OPEN ACCESS

University of Dundee

University of Dundee

Report 3: The Hub as Organisational Model in the Creative Economy

Senior, Timothy J. ; Cooper, Rachel ; Dovey, Jon; Follett, Georgina; Shiach, Morag

Publication date:
2018

Licence:
CC BY-NC-ND

Document Version
Publisher's PDF, also known as Version of record

Link to publication in Discovery Research Portal

Citation for published version (APA):
Senior, T. J., Cooper, R., Dovey, J., Follett, G., & Shiach, M. (2018). *Report 3: The Hub as Organisational Model in the Creative Economy: Core Learning from the AHRC Creative Economy Hubs programme*. Arts and Humanities Research Council.

General rights
Copyright and moral rights for the publications made accessible in Discovery Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

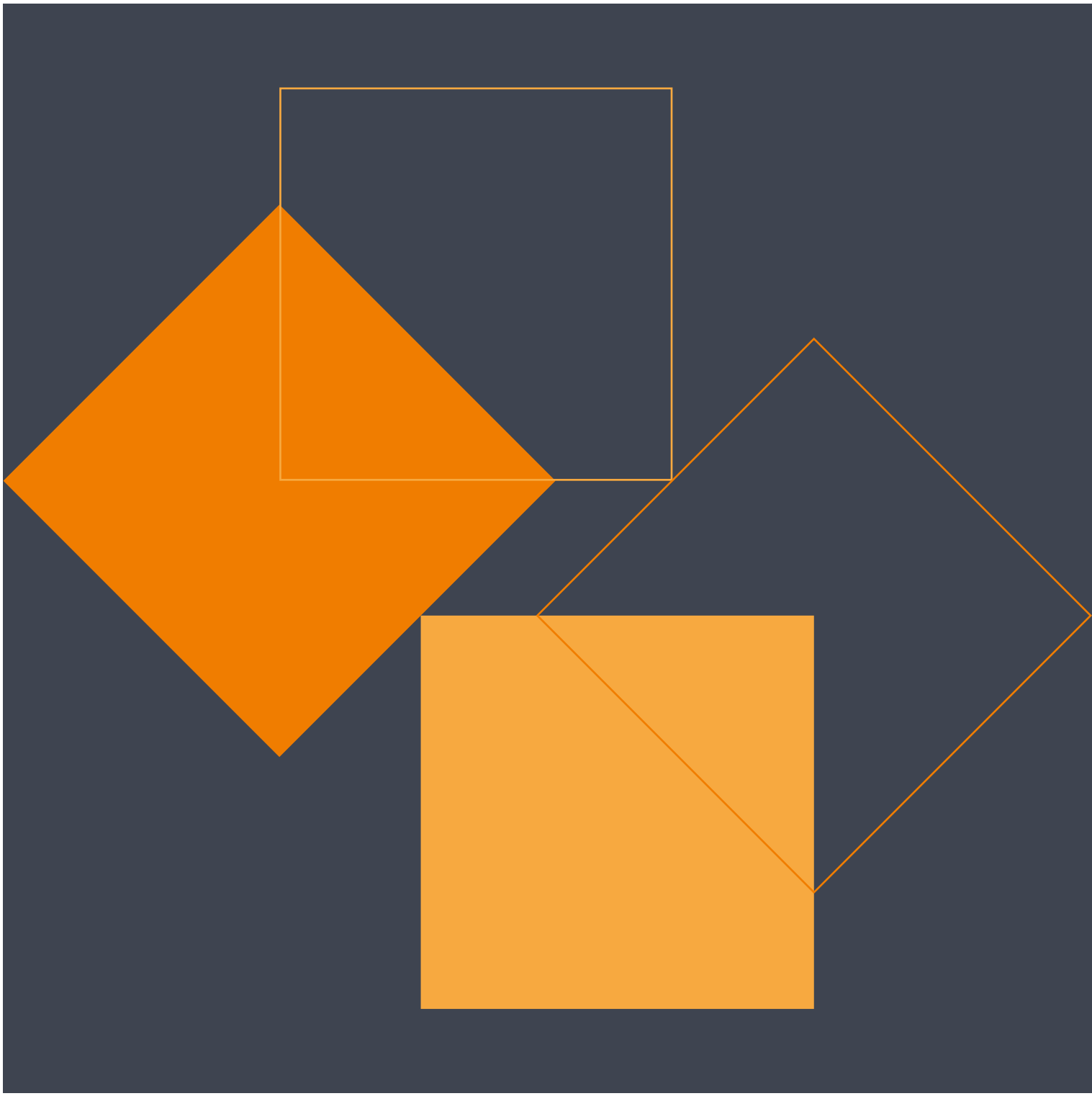
Take down policy
If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 09. Sept. 2026

Report 3: The Hub as Organisational Model in the Creative Economy

Core Learning from the AHRC Creative Economy Hubs programme

Dr. Timothy J. Senior
With Professor Rachel Cooper, Professor Jon Dovey, Professor Georgina Follett, Professor Morag Shiach



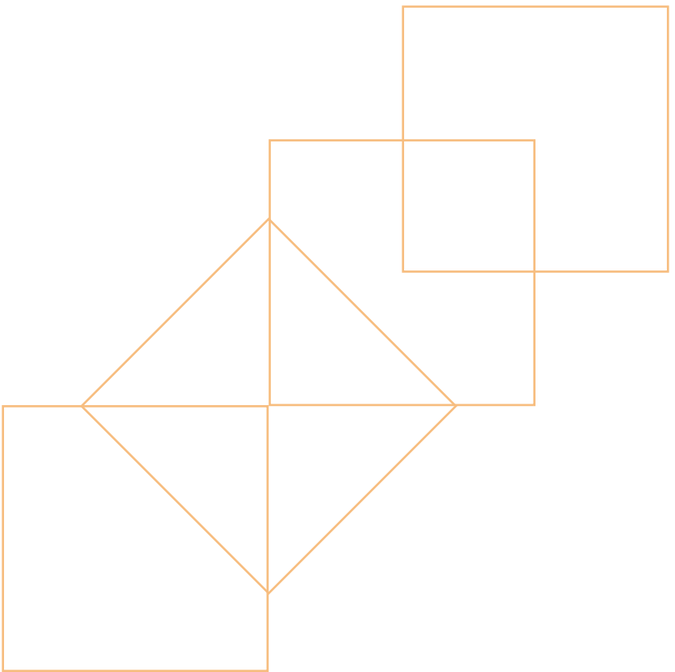
This online paper may be cited or quoted in line with the usual academic conventions.
You may also download it for your own personal use. This paper is published under a Creative Commons license, described below. You may share this work but we would encourage you to seek the author's permission to publish the work elsewhere (e.g. to mailing lists, bulletin boards etc.).

Please note that this paper is covered by the Creative Commons Attribution:
Attribution-NonCommercial-NoDerivatives 4.0 International License
http://creativecommons.org/licenses/by-nc-nd/4.0/

Under the provisions of the license, if you copy this paper you must:
- include this copyright note
- not use the paper for commercial purposes or gain in any way
- not alter, transform or build upon this work (apart from within the accepted bounds of academic convention)

Please observe the conventions of academic citation in a version of the following form:
[Author] (2018) [Title of paper], UWE, Bristol, [URL for the paper]

This work was supported by the Arts and Humanities Research Council
[grant numbers AH/J005150/1, AH/J005142/1, AH/J005126/1, and AH/J005185/1]



Contents

		Page
Foreword		01
Executive summary		02
Report Introduction		03
Section 01	**Contexts:** The Hub Model	**05**
1.1	The Rise of the Hub Model	6
1.2	HEI-Embedded Creative Hubs	7
Section 02	**Core Learning:** The AHRC Creative Economy Hubs	**09**
2.1	Building a Hub Structure and Culture	10
2.2	Driving Culture Change in the University	11
2.3	Building Effective Hub Partner Networks	12
2.4	Influence Beyond the Partner Network	12
Section 03	**Case Studies:** The Four AHRC Hubs in Action	**13**
Case study 1 – Creativeworks London		14
Case study 2 – Design In Action		18
Case study 3 – REACT		22
Case study 4 – The Creative Exchange		26

Foreword

The Arts and Humanities Research Council (AHRC) funds world-class, independent researchers in a wide range of subjects: ancient history, modern dance, archaeology, digital content, philosophy, English literature, design, the creative and performing arts, and much more. This financial year the AHRC will spend approximately £98m to fund research and postgraduate training in collaboration with a number of partners. The quality and range of research supported by this investment of public funds not only provides social and cultural benefits but also contributes to the economic success of the UK. For further information on the AHRC, please go to: www.ahrc.ac.uk

Between 2012 and 2016 the Arts & Humanities Research Council launched a remarkable experiment to mobilise the research base of UK universities for the benefit of the Creative Industries. They invested £16 million in four 'Creative Hubs'. Nobody knew then what a 'creative hub' was or could be. The 'Hub' has since become commonplace: high streets have print hubs where before they had printshops, and universities have learning hubs where before they had libraries. And, of course, many cities now host creative hubs, bringing together informal and formal networks of talent, technology and resources. The hub has become a ubiquitous idea for new ways of organising productive work that resonate with new forms of loosely organised social productivity. These reports capture the methods and approaches that the four Creative Hubs evolved for building collaborative networks that can coordinate academic effort with business expertise to have an impact on the Creative & Cultural Industries.

Since the end of the Creative Economy Hubs initiative, a policy hiatus has been worked through between the Cameron coalition and the May government's launch of an industrial strategy. The Nesta Geographies of Creativity research has landed very firmly in the policy arena, underpinning the 2017 Bazalgette report and its impact on a strategy for the Creative Industries. In particular, the idea of creative clusters has taken root as the framework for future investment through the Industrial Challenge Strategy Fund. There could not be a better moment for the contents of this research to inform and underpin the development of this new clustering approach.

One of the problems of innovation is its amnesia – innovators are less interested in building on the past than seeking new possibilities. These reports illustrate a range of approaches to university-led creative innovation, offering evidence to build on for the future. Equally, whilst cluster approaches do a good job of identifying and mapping creative potential, they don't always reveal the dynamics particular to creative industries that make them succeed. The 'small scale, fleet-of-foot, and first-to-market' energy of creative enterprises thrive through the rapid exchange of ideas between different backgrounds and skills. Again, these reports offer ample evidence of the ways in which such exchanges can produce value for a range of participants. Thank you to my fellow Hub Directors for supporting this evidence gathering effort, to the AHRC for commissioning the work and most all to its chief author and architect Dr Timothy J. Senior for his application, energy and insight.

