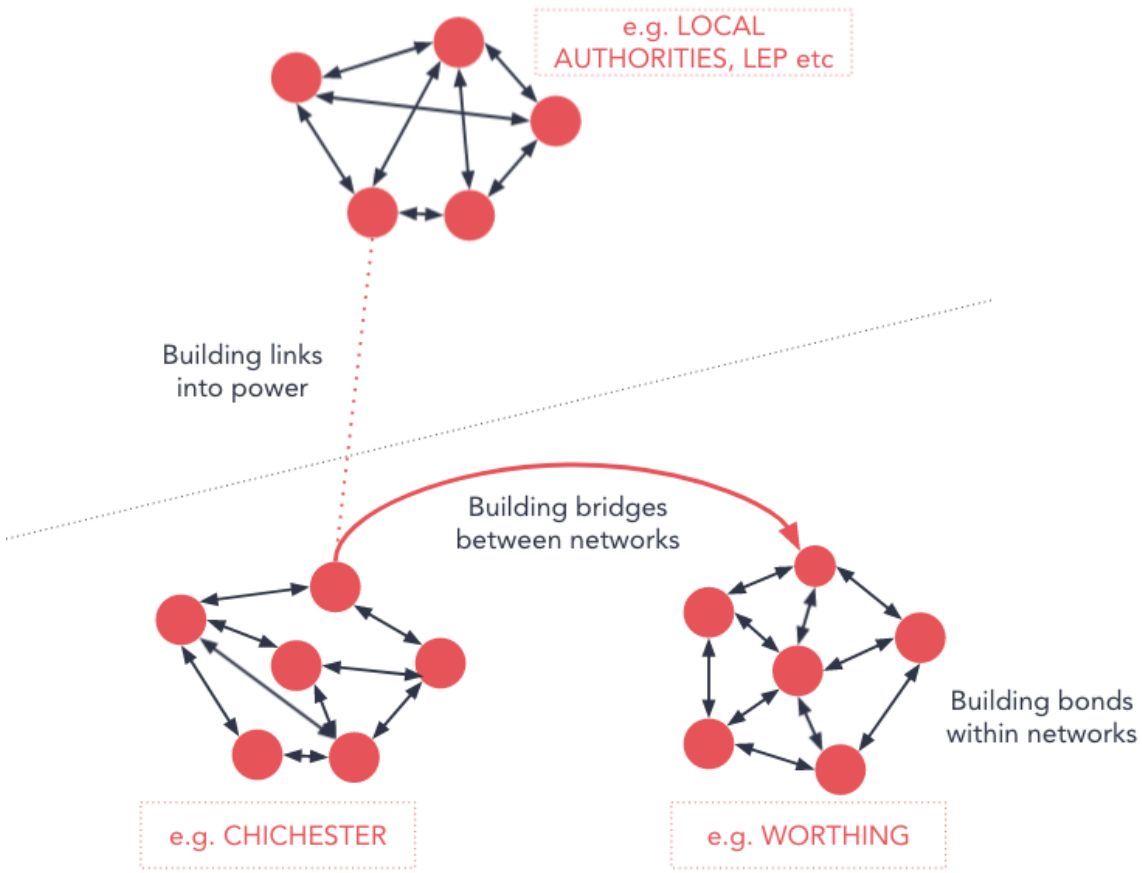
Their goal will be to build a dynamic and sustainable **CreaTech O**pen **I**nnovation **N**etwork (COIN) that will ensure CreaTech / Virtual Production resources and knowledge are accessible to an ever-growing group of organisations and businesses across Coastal West Sussex.

This COIN will give those engaged a chance to take advantage of the opportunities that new Creative Technologies provide, enabling them to produce and distribute content in new ways, and delver novel experiences to audiences.

COIN will further ensure that a set of regional businesses have the expertise required to benefit from the creation of the Virtual Production Studio Complex (see below), either through utilising its resources or by supplying high-value products and services to those who use it.

The COIN would make use of assets that already exist in each place, building stronger bonds within each place-based network, building bridges between networks and linking them to sources of influence, support and funding, such as the local authorities, the LEP etc.

These assets include other organisations with strong local connections and links to the creative digital sector - such as interactive media artists' group, Blast Theory in Shoreham, and AudioActive, a music organisation working with young people at the meeting point of technology and contemporary youth culture in Worthing.



The case for connectivity

The success of the creative industries is determined by the human talent that drives them and that, in turn, means the social and cultural environment in which they are located. However, mere proximity of a number of creative companies is not enough to create a cluster.

"The other crucial ingredient is connectivity between firms within a cluster, with collaborators, business partners and sources of innovation elsewhere … and, finally, with firms in other sectors that can act as clients and as a source of new and unexpected ideas and knowledge. These layers of connectivity are underpinned by a dense web of informal interactions and networking." [7]

This connectivity creates the conditions for knowledge spill-overs - or the informal exchange of ideas and knowledge among individuals. The number and type of connections between firms enables knowledge to travel across and between sectors and subsectors, facilitating innovation and growth. An example in practice might be the adoption of immersive technologies such as virtual reality by an architecture practice seeking to test how people 'use' new public spaces during the design phase.

