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Report 2: Definitions of CCI

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The brief for Report 2: Develop an analysis of different definitions of CCI in use globally and how current available data sources in Iceland, or lack thereof, can define use of different definitions and present in a report form.

Introduction

This report concentrates on how the broad field of creative industries, creative economy, and cultural and creative industries (CCIs) have been defined over time. There are many definitions of CCIs and there has always been some contestation over what counts in the CCIs, and why. Academic scholarship thrives on debate and contest, but government researchers, policy makers and politicians must make decisions about what counts, in what categories, and they must be based on defensible reasons, while also conforming where necessary to international standards and practices.

This report, and Report 1, is mindful of the need for both academic freedom and strategic prioritisation of scarce resources to achieve research impact in Iceland's new multi-university creative industries research centre. It is equally mindful of the needs of government and the citizenry to grasp opportunities to modernise understanding and practical application of this dynamic, growing and important sector of the Iceland's economy and its society.

Our emphasis throughout both Reports is the need to adopt a rigorous, contemporary understanding of the CCIs based on the best statistical, industrial and academic foundations while at the same time stressing modularity and flexibility that allows for best practice stakeholder management.

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This section describes the difference between the CCIs as a discrete set of industrial activity, and the Creative Economy as a broader object based on the distribution of creative skills across the labour market.

4. Creative skills and cultural value: getting beyond the debate

Drawing on recent national Satellite Accounts of the Australian CCIs and the dynamic model of the Australia CCIs, this section offers a conceptual distinction between creative skills (inputs) and cultural goods and services (outputs) that can be applied in Iceland to organise modular data structures that accommodate a diverse sector.

5. Concordance tables issues with CCI coding and Higher Education

This section notes the statistical difficulties in aligning field of education and employment codes with CCI frameworks in Australia and the UK. It notes recent research that has applied a new approach to this problem.

6. Creative employment in Iceland

This preliminary mapping of the Iceland creative economy is original research and shows that:

- Employment in the creative economy (including the creative industries and in creative roles in other industries) represented 14.8 per cent of the Icelandic workforce in 2021, an increase of nearly 50 per cent from 11.2 per cent in 2003.
- Since the early 2000s, creative employment thus defined has grown by as much as three times the rate of the rest of the Icelandic workforce
- On average, the creative industries provide employment to 1.5 times as many people in support roles as core creative roles
- More people in creative occupations are employed outside the creative industries than directly within the creative industries themselves.
- Nearly two thirds of jobs in the creative industries are in creative services sectors, with the remainder in cultural production
- Employment in creative services industries is growing at more than twice the rate of the total Iceland workforce, while employment in cultural production is falling
- Employment growth is strongest in the more commercially-focussed creative services sectors of software and digital content and architecture and design, while the most significant falls in employment are in publishing

Note:

Some of the material in this report is sourced from the original drafts written by Stuart Cunningham that appear in revised form in J. Hartley, J. Potts, S. Cunningham, T. Flew, M. Keane and J. Banks, *Key Concepts in Creative Industries*, Sage, 2013, and also from S. Brook (2022) 'Creative Coding and Modular Solutions: the success of the Creative and Cultural Industries in Australia'. in R. Comunian *et al* (eds), *A Modern Guide to Creative Economies.* Edward Elgar, Cheltenham; pp 21 - 35. Section 6, Creative employment in Iceland, is original research by Dr Marion McCutcheon with critical input from Anton Örn Karlsson, Head of Unit, Labour market, living conditions and demography, Statistics Iceland.

1. Creative Industries

The term 'creative industries', though probably first used by strategy consultants Cutler & Company in Australia in 1994 (Cutler & Company 1994), was given policy and industry prominence through initiatives taken from 1997 by the new UK Labour government through the responsible portfolio minister Chris Smith (see Smith 1998) and his Department for Culture, Media and Sport (DCMS). A Creative Industries Taskforce was set up and was followed by the publication of the Creative Industries Mapping Document in 1998, which was updated and refined in 2001. A foundational definition was promulgated: the creative industries were 'those industries which have their origin in individual creativity, skill and talent which have a potential for job and wealth creation through the generation and exploitation of intellectual property' (Creative Industries Mapping Document, DCMS, 1998:3). The standard definition of the creative industries used by the DCMS included 13 industry sectors: advertising, architecture, art and antiques, computer games/leisure software, crafts, design, designer fashion, film and video, music, performing arts, publishing, software, TV and radio.

This foundational démarche has proven resilient while at the same time attracting great controversy. Above all, it has proven a useful concept. First, it is valuable because it mainstreams the economic value of culture, media and design. It does this through recognizing that creativity is a critical input into contemporary economies that demonstrate features of 'culturisation' (Lash and Urry 1994; Du Gay and Pryke, 2002), digitisation and highly designed goods and services. While these claims have been criticised (eg Dyson 2010) for buying in too fashionably to new economy thinking and its promotion of intangibles, 'weightlessness' (Coyle 1997), and of 'living on thin air' (Leadbeater 2000), the outputs of creative industries were always a mix of high value-added services and manufactured goods.

Second, it brings together in a provisional convergence a range of sectors which have not formally been linked with each other. Despite the long tradition of work that has considered the role of creativity for a broader range of sectors in post-industrial economies (including advertising and software, this has been the source of much criticism – the idea that such collocation was driven by the tendentious need to make Britain look a world leader in a field it had defined for and by itself. Nevertheless, it has been the basis on which the fundamental claims were made – that the creative sector was far larger than previously thought, and that it was growing at a rate significantly higher than that of economies as a whole. Third, the sectors within creative industries – the established arts (visual and performing arts, dance, theatre etc); the established media (broadcasting, film, TV, radio, music); and new media (software, games, e-commerce and e-content) – move from the resolutely non-commercial to the high-tech and commercial. This continuum moves from the culturally-specific non-commercial to the globalised and commercial, where generically creative, rather than culturally specific, content drives advances.

This continuum is less coherent than the neat definitions for the arts, media and cultural industries that organise thinking and policy in the field but does attempt to take into account the profound changes wrought by digitisation, convergence and globalisation. One of the reasons the idea of creative industries has been taken up so widely is that it connects two key contemporary policy clusters. On the one hand high-growth ICT and R&D-based sectors – production in the new economy – and on the other, the 'experience' economy with cultural identity and social empowerment, that is consumption in the new economy.

As would be expected, much research and debate in the ensuing decades or more has been concerned with developing policies and programs to support the sectors thus identified as belonging to the creative industries. But there has also been much debate and refinement of definitions of the

sector, as might be expected of a term that was a policy intervention, rather than a rigorously researched academic category.

Many attempts have been made to refine, clarify and improve understanding of the sectors and boundaries of the creative industries. (See the figures in **Major definitions of the cultural and creative industries** below.) For example, NESTA (2006: 55) has proposed four overlapping sub-groupings (originals, content, services, experiences) based on the various business models employed. *Originals* (eg fine art) trades on the production of scarce one-offs; *content* is the opposite, creating mass media as widely consumed as possible; *services* like advertising and architecture are business-to-business, not final consumption or retail; and *experiences* attract people to typically live events (music festivals, theme parks, museums, art galleries).

Cultural economist David Throsby puts forward a 'concentric circles' model, in which the core are the creative arts (literature; music; performing arts; visual arts), because these are 'the locus of origin of creative ideas' (2001: 112). Outside the core are the 'cultural industries' (film; museums and libraries), the wider cultural industries (heritage services; publishing; sound), and recording (television and radio; video and computer games) and finally related industries (advertising; architecture; design; fashion) based on the degree to which they mix 'pure' creativity with other inputs. The Work Foundation (2007) has produced a different set of concentric circles in which the core creative fields include all forms of original product. Then there are those cultural industries which attempt to commercialise these creative products. Next are creative industries which have intrinsically functional applications (architecture, design, advertising). Finally, there are sectors selling an 'experience' which depends on creative inputs (which include theme parks, museums, art galleries, etc). There is indeed a literature defining creative industries as the 'experience economy' (Pine and Gilmore 1999, Andersson and Andersson 2006). Justin O'Connor (2011: 92) conceptualises Creative Industries as consisting of a higher-order segmentation into 'art-media-design'. This dispenses with the topography of concentric circles – each is an industry sector, each mix cultural and social value, and each deals with tensions between intrinsic and instrumental value. They differ on degrees of functionality.

There are, of course, conceptualisations that go beyond these industry-based or sectoral perspectives reviewed here (for more on this, see **Creative Economy** below). We would propose for close consideration the approach that links Creative Industries to fundamental innovation processes in an evolving economy (Potts and Cunningham, 2008). How can an industrial sector devoted to media, fashion, craft, design, performing arts, advertising, architecture, heritage, music, film and television, games, publishing and interactive software possibly contribute to fundamental dynamics of economic growth? At first sight, the creative industries are not progenitors of the standard causes of economic growth in developing new technology, in capital deepening, in operational efficiency, in business model innovation, or in institutional evolution. Yet many of the people and businesses in this sector are actually intimately involved in all of these things. The creative industries are deeply engaged in the experimental use of new technologies, in developing new content and applications, and in creating new business models. They are broadly engaged in the coordination of new technologies to new lifestyles, new meanings and new ways of being, which in turn is the basis of new business opportunities. The creative industries are not major forces of material economic growth, but they are influential in their role in coordinating the individual and social structure of novelty and in resetting the definition of the normal. The creative industries provide many of the inputs involved in process of *adaptation to novelty* and the *facilitation of change* that by definition underpin the process of economic evolution.

There have been many criticisms of the concept of creative industries. Indeed, it has been what Cunningham (2009) calls a 'globally contestable policy field'. Banks and O'Connor (2009) summarise these as: it promotes a simplistic narrative of the merging of culture and economics and represents incoherent policy; the data sources are suspect and underdeveloped; there is a utopianisation of 'creative' labour; and it is guilty of a benign globalist narrative of the adoption of the idea. Let us consider the fundamental criticism: relations between culture and the economy as conceptualised by Creative Industries.

For critics of the creative industries concept (eg Garnham, 2005; Miller, 2008; Oakley, 2009; O'Connor, 2009), it is seen as a kind of Trojan horse, suborning the integrity of the case for support for culture through an untoward economism. It could, however, be viewed as opening up the hitherto ossified relation between economics and culture; a relationship no longer to be limited to questions of the arts and market failure (cultural economics), or of rationales for cultural regulation. Instead, there is a focus on the role of media, culture and communications in generating change and growth in what Schumpeter called the capitalist 'engine'. Engaging with the heterodox school of evolutionary economics (the intellectual source of much innovation thinking) can, perhaps ironically, bring us back to many animating questions of our field – what are the genuine advances in the communications and media sectors (including aesthetic advances), how would we measure them, and what have been their impact? These are indeed questions of cultural value, from which the debates have rarely veered.

Indeed, the appropriate relations between the economic and the cultural might be best traced as the *evolution* of cultural forms as social and industrial norms themselves evolve. The state developed a role, from the mid-twentieth century, to address market failure by asserting the ameliorating and elevating role of the arts (the values expressed in the arts can never, finally, be reconciled with those of the market). It then engaged in regulation and support of what came to be dubbed the 'cultural' industries (popular cultural value was significantly embodied in the products and services of these industries but they needed protection from the market's levelling of cultural value). Then the high relative growth in the creative sector led to 'creative industry' development strategies based on the healthiness of traditional macroeconomic (GDP, employment, export growth) and microeconomic (enterprise sustainability) indicators and the beginnings of the mainstreaming of cultural activity in the knowledge-intensive services economy. Then, the crisis in mass media business models and the rapid co-evolution of the market and household sectors (the pro-am revolution, social network markets, creativity as a social technology, contemporary innovation policy focused on creative human capital) suggests that addressing future potential sources of value creation and the nature and structure of future markets will have much to do with emergent cultural resources at the population level.

Each of these models of the relation of the cultural to the economic accretes and overlays the others in the contemporary situation. Each has an account of cultural value. Each stood in a critical relation to the dominant formations of their time, and each had, and has, a potentially emancipatory function.

2. Major definitions of the cultural and creative industries

Each of these major attempts to define the cultural and creative industries are part of the definitional history. Justin O'Connor (2007), *The cultural and creative industries: a review of the literature. A report for Creative Partnerships*, Arts Council of England, section 5 has a helpful commentary on the first four of them.

David Throsby

Cultural economist David Throsby puts forward a 'concentric circles' model, in which the core are the creative arts (literature; music; performing arts; visual arts), because these are 'the locus of origin of creative ideas' (2001: 112). Outside the core are the 'cultural industries' (film; museums and libraries), the wider cultural industries (heritage services; publishing; sound), and recording (television and radio; video and computer games) and finally related industries (advertising; architecture; design; fashion) based on the degree to which they mix 'pure' creativity with other inputs.

