Createch Surrey

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Cover image

Created using the Midjourney generative artificial intelligence application and the prompt "a view of Surrey UK in a creative style". Midjourney is an artificial intelligence program created by a San Francisco-based independent research lab Midjourney, Inc. Midjourney generates images from natural language descriptions, called "prompts", similar to OpenAI's DALL-E and Stability AI's Stable Diffusion (source: Wikipedia). Making this image using Midjourney's pre-trained models generated 0.2kg of CO_2 in a data centre, equivalent to making 15 cups of tea.

Executive Summary

This latest research from the University for the Creative Arts (UCA) concerns the role of Createch in the economic development and placemaking in Surrey and the surrounding region.

The profile of Createch is rising quickly. Recently, Sir Peter Bazalgette (Co-chair of the Creative Industries Council) made Createch the centrepiece of his President's Lecture at the Royal Society for Arts, Manufactures and Commerce, describing this new sub-sector of the Creative Industries as "*the beneficial symbiosis which occurs when creative designers collaborate with technologists such as engineers, programmers or data scientists*." Professor Christopher Smith, Executive Chair of the Arts and Humanities Research Council, in the introduction to the 2023 Creative Industries Policy & Evidence Centre State of Creativity report defines Createch as the *"special combination of creativity and technology in creative industry sectors…"* and acknowledges its importance in driving R&D in the Creative Industries and offering *"huge potential for the creative industries to contribute to a levelling-up agenda, to enhance foreign direct investment, to support skills acquisition from school to lifelong learning, to tackle mental and physical health issues and to make a net-zero agenda understandable and attainable"*.

Definitions continue to evolve, from those with a narrow focus on specific technological areas to broad definitions spilling over into any sector where creativity and technology intersect. For UCA, Createch refers to *businesses or organisations that operate in the Creative Industries offering creative experiences, products, or services that have technology assets central to their value proposition to investors, customers, and users. Createch companies operate at the cutting-edge of technology in areas such as generative artificial intelligence, 3D capture, immersive technologies, metaverses and advanced analytics.*

Previous UCA research shows how £1bn of Venture Capital investment flowed into UK Createch in 2020 alone, and how Createch is likely to continue with double-digit growth to deliver a UK Gross Value-Add (GVA) of over £225bn by 2030.

This latest UCA research shows that Createch businesses are spread across the region, not just concentrated where the gaming businesses are centred in Guildford. There are multiple examples based to the east and north of the county near film studios, and near to the borders in Berkshire, Greater London, Hampshire, and West Sussex. Also, Createch companies in Surrey tend to be business to business or "supply-side" organisations feeding into customers across the Creative Industries.

Surrey County Council is starting to work with UCA to make Surrey a world-class destination for Createch. Case studies from the UK and elsewhere show that Createch businesses thrive when there is increased collaboration and networking as this drives innovation and promotes knowledge sharing, improved access to investment and funding, and encourage entrepreneurship. While there are effective creative networks in the South East of England already (e.g. Creative Network South centred on Hampshire, and SECEN centred on Kent), there is a gap in support for Surrey and its border areas. Hence, creating a new regional Createch business network and "cluster" or "corridor" in the region has the potential to stimulate economic growth, re-imagine towns and rural areas as places to work and live, and create new opportunities for businesses and citizens.

Contents

Acknowledgements

1. Introduction

Purpose of this report

This document is for decision-makers in the public and private sector invested in the economic development and placemaking ambitions for Surrey and the surrounding region. The report presents strategic options for supporting Createch growth and makes recommendations for action to:

- Establish in 2023 an Advisory Board to propose a preferred route forward aligned with, for example, the Surrey County Council One Growth Board ambitions.
- Ensure that growth in Createch businesses support net zero and other sustainability targets.
- Create a Createch business network for the region as part of the broader UCA Creative Industries network Surrey and South East launched 1st March 2023.

Definitions

Agreeing a definitive definition for Createch is challenging as emerging technology is permeating everywhere in the Creative Industries. It is helpful to think of a spectrum from those that simply exploit these technologies to those organisations driving R&D-led innovation in the Sector.

The Creative Industries Council originally described Createch as bringing together *"creative skills and emerging technologies to create new ways of engaging audiences and to inspire business growth and investment"* (see Appendix A for a brief history of Createch in the UK). Recognising that this was too focused on immersive entertainment, this was broadened to *"new tech that seeks to improve and automate the delivery and use of creative services"*. Other definitions have followed (see Executive Summary).

To clarify the situation, UCA analysed circa 300 Createchs in the UK and this shows that technology and the associated intellectual property (IP) is at the core of many business and operating models (not just enablers). This allowed Charter and Davis in 2022 to develop a tighter definition for these 'core' Createch businesses:

1. A growth-oriented business or organisation that is in either the Cultural Sector or Creative Industries that designs or delivers creative experiences, products, or services.
2. Has technology assets that are central to the value proposition to investors, customers, and users. It is insufficient for a business to have creative talent producing content using off the shelf tools; there must be technology innovation or adaption.
3. Employs a business or operating model (processes and/or automation) that could only be efficiently and effectively delivered with digital technologies, such as those under the Industry 4.0 umbrella.

Table 1 applies this definition help the reader to understand creative businesses that are in and out of the scope of the definition.

Table 1 Examples of creative businesses and whether they are included or excluded using the UCA definition for Createch.

Examples	Include	Exclude
A creative agency or studio with great skills, but only creates content for clients using off the shelf technology		X
An agency or studio that has patents for AR technology that it uses in its service	X	
A games publisher offering VR titles (e.g. for Occulus Quest 2)		X
A game start-up that uses proprietary AI to make Unreal meta humans more realistic as non-player characters	X	
A company that develops software plug-ins for 3D CAD systems used for multiple sectors e.g. fashion, aerospace, engineering…	X	
A start-up that provides AI-enabled business process automation to film and TV studios	X	
A training company that uses VR to deliver learning content to children		X
A theatre company that creates short-run live performance that include XR sequences created by external agencies for them as a client		X
A standard ecommerce business selling pre-loved fashion		X
An ecommerce business that has developed proprietary algorithms to assemble sustainable outfits for consumers	X	
An artists collective that makes use of AR, VR etc to create their art		X
An app developer offering a 3D modeling platform for creating virtual clothing for gamers	X	

Createch business models and value chains

The Createch world is new and value chains and business models are continually evolving. UCA research shows that there are Createch companies that operate business to business (B2B) and business to business to consumer (B2B2C), typically with customers in the Cultural Sector or Creative Industries, as well as those that work directly with consumers (Business to Consumer, B2C).
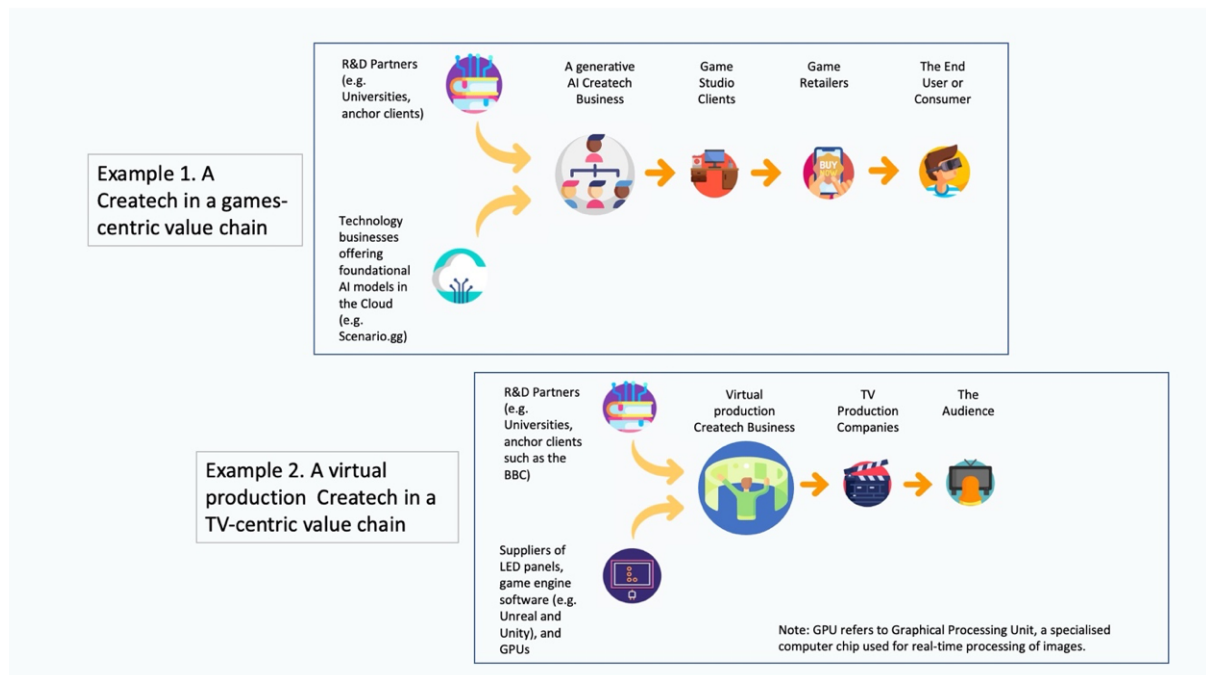

Figure 1 Examples of where Createch fit into creative value chains. Example 1 is the value chain for a Createch company offering generative AI products and services to games studios, and example 2 is a Createch offering virtual production services to TV production companies (the Createch providing physical production volume and content services).

However, there are also Createchs that have found a market for their goods and services in other sectors such as automotive and life sciences.

A UCA survey in 2022 showed that business to business (B2B) and business to business to consumer (B2B2C) Createch companies represent around 80% of the Createchs in the South East of England (although further work is required to validate this figure).

B2B Createch companies can be thought of as "supply-side" companies based on their position in the value chain (as opposed to "demand-side" businesses such as many immersive entertainment companies and arts organisations). Figure 1 gives two illustrations. The first is for a Createch offering specialised tools for game development studios (e.g., AI assisted generation of in-game assets). Their suppliers are a third-party technology company providing foundational AI models, and several R&D partners. Their customers are games studios and freelance developers: they do not sell direct to consumers. The second example is for a Createch offering virtual production services to TV production companies. The Createch has developed a customisable wrap-round production volume using thousands of bought-in LED panels and it offers this space to TV production companies. They also own IP for a specialised production pipeline based on leading game engines, and they offer a range of services based on this too.

Figure 2 shows the four main areas that core Createchs operate in currently, surrounded by examples of Createch businesses that exploit the innovations flowing from the core.

Figure 2 The current state of Createch.

Figure 3 on the following page gives more detail for the core Createchs.

Createch Area	B2B Products and Services Offered	Description	AI	Immersive (VR, AR, XR)	3D Capture, Modelling, Visualisation	Advanced Analytic (Predictive, Prescriptive, Stream)	Blockchain	Other
A. AI Powered Platforms and content	Digital platforms and middleware for designers, creators and storytellers	B2B businesses offering specialist platforms and tools to streamline and enhance effectiveness for creatives (e.g. workflow automation, generative AI) for B2B businesses across all sub-Sectors of the Creative Industries. Includes spillovers to EdTech etc	■					■
B. 3D Capture and Immersive Technologies (AR/VR)	Production support for TV, film, immersive, and interactive experiences	B2B companies that have invested in proprietary software development and physical infrastructure for supporting virtual production and creating immersive live, recorded and interactive entertainment experiences (e.g. AR, VR,XR, motion capture, 3D scanning)		■	■			■
	Tools and infrastructure for designing, developing and distributing computer generated imagery (2D and 3D graphics)	B2B businesses that offer specialist tools (e.g. plugins for game engines, VFX and CAD) that improve graphics workflows and digital asset management, typically for film, fashion, entertainment, advertising and game creatives. Includes tools for creating and deploying full-body 3D avatars for metaverses and fashion ecommerce	■		■			
C. Web3, Blockchain and Metaverses	Web3 authenticated platforms for designers, developers and publishers	B2B businesses offering services for metaverses, including decentralisation, blockchain technologies, and token-based monetisation for creative businesses (e.g. NFTs in games)					■	■
D. Workflow Automation and Advanced Analytics	Value chain insight platforms for designers, creators and their customers	B2B businesses that specialist offer low-code / no-code analytical products and services based on using big data, AI, and other forms of advanced analytics. Includes those that are SaaS				■		■
	Specialist content creation and distribution tools and platforms	B2B businesses that provide artists, designers, and other creators with specialist tools and platforms to make and distribute text, images, videos, music. Includes those P2P businesses that are designed to engage directly with fans (e.g. to sell merchandise)	■					■

Figure 3 Additional detail on B2B Createch products and services, as well as mapping to the key Industry 4.0 technologies involved.

Also, particularly when thinking of economic development, it is important to make a distinction between Createch businesses and one-off uses of the underlying technologies (e.g., immersive art projects). Examples of B2B Createch companies in the region are given in Figure 4.

Figure 4 Regional examples of B2B Createch businesses.

As a B2B company they face different challenges to those that deal directly with consumers. Figure 5 lists some of the business and technical challenges they face, and UCA research shows that Createch founders are often unprepared for these challenges, and struggle to find appropriate support.
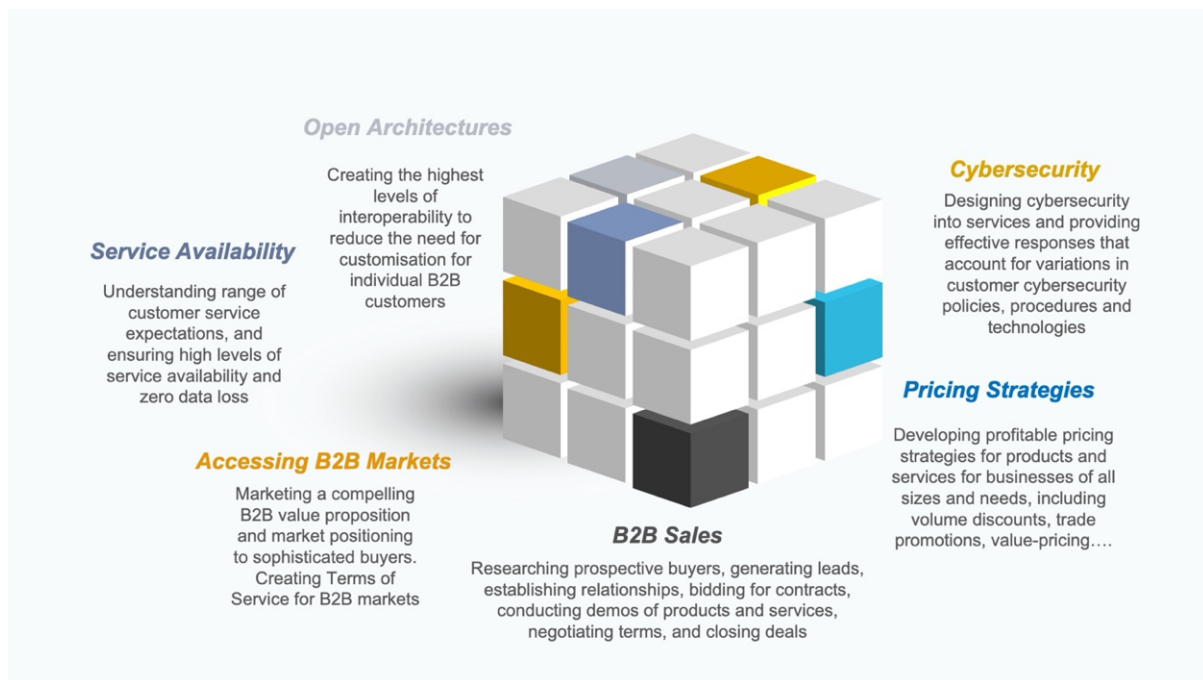
Figure 5 The business and technical challenges facing B2B Createch companies.