Each of the 'COIN' anchor organisations suggested above either operate or intend to operate hubs in their local areas. Hubs are an established component of the creative economy, providing spaces that can be used for affordable workspace, business support and exhibition or sales space for creative entrepreneurs and acting as the central point of a wider network – hence the analogy of a hub as the centre of a wheel. Hubs are as much places for social exchange and informal networking as they are places for doing business, and that is especially valuable for creative people who work on their own or in micro-businesses where their range of contacts and networks may be limited. Each hub has the potential to stimulate connections and spill overs within its own locale - but linking hubs together through the COIN creates opportunities for spill-over across / between towns.

Often economic development strategies only reach for capital investment in the form of buildings, but buildings alone won't create the connections required to form bridges between the different towns. Our research shows that much of the assets required already exist in Brighton, Worthing and Chichester, but that they are not connected in a way that produces regional benefit. It is hard to build a cluster from nothing - so trying to artificially stimulate the creative digital sector in Littlehampton or Bognor Regis will, in our view, be less successful than a connection strategy that invests in creating spill-over effects across the linked chain of towns.

Imagine the theatre producer live-streaming performances from Chichester, connecting to the motion caption studio of a major game's producer in Brighton & Hove, using a business model learned from a music streaming platform based in Worthing.

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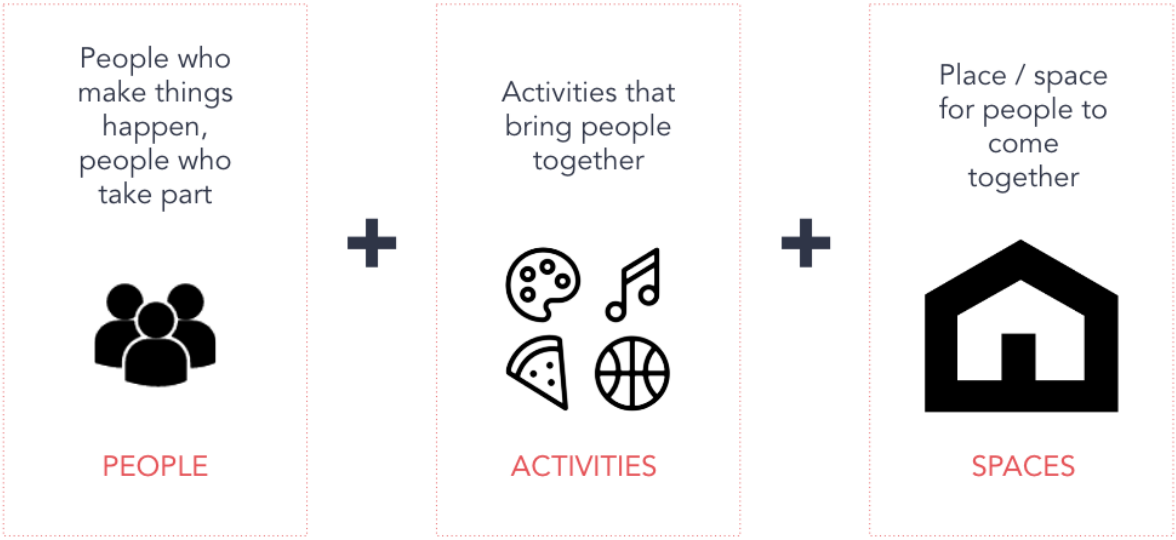
[7] Creative clusters and innovation report, Nesta, 2010



To do this means commissioning the COIN anchors to utilise their people, activities and spaces to:

1. Raise awareness of the opportunities afforded by creative technologies and virtual production by hosting practical showcases that stimulate interest, ideas and new connections among their local networks.
2. Work with other networks and key local businesses to design and promote events across locations, to draw in people from across the region and build bridges between towns.
3. Stimulate and support opportunities for collaboration, perhaps through funding calls or competitions, or engaging with larger regional based corporates.
4. Identify missing or weak infrastructure (I.e., advanced fibre connectivity, see below) that will need longer term investment and feed back to regional stakeholders and funders.

A note on collaboration

The successful adoption of virtual, distributed production requires organisations and individuals to collaborate. However, collaboration requires trusting relationships, which take time to build. The connection strategy proposed in this paper offers a way to engineer opportunities for people to meet, connect and start to build relationships.

By creating many opportunities to generate loose connections (thin ties) and stimulating ideas in a shared environment, then some deeper relationships (thick ties) will form. Mechanics such as joint funding opportunities or competitions can accelerate the forming of these relationships.

Fibre strategies and COIN

To sustain and grow an Open Innovation Network that is focussed on distributed activities requires advanced digital connectivity to enhance people's creative interactions. This is clearly an imperative when that activity is looking to deliver sustainable and value-generating

business cooperation in this sector. It is even more the case when considering the specific corridor nature of the geography of CWS. Consequently, this project needs to ensure support for, and engagement with, fibre strategies for the region.