> **Core creative arts:** Literature; Music; Performing arts; Visual arts.
>
> **Other core cultural industries:** Film; Museums and libraries.
>
> **Wider cultural industries:** Heritage services; Publishing; Sound recording; Television and Radio; Video and computer games
>
> **Related industries:** Advertising; Architecture; Design; Fashion (Throsby, 2001; 2007)

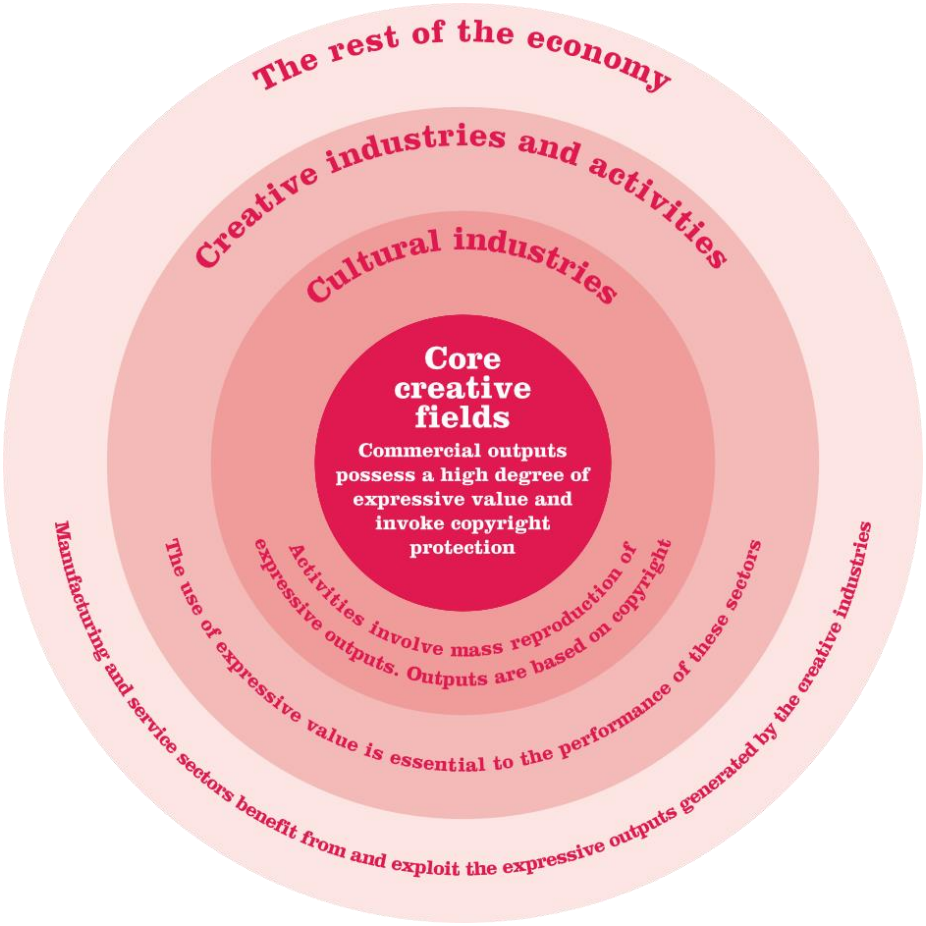
David Hesmondhalgh

David Hesmondhalgh, as a contrast, offers a very different definition of the Cultural Industries. He defines the *core cultural industries as:* television and radio, film, music, print and electronic publishing, video and computer games, advertising marketing and public relations, web design. They are defined by competition for the same resources, as well as their shared characteristics as producers and distributors of primarily symbolic artefacts.

The arts are *peripheral*, because less industrial, reach less people (ie not popular culture) (cf Richard Caves' distinction between simple and complex creative industries). *Neighbouring industries* are: information technology, consumer electronics, telecommunications

Work Foundation 2007

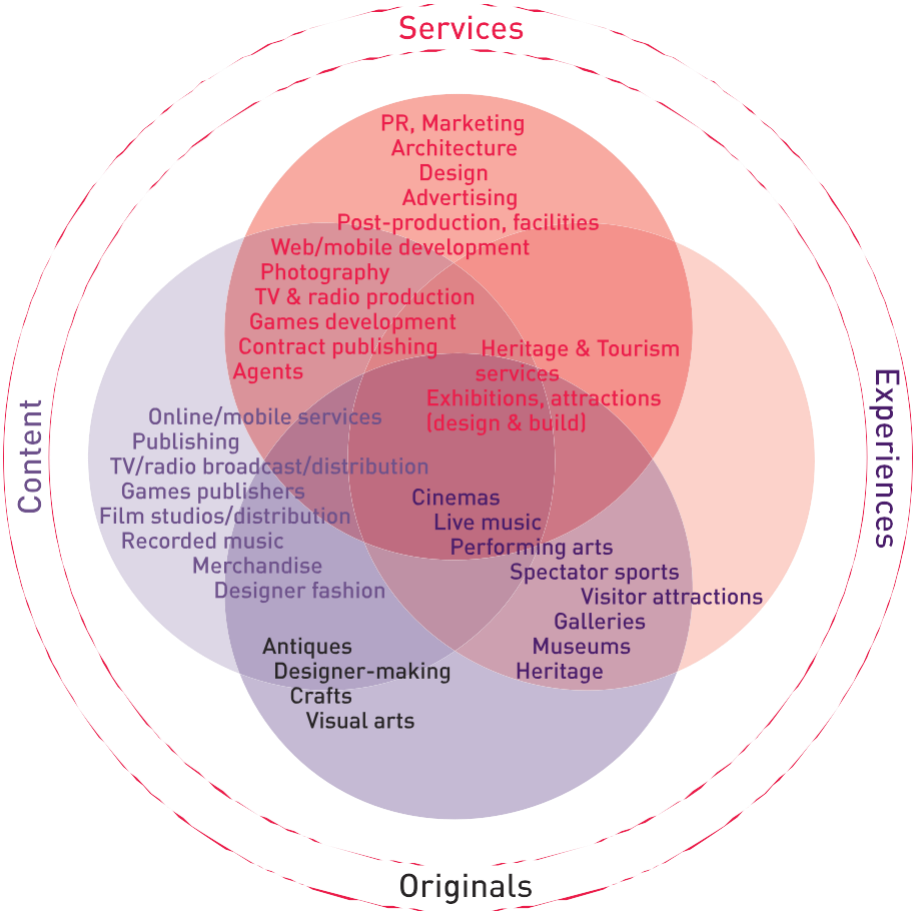
The Work Foundation (2007) has produced a different set of concentric circles in which the core creative fields include all forms of original product. Then there are those cultural industries which attempt to commercialise these creative products. Next are creative industries which have intrinsically functional applications (architecture, design, advertising). Finally, there are sectors selling an 'experience' which depends on creative inputs (which include theme parks, museums, art galleries, etc). There is indeed a literature defining creative industries as the 'experience economy' (Pine and Gilmore 1999, Andersson and Andersson 2006).



Source: Work Foundation 2007, Staying ahead: the economic performance, p 5

NESTA 2006

NESTA (2006: 55) has proposed four overlapping sub-groupings (originals, content, services, experiences) based on the various business models employed. *Originals* (eg fine art) trades on the production of scarce one-offs; *content* is the opposite, creating mass media as widely consumed as possible; *services* like advertising and architecture are business-to-business, not final consumption or retail; and *experiences* attract people to typically live events (music festivals, theme parks, museums, art galleries).



Source: NESTA 2006, Creating growth: How the UK can develop world class creative businesses, p.55

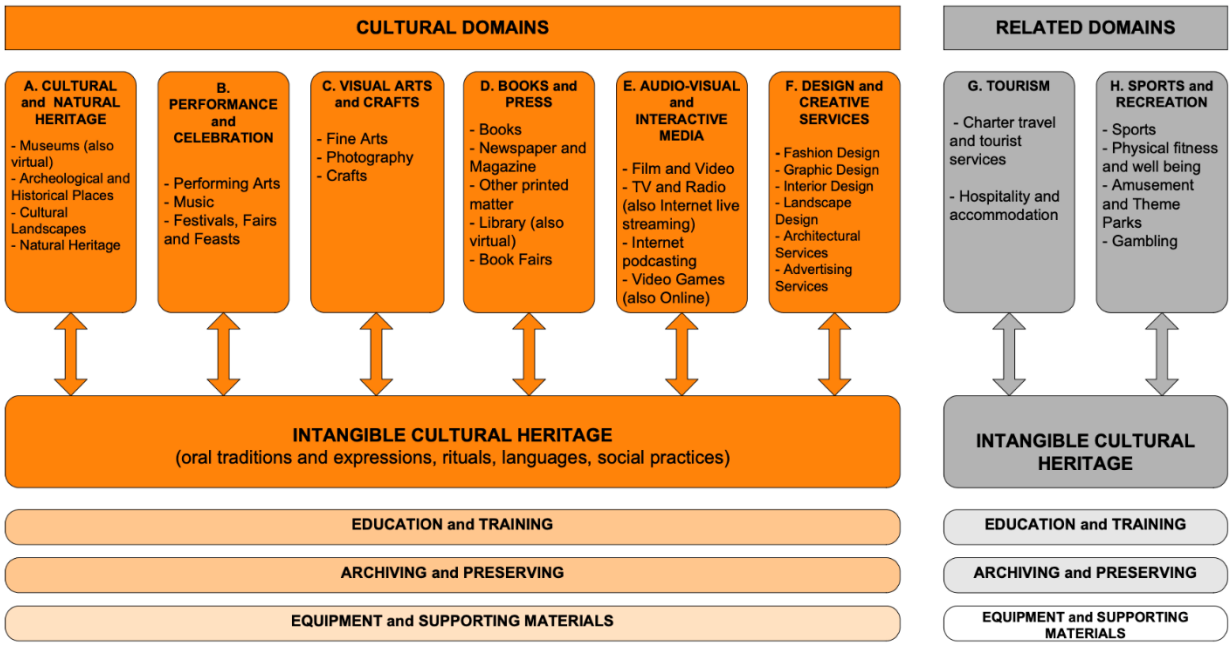
The UNESCO model of the Cultural and Creative Industries (2009)

The UNESCO model is premised on an attempt to overcome three oppositions prevalent in policy frameworks and discussion; oppositions of scope (the social versus the economic way of measuring value); of government (state, commercial, and community modes of provision); and of institutionalisation (formal and industrial modes versus informal and grassroots modes) (UNESCO 2009, p.17).

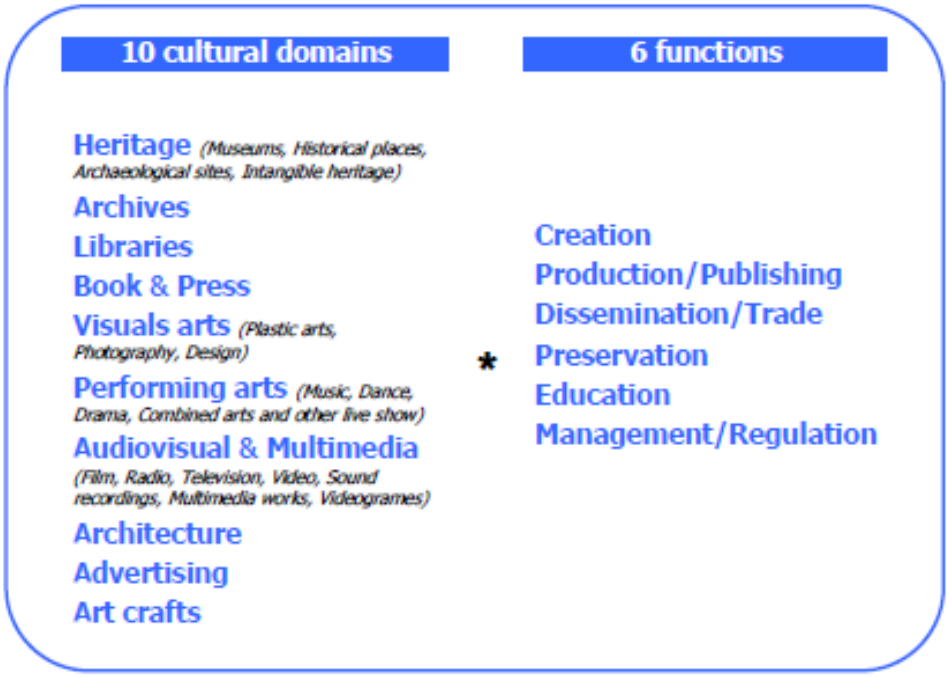
These three objectives are evident in the choice of the word 'domain' rather than 'industry' to organise classifications:

The broad conception of a sector that includes non-formal, amateur and activities unrelated to the market is termed a "domain" in order to indicate that the concept covers social and non-market related activity, as well as economic, market-related activity. (UNESCO 2009, p.19)

Economic market related activity includes the buying and selling of cultural goods and services, including employment (the selling of creative and cultural skills and effort as 'labour'). Non-formal activities include unremunerated work, volunteering and community activities. The UNESCO model is structured around domains of cultural infrastructure—human as well as physical—that support certain kinds of cultural and creative activity and reflect value statements about that domain that are above and beyond employment. For instance, the domain of Cultural and Natural Heritage (domain A) is organized around key state infrastructure, galleries and museums, as well as the soft infrastructure of human expertise and organisational networks that enables it to exist.



EUROSTAT model



The Eurostat (2018) model of cultural occupations is based on the proposed model of the Cultural Industries by Taskforce 3 (TF3) outlined in the comprehensive European Statistical System Network on Culture (2012). This detailed proposal that maps the CCIs to ISCO and ISIC codes defines the sector this way:

> TF3 defines a cultural occupation in this way: Cultural occupations include occupations involved in the creative and artistic economic cycle i.e. creation, production, dissemination and trade, preservation, education, management and regulation, as well as heritage collection and preservation. These occupations involve tasks and duties undertaken:
>
> a) for the purpose of artistic expression (e.g. visual arts, performing arts, audiovisual arts etc.);
>
> b) to generate, develop, preserve, reflect cultural meaning;
>
> c) to create, produce or disseminate cultural goods and services, generally protected by copyright (ESSnet-CULTURE 2012, pp. 143-144).

