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The Interreg IVB North Sea Region Programme
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TU Delft Delft University of Technology
creative city challenge

Transnational learning in Creative City Challenge

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Contents

1 Introduction

1.1 Creative City Challenge

In order to enhance their innovative capacity, many cities have placed the creative city concept on their policy agenda. Current policies focus on improving entrepreneurship in creative industries, on building networks of entrepreneurs or providing space for such activities, and on developing creative zones, incubator spaces or hotspots, covering the people as well as the business oriented perspective. Still lacking however, is an integrated evidence-based strategy for cities to strengthen their innovative capacity that also explicitly takes into account the interactions between these local policies and the goals set in the European growth agendas.

The INTERREG IVB project Creative City Challenge (CCC) aims to build and implement such a strategy, in order to foster creativity and innovation. The project centres around a series of innovative pilot projects developed and carried out by, and in, cities across the North Sea Region, hence having a strong transnational basis, as a link between local practices and European policy aims. These pilot projects take the triple helix of government, knowledge institutions and private businesses as a starting point, thus contributing to a strong programme of transnational interchange of learning, materials and best practice.

Within the CCC project, various Work Packages deal with entrepreneurship, networking and creative zones and hotspots. Work Package 6 on 'Research-based strategy development' aims to integrate other WPs, by means of guiding of, and providing feedback on their activities. Within WP6, Activity 6.5 specifically focuses on 'transnational learning'. It aims so stimulate discussion and the exchange of knowledge and experiences between the project partners, by organizing a number of expert meetings based on explorative discussion papers.

1.2 Overview of activities

Four expert meetings were organized:

1) 'Economic downturn: a threat for creative city policy or a blessing in disguise?', Kortrijk, 20 October 2010. Hilke Ros from Music Motion Manager attended as an external expert. Luis de Carvalho from Erasmus University Rotterdam had to cancel his participation, but provided his feedback afterwards. Wil Zonneveld from Delft University of Technology chaired the meeting.
2) 'The creative city – a sustainable city? An exploration of the impact of sustainable innovation and sustainable urban development on the performance of creative industries', Høje Taastrup, 6 May 2011. Experts were Steen Oleson from Høje-Taastrup Kommune and Anna Thormann from Gate 21 Sustainable Future Forum. Ana María Fernández-Maldonado from Delft University of Technology chaired the meeting.
3) 'Scene meets science: exploring the interactions between creative industries and knowledge institutions', Bremen, 23 November 2011. Experts were Detlef Rahe from Bremen University of Applied Arts and Yvonne Rheinhardt from Copenhagen Business School. Wil Zonneveld from Delft University of Technology chaired the meeting.

4) ‘Lessons learnt: partners’ reflections on the process and outcomes of Creative City Challenge’, Groningen, 19 September 2012. Karin Vosters chaired the meeting.

The first three meetings focused on topics that emerged from the project. These were considered relevant for the partners and pilot projects in CCC, but also relatively new and unexplored. Starting point for each meeting was a discussion paper, written by Delft University of Technology.

The fourth meeting dealt with the lessons learnt from the project by the partners and therefore has a somewhat different character than the first three meetings. A paper was written also in preparation of this meeting, this time on the basis of input provided by the project partners. No external experts were invited, as it was considered that the project partners themselves were ‘experts’ on the lessons they learnt. Instead, a professional moderator and team coach was invited to chair the meeting and guide the discussion.

1.3 The current report

The application form of CCC mentions two reports for Activity 6.5: first, a bundle of the four discussion papers, and second, an activity report on the process of transnational learning. In practice, however, the two reports are closely related and it hardly makes sense to separate them. Therefore, after consulting the lead beneficiary, we decided to combine the two reports in a single volume.

Chapters 2 to 5 of this ‘combined’ report present the four discussion papers. We choose to include the most current version of these papers, as the first three papers have been revised on the basis of the discussion at the expert meetings as well as other comments, and have as such been presented at various conferences. After this, Chapter 6 deals more in detail with the process itself of transnational learning and the way it has been implemented in the CCC project.

2 Economic downturn: a threat for creative city policy or a blessing in disguise?

Expert meeting organized in Kortrijk on 20 October 2010. This chapter includes a revised version of the discussion paper, presented at the RSA Annual International Conference 2011'Regional development and policy – challenges, choices and recipients', Newcastle upon Tyne, 17- 20 April 2011.