Rachel Cooper
Jon Dovey
Georgina Follett
Morag Shiach

May 2018

Executive Summary

The creative Hub – as an organisational model – offers great potential benefit for universities and creative economy partners wanting to forge new collaborative partnerships. Although there is no single prescription for Hub success, a number of recommended principles and practices have emerged from the AHRC Hubs programme concerning the balance between university-embeddedness and Hub autonomy required to gear the two together. A key perspective that has emerged from the programme is the importance of focusing creative Hub policy not on creating Hub infrastructure per se, but on creating the conditions for infrastructuring – a process of Hub self-organisation that can build appropriate and adaptive responses to fit creative activity to a particular collaborative context. Hub Infrastructuring is in many way the majority work of a Hub, and occurs over four levels:

01

Internal Hub Culture

The success of the AHRC Creative Economy Hubs has been marked by their ability to build a Hub structure and culture that can change over time, so allowing learning to be developed, critically reflected upon, and re-embedded. This is key to building a coherent innovation strategy that can remain agile to changing innovation landscapes.

02

Hub Autonomy

The hubs have all benefited from a careful management of their status as HEI-embedded but autonomous structures with their organisational cores outside the walls of the academy. Whilst the close connection with HEIs has proven crucial in the Hubs' ability to become trusted brokers between diverse partners and stakeholders, Hub autonomy has been critical in:

- Challenging university structures for contracting, IP, and finance (originating through a STEM agenda) in order to develop forms of oversight and support appropriate to small-scale collaborative projects in the creative economy. A variety of models have emerged for marginalising the ownership of foreground IP in order to facilitate the highest quality collaborative engagements.

- Coordinating the culture change needed throughout the organisational structure of universities to help these new forms of collaborative working across sectors and disciplines to flourish. Although the operation of creative Hubs as agents of culture change can play a crucial role in gearing between HEIs and creatives businesses, stronger buy-in from HEIs is needed in this area if such work is to have positive long-term impact.

03

Core Partnerships

Hub partner networks have proven a powerful means of connecting creative talent within and across regions, promoting wider cooperation between previously discrete sectors and universities. Hub networks must, however, be built on relationships with active / live potential: Engineered solutions to fostering regional innovation through a Hub network are to be avoided.

04

Beyond the Network

The Hubs have revealed the importance of constituting activity beyond their immediate, core network. Active engagement with policy, the wider public, and international contexts should be central to advancing the creative Hub model as an active process capable of producing wide-spread cultural and economic impact. As the broader commitments entailed by the creative Hub proposition become clearer, these critical engagements might be better defined and supported.

Report Introduction

This Report is the final of three commissioned in late 2015 by the Directors of the AHRC Creative Economy Hubs. Together, they follow on from a preliminary report into the Hubs' activities published in early 2016 (titled Connecting to Innovate), further developing its focus on core Learning from the Hubs programme. To this end, the three reports bring together findings from observation work, data gathering exercises, and semi-structured interviews conducted between January 2015 and May 2016. Working with core Hub team members and selected project participants, these activities sought to identify, understand, and document the Hubs' experience of working in the creative economy. The three reports were completed in January 2017. It is hoped that this articulation of core learning from the Hubs programme may prove informative for future HEI strategy in this arena.

This third report explores the organisational implications of the creative Hub as an active gearing mechanism between university and creative economy work. It addresses the need to strike the right balance between HEI-embeddedness and Hub-autonomy in building a Hub identity that can drive HEI culture change, foster cross-HEI regional cooperation, and effect influence beyond core Hub networks. This report will underscore the value of understanding creative Hubs not as infrastructure, but as adaptive and process-based entities.

In the series, Report One discussed the rich potential for arts and humanities-led work in the creative economy as revealed by the four AHRC Hubs. The innovation strategies behind this work were analysed in Report Two, revealing the emergence of a common innovation framework for Hub activity in the creative economy. Success in implementing an innovation strategy is dependent on the right Hub structure and culture being put in place, the subject of this third report.

AHRC Creative Economy Hubs:

The four ‘Knowledge Exchange Hubs for the Creative Economy’ were set up by the Arts and Humanities Research Council (AHRC) and operated between 2012 and 2016. They were established to support new forms of collaboration between university and creative economy partners. The four Hubs were:

Creativeworks London:

A consortium of 43 London-based universities, museums, cultural institutions, and business, led by Queen Mary University of London and their delivery partner The Culture Capital Exchange. Creativeworks London acted to bring new collaborative research opportunities to London’s creative and cultural industries. For more information on Creativeworks London, please go to: www.creativeworkslondon.org.uk

Design in Action:

A Hub network of Scottish universities, led by the University of Dundee in collaboration with the University of Abertay, The Glasgow School of Art, Robert Gordon University, University of Edinburgh, and St Andrews University. With a focus on key issues facing Scotland today, Design in Action worked to embed design-led business innovation into the Scottish economy. For more information on Creativeworks London, please go to: www.designinaction.com

REACT:

A South-West Hub network, led by the University of the West of England and creative delivery partner Watershed (Bristol) in collaboration with the Universities of Bath, Bristol, Cardiff and Exeter. REACT (Research and Enterprise in Arts and Creative Technology) supported academics to work with creative enterprises in developing innovative products and new research agendas. For more information on Creativeworks London, please go to: www.react-hub.org.uk

The Creative Exchange:

A Hub partnership with a focus on the North of England, connecting Lancaster University, Newcastle University, and the Royal College of Art in London. The Creative Exchange connected university and creative economy partners in the arena of Digital Public Space, exploring new forms of creation and experience around digital content. For more information on Creativeworks London, please go to: www.thecreativexchange.org

Contexts The Hub Model

1.1 The Rise of the Hub Model

Historically speaking, the rise of Hub entities in the UK over the last few decades has mirrored changes in the country's economic landscape, in particular the means of localising and organising more flexible modes of production demanded by the knowledge economy[1]: In post industrial economies the benefits of operating large, full service companies has been lost, with smaller firms working as sub-contractors and even leading on innovation activities as part of networks termed value constellations. Although often more agile and flexible in operation, these businesses have increased exposure to risks associated with the fragmentation and loss of the social and organisational benefits of co-located production. The benefits of managing shared resources, exchanging ideas, and co-production still remain, only the mechanisms that enable them are no longer so readily accessible.

The idea of the creative Hub as an organisational model is gaining traction across many sectors in response to the break up of mass industrial structures accompanied by the rise of self employment and micro-businesses. In the UK in 2015, there were approx 3.3 million businesses registered as having sole proprietors, with 76% of businesses not employing anyone except the owner; non-employing businesses have accounted for 90% of business growth since 2000[2]. The creative and cultural industries are typical in this regard: They are characterised by a larger number of micro- and small businesses and a strong year-on-year rise in sole proprietorship; they reflect the full spectrum of socially, culturally and commercially oriented work (and the new ways of organising such work); they reveal a prominent role for cross-sector and cross-disciplinary enabled actors (running in parallel to these new forms of production); and they are prominent partners in the growth of the digital sector, one enabling rapid, low-cost innovation activities at a small scale. As an area of rare high growth in the UK[3], the rise of the creative and cultural industries has raised the question of how work in these sectors may be better connected, coordinated, and supported.

Hubs have emerged as a means of addressing precisely these issues. Although there are many forms that creative Hubs can take, a core emerging principle is the provision of infrastructure and support that can help businesses to innovate, achieve stability, and grow. This may, for example, be through providing networking opportunities, organisational and infrastructure support, business development, and research / communication capacities (e.g. 4). A creative Hub can, therefore, put in place the advantages brought through networking creative talent together, i.e. a rich interaction around labour, skills, production knowledge, and specialist services that can help businesses tap external knowledge and pool complementary skills, enabling risk to be shared and access to new markets and technologies opened (as we have argued previously; 5). Thus, in contrast to a clustering strategy, that might operate only at the level of co-locating businesses of a synergistic kind, a Hub might work to sustain and feed a network, providing resilience and renewal across the life, but also death, of individual projects or activities[6].

1.2 HEI-Embedded Creative Hubs

With the Hubs programme, the AHRC have pioneered a new form of HEI-embedded creative Hub. Their learning now points towards the viability of an innovation framework that connects sector scoping through project development to product launch (Report Two).

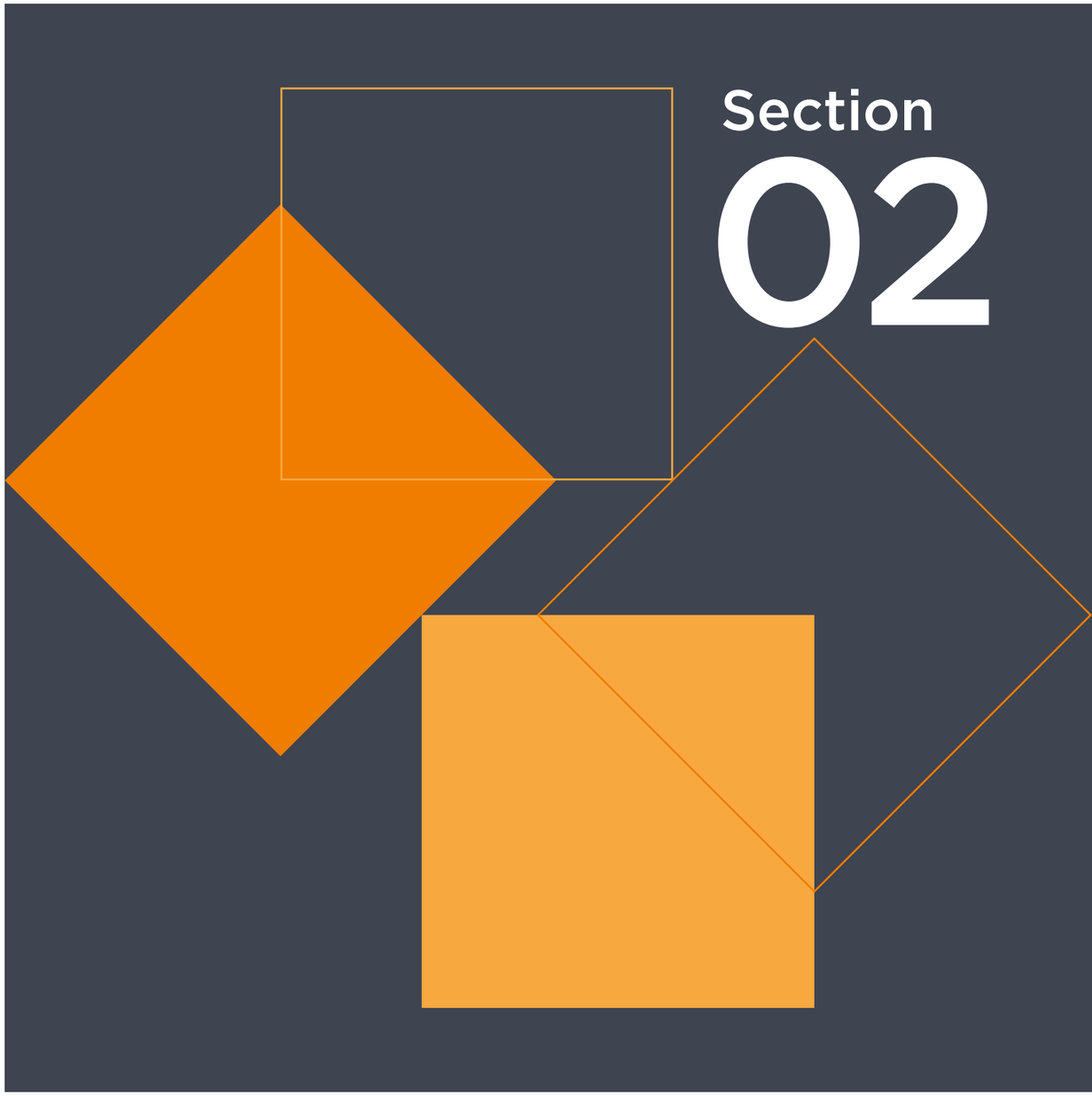
Briefly, the SIIFE framework enables tailored interventions in an innovation landscape to be developed; it creates a timeframe-compatible structure between different sectors that underlies successful collaboration; it enables creative talent to be curated, networked, and nurtured; it enables a streamlining of administrative and contractual burdens for project teams; it helps curtail many of the financial and developmental risks associated with innovation; and it can help connect projects to the right support they need for capitalising on project assets pots Hub support. In terms of a "creative Hub fingerprint," this approach can be characterised as a facilitated innovation pathway that is strategic, planned, selective, tailored, and adaptive. It is an approach that can offer a clarity of mission in terms of the opportunities or pathways towards innovation. Four different strategies have emerged within this framework, capturing each Hub's unique capabilities and objectives for intervention in the creative economy. As such, each Hub has come to figure quite differently the role played by private enterprise and third sector partners, culturally or commercially oriented work, and sites of collaborative activity (virtual and physical) in effecting their strategy.