Can We Build a Virtual Production Studio Complex?

This part of the paper will concentrate on what is happening elsewhere, which areas of the rapidly growing global creative industries we should be looking to be a part of and establishing the grassroots for a bold, imaginative and game changing proposal that would provide a beacon for the region and a clarity of direction and focus for the future by creating a global identity, new high skilled job opportunities and a dynamic attraction for inward investment.

Film Industry & Studio Analysis

The current strength of the film and television sector is of major strategic value. UK Government data shows that the creative industries contributed almost $13 million to the UK economy every hour[8]. Indeed, film and television production helped the UK economy avoid recession in 2019[9]. The growth engine of the film and tv sector is high-end television production. Film production spend in the UK has increased by 24% in the last 5 years with HETV spend increasing by a remarkable 93%. The last financial year saw an increase of £200m compared to the previous 12 months, the highest since records began.

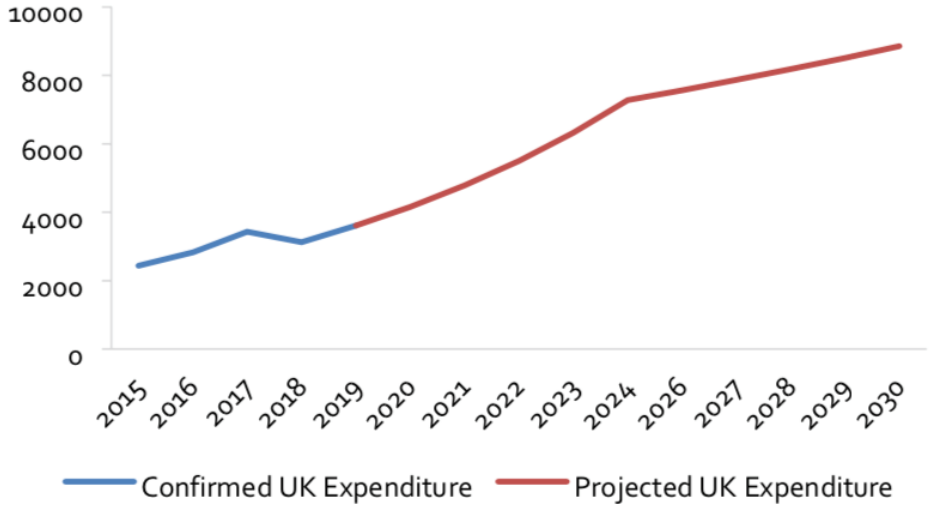
In 2019, the “Big Five” streaming platforms (Netflix, Amazon, Hulu, Apple TV+ and Disney+) were estimated to have spent between $27-28 billion on content. Netflix alone spent $15 billion on content in 2019. Indeed, Netflix’s CEO has said that the company would spend $500 million in the UK in 2019 on films and television shows. The Netflix film division, per a New York Times article in 2018, is set up to deliver 55 original film annually, with budgets between $20 million and $200 million. This figure excludes documentaries and animated films: inclusive of these formats the annual Netflix original film releases are closer to 90[10].

[8] UK’s Creative Industries contributes almost £13 million to the UK economy every hour. Department for Digital, Culture, Media & Sport. 6th February 2020

[9] Recession fears fall as economy boosted by film and TV industries. Ibid

[10] Netflix’s movie blitz takes aim at Hollywood’s heart. New York Times, 16th December 2018

Projected Total Film and HETV Production Expenditure in the UK, 2015-2030 (£ millions)



Source: 2015-2019 data from the BFI. Note: this has not been adjusted to account for COVID-19 impacts.

This growth is forecast to continue, with the British Film Institute (BFI) reporting strong levels for 2019[11]. There was a combined total spend on film and HETV production in the UK of £3.6 billion for 2019, an increase of 16% on the 2018 spend total of just above £3 billion. This is the highest figure ever reported for UK production spend, reflective of a strong year of productions such as the new James Bond film No Time to Die and Netflix's series The Crown.

However, despite this incredible success Research conducted by PwC has estimated that the UK is missing out on as many as eight blockbuster films per year due to a lack of studio space. PwC says that this equates to unmet demand for 940,000 sq ft of sound stages, and it means that the UK is losing out on nearly £1bn of production expenditure each year (Sites, Camera, Action). Furthermore, PwC acknowledges that their unmet demand estimate is a conservative view of the full market potential. It neither accounts for future growth nor demand from HETV productions, which are increasingly driving demand for studio space.

In 2019, Pinewood and Shepperton were both the subjects of landmark, long-term leasing deals. Pinewood entered into an agreement with Disney that saw the film and TV giant take nearly all of the studio's stages and production facilities for at least a decade. Netflix agreed a similar-length deal at Shepperton, making it the US streaming behemoth's permanent UK production base.