2.1 Introduction

This paper addresses the issue of economic downturn and its possible effects on the development of creative economy and creative city policy. Its argument, in a nutshell, is twofold. The current economic downturn might be a decisive factor for urban and regional policy-makers to move towards stimulating and supporting a more creative industry-oriented economy in the broad meaning, i.e. involving production of both goods and services. As such, it might even be considered a blessing in disguise: the crisis as a challenge. However, downturn may also be a factor that causes a retreat of policy in more 'safe' and 'familiar' economic activities rather than creative industries and milieus.

Local and regional policy making authorities have paid increasing attention since the late 1990s to the growth of creative industry for urban economic development. As one of the very first, Huddersfield (UK) dubbed itself 'The Creative Town' in 1997. Over the years, the objectives of creative industry development in urban policies have become increasingly versatile: next to economic growth, these now include also social cohesion, cultural diversity and physical quality of urban spaces. This trend has been accompanied by a growing amount of research-based literature and, as habitual, a fierce debate among academics between clear-cut advocates and sceptics and critics of the positive role of creative industries development in urban policy.

One aspect that has been hardly discussed in the debate about creative industry development in urban policy: the inevitable investments in creative city policy. To develop a flourishing sector of creative industries in cities requires at least investment by local and regional governments, property developers, and financiers, both monetary (subsidies, loans, grants, etc) and non-monetary (training schemes, incubator programmes etc.).[1] It is exactly the current economic downturn that now forces these investors to austerity policies and to more caution with regard to risk-taking. This raises the question if they still prepared to invest in creative industry development as they were before 2008? In spite of observations that the negative impact of the economic crisis is less on creative industries than on traditional mature economic sectors, this readiness is not self-evident.

Although still little academic literature is available currently about the effects of the economic downturn on the creative economy and – city, consultancy reports and discussions in the media and on seminars and conferences indicate that it is indeed a major topic. This elaboration of possible impacts of the downturn on creative city policy is an explorative

[1] KEA European Affairs (2010) 'Promoting investments in the cultural and creative sectors: Financing needs, trends and opportunities', Report prepared for ECCE Innovations and Nantes Métropole. http://www.keanet.eu/docs/access%20to%20finance%20study_final%20report_kea%20june2010.pdf.

exercise: we strived for a concise and thought-provoking rather than for a comprehensive paper that highlights the two opposite arguments mentioned above. The paper is an edited version of a discussion paper we prepared in the INTERREG IVB project *Creative City Challenge* (CCC), which involves nine, mostly medium-sized, cities and city-regions in six countries in the North Sea Region.[2] The two opposite arguments as discussed in the paper are being illustrated by quotes from a SWOT analyses to shed light on the potentiality for creative industry development of the partner cities and regions in the project.

2.2 Background: path dependency and loose embeddedness of creative city policy

Path dependency describes the process by which an event in the past induces a chain of subsequent events according to an *almost* deterministic pattern. Thus, the possible choices of decision makers on any moment in time are constrained by preceding occurrences and decisions, and therefore can only be the result of bounded rationality. This means that path dependency is likely to lead to suboptimal situations.[3]

The classic example of path dependency is the development of the QWERTY keyboard.[4] Once introduced to prevent typewriter typebars to get jammed, it continued to be the standard also among non-typebar machines, and even after the typewriter itself had become obsolete. Other keyboard arrangements enable faster typing, but they are off-standard and not part of typists' education. For each user the benefits of being compatible to the existing system compensate for the costs of changing to another, technologically superior system. However, for the system as a whole this means a suboptimal situation (see Figure 2.1).

Many economic transformation processes also give evidence of a strong institutional path dependency. In traditional industrial cities, the focus of local authorities still tends to be the manufacturing industry, in which large investments have been made and which is in many cases deeply involved in local governance, sometimes unwittingly. A deeply rooted 'industrial mindset' and past investments in the manufacturing sector thus may pose a burden on the development of a service economy. Grabher found this to be the case for the steel industry in the Ruhr area, Kloosterman and Trip for the seaport industry in Rotterdam.[5] Nevertheless, the

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[2] Romein, A. and J.J. Trip (2010) 'The creative production and consumption milieu. Framework Report 6.1, written within the framework of the NSR INTERREG IVB project Creative City Challenge', Delft: Delft University of Technology; Romein, A. and J.J. Trip (2010) 'The creative economy in CCC cities and regions. SWOT Analysis Report 6.2, written within the framework of the NSR INTERREG IVB project Creative City Challenge', Delft: Delft University of Technology.