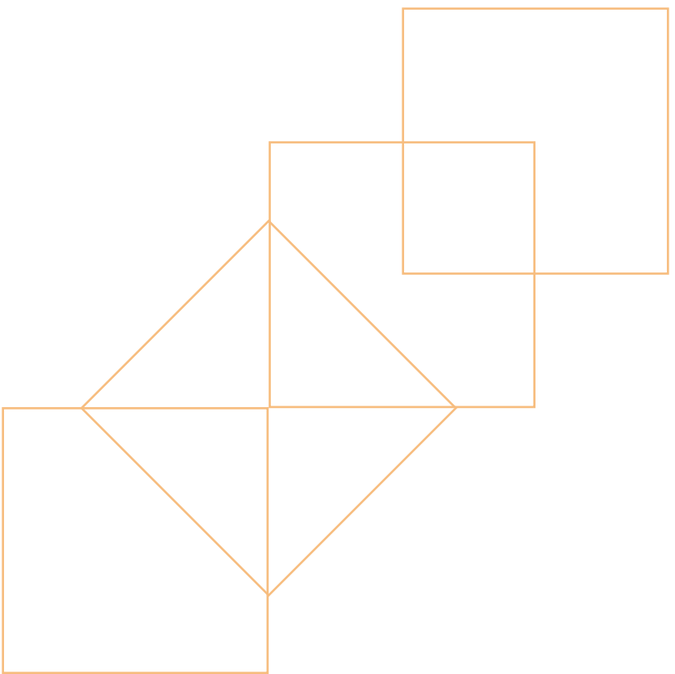
Whilst there are many ways in which Hubs can be characterised, the current work has sought to understand the AHRC Hub entities principally through their programmed activities and intervention strategies (rather than their spatial, or infrastructural qualities as is common in Hub definitions). This position finds parallel in recent work from the British Council, which points to the value of interrogating Hub work in terms of the quality of the productive relationships that occur inside the hub itself, i.e. how Hub strategies enable participants to fit creative activity to a particular context[1]; it is an approach better suited to unmasking learning around a Hub's core capabilities, and so point to Hub characteristics better suited for effective policy action.

In the current work, for example, approaching Hub activities in terms of their strategic response to a particular constellation of needs, challenges, and opportunities renders clear why two major – but independent – UK challenges fall into the same organisational space: namely those faced in connecting creative talent in a fractured, small business-dominated creative economy, and those faced in building HEI-Business partnerships in the arts & humanities that better reflect the changing landscape of knowledge production and knowledge mobilisation. Both recognise the need for mutually beneficial, curated, and clear pathways to the formation of collaborative partnerships across traditional organisational boundaries. Thinking about creative Hubs in terms of activities, rather than infrastructures, helps us to better ask how these two challenges can be aligned, and, in so doing, reveal something of the unique nature of the HEI-embedded creative Hub proposition.

Whilst Report Two focused on Hub innovation strategies, this report will explore what it means to put those programmes and processes in place. It attests to the challenges faced in building a Hub entity with a clear and coherent innovation strategy within the contexts of a university system, one with its own (often differing) institutional practices and ambitions. Thus, whilst a traditional creative Hub might work to ease the innovation process for new collaborative partnerships through managing IP and administrative obstacles, in an HEI-embedded context this effectively serves only to relocate those obstacles to the interface between Hub and university. The process of embedding Hub methods of organisation into university structures produces new challenges for all stakeholders involved. Here we report on how the AHRC Hub's have worked to embed themselves into university structures and processes, whilst also achieving the autonomy needed to build, test, and adapt a coherent innovation strategy, one often achieved in spite of HEI culture.

Core Learning The AHRC Creative Economy Hubs





The Hubs programme has done much to reveal where challenges and opportunities lie in forming HEI-embedded, semi-autonomous creative Hubs. Four levels of core Hub activity have emerged as essential to driving university-led interventions in the creative economy (and detailed in the four Hub case studies later in this report): 1) the formation of a stable but adaptive Hub culture; 2) the building of relationships within universities to drive effective, internal culture change; 3) the development of a shared system of values within a Hub partner network that enable a Hub to operate beyond the confines of university structures and act at a regional and national level; 4) and the extension of Hub activities beyond its partner network and project priorities to strengthen broader Hub visibility and influence.

The notion of 'Infrastructuring' has emerged from the programme as one means of framing these different Hub activities. In contrast to the creation of infrastructure, with its connotations of engineering fixed resources and pathways to achieve particular aims, Infrastructuring concerns the creation of conditions from which new capacities can grow, so enabling people to self-organise (i.e. internally develop) appropriate and adaptive responses to current scenarios. It denotes an ongoing process of activity that, through iterating rather than fixing rules, might result in changing infrastructures over time. First level infrastructuring emerges through the SIFFE Innovation approach itself (see Report Two). Here, Hub projects are not merely the outcome of a successful delivery mechanism, but a means through which wider collaborative, intellectual and market-oriented capacities can be nurtured, and new ideas forged in the present and near-future. Subsequent levels of infrastructuring concern building Hub culture, developing Hub-HEI interactions, fostering regional connectivity, and driving influence beyond Hub partner networks. Whilst establishing suitable Hub infrastructure is critical, it is not enough to build a Hub; it should emerge in response to a critical understanding of the work a Hub is to support, and follow from the mechanisms put in place to apply, adapt, and re-direct capacity. Understood as an ongoing process of infrastructuring, Hub activities need to be sustained if their long-term benefits are to be seen. Once the driving force behind creative economy interventions ceases, so does the apparent need to sustain the university culture change that has enabled them. With the Hubs programme now at an end, the achievements described here in this report are put at immediate risk. This is occurring at a time when creative businesses, academics, and universities are wanting to capitalise on the work of the Hubs.

2.1 Building a Hub Structure and Culture

The work of establishing an effective organisational structure and a stable, visible culture is essential to the proper functioning of a creative Hub. It is the foundation from which a coherent and adaptive innovation programme can be built, and from which core learning can be established, critically reflected upon, and re-embed. This internal infrastructuring is, in many ways, the majority work of a Hub.

Key components of this work include ensuring a buy-in from the core Hub team that reflects the substantial work required in connecting research agendas, project implementation, and administrative operations; establishing effective control over HR and Hub policy decision making that enables a committed core team to be built and maintained; building effective working relations between Hub management and project implementation teams; driving a dynamic (mutually influencing) connection between a Hub's research and funded project work; and establishing an externally visible Hub identity (for example, through strong branding, the adoption of a particular innovation ethic, or developing a place-specific exclusivity).

In becoming an effective learning organisation in its own right, a creative Hub is better placed to mediate between different sector cultures and understand what is required to forge successful cross-sector work. Building in the capacity for adaptation is key if a

Hub is to respond to the changing needs and opportunities that arise from collaborative partnerships. This points away from an easily reproducible, static Hub model; instead, it highlights the importance of a Hub infrastructuring approach that can respond to context-specific creative resources, one leading to a dynamic set of Hub practices that can adapt and respond as required. This is to be embraced not avoided.

2.2 Driving Culture Change in the University

The embedding of Hub entities into the HEI sector can drive considerable, mutual benefit: whilst a Hub gains from tapping into extensive research and administrative capacities, HEIs gain new pathways to apply and further develop knowledge stemming from their research and teaching activities. In this relationship, a shared activity is created that can address the changing – and interlinked – landscapes of sector innovation and knowledge production in the 21st century. In this space, networks of businesses and academics can become better placed to work with, and for, each other.

A Hub's status of semi-autonomy within the university sector empowers it to reveal – and challenge – barriers to forming relationships with creative economy partners. As a 'third organisation' mediating such partnerships, the creative Hub is well placed to work with HEIs in developing suitable levels of project scrutiny and oversight, administrative support, and IP practice. These negotiations over internal HEI culture change will be important if universities are to build agility and capacity in this new cross-sector collaborative landscape. In this light, the Hubs have worked hard to better convey the challenges, needs, and values of collaborative partnerships working in this arena, as well as provide evidence for the shifting role of HEIs in knowledge creation and mobilisation. Although advances in culture change have been possible, the core challenge remains: standard models of Knowledge Transfer, and the expectations around IP control and project oversight associated with it, do not apply in this area of collaborative work (Report Two). Dealing largely with micro and small businesses, the minimization of barriers to idea exploitation through assigning IP to project partners is essential if this field is to expand in a mutually beneficial way. The benefits to HEI's through forging stronger routes to impact and future research funding are considerable. Although accepting that the development and implementation of a parallel structure for managing HEI-business relations might present a challenge to any university in isolation, embedded Hubs show a way forward: They can drive the development of new processes from within the university and from the bottom up. The Hubs have shown how their management and research structures are well suited to building relationships throughout a universities organisational structure, a process that should be a key first step for any new Hub. This process of relationship building is essential both to address low-level administrative challenges and to shape conversations around Institutional prioritization at the highest university level. The Hubs have shown that, in this way, they have been well placed to work with the skills, knowledge, and resources of a university's own staff in designing the right processes needed to support cross-sector creative economy partnerships. In many universities, this powerful form of internal HEI capacity building does not receive enough attention or support. Having evidenced the role that embedded Producers, Designers and PhDs can play in the strategic coordination of collaborative projects and project cohorts, an opportunity arises to explore how these roles can be extended within the context of HEI-embedded-Hubs to enable all important culture change.

2.3 Building Effective Hub Partner Networks

The implications of an HEI-embedded, semi-autonomous status extends to Hub partner networks, i.e. the operation of a Hub beyond the priorities and boundaries of a single institution. The Hubs have shown how a partner network can be a powerful means of connecting creative talent both within and across regions. This can enable academics, creative businesses, and other

organisations to pursue their ambitions beyond their own immediate connectivity and areas of influence. It also opens a path to introducing new ideas or provocations into the development of Hub culture (so taking an important step towards achieving adaptability and reflexivity).

