



Knowledge Works  
National centre  
for cultural industries

rapport 10/2017

# Dynamic mapping of Norway's cultural and creative economy









Putting people  
at the centre:  
Dynamic mapping  
of Norway's  
cultural and  
creative economy

Authors

Dominic Power

Mark Spilsbury

# Index

6	Executive summary
8	1 Background
9	<i>Aims of the report</i>
9	<i>Overall approach</i>
14	2 Creative occupations in Norway
16	3 Measuring cultural and creative employment
16	<i>Data considerations</i>
21	<i>Employment in the Creative occupations</i>
24	4 Calculating cultural and creative intensities in sectors and industries

32	5 Defining Norway's Cultural and Creative Industries
36	6 The Cultural and Creative Trident in Norway
36	<i>The national picture</i>
38	<i>The regional picture</i>
42	7 Conclusions
44	ANNEX 1 Standard Classification Systems
48	ANNEX 2 Arriving at an initial list of cultural and creative occupations

# Dynamic mapping of Norway's cultural and creative economy 2017

## Executive summary

- This report presents findings on the size and location of Norway's cultural and creative economy.
- The innovative methodology used is based on where creative and cultural workers are active: the idea behind the report is that workers and individual talent are the basis for a sector's innovation capacity and knowledge base.
- In total, there are some 61,000 **cultural and creative people** employees or self-employed in the Norwegian economy. This is 2 per cent of the overall employed and self-employed.
- The number of cultural and creative people employed in the economy increased 8 per cent between 2009 and 2014.
- The two biggest single occupational groups are: Architects and Designers whose 16,000 members make up 26 per cent of the cultural and creative occupations; followed by 13,000 authors and journalists (21 per cent).



- **Creative and cultural industries** are industries where creative and cultural people are employed, embedded and make a significant impact.
- Existing definitions of cultural and creative industries exclude sectors which contain lots of businesses with high proportions of workers in cultural or creative roles; existing definitions include sectors which have relatively low proportions of workers in creative and cultural roles.
- Using measures of cultural and creative intensity we can arrive at a definition of the cultural and creative industries that is more accurate than traditional definitions that are not data-informed.
- The cultural and creative industries in 2014 employ 68,000 people which is 2.6 per cent of the entire economy: 36,500 are workers in cultural and creative occupations and 31,500 non-creative occupational workers.
- There are 24,000 cultural and creative workers employed outside the cultural and creative industries.
- Norway's **total cultural and creative economy** in 2014 employed 92,000 workers. This comprises 3.5 per cent of all employment in the economy. In 2014, the combined Norwegian petroleum and petroleum-related industries employed 83 779 people<sup>1</sup>.
- 8 per cent of industrial sectors in Norway have a Cultural and Creative Intensity of more than 10 per cent. A further 22 per cent have a Cultural and Creative intensity of one per cent. Half of all industrial sectors have a Cultural and Creative Intensity of zero – that is we could not identify anyone in those sectors who are engaged in any of our Cultural and Creative occupations.
- The regional picture reveals a very uneven pattern. In Oslo employment in the cultural and creative economy accounts for 8 per cent of the region's economy's overall employment but in nearly all other regions around 3 per cent.
- Policy should support existing strong centres of cultural and creative employment but also aim to support a more even regional distribution.
- It is important that policy recognises the role and needs of the significant number of cultural and creative workers contributing to the Norwegian economy - no matter what area of the economy they are employed.

<sup>1</sup> Anders Ekeland (2015) *Sysselsatte i petroleumsnæringene og relaterte næringer 2014*. Rapport 2015/48. Statistisk sentralbyrå - Statistics Norway, Oslo-Kongsvinger. [https://www.ssb.no/en/arbeid-og-lonn/artikler-og-publikasjoner/\\_attachment/245120?\\_ts=150d1fc6ac0](https://www.ssb.no/en/arbeid-og-lonn/artikler-og-publikasjoner/_attachment/245120?_ts=150d1fc6ac0)

# 1 Background

This report outlines the findings of a research project into producing a dynamic mapping of the cultural and creative sector in Norway. The approach builds upon creative and cultural talent rather than simply looking at registered firms. This report is based upon the idea that in order to understand the potential of Norway's culture and creativity we need to go beyond looking at culture and creativity as a stand-alone sector that fits into an easy box. We believe that it is important to focus not just on firms but on the individuals and workers that have core cultural and creative talent: and that these people are to be found throughout the economy.

Previously research outlining the size and makeup of the cultural and creative economy have largely built upon an industry perspective; there has been a dominant assumption in policy and literature that there is a stand-alone sector broadly referred to as the cultural and creative industries. In Norway we have had four mappings, with BI:CCI's 2016 report<sup>2</sup> as the latest. These have all had the UK's Department for Culture, Media & Sport influential report "The Creative Industries Mapping Document" (DCMS 1998) as an inspiration and model. In this approach, what is measured are primarily firms said to be located in a distinct set of creative industries. The approach has generated valuable and interesting findings but increasingly misses many of those deeply involved in creative and cultural work: the DCMS in the UK have moved away from an industry approach and now use the approach this report is based on.

We suggest that we need to see that cultural and creative intensive work exists throughout the economy and that policy needs to know where this potential is so that appropriate policy can be developed.

Our approach is very different to previous attempts to measure Norwegian cultural and creative industries and is inspired by work first carried out in the UK by NESTA and a subsequent report outlining international comparative work on mapping the creative industries<sup>3</sup>. We have not decided upon a list of industries we think are

<sup>2</sup> Anne-Britt Gran, Øyvind Torp og Marcus Gjems Theie (2016) *Kreativ næring i Norge 2008-2014*. BI: Centre for Creative Industries, Oslo. Full text available at: <https://www.bi.no/globalassets/forskning/centre-for-creative-industries/publications/kreativ-naring-i-norge-2008---2014.pdf>

<sup>3</sup> Hasan Bakhshi, Alan Freeman and Peter Higgs (2013) *A Dynamic Mapping of the UK's Creative Industries*, NESTA, London. Full text available at: [http://www.nesta.org.uk/sites/default/files/a\\_dynamic\\_mapping\\_of\\_the\\_creative\\_industries.pdf](http://www.nesta.org.uk/sites/default/files/a_dynamic_mapping_of_the_creative_industries.pdf) Max Nathan, Andy Pratt and Ana Rincon-Aznar (2015) *Creative Economy Employment in the EU and UK: A Comparative Analysis*, NESTA, London. Full text available at: [https://www.nesta.org.uk/sites/default/files/creative\\_economy\\_employment\\_in\\_the\\_uk\\_and\\_the\\_eu\\_v8.pdf](https://www.nesta.org.uk/sites/default/files/creative_economy_employment_in_the_uk_and_the_eu_v8.pdf)

cultural or creative and then worked out the numbers. Rather we have through consultation with Norwegian stakeholders and experts in the field identified the occupations that can be considered cultural or creative and looked at where those workers are. Our definition of cultural and creative industries (CCIs) is based on the people rather than businesses: it is a data-informed process based on where we find the most cultural and creative workers.

In short, this report examines occupations – what people actually do at work – instead of industries – where they work – to measure the importance of creativity in Norway's contemporary economy.

## 1.1 Aims of the report

This report discusses the approach to the definition and measurement of the Cultural and Creative Industries and Creative Economy in Norway and then presents figures for 2014 (the latest year available at the time of writing). The report sets out:

- the broad approach that was used;
- discusses occupations which have been considered for inclusion in the Cultural and Creative Occupation list;
- discusses data issues;
- describes the size and structure of the Cultural and Creative Industries in Norway, including an exploration of how the Creative and Cultural industries are distributed around the regions of Norway.

## 1.2 Overall approach

This report is based on a consultative and data-informed methodology first used in the UK. The dynamic mapping approach we use takes its starting point in individual workers' jobs, talents and skills. Our approach was consultative and involved stakeholder workshops in Norway, open access consultative documents, calls for feedback on our homepage as well as interviews and meetings with Norwegian

and international experts and organisations in the field. This process resulted in a list of cultural or creative occupations that was the basis for a series of statistical measurement processes. From this we present a data-informed definition of the cultural and creative industries; figures on cultural and creative workers; figures on cultural and creative industry employment; and a wider set of figures on the cultural and creative economy in Norway.