Createch as a driver of growth

There are challenges with obtaining accurate data on the economic performance of Createchs. Central government uses Standard Industry Classification Codes that do not uniquely identify Createch. County and local councils include Createch in broader "creative and digital" calculations. Commercial big data sources, such as Beauhurst or Crunchbase, tend to classify Createch in ways that provide an incomplete picture.

With these caveats, UCA research suggests that the 2019 Gross Value Add (GVA) for Createch and the supporting ecosystem in Surrey was £2.6bn, about 6% of the Surrey GVA (£46bn). For comparison, the GVA for film and TV in Surrey in 2019 was £4.3bn and game publishing was £1.2bn (excluding retail sales).

Perhaps more significant than the absolute GVA figure is that Createch has been consistently delivering double digit growth rates for the last five years and looks set to accelerate going forward as market demand for tools to support virtual production, digital fashion, immersive gaming, and such increases. London-based Createch stability.ai is a good example of this growth, reaching a billion-dollar valuation within three years of being founded. Putting this into a local context, Figure 4 provides an illustration of how Createch, TV and film, and games may develop over the next decade in terms of contribution to Surrey GVA.
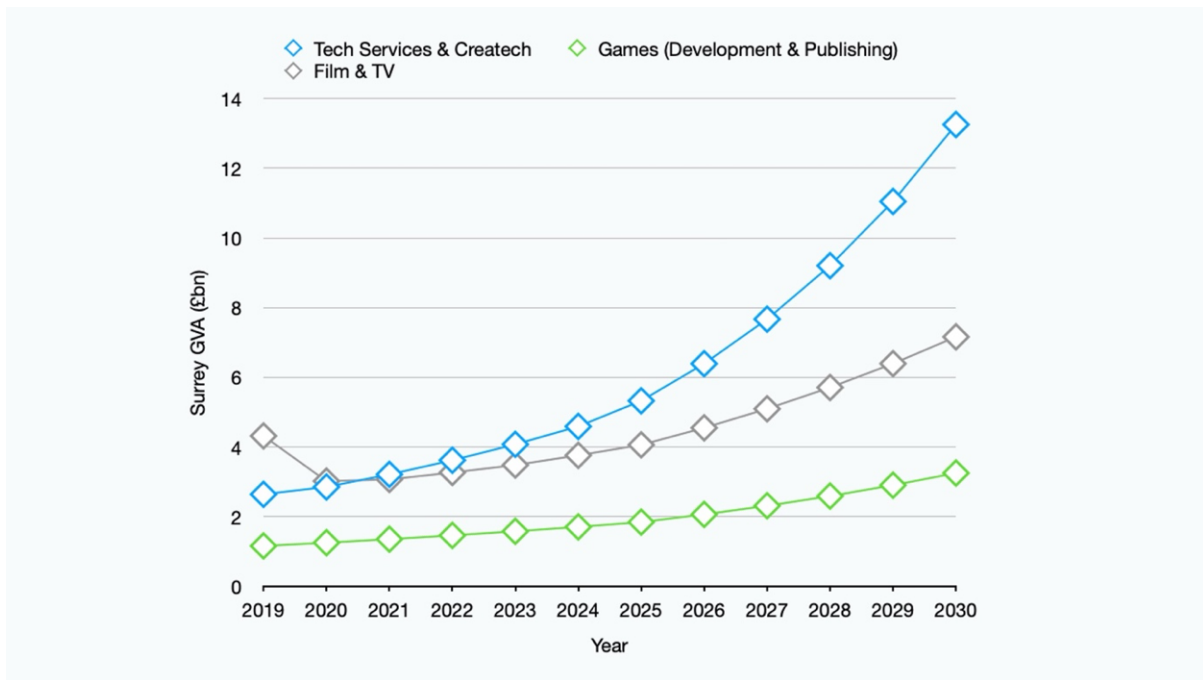
Figure 6 Forward GVA projections for Surrey (selected sub-sectors). Note that this information based upon assumptions, and there can be no assurance that these forward-looking statements will prove to be accurate.

As with other parts of the Creative Industries, growth in Createch can contribute to the place offer of Surrey's towns, including attracting and retaining digital talent, unlocking brownfield sites, creating "good work" across the region (not just in towns), and making more sustainable places. However, despite the rise of a green coding movement[1] in the sector and Createch founders highlighting their commitment to UN Sustainable Development Goals and net zero targets[2], the level of sustainability maturity is low and technologies such as generative artificial intelligence and blockchain may have significant hidden CO_2 emissions.

Finally, there are beneficial spillovers from Createch into other sectors terms of the local economy, innovation, investment, and skills (see Figure 7).

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[1] The green coding movement refers to programming code that is written to produce algorithms that have minimal energy consumption, including energy consumption that is related to user scenarios.
[2] In the 2022 UCA survey of Createch in the UK, nearly 60% of Createch founders and CEOs in the South East of England said that sustainability was core to their mission, and a similar percentage replied that the UK Net Zero Strategy was directly relevant to them.
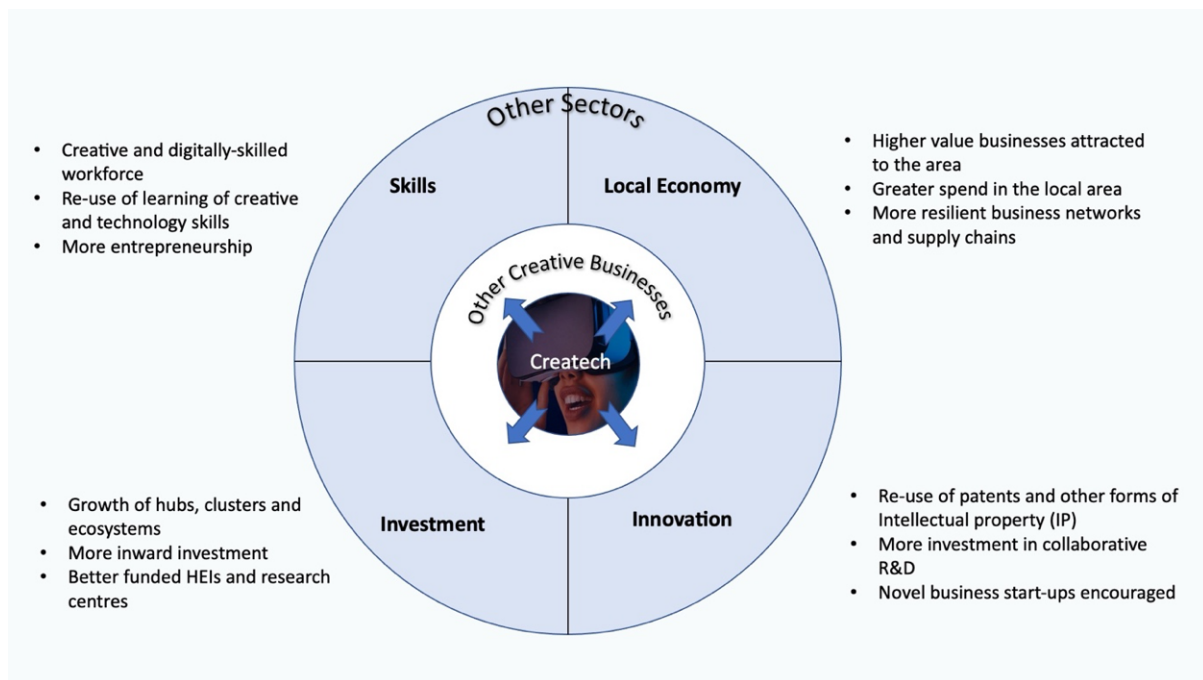
Figure 7 Map of spillovers from Createch into the rest of the Creative Industries, and then into other sectors such as life science, aerospace and automotive.

Fit with local government ambitions

According to the publicly available strategy documents of the Surrey County Council (SCC), the growth priorities for the county can be summarised as:

1. Growing the leading edge: supporting the growth of Surrey's innovation economy, particularly digital and creative businesses such as Createch.
2. Taking a 'whole place' approach to growing and sustaining quality places.
3. Maximising opportunities within a balanced, inclusive economy, addressing significant disparities in economic activity across the county (i.e., not just in the West around Guildford).
4. Capturing the potential of a greener economy, specifically supporting the development of the low carbon goods and services sector alongside the wider adoption of lower carbon technologies.

Based on UCA research over the past few years, Createch businesses (and others in the Creative Industries) are a good fit with these points, with founders frequently being purpose driven and expressing values aligned to these priorities.

Also, SCC have established the One Surrey Growth Board to focus on issues of key importance to Surrey's economy and "whole-place" development and to ensure there is delivery against plans. It brings together key stakeholders to promote economic growth, developing sustainable communities, and enhancing the quality of life for people living and working in Surrey.

Likewise, multiple borough councils (including Guildford, Waverley, and Runnymede) have made the combination of digital and creative businesses a focus for growth and placemaking in their strategies, although specific mentions of Createch are scant.

2. Createch in Surrey and surrounding regions

Createchs are R&D intensive and so benefit from good access to academic and business research and innovation, and while Surrey does have world-leading innovation assets, neighbouring counties can provide important contributions. Overall, the wider region has major strengths in other nationally and globally important sectors (e.g., aerospace, automotive and life sciences) that contribute to the talent pool that Createchs need to attract (i.e. entrepreneurship, digital skills).

In Surrey, the University of Surrey and Royal Holloway are recognised as the main academic research centres in Surrey covering key scientific and technical areas directly relevant to Createch (e.g., artificial intelligence and cybersecurity), while the University for the Creative Arts in Farnham and in Epsom specialise in providing educational courses, research and innovation directly related to cultural and creative businesses.

SETSquared Surrey ("Business Hatchery") is the predominant business incubator in the region (with strong connections to Surrey Research Park) with both Barclays Eagle Labs and Oxford Innovation building their presence in the wider region.

There are strong innovation links to surrounding regions, such as Hampshire and the Solent (for example with a concentration of high technology activity), as well as several key commercial and academic assets on the border of Greater London and other neighbouring counties (e.g., the major film studios). Further afield, Portsmouth University is developing a strong reputation for research around mixed reality and related disciplines. The South East Creative Economy Network (SECEN) covering East Sussex, Essex, Kent, Medway, Southend and Thurrock also plays a key role in accelerating growth in the digital, creative and cultural sector in the wider region (see more on SECEN later).

Customers for Createch goods and services are global, but there is well-developed local market because of the concentration of games, music, film, and TV companies (including the largest players such as Netflix). While many are fully inside Surrey's administrative boundaries, a significant number are across the borders into neighbouring counties and Greater London.

Scale and place of Createch activity

UCA keep track of a selection of around 300 UK core Createch businesses in the UK, 28 of which are in Surrey or in adjoining counties. However, this does not represent the actual number of Createch businesses in the region. Examining Office for National Statistics (ONS) 2022 census and labour market statistics for Surrey (via the Nomis service) for the common SIC codes most closely aligned to B2B Createch shows that there are 5800 businesses in the county using those codes. UCA experience with the data indicates that many will be conventional IT companies, but, as an example, there are 75 producing "interactive leisure and entertainment software" alone. Also, in the 2021 Policy and Evidence Centre (PEC) report An analysis of Createch R&D Business Activity in the UK, around 210 Createch businesses using public funds for R&D were identified in the travel to work areas around Aldershot, Brighton, Guildford, Reading, Slough and Southampton. Hence, a more realistic figure for the total number of Createchs according to the UCA definition in the county may be as many as 300, so already more than the number of games studios (85-100). However, a comprehensive audit is needed to establish the true number and associated economic benefit, and any such audit needs to account for industry coding challenges and the reality that the low awareness of Createch means that some businesses may not self-identify as such.

Creative Industry Sub Sector Alignment	Percentage (UCA Tracker Dataset)
IMMERSIVE ENTERTAINMENT	25%
GAMES	18%
ADVERTISING	7%
DESIGN	7%
FASHION	7%
MARKETING	7%
MULTIPLE	7%
TV & FILM	7%
ARTS & CULTURE	4%
MUSIC	3%
NOT ALIGNED	3%
STREAMING	3%

Source: UCA tracker dataset (28 Createchs, Surrey and Surrounding Region), 2021-2022
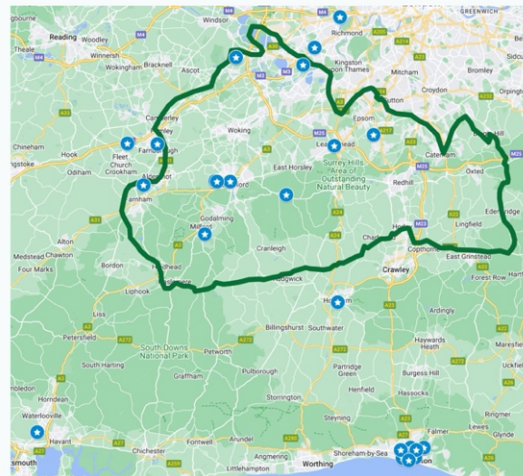
— Surrey District Boundary (approx., from SCC ArcGIS)

Figure 8 Regional locations of Createchs tracked by UCA.

Geographically (see Figure 8) the Createchs tracked by UCA mainly fall into an East-West corridor across the county and across the border into Hampshire. There are also UCA tracked companies operating on the Berkshire border, and in South West edge of Greater London. From UCA research, some of the Createch businesses that started in Surrey have relocated to East Sussex (Brighton and Hove) or to neighbouring parts of Greater London as they grew. This seems to be driven by availability of commercial property, skills, the social benefits of the location (nightlife, restaurants, entertainment etc), and access to specialised business and professional advice within walking distance (e.g., marketing and recruitment agencies).

In conversation with start-up founders, several companies have links to the Surrey universities (University of Surrey, Royal Holloway and UCA) where the founders attended or performed research relevant to their business. In some cases, this extends to universities providing original seed funding or facilitating grants. For example, LOANHOOD co-founder Jade McSorley is pursuing a PhD in Digital Fashion and Sustainability at UCA. Royal Holloway (StoryFutures) has acted as a funder and business incubator for several businesses that still operate in Surrey, although the precise numbers are difficult to determine.

However, irrespective of where the actual business operates from, several choose to be registered in Central London as this is attractive to investors; although, they might operate in Surrey and/or the surrounding counties.