The Hubs, however, have argued strongly against regionalism as an organising principle of Hub network formation. An effective Hub partnerships need to be built on collaborations with active promise and shared values. This may reflect a common interest in an innovation method (such as Design or Action Research), a national priority (e.g. productivity in Scotland) or local opportunities (e.g. London's creative and cultural sectors). With the four constellations of Hubs partners already being reconfigured at the end of the programme, a Hub network should be understood as enabling current synergies to be explored in a highly temporal fashion, rather than reflecting stable formations bound to regional organisation. Further, there is evidence of the benefits that could arise from the operation of Hubs embedded only within a single university: whilst cross-regional networks can help foster collaboration between HEIs and build a wider capacity and knowledge base for intervening in a complex creative economy nationally, a high-intensity focus on an emerging sector-specific and geographically-limited area (for example within one city area) may also be a powerful means of deploying Hub resources. At a supra-Hub network level, it is the diversity of Hub strategies and their rich experience in identifying and responding to interests regionally and nationally that calls for a Hub Research Unit to be established. This would serve to gather learning from across diverse Hub-related programmes, support future Hub developments, and investigate the applicability of HEI-embedded creative Hub formations internationally.

2.4 Reaching Beyond the Partner Network

The Hubs have each highlighted the importance of engaging with audiences beyond their principal project commitments and immediate Hub partner network, reflecting the wider social, cultural, and market commitments entailed by their work. These activities have been critical in helping the Hubs support the broader uptake of their ideas, lay pathways to project impact beyond the remit of their innovation programmes, and explore proof-of-concept scenarios for the validation of Hubs' learning. These activities have included, for example, wider academic engagement through conferences and peer-review publishing (including over 80 journal articles, working papers, book chapters and reports, and nearly 300 paper presentations at industry and academic conferences), working with local and/or national government departments, engaging with international-oriented policy work, cementing the wider public value Hub work, or actively seeking greater private sector influence for Hub outputs. The strong cross-sector and cross-disciplinary network foundation of the creative Hub model has proven a key in identifying important stakeholders and coordinating the diverse engagement activities needed to make broader sense of Hubs' work.

In underscoring each Hub's commitment to purposeful creative action bound to a given context, however, these additional targets should not be understood simply as 'free' choices made from amongst many; indeed, they may even be commitments that a Hub in its current configuration will struggle to deliver. As our understanding of the creative Hub proposition develops – and, more specifically, the wider social, cultural, and market commitments entailed by variants of the SIIFE innovation framework – these critical wider engagements might be better defined and supported. Developing Hub policy in this area will be vital long-term in building sustainability into Hub approaches, whether helping to direct government policy more effectively or bolstering the quality of application pools suitable to a given Hub's creative programme long-term. No Hub should operate in isolation from the world around it, but the wider commitments they make have to be the right ones.

Case Studies The Four AHRC Hubs in Action

Section 03

Case Study
Creativeworks London

1 Building a hub culture

CWL have responded to the positive opportunities that London's diverse creative and cultural industries have to offer. London's challenging scale, however, has made building a Hub culture one of the most significant aspects – and achievements – of CWL's development. With a partner network including 43 different institutions, and a role in delivering three major independent innovation pathways (Creative Voucher, Fusion schemes, and the residency schemes), this process proved to be a challenging one. It has, however, revealed the extent to which infrastructuring underlies the proper functioning of any Hub, and its value when in place: As a learning organisation, CWL was able to build the expertise and experience needed both to mediate between HEIs and project partners and understand different cultures of practice essential to brokering collaboration between individual academics and diverse creative economy partners. Core learning has centred around four areas:

Building Internal Hub Infrastructures

In developing an innovation programme like the Creative Voucher Scheme from the ground up, CWL have come to recognise the formidable work required to build, sustain, and broker cross-sector collaborative networks on the scale of London's creative economy. They have experienced de novo the role of internal Hub capacity building in helping manage turnover within the core team, build a strategy that links research with project delivery, build contacts throughout HEI hierarchies and key administrative departments to effectively tackle bureaucratic barriers to collaboration, manage differences between the cultures of partner institutions, adapt Hub practices to the strengths and weaknesses of its network, and help manage different sector cultures in conducting collaborative work (addressing challenges in project partner turnover, time-scales for deliverables, projects expectations, and so on). CWL had to undergo considerable development at management level to put these capabilities in place, introducing a Senior management Group, Partners' Forums (all-team meetings), dedicated 'task and finish' groups, and regular one-on-one meetings. With support and monitoring from the Management Board and Governing Council, effective oversight and coordination of Hub activities could be put in place. The extent and scale of these developments, however, have revealed the serious commitment required to build Hub culture, one that must be reflected in the formal time allocation of senior academic staff, Hub director, and business and management support.

Adapting Hub practices

CWL learned to adapt its practices to reflect the realities, challenges, and opportunities of creating work in a complex and multi-faceted creative economy. This included, for example, working to better integrate project delivery and research teams (below); streamlining the contracting process as much as possible to speed up HEI review, help creative partners new to such processes; modifying IP contracts from a bespoke to a template format to reduce project team administration; introducing post-Ideas Pool workshops to further improve the quality of proposals (and leading to adjustments in the requirements of award applications); introducing the BOOST scheme to support projects into the next stage of development following on from the Creative Voucher Scheme; introducing processes for participant feedback to adapt Hub practices; strengthening project programme development by bringing in previous participants to serve on project panels and act as advocates at information sessions for future potential collaborators. These changes were important in helping CWL remain responsive to the London innovation landscape their work has sought to shape.

Integrating Research and Project Delivery

With a strong dual focus on academic research and project development, forging a close integration between research and project delivery proved challenging but essential. Such connections are important if a Hub is to sustain the quality of sector scoping, retain core learning, align knowledge exchange and research activities to common goals, and put mechanisms in place that can support Hub adaptation to changing innovation landscapes. The capacity to chart and capture internal Hub learning as it develops is an important step towards building a reflexive Hub – it needs to be built into the operational structure of the Hub itself. CWL worked to develop such a structure, embedding senior members of the Hub team into the research strands to promote collective reflection and integrated working; re-designing the Ideas Pools to better support engagement between participants and researchers around key questions; and developing a Research Lab as a space to bring researchers, policy makers, and creative partners into discussion. In future Hub iterations, more attention to the building of smaller, stable, and clearly focused research teams could prove beneficial. The creation of a shared space for project delivery and researchers teams may also help in tying these two critical components of a reflexive Hub together.

Broadening Participatory Networks

CWL's delivery partner (The Culture Capital Exchange) played a critical role helping CWL gain access to established networks of cultural organisations and creative businesses. To target the diversity of potential collaborators implicated in their creative economy ambitions, however, CWL had to work further in expanding this contact base, for example through information events, blogs, newsletters, social media, working papers, films, and by reaching out to external suppliers and agents that could help project teams develop work in their target market. CWL also devised a number of mechanisms to nurture and extend networks within the cohorts of applicants, including workshops (for example around IP and business development) and regular roundtables where project teams could discuss their collaborative processes, share understanding on issues they have faced, build new connections to extend their networks, and identify where previously untapped synergies might lie. Whilst the Fusion and the Creative Voucher schemes have been successful in drawing academic, business, and third sector partners into collaboration, achieving the dual goals of 'fusing' two previously unconnected businesses (Fusion) and widening academic participation outside of the immediate partner network (CVS) proved more challenging. The building of richly interconnected partner networks takes time and effort, but is an essential aspect of forging a reputation that can travel beyond an immediate Hub setting to draw in new collaborative partners and create the spaces where trusted relationships can be built.

2 Building a University-Hub Relationship

Within CWL's partner network, a considerable range of HEI practices were encountered that worked either in favour, or in opposition to, small-scale collaborative work in a creative economy context. A number of HEIs, in particular Queen Mary University London, have been noted for providing contractual and administrative processes suitable to the scale and ambitions of the Hub's work in this area. Further, CWL was able to work with QMUL to streamline payment processes, enabling small businesses (who are particularly sensitive to cash-flow problems) to receive 50% of funding both prior to project commencement and within 5-7 days (rather than the standard 30 day period).

A number of core institutional challenges, however, arose within the Hub network, principally regarding those HEIs geared towards large-scale, long-duration HEI-Business collaborations centred around STEM subjects. This erected unnecessary barriers to the initiation of collaborative projects involving small businesses. Issues around the slow pace of contracting and administration within HEIs for projects that may last only a few months, and engagement with finance offices that don't recognise the considerable impact of delays to payment (of even small sums) to small businesses have been reported. The Hub has also encountered cultures of business development and Knowledge Exchange within HEIs that were not geared towards the detailed knowledge and proactive stance needed to broker collaborative relationships in the creative economy; cultures that have even struggled with CWL's own proposition for cross-sector collaboration in this area. These issues have varied considerably across CWL's HEI partner network, highlighting how not all universities are equally suited to supporting work of this kind, a suitability dependent on the quality and dedication of established Knowledge Exchange offices and business development managers. Often, it has been HEIs with business schools attached that were better able to grasp the opportunities that new innovation programmes, such as those of CWL, have to offer.

CWL have highlighted two fundamental mismatches at play: The first is between the expectation of academics to conduct cross-sector collaborative work and the systems actually in place for incentivising, supporting, and recognising such work. The second is the conflict between a vision of the HEI impact agenda that emphasises consultancy roles within corporate models of knowledge transfer, and current understanding of how to work in a dynamic and multi-faceted cross-sector innovation arena with many different values in play. Such mismatches risk over-systematizing and under-supporting the creative energies that academics and small businesses have. Forcing new partnerships into corporate models of innovation will not lead to better work, wider participation, or the rich and productive body of outcomes that such cross-sector work can produce.

HEI culture change

If universities are to avoid going down the route of concretising old-fashioned and ineffectual models of Knowledge Transfer in the domain of the creative economy, steps need to be taken to reinvigorate their roles as learning and self-reflexive institutions. As such, there is an important role for Hub entities to play within universities. It is precisely their embedded nature that enables internal culture change and can provoke universities to respond to the changing landscape, and diversity, of HEI-business potential. As an organisation that can generate and learn from the cross-sector interventions it produces, Hubs are well placed to address these two core misalignments and so support HEIs in developing their own thinking around the depth and scope of partnerships that universities could benefit from entering into. This opens the way towards an 'Insurgent Hub' role, one built around those institutions best able to support this form of culture change activity. Work at university leadership level will be essential to helping embed that activity into a university's strategic planning and shape what legal status and administrative / contracting powers such an entity should have in order to facilitate its work (i.e. strike the right balance between HEI-embeddedness and Hub autonomy).