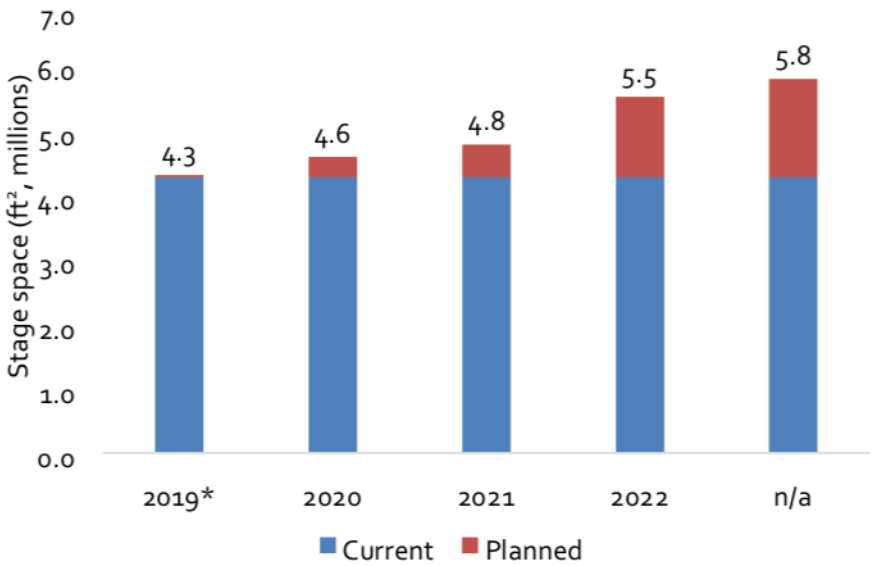
The UK has approximately 4.2m sq ft of stages in dedicated film and TV studios, with at least an additional 1.2m sq ft in a variety of 'alternative' build spaces that are marketed for studio use. These 'blank canvas' filming locations play a valuable role in helping to make up for the UK's current shortage of permanent studio space. The studio stock includes a huge variety of spaces. Only a relatively small part of the supply is in truly purpose-built film studios, with large well-equipped sound stages suited to major film and TV drama

[11] Film, high-end television and animation programmes production in the UK: full-year 2019. BFI, 31st January 2020

productions. Examples of purpose- built studios opened in recent years include Belfast Harbour Studios and Space Studios Manchester.

The current supply of studios is widely acknowledged within the film and TV industry as insufficient to meet demand. Major studios have operated at capacity in recent years, and production companies have found it extremely challenging to find stage space, particularly in London and the south east. It is estimated that 2.3m sq ft of new studio stage space is required in the UK to meet expected demand. As a consequence, traditional studios and broadcasters have upped their spending to remain competitive. This is creating global opportunities, as producers look to site projects in jurisdictions with a strong offer of generous production incentives, skilled workforce and infrastructure capacity.

Current and Planned Stage Space in the UK, 2019-2022



Source: Olsberg•SPI. Notes: 2019 counts developments that were planned to come onto market in 2019; 'n/a' includes planned studios/expansions where no launch year was available.

Government recognises that film and TV studios are a unique economic and cultural proposition, highlighting "the impact that creative anchor institutes can have on pride and economic performance in an area", and citing film and TV studios as an example of how creative businesses and local investment increase employment and share spill-over benefits

across the area and the supply chain. This Government backing was consolidated in the Spring 2020 budget when the Chancellor of the Exchequer announced support to increase stage studio space capacity in the UK:

"The Budget allocates £4.8 million to expand the work of the British Film Commission to promote the UK as a destination of choice for studio space investment. The British Film Commission will act as a single source of expert advice for investors and developers and provide targeted support at the early stages of viable projects to facilitate increased provision of studio facilities across the UK."

A significant volume of capital remains on the side lines, as investors with a clear appetite to enter the sector have found it difficult to source suitable development sites or investible studio projects[12].

Another major risk is whether the UK is able to ensure a sufficient pipeline of skills to service continued production growth. This is already a key challenge and for regional production centres. It is estimated that by 2026 30,000 new high skilled creative/tech jobs will need to filled in the UK to meet the growth in demand of the F&HETV sector[13].

What is Virtual Production?

Virtual production (VP) is the unique intersection of physical and digital filmmaking. VP blends video game technology with filmmaking techniques into the pre-production and production process. Its earliest use and iterations can be traced to advancements and innovations in filmmaking technologies to designing and altering photorealistic environments in real-time. As technology continues to innovate, other fields of entertainment are also leveraging virtual technology's capabilities, such as in live entertainment, fashion, and news reporting

Virtual production itself "is a broad term referring to a spectrum of computer-aided production and visualization filmmaking methods. VP combines virtual and augmented reality with CGI and game-engine technologies to enable production crews to see their scenes unfold as they are composed and captured on set" (Spectre Studios). Epic Games, a video game software developer and publisher has applied its real-time engine, Unreal, to help filmmakers blend video game capabilities with filmmaking techniques. Their main competitor is the Unity engine. When technologies from these companies are combined with traditional filmmaking techniques, the filmmakers are employing VP. Consequently, VP is not just the technology itself, but the methods through which it is used as well. Various subcategories of VP tools employed today are broadly categorized as visualization, performance capture, and a full, live LED wall. They each have their own subsets of tools and methodologies. The underlying thread that connects these tools is the gaming engines used to operate them and the ability to render in real-time. Each of these technologies provides certain benefits and abilities at each stage.