In terms of Creative Industry sub-sector alignment (typically this reflects the customer base of the Createch), most sub-sectors are represented in the Surrey regional sample. Games, high-end TV and film are currently the most important customer segments for local Createchs. A small number of Createchs have developed a growing customer focus in other sectors (e.g., education, training, and life-sciences) and so are categorised as non-aligned.
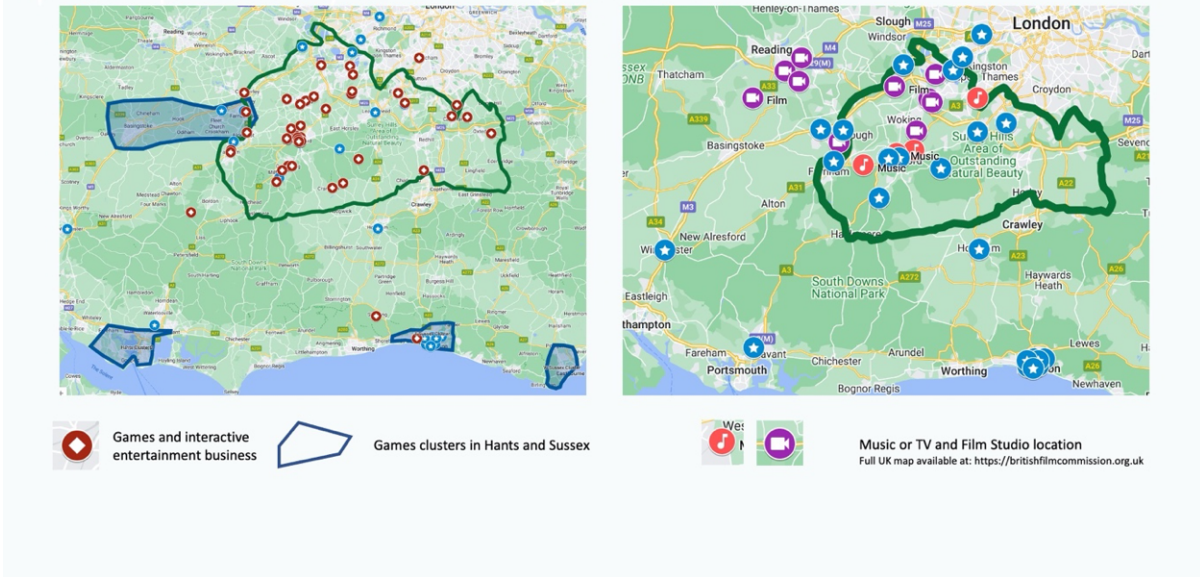
Figure 9 Regional distribution of games businesses, and the music, TV, and film studios.

Figure 9 shows the proximity to the regional games businesses, and the music, TV, and film studios. As the maps reveal, these businesses are widely distributed across the county in rural and town locations.
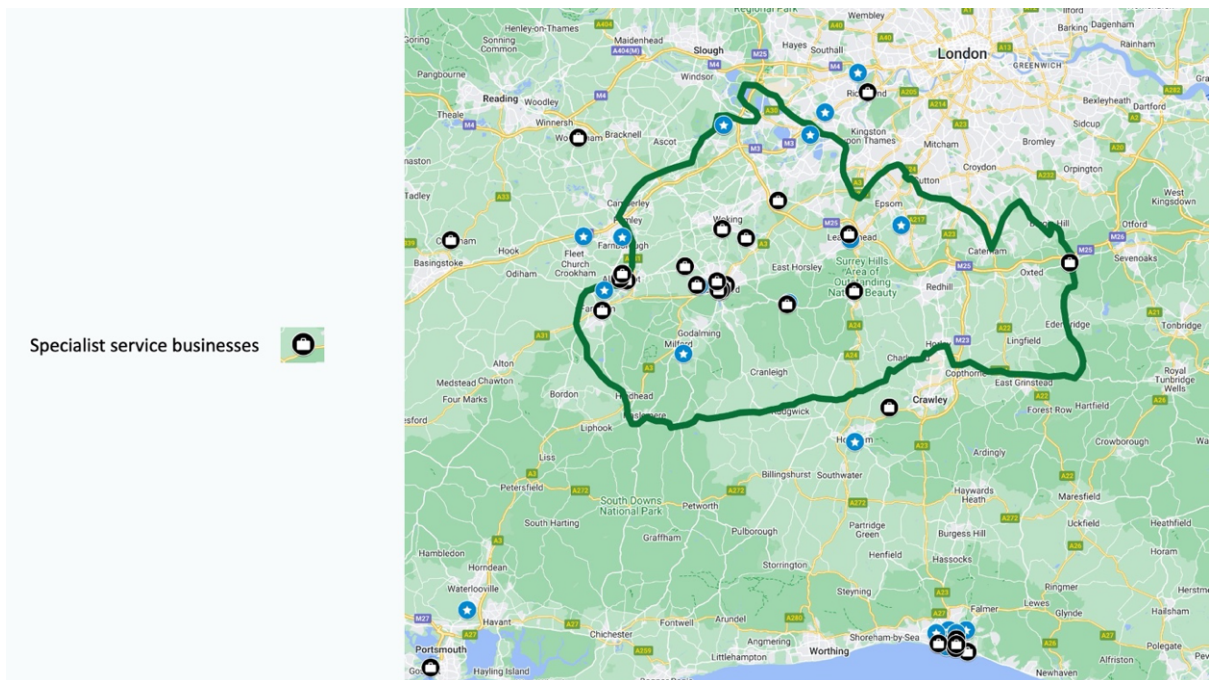
Figure 10 The specialist services ecosystem in the region (i.e., accountants, legal professionals, IT companies for the Creative Industries, etc).

Figure 10 plots the specialist services ecosystem in the region (i.e., accountants, legal professionals, IT companies for the Creative Industries, etc). Again, these are arranged East-West across the county. Also note the concentration in Brighton and Hove, many of which have clients in Surrey.

Inward investment

It is difficult to put an accurate figure on the level of inward investment specific to Createch in Surrey, but the number of domestic and international investors just in the last three years is significant. Appendix B lists the 87 investors in Surrey Createch identified in the UCA research (accelerators, business angels, debt finance, family offices, institutional funds, private equity, UK HMRC approved Enterprise Investment Schemes and Venture Capital Trusts, and venture capital). This large number of investors is further evidence that the number of Createchs in Surrey is likely higher than that identified in the UCA sample.

Note that all of the investors listed are from outside Surrey, despite SCC having identified that Surrey may have the highest concentration of financial services and venture capital people in the UK (perhaps even in Europe). However, although these people are living in Surrey the majority work elsewhere e.g., the City of London.
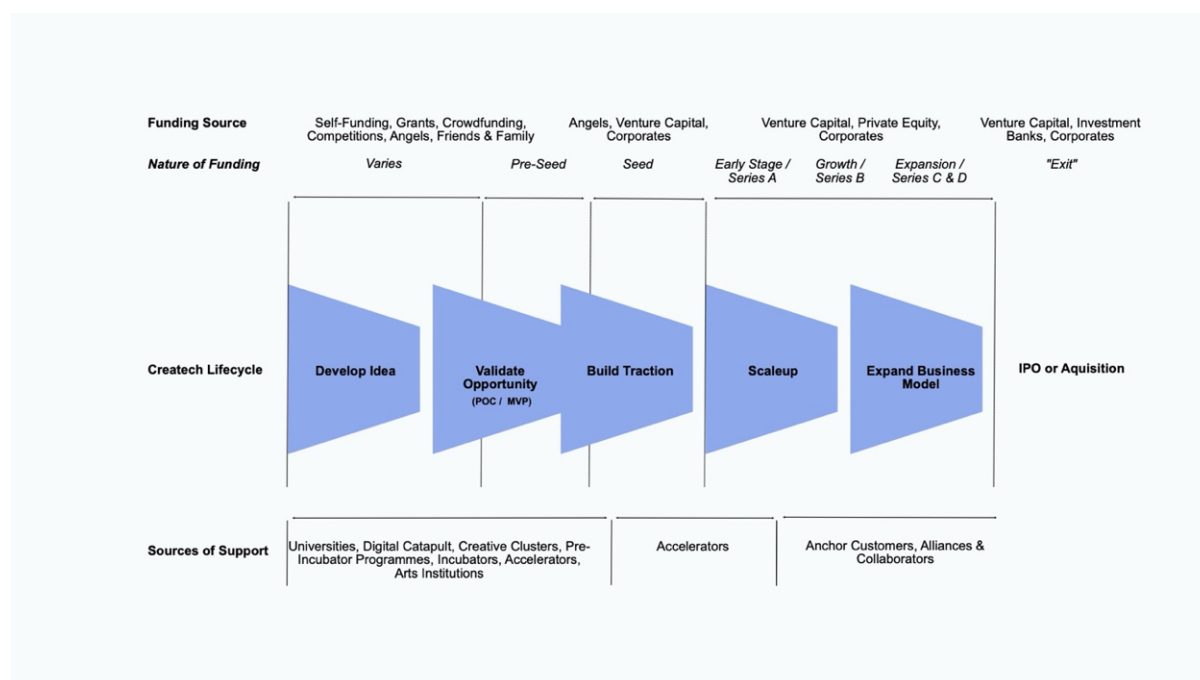
Figure 11 Createch lifecycle and funding sources.

To put this investment into context, Figure 11 shows the typical Createch lifecycle and funding sources for each stage. From UCA research, although Createch start-ups share many common characteristics with other technology start-ups (such as Fintech) they appear to struggle to access financial, business, and technical support in their earliest stages (pre-seed and seed) and again later in scaleup. This likely reflects the leading-edge nature of many of the technologies involved, a lack of understanding of the opportunities and risks by investors.

Pre-seed funding is particularly important for Createch, and typically comes from the founders themselves (e.g., from bank loans), grants (e.g., via Arts Institutions, InnovateUK, the Digital Catapult, Creative Clusters), their families and friends, crowdsourcing, competitions, and angel investors.

Positioning of Createch in council and LEP strategies

Surrey County Council

SCC are now starting to recognise the potential of Createch as a contributor to economic development, and UCA is providing input to development of strategies and plans as part of the One Surrey Growth Board Innovation Working Group[3]. However, there is a need for a comprehensive and focused study of the Creative Industries in Surrey as the true scale of the Createch opportunity is hidden under the more general classification of 'creative and digital' in strategies and plans.

Encouraging, attracting, and retaining Createch businesses and their highly skilled people, is consistent with SCC seeking to strengthen capabilities in advanced digital technologies (artificial intelligence, 5G, cybersecurity), and exploit its inventory of commercial and academic R&D activity. For example, in Surrey's Economic Future, Forward to 2030: Our Economic Strategy Statement (published in 2020) the intent is *"to make the county a key part of a UK 'Silicon Valley', linked with opportunities across the wider South East."*[4] However, in this and other strategic documents (such as Surrey's 2050 Place Ambition), Createch has not named as such.

Since a priority theme for SCC is "Growing the Leading Edge", the Council is using the recently refreshed inward investment service to promote the County as an attractive and highly competitive business destination. This includes recently financed start-ups and scale-ups with interest in relocating to Surrey. Since London is often a first choice for Createch businesses, a focus on the unique place offer of Surrey is likely to be beneficial in attracting people.

SCC is also evaluating the feasibility of raising an Innovation Fund (potentially £50m)[5], with funding streams targeted at the development of innovative concepts and solutions to grow the Surrey and UK economy. Createch businesses are likely to fit with any criteria developed.

Borough councils

It is clearly early days for Createch at borough council level. An exhaustive analysis of local councils has not been performed. Instead, four are highlighted to show the similarities and differences in approach to Createch.

Waverley Borough Council's Economic Development Strategy 2018-2030 discusses the importance of *"creative and digital"* sectors as key for economic growth, exports, and highly skilled jobs in the borough. However, the strategy does not mention Createch by name, rather it is implied in phrases such as *"digital and media specialisation".*

The Waverley strategy recognises that Universities and Colleges have an important role in nurturing creative and digital start-ups e.g., the strategy suggests that UCA at Farnham could take on the role of a commercial creative hub offering support for creative, digital and knowledge intensive start-ups (i.e., Createch), hence attracting and retaining skills locally.

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[3] The sectoral commitments of Kent County Council (KCC) could offer a model to learn from. KCC engagement in the Creative Industries goes back to the early 2000s, with the highlighted as a priority, and a board champion and manager in put place.
[4] Surrey's Economic Future. Forward to 2030: Our Economic Strategy Statement, Annex 1 (November 2020).
[5] Surrey's Economic Future. Forward to 2030: Our Economic Strategy Statement (November 2020).

Waverley also recognise that they need to "work with strategic partners and internal council teams to look at the opportunities for affordable studio and incubator spaces", a common concern raised by Surrey Createch founders (see later).

In contrast, [Runnymede's Economic Development Strategy 2022-2026](#) does talk about Createch explicitly and as a priority:

"Createch is a fast-growing part of the UK economy where creativity interacts with emerging technologies such as immersive technologies and artificial intelligence. The borough should develop joint work with Netflix, the film and TV sector and supply chains to maximise the opportunities for local employment and business growth from this major investment. The Council will work jointly with the LEP, Surrey County Council and surrounding boroughs to support a strategic approach to support createch."

Further, in November 2022, Runnymede held an event for local businesses interested in finding out about new creative technologies in immersive entertainment, TV, and film, and Createch in particular. The event showcased several Createch start-ups linked to the StoryFutures Cluster at Royal Holloway, and the council's work to support Createch across the borough.

[Epsom and Ewell Borough Council's Four Year Plan 2020-2024](#) discusses exploring *"creation of a creative industries business centre"* as *"a catalyst for further development of the new high value industries within the area"* exploiting the presence of UCA and NESCOT in the borough. However, there is no mention of Createch although the [Local Plan Spatial Economic Growth Strategy for Epsom & Ewell Borough](#) does prioritise the *"set-up of an enterprise centre suitable for the creation and growth of creative and technology- based businesses within the area in conjunction with key partners such as UCA and Nescot"* (i.e., Createch).

In Hampshire, near the Surrey border, Rushmoor Borough Council's working with Arts Council England, The Fifth Sector and other partners developed a [Cultural Strategy and Cultural Compact](#). Following research and stakeholder engagement workshops and surveys, the strategy and compact was presented for approval at Cabinet in October 2022/ The strategy has four main pillars:

- Social engagement
- Cultural engagement
- Skills development
- Building capacity in the cultural sector.

The strategy calls out Createch explicitly stating the objective to "work with artists and the Createch sector to establish Rushmoor as a centre for innovation and excellence in creative media. The main report also links Createch businesses with their local customers in the games sector:

"a strong digital industry, with leading VR and games companies based locally" and "Aldershot and Farnborough's computer games and 'Createch' businesses form an important part of the innovation-led, high-wage economy."

The strategy also makes the point that although these businesses bring well-paid work in a fast-growing sector and give young people a sustainable career in the Creative Industries, the skills and opportunities are not evenly spread across the Borough. The strategy also highlights that attraction and retention of staff are particular priorities.