IP case studies

CWL's approach to IP was shaped by their approach to seeding collaborative activity in the creative economy arena (Report Two), as well as the role HEIs should play in supporting such work. The core principle that emerged was that in this form of experimental cross-sector work, the relational nature of knowledge rises to the fore, placing an emphasis on open exchange, the creation of opportunities for 'spillover' effects, and a recognition that much of the value being created in thee new partnerships is intangible. From this emerged a 'low-risk' strategy built around engaging participants in IP discussions and drawing up unique IP policy agreements for each project where participants could specify particular IP restrictions if, and only if, pertinent. This is to recognise that there is no final word on IP in this type of work: Agreements have to be malleable to reflect projects as they develop, generate more tangible assets, and open up different trajectories for commercial exploitation. Many challenges with HEIs have arisen over IP policy. Through a focus on traditional HEI-industry relations, there arose a pressure from many in the Hub network to formalise IP and adopt market-driven models for IP exploitation (in the expectation of high financial returns for the HEI). Exercised through a lock-down on innovation processes and ever-closer scrutiny of projects, these are approaches inappropriate to nurturing innovation in this area, and fail to reflect the different contexts of knowledge creation and mobilisation in the creative economy. HEIs need to understand that the immediate financial returns from these experimental projects will be low, but that through their support they will help build and nurture communities within the creative and cultural industries that can generate high returns for the UK long-term. This type of engagement within the broader creative economy (one involving both the business community and third sector organisations) is the proper public function of a university.

3 Building a Network of Hub Partners

CWL sought to expose the intense activity that can be found across the breadth of London's creative and cultural sectors. The Hub's extensive network of partners played a critical role in this regard, helping the Hub reach a broader audience with their work and engage a greater diversity of participants than could have otherwise been possible. Recognising the great strength that lies in nurturing a diverse network, CWL's projects have shown how multiple forms of value – from economic to social – can be linked up together. At the end of the programme, a number of small-scale collaborative projects are beginning to emerge from within parts of the CWL network, further advancing the Hub's research strands, and exploring common interests both across strands and between Hubs.

Operating such a large network has, however, been a considerable challenge, with many partners struggling to adapt to new ways of working in the creative economy (see above) and only 60% of partner HEIs regularly participating in the Partners' Forum (in which core learning was discussed and future Hub activities were planned). In this light, it is important to recognise that CWL have revealed where opportunities may lie in targeting not the breadth of London's innovation landscape but the depth associated with particular sectors and geographical regions through smaller Hub networks. A key observation has emerged that projects within a cohort from a common London region often found synergies in their work that continued to be developed after the period of CWL support. Akin to the clustering and 'fusing' effects described for larger regions, CWL have begun to show how London can be understood, and acted upon, as an economy of subsectors in which sector-specific activities are geographically concentrated. This has suggested that Hub entities might also be effectively deployed to tap into sector-specific and sub-regional clusters, positioned in each to respond to the unique conditions and opportunities they represent. Such Hubs – linked with HEIs best able to support them – would be strongly positioned to foster unexpected connections between creative people who have a great deal in common, and likely share networks, but haven't yet engaged collaboratively. These smaller-scale Hubs would also be better able to pinpoint emerging centres of activity (e.g. Fashion in Hackney), exercising the 'powers of overview' that university-embedded Hubs can offer, and so 'supra-stimulate' collaborative networks that are already active. At this scale, such Hubs may also be able to achieve greater visibility in their work. Hub impact, therefore, might be enhanced by targeting where the strongest emerging talent base is; this may be across London or more locally concentrated.

4 Influence Beyond the Hub Network

In their Creative Voucher Scheme, CWL have developed a low-cost, participant friendly mechanism for seeding collaborative potential, one that can be deployed to diverse creative and cultural ends. These features confer on the scheme a broad transferability. It's implementation at scale within a large partner consortium has lent further credibility to the schemes potential as a generalisable policy instrument with regional, national, and international applicability. The CWL team is currently working with new international partners in Sao Paulo, Brazil, to explore this avenue further. It has also informed the Hub's wider engagement with Think Tanks, policy debates, government-commissioned reporting, and interested international parties (including the Institute of Innovation at Hitotsubashi University, Tokyo; the Ministry of Culture in Hamburg, Germany; and the Innovation Policy Unit in Milan, Italy). Robust methods for evaluating the scheme's effects are now being developed. In a similar vein, the Residency programme for entrepreneurs and researchers – a programme in the same spirit as the voucher scheme – is now being scaled in the form of The Exchange (managed by CWL's delivery partner: The Culture Capital Exchange). This pilot study aims to build a permanent national network for artists, creatives, and researchers to engage in mutually beneficial cross-sector collaborative work.

Case Study
Design in Action

1 Building a hub culture

An important component of DiA's work was to build a visible Hub identity and establish itself as a focal point for those wanting to explore design-led business development. It achieved this through building a strong core administrative team around shared values; developing a visible DiA brand; putting in place extensive measures to inform and attract potential participants (including lectures, design Jams, creative mornings); laying out a clear innovation programme that could speak directly to the needs and interests of target communities; providing clarity and authority in their communications and contracting strategies; and nurturing strong cross-institutional ties through collaborative work, model building, workshops, annual reviews, and partnership meetings. This identity building was key to establishing an independent reputation internally within the partner network, and gaining the trust of additional external partners and funding sources. Establishing a strong Hub identity enabled DiA to manage a volatile academic employment landscape, withstanding a change to each Co-Investigator in its partner network and the continuation of only one PDRA to the end of the programme. Through forging networks of academic, design, and entrepreneurial participants around the idea of a Hub with a clear mission, the DiA programme was able to achieve iterability, with its reputation helping to draw new participants and interest with each subsequent Chiasma call. The balance between HEI-embeddedness and semi-autonomy as a Hub within the university system – shaping its own brand, managing its own budgets, directing its own interventions – proved crucial in making this work possible. Many aspects of the autonomy DiA worked to attain might be bolstered in future iterations of the Hub programme to help further streamline its work and better connect together its activities across university structures.

Occupying a position that mediates between university and business sectors (each with their own unique cultures and practices), DiA recognised how semi-autonomy could enable it to be a 'learning organisation' in its own right. By building in the capacity to critically reflect on its own learning, DiA was able to adapt to the changing innovation landscape in which it worked. This found expression, for example, in the re-development of its scoping process towards a co-inquiry model better able to capture the diverse interests implicated in its work; in the tying together of DiA's project and research agendas, enabling it to remain up-to-date with current developments and influence them in turn; in adopting an iterative approach to their primary 'Knowledge Exchange' activity – the Chiasma (see Report Two) – that helped DiA better understand the balance required between internal (Hub) and external sources of project facilitation; in the accumulation of learning across Chiasmas that enabled more effective targeting and timing of repeat sector interventions; in its realignment of its HR capacities to reflect the realities of coordinating partnerships, business support and research; in its re-evaluation of the role business models play in better supporting business development.

At the core of this approach has been a deeper recognition that Design itself captures an active, changing body of techniques and perspectives. In this way, "co-designing design" – in which design methods themselves are made subject to iterative and multi-agent developments – became a means of bringing the field of Design forward, so keeping it agile and responsive. Even as the processes behind Chiasma were refined and made easier to execute – DiA becoming a "well-oiled machine" able to turn-around a Chiasma in a month or two – the Hub was exploring new directions to develop their model further, such as in tuning it to different sectors and responding to a greater range of business scales and needs. DiA's innovation program has, therefore, not been set in stone; attempts to do so would make it less able to respond to the active innovation landscape in which it is to work. If this model were to be adopted elsewhere, the adaptation of the Chiasma approach to new circumstances, needs, and experiences would need to continue. This process is best supported by an HEI-embedded, well-connected, and identity-rich Hub.

2 Building a University-Hub Relationship

For DiA, there were enormous benefits to being embedded within an academic environment, such as the access it provided to key administrative infrastructures; the support they gained from a large, knowledgeable, and well connected university Research Office; the influence/prestige that such associations brought in building networks and attracting attention nationally (and even internationally); the facilitation of deep-sector scoping enabled by linking university research to pressing issues in the creative economy; and the assurances businesses gained in knowing that they will receive quality support in taking their ideas forward. Indeed, the DiA team consider HEIs to be the only structure with a UK-wide coverage that can enable cross-sector work of this kind as an effective generator of economic growth; in this context DiA have asked whether a spin-off commercial entity built around its practises may be possible in the future.

There were, however, challenges of working with universities geared towards Technology Transfer and the commercialisation of intellectual property. These included university positions on project oversight, shareholding and equity stakes that are largely incompatible with investment practices in the micro-business sector, being geared more towards the creation of spinout companies in the life sciences that forms the mainstay of Technology Transfer Office work. Interactions with other HEI departments (for example around procurement and accounting) also revealed to differing degrees where the value propositions of DiA ran counter to established departmental protocols / remits, so identifying where sustained interaction over the values and aims of the Hub was required. A final area of

concern that emerged was that of institutional barriers to academic recruitment, which challenged DiA's efforts to reach a broader cross-section of the academic community and, in particular, those with the cross-sector and cross-disciplinary interests well suited to the co-design environment of the Chiasma.

Driving Culture change

DiA have represented a large grant for Dundee university (the biggest outside of the Life Sciences), giving them a degree of influence at an institutional level. In working closely with university departments (such as with HEI research offices to shape the terms of engagement for the Chiasma participants, funding proposal, IP model, and contracts) DiA was able to drive forms of culture change that are now opening its academic partners to the potential of collaborations with micro-businesses through design. Further, by overcoming the institutional challenges in these areas, they succeeded in building an open, shared knowledge base and structure across partner institutions. Through DiA, research offices in turn gained an understanding of what motivates micro-businesses, and insight into the commercial, legal, and regulatory issues particular to the micro-business sector (for example around VAT). This helped forge a deeper and broader relationship between the Hub partner universities and the entrepreneurial sphere, gearing these networks of businesses and academics to work for each other. These observations reveal the importance – for future endeavours – of engaging in conversations with partner institutions as early as possible to identify where barriers to collaborative work may emerge at an administrative level. Such conversations will help to identify and align HEI-Hub priorities so better enabling any culture change needed. Building these mutually beneficial interactions, however, requires sustained effort. Staff turnovers mean working relationships may need to be rebuilt and/or attended to in different ways. If the impetus from inside the HEI diminishes – for example following the end of a Hub programme – universities departments will likely revert to earlier practices.

IP case studies

DiA's position on the value of co-creation played out in their IP model, one that ran counter to normal IP practices in HEI-business partnerships. DiA sought to create an open environment for people to co-develop new ideas, whilst also opening up a route to commercialisation that protected IP emerging from that process. This was achieved through DiA, rather than the university per se, sheltering all IP generated from Chiasma before assigning it back to those project teams best suited to take it foreword. Given that the Hub's mechanism of ideas generation and development occurred in an environment of openness, and was exploratory in nature, IP assignment at the early stage of project development was in many cases largely symbolic. It proved, none-the-less, an important assurance to project teams and a key driver for this type of work. A project's IP case could be strengthened later on as R&D developed, with DiA taking a profit share or equity stake when businesses reach the market. This approach presented a challenge to those HEIs geared towards a stronger role in overseeing project development and defining IP contracts. HEIs need to learn that traditional routes of generation and exploitation of IP do not apply here; few projects of this nature will lead to the financial gains typically associated with traditional STEM-facing tech transfer. Although a Hub equity stake may, in time, contribute to the cost-base of this innovation method, the driver behind DiA's activities was the creation of new routes to future HEI-business collaborations and the advancing of academic research through engagement in this cross-sector work. This reflects the proper role of universities in the entrepreneurial sector: the support of mutually enriching R&D, the safeguarding of assets created (for example through an IP shelter), and the directing of those assets along pathways best able to support their exploitation.