There have been numerous attempts to define the cultural or creative industries in Norway and internationally. Most of these attempts have been built around the idea that we decide upon a definition of the cultural or creative industries and then go out and find figures based on this definition. However, there has been criticism over the years of how these definitions have been arrived at and questions have abounded as to why certain industries are included in one definition but not in another. This has left many feeling that sectors of the economy where cultural or creative labour make significant contributions have been left out and that the cultural economy has been underestimated. Equally debates over definitions have often involved the criticism that sectoral definitions might be arbitrary, politically motivated or exaggerate the importance of the cultural and creative industries <sup>4</sup>.

Pioneering work in the UK attempted to get around arbitrary definitions of which industries are included or not by coming up with a definition that focused on the individuals and people behind creative work and therein creative industries and economy. In the UK, this approach has been to move from a broad definition:

‘Those industries which have their origin in individual creativity, skill and talent and have a potential for wealth and job creation through the generation and exploitation of economic property.’ <sup>5</sup>

In the UK and elsewhere attempts to more accurately define which sectors are included in the cultural or creative Industries were beset by a lack of an adequate measure of what creativity actually is. The definition above, whilst a useful beginning, suffers from the problem that it could actually apply to all economic activities as nearly all such activities do involve some degree of creativity, either in the creation of new products and services or in innovating in producing goods and providing services. The issue is therefore not whether there is any ‘creativity, skill or talent’ in a sector, but the extent of it. At some point, an industry has a sufficient proportion of ‘creativity, skill and talent’ to be deemed to be part of the creative industries, with other sectors falling below this (arbitrary) benchmark.

In Norway, we have also had difficulties deciding whether we are interested in

<sup>4</sup> cf. D. Hesmondhalgh (2013) *The Cultural Industries 3rd Edition*. Sage, London.

<sup>5</sup> *Creative Industries Economic Estimates: Full Statistical Release*, Department for Culture, Media and Sport, December, 2011

studying 'creative' or 'cultural' activities and indeed have been uncertain whether we should study them as 'industries', 'business' or 'sector'. What this approach does is cut across these different definitions by focusing on the individuals, or the occupations, with certain talents, skills and training that all the variously discussed edits ultimately build upon.

The approach we use in this approach is essentially an estimation process, described as a 'Dynamic Mapping' approach, which in its simplest form states that a Cultural or Creative Industry is one which has within its workforce a high

proportion of cultural or creative workers. This approach requires three steps:

1. a set of occupations are defined as being 'creative' or 'cultural';
2. a calculation of 'cultural and creative intensity' for all the industries in the economy;
3. defining a threshold beyond which we accept all sectors as being Cultural or Creative Industries.

In our work on Norway it is important to note that we move away from the UK definition by stressing more the notion of cultural work than 'creative' work. Whilst it is almost impossible to disentangle the two concepts in practice, the UK idea of creative industries is much broader in scope and encompasses larger parts of the ICT industries than policy and practice around cultural industries in Norway and the Nordic countries has traditionally entailed.

A particular feature of our approach is that it allows the identification of the **'cultural and creative trident'**, namely it allows the identification and estimation, not only of the Cultural and Creative industries, but also of those working in cultural and creative occupations across the wider economy. This is shown below and shows that:

- the cultural and creative industries are segments (1) plus (2): it is a sectoral definition and includes only those jobs which are within the cultural and creative industries, including both cultural/creative and non-creative jobs;
- the cultural and creative economy are segments (1), (2) and (3) and adds to the cultural and creative industry estimates above the number of people employed in creative occupations which lie outside the creative industries.

**Figure 1: The Cultural and Creative Trident**

		Sectors	
		Cultural/Creative sectors	Non-creative sectors
Occupations	Cultural and creative occupations	(1) Cultural and creative jobs in cultural and creative industries	(3) Cultural and creative jobs in non-creative industries
	Non-creative occupations	(2) Non-creative jobs in cultural and creative industries	(4) Non-creative jobs in non-creative industries

The approach of Dynamic Mapping is located completely within the SIC (Standard Industrial Classification) and SOC (Standard Occupational Classification) codes: described in more detail in Annex 1. These coding systems are not, themselves, without problems and which have been well documented<sup>6</sup>, but mainly reflect the (in)ability of a standard definition which is only amended every ten years (or so) to continue to capture the underlying reality of the economy. This is particular true of the cultural and creative industries, and also for the increasingly important ‘digital media’. What is positive though is that these coding systems are used to gather large amounts of data on activities in Norway and do this in a way that makes the resulting statistics comparable with other countries. So, whilst there are definite limits to the numbers generated and how they represent activities on the ground they do at least generate illustrative figures then can be used to compare activities across Norway and against other places.

<sup>6</sup> See, for example, the Creative Skillset Sector Skills Assessments. Full text available at [https://creativeskillset.org/assets/0000/6023/Sector\\_Skills\\_Assessment\\_for\\_the\\_Creative\\_Industries\\_-\\_Skillset\\_and\\_CCSkills\\_2011.pdf](https://creativeskillset.org/assets/0000/6023/Sector_Skills_Assessment_for_the_Creative_Industries_-_Skillset_and_CCSkills_2011.pdf)

The cultural and creative trident presented in the report is the overall outcome of a long process and the remainder of report follows the data-informed process we used to calculate it. The following stages are each given a chapter:

- identifying cultural and creative occupations in Norway;
- measuring cultural and creative employment;
- calculating cultural and creative intensities for industries and sectors;
- calculating the size of the Cultural and creative Industries in Norway and estimating the 'creative trident'.

## 2 Creative occupations in Norway

The most important first stage in the work this report is based upon was to come up with a list of occupations that could be considered cultural or creative. The definition of these occupations and the data on occupations in Norway is built around a well-established Standard Occupational Classification (SOC) system that is internationally comparable as well as it offers levels of detail that are uniquely tailored to Norway: see Annex 1. The comparable, grounded and consultative process by which we identified which occupations should be included in the baseline creative occupation list is described in detail in Annex 2. From this process, the following list of occupations were identified as those that should be included in the Cultural and Creative occupations list:

**Table 1: List of occupations for the Cultural and Creative occupation list**

Occupational code and title (STYRK08)	
1222	Advertising and PR managers
1330	Information and communications technology service managers
2511	Systems analysts
2512	Software developers
2513	Web and multi-media developers
2161	Building architects
2162	Landscape architects
2163	Product and garment designers
2164	Town and traffic planners
2166	Graphic and multimedia designers
2431	Advertising and marketing professionals



## Dynamic mapping of Norway's cultural and creative economy

2432	Public relations professionals
2621	Archivists and curators
2622	Librarians and related information professionals
2641	Authors and related writers
2642	Journalists
2651	Visual artists
2652	Musicians, singers and composers
2653	Dancers and choreographers
2654	Film, stage and related directors and producers
2655	Actors
2659	Creative and performing artists nec (not elsewhere classified)
3431	Photographers
3432	Interior designers and decorators
3433	Gallery, museum and library technicians
3434	Chefs
3439	Other artistic and cultural associate professionals nec
7221	Blacksmiths, toolmakers and forging press workers
7311	Precision instrument makers and repairers
7312	Musical instrument makers and tuners
7313	Jewellery and precious metal workers
7314	Potters and related workers
7315	Glass makers, cutters, grinders and finishers
7316	Sign writers, decorative painters, engravers and etchers
7317	Handicraft workers in wood, basketry and related materials
7318	Handicraft workers in textiles, leather and related materials (but see below)
7319	Handicraft workers nec
7522	Cabinet makers and related trades workers

## 3 Measuring cultural and creative employment

### 3.1 Data considerations

The data that we have obtained for estimating the Cultural and Creative Industries has been provided by The Division for Labour Market Statistics from the Norwegian Government. We had the choice of two databases:

- registration data, which gives good detail on occupation and industry, but which does not provide any occupational details for the self-employed – a considerable drawback, given that many creative occupations have high rates of self-employment; and
- the Labour Force Survey (LFS), which includes data on both employed and self-employed. However, as it is a sample survey, it is not as accurate as the registration data and, there are limits to the level of disaggregation of the data – in particular some of the occupational groups we have identified to be included in the Cultural and Creative occupation list above are not identifiable separately, but instead data is only available on a ‘grouped’ basis.