Source: European Statistical System Network on Culture 2012, ESSNET Culture Final Report, https://ec.europa.eu/eurostat/cros/system/files/ESSnet%20Culture%20Final%20report.pdf

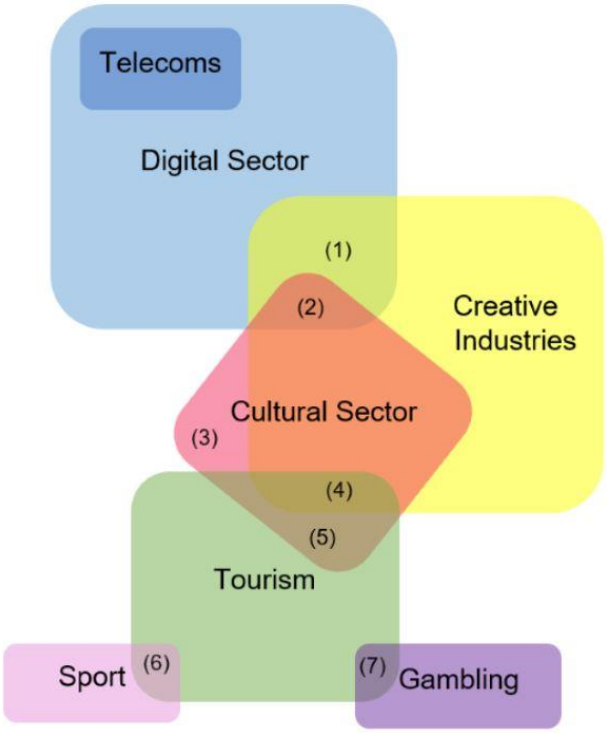
The next horizon in application of definitions: The digital economy & the creative economy

Iceland has a much higher than average proportion of embedded creatives across the economy (see Section 6 below). Where are these embedded creatives by industry and what are they? What is the size of Iceland's digital economy?

Tech sector jobs include graphic design, user experience design, information architecture, customer engagement, content creation, publishing, and broadcasting – all roles that are centred around or interact with culture and the arts more broadly. Iceland's cultural workers should be at the forefront in developing innovative content and cultural experiences using digital technologies and platforms. Arts and cultural sector workers need to be skilled and trained for the opportunities and jobs of the future which will increasingly require digitally skilled creative talent across many sectors of society. As digital technologies evolve, so too do the capabilities that creative workers will require.

In addition, to what extent are online labour markets supporting creative workers? Recent evidence from Europe suggests most creatives working in the online gig economy do not rely on this work as a primary source of income. Given this, how are the skills of Icelandic gig economy creatives distributed across the formal labour market?

Similarly, how can Iceland measure informal creative digital work, such as YouTube content creators, Esports and Social Media Influencing? How are such invisible if economically significant creative digital skills distributed within the labour market?



(1) Publishing, computer games, software publishing, computer programming, computer consultancy activities
(2) Film, TV, Music, Radio
(3) Heritage, retail of music and video recordings, manufacture of musical instruments, reproduction of recorded media
(4) Arts, Museum activities
(5) Heritage
(6) Renting of sports goods, operation of sports facilities, other sport activities
(7) Gambling

Note: Civil Society has not been depicted in this figure because it spans across all industries, both within DCMS sectors and outside. The overlap between Civil Society and other DCMS sectors is taken into account for All DCMS totals (mainly SIC 90 – Arts, which overlaps with Creative Industries, Cultural Sector and Tourism sector).

Source: UK Department for Digital, Media, Culture and Sport 2021, DCMS Sector Economic Estimates Methodology, 26 August, https://www.gov.uk/government/publications/dcms-sectors-economic-estimates-methodology/dcms-sector-economic-estimates-methodology

3. Creative Economy

It is important to understand the basic distinction between Creative Industries and Creative Economy. The concept of creative industries first emerged in the late 1990s as a model of post-industrial development coupled with urban regeneration. The principal conceptual preoccupations of this first 'wave' of creative industries thinking were to map this newly defined industrial sector in respect of contribution to jobs and economic value added, and explore some of the policy avenues by which it could be better supported to grow. These were base-line considerations that did not yet seek to account for wider economic spillovers and contributions to other sectors or to consumption patterns and innovation processes in the wider economy.

Questions of the relations between the creative industries and the wider economy have been posed from an early stage of its history. These have arisen for several reasons. The incoherence of the original definition has always left the boundaries of the category fluid and therefore what is 'in' and 'out' remained contestable, and its relation to neighbouring sectors undecided. In particular, there was legitimate concern over the promiscuous insertion of a broad definition of software in the original DCMS characterisation of the sector (Hesmondhalgh and Pratt 2005, p.8). Critics argued that this was done in order to boost its size; it could also be said that it was a function of the outdated SIC (standard industry classifications) codes by which industry sectors perforce were classified. Drawing on early policy development in Australia, we suggest below that the inclusion of software within the remit of cultural policy development cannot be reduced to an attempt to increase the size of the CCIs, but is an effect of normative skills agendas that should be solid grounds for modern Cultural Policy. One of the enduring controversies in the field is precisely one of 'boundaries': the extent to which creative industries is beholden to the 'prestige' of ICT and thus conflates culture and information sectors (Garnham 2005; and cf Cunningham 2009). This, in part, can be addressed by empirically testing the interdependence between creative industries and ICT-intensive services, as Chapain et al do (2010). Another productive example (Oakley et al, 2008) that addresses controversies over the relation of arts and creative industries is a study that shows those trained in what David Throsby would call the creative core (ie the traditional arts) have tended to remain in the arts or 'spilled' into the creative industries, but have tended not to make careers in the wider economy.

Spillover issues have also been posed by the growing evidence base, for example, the fact that detailed statistical mapping work shows consistently there is more creative employment outside the creative industries than inside them, as we shall see, brings into sharp relief the issue of the relation of 'creative employment' in wider labour markets and its effects. And there is fresh research attention to value chains, spillovers, and the actually existing spatial distribution of creative industries (rather than a naïve expectation that all regions will have them, in defiance of all logic of comparative advantage). Thus, the concept of Creative Clusters fits, as well, into the general category of spillovers.

Thus, without neglect of the sector-specific issues, there has been quite rapid evolution of policy makers' interests and a broadening of the remit of the state's purview of creativity and the economy. In its country of origin, various reviews, white papers and restructures morphed the creative industries idea into a broader *Creative Economy Programme* (www.cep.culture.gov.uk). This focused on higher growth businesses, the nature and value of creative inputs into the broader economy, a broader promotion of 'creative careers', and clearer differentiations of economic and cultural goals. The *Cox Review* came out in early 2006, recommending a series of measures to refocus, including creativity/innovation 'centres of excellence' in all regions. The *Gowers Review*

examined the whole canvas of IP law and its impact on how business and society can deal with the divergent trends of greater digital rights management and technical protection measures to guard IP against easier ways of accessing and using digital content on the one hand and on the other the public interest value of promoting appropriate and better access.

Recent research has shown that spillovers can take the form of knowledge, product and network spillovers (Chapain et al 2010). Knowledge spillovers include flexible, collaborative models of work organisation developed for highly dynamic competitive environments can influence sectors that engage with the creative industries. Research in Britain has shown that firms which spend double the average on creative industries inputs are 25 per cent more likely to introduce products or services which are new to the firm or market (Chapain et al 2010, p. 24). Soon, we will focus on arguably the major supply-side spillover, that is the supply of creative professionals into the broader economy.

There are also demand-driven knowledge spillovers. Often creative industries, particularly those at the cutting-edge of digital applications such as high-end games, CGI and other special effects and telepresence, demand new and rapid advances in technology which stimulate innovation on the supply side. Innovation studies in Britain have shown that sectors such as advertising, architecture and creative software have high levels of user innovation which may spill over to their suppliers (Chapain et al 2010, p. 25).

Product spillovers are a well known feature of the creative industries – they include so-called ancillary markets for mass entertainment (toys, clothing and household items themed on Hollywood blockbusters) and the ubiquity of music online has made access devices like MP3 players equally ubiquitious consumer 'must-haves'. Network spillovers can take the form of the presence of a 'creative milieu' (the presence of significant numbers of creative businesses, people and activities) influencing tourism, property values or specialist retail (cafe society etc).

The Creative Economy, as has been suggested, can be approached through the concept of the creative workforce (see Cunningham 2011, Figure 1). The creative workforce can be understood as the total of creative occupations within the core creative industries (specialists), plus the creative occupations employed in other industries (embedded), plus the business and support occupations employed in creative industries who are often responsible for managing, accounting for, and technically supporting creative activity (support).

Figure 1. The Creative Trident

	Employment in creative industries	**Employment in other industries**	**Total**
Employment in creative occupations	Specialist creatives	Embedded creatives	Total employment in creative occupations
Employment in other occupations	Support workers		
Total	Total employment in creative industries		Total creative workforce

This approach to the creative workforce shares similarities with, but is substantially different from high-profile, and highly criticised, work such as that of Richard Florida. Florida corralled all white and no-collar workers into the orbit of the creative class even as he very helpfully highlighted the importance of those in creative occupations being studied in their own right, rather than focus

narrowly on industries in which they work. Our approach is a much more constrained categorisation of the creative workforce but much wider than traditional arts and culture.

The key finding from this approach is results that there are more creatives ('embedded') working outside the creative industries than inside them. It is as important to study the embedded workforce as the specialist, if we are to understand the creative economy. This offers a rich vein of both quantitative and qualitative exploration. A case study of the health industry (Pagan et al 2009) found that creatives are making a range of contributions to the development and delivery of healthcare goods and services, the initial training and ongoing professionalism of doctors and nurses and the effective functioning of healthcare buildings. Creative activities within healthcare services are also undertaken by medical professionals and patients. Key functions that creative activities address are innovation and service delivery in information management and analysis and making complex information comprehensible or more useful, assisting communication and reducing psycho-social and distance-mediated barriers, and improving the efficiency and effectiveness of services.

These perspectives have been given additional conceptual depth with the notion of the culturisation of the economy, and a school of contemporary thought that seeks to radically collapse the relations between culture and the economy – called by shorthand 'cultural economy'. These fold cutting-edge economic sociology into the business and policy equation, and demand our attention.

The concept of the culturisation of the economy has been developed by Scott Lash and John Urry. This directly goes to our understanding of the creative economy by first, distinguishing between the 'industrialisation of culture' (Adorno and Horkheimer's original dystopian version of Cultural Industries) and the more contemporary 'culturisation' of industry. 'Ordinary manufacturing industry', Lash and Urry state, 'is becoming more and more like the production of culture' (1994, p. 123). Their 'culturisation' thesis sees not only standard cultural products and services growing as a proportion of the whole economy (as we have seen, that was the starting point for whole idea of Creative Industries) but also cultural ideas, processes and dispositions being recognised and adopted in non-cultural products and services like mobile phones, clothes, education (games-based learning), retail precincts (malls as entertainment venues), and so on. This is consistent with the emphasis we will place in a moment on creative employment in wider labour markets, as these economic domains need creatively-trained people to inform the culturisation process.

John Howkins pushes the claims further with his take on the management of creativity, or 'the economics of the imagination' (2001: chapter 4). Howkins talks of special personality traits of creative people, of creative entrepreneurship (which unlocks the wealth that lies in human capital), the post-employment job (in other words, the portfolio career), the just-in-time company and the temporary company, and the network office. In itemising these characteristics, he reinforces Lash and Urry's point that contemporary forms of corporate and enterprise organisation have derived from cultural or creative business practices. This has been observed as well by Ruth Towse (2010), who argues that typical features of artistic labour markets – casualisation, self-employment, the project-based company – are becoming more widespread in the economy as a whole. Chris Bilton (2010) provides a more sceptical, historical and cautious view, arguing from a management viewpoint that the 'heroic', disruptive model of creativity is being replaced with a 'structural' model in which creativity is eminently manageable. This runs the risk of minimising the unpredictability of creative processes.

Perhaps the outstanding example of the culturisation thesis for business practice is Hollywood. It consolidated by reproducing the dominant Fordist mode of production of its day (from the 1910s) but survived and thrived in the post-war era by pioneering particular post-fordist production modes – such as the 'package-unit system' (Bordwell et al 1985), the 'just-in-time' company (Howkins 2000) and complex contingency contracting (Caves 2000) – that have been widely adopted as prototypical and in turn produced major spillover effects for the wider economy. Such business model spillovers have carried through to the present and to everyday, including small business activity.

While Howkins devotes the greatest amount of his business analysis to creative industries actors and scenarios, his inclusion of science and technology and general software in the definition of creative industries (fifteen sectors rather than DCMS' original thirteen), and his emphasis on creativity as generic to all humans, makes his notion of the Creative Economy almost the equivalent of the knowledge-intensive economy. In that sense, his approach is close to Richard Florida's Creative Class.

The 'cultural economy' school of thought (see eg Pryke and du Gay 2002) shows that big concepts like culture, economy and the social are never stable categories – what counts for them changes over time and therefore their relationships must be established on a case basis, not assumed. But this is not simply another variant of constructivism, which seeks to reduce one large category (the economy) to another (culture, or the social). Such constructivism, say the editors of the field journal *Journal of Cultural Economy*, 'yields vanishingly little in the way of understanding how [economies] work' (Bennett et al 2008: 2). This school draws on a range of humanities and social science disciplines to analyse the history, emergence and operation of markets which are always and at once assemblages of social, cultural, and technical knowledge and practices.