3 Building a Network of Hub Partners

DiA have shown the value that a regional consortium can bring to a Hub partner network. In building a strong Hub identity bound to, and expressed through, a clear vision of design-led business development, DiA was able to distance itself from a place-bound conception of a creative Hub and operate Chiasma in different locations all over Scotland (and once outside of Scotland in Northumbria). In so doing, DiA was tasked with operating across different regionally active Scottish support programs to find ways of responding to the unique characteristics of each region. By working with themes that lend themselves to this geographical spread, DiA was able to work in a region-sensitive fashion (for example with technology clusters in Edinburgh, or rural and food clusters in Aberdeen) whilst also addressing themes that are important Scotland-wide.

Through DiA's university influence at a senior level – and armed with evidence of project successes – DiA was able to leverage considerable support across the partner network for their collaborative teams in the form of desk space, computer access, and free software, using their cross-country network to better enable collaborative work at the locations where it was needed. The benefit to host institutions (through PR and student contact) has been an important factor in building mutually beneficial and lasting relationships between partner HEIs. In this way, DiA have worked against a mindset of competition between Scottish HEIs – a position considered detrimental to Scottish enterprise, productivity, and entrepreneurial activity – to foster a common project and an attitude of cooperation. Although it often proved challenging to build connections between geographically distant HEIs, DiA partners were able to build a strong network and work together around a set of common values and interests. Putting the longer-term benefit of these relationships into jeopardy would be a mistake; with the end of the programme, these contacts, and the activities that have sustained them, will begin to degrade. This is occurring at a time when businesses are wanting to capitalise on the work done by DiA and are willing to self-fund a Chiasma process in their own Sector. The importance of fostering this free flow of resources through creative businesses across the country has been clear to DiA. It is a mechanism to help networks of businesses and universities work for each other in the entrepreneurial sphere so helping tackle the low rates of R&D investment in the private sector more widely, stimulating creative people and businesses to develop new ideas and think appropriately about how they invest in people, processes and products. This is to be understood alongside the international comparators that connect high rates of R&D with economies that are more stable, less prone to external or internal shocks, and recover more quicker when sector landscapes shift.

The DiA project has led to over £3.0 million in additional research grants for Aberdeen, Dundee and Edinburgh universities (including success with H2020 funded bids). New developments in research portfolios have emerged across the entire partner network, including the role of design in entrepreneurship, international competitiveness, healthy ageing, and digital innovation.

4 Influence Beyond the Hub Network

DiA's interest in championing design's role in business innovation – a principle central to its work as a Hub – brought it in close contact with a wider agenda around design (its economic and social role) that extends beyond its Hub-related activities. DiA sought to contribute to this agenda not least where it might help to stimulate demand for the design sector in Scotland for the services it provides. This proved a powerful drive to engage with diverse audiences and actors far beyond the immediate Hub network, engagements that have lent credibility and

vitality to a Hub programme. Firstly, DiA have played a major strategic role locally in Dundee, shaping the bid for UK City of Culture 2017, helping secure the UNESCO City of Design status (including and membership of the UNESCO Creative Cities), influencing the direction of Dundee's V&A Museum of Design, and forming the basis for a new Dundee-based Design Research Institute. Secondly, DiA devised a programme of public engagement aimed at raising the standards of design literacy among the population at large; nearly 3800 people attended DiA's lectures on Design, and hundreds others participated in Creative mornings and Global Service Jams in Dundee, Glasgow, Aberdeen, and Edinburgh; Thirdly, DiA hosted the Scottish Design Summits (2014 and 2015) to showcase international excellence in how design has developed, influenced and advanced businesses, along with its own public-facing product launches; finally, DiA have contributed widely to the Scottish Parliament's agenda on Design in the creative industries, for example, through the submission of written evidence for parliamentary enquiries or hosting policy roundtables on issues of design-led innovation, for example exploring the Design Commission's 'Restarting Britain 2 – Design and Public Services' report in the Scottish Parliament (in June 2013).

Case Study
REACT

1 Building a hub culture

The REACT team believe that their role in producing and supporting collaborative work has been emboldened through the Hub's status as a semi-autonomous agent, a third-space seen as separate from the university. This was important in helping the Hub maintain a degree of neutrality between funding source and funded recipients in its project production role. As a collaborative space centred within a pre-existing, and trusted, innovation lab (the Pervasive Media Studio), REACT was also able to gain greater manoeuvrability in bringing together the many different collaborative partners needed to conduct work in the creative economy arena. This proved critical in terms of its brokerage, advocacy, and intervention activities. It is because of this status as a trusted third space, that REACT was able to pull together a wide range of advisors, industry and PR experts, and mentors to support their work. These people have played a vital role as REACT champions and ambassadors in their own industries.

Within REACT, the core team created a flat hierarchy, working tightly together across many different academic and sector specialisms to develop a common purpose and shared vision essential to their 'culture change' project. This helped to bring the delivery team and the operations group into alignment, so establishing an effective and agile management /project delivery structure. This approach to Hub management underpinned REACT's formation as a reflexive organisation, one capable of applying emergent learning to alter its own structures and processes over time as required. This supported the creation of adaptable processes, strong internal-Hub learning and reflection, and helped REACT learn from the creative communities of academic and businesses they worked with. In this sense, the structure of the Hub itself could be said to parallel those implemented within individual collaborative projects. This capacity for agile learning helped REACT understand and act on the different cultures of practice active in cross-sector collaborative work. This enabled REACT to iteratively develop its own production and research processes, resulting in new trajectories for the original Sandbox model adopted by the Hub. One example of this has been the creation of Play

Sandbox – a highly original approach for supporting the co-design of new products with young people (the Young Coaches, aged between 7 and 12). Further, this built-in capacity for learning enabled REACT to identify where additional funding streams for different types of project activity might be needed, leading to the development and implementation of the Alumni Scheme, and the Prototype, Feasibility, and Pump Priming awards. This, in part, allowed REACT to adapt to the challenges of a centralised Hub structure working within a regional partner network.

2 Building a University-Hub Relationship

HEIs have complex organisational structures that can put them at odds with many of the principles so far discussed. REACT recognised from the very beginning that HEIs are not geared towards working in the creative economy, that the tacit and applied understanding of how the sector works lies not with HEIs but with the creative businesses that shape and drive it on a daily basis. Here, new forms of knowledge production – including forms of social co-production – are beginning to emerge and undergo rapid change. This increasingly puts the creative and cultural sector at odds with the entrenched models of linear Knowledge Transfer operating in many universities, models in which the HEI plays the primary role of knowledge creator and guardian.

A number of core challenges emerged in building REACT's vision of how universities can form productive partnerships with creative economy partners. This has been a vision that differs substantially from established HEI technology transfer activities and support. For example, creative economy partnerships can thrive on small award amounts, which, although a low priority for HEIs, are important for small business engagement in this arena; a high turnover of relatively short-lived projects is also common, which requires that HEIs carry out more rapid contracting processes than is standard practice; there is insufficient understanding within HEIs of the dynamics of creativity within this form of cross-sector collaborative work, an understanding that points towards the need for contracts that don't over-formalise partnerships or impose damaging IP constraints (IP policy that favours HEIs over collaborative partners tend to be a major disincentive to the participation of small businesses, and can also restrict innovative project development). Further, the HEI accounting systems in place to support research activity are not 'impact positive'. REACT have been challenged by the opacity of FEC and the contracting of academic research time to external partners. Issues over the high academic buy-out associated with each project have also arisen, especially when academics fail to contribute their contracted hours or are forced to contribute those hours in their spare time. In short, many of the HEI partners proved not to be geared towards the important exploratory, dynamic and flat collaborative structures central to REACT's work.

HEI culture change

One of REACT's key achievements has been to drive culture change within it's HEI partner network. As a semi-autonomous, embedded, and self-reflexive entity, it has been able to operate as a gearing mechanism between HEIs and creatives economy partners, and so challenge enshrined HEI attitudes around Knowledge Transfer and the dominant position of the university in collaborative processes. The REACT steering board, operating at University Pro-Vice-Chancellor level under Creative Economy leadership, was pivotal in driving these changing attitudes, conveying the proposition of REACT and conducting strategic conversations that have established the creative economy as an industrial domain appropriate to HEI activity. The strong link between the Steering board and REACT's work on the ground proved critical in evidencing the successes of its HEI-business collaborations and directing how such partnerships were supported. Equally important was the use REACT staff time to build relationships within and between HEIs research offices and contracting / financing departments. This made the process of working with HEIs easier, with many HEI offices developing more appropriate levels of oversight for REACT projects. This included, for

example, the development of a standard contract template that was better aligned with the different principles of project partners, reduced the room for unnecessary project negotiations, and built capacity to respond to the needs of individual projects when they arose.

The REACT hub has shown that HEIs are capable of supporting collaborations with a creative economy focus, but more work is needed from university leadership to recognise and prioritise such work – through all levels of their institution – if it's full potential is to be realised. An important step towards this, and learning from REACT itself, will be for HEIs to re-design their own processes through better using the skills, knowledge and resources of their own staff. This is a form of internal capacity building that HEIs need to develop further, and a process that an embedded Hub could be very powerful in sustaining. If universities are to take a lead in developing collaborative work in the creative economy, they should expect to have a number of people at school or faculty level in the arts and humanities who have expertise in this arena.

Intellectual Property Case Study

A core principle of the REACT programme was that the value being created in collaborative work doesn't lie in the project idea, but in the benefits of a collaborative process for all partners built on sharing and developing that idea in the open. The creative economy partner – i.e. the partner best able to develop and exploit a project's commercial potential – was assigned the IP rights, giving them the confidence to take ideas forward to market at a later stage, and providing assurance for future potential investors that there won't be future conflicts over work that has originated as a multi-partner collaborative effort. Although the assignment of IP to the business was largely symbolic at the start of Sandbox, it's effect has been to push IP conversations to the margins of the innovation process. This has helped stimulate creativity and the spontaneous, open interactions on which this work depends. Where initial project ideas developed post-REACT into assets that could be protected under IP law within a commercial venture, a serial approach to drawing up multi-partner IP contracts proved manageable and successful. HEIs can have prohibitive attitudes towards giving IP to business partners within collaborations, wanting to closely scrutinize and define IP agreements in their own terms from the beginning. This is not appropriate for projects generated through open, mutually beneficial cross-sector interaction.

3 Building a Network of Hub Partners

Geographically speaking, REACT was well-positioned in Bristol to fulfil its task of fostering new collaborations between universities and creative economy partners in the Southwest. At the centre of a cluster of HEI partners, each with their own specialisms and interests, REACT was able to develop points of focus that resonated widely within the creative economy and drew together diverse regional interests and regional networks.