Because of the importance of self-employment in the creative occupations and because of the importance attached to including the self-employed at the first discussion workshop we had in Oslo June 2016, a view was taken that the LFS was the preferred data source and that we should accept the limitations. The initial difficulty with using ‘grouped data’ is that we have had to take a view about which of the Cultural or Creative occupations could be included. Our principle has been that where ‘cultural or creative occupations’ form the bulk of the ‘grouped data’ then this should be included and, conversely, where these occupations do not form the majority of the group then it should be excluded. On this basis, we have excluded:

- **Advertising and PR managers (SOC 1222):** data is only available when included in a much wider group of general managers, including Finance managers (1211), HR managers (1212), Policy and planning managers (1213), Business service and administration managers nec (1219), Sales and marketing managers (1221) and Research and development managers (1223);
- **Information and communications technology service managers (SOC 1330):** data is only available when included in a wider group including Agricultural and forestry production managers (1311), Aquaculture and fisheries production managers (1312), Manufacturing managers (1321), Mining managers (1322), Construction managers (1323), Supply, distribution and related managers (1324), Child care services managers (1341), Health services managers (1342), Aged care services managers (1343), Social welfare managers (1344), Education managers (1345), Financial and insurance services branch managers (1346), professional services managers nec (1349), Hotel managers (1411), Restaurant managers (1412), Retail and wholesale trade managers (1420), Sports, recreation and cultural centre managers (1431) and Service managers nec (1439). In addition, there were concerns at the first workshop that ICT services might not be part of common ideas of creative and cultural industries in Norway.
- **Systems analysts (SOC 2511), Software developers (SOC 2512) and Web and multi-media developers (SOC 2513):** data only available when included in a wider group also consisting of Application programmers (2514), Software and applications developers and analysts nec (2519), ICT operations technicians (3511), ICT user support technicians (3512), Computer network and systems technicians (3513) and Web technicians (3514). In addition, there were concerns at the first workshop that ICT services might not be part of common ideas of creative and cultural industries in Norway.
- **Advertising and marketing professionals (SOC 2431) and PR professionals (SOC 2432):** included in a wider group also consisting of management and organisation analysts (2421), Personnel and careers professionals (2423) and Training and staff development professionals (2424).

**Table 3: Grouping of 4 digit occupations**

SOC code and title		Appearance in data	Inclusion or exclusion
1222	Advertising and PR managers	Grouped into 1211-1223	Excluded
1330	Information and communications technology service managers	Grouped into 1311-1439	Excluded
2511	Systems analysts	Grouped into a single group including 2511-29 and 3511-14	Excluded
2512	Software developers		
2513	Web and multi-media developers		
2161	Building architects	Grouped into 2161-2166, which is OK since this the majority of 'our codes' but means including 2165 (cartographers)	Included as a single group
2162	Landscape architects		
2163	Product and garment designers		
2164	Town and traffic planners		
2166	Graphic and multimedia designers		
2431	Advertising and marketing professionals	Grouped into 2421 (management and organisation analysts), 2423-24 (HR and training), and 2431-32	Excluded
2432	Public relations professionals		
2621	Archivists and curators	Grouped together as 2621-2622, which is OK	Included as a single group
2622	Librarians and related information professionals		
2641	Authors and related writers	Grouped together as 2641-42, which is OK, but with the addition of 2656 (announcers on radio, TV and other media)	Included as a single group
2642	Journalists		
2651	Visual artists	...	...
2652	Musicians, singers and composers		
2653	Dancers and choreographers		

Dynamic mapping of Norway's cultural and creative economy

2654	Film, stage and related directors and producers	Three groups here: 2651, 2659 and then a 2 <sup>nd</sup> of 2652-2653 and a 3 <sup>rd</sup> of 2654-2655	Included as a single group
2655	Actors		
2659	Creative and performing artists nec (not elsewhere classified)		
3431	Photographers	Ok, separate group of 3431	Included
3432	Interior designers and decorators	Grouped together as 3432-3439, which is OK	Included as a single group
3433	Gallery, museum and library technicians		
3434	Chefs		
3439	Other artistic and cultural associate professionals nec		
7221	Blacksmiths, toolmakers and forging press workers	OK, separate group of 7221	Included
7311	Precision instrument makers and repairers	OK, separate group of 7311	Included
7312	Musical instrument makers and tuners	OK, separate group of 7312	Included
7313	Jewellery and precious metal workers	OK, separate group of 7313	Included
7314	Potters and related workers	Grouped together as 7314-7319	Included as a single group
7315	Glass makers, cutters, grinders and finishers		
7316	Sign writers, decorative painters, engravers and etchers		
7317	Handicraft workers in wood, basketry and related materials		
7318	Handicraft workers in textiles, leather and related materials (but see below)		
7319	Handicraft workers nec		
7522	Cabinet makers and related trades workers	OK, separate group of 7522	Included

On this basis, our 'baseline' set of cultural and creative occupations is shown below. This list does not include many of the 'commercial' creative occupations that would be found in, for example, in the UK list of Creative Occupations. Given that in the UK analysis, these occupations (particularly the IT-related ones) are those with the highest employment numbers, direct comparisons are not applicable; this very different nature of the creative occupations list needs to be remembered when considering the data. In short, the approach we have taken here has been to be very conservative and careful in the data and categories used in order to avoid overestimation and error.

**Table 4: Baseline list of occupations**

SOC code and title	
2161	Building architects
2162	Landscape architects
2163	Product and garment designers
2164	Town and traffic planners
2166	Graphic and multimedia designers
2621	Archivists and curators
2622	Librarians and related information professionals
2641	Authors and related writers
2642	Journalists
2651	Visual artists
2652	Musicians, singers and composers
2653	Dancers and choreographers
2654	Film, stage and related directors and producers
2655	Actors
2659	Creative and performing artists nec
3431	Photographers
3432	Interior designers and decorators

3433	Gallery, museum and library technicians
3434	Chefs
3439	Other artistic and cultural associate professionals nec
7221	Blacksmiths, toolmakers and forging press workers
7311	Precision instrument makers and repairers
7312	Musical instrument makers and tuners
7313	Jewellery and precious metal workers
7314	Potters and related workers
7315	Glass makers, cutters, grinders and finishers
7316	Sign writers, decorative painters, engravers and etchers
7317	Handicraft workers in wood, basketry and related materials
7318	Handicraft workers in textiles, leather and related materials
7319	Handicraft workers nec
7522	Cabinet makers and related trades workers
7314	Potters and related workers
7315	Glass makers, cutters, grinders and finishers
7316	Sign writers, decorative painters, engravers and etchers
7317	Handicraft workers in wood, basketry and related materials
7318	Handicraft workers in textiles, leather and related materials (but see below)
7319	Handicraft workers nec
7522	Cabinet makers and related trades workers

## 3.2 Employment in the Creative occupations

In total, the Creative occupations, as described above, accounts for some 61,000 employees and self-employed in the Norwegian economy. This is two per cent of the overall employed and self-employed. When compared to estimates of employment of creative occupations in other countries (such as the UK), this this two per cent

may seem low, but it is important to note that estimates in different countries are not comparable. In this definition, we are not including all the employees and self-employed engaged in IT-related occupations – which actually forms the highest proportion of creative occupations in the UK definition. As it is now defined, the classification of creative occupations in Norway is now a very different classification to those which may be used elsewhere, making international comparisons misleading.

The biggest single group are those covering Architects and Designers (16,000), some 26 per cent of the Creative occupations, followed by 13,000 authors and journalists (21 per cent), with 9,000 (15 per cent) being in the Interior designers and decorators, Gallery, museum and library technicians and Chefs group and a further 9,000 (15 per cent) being in the Visual artists, Musicians, singers and composers et al group.

**Table 5: Numbers working in Creative occupations**

SOC code and title		n	%
2161	Building architects	16,000	26
2162	Landscape architects		
2163	Product and garment designers		
2164	Town and traffic planners		
2166	Graphic and multimedia designers		
2621	Archivists and curators	5,000	9
2622	Librarians and related information professionals		
2641	Authors and related writers	13,000	21
2642	Journalists		
2651	Visual artists	9,000	15
2652	Musicians, singers and composers		
2653	Dancers and choreographers		
2654	Film, stage and related directors and producers		
2655	Actors		
2659	Creative and performing artists nec		



## Dynamic mapping of Norway's cultural and creative economy

3431	Photographers	4,000	7
3432	Interior designers and decorators	9,000	15
3433	Gallery, museum and library technicians		
3434	Chefs		
3439	Other artistic and cultural associate professionals nec		
7221	Blacksmiths, toolmakers and forging press workers	:	1
7311	Precision instrument makers and repairers	:	1
7312	Musical instrument makers and tuners	:	0
7313	Jewellery and precious metal workers	:	1
7314	Potters and related workers	:	1
7315	Glass makers, cutters, grinders and finishers		
7316	Sign writers, decorative painters, engravers and etchers		
7317	Handicraft workers in wood, basketry and related materials		
7318	Handicraft workers in textiles, leather and related materials		
7319	Handicraft workers nec	:	2
7522	Cabinet makers and related trades workers	:	2
<b>Total creative occupational employment</b>		<b>61,000</b>	<b>100</b>
Total employment in Norwegian economy		2,650,000	
<b>Creative employment as a proportion of all employment</b>			<b>2</b>

*Note: numbers rounded to the nearest 1,000. Employment numbers lower than 4,000 are suppressed*

## 4 Calculating cultural and creative intensities in sectors and industries

It is important at this stage to underline again how different our approach is to previous attempts to measure the cultural and creative industries. We have not decided upon a list of industries we think are cultural or creative and then worked out the numbers. Rather we have through consultation identified the occupations that can be considered cultural or creative and looked at where they are. Our definition of cultural and creative industries (CCIs) is based on the data: it is based on where we find the most cultural and creative workers.