The Local Enterprise Partnerships (LEPs)

Chancellor Jeremy Hunt announced a consultation on the future of LEPs as part of the Budget announcements on the 15th March 2023. The result of the consultation will be published in Summer 2023 and could result in the 38 LEPs in the UK being subsumed into the relevant local authorities by 2024. Even if this goes ahead as outlined, the strategies and plans produced by LEPs (usually in collaboration with local authorities or Chambers of Commerce) are likely to continue to influence thinking for some time.

Surrey County Council has links to two LEPs. Enterprise M3 (EM3) is the Local Enterprise Partnership (LEP) covering Surrey and Hampshire, while Coast to Capital (C2C) covers the West of Surrey, much of Sussex and reaches north to Croydon. Both are important in terms of the Economic Plan, the Local Industrial Strategy, and the Local Skills Improvement Plan (together with the Surrey Chambers of Commerce). Both include the Creative Industries in their thinking with Createch as a relatively recent addition.

In 2019, EM3 published A Strategic Economic Plan for the Enterprise M3[6], and stated that Createch is:

"a major source of innovation for our economy and, along with growth in our creative companies themselves, createch (sic) will be a significant factor in achieving our overarching ambitions for achieving more foreign trade, improved productivity and economic growth."

EM3 LEP are backing several different initiatives around the region that support the development of digital and creative businesses, and potentially Createch. For example, there is a major 25-year investment titled EZ3 made up of multiple sites:

- Basing View ('an innovation district' for the M3 corridor)
- Longcross Park (close to the major film studio at Longcross)
- Tech Forest Whitehill and Bordon in East Hampshire (previously designated as an "eco-town").

Whitehill and Bordon are interesting as they are developing four distinct creative districts (phrases such as "Hollywood" and "Silicon Valley" are used to describe the placemaking ambitions) and their ambition explicitly targets younger, tech-savvy creative businesses such as Createch. How far this has progressed is unclear: a visit by UCA to BASE Bordon Innovation Centre as an example showed that the profile of companies don't fit the Createch definition.

As with EM3 LEP, C2C have started to focus more on Createch in Sussex, with a major project launched in 2022 to develop a large-scale film studio complex that exploits virtual production to the full, alongside an integrated centre for creative technology research, training, and innovation. The project is still in its infancy but includes a 'Createch Open Innovation Network' to support existing businesses, as well as a skills and training programme focused on local people and places. As the full development requires around £100 million in investment, the current phase prioritises a business plan to generate interest from investors.

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[6] A Strategic Economic Plan for the Enterprise M3 Area 2018-2030, Appendix Two – Opportunities and Challenges (August 2019).

Existing Creative Industries networks in the region

There are existing Creative Industries networks in the region around Surrey, but their typically their geographic scope excludes Surrey although administrative borders are treated as porous when necessary to achieve objectives.

The main network is the South East Creative Economy Network (SECEN), established in 2013. SECEN is a collaborative network that aims to accelerate growth in the creative economy sector aligned with the South East LEP (SELEP) geographic scope (East Sussex, Essex, Kent, Medway, Southend and Thurrock). From PEC research on creative clusters and microclusters, there is a higher density of the Creative Industries along the Thames Estuary, particularly in Kent, than in Surrey. Hence, SECEN has access to a string local membership base.

As an open network, SECEN comprises creative businesses, strategic bodies, local authorities, education bodies, and individuals with an interest in the sector. SECEN's role is to support growth through various activities, such as developing partnerships, sharing knowledge, supporting product development, and raising awareness. It has had a significant impact on creating jobs and businesses, promoting innovation, and supporting the growth of existing businesses.

In November 2022 a SECEN consortium won a bid for an initial £1.275 million share of the UK government's £18 million Create Growth fund to support creative businesses, and the SECEN press release specifically mentions Createch as a sub-sector priority. This fund is focussed on scaling up businesses to bring them closer to the investment market, and development of investor networks for the Creative Industries. In total sixx regions were successful in their bids, and businesses across the six regions will also be able to apply to a new £7 million investment fund to fuel their expansion.

For the last few years SECEN has also been working with the GLA (Greater London Authority) to support the Thames Estuary Production Corridor on developing creative business clusters and facilities. This potentially is a model for a longer-term vision for Surrey.

The other active network in the region is Creative Network South (CNS), which is an advocacy partnership led by Hampshire Chamber of Commerce and established jointly with the Partnership for Urban South Hampshire in 2012. Examples of CNS activity include securing capital investment, attracting and retaining talent, and getting young people into traineeships, paid internships, and creative apprenticeships.

CNS works primarily in and around the Solent LEP area and has the ambition to be the lead agency promoting the development of the Creative Industries in that area. CNS geographic scope also includes travel to work areas such as Guildford and Aldershot, and it is recognised that creative people and businesses commonly work across administrative boundaries.

Despite Createch not being named in key documents, the combination of entrepreneurship, creativity and technology is a recurring theme in documents such as the CNS Solent Creative Industries Declaration. For example, the document states, *"a major driver of innovation and growth is the fusion of creative imagination and digital technology"* and there is an entire section dedicated to a plan to support creative entrepreneurship in the south. That section includes input from creatives on support for entrepreneurship in the Creative Industries. This includes sector specific business advice and sector specific mentoring, access to affordable flexible workspaces and incubators, and affordable access to cutting-edge technology and software (e.g., potentially in partnership with universities and colleges). There is also an ambition to provide appropriate support for high-potential businesses with a turnover less than £20k.

While not a network per se, the Southern Policy Centre (SPC) is an independent think tank and policy forum for the central South (Hampshire, the cities of Southampton, Portsmouth, and Bournemouth, Christchurch and Poole, the Isle of Wight, with connections to Dorset, West Sussex, Wiltshire, Berkshire and Oxfordshire) that researches opportunities for growth in the Creative Industries. In 2022, SPC published an economic development report on [Culture and the Creative Economy in the Central South](#) that discussed the importance of creative business support and technology mentoring, alongside university hubs for knowledge and technology transfer and development (all key areas of interest for Createchs).

3. Making Surrey a world-class Createch destination

Lessons from elsewhere

Globally, there are several examples of local or regional agglomerations of Createchs, usually within a broader, public-private collaboration to grow innovative businesses in a region. Although some are dense clusters in cities or urban areas, others are shaped differently by geography into corridors and other forms (for more examples see Hubs of Innovation from the Connected Places Catapult). This is more than an academic exercise, as the stakeholder map follows the landscapes, and the strategic options for economic development and placemaking in sparsely populated rural areas is different to cities.

Appendix C provides 5 case studies from around the world that are relevant to how Surrey and the surrounding region can become a world-class destination for Createch:

Toronto-Waterloo Tech Corridor - Silicon Valley North
(https://thecorridor.ca): The Toronto-Hamilton-Waterloo Regional Corridor (the Corridor) is a 110km development of high growth start-ups and established multinational technology businesses. Currently, it is the second-largest concentration of start-ups in North America after Silicon Valley with over 5,000 start-ups, supported by 16 universities and colleges (more than 400, 000 students), and multiple incubators and accelerators.

Thames Estuary Production Corridor / Creative Estuary
(https://www.creativeestuary.com): The Thames Estuary Production Corridor (the Corridor) is a significant new investment programme to unite East London, the North Kent Coast and South Essex to create a world-class, globally competitive centre for creative and cultural production. The programme was launched by the Mayor of London in partnership with the London Economic Action Partnership (LEAP), the South East Local Enterprise Partnership (SELEP) and the South East Creative Economy Network (SECEN) in February 2017.

Quartier de la Création Nantes (SAMOA)
(https://www.iledenantes.com): The Creative District on the island of Nantes in France is the 100% publicly owned agency in charge of the redevelopment of the Island of Nantes into a creative cluster. SAMOA's president is mayor of Nantes and president of Nantes Metropole. SAMOA develops and manages office space destined for in the creative and cultural industries and offers entrepreneurs a complete support package covering all stages of development of their organisations.

InnovationDistrict.com – Boston's Innovation District (http://innovationdistrict.com): The concept of the Innovation District was started by Boston City Mayor Thomas M. Menino in 2010 as a mechanism to utilise Boston waterfront as a place for innovative professionals to collaborate (the district is located on 1,000 acres of underdeveloped land on South Boston's waterfront peninsula between the Boston Harbour, Boston Logan Airport, and two major highways). The intention of the Innovation District is to provide creative individuals with the tools and connections needed to improve the local economy, as well as offering an affordable, yet high, standard of living to attract millennial entrepreneurs. Building physical spaces that enabled entrepreneurs to socialise during and after work hours was an imperative for the public sector stakeholders, as was involvement of existing accelerators.

Minc – the Startup House of Malmö (https://www.minc.se/): Minc is owned and funded by the City of Malmö. The economic development objective of Minc, on behalf of the City of Malmö, and the neighbouring County Councils, is higher sustainable growth and increased exports. It was established in 2002 as one of Scandinavia's first startup incubator programmes and over 400 start-ups have gone through one of their programmes. Minc also runs an accelerator called Fast Track Malmö and the pre-incubator Startup. Minc also works as the bridge between capital investors and the start-ups, and Minc manages the co-investment company, Fast Track Capital.

Each of these case studies represents a substantial commitment of time, money, and resource from public and private sector. For example, the vision for the Thames Production Corridor initiative was formed in 2017, then between 2018 and 2019 there was a year-long programme of activity to develop the investment case involving consultation with over 200 partners and stakeholders, and detailed research. Following on from the investment case, Central Government awarded £4.3m funding into a £6.7m three-year programme to the University of Kent in 2019 (from the Cultural Development Fund – "capital investment in transformative place-based creative and cultural initiatives"). So, they are the result of complex, multi-year programmes of stakeholder engagement and funding to establish partnerships and consortia and to secure the funding for the specialised infrastructure and more general placemaking initiatives that facilitate the growth and success of Createch ecosystems and attract talent to them. This includes developing physical spaces such as co-working spaces, innovation labs, as well as digital infrastructure like high-speed internet and technology-enabled production facilities.

The key takeaways from these case studies are:

- Ambitions visions involve many public and private stakeholders and significant investment and public funding. Novel commercial arrangements may also be involved such as establishing a legal entity for the programme (e.g., a joint venture or a company)
- Getting alignment takes time, and this requires sustained, strong leadership.

- Quickly building a region/county/borough concentration of companies is important to keep investors and funders on board, and to attract and retain businesses. Connecting to existing Creative Industries clusters can accelerate the process.
- Anchor institutions from academia, the arts, cultural and heritage sectors, the Creative Industries, and technology sectors are all necessary to attract and retain Createch start-ups and help them scale-up. These organisations often act as customer, investor, and source of skills rolled into one.
- For early-stage Createch start-ups in particular, low-cost, flexible office space and affordable housing is critical, and urban planning choices have a strong influence on attracting and retaining Createch entrepreneurs (i.e. no night-time economy, no entrepreneurs).
- Investment in physical space must be matched with professionally run incubator and accelerator support programmes as Createch entrepreneurs are often missing key business skills.
- Further and higher education establishments are core components in the knowledge networks that connect Createch start-ups to each other and the wider business community. They also create a pipeline of ideas and local entrepreneurs and provide access to R&D funding and facilities (as well as the academics with specialist knowledge).

In addition, two interviews were conducted with experienced people involved in establishing the successful Creative Industries cluster in Luxembourg (2400+ companies, employing 15,000 creatives). One of the interviewees is now running incubators and co-working spaces for start-ups. These interviewees echoed many of the points already made, and added:

- Sector mapping and data collection: Understand the industry landscape by conducting sector mapping and gathering accurate statistics. This information helps identify key players, uncover opportunities, and assess potential challenges.
- Project-based approach: Focus on initiating and supporting projects that align with the cluster's objectives and address the needs of its members. These projects can help demonstrate the value of the cluster and encourage further collaboration.
- Leverage existing resources: Utilise existing resources and infrastructure, such as educational institutions, industry associations, and government programs, to support the development of the cluster.
- Community building: Foster a sense of community among cluster members by organising events, workshops, and networking opportunities. This can help create a supportive environment where members feel connected and invested in the cluster's success.
- Continuous improvement: Regularly evaluate the cluster's progress and adjust as needed. This ensures that the cluster remains relevant, effective, and responsive to the changing needs of its members.

When it comes to incubators and co-working spaces for Creative Industries and Createch in particular, several factors are important to ensure their effectiveness and success:

- Location and facilities: Establish a Createch-focused space in an accessible location with high-quality infrastructure, including specialised equipment, high-speed internet, high-performance computers, design software, 3D printers, VR/AR equipment, and audio-visual equipment.
- Networking and mentorship: Organise Createch-specific events to facilitate networking and collaboration, and provide access to industry-specific mentors, advisors, and experts to guide start-ups and entrepreneurs in the creative and technology sectors.

- Access to funding and resources: Assist members in connecting with investors open to Createch pitches and R&D grants, as well as essential business resources tailored to creative and technology industries, such as specialised legal, accounting, and marketing services.
- Business development programs and collaboration: Offer skill-building programmes focused on Createch's unique needs, encourage collaboration among members, and facilitate partnerships with industry associations, educational institutions, and government agencies relevant to the both the Creative Industries and Technology sectors.
- Diverse community: Any Createch space should attract a diverse range of businesses and professionals from various creative and technology disciplines, such as designers, artists, developers, systems engineers, as well as the entrepreneurs. This diversity can lead to a more vibrant, innovative, and supportive environment for its members.

Stakeholder input

In late 2022 and early 2023, interviews were conducted with 16 regional stakeholders, and the findings discussed in a focus group with three Createch CEOs from the region. The summary from those meetings is:

1. Surrey is an attractive location for Createch: Those involved discussed the benefits of Surrey, particularly in terms of the talent pool and the close-knit community of industry professionals. They also talked about the importance of networks in finding new hires and noted that locations such as Aldershot and Farnborough are seeing spin-offs from established companies. Guildford was identified as a tech hub with a longstanding critical mass of talent and companies.
2. Virtual ways of working are not sufficient to address the high cost of working and living in Surrey: The challenges of virtual ways of working were highlighted, noting that they are not ideal for innovation and deep tech. They also discussed the importance of social interaction and the night-time economy for those in the industry. At a more basic level there is a need for better ways to identify available office space in the region (especially low-cost accommodation for Createch start-ups pre-seed funding).
3. More needs to be done to encourage collaboration and knowledge sharing: The individuals stressed the importance of regular meetups and events to help Createch professionals get to know each other and each other's projects. They also talked about the importance of networks in finding new hires and expanding the talent pool to include people from other industries, as well as simply communicating Createch success stories in the region.
4. Expanding the talent pool is essential: The founders and CEOs discussed the need for a larger talent pool, as other industries are coming into this space ("digital and creative") and spreading the pool in Surrey thinner. They also noted that universities and colleges may not fully understand the changing skill and knowledge needs for Createch (as opposed to, say, games development or virtual production in film).
5. Challenges with early-stage investment and grants: All agreed that it is too difficult for Createchs to access early-stage investment and funding (especially public funding for R&D and innovation). For some, knowledge of what funding is available and how to apply is a barrier, with some individuals citing arduous application processes or investor mindsets as problematic.
6. A diverse workforce brings a variety of perspectives and experiences: As with the technology sector, the lack of diversity in Createch leads to a narrow range of ideas and constraints on the talent pool. In turn, this limits the potential for innovation, entry to new markets and growth. The participants raised the diversity issue, especially with respect to Black, Asian and Minority Ethnic (BAME) recruits and women, and several had started their own, isolated initiatives to improve representation.