At the level of individual collaborations, REACT have generated many examples of projects and individuals who, through their Sandbox experience, have become connected to a wider, regional creative economy, changing their working practices at home institutions and developing work else were in the region. At an institutional level, five universities in the South-West have now been able to enter into a strategic conversation about the role of HEIs in the creative economy through REACT. This has shaped future activities in four of the five partner HEIs, with £2.23 million in future funding for REACT legacy activities in the region leveraged from partner HEIs or external sources. First and foremost is the foundation of Creative Cardiff in 2014 through a £1.5million investment from Cardiff University, a creative economy programme that aims to applying lessons and legacy capital from the REACT program. Conversations to build a similar Hub in Exeter have been brokered by REACT between their creative economy partner in the city, Kaleider, Exeter University, and the Met Office. Amongst

other legacy projects can be counted continuing collaborations between Bath, Bristol, the Watershed, and Exeter in projects on the internet of things and robotics, and success in the first stage of the Arts Council England/EU Regional Development funding competition for a consortium made up of UWE, Bristol and the Watershed. These regional developments in which existing Hub partners have co-opted different facets of the Sandbox model, or the REACT experience, to find new forms of response to different creative and organisational challenges is an important outcome attributed to REACT's practice of cultural ecology (outlined in Report 2).

REACT worked with the particular qualities of creative culture in Bristol and the wider region, and deployed – then adapted – processes for creative economy engagement that could respond to the opportunities and potentials encountered, fostering new possibilities in turn. Although this reflects how the REACT partnership helped to build capacity across its region, the recommendation for building on this success has been to develop digital economy clusters around each of the partner regions rather than pursue the model of a single Hub with a regional focus. The aim would be a federated network in which "the precise governance form and investment strategy in each centre would be self determined, but sharing knowledge, market intelligence, and a common development agenda would continue". As such, the REACT model of a semi-autonomous, self-reflexive and embedded entity could be enacted in any number of spaces around, or between, established cultural and creative institutions (including universities, theatres, maker spaces and so on). These Hubs would not be a reproduction of REACT, rather they would respond to the particular strengths of their own regional contexts, and work to generate their own distinctive character (as is already being seen in Cardiff and Exeter).

4 Influence Beyond the Hub Network

A key principle for REACT from the start of the programme was to engage with actors beyond its immediate Hub network. It is a sure expression of their cultural ecology perspective, one of investing in the wider ecosystem in which work is produced so that new collaborative voices can be heard and their work find its intended target. To these ends, the Hub team worked hard to build a strong public, media, and industry presence in order to gain visibility for their work and the Bristol region. They staged public and industry-facing showcases for each of the five Sandboxes (with a final Hub showcase attracting 6000 visitors over its three days), supported projects to connect with new funders or advisers post-Hub support, and invested in taking projects to key international events such as the Game Developers Congress and Tribeca Film Festival, where they might gain critical attention and further support (even after their period of direct Hub funding). Through its active, widespread engagement beyond the Hub network, REACT received media coverage in over 150 articles across industry and popular press including Wired, The Guardian, and Times Higher Education supplement. REACT also actively pursued opportunities to share best practices in fostering creative economy partnerships and showcase its projects at a regional, national, international, and EU level, including conversations with universities and university networks, government departments and report commissions, research councils, and research institutes.

Case Study
The Creative Exchange

1 Building a hub culture

The Creative Exchange brought together three different innovation labs, each with their own history of practice and research in collaborative methods / making. What united them was a common interest in the nature of the collaborative act and how such acts can frame and drive processes of inquiry. CX came to embody this as a form of action research. This was not only been built into their innovation programme (Report Two) but into the Hub's structure, shaping its work and its understanding of itself as an organisation. This embracing of risk and adaptation associated with developing innovation practices became a hallmark of CX's identity as a Hub, one enabled through its embedded, but semi-autonomous, status within the university system.

At the core of the CX programme was the cohort of 21 PhDs, serving as the lynchpin between Hub-funded projects and university research (their own, the work of their departments, and the work of the Hub itself). As a cohort, they played an important role in building Hub culture, creating new paths for exchange horizontally within the Hub structure (for example seeding ideas between projects), vertically through the Hub hierarchy, and forwards across generations of PhD candidates. This Hub structure proved a critical means for implementing CX's action research approach. First and foremost, the PhDs played a significant role in a shift of Hub strategy early on from the Creative Lab model of rapid-fire 'big bang' projects to a more informal, slower paced, iterative, and organic approach of engaging with creative economy partners. This captured a change in the PhD cohort as they learned to support creative exchange, began to structure their own activities better and develop skills as reflective practitioners, so gaining the confidence to apply what they were learning. No longer enacting standard university research processes, they became active agents themselves, drawing on their own experiences to propose new directions for cross-sector collaborative events (resulting in the Lounge event) and guide project development. The cohort have, therefore, proved important not only in driving an action research agenda but also documenting and critically analysing the customised collaborative tools they developed to suit different research and innovation contexts as part of that process.

Coupled with these changes was the development of a more flexible and adaptive management approach within the Hub. This was essential not only to keep pace with creative companies, but also to respond to the generative outcomes of the Hub's own project and research work. A prime example of this was the complete re-thinking of Digital Public Space as a Hub theme, signalling a move away from archives to embrace the fuller cultural, social, digital, and technological implications of this highly charged, and often controversial, space. The adoption of an action research approach is why the theme developed so considerably. Although this process of change often unfolded unpredictably and presented considerable challenges for the Hub, it should been understood as having cemented CX's identity as an agent of action research. Indeed, it presents a strong case for how CX was able to build the capacity to learn, reflect, and adapt as a Hub, and so strive closer to realising its intended aims. Here (as with the other Hubs) we see the role of "infrastructuring", i.e. building in capacity that enables people to self-organise appropriate and adaptive responses to current challenges. The reorganisation of the PhD model, CX management structure, and the re-

direction of the Digital Public Space theme are examples of internal Hub infrastructuring. In this strong sense, it is not expected that CX's innovation model should now be set in stone; the importance of staying open to where new learning emerges and new capacities are needed will always remain important. Any future iteration of CX's innovation model would require the same infrastructuring approach.

2 Building a University-Hub Relationship

CX's network of three university partners enabled it to build and sustain a large body of diverse cross-sector work. It's HEI-embedded nature proved vital not only in keeping the Hub closely tied to cutting edge research through academic project partners and its PhDs, but also in opening it up to the rich creative, cultural, civic, and business communities beyond the university that helped to broaden the Hub's understanding of Digital Public Space.

CX's culture of open, experimental research in this space – a principle that speaks against the over-protection of ideas and for opening publically funded projects to a wider audience where these ideas may have broader impact and influence – at times ran counter to standard research office practices in the Hub partner network. The first issue concerns the scale of the collaborative partnerships: Dealing largely with micro-businesses and small organisations, the relatively small amounts of project funding involved were often considered a low priority for HEI departments to process. Further, many HEIs made extreme liability claims unsuitable to the size of the creative partners involved and the potential value of their IP. The second issue concerns the breadth of Digital Public Space as a cross-sector and cross-disciplinary venture: Working within an academic context, CX activities were funnelled through protocols for ethics approval inappropriate to the low-level risk of their predominately digital work, and scrutinised according to research (as opposed to artistic) standards in a way that erected barriers to projects trying to cross between different disciplines or traditions of practice. Through these mismatches, HEIs were initially very slow in signing contracts and supporting projects to get under way. Consequently, some project contracts were only signed after the completion of collaborative work, with many academics choosing to be non-funded partners in order to initiate new project partnerships.

HEI culture change

CX worked hard to drive culture change within their partner network. Three core examples of infrastructuring work done by the Hub have emerged: The first was to undertake direct liaison with HEI research offices and build the relationships needed to convey the nature of fast-paced, fluid projects at the heart of the Hub's activities. This led to guidelines that better explain the Hub's proposition to research offices, a shared collaboration template agreement across the Hub network, and the creation of protocols that deploy suitable levels of oversight and scrutiny for these small-scale collaborative projects. Theses changes could help inform further improvements to university practices and better enable academic-industry partnerships on a range of scales; The second example of infrastructuring was to show how the strategic change towards funding smaller, exploratory projects could help build the capacity for larger projects and research bids to emerge; The third example is the PhD cohort itself – a new generation of researchers who will take their learning into their future positions as researchers or creative practitioners, opening up routes to further adopt and adapt these practices. That successful doctoral candidates are taking up positions in academia, the creative arts, and industry is already testament to the success of this work.

There is still, however, a need for high-level advocacy work (through to vice chancellor level) to support research offices in developing these new internal HEI capacities and streamlining the bureaucratic process underlying this type of cross-sector work. Critically, for CX, being

embedded within the university was the only way to drive these long-term changes; working from the inside, a strong semi-autonomous Hub is better able to shape HEI strategy than individual academics who may be supportive of such collaborative endeavours but lack influence at an institutional level. Pressure to change institutional culture is also an ongoing process. Once the drive to adapt is removed (for example at the end of a Hub programme), previous gains are put at risk. In their role as an embedded driver of culture change, CX have understood itself very much as part of, rather than separate from, university research capacity. Failure to accomplish the HEI culture change required is, therefore, a failure of internal HEI culture, of which the Hub is part. Although greater Hub independence might allow short-term gains in administrative and contractual oversight of projects in future iterations, a 'floating free' from the university system would likely jeopardise core goals long-term. In the same vein, whilst a for-profit consultancy version of a CX model might be possible, it might re-orient projects towards output-driven goals and away from the experimental R&D space that HEIs – and an action research agenda – can support.

IP case studies

CX's position on IP captured its approach to creative exchange and the Hub's principal aim of breaking down disciplinary and sector barriers to create new ideas. Given the exploratory nature of R&D they supported, its public funding source, and a model of Digital Public Space built around wider access to digital material and methods, CX made a commitment to an open publishing model. Here, IP was shared amongst project participants (with each retaining their prior knowledge and prior art) but new ideas could be freely adapted and shared unless specific restrictions had been put in place by the project team. Given the early stage development in these projects, traditional forms of IP exploitation would likely emerge only from subsequent work, when new (more suitable) contracts could be drawn up. This simple IP regime supported project partners to openly explore R&D opportunities whilst also reflecting the role of the university in the public domain. Challenges emerged when working with the different HEI IP policies within the partner network, with many exercising a degree of caution towards CX's contract terms, CX's position on project liability, and the lack of HEI control in IP exploitation. CX have seen a key role of the contemporary university in this context as one supporting businesses to conduct R&D (from which growth and job creation may arise long-term) whilst also opening up routes for that value created to reach multiple targets to society's wider benefit. Whilst such experimental work is unlikely to result in immediate financial benefit (as traditional IP commercialisation activities might), it opens up new means for universities to yield cultural and social influence and invigorate its research potential.