Central to how we use the data to define cultural and creative industries is calculating the cultural or creative intensity of an industry. Basically, this involves measuring the proportion of employment in each sector accounted for cultural and creative occupations. Industries/sectors where we have found high proportions of such workers are then defined as cultural and creative.

Industrial statistics in Norway are based upon 591 industrial sectors classified by Statistics Norway in line with international conventions; these sectors cover the entire range of public and private firms and organisations in Norway. We have calculated the Creative Intensity (i.e. the proportion of employment in each sector accounted for by employment in cultural or creative occupations) for each of these sectors. The values range from zero to 81 per cent. Once again, we do need to be aware of a need to take care with some of these values. The levels of employment in some these sectors are very small and Statistics Norway advises that the data cannot be regarded as fully reliable (and thus care should be taken to publish data on small sectors). For example, the sector with the highest creative intensity actually only has a total of 42 people working within it, and so this very high Intensity needed to be treated with some caution. In consultations with Statistics Norway and the UK Office for National Statistics we were advised that we should exclude occupations with employment lower than 1000 as survey results based on small samples would mislead. This has meant that we have excluded industries with high cultural and creative intensities in the interests of being as statistically rigorous as possible.

As important as the range is the distribution. Half of all the sectors have a Creative Intensity of zero – that is the Labour Force Survey has not identified anyone in those sectors who are engaged in any of our Creative or Cultural occupations. A further 22 per cent have a Creative intensity of one per cent. In total, eight per

cent of sectors have a creative intensity of more than 10 per cent. A relatively small number of sectors (eight per cent) have a Creative Intensity of more than 10 per cent.

This distribution of Cultural and Creative Intensities we see in Norway is different from that which has been observed in other countries even though we must take into account that different international definitions of creative occupations mean that direct comparisons are not always valid. Reports on the distribution of creative intensity in the UK was clearly bi-modal, with the overwhelming majority of sectors with zero or one per cent intensity, just as with the Norwegian distribution. However, the UK then had a cluster of sectors with high Creative Intensity. This seems not to be the case in the Norwegian data, which seems to suggest a relatively long tail.

**Table 6: Distribution of Creative Intensities**

Creative intensity range	Number	%	Cumulative percentage
Zero	296	50	
1	132	22	72
2	39	7	79
3	29	5	84
4	13	2	86
5 - 9	36	6	92
10 - 19	18	3	95
20 - 29	9	2	97
30 - 39	4	1	97
40 - 49	5	1	98
50 - 59	5	1	99
60 - 69	1	*	99
70+	4	1	100
<b>Total</b>	<b>591</b>	<b>100</b>	

A further examination is needed of the type of sectors which have been identified in the data as being culturally or creatively intensive. In Table 7 below, we have listed the sectors which have a creative intensity of more than 10 per cent. Because of restrictions on the data that can be published we have not shown the employment size in each of these sectors.

**Table 7: Sectors with a creative intensity of 10 per cent and greater**

Sector		Creative intensity
Code	Name	%
1420	Manufacture of articles of fur	10
3211	Striking of coins	10
5030	Inland passenger water transportation	10
6399	Other information service activities nec	10
7990	Other reservation services and related activities nec	10
3109	Manufacture of other furniture	12
1413	Manufacture of other outerwear	13
4665	Sale of office furniture	15
3102	Manufacture of kitchen furniture	15
3299	Manufacturing nec.	15
5629	Other food services	15
1393	Manufacture of carpets and rugs	16
9525	Repair of watches, clocks, jewellery	16
4648	Sale watches, clocks	17
7021	PR and communication activities	17
1813	Pre-press and pre-media services	18
9102	Museums activities	18
1622	Manufacture of assembled parquet floors	19
2349	Manufacture of other ceramic products	20

## Dynamic mapping of Norway's cultural and creative economy

9001	Performing arts	21
3291	Manufacture of brooms and brushes	22
7311	Advertising agencies	23
2313	Manufacture of hollow glass	24
5819	Other publishing activities	24
7430	Translation/interpretation	24
9002	Support activities to performing arts	25
5920	Sound recording and music publishing activities	27
5912	Post-production of motion pictures, video etc.	30
9101	Libraries and archives activities	31
3240	Manufacture of games and toys	35
5821	Publishing of computer games	37
5811	Book publishing	41
5911	Production of motion pictures, video, etc.	41
5814	Publishing of journals and periodicals	42
6010	Radio broadcasting	43
5813	Publishing of newspapers	48
6391	News agency activities	53
3212	Manufacture of jewellery and related art	54
7410	Specialised design activities	55
3213	Manufacture of imitation jewellery and art	57
6020	Television programme broadcasting activities	59
1722	Manufacture of household and sanitary goods	67
7420	Photographic activities	73
7111	Architectural activities	75
9003	Artistic creation	76
3220	Manufacture of musical instruments	81
<b>Total employment</b>		<b>87,325</b>
<b>Economy-wide creative intensity</b>		<b>3.3%</b>

As a 'list' ordered by levels of creative intensity, it can be a little difficult to understand the nature of the sectors which the data have identified as being culturally or creatively intense. So, if we re-order these into broad industrial groups (as defined by Standard Industrial Classification code groups), rather than in order of intensity, we get a better view of what is included in the list at this stage. This shows that we have identified:

- a **Manufacturing** group, drawn from across a range of manufacturing sectors, but which include some with high levels of design and creative input – glass manufacture, ceramic products and jewellery;
- a **Publishing** group, which contains all the publishing sub-sectors with the exception of “58.12 Publishing of directories and mailing lists” with an employment size of 34 and a CCI of 3 per cent. This group also includes the Publishing of computer games (58.21);
- a **Film, TV and music** group, which includes production and post-production activities, but excludes distribution and projection activities;
- a **Programming and Broadcasting** group, of TV (60.20) and radio (60.10) broadcasting. This is all the 4 digit SIC codes within this broader 2 digit sector of Programming and broadcasting activities;
- what we have termed a broader '**Cultural Intensive Business Services**' group which contains News agency activities, Architectural activities, Advertising agencies, Specialised design activities, Photographic activities and Translation/interpretation;
- **Arts Activities**, which includes Visual arts, Performing arts, Support activities to performing arts and Artistic creation;
- **Libraries and Museums**;
- a range of activities which do not fit into any of the above, which we have called '**Miscellaneous Activities**'.

Again, we do not show employment sizes of each sector in this table because of restrictions on the publication of the data.

**Table 8: Sectors with a creative intensity of 10 per cent and greater grouped in SIC code groups**

Sector		Creative intensity
Code	Name	%
<b>Manufacturing</b>		
1393	Manufacture of carpets and rugs	16
1413	Manufacture of other outerwear	13
1420	Manufacture of articles of fur	10
1622	Manufacture of assembled parquet floors	19
1722	Manufacture of household and sanitary goods	67
1813	Pre-press and pre-media services	18
2313	Manufacture of hollow glass	24
2349	Manufacture of other ceramic products	20
3102	Manufacture of kitchen furniture	15
3109	Manufacture of other furniture	12
3211	Striking of coins	10
3212	Manufacture of jewellery and related art	54
3213	Manufacture of imitation jewellery and art	57
3220	Manufacture of musical instruments	81
3240	Manufacture of games and toys	35
3291	Manufacture of brooms and brushes	22
3299	Manufacturing nec.	15
<b>Publishing</b>		
5811	Book publishing	41
5813	Publishing of newspapers	48
5814	Publishing of journals and periodicals	42