Performance capture

Performance capture, as pioneered by films such as *Avatar*, records movements of objects and/or actors to animate digital models. It involves the use of markers to help capture subtle facial expressions and body movements in a live-action environment. This technique is

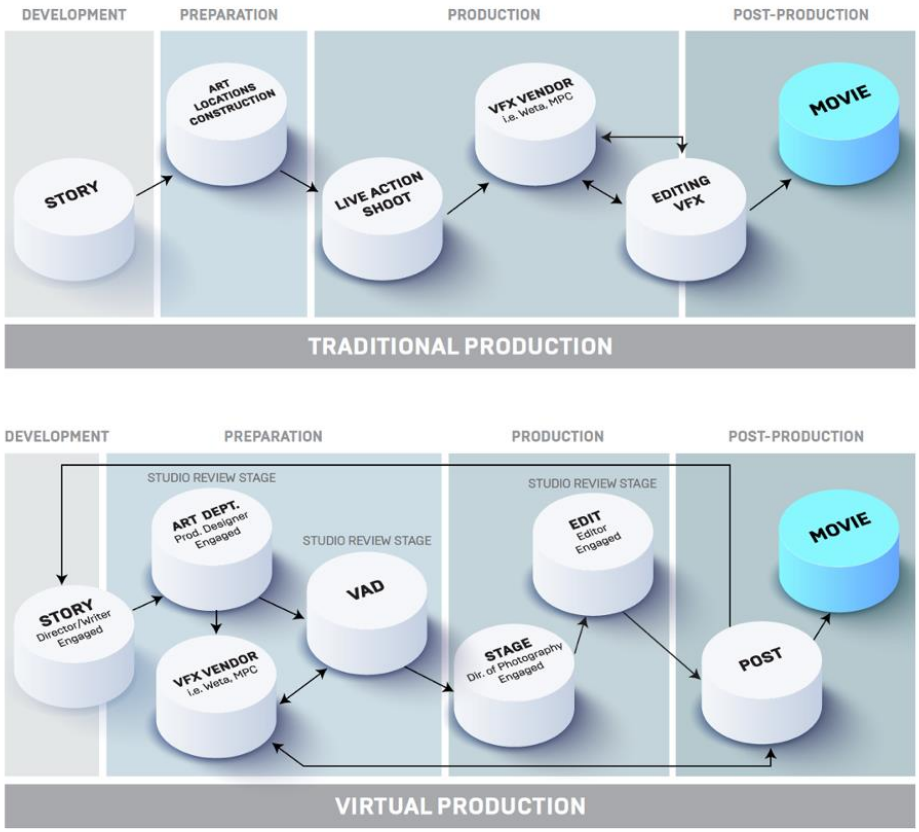
[12] From Studios Research Report: Sites, Camera, Action! 2 by Lambert Smith Hampton

[13] From British Film Council/Film London/ScreenSkills

called simulcam and is often used when virtual characters need to interact in live-action. The main subsets of performance capture are motion capture, facial capture, and full-body animation.

Live LED wall

A live LED wall is VP in its purest form. An image-output is created with real-time rendering engines and projected onto a screen behind a physical set (Image 6). In contrast with using a green screen, talent can interact with and witness the scene exactly as the crew does as the sequence of events unfolds on the wall. Lighting and imagery can be adjusted on a whim, the final-pixel imagery obtains a level of photorealism that can be captured on camera, and expensive on-location shoots are not required. As cameras move, the perspective and lighting projected onto the LED wall shifts in relation to the camera's position. According to *The Virtual Production Field Guide*, "All of the natural reflections and lighting from the screen provide important artistic cues and enhance the realism of the imagery, compared to the typical struggle to avoid contamination from the green screen's colour spilling onto the subject as well as creating unwanted reflections." These features make the live LED wall an extremely versatile tool that enables filmmakers to obtain their creative vision in real-time. More and more productions are adopting these walls. Industrial Light & Magic's (ILM) LED wall, *StageCraft*, was used to create the sets for over half the scenes in *The Mandalorian*.