7. Public infrastructure projects are vital enablers: The various interviewees and groups discussed the importance of improving network infrastructure and bandwidth (especially in more rural areas), as well as the need to prioritise greening infrastructure, such as low-Carbon energy and East-West transport links.

Views from the World Café held at the UCA Creative Growth Summit

On 1st March 2023 nearly 40 people from local Createchs, arts and culture bodies, public sector organisations, LEPs, educational establishments, and micro- and small to medium sized companies in the Creative Industries participated in a World Café format discussion about the future of Createch in Surrey and the surrounding region.

Four themes were discussed in facilitated table conversations: growth, skills, collaboration, and sustainability. One immediate finding is that knowledge of Createch varied from zero to quite detailed, but overall awareness was low. Except for the Createch participants themselves, understanding of the B2B value chain was also low.

The output was recorded on over 170 Post-Its, machine-transcribed into text using Whisper and analysed with ChatGPT 4.0. The ChatGPT output (with light edits) is presented below in italics:

"Participants suggested that Createch in Surrey faces several challenges, including the high cost of doing business, limited space for scaling, and weak public transport links. To address these issues, it is suggested that empty retail spaces be repurposed, and hybrid working, and small hubs be adopted in a larger Createch corridor. Peer-to-peer connections and collaborative working are vital for driving growth in the sector, and creating directories for businesses, academic resources, and funding opportunities could enhance Createch visibility.

Fostering a local market for Createch products and services, attracting investors, and branding Surrey as a creative hub ("Shoreditch South") are seen as essential steps. The community thrives on a combination of creative, technical, and business skills, but there are significant gaps in education and training. Initiatives like code camps, scholarships, placements, and apprenticeships can address these gaps, while greater emphasis should be placed on communication, social skills, and digital marketing.

Academia and industry need to better understand each other's requirements, and AI alone cannot fill skill gaps in Createch. Placements can facilitate employability and knowledge transfer, while collaboration can bridge skill gaps and improve lives. Creative funding ideas for collaboration should be explored, along with digital connectivity and physical spaces for fostering communication.

Opportunities for collaboration with central government should be sought, and Createch companies should focus on understanding their role in sustainability. This includes being aware of energy and emissions in their value chains, the ethical dimensions of technology, and supporting each other through sharing sustainability knowledge and networking."

4. Vision and strategic options

Surrey already has a mature games cluster, and the region hosts a significant proportion of the UK's stock of large TV and film studio space (although these are not formally defined as a cluster). So, there are many customers locally for Createchs, and a well-established range of professional services that can service Createch companies. The region has strong creative and technical research and educational asset. As was demonstrated earlier, there is a track record of inward investment into the region for the Creative Industries. Hence, some of the key pre-requisites for forming a cluster or regional corridor for Createch already exist.
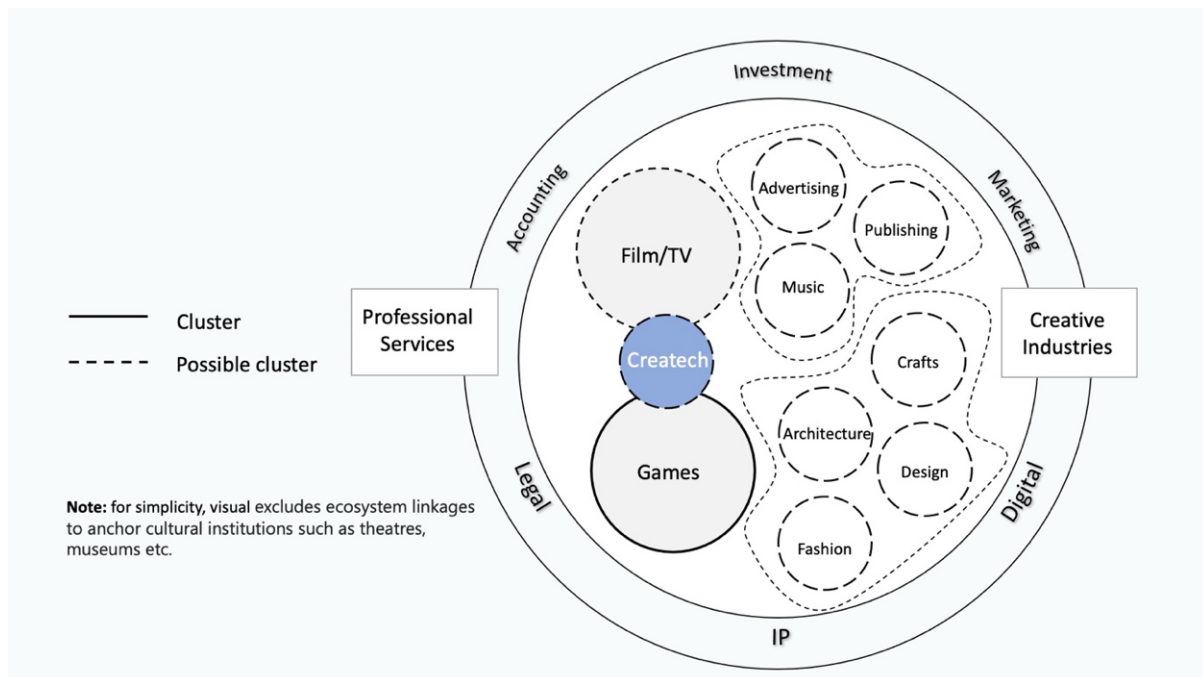
Figure 12 Creative Industries ecosystem.

Surrey could aspire to become one of the top destinations for B2B Createch globally: a vibrant, connected, and sustainable regional Createch ecosystem that fosters innovation, collaboration, and growth for Createch businesses, their customers and suppliers, entrepreneurs, and citizens. Figure 12 illustrates the key elements that could form the basis of action planning to deliver this vision over the next few years.

The Createch Corridor vision

Priority Places	Buildings	Incubator Programme	Networking
• Aldershot • Basingstoke • Egham • Farnham • Farnborough • Guildford	• Brownfield locations • Refurbishment • Equipped for Createch • Space for ~15-20 • Attention to social fabric	• Bite-sized content • Business & technology skills • Competitive entry • Preparation for investors • Target graduates and PhDs	• "Createch South East" • Partners with FEI/HEI, businesses and local authorities • Supporting creative clusters • Fostering Createch skills • Accelerating Createch growth

Figure 13 Key elements of a vision for Surrey as a world-class destination for Createch.

To gain support from all the stakeholders involved (see Appendix D), this vision needs to:

- Demonstrate it attracts, and retains more B2B Createch businesses and talent, and helps those businesses achieve scale (especially those that Createchs that incorporate sustainability and ethical considerations into their operations, products, and services).
- Assist in delivering measurable progress against regional economic development, net zero, skills improvement, and placemaking goals. Without these achievements it may be difficult to gain public sector funding support.
- Help in addressing disparities between the eastern and western parts of the county, and between rural, town and city areas.
- Take action to tackle issues of equality, diversity, and inclusion within the Createch sector.

As a minimum, this vision requires a B2B Createch network to encourage collaboration, knowledge sharing, and the exchange of ideas among local businesses, academic institutions, and government entities, and this could extend to interconnected Createch hubs within Surrey and the surrounding regions. The aim being to move towards a larger Createch cluster or corridor that encompasses the border areas of Berkshire, Hampshire, and West Sussex.

From input gathered from stakeholders, this vision should include both digital platforms and affordable physical spaces (e.g., ideally brownfield or re-purposed commercial properties as co-working spaces and incubators) to foster ideation, collaboration, peer-to-peer knowledge sharing, and networking among Createch and other creative businesses in Surrey.

Of course, new ideas need to turn into action, and this requires:

- Capital for early-stage development, start-ups and scaleups. This means communicating Surrey globally as an attractive destination for Createch investors, entrepreneurs, and businesses and highlighting the region's competitive advantages, such as its skilled workforce, quality of life and innovation assets.
- Matching the labour force and skills to Createch opportunities. This involves partnerships between educational institutions, industry leaders and the public sector to bridge skill gaps

and equip individuals with the combination of creative, technical, and business skills necessary to excel in the Createch sector. In turn this means developing talent pipelines, modular programmes, code camps, scholarships, placements, and apprenticeships.
- Access to markets in the UK and internationally. This could start with cultivating a thriving regional market for Createch products and services (e.g., by promoting local businesses and supporting the growth of a local customer base in the existing games, TV, and film clusters).

The vision also needs to deliver the right assistance to B2B Createch founders and leaders. For example, provision of tailored incubator and accelerator programmes, mentorship, bite-sized and modular skills training, and business support. It is not only important to help creative entrepreneurs to develop the right business skills and identify opportunities for growth, but also to facilitate dialogue between the technical, creative, and business personalities and perspective involved.

While initial progress towards this vision might be achieved with local investment and funding, the likely scale of the full corridor vision requires collaboration with central government departments, leveraging their support and financial resources to drive the growth and development of the Createch sector in Surrey as a global destination for Createch.

Strategic options

Three options are presented in Table 2 below. These represent a progression towards the vision in terms of effort and complexity, rather than being mutually exclusive.

Table 2 Strategic options for Createch in Surrey and surrounding region.

	Option	Pros	Cons
1	Createch network Surrey	• Enhanced collaboration and knowledge sharing • Wider access to resources and funding • Increased visibility and recognition for Createch in the region, nationally and internationally	• Requires dedicated resources to keep network vibrant and effective • Stakeholders may be sceptical of benefits • Challenging to maintain momentum over the long term
2	The network plus Createch incubators	• Provides place-based specialist support and resources (town and country) • Offers local and in-person mentorship and advice • Proven approach to attracting and growing start-ups	• More stakeholders involved (e.g., property developers) • Initial and on-going costs of buildings and staff • Choosing locations must balance multiple public and private agendas
3	A regional Createch cluster or corridor	• Can attract substantial public and private investment • Greater scale and retention of Createch businesses and ecosystem partners • Grows pool of "creative and digital" skills in the region	• Strong, sustained leadership required • Complex stakeholder map (government, universities, private businesses, investors) • Requires sophisticated governance and project management

No final decision has been made yet about how to progress these options, but this report does make recommendations for decision-makers.

Getting started

UCA held a stakeholder workshop on 16th March 2023 as an initial test of the vision. The participants came from Createch businesses, property development, local government, academia, trade bodies, Chambers of Commerce, and the national innovation agency.

The aim was to challenge the vision and the options and then to build upon this foundation to further inform decision-making. The key observations were:

1. The definition of Createch needs to be clarified for stakeholders. It is essential to determine whether it should exist as a standalone sub-sector to ensure that funding for other parts of the Creative Industries is not diluted.
2. The growth of the Createch network in Surrey should be both top-down (local government-led) and bottom-up (business-led), with businesses being the key stakeholders.
3. Technology research and innovation is happening within every part of the Creative Industries, so it is important to understand the contribution and position of Createch in the broader value chain for the sector and any spillovers into other sectors.
4. Createchs that are "pre revenue generation" may not be aware of the grants available to support their research and innovation efforts (e.g., InnovateUK).
5. Funding and support are needed to examine best practices and lessons learned from successful and failed cluster / corridor initiatives.
6. Engaging politicians as well as businesses and other stakeholders is crucial to ensure the success of the Createch cluster in Surrey.
7. Challenges include political and business buy-in, supporting the talent pipeline, and availability of affordable commercial space.
8. Effective collaboration between businesses, education institutions, and government in bringing the vision to life is a key enabler of success.
9. Ensuring that Createch skill needs are reflected in the forthcoming Local Skills Improvement Plan is essential to support future growth.

From all the inputs received from interviews, meetings, case studies and workshops, there is a belief in the value of a Createch network as a starting position, but only if it is led by businesses in response to their needs, and only if it is action oriented. In practice this means putting in place finances and resources to:

1. Clearly define the network's purpose as an action-oriented platform for Createch companies in Surrey, emphasising the facilitation of small group collaborations on projects of shared interest and ensuring that the network's structure and activities align with this focus.
2. Organise project-focused events, such as workshops and hackathons, to encourage collaboration, showcase work, and provide opportunities for feedback and refinement. This could be extended to a dedicated platform for project collaboration, allowing members to discover, join, and work on shared projects with effective communication and resource sharing tools.
3. Foster small-group formation based on shared interests and complementary skills, providing resources and support to help these groups work effectively on their projects.

4. Continuously evaluate and refine the network by gathering feedback from participants and using it to improve the structure, events, and offerings, ensuring the Createch network effectively serves the Surrey community.
5. Fund an appropriately skilled full-time or part-time co-ordinator for the network.

Given that many Createchs are at the cutting-edge of their field, creating a safe and confidential environment for open collaboration (e.g., by implementing Chatham House Rule-style meetings) will be important. It may even be necessary to segment participation based on whether companies are early stage, start-up or scale-up, or established.

5. Conclusions and recommendations

Surrey and the surrounding regions have many strengths that can help grow Createch (see SWOT analysis in Figure 14). The opportunities are attainable although there are some visible threats and weaknesses. Overall, Surrey is well positioned to become a renowned centre for Createch.

Figure 14 SWOT analysis.

To use the words of a participant at the recent UCA Creative Growth World Café, if Surrey and the surrounding areas are to become the next "Shoreditch"[7] in the eyes of Createch founders and CEOs, then the priorities are:

1. Foster a strong local Createch community: Building a strong local community of industry professionals is essential for creating a vibrant and innovative Createch industry in Surrey. This can be achieved through more co-ordinated and regular meetups, events, and networking opportunities.
2. Attract and retain talent: Creating an attractive environment for talented individuals in Createch to live and work is important for building a world-class destination for the industry. This could include investing in local education and training programmes and promoting a culture of innovation and creativity.
3. Support early-stage companies: Early-stage companies are the lifeblood of the sector and supporting them is essential for creating a thriving Createch ecosystem. This could include offering early-stage funding and grants, mentoring and support programmes, and access to incubators and co-working spaces.
4. Encourage collaboration: Collaboration between Createch companies, as well as with other industries, is important for building a successful and innovative ecosystem. This could include encouraging within and cross-industry collaborations, promoting knowledge-sharing and best practices, and facilitating partnerships and joint ventures.

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[7] Shoreditch is a part of East London that was for several years a beacon for Creative Industries start-ups. It remains fashionable with neighbourhood coffee shops and trendy bars for after-work drinks. However, in recent years the supply affordable co-working and office rental spaces has declined sharply.

5. Address diversity and inclusion: Addressing diversity and inclusion issues is essential for creating a world-class Createch destination that is equitable and socially responsible. This could include implementing diversity and inclusion programmes, promoting a culture of inclusivity, and actively recruiting and retaining a diverse workforce.