4. Creative skills and cultural value: getting beyond the debate

It is widely acknowledged that the lack of consensus concerning the industrial framework for the study of creative and cultural activity since the advent of the UK Creative Industries policy has provided the occasion for a continuing dispute based on first principles of analysis; namely, whether researchers should focus on **'creativity' as a skills input**, where creative skills are defined by their capacity for innovation and, increasingly, intrinsic resistance to automation (Bakhshi *et al*., 2013; BCAR, 2019); or **culture as goods and services** that are publicly valued (Garnham 2005), and hence in need of government support.

This has led to a certain amount of shadow boxing in the literature. As shown in the work of Camilla Nelson and Ian Hunter, the two objects have distinct genealogies in the modern industrial era, (Nelson 2015, 2018; Hunter 1988), and their current entanglement finds its roots in 19th century Romantic aesthetics which was influenced as much by Kantian theories of the natural sublime with its capacity for creative destruction, as that of Arnoldian arguments for culture as civilising mission. As noted, they tend towards different styles of policy intervention concerning the State and its relation to the market, such as a neo-Schumpeterian innovation economics (eg Potts 2012), and orthodox cultural economics (eg Throsby 1999). Where the former looks to the State as an enabler of R&D in a leading industrial sector for innovation economies powered by forces of technological disruption, the latter posits the State as the key enabler of an essential public amenity for liberal social democracies that is characterised by market failure.

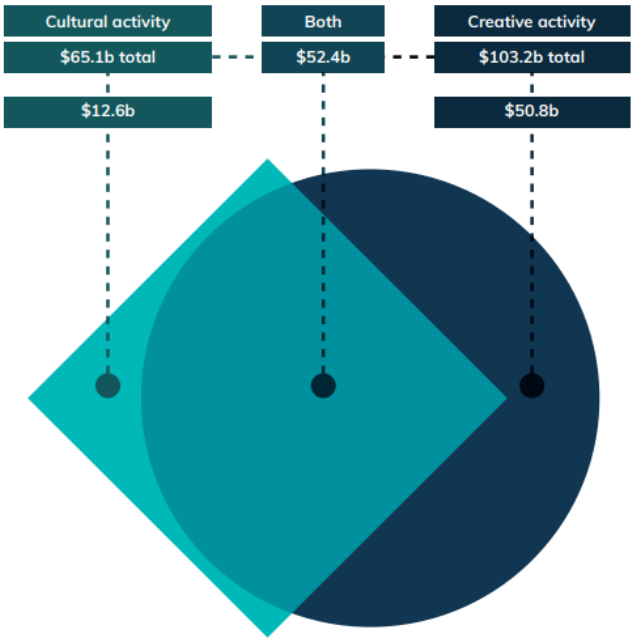
Now, the widely used phrase "Cultural and Creative Industries (CCIs)" signals less that some sort of détente has been achieved between these competing models, and more that the disagreement itself is increasingly unproductive. This is especially true for those government agencies, such as arts and culture departments, that are key stakeholders in sector research and for which such economic debates are not the primary object of policy, and such principled positions on the meaning of culture *vis a vis* 'the economic' present an unnecessary choice.

Such an agonistic relation is not new to cultural policy**. This ambivalence about the relationship of cultural value to various domains of industry activity, such as commercial television, video games or popular music, are fundamental to cultural policy, once posing problems for the inclusion of modern broadcasting technologies**, and continuing to provide conundrums for arts funding bodies, routinely by way of questions of value that become acute in relation to genres of activity that are worthy of the title 'cultural'.

Creative and cultural activity, services and production; the binary models of Australia's Creative and Cultural Industries

In 2014 the Australian Bureau of Statistics published the outcome of its experimental measures of the economic contribution of cultural and creative activity based on the 2008/09 financial year (ABS 2014). Its method has since been updated annually by the Bureau of Communications, Arts and Regional Research, which sits within the federal communications department. This satellite account visualises creative and cultural activity as two separate but overlapping sectors. It shows that, in 2018-19, while the CCIs as a whole contributed 6.0% of GDP (A$115.8b), the contribution of 'creative' activity was far greater, mainly due this segment including computer system design, and the wholesale, manufacture and retailing of clothing and footwear (see Figure 2).

Figure 2: Cultural and Creative Activity GDP – National Accounts Basis, 2018-99.



Source: BCARR 2021

The Venn diagram used to illustrate the data in the report shows creative and cultural activity as two overlapping sets; although the economic size of the occupations and industry codes that were coded to both was significant (A$52.4b), the economic footprint of their exclusive codes were also significant, if clearly different in scale; the contribution of discrete creative activity was over four times that of the cultural.

This **binary approach** to the satellite account was based on a 2013 discussion paper released by the ABS which reviewed a wide range of classifications used in international policy and research. In the absence of an international standard for cultural and creative satellite accounts, its primary purpose was to clarify statistical needs and provide a practical framework. Of signal importance was the proposal of a binary model that might enable separating out the creative and cultural as two distinct, if overlapping, sets of occupational codes. While clearly influenced by the Creative Industries agenda, the model owed as much if not more to a radical recasting of David Throsby's 'concentric circles' model in which a core of culture producing domains (the arts) were encapsulated by outer-rings of service, design and technology industries, and which proposed that the share of cultural and creative content decreased in the goods and services supplied as it moved away from the centre, with the most commercial domains, such as advertising, computer systems and design occupying the outermost orbit (ABS 2013, 8). Rather than Throsby's model that puts the traditional creative arts at the core, it places all sectors on the same economic plane as 'cultural and creative activity'.

Industries and occupations would be coded as:

> 'cultural' in that they communicate symbolic meaning (e.g. beliefs, values, traditions), require human creativity as an input, and potentially contain intellectual property; or are 'creative' in that human creativity is a significant and identifiable input (ABS 2013, 8).

A key reference here is to creativity as an 'input'. While creative activity is to be distinguished from the cultural in that it enables a non-cultural domain of creative activity, such as software, to be

included, at the same time it is a distinction that partly lies *within* the 'cultural', in so far as cultural activities are also defined by creativity. Despite the logical difficulties this raises – given the above sets**, *the creative appears as that which lacks the cultural, but not vice versa*** – the reference to human creativity as an input is an important conceptual clarification as regards economic metrics. We propose that 'the cultural' refers us to 'culturally valued goods and services' as industry/economic *outputs*, with an implied scale of value as to what is culturally most valued. Meanwhile, **'the creative' refers to a special type of human capital, 'creativity', potentially spread across all domains as economic input.**

The cultural and creative hence appear in an asymmetric relation, referring to distinct objects of measurement. While creativity may be concentrated in the cultural sector (its presence partly defines that sector, but it isn't a sufficient criterion), it also exceeds the sector, in so far as it is applied to other goods and services that are not necessarily culturally valued.

The ABS focus on skills input was consistent with the development in the UK of a revised model of the Creative Industries in which the CIs were to be identified by a workforce rather than industry sector through the methodology of mapping 'creative intensity'. This dynamic approach to modelling the sector through its human capital was developed in a NESTA report that proposed a five point definition of creative activity as the basis of identifying occupations that require creative skills, which could then be used to identify industries based on a threshold of occupations within that industry (Bakhshi, Freeman and Higgs 2013). The five points are 1) novel processes, 2) resistance to mechanisation, 3) non-uniform functions, 4) the integrity of the creative contribution across contexts, and 5) interpretation/creative judgment. (Bakhshi *et al*. 2013, 24). This model of creative skills was scrupulously 'non-cultural', in so far as it made no reference to culturally valued skills (whether in terms of aesthetic, heritage or any other model of cultural value), but rather focused on the role of human novelty and judgement in the creative process (Bakhshi *et al* 2013, 24-25). This was subsequently applied to the Australian case by QUT researchers Peter Higgs and Sasha Lennon (2014), from which another binary model of Australia's CCI was proposed that involved six segments allocated to 'creative services' and 'cultural production':

Figure 3. The Dynamic Model of Australia's CCI (adapted from Higgs and Lennon 2014, pp 11-12)

Segment	Subgroup	Description
Creative Services	Advertising and Marketing	"Creative services enterprises and creative entrepreneurs provide inputs that are central to businesses across many industries, from manufacturing and construction to retailing and entertainment"
	Architecture and Design	
	Software and digital content	
Cultural Production	Film, TV and Radio	"Arts and cultural assets as contributors to quality of life and community well-being and as important contributors to economic activity and development in their own right"
	Music, Visual and Performing Arts	
	Publishing	

Higgs and Lennon's model was far more empirical than the ABS coding of the cultural and creative, in so far as it was based on the NESTA criteria for identifying the creative skills content of occupations and used this to determine the intensity of creative activity within an industry. However, a further merit lay in its two segments of 'Creative Services' and 'Cultural Production',

within which six subgroups are proposed, and which are based on stakeholder domains. The six subgroups break down into a further 12 groupings around even more specific domains that cohere around established discrete sectors of activity and infrastructure, such as 'Radio', 'Performing Arts', 'Film and Television' and 'Advertising'.

Although not determined by the methodology, which as noted makes no claims to cultural value, this distinction between 'cultural production', 'creative services' and the proposed subsections makes the model amenable to stakeholders with no interest in the conceptual underpinnings of the classification. For instance, the subgroups of 'cultural production' neatly identify specific domains of public value where most government investment occurs through dedicated agencies and infrastructure, such as the Australia Council for the Arts, Screen Australia, the Australian Broadcasting Commission, Special Broadcasting Services, and the major cultural infrastructure of galleries, museums, and concert halls. With the notable exception of Design, it also well aligned with the Australian Standard Classification of Education, where the field of 'Creative Arts' matches occupations represented in the Cultural Production list. While there is no segment for what is sometimes described as the 'GLAM' sector (Galleries, Libraries and Museums), relevant occupations are in fact covered by the 'Publishing' (Archivists, Curators, and Librarians) and 'Visual Arts' (Conservators, and Gallery and Museum Curators) segments.

As such, the classification is quite capable of mapping a domain of activity that responds to a range of policy rationales. As with the ABS model, users may 'bracket out' segments that don't service their data needs in order to speak more directly to sector interests. This modularity is the result of two properties; the classification system is decomposable into segments that reflect the needs of diverse stakeholders (those in discrete industry segments), and networked via its use of authoritative classification systems maintained by collecting agencies (such as the Australian Bureau of Statistics) that provide a stream of data that is comparable across time.

In summary, we can say the success of the CCI model in Australia rests on a modular coding structure that accommodates two asymmetric economic concepts whose prevalence in the CCI literature has to date been unacknowledged; namely 'creativity' as human capital *economic input* ('innovation' as human skill or intellectual orientation towards activity), and 'the cultural' as *economic outputs* ('goods and services') that have publicly agreed value. These concepts appear asymmetric as a close reading of attempts by the Australian Bureau of Statistics to describe their relationship reveals that 'the creative' introduces a division that lies within the cultural as part of its definition, but also sits *without*, as an object that lies beyond the remit of cultural value. That the Creative Industries agenda is essentially a human capital argument has consequences for the sector that are barely acknowledged in policy debate.

Projecting a Creative Economy: *Creative Nation* (1994) and *The Australian Cultural Industry* (1990)

It is often claimed that CCI policy is an 'economistic' policy agenda that includes the digital economy, such as software, to achieve policy impact through inflating metrics for economic significance. In this section we debunk this claim by reference to the prehistory of CCI policy in Australia, which shows that, following the inclusion of broadcasting in the 1980s, cultural statistics have pursued the CCIs as a socio-economic project linked to skills development in the general population. Such an account is consistent with the traditional public purpose of cultural policy in most developed countries.

The notion that Australian cultural policy might leverage the value of creative skills via new technologies in order to benefit the broader economy was made explicit in the nation's first

framework for cultural statistics developed in the late 1980s. Known as *The Australian Cultural Industry*, this framework was developed by the Ministerial Statistical working party and was crucial for the preparation of the Creative Nation policy of the Keating government. A closer reading of these two documents reveals that this new object for cultural policy was not simply a case of 'economic rationalism', but also drew on 'culturalist' understandings of creativity as a valued way of life related to a new period of rapid technological change.

As is well known, 1994 *Creative Nation* policy of the late Keating government, Australia's first national cultural policy produced by the Department of Communication and the Arts (DCA 1994), anticipated the 1997 UK Creative Industries policy agendas in many key regards (Luckman 2012, 11). Its explicit references to the economic significance of the cultural sector, the importance of 'copyright industries', 'content industries', and signature emphasis on information technologies all spoke to a new governmental vision for what it described as 'Cultural Production in the Information Age':

> **Information technology, and all that it now offers, has crossed the technical rubicon into the realm of consciousness, to the realm of culture**. […] This is why the imperatives of the information age and some of its opportunities are addressed here in the context of creative and cultural policy'. ('Cultural Production in the Information Age', DCA 1994 np.)