Traditional vs. Virtual Production for Film

Visual development by Fox VFX Lab

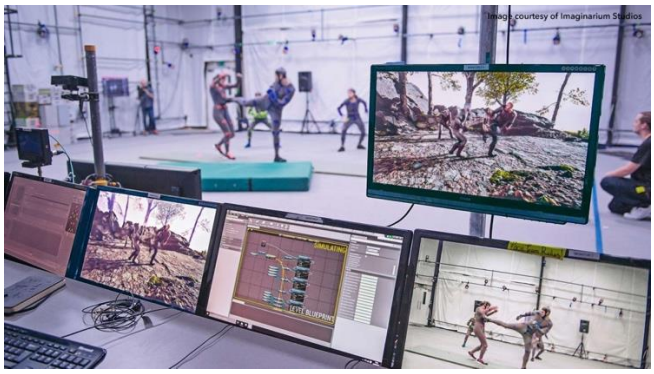
The Opportunity

There is clear evidence that there is insufficient studio space to support the ever-increasing demand to produce new content. In the past, this problem has largely been highlighted as a London-based issue whilst in the 2019 research, the lack of studio space appears more evident across the nations and regions of the UK as well as in London. Elsewhere, locations are reportedly becoming more and more expensive and bookings for location and unit bases are being cancelled at short notice due to a new type of 'gazumping'.

Aligned with the increasing dominant use of Virtual Production techniques for filming, our region has a golden, time limited opportunity to create a digitally driven studio complex with a clear emphasis on Virtual and Mixed Reality Production and Research.

Virtual production is so new, that there are few examples of purpose-built facilities world-wide. However, many existing stages are having varying forms of refitting for virtual production needs. One of the most important factors of how virtual production in Film & HETV has been established is the nature of collaboration across CreaTech tools. Technologies across a range of industries have been interconnected to achieve one of the most significant disruptions to the production process since recorded sound. Large high definition LED screens are used in conjunction with military grade tracking technology and open access games engine software to create some of the biggest F&HETV content. Creative Technologies[14] in Horsham are able to demonstrate the technology on a small scale.

Alternative industrial uses for virtual production, mixed reality and tracking technologies are also emerging such as health, medicine, architecture and design. Engineering, sports, marketing and events. It is also worth recognising the environmental sustainability of the approaches taken reducing the need for large-scale travel to far-off locations.



[14] https://www.ct-group.com/uk/

London and the south east dominate in terms of existing and new studio stage facilities totalling 62% of available stock. However, despite ease of access, high quality locations and a major international airport, the West Sussex and south coastal region has no professional level studio stage facilities, bar the relatively small sound stage at the University of Chichester's Tech Park at Bognor Regis.

Our proposal seeks to rectify this situation and offer a unique approach that merges the two biggest expansion needs, studio space and virtual production sound stages to develop a large-scale national virtual production centre. Aligned with this would be a significant research and training facility to support future development, a local skills pipeline and investment opportunities.

The core proposition focuses on the development of a number of purpose-built virtual production sound stages with additional studio space, sound recording suites and editing suites all interconnected with sophisticated digital production technologies on a single site. The site would house aligned businesses and more broadly, the interconnection would extend into the region, utilising the developing gigabit infrastructure to allow regional businesses to access the virtual production environment.

A critical and differentiating component of the proposition will be the establishment of a Centre for Research, Training and Innovation for Virtual and Mixed Reality Production, within the studio footprint.

Virtual Production is a dynamic and rapidly developing proposition. Innovation is much more prevalent than in most other more established creative industry activities. Having research and innovation activity co-located with production means that the link between commercial need and the innovation activity required to meet it, is more integrated. Such an approach has the potential to attract significant inward investment, ensuring the continuing development and sustainability of the facility as well as providing an international profile for Coastal West Sussex. Some initial conversations with UKRI suggest that such an R & D & I proposition could be of national significance.

The Centre would provide a focus for the whole proposition; enabling onsite R&D, supporting start-up innovation, facilitating regional skills development and providing a point of engagement with schools and colleges by raising awareness of the opportunities available through; tours, workshops, projects, placements and apprenticeships. Although, this aspect will be attractive to funders, we also need to recognise that it will be commercial availability and use that ensures sustained economic viability of the project.

Within this loosely framed proposal we could also establish virtual access computing to further support schools, colleges and micro-businesses, render farms and short course CPD for teachers and commercial interests alike. Innovation and R&D spaces would be made available for all forms of VP technologies such as VR, AR, AI, Motion Capture, Tracking, Compositing and mobile tech. This element especially connects with both the clusters programme and support for schools and colleges.

As one of the first purpose built Virtual Production Studios in the UK, particularly with an emphasis on training and research across all VP technologies, this is a bold and ambitious proposition. The complex has the potential to be a regional growth engine, which would have wide ranging benefits across numerous sectors.

Studios offer many broader opportunities for the local community and established traditional non-digital businesses also. Catering, carpenters, electricians, make-up, costume design and many other traditional trades are utilised in a normal production workflow creating screen-based materials. Hotels, bars and restaurants all benefit from being near to studio complexes, as do both temporary and longer-term office space.

The key requirements to realise this ambition are; a bold vision, space to build, inward investment, skills, amenable local authorities and ready access to a broadband infrastructure.

Much of the UK's current and planned stock of studios are either converted space or on temporary planning permission. The most attractive facilities for production and investors are those that are purpose-built. Purpose-built stages and studios of the right specification, offer an integrated support system, and an income twice that of adapted space studios.