## Dynamic mapping of Norway's cultural and creative economy

5819	Other publishing activities	24
5821	Publishing of computer games	37
<b>TV, Film and Music</b>		
5911	Production of motion pictures, video, etc.	41
5912	Post-production of motion pictures, video etc.	30
5920	Sound recording and music publishing activities	27
<b>Programming and Broadcasting</b>		
6010	Radio broadcasting	43
6020	Television programme broadcasting activities	59
<b>Cultural Intensive Business Services</b>		
6391	News agency activities	53
6399	Other information service activities nec	10
7021	PR and communication activities	17
7111	Architectural activities	75
7311	Advertising agencies	23
7410	Specialised design activities	55
7420	Photographic activities	73
7430	Translation/interpretation	24
7990	Other reservation services and related activities nec	10
<b>Creative arts and entertainment activities</b>		
9001	Performing arts	21
9002	Support activities to performing arts	25
9003	Artistic creation	76
<b>Libraries and museums</b>		
9101	Libraries and archives activities	31
9102	Museums activities	18



## Dynamic mapping of Norway's cultural and creative economy

Miscellaneous activities		
4648	Sale watches, clocks	17
4665	Sale of office furniture	15
5030	Inland passenger water transportation	10
5629	Other food services	15
9525	Repair of watches, clocks, jewellery	16

**Total Employment** 87,325

**Economy-wide creative intensity** 3.3%

## 5 Defining Norway's Cultural and Creative Industries

To move to our definition of the cultural and creative industries, we now further need to consider two factors:

- the creative intensity threshold – the threshold level at which it is determined that a sector has enough cultural and creative workers to be considered a ‘creatively intense’ sector; and
- overall size of sectors, where we need to exclude any sectors which are too small on the grounds of statistical reliability as a relatively small number of workers in cultural and creative occupations can create a rogue result.

The second of these is more immediately resolvable than the first. The advice of the Division for Labour Market Statistics of Statistics Norway is that there should be a minimum sector size cut off point, below which the data is unreliable, in that any sector which had a total employment size of less than 5,000 cannot be published and essentially excluded from the final selection unless it formed part of a wider SIC code block that were also all over the threshold. We have not strictly applied this to individual 4 digit SIC codes but we have used it in relation to our wider sector groups to form our definition of the cultural and creative industries.

The threshold level is more a subject for debate. In the UK this was set at 30 per cent, but the inclusion of the ICT occupations has clearly resulted in a different distribution, and that comparison is not valid. The distribution shown in Table 6 above does not indicate an obvious cut-off point, as there is no indication of a bi-modal distribution in this data. In the absence of a statistical guide, we have arbitrarily set the threshold at a creative intensity of 20 per cent.

This last point reinforces an over-riding consideration in this process, which is that it should be regarded as a **‘data-informed’ process**, not a ‘data-driven’ one. The difference being that in a data-driven process, the sectors which are above the threshold are definitely included and those that are below it are excluded, whilst in a data-informed process, the analysis gave us our first, baseline indication of which sectors would be included (and which ones not) for consideration and consultation.

In the final list of cultural and creative industries some are included which actually fell below the threshold on the dynamic mapping analysis and/or are below the size threshold. Where this is the case, we note below.

Our proposals for the cultural and creative sectors are:

- the main **Publishing** activities of Books, Newspapers and journals and periodicals (which covers magazine publishing). This grouping employs over 13,500 workers and comprises a fifth (20 per cent) of the cultural and creative industries;
- the **TV, Film and Music** sectors, which employs just under 4,500 workers, some 6 per cent of the proposed cultural and creative Industries;
- the **Programming and Broadcasting** sectors, which employs over 6,000 workers, some 9 per cent of the cultural and creative industry employment;
- the range of **Culture Intensive Business Service (CIBS)** sectors, including News Agency activities, Architecture, Advertising, Design, Photography and Translation. Collectively these employ nearly 21,000 people and form 31 per cent of the cultural and creative industries;
- the three sub-sectors from within the **Creative Arts and Entertainment** sectors, which collectively employ nearly 15,500 people and account for 23 per cent of the creative industries;
- we have included both libraries and museums to form a wider **Museums and Libraries** sector. The Museums sector has a creative intensity below the threshold level of 20 per cent (at 18 per cent), but it has been argued that the infrastructure which surrounds these very public buildings creates the need for non-creative staff (receptionists, security guards, cleaners, etc.) which depresses the creative intensity. On this basis, we have included this sector.

The main 'casualty' of this approach is the **Manufacturing** grouping, and the cultural and creative industries as currently proposed does not include any representation of the Manufacturing sector. As this includes sectors such as the Manufacture of jewellery, bijouterie and related articles this may be an element for discussion. However, it should be noted that if all the Manufacturing sectors which have a creative intensity of more than 20 per cent are included, then collectively total employment is still less than 1,000 – much lower than our cut off point of 5,000. Also, not included are the range of miscellaneous activities, none of which exceeded the threshold of 20 per cent.

**Table 9: The Cultural and Creative Industries**

Sector		Creative intensity	Employment	
Code	Name	%	(n)	
<b>Publishing</b>			<b>13,500</b>	<b>20%</b>
5811	Book publishing	41	:	
5813	Publishing of newspapers	48	8,000	
5814	Publishing of journals and periodicals	42	:	
5819	Other publishing activities	24	:	
5821	Publishing of computer games	37	:	
<b>TV, Film and Music</b>			<b>4,500</b>	<b>6%</b>
5911	Production of motion pictures, video, etc.	41	:	
5912	Post-production of motion pictures, video etc.	30	:	
5920	Sound recording and music publishing activities	27	:	
<b>Programming and Broadcasting</b>			<b>6,000</b>	<b>9%</b>
6010	Radio broadcasting	43	:	
6020	Television programme broadcasting activities	59	6,000	
<b>Cultural Intensive Business Services</b>			<b>21,000</b>	<b>31%</b>
6391	News Agency activities	53	:	
7111	Architectural activities	75	6,000	
7311	Advertising agencies	23	6,000	
7410	Specialised design activities	55	4,500	
7420	Photographic activities	73	:	
7430	Translation/interpretation	24	:	

## Dynamic mapping of Norway's cultural and creative economy

7420	Photographic activities	73	4,500	
7430	Translation/interpretation	24	:	
7990	Other reservation services and related activities nec	10	:	
<b>Creative arts and entertainment activities</b>			<b>15,500</b>	<b>23%</b>
9001	Performing arts	21	8,000	
9002	Support activities to performing arts	25	:	
9003	Artistic creation	76	5,500	
<b>Libraries and museums</b>			<b>8,000</b>	<b>12%</b>
9101	Libraries and archives activities	31	4,000	
9102	Museums activities	18	4,000	
<b>Total</b>			<b>68,000</b>	<b>100%</b>

*Note: numbers rounded to the nearest 500. Employment numbers lower than 4,000 are suppressed*

## 6 The Cultural and Creative Trident in Norway

### 6.1 The national picture

Cultural and creative workers are employed throughout the Norwegian economy. As one would expect they comprise a large share of those employed in the cultural and creative industries. Here they are the core talents that the entire cultural and creative industry is based upon.

In other sectors of the economy there are also large numbers of cultural and creative workers employed. Their knowledge, expertise and talent may contribute in significant ways to the innovation potential and competitive advantage of the economy in general. This is a significant talent cluster that could greatly benefit from research and policy support.

- The cultural and creative industries are comprised of 36,500 workers in cultural and creative occupations and 31,500 non-creative occupational workers. In total, they employ 68,000 people which is 2.6 per cent of the entire economy.
- The cultural and creative economy employs 92,000 workers: i.e. the 68,000 workers from the Cultural and Creative Industries plus the 24,000 workers in cultural/ creative occupations who are working within (embedded within) non-creative sectors. This comprises 3.5 per cent of all employment in the economy.

**Figure 2: The Cultural and Creative trident in Norway, 2014**

		Sectors		
		Cultural and Creative sectors	Non-creative sectors	Total
Occupations	Cultural-Creative occupations	36,500	24,000	61,000
	Non-creative occupations	31,500	2,558,000	2,590,000
Total		68,000	2,582,000	2,650,000

Note: numbers rounded to the nearest 500.

We have calculated the same 'creative trident' for 2009 so that we can see the extent of change in the size of the creative and cultural workforce over the period 2009 – 15.

**Figure 3: The Cultural and Creative trident in Norway, 2009**

		Sectors		
		Cultural and Creative sectors	Non-creative sectors	Total
Occupations	Cultural-Creative occupations	33,500	23,000	56,500
	Non-creative occupations	31,000	2,409,000	2,440,500
<b>Total</b>		<b>65,000</b>	<b>2,432,000</b>	<b>2,497,000</b>

Note: numbers rounded to the nearest 500.