It was for this reason the policy called for more **'interaction between traditional content producers and the software experts'** and **'creative and software communities'**, and saw it 'as imperative [..] that we accelerate the integration between them', announcing a series of funded national industry forums and the Departmental merger of the Arts and Communication portfolios. The turn to information technologies in *Creative Nation* did not signal an attempt to increase the economic size or importance of the cultural sector, but rather proposed to engineer a convergence in order to leverage the value of this sector for broader economic goals. This epochal description of information technology crossing 'the technical rubicon into the realm of consciousness, the realm of culture', was directly influenced by 1970s and 1980s new media theory, including a revived interest in work of Marshall McCluhan (1964), which had become influential in the cultural sector during the 1970s and 1980s. Popular works of postmodern culture, such as David Cronenberg's feature film *Videodrome* (1983) and Don DeLillo's novel *Whitenoise* (1984) (to name two prominent examples), provided contemporary visions of the profound shift in 'culture' and 'consciousness' felt to be underway, and a platform for the academic literature of new media theory.

Key research for *Creative Nation* was produced by the Statistical Advisory Group (SAG) of the Council of Cultural Ministers, which in 1990 published several key reports on what it called *The Australian Cultural Industry*. Composed of Federal and State level ministers with cultural portfolios, the Cultural Ministers Council was formed in 1984 and set to addressing the lack of any statistical framework in Australia for assessing the size or significance of the sector. The Ministerial Council established the Statistical Advisory Group (now known as the Statistical Working Group) which conducted stakeholder meetings and engaged a corporate consultancy to develop Australia's first statistical framework for national cultural and leisure data collection, which was released in 1989.

This framework, which has been maintained by the ABS ever since, enabled the first national economic account of the sector, showing that in the 1987/88 financial year, the 'Cultural Industry' contributed 7.6b to national GDP, more than Base Metals, and almost as much as Food, Beverages and Tobacco (CMCSAG 1990). The largest subsector of the Cultural Industry was Publishing and Printing. The classification was comprehensive for its time, including domains of popular culture, such as television and radio, as well established domains, such as film, adult education in the arts,

festivals, natural environment, the GLAM sector, performing and visual arts, publishing, heritage and community arts. While Sport and Recreation were included in the statistical framework, it was bracketed-out for the purpose of Cultural Industry accounts.

Apart from the classifications, which produced the impressive economic data that could be cited in *Creative Nation*, the Statistical Advisory Group attached a novel economic importance to the cultural sector, in so far as it might disseminate the value of innovation throughout the workforce:

> The cultural industry is itself important for the Australian economy, as shown in this [report]. Of greater importance to national economic survival is the existence of a flourishing creative community which can inject imaginative and innovative concepts into all aspects of the environment and the goods and services created for consumption in Australia and for export". (CMCSAG 1990; 'Rationale', p2)

> […] such outcomes happen through the transfer of artistic values of creativity, imagination and innovation into every aspect of social, political and economic life. There is an obvious impact on both the quality of life and economic performance of a nation whose managers, bureaucrats, tradespeople and workers embrace artistic values of creativity, innovation, and striving for excellence. (CMCSAG 1990; 'Rationale', p2)

This would appear to be the first coding frame for cultural statistics in Australia to explicitly cite the value of creativity and innovation for the general economy in its rationale. Such 'blue sky' economic thinking – informed by the canon of mid-twentieth century creativity-for-innovation management writing – reaches far beyond the classifications it presides over to announce a **rationale for cultural policy ('national economic survival') that is strikingly new**. The 'information revolution' discussed in *Creative Nation* needs to be read in the context of this new socio-economic mission for culture.

While the rationale is new, this remains a culturalist argument for creativity, in so far as it concerns community-specific *concepts* and *values* that need to be 'transferred' and 'injected' (today we would say 'embedded') in the general workforce. As I have argued elsewhere, **the enduring pedagogic mission of the Creative Industries is the promotion of this economic rationale for 'exemplary' ways of working: the innovation economy is a cultural project.** As such, it inherits a very traditional governmental project for culture in terms the formation of a modern liberal citizenry (Brook 2016).

In summary, we can say that the creative human capital agenda has always supplemented, rather than replaced, an agenda focused on publicly valued cultural goods and services.

5. CCI coding and Higher Education: problems in concordance tables

Higher Education remains a key catalyst for CCI research, however it is in Higher Education policy that we can see a key limit of creative industries policy to date. Given the centrality of creative skills to the creative industries agendas, it is notable that recent reviews and policy proposals for the reform of Higher Education funding in Australia and the UK have not engaged with the notion of a creative economy. **With its focus on the economic resilience of a sector made up of 'protean' workers who can reinvent themselves according to labour market needs (Bridgstock 2005), it should be the case that the CCI argument is well placed to make a case for the value of creative degrees**. While training for professional occupations has always been a key rationale for many academic fields, such as law and medicine, the 'employability' agenda has in recent years spread across all areas of HE study.

The major obstacle concerns the difficulties of developing concordance tables that might support HE reform. The coding frameworks used in Higher Education systems in developed nations are premised on a fundamental distinction between vocational and general (or 'liberal') forms of study, and hence code Broad Fields of Education on historically established domains of knowledge rather than industry or occupational divisions. **Higher education coding systems are not structured around industry segments, but around domains of educational activity whose historically long standing and highly evolved internal distinctions are not derived from labour market classifications. Although disparate, these domains of education tend to be further bifurcated between Science, Technologies, Engineering and Maths (STEM) and Humanities, Arts and Social Sciences (HASS) domains.**

This is understandable, as the stakeholders for Higher Education field of education frameworks exist in many sectors of the education system, from primary schools to postgraduate studies, and entertain a range of purposes, including preparation for further study and lifelong learning. Furthermore, the school system reproduces a population (students) whose intellectual development is routinely invested in educational fields that do not relate to the labour market, and who translate these interests into university enrolment decisions.

Nevertheless, this presents problems for CCI-oriented curriculum development within HE, as CCI graduate skills are effectively invisible within established frameworks. **Fields of study that are cognate to CCI fields of employment are highly disparate within most Higher Education frameworks, including those used in Australia and the UK, as well as the UNESCO ISCED13 coding system adopted by Eurostat.** According to the recent BCAR study already cited, the CCIs in Australia are located across no less than 6 of the 11 available Broad Fields of Education: 01 Natural and Physical Sciences, 02 Information Technology, 04 Architecture and building, 08 Management and Commerce, 09 Society and Culture, and 10 Creative Arts (BCAR 2019, p 24). **Similar problems with ISCED13 would emerge, as relevant codes would be found across 6 of the available 10 Broad Fields of Education: 02 Arts and Humanities, 03 Social Sciences, Journalism and Information, 04 Business Administration and Law, 05 Natural Sciences, Mathematics and Statistics, 06 Information and Communication Technologies, and 07 Engineering, Manufacturing and Construction.**

The problem isn't simply that creativity as economically valued input is spread too broadly, as a comparable translation of the UNESCO framework according to 'domains of cultural activity' (rather than economic sectors) would include further Broad Fields of Education that cover the intangible and environmental forms of cultural value in Health and Natural Science disciplines (UNESCO 2009, 24-30). **The key problem is that the skills that drive the CCIs are spread *across* the divisions of**

STEM and HASS, as vocational and general education. The skills relationship between technologies, business development and creative vocations, which has only recently become visible in CCI employment data, is yet to be reflected in HE Field of Education coding.

Secondly, although many areas of university education are articulated to professions through the mediation of professional industry bodies and accreditation systems, many fields of creative arts study are not conceptually aligned with occupational outcomes in the CCIs for the simple reason that the forms of training they provide are not structured according to the human capital needs of specific labour markets. While the mismatch between higher education and creative labour markets has been well documented, there has been little acknowledgement of why this might be the case, and, more importantly, what this tells us about the creative economy. Many **Fields of creative and cultural education, such as the visual and performing arts, are structured more like *domains of cognate activity*** (which we might variously describe as 'fields' (Bourdieu 1993), 'worlds' (Becker 1982), or 'social network markets' (Potts *et al* 2008)) rather than industrial sectors of employment or market activity. While the forms of professional cultural identity they inculcate overlap with employment and other economically significant phenomena (creative services, markets for content), they are formally independent of them in so far as they reflect socially recognised 'vocations' that are conceptually independent of commercial value. It is for this reason that most countries can measure high levels of both 'paid' and 'unpaid' cultural activity across all occupational groupings (not simply cultural professionals), and why there can be very high levels of both for the unemployed and those not in the labour force (eg students and retirees)

In terms of quantifying the direct links between study and employment, one solution to the problem of educational coding frames is to derive HE CCI subject codings from their prevalence in CCI occupations. The coding of fields of study as 'creative' on the basis of large numbers of creative employees holding these qualifications focuses research on the skills needs of the CCIs. This 'demand side' approach requires a robust definition of Creative Occupations, and the setting of a percentage threshold for determining the status of qualifications as creative. Definitions are based on empirically demonstrated labour market demand, rather than peer and industry-oriented models of nominating fields of study as creative according to perceptions of cognate skills, values. This model has been applied in Bureau of Communications and Arts Research to great effect in Australia (BCAR 2019).

Implications of studies like Creative skills for the future economy (BCAR 2019).

These studies can make a strong case for the value of creative qualifications, appropriately defined, for future workforce:

This is an extract from the Executive Summary of this report:

A common misconception is that these skills are predominantly found solely in 'creative' fields, such as the performing and visual arts. In fact, 9.5 per cent of those employed in Australia in 2016—around a million workers—held a 'creative' qualification as their highest level of qualification. The most prevalent of these qualifications included:

• communication and media studies, graphic and design studies, visual arts and crafts and performing arts

• management and commerce, particularly sales and marketing

• information technology, including computer science

• architecture and building.

This underestimates the true prevalence of these creative skills. This is because the data includes formal qualifications (including vocational and non-award qualifications) not self-taught skills and 'learning by doing', which are essential to creators and creative industries.

Creative skills already have a substantial influence on the economy. Creative skills:

• Are critical to industries that provide inputs to produce a wide range of goods and services. In 2014–15, Australian businesses relied on around $87 billion worth of creative industries inputs.

• Have been integral to fast-growing industries over the past decade. Around a quarter of those employed in Information, Media and Telecommunications, and a fifth of those employed in Professional, Scientific and Technical services hold a formal qualification in a creative skill.

• Are significant in some innovation-intensive industries. Of the top five most innovation-active industries, between 10 and 28 per cent of employees hold a creative qualification.

• Support Australia's participation in the global economy. The share of exports in what Australia produces that can be attributed to complete or partially creative industries is 4.5 per cent.

• Will be vital to future employment growth. Around one in seven workers currently in the industries projected to grow the fastest over the next five years holds a creative qualification.

As the trend to automation continues, so does the likelihood that expanding industries will rely on creative skills. Understanding their role and influence

Similar findings, based on very different research methods, can be seen in NESTA's study Creativity versus Robots https://www.nesta.org.uk/report/creativity-vs-robots/.

6. Creative employment in Iceland

This section presents time series data on creative employment on Iceland, sourced from Statistics Iceland's Labour Force Survey and Register Based Employment collections (Statistics Iceland 2022a and 2022b), in accordance with the dynamic model of the CCIs. It also compares rates of growth in creative employment in Iceland with two other countries that have adopted the dynamic mapping approach, Australia and the UK.

The analysis here demonstrates that creative employment in Iceland is growing faster than the average for the rest of the workforce. Employment growth is strongest in the more commercially-focused creative services sectors of software and digital content and architecture and design

- Employment in the creative economy (including the creative industries and in creative roles in other industries) represented 14.8 per cent of the Icelandic workforce in 2021, an increase of nearly 50 per cent from 11.2 per cent in 2003.
- Since the early 2000s, creative employment has grown by as much as three times the rate of the rest of the Icelandic workforce
- On average, the creative industries provide employment to 1.5 times as many people in support roles as core creative roles
- More people in creative occupations are employed outside the creative industries than directly within the creative industries themselves.
- Nearly two thirds of jobs in the creative industries are in creative services sectors, with the remainder in cultural production
- Employment in creative services industries is growing at more than twice the rate of the total Iceland workforce, while employment in cultural production is falling
- Employment growth is strongest in the more commercially-focussed creative services sectors of software and digital content and architecture and design, while the most significant falls in employment are in publishing

Definitions

The data presented in this section is aggregated according to the dynamic model of the CCIs (outlined in Figure 3) and the creative trident (Figure 1). Following the dynamic model approach, the CCIs can be grouped into seven sectors:

- the mostly business-to-business creative services sectors (1) *advertising and marketing*, (2) *architecture and design*, (3) *software and digital content*, and
- the mostly business-to-consumer cultural production sectors (4) *film, TV and radio*, (5) *music and performing arts*, (6) *publishing* and (7) *visual arts*

The creative trident is a useful way of presenting creative industry and creative occupation data that highlights different categories of creative workers:

- *Specialist* creatives work in creative occupations within the creative industries
- *Support* professionals work in support roles (not defined as creative occupations) within the creative industries
- *Embedded* creatives work in creative occupations in industries other than creative industries

Statistics Iceland does not routinely publish employment data for the CCIs. Rather, it publishes annual cultural employment estimates in line with the definition adopted by the Eurostat Guide (2018). This is based on the definition of 'cultural employment' in the ESSnet Final Report (2012, pp. 143-144):

> TF3 defines a cultural occupation in this way: Cultural occupations include occupations involved in the creative and artistic economic cycle i.e. creation, production, dissemination and trade, preservation, education, management and regulation, as well as heritage collection and preservation. These occupations involve tasks and duties undertaken:
>
> a) for the purpose of artistic expression (e.g. visual arts, performing arts, audiovisual arts etc.);
>
> b) to generate, develop, preserve, reflect cultural meaning;
>
> c) to create, produce or disseminate cultural goods and services, generally protected by copyright.