This latest UCA research shows that the Createch sector in Surrey holds significant potential for addressing these priorities and driving innovation, economic growth, and job creation in the region. To fully capitalise on this potential, it is crucial to engage a diverse group of stakeholders, especially businesses, educational institutions, and government entities, in a partnership effort to remove blockages and seize the opportunities that lie ahead. This collaboration should be characterised by:

- A shared understanding and definition of Createch.
- Leadership from businesses based on their needs and enabled by local government and UCA.
- The establishment of effective and tailored support systems such as a network, incubators, skills development, and mentorship programmes.
- Connection to existing games, TV, and film clusters.
- Adequate resourcing and funding for running networks etc and pursuing a multi-year programme of funding and investment.
- Agreement that the financial and non-financial benefits for all involved are equitable.

The need for a Createch South East network (Option 1) has support in principle from UCA and SCC, although the ownership, resourcing and other details still need to be agreed. Of course, getting early business buy-in to the benefits of participation and involvement in designing the network are pre-requisites.

If a decision is taken to progress beyond the network option, it is essential to learn from the successes and failures of other initiatives, adapting best practices to the Surrey context while ensuring the active participation and buy-in of all stakeholders. For example, the SECEN experience of taking the Thames Estuary Production Corridor from vision to action offers useful insights and a template for how to proceed in securing support and funding at scale.
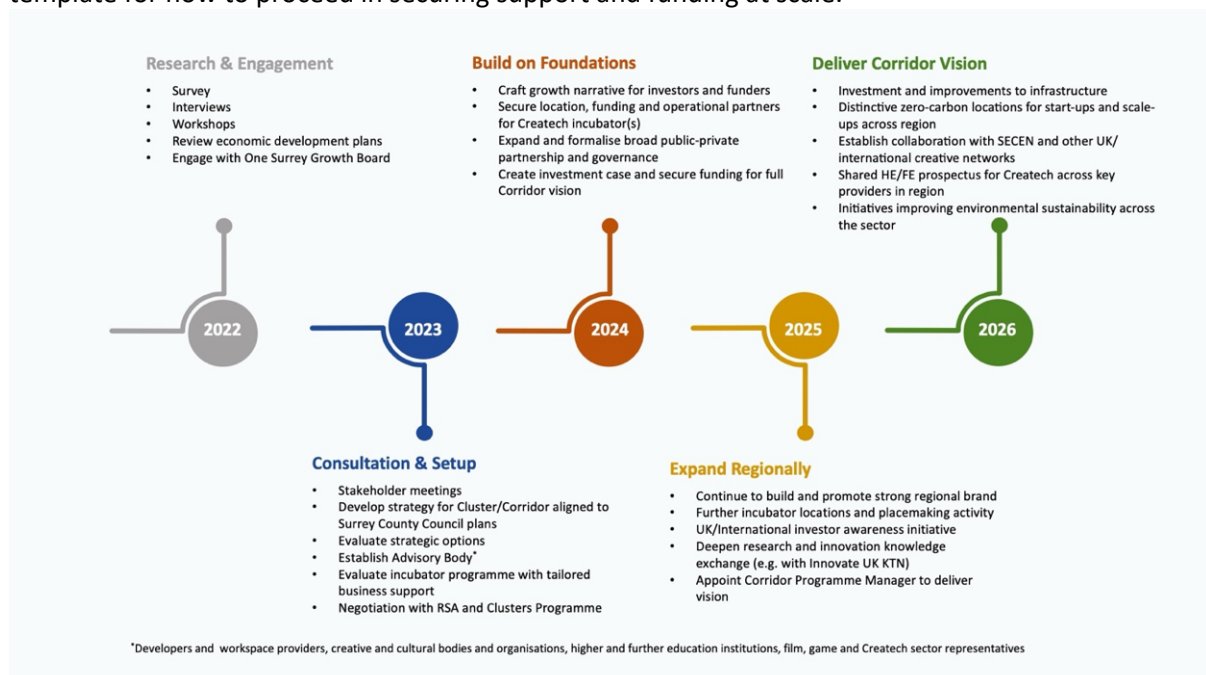
Figure 15 Draft timeline from 2022 to 2026 based on the assumption that a decision is made to pursue option 3 (a regional Createch cluster or corridor).

The potential scale of activity to deliver the vision should not be underestimated. Figure 15 is a draft timeline from 2022 to 2026 based on the assumption that a decision is made to pursue option 3 (a regional Createch cluster or corridor). Figure 16 provides a framework for the governance and overall co-ordination required to deliver option 3.
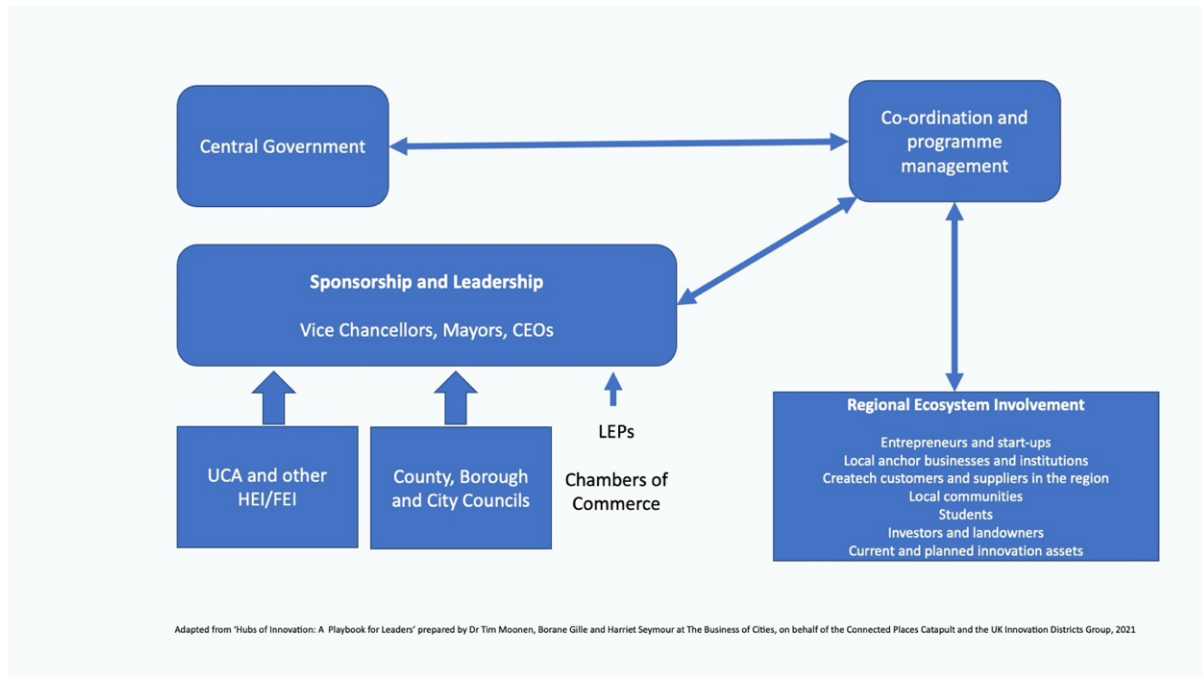
Figure 16 Framework for the governance and overall co-ordination required to deliver option 3.

Recommendations

Drawing from the various research findings and opinions, UCA present a set of key recommendations:

1. Work with all stakeholders to develop a clearer definition of Createch and identify key priorities.
2. Use the definition to facilitate a robust audit of core and non-core Createch in Surrey and the surrounding region.
3. Research the needs of Createch companies: pre-start-up, start-up and scale-up.
4. Prove the business benefits of cluster development to relevant businesses and local authorities and ensure buy-in.
5. Together with, say, around 10 Createch businesses, design a business network and mentorship program to support start-ups and growth in the sector.
6. Seek out lessons from successful and failed cluster and corridor initiatives and adapt best practices to the Surrey context.
7. Establish an advisory group and a lead person to be responsible for driving the chosen strategic options forward and co-ordinating the Createch initiative in Surrey.
8. Engage with politicians to ensure their support and prioritisation of the Createch sector in Surrey.
9. Continuously monitor the evolution of Createch in Surrey and adapt to changing needs and challenges.

6. Next steps

The recommendations above lay the foundation for creating a pathway for scaling up to a cluster or corridor, but in the short term UCA believes it is important to continue with a focused set of next steps involving communicating this report, consulting with stakeholders and action planning:

1. Develop an action plan to secure stakeholder buy-in to the vision (on-going).
2. Dissemination webinar covering this report (due May/June 2023).
3. Agreement with SCC on the Createch cluster strategy (due May/June 2023).
4. Publish draft Advisory Board proposal (due May/June 2023).
5. Completion of support tool/process on sustainability for Createch companies (due July 2023).
6. Dissemination webinar covering tool/process (due July 2023).
7. Negotiation with Royal Society of the Arts (RSA) and the Arts and Humanities Research Council (AHRC) Clusters Programme regarding Createch and the Policy and Evidence Centre for the Creative Industries (ongoing).
8. Seek funding to evaluate an incubator programme with tailored business support (due September 2023).

7. Final thoughts

There is clear trend across the Creative Industries to include advanced technologies into the products This means that all creative businesses need to rethink their skill mix and redesign their value chains to both exploit technological innovations in their core processes and to work effectively with third parties such as B2B Createchs who are pushing the boundaries of technologies such as AI. The pace of change means that continuous monitoring of the evolution of Createch in Surrey and adaptability to changing needs and challenges will be critical to the long-term success of this sector.
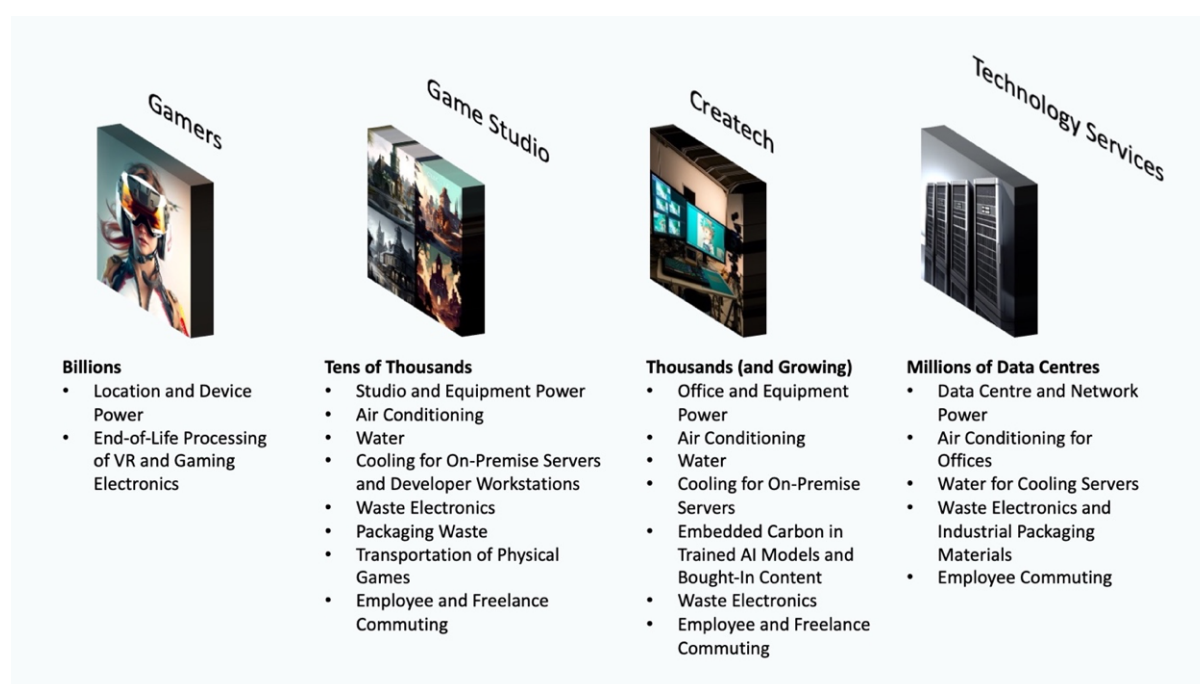
Figure 17 The world behind the screen. An illustration of the sources of energy and resource consumption, and waste in the end-to-end value chain involved in interactive entertainment and gaming.

Net Zero is an important goal for Surrey and Figure 17 shows that hidden behind many of these exciting technologies are high levels of energy consumption and CO_2 emissions (although calculating these for Createch is problematic). Createch founders want to support sustainability measures and previous UCA research shows that Createch founders are aware of the possible issues. However, these founders are not always able to quantify the impact of their businesses or plan improvements effectively. In the 2022 UCA survey of Createchs in the UK for example, over 70% of the companies surveyed were at Zero or Basic levels of sustainability maturity, and 50% had limited or no documented carbon reduction plans.

By fostering a thriving Createch ecosystem in Surrey, the region can position itself as a hub of creativity and innovation, contributing to the overall growth and prosperity of the UK's economy. Supporting the Createch sector to deliver Surrey's Net Zero and broader sustainability goals should also be an important part of any future developments in the region.

Appendix A: Brief History of Createch

In 2019 the Creative Industries Council were the first to offer a formal definition of Createch / CreaTech / createch as businesses harnessing the interaction of creativity and technology or "where creativity meets technology. It brings together creative skills and emerging technologies to create new ways of engaging audiences and to inspire business growth and investment."

Other definitions have followed the original, such as this one from Tech Nation in 2021:

"Creative technology (CreaTech) is used to describe new tech that seeks to improve and automate the delivery and use of creative services. CreaTech is utilised to support both companies and consumers better manage their operations and processes by applying specialised software and algorithms that are used on computers, smartphones, consoles and other Internet of Things devices."

These broad definitions tend to include many companies that consider themselves to be part of other sectors, and not part of the Creative Industries. Hence, UCA undertook research in 2022 to refine the definition further.

Createch companies are often notable for their content (for example, the visual styling of avatars for companies that are part of the gaming ecosystem). However, as mentioned above, technology assets are central to being a 'tech company. Technology assets can dramatically affect competitive positioning and valuation by investors. From an examination of well-publicised Createch companies, their core capability is entirely dependent on technology they have developed themselves or on a unique exploitation of someone else's. This became an important part of the UCA definition used for this report.

As well as making technology assets central to the definition, UCA research makes a distinction between "core" and "non-core" Createchs. Core Createchs are completely aligned to sub-sectors of the Creative Industries (their business customers), whereas non-core Createchs tend to pursue customers in multiple sectors (and the Creative Industries may not be the main segment) or have business models that spillover from or to other sectors (e.g.; fashion retail ecommerce).

In total, UCA estimate there are around 1900 Createchs in the UK. The Creative Industries Foresight 2030 update published in April 2021[8] discussed how £1bn of Venture Capital investment flowed into UK Createch in 2020 alone, and how Createch is likely to continue with double-digit growth to deliver a UK Gross Value-Add (GVA) of over £225bn by 2030.

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[8] A foresight report on Creative Industries in 2030 by The Centre for Sustainable Design®, Business School for the Creative Industries, University for the Creative Arts (UCA), with a particular focus on Sustainability & Industry 4.0. The report fully updates the report published in 2021.