As we see in Figure 3 there has been growth between 2009 and 2014:

- The numbers of people engaged in Creative and Cultural occupations has increased from 56,500 in 2009 to 61,000 in the 2015 data (an increase of 4,500, or 8 per cent). The overall workforce also increased over the same period from 2,497,000 to 2,650,000, an increase of 153,000 or 6 per cent;
- The cultural and creative industries have increased from 65,000 in 2009 to 68,000 in 2015, an increase of 3,000 (5 per cent). It has not significantly increased as a proportion of the economy;
- The cultural and creative economy has increased from 87,500 in 2009 to 92,000 workers, an increase of 4,500 (5 per cent). Again, it has not significantly increased as a proportion of the economy.

## 6.2 The regional picture

The distribution of cultural and creative occupations and cultural and creative industry employment is not distributed equally across all the regions (Fylker) of Norway. Our data confirms the findings of international research on the cultural and creative industries that have found that these occupations and activities tend to be drawn to larger urban areas and in the case of many countries to the capital city region.

As Table 10 shows Oslo is the main centre, with a third of all those working in cultural and creative occupations (32 per cent) and a third of the cultural and creative industries (34 per cent) located there.

Other regions which employ substantial numbers of the cultural and creative workforce are Akershus (12 per cent of cultural and creative occupational employment and 13 per cent of cultural and creative sector employment);

Hordaland (9 per cent of cultural and creative occupational employment and 9 per cent of cultural and creative sector employment); and Rogaland (6 per cent of cultural and creative occupational employment and 6 per cent of cultural and creative sector employment).



**Table 10: Distribution of Creative occupation and Creative Industry employment across regions**

		Creative occupational employment	Creative sector employment	All employment
		%	%	%
1	Østfold	4	4	5
2	Akershus	12	13	11
3	Oslo	32	34	13
4	Hedmark	3	2	4
5	Oppland	3	2	4
6	Buskerud	4	4	5
7	Vestfold	4	3	4
8	Telemark	2	2	3
9	Aust-Auger	1	1	2
10	Vest-Auger	3	3	3
11	Rogaland	6	6	9
12	Hordaland	9	9	10
14	Sogn og Fjordane	1	1	2
15	Møre og Romsdal	3	3	5
16	Sor-Trøndelag	6	6	6
17	Nord-Trøndelag	2	1	3
18	Nordland	3	3	5
19	Troms	2	2	3
20	Finnmark	1	1	1
<b>All Norway (n)</b>		<b>61,000</b>	<b>68,000</b>	<b>2,650,000</b>

Oslo (and to a much less extent, the neighbouring county of Akershus) has a far higher density of employment in both the cultural and creative occupations and the cultural and creative sectors than all other regions – having a third of the cultural and creative employment compared to 13 per cent of all employment located there. In all other regions, employment in the cultural and creative occupations and in the cultural and creative industries is at the same proportion, or below, the overall employment distribution.

In Table 11 we present the Cultural and Creative Tridents for each region.

**Table 11: The cultural and creative trident across regions**

		CC occupations in cultural and creative sectors	Non-creative occupations in cultural and creative sectors	CC occupations in non-creative sectors	Non-creative occupations in non-creative sectors	Total
		(1)	(2)	(3)	(4)	
<b>Norway</b>		<b>36,000</b>	<b>32,000</b>	<b>24,000</b>	<b>2,558,000</b>	<b>2,650,000</b>
		<b>1.4%</b>	<b>1.2%</b>	<b>0.9%</b>	<b>96.5%</b>	<b>100%</b>
<b>1</b>	Østfold	1%	1%	1%	97%	136,000
<b>2</b>	Akershus	1%	2%	1%	96%	301,000
<b>3</b>	Oslo	4%	3%	1%	92%	350,000
<b>4</b>	Hedmark	1%	1%	1%	97%	94,000
<b>5</b>	Oppland	1%	1%	1%	97%	95,000
<b>6</b>	Buskerud	1%	1%	1%	97%	140,000

7	Vestfold	1%	1%	1%	97%	119,000
8	Telemark	1%	1%	1%	98%	83,000
9	Aust-Auger	1%	1%	1%	98%	55,000
10	Vest-Auger	1%	1%	1%	97%	90,000
11	Rogaland	1%	1%	1%	98%	250,000
12	Hordaland	1%	1%	1%	97%	268,000
14	Sogn og Fjordane	1%	1%	1%	98%	57,000
15	Møre og Romsdal	1%	1%	1%	98%	137,000
16	Sor-Trøndelag	1%	1%	1%	97%	163,000
17	Nord-Trøndelag	1%	1%	1%	98%	67,000
18	Nordland	1%	1%	1%	98%	120,000
19	Troms	1%	1%	1%	98%	85,000
20	Finnmark	1%	1%	1%	97%	39,000

When we examine the tridents for each region we see a surprisingly even yet uneven pattern. We see clearly that in Oslo, employment in the cultural and creative sectors (columns 1 and 2) account for 8 per cent of the region's overall economy's employment (compared to 2.6 per cent across all of Norway). By including cultural and creative occupational workers in non-creative sectors (column 3) we can see that the wider cultural and creative economy accounts for 8 per cent of all employment in Oslo (compared to 3.5 per cent across the entire economy).

All other regions (with the exception of Akershus) have the same distribution across the Creative Trident, with 2 per cent of employment in the cultural and creative economy (columns 1 and 2) and with a further 1 per cent engaged in cultural and creative occupations outside the cultural and creative sectors.

## 7 Conclusions

We find that the Cultural and Creative Industries in Norway employ a total of 68,000 workers (2.6 per cent of the economy), although in addition there are a further 24,000 cultural/creative occupational workers engaged outside the creative industries. This wider cultural and creative economy employs 92,000 workers, some 3.5 per cent of all employment in the economy.

We have used the dynamic mapping approach to inform the creation of a new definition of the Norwegian Cultural and Creative Industries. As with any measurement exercise there are issues with our methodology that can be discussed. However, we have used a conservative and careful methodology and worked within the confines of the data available to us. Using the available data our methodology has given a rather different picture of the cultural and creative industries than is usual. It is a picture that draws on ideas of cultural and creative intensity to define the cultural and creative industries, just as it is a picture that highlights cultural and creative occupations and workers over clusters, businesses or organisations.

We argue with this report that two key points need to be made to bring policy closer to providing the best support for culture and its vital role in society:

- That culture is driven forward and cultural knowledge is borne by individuals. Their skills, talents and needs should be as much of a policy focus as institutions and firms.
- That such individuals are not necessarily employed in what we might think of 'cultural' or 'creative' industries. We need to re-examine what cultural and creative industries are as well as we need to re-examine the wider Norwegian cultural economy.



# ANNEX 1 Standard Classification Systems

## 1 Background

In order to better understand the figures and methodology we use it can be helpful to understand the statistical classification systems that provide a framework for the collection, tabulation, presentation and analysis of data. Their use promotes uniformity and is a convenient way of classifying industrial activities into a common structure and in a manner that is internationally comparable. Whilst there are many different classification systems in use, the two main ones (and the two used in this report) are those which relate to occupation and industry. This note highlights the key features of each.

## 2 Standard Occupational Classification

The Standard Occupational Classification describes jobs that people do. Any individual, working in any job, should be able to be located within the (SOC).

The SOC classifications are updated on a (roughly) 10-year cycle. The current SOC is called SOC2010, because it is the 'new' 2010 version and replaced the SOC2000.

The SOC feeds into a wider international classification system – the International Classification of Occupations, co-ordinated by the International Labour Office. Because of this, broadly comparable international data on occupations is available.

The SOC is a hierarchical system in two senses:

- it is hierarchical, in that the occupations are ordered in descending skill levels, so the higher up the order the higher the perceived skill level; and
- there are 4 different tiers within the classification, such that the highest level of aggregation is the 'major' group (also called 'one-digit SOC), the second 'sub-major groups (two-digit), the third 'minor groups' (three digit) and the fourth unit groups (four-digit).

In SOC 2010 there are nine major groups, 25 sub-major groups, 90 minor groups and 369 unit groups. There are, however, many more job titles than even the most disaggregated level of SOC so even the 4-digit level, the most disaggregated available under this classification, is a gathering together of job titles. Note also that most unit groups end with a 'catch-all' category of those in the broad areas who have not fully fallen into one of the unit definitions and are termed 'not elsewhere classified' (*nec*). However, national statistical agencies have a tendency to regard it as a point of principle (and pride) to try and reduce the numbers in these 'nec' groups as far as possible.