The Eurostat cultural employment definition excludes the most dynamic part of the broader creative industries—the creation and publishing of intellectual property in the software development and digital content sector. It also includes non-creative parts of the cultural value chain, including retail and wholesale, distribution and exhibition and manufacturing. In this analysis, the Eurostat definitions are adapted to provide a indication of the scale and growth of Iceland's creative economy more closely aligned with the dynamic model approach, through (1) constructing annual creative trident tables using a tailored output from the Labour Force Survey (Statistics Iceland 2022c) and (2) extending cultural industry register based employment series (Statistics Iceland 2022b) to include software and digital content from the Employment by Economic Activity series (Statistics Iceland 2022d). (Note that Hagstofa has also expanded its definition of cultural employment to include software and digital content and the sale/retail of cultural items.)

Creative employment by industry and occupation—the creative trident

Statistics Iceland's existing Cultural Employment by Cultural Sector (Statistics Iceland 2022a) is set up to allow users to generate *cultural trident* tables for each year from 2003 to 2021. In order to reveal trends in employment across the full breadth of the CCIs, Statistics Iceland provided a tailored time series detailing employment in creative and other industries, and creative and other occupations, enabling construction of a series of creative trident tables for the full CCIs for the full time series of 2003 to 2021. The tailored data set provided by Statistics Iceland approximates total employment for the requested creative ISIC and ISCO categories for the number of individuals (in main or second job), based on yearly figures from the Icelandic Labour Force Survey, for people aged 16 to 74 years with a registered legal domicile in Iceland (the target population of the survey).

It is important to note that while the time series presented here is highly indicative of creative employment in Iceland, it is not necessarily definitive. There are two reasons for this, with both providing scope for future work:

1. The creative industries and creative occupations included in this analysis are based on the Australian and New Zealand industry and occupation classifications identified in the dynamic modelling by Higgs and Lennon (2014). As these classifications are unique, we provided Statistics Iceland with the closest-matching equivalent ISIC and ISCO codes.
2. The tailored creative employment time series is an approximation as based on the Icelandic Labour Force Survey, Statistics Iceland delivers ISCO08 categorizations to Eurostat on the second

digit, but the actual coding is based on ÍSTARF95 (which in turn is based on ISCO88). Thus, Statistics Iceland needed to use a simple cross-classification between the three digit ÍSTARF95 and the three digit ISCO08 – but in order for this to be perfect, a recoding of the dataset would have been necessary.

Creative employment in 2021—more than half of creative jobs are outside the creative industries

In 2021, total creative employment accounted for 28,977 people, 14.8 per cent of the total workforce (Figure 4). Total creative employment is evenly spread across the creative industries themselves, with 14,412 people employed directly, and 14,565 creatives working in other industries.

Within the creative industries, there are nearly one-and-half times more support workers than specialists, with 5,944 people employed in *specialist* creative roles and 8,468 in *support* roles.

There are more people working in creative roles outside the creative industries than directly within the creative industries, with 14,565 *embedded* in creative occupations in other industries such as finance, government, education and tourism.

Figure 4 Employment by industry and occupation and intensity (share) for creative and other sectors, 2021

Total creative employment: 28,977 **Total creative intensity: 14.8%**	**Creative industries**	**Other industries**	**Total**
Creative occupations	5,944 3.0%	14,565 7.4%	20,509 10.5%
Other occupations	8,468 4.3%	166,965 85.2%	175,433 89.5%
Total	14,412 7.4%	181,530 92.6%	195,942 100.0%

Source: Statistics Iceland (2022c)

Creative employment is growing at more than twice the rate of the rest of the Icelandic workforce

As a share of the Icelandic workforce, creative employment has increased, from 17,114 people or 11.2 per cent of the total workforce in 2003 to 28,977 people or 14.8 per cent in 2021 (Figure 5). While employment in all creative role types (specialist, support, embedded) has increased, the most significant increases have occurred in creative occupations embedded in other industries. Embedded creatives more than doubled between 2003 and 2021, from 6,878 people or 40.1 per cent of total creative employment to 14,565 or 50.3 per cent of total creative employment (Figure 6).

Note that growth rates through the time series are not consistent. As annual employment estimates are available, here shorter time periods are used to give a clearer sense of how growth as changed over time. 2011-2012 is used as a transition period as it appears to be a low point in creative employment. The time period 2017-2021, the most recent five years, allows comparison of most recent growth patterns. The shorter time series for 2012-2021 and 2017-2021 allow for direct comparisons with the data explored in the next section.

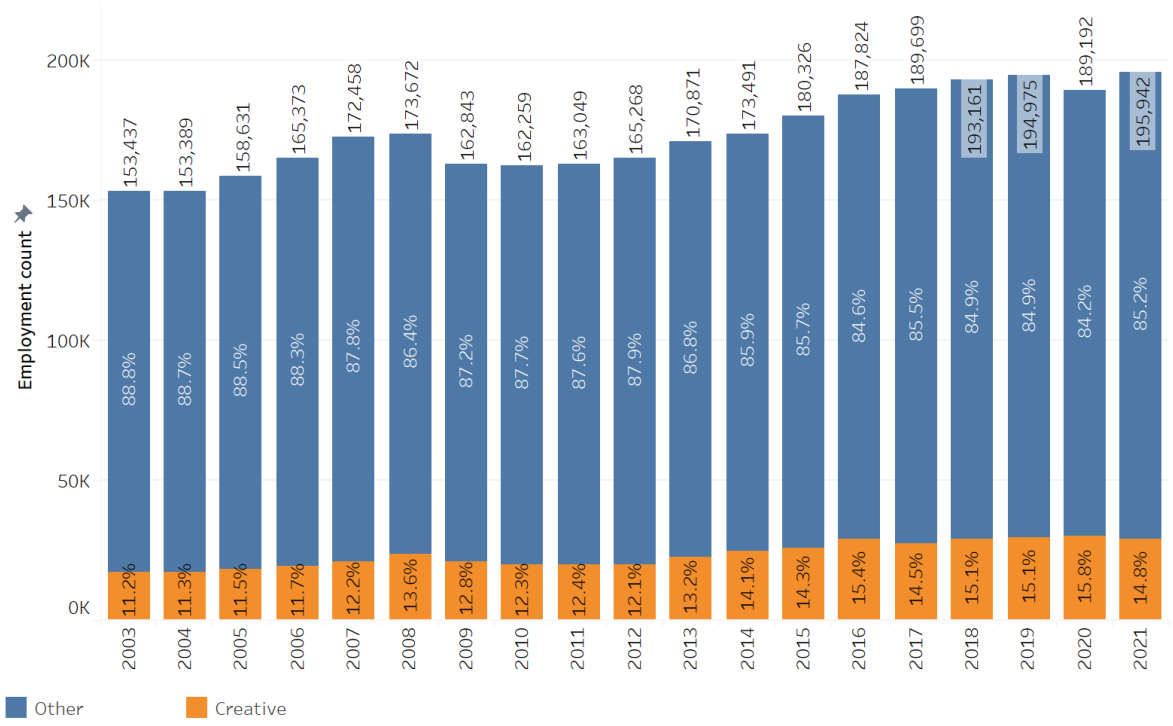
Looking at growth rates, between 2003 and 2021, creative employment grew at a compound average rate of 3.2 per cent per annum—more than twice the rate of growth in employment in other sectors (from 2012 to 2021 at 4.0 per cent per annum, including growth in employment in

specialist roles of 4.5 per cent and in embedded roles of 5.3 per cent. Growth in support roles was closer to growth in other sectors, at a compound annual average of 1.8 per cent.

During the most recent five years, a different pattern is revealed as employment growth slows considerably. Between 2017 and 2021, total creative employment grew by a compound annual average of 1.4 per cent, while growth in the rest of the workforce fell to 0.3 per cent. Looking at the different types of creative roles, only embedded creative employment increased, by a compound annual average of 3.1 per cent, while specialist and support roles fell, by 0.1 per cent and 0.5 per cent respectively (Figure 7).

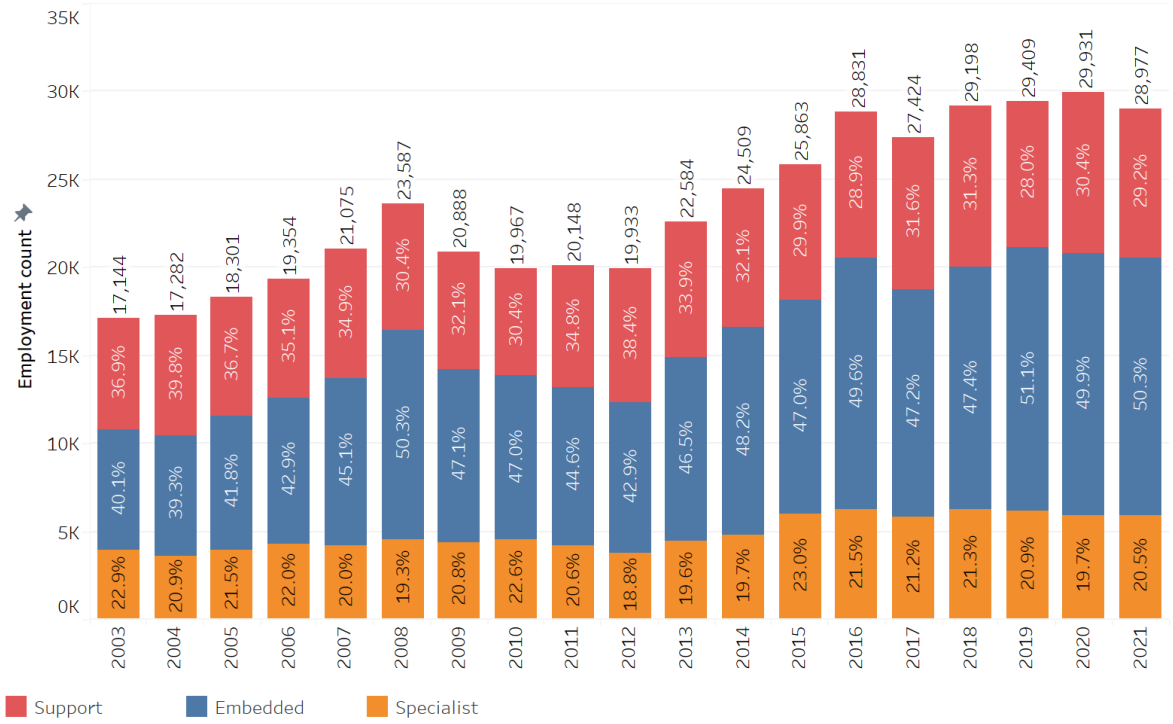
Figure 7). Average growth in creative employment was highest over the ten years

Figure 5 Creative and other employment in Iceland



Source: Statistics Iceland (2022c)

Figure 6 Creative specialist, support and embedded employment in Iceland



Source: Statistics Iceland (2022c)

from 2012 to 2021 at 4.0 per cent per annum, including growth in employment in specialist roles of 4.5 per cent and in embedded roles of 5.3 per cent. Growth in support roles was closer to growth in other sectors, at a compound annual average of 1.8 per cent.

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Figure 7 Compound average annual growth for creative and other roles

	2003-2021	**2003-2011**	**2012-2021**	**2017-2021**
Specialist roles	3.0%	1.9%	4.5%	-0.1%
Support roles	1.8%	0.1%	1.8%	-0.5%
Embedded roles	4.3%	4.8%	5.3%	3.1%
Total creative employment	3.2%	2.6%	4.0%	1.4%
Other employment	1.0%	0.6%	1.5%	0.3%

Source: Statistics Iceland (2022c)

Creative employment by industry

The data presented in this section is taken from Statistics Iceland's *Register Based Employment in Cultural Industries, 2008-2021* (Statistics Iceland 2022b). Unlike the employment count data

available from Labour Force Survey, the Register Based Employment data is available disaggregated by industry, which allows exploration of employment patterns in different CCI sectors. The Register Based Employment data does not allow of disaggregation by occupation, so cannot be used to examine embedded creative employment in other industries.