To have an effective economic impact, attract the level of investment needed and to meet a high level of demand, any new studio complex needs to be on a large scale. It is estimated that any suitable site would need to be 12-20 acres and be able to house a range of purpose-built sound stages (min 10k/12k sq ft per stage/ min 60/70k total), the same square footage again to house support and technical services including offices, catering, workshops and equipment stores, parking and access to good transport routes are essential. Short term offices and post production facilities would also be needed. Potential sites that may support such a development might include the undeveloped IKEA site at Shoreham Airport or the Decoy Farm site in Worthing.

Some investors might be interested in other options also such as hotels, bars, retail etc, though much would depend on location and size of plot.

If developed, this proposal gives the region a chance to establish itself globally as a creative destination for projects and would be a driver for high skilled jobs creation, and to develop a culture of retaining talent, whilst also attracting new talent and investment across the creative sector in the CWS region. This is a long term and sustainable solution to a current and growing economic and social challenge.

Creating the links to education and skills attainment

It is clear that we will need to work with schools, colleges and business to develop a holistic plan to raise both the awareness of the opportunities presented by a career in creative digital industries and to provide them with the means to deliver the educational objectives.

From our research there is a clearly emerging set of issues connected to the pipeline of talent required to sustain the creative sector in the CWS region. Opportunity, Resource, Expertise. There is a heavy focus on English and Maths Level 2 attainment within the UK education system. However, students who do not achieve a L2 qualification in both, generally have limited higher qualification pathways to choose from. Undeniably it weakens the options students have to enter creative and tech courses.

Within the state school system, Arts and Creative courses such as Media have been, and continue to be, withdrawn as options at GCSE level therefore a significant pipeline for creative industries is being blocked. There has been much focus on STEM subjects and this has seen an increase in attainment in Mathematics, Biology, Chemistry and Physics in England, Wales and Northern Ireland has improved, with increasing numbers of students achieving A* to C grades at GCSE.

The shift towards STEM overlooks the needs of many key sectors across the burgeoning Creative Industries. The Games Industry alongside Film & High End TV especially, are in great need of high skilled talent with a combination of creative and technology skills. This CreaTech gap will be very harmful to the Creative Industries growth and to the UK economic situation. It is a current problem that will only get worse.

Educational barriers lead to a lack of opportunity for skills development and therefore narrowing options career wise. Teaching creative application of digital technologies is a vital component if the creative industries are to continue growing at a rate GDPR 5 times the overall UK economy.

Figures from the Joint Council for Qualifications for GCSE entries in 2016 show a 6 per cent decline in the number of Art and Design pupils compared with 2015. This is the biggest year-on-year decline in candidate numbers recorded since 2000 – and there was a further decline in 2017. Likewise, the numbers opting to study Design and Technology at GCSE fell by 42 per cent from 2010 to 2017[15].

Research from the innovation foundation Nesta shows that companies that harness both art and science – STEAM rather than STEM – outperform competitors in terms of sales, employment, productivity and innovation[16].

As our CWS review suggests, evidence is emerging locally, that creative subjects are at risk of decline: declining student participation, declining funding and declining attainment.

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[15] http://www.jcq.org.uk/examination-results/gcses/2016 http://www.jcq.org.uk/examination-results/gcses/2017

[16] http://www.nesta.org.uk/news/businesses-boasting-art-and-science-skills- grow-8-faster

Computer Gaming and Esports offer an opportunity to embed digital skills more deeply into our local culture.

Utilising E Sports is perceived to be a way of attracting young people into the industry. The Games industry and the Esports industry are growing and vital to the future UK economy. As an access to greater educational attainment and employment, inspiring and engaging young people otherwise disconnected from traditional academic education, Esports in particular offers a unique and exciting pathway. The UK's creative economy is also reliant on improving diversity and employing people from under privileged backgrounds, otherwise not represented in the sector.

The British Esports Association has worked on projects such as 'Digital Schoolhouse' promoting gaming and Esports within primary and secondary schools, and FE Colleges. The main driver with such projects is to improve digital skills for a range of students, enhance problem solving through gameplay and to embrace the many opportunities offered by gaming in general.
We should also recognise that innovative colleges in the region are attracting students to undertake creative digital programmes and the recent largescale growth and diversity of the digital production sector is attracting interest from young people. However, they face real challenges in relation to resources, experienced teachers, business interaction and identifying opportunities and jobs for the students when they leave.

There is an overarching opportunity to enhance the creative digital profile of the region, capitalising on existing competence and skill but attracting a new and vibrant audience; commercial design and development and experience based entertainment and tourism. Underlying this is a strong connection to education and engaging otherwise hard to reach groups.

Gaming Hubs

One enabler is believed to be the establishment of a network of ‘Gaming Hubs’ across the south coast region.

This would operate on two levels. Firstly; the creation of Esports Centres/Cafes to attract gamers into the town centres and provide a focus for educational activity. The second is to offer flexible commercial space to the current and future growing workforce in games development. This might be associated with novel and affordable living spaces.

The cafes would act as a visible focal point for gamers and creatives if located in reasonably prime positions within high streets and connected to other entertainment and restaurant/café facilities. This would assist in diversifying the high street and increasing footfall.