To illustrate how the SOC system works we show below the entire structure relating to that of a strand of a single major group – for illustration purposes 'Professional occupations'. This single occupation splits into 4 sub-major groups, which then divide into 16 minor groups and 71 unit groups. Setting it out this way shows the level of detail that is available, but also (conversely) shows the level of aggregation that is necessary. Sometimes this is explicit: e.g. the SOC unit group 2425 includes Actuaries, economists and statisticians, which are clearly different professions with very different skill sets, sometimes it is implied: e.g. the SOC unit group 2134 which covers Secondary education teachers covers all teachers, regardless of subject or level.

Major group		Sub-major group		Minor group		Unit group	
2	Professional occupations	21	Science, research, engineering and technology professionals	211	Natural and social science professionals	2111	Chemical scientists
						2112	Biological scientists and biochemists
						2113	Physical scientists
						2114	Social and humanities scientists
						2119	Natural and social science professionals <i>nec</i>

### 3 The Standard Industrial Classification

The partnership classification to the SOC classification is the Standard Industrial Classification (SIC). SIC classifications are determined according to the principal activity of an 'economic unit' – they therefore relate in the first instance to businesses, not to individuals, but can of course be used to classify individuals who are working in that business.

The SIC is an international classification standard. For example, the UK SIC (which the Dynamic Mapping methodology was first used upon) is based exactly on a European Community Standard, which itself is closely related to a wider international standard. However, in the UK where it was thought necessary or helpful, a fifth digit has been added to form subclasses of the NACE four digit classes. Thus, the UK SIC is a hierarchical five-digit system. UK SIC (2007) is divided into 21 sections, each denoted by a single letter from A to U.

The letters of the sections can be uniquely defined by the next breakdown, the divisions (denoted by two digits). The divisions are then broken down into groups (three digits), then into classes (four digits) and, in several cases, again into subclasses (five digits). There are 21 sections, 88 divisions, 272 groups, 615 classes and 191 subclasses. Again, for illustration we show how a single section sub-divides – in this case that of Construction.

The SIC undergoes frequent revisions to ensure that the classification continues to reflect the economic production system which underpins it and to reflect different forms of production and emerging new industries. At the same time, efforts are made to maintain the structure of the classification in all areas that do not explicitly require change based on new concepts. The last full revision was in 2007: the next one will not be for at least 10 years.



Dynamic mapping of Norway's cultural and creative economy

Section		Division		Groups		Classes		Sub-classes			
F	Construction	41	Construction of buildings	41.1	Development of building projects	2111	Chemical scientists				
				41.2	Construction of residential and non-residential buildings	41.20	Construction of residential and non-residential buildings				
								41.20/1	Construction of commercial buildings		
								41.20/2	Construction of domestic buildings		
		42	Civil engineering	42.1	Construction of roads and railways	42.11	Construction of roads and motorways				
						42.12	Construction of railways and underground railways				
						42.13	Construction of bridges and tunnels				
						42.21	Construction of utility projects for fluids				
						42.22	Construction of utility projects for electricity and telecommunications				
						42.9	Construction of other civil engineering projects	42.91	Construction of water projects		
42.99	Construction of other civil engineering projects nec.										

## ANNEX 2 Arriving at an initial list of cultural and creative occupations

Perhaps the most important stage in the process this report is based upon is to define the list of cultural or creative occupations, because it is this list which then 'drives' the analysis to follow and (obviously) determines the sectoral employment distributions. In this Annex we describe in more detail the process we employed to create initial lists that were then discussed at workshops in Norway with stakeholders and researchers.

There will be different views as to what constitutes 'creative occupations'. Fortunately, we had a reasonable starting point, in that in the UK NESTA and the DCMS (Department of Culture, Media and Sport) invested a considerable amount of time in identifying (and reaching a reasonable level of agreement) on what these are.

The background work for the DCMS relied mainly on professional judgement, based on what was known about the occupational group in question, allied to the definition of that occupation in the SOC classification. It was not a data-based analysis. At the same time, NESTA conducted a research project which also derived a set of creative occupations, using a different process. NESTA define Creative Occupations as being:

'a role within the creative process that brings cognitive skills to bear about differentiation – either novel, or significantly modified or enhances services, artefacts and products of value – and which produces in conformity of semantic descriptions whose final form is not known in advance of its production.'

NESTA operationalised this definition by breaking it down into five criteria:

1. **novel process:** whether the role most commonly solves a problem or achieves a goal in novel ways;
2. **mechanisation resistant:** whether the occupation has no mechanical substitute;
3. **non-repetitiveness** or **non-uniform:** whether the transformation which the occupation effects vary each time;

4. **creative contribution** to the value chain: whether the outcome of the occupation is novel or creative irrespective of the context in which it is produced; and

5. **interpretation**, not mere transformation: whether the role merely 'shifts' the service or artefacts form or place or time.

NESTA note that each of these five criteria are problematic when considered in isolation, and they do not offer hard and fast rules for determining whether an occupation is or is not 'creative'. There are also connections between them: it is unlikely that the activities of an occupation which satisfies one of these criteria will also satisfy others. But it is worth noting that whilst this is undoubtedly a more structured and systematic process, the scoring against each of these criteria is again done by professional judgement – there is still no data to measure a creative occupation.

Interestingly, the development of creative occupation lists using these two different methodologies produced lists which were very similar. The majority of differences in the two separate lists are created by the use of different SOC classifications (2000 for NESTA, 2008 and 2010 for this research). When like-for-like comparisons are made, there are only three differences in the occupations included in the respective lists.

Accepting this previous work as a valid starting point, then the process we have followed below is to:

- map the list of Creative Occupations across from the UK SOC list to the occupational coding system used in Norway: which is called STYRK08 (Standard for yrkesklassifisering):
  - the Norwegian system can be found at: <http://stabas.ssb.no/ItemsFrames.asp?ID=8088501&Language=en>
  - the UK system can be found at: <http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/soc2010/index.html>
- examine the STYRK08 to see if whether there are any occupations which exist within this system which do not exist in the UK systems which may warrant inclusion;
- examine this list to consider whether there are any occupational groups whose

inclusion is doubtful in the view of Norwegian policy makers.

It is important to note at this stage that the discussion of these SOC groups was based only on professional judgement – on what is known about the SOC group in question. It was not a data-based analysis.

We undertook a mapping of the UK's list of Creative Occupations, based on the SOC08, to the Norwegian STYRK08. In the majority of cases there is a reasonable match across. Points to note:

- the UK list has three additional architecture-related codes (SOC 2432, Town Planning Officers, SOC 2435, Chartered architectural technologists and SOC 3121 Architectural and town planning technicians which do not seem to have equivalents in the STYRK08);
- The UK list contains SOC 3413 (Actors, entertainers and presenters) which is disaggregated into two codes in the STYRK08, 2655 (Actors) and 2656 (Announcers on radio, TV and other media). In the UK list there would have been a preference not to include the presenters and announcers if this had been an option.

## The UK Creative Occupations list mapped onto the Norwegian Standard classification of occupations

UK SOC (2010)		Norway (STYRK08)	
1132	Marketing and sales directors	1221	Sales and marketing managers
1134	Advertising and public relations directors	1222	Advertising and PR managers
1136	Information technology and telecommunications directors	1330	Information and communications technology service managers
2135	IT business analysts, architects and systems designers	2511	Systems analysts
2136	Programmers and software development professionals	2512	Software developers
2137	Web design and development professionals	2513	Web and multi-media developers

Dynamic mapping of Norway's cultural and creative economy

2431	Architects	2161	Building architects
		2162	Landscape architects
2432	Town planning officers	2164	Town and traffic planners
2435	Chartered architectural technologists	-	No equivalent
2451	Librarians	2622	Librarians and related information professionals
2452	Archivists and curators	2621	Archivists and curators
2471	Journalists, newspaper and periodical editors	2642	Journalists
2472	Public relations professionals	2432	Public relations professionals
2473	Advertising accounts managers and creative directors	2431	Advertising and marketing professionals
3121	Architectural and town planning technicians	-	No equivalent
3411	Artists	2651	Visual artists
3412	Authors, writers and translators	2641	Authors and related writers
3413	Actors, entertainers and presenters	2655	Actors
		2656	Announcers on radio, TV and other media
3414	Dancers and choreographers	2653	Dancers and choreographers
3415	Musicians	2652	Musicians, singers and composers
3416	Arts officers, producers and directors	-	No equivalent
3417	Photographers, audio-visual and broadcasting equipment operators	3431	Photographers
3421	Graphic designers	3432	Interior designers and decorators
		2166	Graphic and multimedia designers
3422	Product, clothing and related designers	2163	Product and garment designers