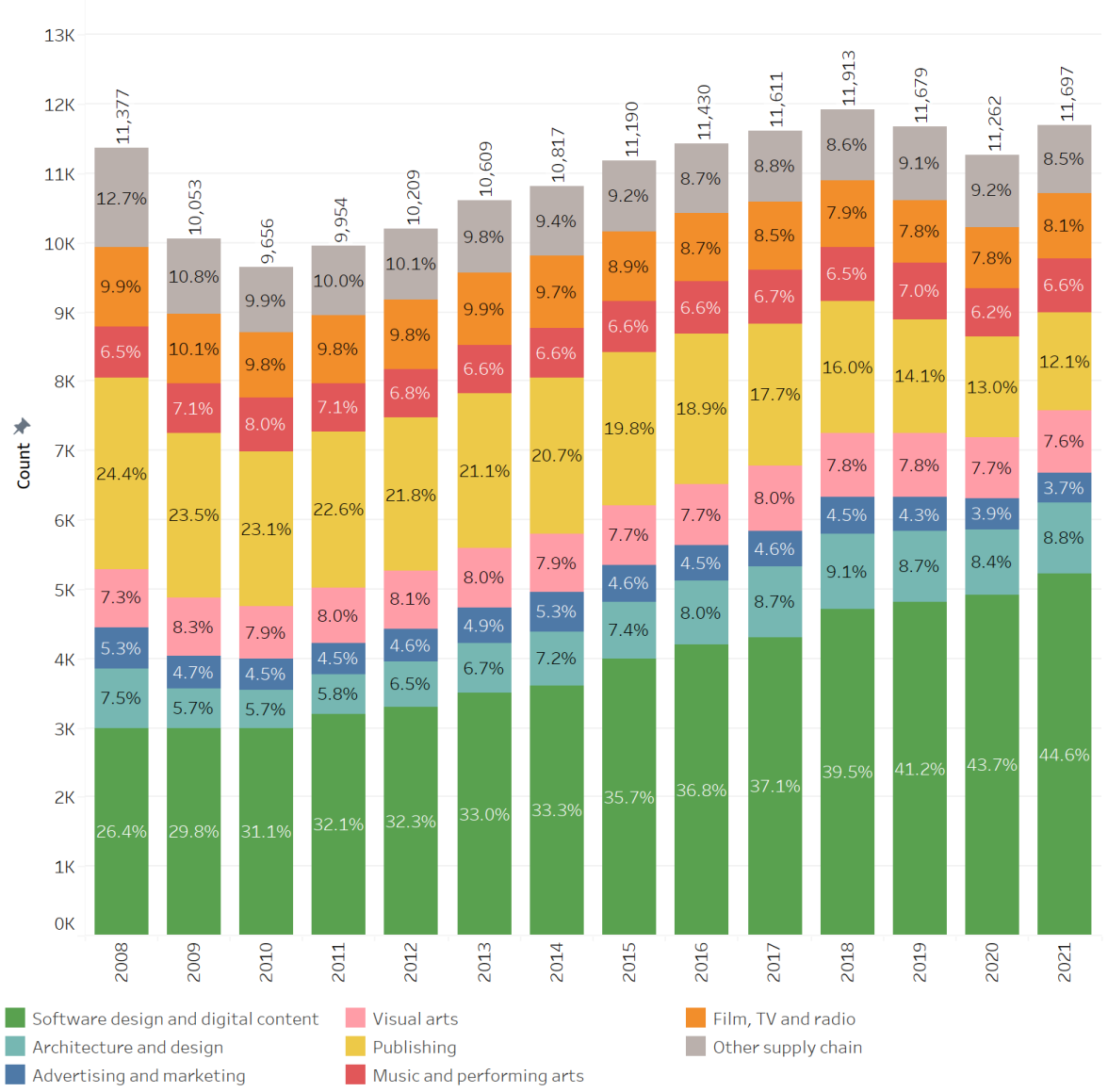
To extend the analysis to include digital content design and development, the analysis here includes the industry category 'Computer programming, consultancy and related activities; information service activities', from the Statistics Iceland time series *Number of employed persons, jobs and hours worked by economic activity 1991-2021* (Statistics Iceland 2022d). ***This most likely results in an overestimation of employment in software design***. Until we have more granular data breaking down the 'Computer programming, consultancy and related activities; information service activities' category, it is not possible to produce a more exact estimate of the creative employment component of Software design and digital content. Nevertheless, its inclusion provides a strong indication of the scale and growth of the sector that is otherwise not visible in the culture-only industry data. Another modification here is to separate employment in the parts of the supply chains that support CCIs, but that are not creative activities in themselves.

It should also be noted that the Register Based Employment series only extends back to 2008, until the Labour Force Survey, which goes back to 2003. As with the Register Based Data, here grow rates are calculated for the periods 2012 to 2021 and the most recent five years from 2017 to 2021 as well as for the full time series. Caution should be used when comparing growth rates for the full time series.

More than half of creative industry employment is in creative services—and it is growing faster whiles cultural production employment contracts

Overall, total creative industry employment in Figure 8 shows a similar trajectory to total creative employment Figure 6, albeit without benefiting from the relatively high growth in embedded creative employment. Looking at the creative services and cultural production sectors separately, however, shows very different stories.

Employment in creative services industries grew by more than twice the rate of the total workforce between 2008 and 2021 and 2012 and 2021. Between 2017 and 2021, creative services industry employment grew by a compound annual average rate of 2.6 per cent, while total workforce employment fell by 0.8 per cent per annum (Figure 8 Employment by creative industry sector



Sources: Statistics Iceland (2022b and 2022d)

following years. In contrast, while employment in the architecture and design industry grew by a compound annual average of 5.0 per cent between 2012 and 2021, this growth was focussed in the years following the GFC, as architecture and design fell by an annual average of 1.1 per cent between 2017 and 2021. Unlike the other creative services industries, advertising and marketing fell throughout the time series, most rapidly following the GFC, at an annual average of 9.7 per cent between 2008 and 2011, and then again by 5.9 per cent per annum between 2017 and 2021.

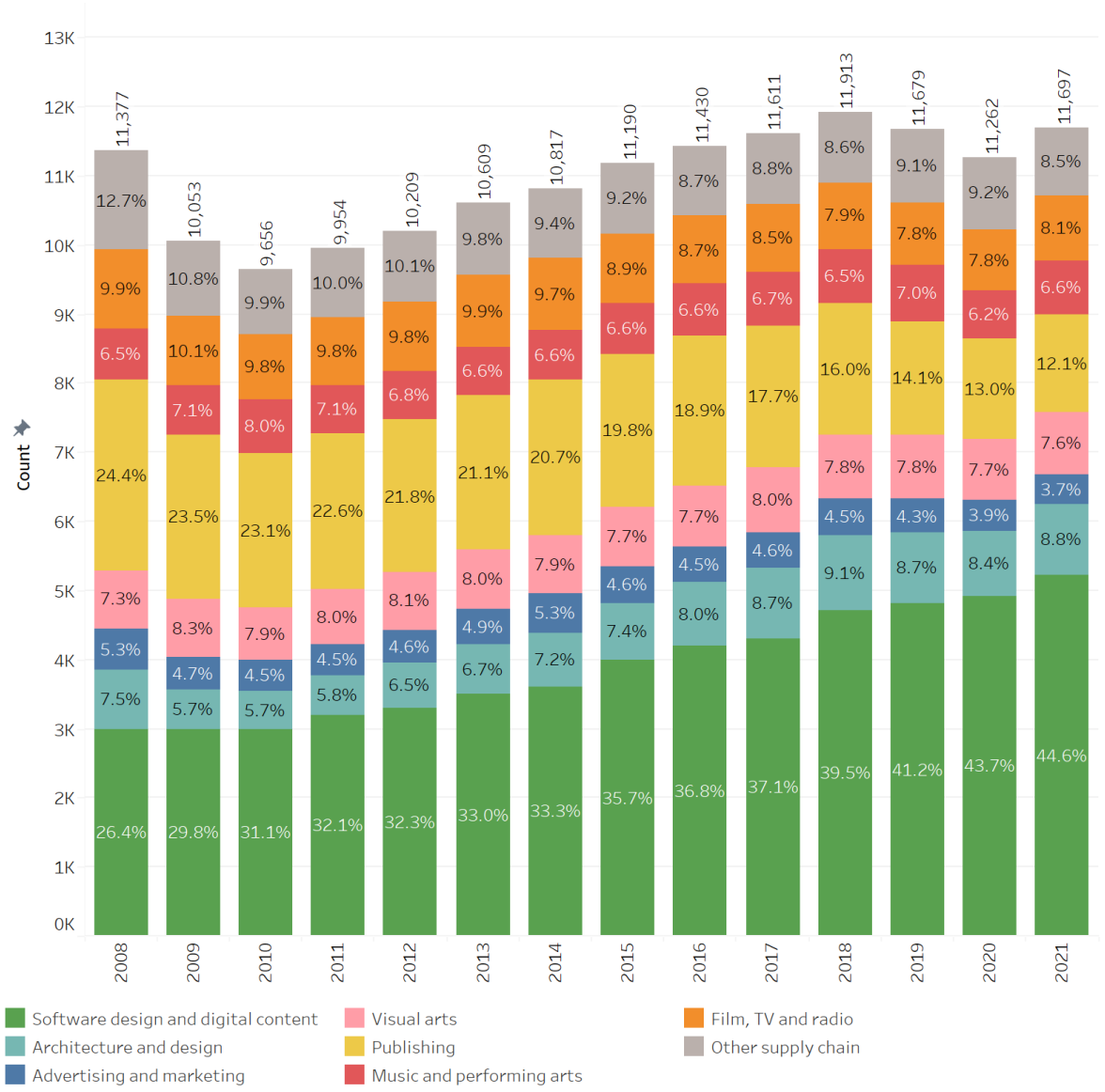
In contrast, *cultural production industry* employment has been in continual decline since the beginning of this time series, falling by an compound average of 1.7 per cent per annum, and with falls peaking in the years surrounding the GFC at 4.9 per cent per annum and the five years leading to 2021 at 4.8 per cent per annum. The largest falls in employment were in the Publishing sector,

which in 2008 accounted for 24.2 per cent of creative industry employment and by 2021 had more than halved to 12.1 per cent. Film TV and radio appears to have slowed job losses during the time series, from a compound annual average of 5.1 per cent between 2008 and 2011 to an average loss of 1.5 per cent between 2017 and 2021. Music and peforming arts and visual arts, on the other hand, appear to be relatively stable, with small gains over the entirity of the time series and fluctations in the years between.

Note that this time series of Register Based Employment counts does not include embedded employment. Much of the changes that can be seen here and in the Labour Force Survey data—overall creative employment growth, decreases in cultural production industry employment and increases in creative occupations embedded in other industries—can be interpreted as evidence of the value placed on creative skills as non-creative industries increasingly bring creative skills in-house.

Figure 9). This growth has been sustained through the expansion of the software design and digital content industries, which in terms of employment grew continuously in the data explored here, both through the global financial crisis as well through the

Figure 8 Employment by creative industry sector



Sources: Statistics Iceland (2022b and 2022d)

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Figure 9 Compound average annual growth for creative and other industry sectors

	2008-2021	2008-2011	2012-2021	2017-2021
Other supply chain	-1.0%	-12.4%	-0.1%	-0.6%
Film, TV and radio	-1.1%	-5.1%	-1.6%	-1.5%
Music and performing arts	0.6%	-0.7%	1.1%	-1.2%
Publishing	-4.1%	-6.9%	-5.5%	-10.0%
Visual arts	1.1%	-2.0%	0.9%	-1.5%
Total cultural production	-1.7%	-4.9%	-2.3%	-4.8%
Advertising and marketing	-0.4%	-9.7%	-1.5%	-5.9%
Architecture and design	4.6%	-12.0%	5.0%	-1.1%
Software design and digital content	4.7%	1.9%	5.1%	4.3%
Total creative services	4.2%	-1.7%	4.5%	2.6%
Total workforce	1.6%	-3.0%	2.0%	-0.8%

Sources: Statistics Iceland (2022b and 2022d)

International comparisons

While it would be ideal to provide comparisons here with other Nordic countries, this is a benchmarking exercise that is best left for future research and that will require careful selection of relevant detailed industry codes. Using Eurostat cultural employment data, as discussed above, underestimates creative employment. While this section presents creative trident employment counts that accord with the dynamic mapping and provide a reasonably accurate view of overall creative employment in Iceland, the Register Based Employment data for creative industries, most likely overestimates creative employment.

To enable some comparison with creative employment trends in other counties, employment count data is presented here for Australia and the UK. Both countries base their definitions of creative industries and creative employment on the dynamic mapping method, which means that the definitions they have adopted to observe the CCIs are very similar. There are however some differences between these data sources that should be noted:

- Australian creative trident employment count data is sourced from the Australian Census. The Census is conducted every five years: 2006, 2011, 2016 and 2021, and captures demographic and other information from people in all Australian households. Employment estimates only capture first jobs. 2021 data will be available from 12 October 2022.

- UK creative employment count data are published annually by the UK Department of Communications, Media and Sport, with the available time series running from 2011 to 2021. Employment estimates include the first and second jobs in creative industries sectors. (DCMS total workforce estimates are only available from 2011 to 2018).

Comparing Australian creative trident data (Figure 10) with the Icelandic creative trident and growth rates (Figure 4 and Figure 7) shows that:

- Creative intensity (creative employment as a proportion of the total workforce) is nearly three times higher in Iceland than Australia, 14.8 per cent in 2021 in Iceland compared with 5.9 per cent in 2021 in Australia.
- Growth in total creative employment is similar across the two countries, and perhaps higher in Iceland.
- These points need to interpreted in context—Australia is a larger country, with higher total creative employment. It's largest industries—financial services, mining and construction—are each around twice the size of Australia's CCIs.

Comparing UK creative industry employment data (Figure 11) with the Iceland creative industry Registry Based Employment data (Figure 9):

- Between 2017 and 2021, UK creative industry employment grew by a compound average annual rate of 3.3 per cent, higher than the comparable rates for Iceland of 2.6 per cent for creative services industries and -4.8 per cent for cultural production industries.
- Share, which is only available for the UK up to 2018, appears to be higher in Iceland than in the UK— in 2018, total creative industry employment as a proportion of the total workforce was 8.0 per cent in Iceland and 6.2 per cent in the UK.
- Again, context here is important. The UK is a significantly larger economy than either Australia or Iceland, with well-established and nurtured CCI sectors. CCI growth in the UK occurs off a large and stable employment base.

Figure 10 Australian creative trident employment (includes specialist, support and embedded creatives)

Year	Creative industries employment ('000)	Workforce (m)	Share		Compound average growth	
2006	461.5	8.7	5.1%		2006-2016	2.4%
2011	526.3	10.1	5.3%		2011-2016	2.6%
2016	593.8	10.7	5.5%		2016-2021	3.4%
2021	714.6	12.0	5.9%			

Source: Australian Bureau of Statistics, Australian Census, Stuart Cunningham and Marion McCutcheon 2018, Factsheet 1 Creative Employment Overview, Digital Media Research Centre, Queensland University of Technology, Brisbane.