3 Building a Network of Hub Partners

The breadth of CX's approach to 'creative exchange' is captured in the interests of its three academic partners, each an innovation lab in their own right: The RCA brought its interests in how research becomes embedded into artefacts through artistic practice; for Lancaster, the process of theorizing exchange and ideation through which artefacts are generated was a core focus; finally, Newcastle brought to the partnership a focus on practices of making and how such practices build relationships and future collaborative potential. In this sense, when each partner has talked about 'creative exchange' as a process they have refered to slightly different interests and priorities. Although the geographical divide made it more difficult to share ideas within the network and foster closer ties at a management and PhD cohort level, a partner collaboration developed that captured a stronger common ground of what creative exchange might be and what it could achieve. This then emerged through the energy of the network, the value of a three-way 'outside' perspective, an engagement with different traditions of theorising and making, and a healthy institutional competition amongst PhDs. This is a Hub-network extension of the CX's action research approach.

The effect of the CX programme in driving new forms of institutional, regional, and pan-regional capacity building in part captures its origins in three established, independent innovation centres. At Lancaster, AHRC funding has been secured for Leapfrog – research into the co-design of new tools for creative engagement in the public sector; Lancaster has been part of a successful bid (with UCL, Imperial, Oxford, Warwick and 40 companies) for an EPSRC Internet of Things Petras grant; FACT Liverpool has built on its engagement with CX to develop its own innovation labs, including FACTLab; the N8 consortium programme is adopting KE models from Creative Exchange to develop research clusters under the Urban Living and Digital themes; finally, learning from the new CX PhD model is now impacting each of the partner institutions (e.g. forming the foundation of a new £6.5 million EPSRC-funded Centre for Doctoral Training in Digital Civics at Newcastle University).

Recognising that in this area of work, a network of regional actors can be highly commensurate with the cross-sector collaborative aims undertaken, there is enormous scope for identifying and exploring such partnerships more widely across the UK. Indeed, this area of work lends itself to such partnerships. However, there is a need to resist engineered approaches, or explanations, of regionality, i.e. the urge to construct partnerships on the grounds of a common region alone. Developing clarity of purpose and a shared vision (conceptual and theoretical) within a mutually beneficial partnership are essential to making any regional or cross-regional hub of this type work. Simply agreeing logistic and operational protocols is not enough, and will not lead to the building of strong relationships and infrastructuring capabilities.

4 Influence Beyond the Hub Network

CX's action research perspective was significant in shaping the Hub's wider engagement beyond its network. Supporting projects that were largely exploratory and iterative in nature, such engagements were critical in exploring the Hub's concept of Digital Public Space. For example, project teams used participatory methods to develop or test new project ideas with members of the public or relevant stakeholders and communities (including at a city council or regional government level). A number of projects also developed public-co-working spaces or workshops, hackathons, public sector / community consultations, and large scale public showcases. (The Time & Motion: Redefining Working Life exhibition at FACT Liverpool, for example, attracted over 16,000 visitors). Facilitation tools developed by CX for supporting new collaborative partnerships have now been made publically available[7]. CX's work on Digital Public Space and co-design also informed its interactions in the domain of policy (for example through a series of workshops with Scottish government teams) and its broader academic engagement, conducted through the work of its PhDs, 59 research conference presentations, and a national conference on methods for cross-sector collaboration). With Hub activities bound closely to an academia-led action research agenda, the development of media channels to bring further visibility to Hub projects, or the fostering of industry links that might support project work to new developmental stages, were not a core priority in the Hub's work beyond its network.

References

1. Pratt, A., et al., (2016) Creative Hubs Report (British Council) [Online]. Available at: http://creativeconomy.britishcouncil.org/media/uploads/files/HubsReport.pdf

2. UK Government (2015). Business population estimate for the UK and regions: 2015 statistical release [Online]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/467443/bpe_2015_statistical_release.pdf

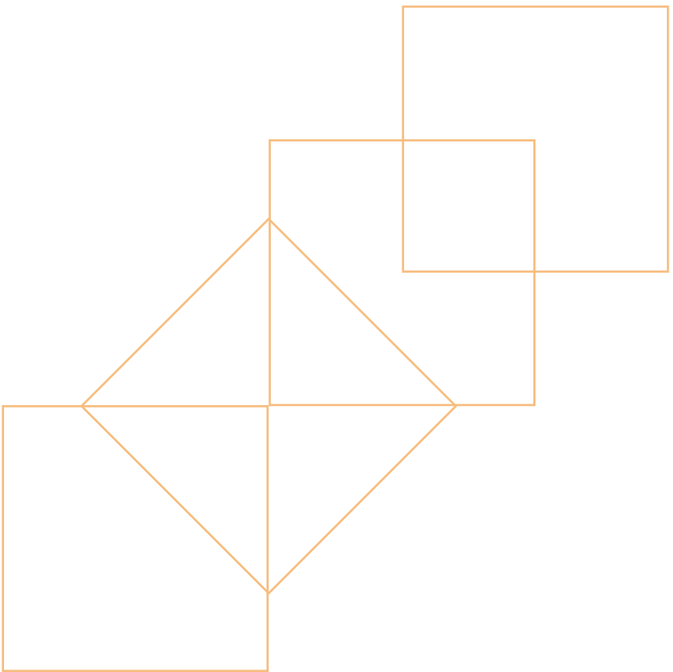
3. UK Government (2015). Creative Industries Economic Estimates: Statistical Release, p. 7 (Department for Culture, Media, and Sport)

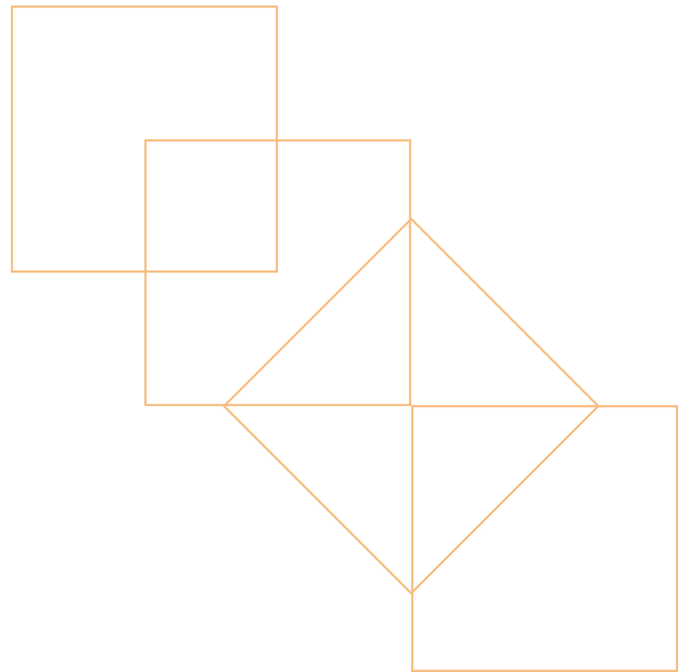
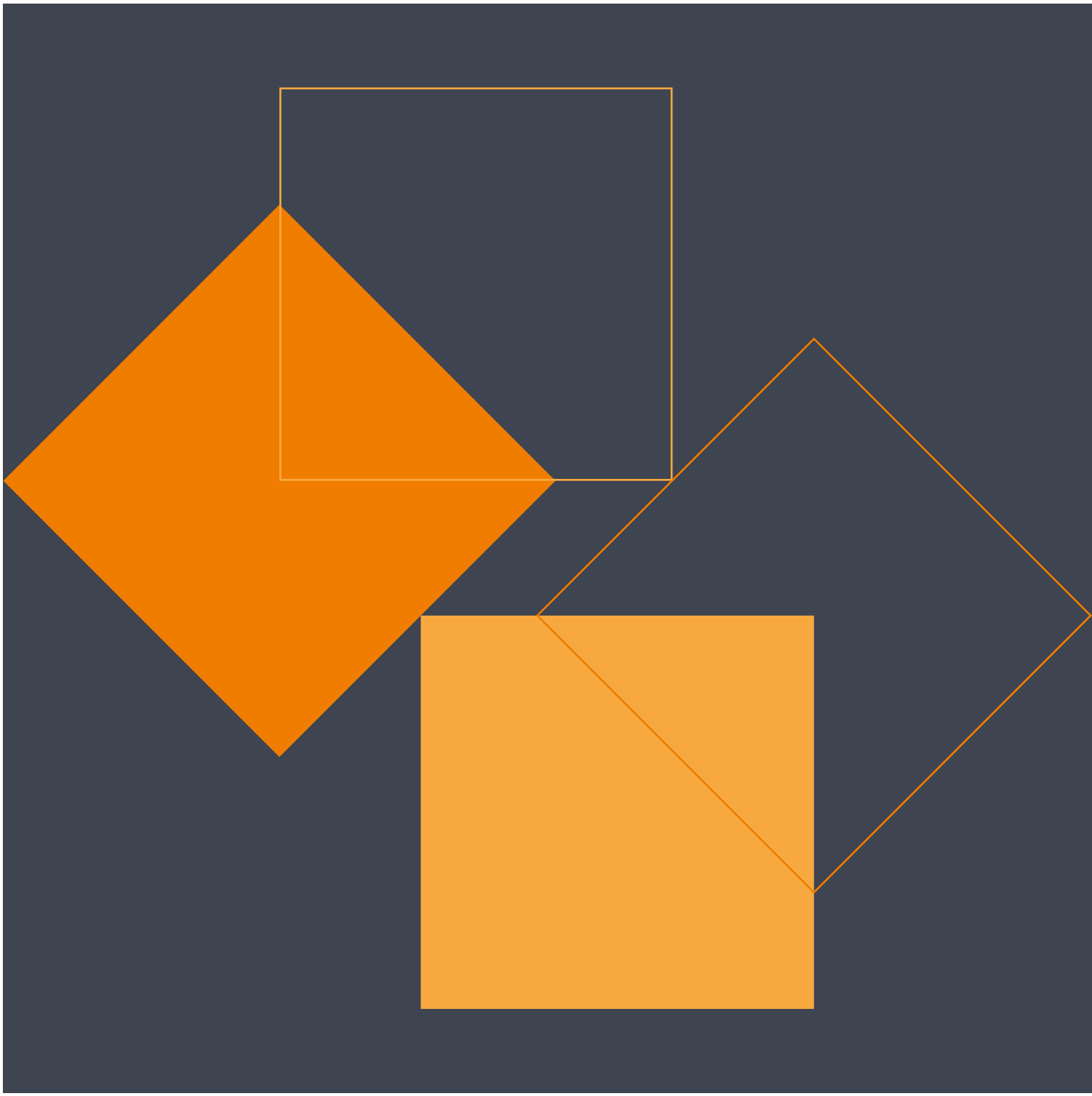
4. European Creative Hubs Forum (2015) [online]. Available at: http://creativehubs.org/

5. Senior, T.J. (2016). Connecting to Innovate: A Preliminary Report on the Achievements of the AHRC Knowledge Exchange Hubs for the Creative Economy (UWE, Bristol [online]. Available at http://react-hub.org.uk/publications/publications/connecting-innovate

6. Pratt op.cit., p. 10

7. http://cx.tools





Funded by the
Arts & Humanities Research Council