3543	Marketing associate professionals	-	No equivalent
5211	Smiths and forge workers	7221	Blacksmiths, toolmakers and forging press workers
5411	Weavers and knitters	7318	Handicraft workers in textiles, leather and related materials (but see below)
5441	Glass and ceramics makers, decorators and finishers	7315	Glass makers, cutters, grinders and finishers
		7314	Potters and related workers
5442	Furniture makers and other craft woodworkers	7522	Cabinet makers and related trades workers
5449	Other skilled trades not elsewhere classified	7319	Handicraft workers nec

## Additional codes within STYRK08

There are other SOC codes which are occupational codes in the STYRK08 which were considered worth noting:

- whilst the UK list includes Architects (SOC 2431), STYRK08 has an additional code for **Landscape Architects** (2162) which does not exist in the UK SOC, with the nearest equivalent being Gardeners and landscape gardeners (SOC 5113), which was considered in the UK list but rejected;
- the STYRK08 has an additional code of 2514 (**Application programmers**), for which there is no equivalent in UK SOC. A decision was needed over whether this IT code should be included in the list or not – indeed the issue of IT occupations is discussed further below;
- the STYRK08 has a distinction between 2641 (**Authors and related writers**) and 2643 (**Translators, interpreters and other linguists**), which the UK does not have - these are conflated within SOC 3412 (Authors, writers and translators).
- the STYRK08 has extra codes in the broader 3-digit SOC of Creative and performing artists (265) which the UK SOC does not have of (i) 2654 (**Film, stage and related directors and producers**) and (ii) 2659 (**Creative and performing**

**artists not elsewhere classified**). It was deemed consistent to include this code in the definition.

- the STYRK08 has a code of 3433 (**Gallery, museum and library technicians**), which has no equivalent in UK SOC. This brought up questions as to whether this would warrant inclusions, sitting as it does, within the wider SOC of 343 (Artistic, cultural and culinary associate professionals. Similar consideration was given to 3434 (**Chefs**)<sup>7</sup> and to 3439 (**Other artistic and cultural associate professionals nec**), which has no equivalent in UK SOC.
- the Norwegian STYRK08 have a greater degree of identification (and a far preferable definition) in the area of 'craft' or handicraft. The areas where there is commonality include:
  - 7311 (**Precision instrument makers and repairers**) which has a UK equivalent of 5224 (Precision instrument makers and repairers). Similarly, 7531 (**Tailors, dressmakers, furriers and hatters**) does have a UK equivalent (SOC 5414) but it was decided not to include these SOC codes in the list;
  - Other areas of handicrafts group codes are, in the UK, grouped in a 'catch-all' category of SOC 5449 (Other skilled trades). These include 7312 (**Musical instrument makers and tuners**), 7313 (**Jewellery and precious metal workers**), 7316 (**Sign writers, decorative painters, engravers and etchers**), 7317 (**Handicraft workers in wood, basketry and related materials**). As Other skilled trades are included in the UK list of Creative Occupations, this suggested to us that these codes should also be included;
  - an area which is less clear is 7318 (**Handicraft workers in textile, leather and related materials**) which may overlap with the UK SOC 5411 (Weavers and knitters in the UK), but there is also a SOC 5413 (Footwear and leather working trades) which also may overlap.

The STYRK08 code of 1223 (**Research and development managers**) does have an equivalent in the UK SOC of 2150 (also Research and development managers). This was considered in the UK classification but rejected. This was partly because in the UK classification, this SOC code sits alone, but in the STYRK08 it sits within the broader 3 digit SOC of 122 (Sales, marketing and development managers). As the other two component parts of this SOC have been included (1221 and 1223) further consideration was given in the consultation process to including 1223 as well.

<sup>7</sup> The possible inclusion of Chefs was discussed for the UK Creative Occupational list as a similar UK SOC exists (5434, Chefs), but was considered too far down the hierarchical scale to be included.

Two other categories that could be included based on discussion are:

- **1431** Sports, recreation and cultural centre managers;
- **5241** Fashion and other models

Reconsidering included codes

Possibly the biggest areas of controversy in the UK process was the inclusion of:

- a number of ICT-related SOC codes: 1136 (Information technology and telecommunications directors), 2135 (IT business analysts, architects and systems designers), 2136 (Programmers and software development professionals) and 2137 (Web design and development professionals). In addition, there was a further code 2139 (IT professionals nec) considered but not included; and
- the inclusion of the 1132 (Marketing and sales directors), which were included as an equivalent to 1134 Advertising and public relations directors.

## A baseline list

Bearing in mind the discussion above, we proposed an initial 'baseline' list of Creative occupations. A methodology document/paper was distributed to stakeholders as well as made available on the web. Note that this was intended for discussion only and as a starting point for further consideration. Workshops in Norway with stakeholders and researchers used this list as a starting point for discussion.

We present this in two ways – with the occupations listed:

- in their hierarchical SOC order;
- with the Creative Occupations grouped together in 'Creative Groups', to give an indication of how these fit together. Note that this is by far from a perfect process. The placing of some occupations in these wider groups sometimes feels arbitrary and, below, leaves a very small Film and TV sector, with some of their perhaps obvious occupations (e.g. Film, stage and related directors and producers) being placed elsewhere. There are also two occupational groups 3434 (Chefs) and 3439 (Other artistic and cultural associate professionals nec) which we were unable to place.



## Initial Baseline suggestions for Norwegian Creative occupations

SOC code order		Creative occupation groups		
1221	Sales and marketing managers	Advertising and marketing	1221	Sales and marketing managers
1222	Advertising and PR managers		1222	Advertising and PR managers
1330	Information and communications technology service managers		2431	Advertising and marketing professionals
2511	Systems analysts		2432	Public relations professionals
2512	Software developers	Architecture	2161	Building architects
2513	Web and multi-media developers		2162	Landscape architects
2161	Building architects			Town and traffic planners
2162	Landscape architects	...	7221	Blacksmiths, toolmakers and forging press workers
2163	Product and garment designers		7311	Precision instrument makers and repairers
2164	Town and traffic planners		7312	Musical instrument makers and tuners
2166	Graphic and multimedia designers			
2622	Librarians and related information professionals		7313	Jewellery and precious metal workers
2621	Archivists and curators		7314	Potters and related workers
2642	Journalists		7315	Glass makers, cutters, grinders and finishers
2431	Advertising and marketing professionals		7316	Sign writers, decorative painters, engravers and etchers
2432	Public relations professionals		7317	Handicraft workers in wood, basketry and related materials

Dynamic mapping of Norway's cultural and creative economy

2641	Authors and related writers		7318	Handicraft workers in textiles, leather and related materials (but see below)
2651	Visual artists	<b>Crafts</b>	7319	Handicraft workers nec
2652	Musicians, singers and composers		7522	Cabinet makers and related trades workers
2653	Dancers and choreographers			
2654	Film, stage and related directors and producers			
		<b>Design</b>	3432	Interior designers and decorators
			2163	Product and garment designers
2655	Actors		2166	Graphic and multimedia designers
2659	Creative and performing artists nec	<b>Film, TV, video, radio and photography</b>	3431	Photographers
3431	Photographers	<b>IT, software and computer services</b>	1330	Information and communications technology service managers
3432	Interior designers and decorators		2511	Systems analysts
3433	Gallery, museum and library technicians		2512	Software developers
3434	Chefs		2513	Web and multi-media developers
3439	Other artistic and cultural associate professionals nec			
7221	Blacksmiths, toolmakers and forging press workers	<b>Publishing</b>	2642	Journalists
				Authors and related writers
7311	Precision instrument makers and repairers	<b>Museums, galleries and libraries</b>	2622	Librarians and related information professionals
7312	Musical instrument makers and tuners		2621	Archivists and curators
7313	Jewellery and precious metal workers		3433	Gallery, museum and library technicians

Dynamic mapping of Norway's cultural and creative economy

7314	Potters and related workers	...	2651	Visual artists
7315	Glass makers, cutters, grinders and finishers		2652	Musicians, singers and composers
7316	Sign writers, decorative painters, engravers and etchers	<b>Music, performing and visual arts</b>	2653	Dancers and choreographers
7317	Handicraft workers in wood, basketry and related materials		2654	Film, stage and related directors and producers
7318	Handicraft workers in textiles, leather and related materials (but see below)		2655	Actors
7319	Handicraft workers nec		2659	Creative and performing artists nec
7522	Cabinet makers and related trades workers		<b>Other ungrouped</b>	3434
		3439		Other artistic and cultural associate professionals nec