Appendix B: Investors in Surrey Createch

The following table lists the investors who have made at least one investment in a Surrey Createch in the last five years. It is common to have multiple investors in a single start-up or scale-up. No attempt has been made to identify the scale of investment.

Investor	Country	URL	Notes
1UpVentures	USA	https://1upfund.com/	Games
7Percent Ventures	UK	http://7pc.co	Early stage
Acequia Capital (AceCap)	USA		Early founder focus
AI Seed Fund	UK	http://aiseed.vc/	Early-stage AI start-ups
Andreesen Horowitz	USA	https://a16z.com	One of the giants of the VC world
Aonic Group	Sweden	https://aonic.co	A video gaming family consisting of development studios as well as gaming-related technology and service providers.
Ascension	UK	https://www.ascension.vc	Pre-seed "micro-VC". Seed VC of the Year 2022
Augmentor Partners	UK	http://augmentor.digicatapult.org.uk/	Accelerator/incubator for B2B start-ups
BITKRAFT	USA	https://www.bitkraft.vc/	Gaming, Web3 and immersive
Black Sheep Ventures	USA	https://blacksheepvc.com/	Founded by Nolan Bushnell!
C4 Ventures	France	https://c4v.com	Early stage
Carmen Busquets/Couture Lab	UK	https://www.carmenbusquets.com	Fashion and sustainability angel
Catherine Lenson	UK	https://www.linkedin.com/in/catherine-lenson/	Pre-seed investor in start-ups led by women with a social impact. Certified as the first UK-based Fair Play facilitator

Christer Holloman	USA	https://www.linkedin.com/in/cholloman/	Pre-seed. Angel investor. Founded Glassdoor.com
Clearly Social Angels	UK	https://www.linkedin.com/company/clearlyso/	Angel network dedicated to businesses that create positive social change; the first of its kind in the UK
Coatue	USA	https://www.coatue.com/#!	Founder led firm
Connect Ventures	UK	https://www.connectventures.co	Early stage
Creator Fund	UK	https://thecreatorfund.com	Investing in university founders
Deeptech Labs	UK	https://www.dtl.vc/	Accelerator and VC
Deeptech Ventures	Switzerland	https://www.deeptechventures.ch	Web3 and play to earn
Dune Ventures	USA	https://dune.ventures/	Early-stage gaming
Elrond / MultiverseX	Romania		Blockchain platform!
Felix Capital	UK	https://www.felixcap.com	A venture firm for the creative class, at the intersection of technology and creativity, focused on opportunities in digital lifestyle
Foundamental	Germany	https://foundamental.com	Construction and architecture focus (including metaverse)
Fuel Ventures	UK	https://fuel.ventures	One of the most active early and growth stage investors in the UK into leading fast growth technology businesses (e.g. SaaS, platforms)
Galaxy Interactive	USA / Cayman Islands	https://www.galaxyinteractive.io/	Invest at the intersection of content, technology, and social commerce with an emphasis on video games and the infrastructure powering immersive virtual worlds
Game Seer	Germany	https://www.game-seer.com/	Games
GameFounders	Malaysia	http://www.gamefounders.com	Games accelerator
GamerForce Ventures	Singapore	https://www.gamerforce.ventures/	eSports and gaming

Grace Ladoja	UK	https://www.linkedin.com/in/grace-ladoja-0325302a/	Music entrepreneur and manager of Skepta
Green Angel Syndicate	UK	https://greenangelsyndicate.com	Green Angel Syndicate is the UK's largest network of specialist investors fighting climate change
Griffin Gaming Partners	USA	https://griffingp.com/	One of the largest funds - Content, Software Infrastructure, Social Platforms, and gaming-related Web3 companies
Hiro Capital	UK	https://hiro.capital/	Videogames, Esports, Streaming and Digital Sports. Invest in Metaverse technology founders and Game creators who are building the future. Ian Livingstone key figure
Horizon Ventures	China (Hong Kong)	https://www.horizonsventures.com	
Ian Hogarth	UK	https://www.linkedin.com/in/ianhogarth/	Founder and angel investor
Initial Capital	UK	https://www.initialcapital.com	Investor in seed and early-stage technology companies with a focus on games, consumer services & technology enablers
Intel Capital	USA	https://www.intelcapital.com	Investing in the future of compute
Jonathan Lenson	UK	https://www.linkedin.com/in/jonathanlenson/	Pre-seed
Konvoy Ventures	USA	https://konvoy.vc/	Gaming platforms and technology
Lauder Partners	USA	https://lauderpartners.com	Family Office investing both directly in companies as well as in funds
Lightspeed Ventures	USA	https://lsvp.com	Presence and access to resources in Silicon Valley, Israel, China, India, Europe, and Southeast Asia
LocalGlobe	UK	https://localglobe.vc	Seed and impact investments

London Co-Investment Fund	UK	http://glif.co	£100m public-private venture capital fund. It allows us to invest in some of London's most innovative science, digital and technology start-ups. Run by Funding London
London Venture Partners (LVP)	UK	https://londonvp.com	A seed fund that focuses on the game ecosystem
Lumikai	India	https://www.lumikai.com/	First Indian gaming and interactive VC
M&A Advisory	UK	https://www.mandaadvisory.com	Selling businesses is the primary focus
Maersk Growth	Denmark	https://www.maersk.com/growth	Mission to digitise, democratise, and decarbonise supply chains
Makers Fund	USA	https://makersfund.com/	Interactive and gaming
March Gaming	USA	https://marchcp.com/march-gaming/	Invest in ideas at the intersection of tech, creativity & culture
MassChallenge	USA	https://masschallenge.org	A global non-profit startup accelerator and competition with a focus on high-impact, early-stage entrepreneurs
Mercia Asset Management	UK	https://www.mercia.co.uk	Venture, private equity, or debt finance to regional businesses with growth ambition
Metaverse	China		Leading public blockchain in China!
MGVC	Netherlands / Cyprus	https://mgvc.com/en	Gaming
Microsoft M12 Venture Fund	USA	https://m12.vc	Gaming / NFTs / blockchain
MMC Ventures	UK	https://mmc.vc	EIS and Institutional Funds
NetEase	China	http://www.163.com/	ISP
O'Shaughnessy Asset Management, LLC (OSAM)	USA	https://www.osam.com	
Octopus Ventures	UK	https://octopusventures.com	B2B

Play Ventures	Singapore / Finland	https://www.playventures.vc/	Leading early-stage games VC
Possible Ventures	Germany	https://www.possible.ventures	Invest in frontier technologies to build meaningful companies that benefit people and the planet
Psion Partners	UK	http://www.psion.vc/	B2B deeptech venture investing
Redbus Ventures	UK	https://redbus.uk	Early stage
RRE	USA	https://www.rre.com	One of NYC's oldest, largest, and most active venture capital firms. Invests in early-stage, technology-enabled companies
Sebastian Picardo	Canada	https://nrfbigshow.nrf.com/speaker/sebastian-picardo	Active in fashion and technology - also CEO of Holt Renfrew
SFC Capital	UK	http://www.sfccapital.com/	"First equity" investors. Seed Enterprise Investment Scheme (SEIS) and EIS investments. Also, Angel House was formed to extend SFC's impact as leaders of the UK seed funding ecosystem
Sfermion	USA	https://www.sfermion.io	Metaverse and NFT focus
Side Stage Ventures / Ben Grabiner	Australia	https://www.sidestage.vc	Invest in ideas at the intersection of tech, creativity & culture
SoftBank Vision Fund	London	https://group.softbank/en/segments/svf	Focus on social impacts
Solana Ventures	USA	https://solana.ventures	Blockchain and Web3 gaming investors
Supernode Global	UK	https://supernodeglobal.com	Early stage. The first global community of start-ups, industry leaders, and investors shaping the future of the digital content ecosystem
Techstars London Accelerator	UK	https://www.techstars.com/accelerators/london	Pre-seed and later

Techstart	UK (Northern Ireland)	https://www.techstart.vc	Seed capital across Scotland and Northern Ireland
Temasek Holdings	Singapore	https://www.temasek.com.sg/en/index	Generational investor
The Games Fund	USA	https://gamesfund.vc/	Early-stage game developers, gaming technologies, and services
The LAO	Global DAO!	https://www.thelao.io	DAO
Third Kind Venture Capital	USA	http://3kvc.com	
Tom Blomfield	UK	https://www.linkedin.com/in/tomblomfield/	Also, CEO Monzo bank
Triple Point	UK	http://www.triplepoint.co.uk/	Investment with purpose
Triple Point Ventures	UK	https://www.triplepoint.vc	Generalist investors with a particular interest in the future of health, money, work, education, and the environment. Almost all their investments are into companies with digital or software products
Upscale	UK	https://www.upscale.vc	Focus on acceleration and scaling
Valour, Inc	Canada	https://valour.com	Digital asset investors
Venrex	UK	https://www.venrex.partners	A VC firm that backs creative founders to launch and build innovative businesses. 43% of investments have a female founder or co-founder.
Vgames	Israel	https://www.vgames.vc/	Gaming
Vive X Accelerator	US/Taiwan/China	http://www.vivex.vive.com/	Startup accelerator program with the goal to support start-ups working on virtual reality applications by providing them with education, investment, networking and mentorship

Wargaming	Cyprus	https://wargaming.com/en/	A game development platform that publishes free-to-play MMO games online.
Warner Music Group Boost	USA	https://www.wmgboost.com/	Seed stage investment
Winkelvoss Twins	USA	http://winklevosscapital.com	Family office

Appendix C: Case Studies

Minc – the Startup House of Malmö (https://www.minc.se/)

Background

Minc is owned and funded by the City of Malmö. It was established in 2002 as one of Scandinavia's first startup incubator programmes (after the dot com-bubble burst, but ahead of the rise of the new internet giants). Over 400 start-ups have gone through one of their programmes.

Minc entrepreneurs have done everything from developing a new standard for diagnosing mental illness using AI technology to creating the largest Arabic-speaking community with in-depth knowledge about the national affairs. They have created facial recognition software for Apple.

Createch linkages

The Swedish games industry is worth about £3bn per annum. In 2020, 81 new gaming companies were started in Sweden through startup hubs and gaming clusters in Stockholm, Västernorrland, Västra Götaland, and Skåne . Minc has a collaboration with GASS (Game Accelerate South Sweden). The intention is to make the Skåne and Blekinge counties[9] (the region around Malmö) unique and attractive to the gaming industry, building on the tradition in both counties of successful business incubators. Also, Blekinge Institute of Technology and Lund University have highly regarded game design and development faculties.

The goals of the GASS collaboration are:

- to develop a method adapted to the special conditions in the gaming industry for start-ups; and
- to attract multiple international investors and talent to the region.

The economic development objective of Minc, on behalf of the City of Malmö, and the neighbouring County Councils, is higher sustainable growth and increased exports.

Minc runs an accelerator called Fast Track Malmö and the pre-incubator Startup Labs[10], as well as the incubator. There is also Minc Scale, a network of mentors who form the Minc Scale community and share their knowledge with the start-ups.

Minc also works as the bridge between capital investors and the start-ups, and Minc manages the co-investment company, Fast Track Capital (FTC, established in 2017 with £200k capital from family offices and 12 business angels). FTC exist to build the startup ecosystem and plays an important part for start-ups and business angels (FTC has some of the most experienced angels in Southern Sweden and relationships with angels from other parts of Sweden).

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[9] Together, they have a population slightly larger than Surrey.
[10] A free, 6-month period of support for those who want to verify their business idea. It provides access to experienced coaches who have knowledge from their own startup journeys.

FTC to date has supported three cohorts (FTC1, 2 and 3), the latest in 2021 being FTC3. FTC3 is supporting over 20 start-ups. 40% of the investors are women. £2m has been raised from investors including Saminvest, the VC firm formed by the Swedish Government in 2016.

FTC3 is a collaboration with Ideon Innovation (https://www.ideoninnovation.se), based in the Science Park in Lund. Ideon evaluates around 200 ideas annually. Of these, about 10 - 15 are admitted to their incubator process per annum.

If an idea is judged to be too early, then they also offer a free pre-incubator preparation program (PreInk - https://home.preink.se) where entrepreneurs get a workspace and coaching to help build on their ideas there is then an opportunity to enter the incubator process after 6 months.

InnovationDistrict.com – Boston's innovation district (http://innovationdistrict.com)

Background

The concept of the Innovation District was started by Boston City Mayor Thomas M. Menino in 2010 as a mechanism to utilise Boston waterfront as a place for innovative professionals to collaborate (the district is located on 1,000 acres[11] of underdeveloped land on South Boston's waterfront peninsula between the Boston Harbour, Boston Logan Airport, and two major highways).

Since most of the land is privately held, the financial burden does not fall on the City.

The intention of the Innovation District in Boston is to provide creative individuals with the tools and connections needed to improve the local economy, as well as offering an affordable, yet high, standard of living to attract millennial entrepreneurs. Building physical spaces that enabled entrepreneurs to socialise during and after work hours was an imperative for the public sector stakeholders. This also led to involvement of accelerators, such as MassChallenge, Greentown Labs[12], an incubator for hardware-based start-ups, and the development of public meeting spaces for entrepreneurs.

Tech companies account for about 30 percent of the start-ups attracted to the area, with a high percentage of creative individuals and artists involved. Around 10% of the start-ups are non-profits or businesses with a social mission. So far, over 200 start-ups have set-up shop in the district.

Half of the workspaces are shared allowing companies to save on rents while enjoying the opportunity to share business ideas with other startup businesses. This is particularly attractive to creative professionals, attracted by the low-cost co-working spaces, effective office space and flexible housing options. Unusually for the region, short-term apartment rentals are available for people who need to easily access their office space or collaborative workspaces for project work.

One-quarter of the businesses employ fewer than 10 people, creating many opportunities for the smaller scale collaborations valued by creative individuals.

Createch linkages

Central to the vision of the district is the idea that leading-edge anchor institutions and companies cluster and connect with start-ups, business incubators, and accelerators. For example, Babson College (a top ranked school for entrepreneurship education) has a hub for innovation activities in the district. Generally, Boston has a high concentration of higher education institutions, and a key anchor institution is the Massachusetts Institute of Technology (MIT). This creates a strong pipeline of startup ideas and graduates wanting to exploit them. Boston is also the second ranked destination for venture capital investment in the US.

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[11] The district is slightly smaller than Dorking.

[12] MassChallenge is a "zero equity" accelerator) i.e. they take no equity in the business or product) focused on multiple high technology areas, including gaming, advertising, entertainment and media. Greentown Labs is both an incubator and accelerator with a focus on cross-sector "green" start-ups i.e. includes architecture, design and simulation start-ups, as well as construction and energy systems.

This combination (higher education and funding) has enabled the Innovation District to quickly build dense clusters of biotech, cleantech and Createch companies in South Boston. The Createch presence is broad including film, game, publishing, music, media, and design start-ups.

Recognising that these tech start-ups require specialist support, there are multiple innovation spaces, a dedicated business incubator building, and a Public Innovation Center, called District Hall (offering free entrepreneurial events in the area).