A Coordinated Education Esports and Digital Skills Programme

The development of a coordinated educational programme, working with schools and colleges would focus on both the digital skills and technology behind games design and production. It would also link into the Esports industry promoting, for example the Level 2 and 3 BTEC programmes and provide a focus for intra college competition. It is challenging for schools and colleges to find space and to fund the expensive technology and resources necessary to promote Esports initiatives. Providing daytime access to the gaming hubs would overcome these issues. Effective interconnections with the industry and with a Virtual production hub could support the development of digital production skills focused on film and music production.

Educating more broadly around gaming and ‘myth busting’ the sometimes, negative reporting re gamers, should also underpin the ethos and has been evidenced to engage quite hard to reach educational groups. Utilising an outreach programme bringing technology, training and speakers into the schools would require long term commitment across local and regional government, education and industry to have a real impact, but would also bridge and connect an effective supportive infrastructure. There maybe a consequent opportunity to influence the development of the new creative digital T levels due in 2024.

Post workshop note: Educational providers attending the recent Worthing Dome workshop held to discuss the opportunities highlighted the need to broaden the scope for digital skills training to include Film/Media support covering areas such as 3D Animation, Visual Effects, Film Production and Live Event Broadcasting. A more extensive list of activities and support will be drawn up through the next phase of this project.

Venues for Esports Competition and Tournaments

In a further development, and working with key stakeholders, both regionally and from industry the programme would provide the opportunity to establish localised college and school Esports tournaments, both virtual and venue based. The teams could be run and branded with their own logos to mirror professional teams, which opens up many additional business, marketing, promotional and communication skills development prospects.

The coastal region has a number of venues large enough to be considered for hosting professional and University level competitions and/or festivals of gaming. The influx of large numbers for these events will have a wider economic impact bringing additional income streams for the hospitality sector especially.

Driving Economic Growth

Creating clusters or hubs for creative sectors is a well-established re innovation and sustainable opportunity development. However, combining this approach with embracing the Esports cafes/culture would be unique. Ideally both would occupy the same building to create a natural intersection for fostering collaboration and opportunity. Facilities to support games related creative work can be accessed both at the UoC Tech Park but also within the café itself through overnight rendering services for example. The café would also provide catering for both user and the creatives, and be run on a commercial basis.

Conclusions

It is clear that there is a very real opportunity to develop a game-changing proposition and establish the Coastal West Sussex Strip between Chichester and Brighton as a global centre for creative digital industries focussed on Virtual Production and Distribution. Not only this, but it was also clear from our conversations with those we interviewed and attendees at our workshop, that there is genuine excitement and enthusiasm for a holistic initiative.

We have proposed 3 overlapping layers of engagement covering:

- The establishment of a CreaTech Open Innovation Network to promote faster and more effective knowledge-sharing, collaboration and activity amongst organisations and their networks within CWS
- A virtual production studio complex with an associated Centre for Research, Training and Innovation for Virtual and Mixed Reality production.
- A linked education and skills attainment programme covering esports, Games Design, Digital skills and esports cafes.

Though it might be argued that each of these objectives could be pursued independently, a holistic programme of activity would deliver far more than the sum of the parts, and is likely to make each element more impactful.

Whilst in all likelihood the three strands will begin independently, and often run along separate timelines, they are an integrated strategy. It is the big, bold and innovative ideas that attract attention and investment both from government and from investors. Together the three strands will maximise the economic and social value that is created across CWS in this emerging sector, and demonstrate to others our ambition for this project. It is a genuine opportunity to establish and promote a unique identity for the region.

Consequently, we suggest that, operationally, a single, discrete entity is created to manage and engage with stakeholders and undertake responsibility for the delivery of all three aspects of this project.

Next Steps

There is currently a narrow window of opportunity to make something very special happen along the South Coast. Virtual Production and CreaTech in general is only just being recognised as game changing technology at an industry scale. Research initiatives are being funded and it will not be long before larger well-funded regions will be looking intently at the opportunities presented. We have a short period of time in which to establish some first-mover advantage. We have regional commitment, established businesses, established educational provision an attractive area to live and a developing ultra-fast broadband infrastructure. To take this holistic concept forwards, we will need to develop a detailed business case and plan that we can use to attract further public and private sector investment to develop the initiative. This would include:

- Working with commercial organisations to develop workable proposals for a Virtual Studio complex with aligned research and education facilities. This would identify potential land available.
- The design and funding proposition for the establishment of a CreaTech open innovation network. Ideally, the early establishment of the network would inform the development and coastal integration of the Virtual production studio complex.
- The design and funding proposition for an educational intervention programme with potential connection to esports initiatives.

In the first instance we will work together under the Coastal West Sussex Partnership banner to build a proposal to undertake this work. Creative Digital is a key sector for Coast to Capital LEP and this is nationally recognised. There is a potential immediate opportunity to apply to Coast to Capital LEP for this initial funding and we will create an outline proposal in preparation for an anticipated call this month.