Figure 11 UK creative industry employment (excludes embedded creatives)

Year	Creative industries employment (m)	All workforce (m)	Share
2011	1,562	30,129	5.2%
2012	1,691	30,334	5.6%
2013	1,713	30,760	5.6%
2014	1,808	31,410	5.8%
2015	1,866	32,037	5.8%
2016	1,958	32,422	6.0%
2017	2,008	32,921	6.1%
2018	2,040	33,170	6.2%
2019	2,100	n.a.	n.a.
2020	2,190	n.a.	n.a.
2021	2,290	n.a.	n.a.

Compound average growth	
2011-2021	3.5%
2017-2021	3.3%

Source: DCMS Sectors Economic Estimates

Scope for future work on mapping creative employment in Iceland

The analysis presented in this section is in effect a scoping exercise—an examination of what is possible to observe using currently available data resources. It has revealed a number of pathways for work to establish more accurate estimates of creative employment in Iceland:

- Apply the dynamic mapping method to Labour Force Survey to systematically identify the full scope of Iceland's CCIs.
- Recode the Labour Force Survey to create more accurate and more detailed creative trident tables
- Disaggregate the Register Based Employment estimates for 'Computer programming, consultancy and related activities; information service activities' into its component sections to establish a more accurate employment count for software and digital design.

These form part of the more comprehensive set of data-focussed research questions outlined in the next section.

7. Data focussed research questions

This section presents a set of economic and other quantitative research questions that have been successfully undertaken or are being planned to be undertaken by the Australian authors of this report. It includes a short description of each research question, the kinds of data and sources that have been used in analysis, and suggestions for what might be possible in Iceland

This section has been shared with Anton Örn Karlsson, Head of Unit, Labour market, living conditions and demography and María Kristín Gylfadóttir from Bifrost University and incorporates their feedback.

DATA FOCUSSED RESEARCH QUESTIONS

<table>
<tr><th>Research issue</th><th>What we have done/what has been done</th><th>What has/what could Iceland do</th></tr>
<tr>
<td>How to define cultural industries/creative industries/creative employment</td>
<td>
Dynamic mapping
A rigorous and transparent method for classifying creative industry and occupations using standard classification schema.
Overview and history of dynamic mapping
Hasan Bakhshi, Alan Freeman and Peter Higgs 2013, A Dynamic Mapping of the UK's Creative Industries, 5 Nov
Peter Higgs and Sasha Lennon 2014, Australian Creative Employment in 2011 - applying the NESTA Dynamic Mapping definition methodology to Australian Classifications
nesta 2015, Creativity vs Robots, 17 April.
nesta 2015, A primer on measuring the creative economy, 16 Oct.

Trident I
A useful way of presenting creative industry and creative occupation data that highlights different categories of creative workers:

Specialists – people employed in creative occupations in creative industries
Embedded creatives – people employed in creative occupations in other industries
Support workers – people employed in other occupations in creative industries
Total creative employment – the sum of specialists, embedded creatives and support workers

Australian creative employment trident 1, 2016 (persons)
<table>
<tr><td>593,830
Total creative</td><td>Creative industries</td><td>Other industries</td><td>Total</td></tr>
<tr><td rowspan="2">Creative occupations</td><td>162,160</td><td>185,020</td><td>347,190</td></tr>
<tr><td>Specialist</td><td>Embedded</td><td></td></tr>
<tr><td rowspan="2">Other occupations</td><td>246,650</td><td>10,090,000</td><td>10,336,650</td></tr>
<tr><td>Support</td><td>Other</td><td></td></tr>
<tr><td rowspan="2">Total</td><td>408,810</td><td>10,275,030</td><td>10,683,840</td></tr>
<tr><td></td><td></td><td>Workforce</td></tr>
</table>
Source: Stuart Cunningham and Marion McCutcheon 2018, The Creative Economy in Australia
</td>
<td>
Apply the dynamic mapping method to relevant industry and occupation classification systems (eg. NACE, ISCO-08) to produce lists of creative industries and creative occupations.

Occupation codes are available for employees and for some self-employed. Currently, the main sources are the labour force survey and the wage survey—these may not capture detail for occupations with low counts. Occupational code data for the labour market as a whole will be available in the future.
Industry codes are only available for the main industry of each enterprise.

Apply creative industry and occupation definitions to available census and labour force data to produce trident analyses of employment counts, creative intensity (share of the total workforce) and mean incomes – and growth rates of each.

Note that the census only captures main jobs. It does not record additional jobs or volunteering
Census data is not likely to be available before it is delivered to Eurostat in 2024.

</td>
</tr>
</table>

<table>
<tr><th>Research issue</th><th>What we have done/what has been done</th><th>What has/what could Iceland do</th></tr>
<tr><td>The CCIs is a much larger industry sector and creative employment much larger than traditional arts and culture</td><td>Creative and cultural satellite accounts
Satellite accounts measure the economic contribution of cultural and creative activity in the economy.
ABS 2013, 5271.0.55.001 - Discussion Paper: Cultural and Creative Activity Satellite Accounts, Australia, 14 June.
ABS 2013, 5271.0.55.002 - Information Paper: Cultural and Creative Activity Satellite Accounts, Australia, 9 Dec.
ABS 2014, 5271.0 - Australian National Accounts: Cultural and Creative Activity Satellite Accounts, Experimental, 2008-09, 10 Feb.
Bureau of Communications, Arts and Regional Research 2021, The economic value of cultural and creative activity, 16 Sept.
DCMS 2021, DCMS Sector Economic Estimates Methodology, Guidance, 26 August.</td><td>Work with Statistics Iceland national accounts team to develop a method for generating creative and cultural satellite accounts. Subsequently produce satellite accounts as a regular output.
• Request input from the National Accounts team. It would be good to have a timeline/what hinders for briefing the Minister.</td></tr>
<tr><td>How to account for differences across the CCIs</td><td>Trident II
This version of the trident table differentiates between the mostly business-to-business creative services sectors (advertising and marketing, architecture and design, and software and digital content) and the mostly business-to-consumer cultural production sectors (film, TV and radio, music and performing arts, publishing and (7) visual arts).

Australian creative employment trident 1, 2016 (persons)
<table>
<tr><td colspan="2" rowspan="2">593,830
Total creative</td><td colspan="2">Creative industries</td><td rowspan="2">Other Industries</td><td rowspan="2">Total</td></tr>
<tr><td>Creative services</td><td>Cultural production</td></tr>
<tr><td rowspan="3">Creative occupations</td><td>Creative Services</td><td>95,640</td><td>9,220</td><td>153,960</td><td>258,820</td></tr>
<tr><td>Cultural Production</td><td>5,510</td><td>51,800</td><td>31,060</td><td>88,370</td></tr>
<tr><td></td><td colspan="2">Specialist</td><td>Embedded</td><td></td></tr>
<tr><td colspan="2" rowspan="2">Other occupations</td><td>183,970</td><td>62,680</td><td>10,090,000</td><td>10,336,650</td></tr>
<tr><td colspan="2">Support</td><td>Other</td><td></td></tr>
<tr><td colspan="2">Total</td><td>285,120</td><td>123,690</td><td>10,275,030</td><td>10,683,840</td></tr>
<tr><td colspan="4"></td><td></td><td>Workforce</td></tr>
</table>
Source: Stuart Cunningham and Marion McCutcheon 2018, The Creative Economy in Australia: Cultural production, creative services and income

Note – in Australia, the data source used for Trident analysis is the Census of Population and Housing, which is conducted every five years.</td><td>Apply creative industry and occupation definitions to available census and labour force data to produce trident analyses of employment counts, creative intensity (share of the total workforce) and mean incomes – and growth rates of each.
• Statistics Iceland has indicated it can undertake this work, perhaps interpolating missing data using models or other innovative estimation methods</td></tr>
</table>

Research issue	What we have done/what has been done	What has/what could Iceland do
How to account for the role of creative activity	**Business data** Interrogation of official and open data to interrogate the role of the cultural and creative industries in economic ecosystems. Nesta 2018, Creative Nation, 8 Feb. In Australia, we are planning to use the Federal Government's Business Longitudinal Analysis Data Environment (BLADE), which combines tax, trade and intellectual property data for two related analyses. First, in combination with Census data, it will be used to estimate the economic contribution of the CCIs. This will be achieved by proportionally allocating the value added data available in BLADE according to Census employment data using creative ANZSIC, ANZSCO and ANZCED classifications. **Analysing value added in this manner is innovative and will provide a deeper understanding of how creative skills and occupations contribute to economic growth and their relation to education and training needs, thereby contributing to debates about job readiness**. The economic contribution analysis will be presented at industry wide aggregate level as well as for each of the six sub sectors, including a broad analysis of the CCI's backward and forward links in supply chains and links to 'allied' or 'complementary' industries. **Allied industries are critical enablers of the creative industries, driving demand through wide infrastructure ecologies that operate as market organisers within and across regions and define possible pathways to post-pandemic diversification and growth**. Second, we are also planning to interrogate BLADE to determine the extent of creative work across the workforce that is concealed by primary employment statistics. Creative employment is characterized by multiple job holding and portfolio careers, which makes much creative employment activity invisible in the Census and in Labour Force surveys. We will identify the non-CCI sectors in which non-main income is prevalent, the ratio of secondary and other employment to primary employment in the CCIs, and compare income earned from primary and secondary and other creative employment in order to understand the income ratios for this group. **Coupling with the Census 2021 analysis, this analysis of BLADE will rectify the radical underestimation of the number of people earning money in the CCIs.**	Use official business statistics to map creative businesses in Iceland in terms of growth, geographic concentration, productivity, scale • First steps will include identification of the most appropriate variables for tracking business trends and ensuring they are consistently available for creative industries. • Further consultation is required on what variables would be needed – Australian researchers are only on the cusp of doing this kind of research themselves.

Research issue	What we have done/what has been done	What has/what could Iceland do
How to assess the value of creative qualifications and correlate creative qualifications with industry and employment	**Creative qualifications** Rigorous manual intervention in traditional qualifications classifications is needed. In Australia, the Bureau of Communications and Arts Research's 2019 report Creative skills for the new economy revealed for the first time the extent to which the qualifications that open creative career pathways are located throughout the economy. **For example, games and IT sectors employ people that share career pathways with artists, designers and software developers.** **Trident III** Trident I with an additional third dimension (or layer) for creative and other qualifications. Adding qualifications to the trident table reveals the qualifications held by those working in various subsectors of the CCIs as well other industries, enabling analysis of the full gamut of creative capacities valued in the labour market.	Apply the dynamic mapping method and previously identified creative occupations to relevant education and qualification classification systems to identify creative qualifications. Apply creative qualification definitions to available census and labour force data to produce trident analyses of employment counts, creative intensity (share of the total workforce) and mean incomes – and growth rates of each. Statistics Iceland has indicated this is possible using currently available data.
How to account better for value (= economic activity expressed as revenue) of particularly cultural production/creative arts	**Secondary and other income (Tax Office data; Linked Employer-Employee datasets).** Documenting secondary employment in creative activity is significant as evidence suggests much creative work happens outside primary employment. Primary employment may be a form of 'day job' that supports a creative career or small business, and/or a cognate field of employment for creative skills (Eg education, technologies)	According to Statistics Iceland, identifying secondary creative employment should be possible using the Pay As You Earn database and other register-based data from the Icelandic tax office.
How to account better for value (= premarket signalling, transferable creative skills development through volunteering, nonmarket value) in particularly creative arts	**Participation in paid and unpaid cultural activities** Australian Bureau of Statistics 2019, Participation in Selected Cultural Activities, 26 March Documenting unpaid and partly paid creative activity and their relationship to formal employment is significant, as these relationships assist us to understand the scale of the creative workforce (inc unpaid and volunteer work), and their relationship to the creative employment and the broader creative economy. In Australia, the Cultural Participation Survey collects detailed data on occupation, industry, creative activity (all arts, media, design, games and software), education (field and level) and a range of demographic variables (gender, age, geography). This allows a detailed account of the relationships between unpaid, partly paid and paid creative work; the relationships between creative activity and the labour market broadly, including small business owners, tertiary students, and retirees.	Cultural participation data will be generated by a new survey to be administered by Hagstofa Islands late fall 2022 or early 2023. The survey will focus on the use of the Icelandic population of media, culture and other related matters.

Research issue	What we have done/what has been done	What has/what could Iceland do
How to account for cultural and creative activity as an input to the rest of the economy	**Trident I** - embedded creatives (employment as inputs) and creative services as inputs. **Case studies** selected for maximum relevance and importance.	Case Studies eg Creatives in health., as supplied by Cunningham.
Digitisation Household/market boundary	**Gig economy and the CCIs** A high level review of the data required to observe the gig economy within the CCIs For example - Quantifying creative employment in the digital gig economy (COOLEEM Survey) Urzi Brancati M., Pesole A. and Fernandez Macias E (2019) 'Digital Labour Platforms in Europe: Numbers, Profiles, and Employment Status of Platform Workers'. European Commission Publications Repository. case studies of emergent forms e.g. social media entertainment	Run a version of the COOLEEM survey to assess extent, intensity and types of creative work facilitated by digital labour platforms.

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