Early on, the Massachusetts College of Art and Design and Design Museum Boston (MassArt - the only publicly funded independent art school in the United States) took a key role in shaping the character of the district. MassArt engaged designers and artists with the City to create an environment in which they could live and work, embedding the creative community in cultural and economic development activities. Second, MassArt worked with businesses within the district to highlight the innovation value of connections to the creative community.

A strong clean technology (cleantech) cluster has also migrated to the area, including the Fraunhofer Center for Sustainable Energy Systems (an affiliate of the German Fraunhofer-Gesellschaft) who work with architects and interior designers in the Innovation District to test and integrate cutting-edge cleantech technology into the district's built environment.

Quartier de la Création Nantes (SAMOA) (https://www.iledenantes.com)

Background

The Creative District on the island of Nantes in France is similar in scale to Boston's Innovation District. SAMOA - SPL Ile de Nantes is the 100% publicly owned agency in charge of the redevelopment of the Island of Nantes into a creative cluster. SAMOA's president is mayor of Nantes and president of Nantes Metropole.

SAMOA develops and manages office space destined for in the creative and cultural industries and offers entrepreneurs a complete support package covering all stages of development of their organisations.

Since 2003, SAMOA, on behalf of the metropolitan area of Nantes, has operated as an integrated economic development agency, coordinating all the players in the digital and creative sectors in the area. SAMOA has a team of 40 people, with half focused on economic development.

The policy aims pursued by SAMOA are dual: improved urban planning (placemaking) and economic development, enabled by the creative sector and digital technologies. SAMOA pursues these aims with international cooperation with other European clusters and hubs active in the field of the creative and cultural economic sectors. SAMOA also participates in the cooperation and funding programmes of the European Commission and has strong partnerships with public and private organisations across Europe and Canada.

The district leadership is unique in encouraging public experimentation (e.g. underground artistic installations, performance art, music festivals, and prototyping new forms of entertainment). Over the years, the daily users and inhabitants of the Island of Nantes have been directly involved through public participation platforms and workshops to ensure that development is green, innovative, and liveable for all stakeholders.

SAMOA also promotes open innovation in order to stimulate collaborations between traditional industries and start-ups in the cultural and creative sectors.

Createch linkages

The Creative District is viewed by SAMOA as a laboratory in which new creative businesses and services can be prototyped or tested at scale. The district currently supports over 2,000 businesses in the digital and creative sectors, and directly supports 35,000 jobs in the Nantes Saint-Nazaire region as a whole.

Currently, there are around 200 businesses in the district that can be described as Createch, or Createch adjacent. One reason for this concentration is that the district offers multiple buildings with specialist tools, services and spaces for different creative endeavours. For example, the La Centrale "business hotel" (opened in 2016), is designed to house Createch start-ups in the cinema, audiovisual, animation, video games, visual arts, media, and transmedia fields.

The Atlangames games cluster is another strong connection with Createch, and the cluster offers a specialist co-working space for start-ups aligned to games.

The presence of nearly 5,000 students in the fields of design, performing arts, architecture, and visual arts (from the Nantes School of Design, the School of Fine Arts, ESMA Cinécréatis (school of cinema and audio-visual arts), and the School of Architecture provides a constant flow of entrepreneurs and skilled creatives). The School of Design has a Digital Design Lab and City Design Lab with a strong track record of Createch startup incubation.

Close collaboration between SAMOA, higher education and local businesses drives the large-scale creative ecosystem. This is an important factor in the regeneration of the region and has accelerated the move away from older, manufacturing industries (such as shipbuilding) to newer, more sustainable businesses. Together, the collaborators provide business and financial support for the cultural and creative industries, with an average of 80 startup or experimental projects backed every year.

SAMOA promotes spillovers from Createch to other sectors (e.g. Biotech), and vice versa, and these provide an additional benefit in terms of economic development.

Thames Estuary Production Corridor / Creative Estuary (https://www.creativeestuary.com)

Background

The Thames Estuary Production Corridor (the Corridor) is a significant new investment programme to unite East London, the North Kent Coast and South Essex to create a world-class, globally competitive centre for creative and cultural production. The programme was launched by the Mayor of London in partnership with the London Economic Action Partnership (LEAP), the South East Local Enterprise Partnership (SELEP) and the South East Creative Economy Network (SECEN) in February 2017

Between 2015 and 2020, The Estuary's creative and cultural production sector grew by over a third and now comprises over 16,000 businesses found within established and emergent clusters of existing business activity across the Estuary. Demand for output remains strong, and so there is a significant opportunity for growth if challenges with availability of production space and services, lack of skills, and digital infrastructure investment (full fibre availability is not comprehensive) are addressed. The investment case for the Corridor identifies the potential to double the size of the production sector across the Estuary, supporting the delivery of more than 50,000 new jobs and creating additional economic output (GVA) of over £3.7bn per annum.

The programme seeks to achieve its economic development aims (in terms of growth in employment and GVA) by strengthening the Estuary's creative and cultural ecosystem, embedding it more deeply across the economy to enhance critical mass, build identity, enhance investor attractiveness, and underpin long-term competitiveness. Development of places, clusters and infrastructure is key, with a diverse geographic focus (Estuary-wide initiatives will be supported, along with smaller scale projects rooted in local communities and production assets).

While the Estuary offers many opportunities for regeneration and investment, supply of commercial and industrial floorspace is highly constrained, and property costs can be unaffordable for creative businesses in some areas.

The Estuary contains 63 higher and further education institutions, with some, such as Goldsmiths and the University for the Creative Arts, recognised leaders in the Creative Industries. The University of Kent has identified Createch as important since 2018 and has an Institute for Cultural and Creative Industries (a National Portfolio Organisation with Arts Council England and members of Creative UK and Immerse UK).

Delivery of the programme started in 2018/2019 an initial investment of nearly £5m from the Department for Digital, Culture, Media and Sport and the Ministry of Housing, Communities and Local Government.

Progress has attracted new investment to drive the Corridor vision forward, including such as Creative Estuary, the Cultural Development Fund supported project for the Thames Estuary. Creative Estuary is a consortium of higher education, public, private sector, and cultural organisations, led by the University of Kent[13]. Creative Estuary. Creative Estuary aims to "to transform 60 miles of the

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[13] They include the South East Local Enterprise Partnership (SELEP), Kent and Essex County Councils, the Greater London Authority, 11 local authority areas represented by Greater North Kent and Opportunity South Essex, South East Creative Economy Network (SECEN), University of Essex, Locate in Kent and cultural organisations Metal and Cement Fields.

Thames Estuary across Essex and Kent into one of the most exciting creative clusters in the world. We're going to do this by developing the places where the creative industries can build a vibrant and prosperous future, enriching communities and strengthening the region". In practice, this means unlocking the potential of the Estuary as an international production hub and as a collaborative, inspiring place to work for creative talent.

Createch linkages

The vision for the Corridor acknowledges that the Creative Industries are undergoing a digital transformation (in terms of both consumption and production), and that a new generation of start-ups and scaleups are emerging (Createch). These new generation businesses require appropriate support mechanisms if they are to thrive.

The investment case for the Corridor highlights the wider economic and social benefits of bringing together creative entrepreneurs, technologists, academics, and industry professionals. This will ensure that there is a focus on linking creative and cultural production with new technology and ideas for placemaking and social good as well as for profit. This aligns well with the fact that many Createchs are purpose driven[14].

The longer-term ambition of the Corridor is to ensure that businesses in the Estuary are resilient and able to respond to fast-changing processes, technology and markets. Planned investment that assists Createch start-ups and scaleups includes production labs and testbeds to provide cost-efficient access to tools for design innovation (e.g. artificial intelligence, simulation, and augmented reality - AR), and rapid prototyping (e.g. 3D printing).

The need to support development of new business models (such as those involved with Createch) for sustainable commercial success is prioritised. Ongoing investment in education and skills to enhance digital competency in the creative sector is a further enabler of sustainable success.

The need for R&D investment and support for Createch (and the Creative Industries more generally) is recognised. Plans include development of a dedicated R&D network to facilitate knowledge exchange and provide innovation support, and digital competencies.

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[14] Documented in UCA research publications on the future of the Creative Industries.

Toronto-Waterloo Tech Corridor - Silicon Valley North (https://thecorridor.ca)

Background

The Toronto-Hamilton-Waterloo Regional Corridor (the Corridor) is a 110km development of high growth start-ups and established multinational technology businesses. Currently, it is the second-largest concentration of start-ups in North America after Silicon Valley with over 5,000 start-ups, supported by 16 universities and colleges (more than 400, 000 students), and multiple incubators and accelerators. In total, the corridor is home to over 15,000 tech businesses of all sizes (including giants such as Google, IBM and Shopify), and a workforce of more than 200,000.

Unlike the other case studies, the Corridor did not start from a unified vision. Rather a vision solidified organically from multi-year public and private investments centred on established high-tech companies in the region, rapidly growing University tech' spin-offs, and clusters in the larger cities in Ontario such as Toronto, Hamilton, Kitchener, Waterloo, and Cambridge. Hence, the Corridor is an aggregation of technology companies between Toronto and Waterloo city centres at either end.

Since 2016, developing the Corridor as a global hub of innovation and economic growth has had more concerted civic leadership from the Toronto and Waterloo mayors (via the Waterloo Region Economic Development Corporation), supported by mayors of the smaller cities in Ontario. Research indicates that there are over 150 organisations, partnerships and alliances involved in shaping the direction of the Corridor, and central governance is focused on inward investment and major infrastructure developments such as rail transportation.

Just in 2022 alone, over $5bn has been invested in start-ups in the Corridor. This high level of investment is backed up by incubator and accelerator support for technology innovation from the likes of MaRS, the most significant innovation hub in the region focused on disruptive startup ideas, and Communitech, a private-public partnership to help tech start-ups grow.

In addition, there are five "superclusters" (federally funded) as the result of the Canadian Innovation Superclusters Initiative[15] (Digital Supercluster, the Protein Supercluster, the Artificial Intelligence Supply Chain Supercluster, the Advanced Manufacturing Supercluster and the Ocean Supercluster – only the Advanced Manufacturing Supercluster is centred in the Corridor).

The province of Ontario is responsible for nearly 55,000 STEM graduates per year, ranking among the top five in North America. The majority of these come through the University of Toronto, the country's top-ranked higher education institution, and the University of Waterloo. The University of Waterloo is a top-rated artificial intelligence institute and their unique 'creator owned' IP policy grants ownership to inventors. Hamilton's McMaster University is home to more than 70 research centres and institutions, and the University of Toronto is consistently ranked in the top five globally for research output.

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[15] A supercluster is not the same as the highly place-specific models such as the Toronto-Waterloo Corridor or Minc. Instead, superclusters a themed government programme of funding to encourage collaborations between businesses, academic institutions, and non-profits in specific fields. For each supercluster, collaborators are spread across a region as 'host' and sometimes the entire country. The intent is to commercialise ideas in industries in which Canada has competitive advantage.

The Corridor is more affordable for start-ups than most other major global centres of innovation. The region offers a low cost of living and business rental rates compared to other tech clusters and has low R&D tax and corporate investment tax rates.
The region is noted for diversity of nationalities, and Canada's Global Talent Stream programme makes international recruitment for high-tech jobs simple (a permanent resident visa and work permit can be approved in two weeks).

Createch linkages

Toronto has a thriving games cluster and the region's film, and television cluster is the third largest in North America (Vancouver, in British Columbia is second). Hence, there are many Createch start-ups, although the exact number is difficult to ascertain as Corridor priorities are "Darwinian" – they evolve out of the success of organisations in the region. The concentration of businesses and academic institutions with a focus on artificial intelligence and blockchain means that Createch businesses using those technologies are constantly appearing (and disappearing), and there are also spillovers from and to sectors as diverse as Retail, Life Sciences and Manufacturing.

As well as the tech and engineering universities and colleges, academic institutions such as Toronto Metropolitan University, Toronto Film School, George Brown College, Humber College, Fanshawe College Ryerson, York University School of the Arts, and Sheridan offer business and creative programmes (including game design and virtual production for film and TV) that complement the Corridor's tech industry.

Appendix D: Stakeholder Map

Stakeholder	Role
Createch start-ups and scale-ups	Network leadership and participation; incubator tenants
Micro, Small, and Medium Enterprises (MSME) – creative / technology	Network leadership and participation; incubator tenants
Local government – borough / districts / towns	Funders; property and asset owners; business support (indirect)
Local government - counties	Funders; property and asset owners; business support (indirect)
Central government (e.g., DCMS)	Funding; policymaking; support for exports
Chambers of Commerce	Business support; Local Skills Improvement Plans
Property developers	Brownfield sites; capital
Research and innovation agencies (e.g., UKRI)	R&D and innovation funders
Further / higher education	Entrepreneur pipeline; access to research centres and labs; collaborative R&D
Managers – incubators / accelerators	Manage facilities plus provide services
Service providers – incubator / accelerator programmes	Providing start-up, etc programme
Service providers - professional	Marketing; fund-raising; accountancy; legal; development
Investors - in start-ups, scale-ups and MSMEs	Investing in companies
Established media and technology corporates	Customers; source of talent, skills, and facilities; seed funding; mentoring
Arts, cultural and heritage institutions	Commissioning work; source of talent, skills, and facilities

Notes;

1. Given the uncertainty over the future of LEPs, they have been omitted from this list.

The Centre for Sustainable Design®, Business School for the Creative Industries, University for the Creative Arts

The Centre for Sustainable Design® (CfSD) was established in 1995 in Farnham, Surrey, UK at what is now the University for the Creative Arts (UCA). CfSD is based within the Business School for the Creative Industries (BSCI). The Centre has led and participated in a range of high-quality research projects and has organised hundreds of conferences, workshops and training courses in Europe, Asia and North America focused on sustainable innovation and product sustainability. CfSD is recognised worldwide for its knowledge and expertise, having worked closely with business, policy making and research communities for two decades. CfSD has built world-class knowledge and expertise of sustainable innovation and product sustainability. The Centre completes research and disseminates understanding of present and future sustainability impacts and solutions related to innovation, products, technologies, services and systems through projects, training, events, networks, and information. CfSD works with partners in Europe, Asia, and North America to deliver high quality results. CfSD have led and partnered in 15+ European Commission funded projects (www.cfsd.org.uk/projects) and has actively worked with 500+ eco-innovative SMEs. The Centre is an internationally recognised centre of excellence. CfSD has two areas of core competence based on extensive research since the mid-1990s (www.cfsd.org.uk/research). CfSD integrates Circular Economy into its broader sustainable innovation and product sustainability activities (http://cfsd.org.uk/news/circular-economy-innovation/):

- Sustainable Innovation (understanding the policy and business implications of sustainable innovation; and working with companies to develop sustainable solutions
- Product Sustainability (understanding the organisational, management, development, and design implications of product sustainability)

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Trevor Davis & Associates Ltd

Trevor Davis & Associates Ltd is a strategic insights and technology consultancy business. The company's focus is on stimulating business leader and policymaker action to harness technologies such as AI and blockchain for a more sustainable future for FMCG brands and Agriculture:

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Trevor Davis & Associates Ltd was founded by Dr. Trevor Davis, a Fellow of the Royal Society of the Arts, and a former IBM Distinguished Engineer.

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