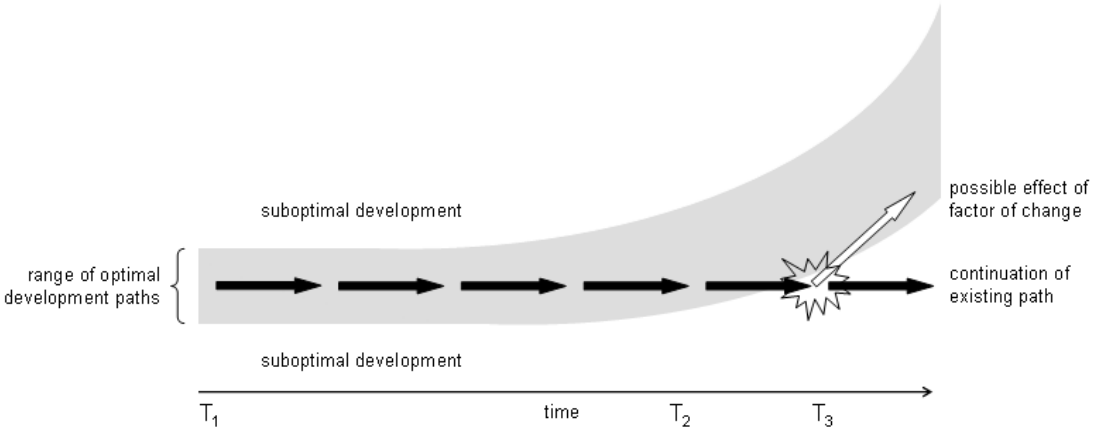
[3] Pierson, P. (2000) 'Increasing returns, path dependence, and the study of politics', American Political Science Review, Vol. 94 No. 2, p. 251-267; Kay, A. (2005) 'A critique of the use of path dependency in policy studies', Public Administration, Vol. 83 No. 3, pp. 553-571; Howlett, M. and J. Rayner (2006) 'Understanding the historical turn in the policy sciences: a critique of stochastic, narrative, path dependency and process-sequencing models of policy-making over time', Policy Sciences, Vol. 39, pp. 1-18.

[4] David, P. (1985) 'Clio and the economics of QWERTY', American Economic Review, Vol. 75, pp. 333-335.

[5] Grabher, G. (1993) 'The weakness of strong ties; the lock-in of regional development in the Ruhr area', in: G. Grabher (ed.) The embedded firm; on the socioeconomics of industrial networks, London/New York: Routledge, pp. 255-277; Kloosterman, R. and J.J. Trip (2004) 'Gestold modernisme. Een analyse van de Rotterdamse economie vanuit een postindustrieel perspectief' [Frozen modernism. An analysis of

question remains why some cities are capable to change, while others in comparable circumstances are not.[6]

Figure 2.1: Adaptation of a suboptimal development path due to a factor of change.



Path dependency does not imply that the situation at a given moment in time can be predicted with complete certainty from the initial event. Actually, it remains possible all times to leave a taken path. This will normally be a hard and long-term process however, because the course of development is locked-in in its earlier stages, and the costs of reversal, or of adaptation to an alternative path, are often high. Normally, but not for certain, a path will only be left due to a structural cause or factor of change (Figure 2.1). The so-called policy philosophy model distinguishes between a normative core and a policy core of urban policy.[7] The normative core involves basic principles and guidelines of urban policy, particularly values and axioms regarding the relationship between the major trends of urban development – economic, social, cultural, environmental – and of the institutional organisation of governance. This core both motivates and legitimates the policy core, i.e. the whole of planning concepts and strategies, programmes and projects in the practice of urban policy. Changes in the policy core can be introduced within the context of a relatively stable ruling normative core, but in the course of time more structural causes or factors of change cause the substitution of the ruling policy philosophy with a new, competing one.

It remains to be seen whether the current economic downturn may cause a new normative core to take over power in urban policies. It leaves little doubt however take it can be regarded as a structural factor of change. When it popped up in the second half of 2007 however, the development paths of urban economies grounded in manufacturing, and to

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Rotterdam's economy from a post-industrial perspective], in: F. Becker, W.R. van Hennekeler, M. Sie Dhian Ho, B. Tromp and M. Linthorst (eds.) Rotterdam; het vijfentwintigste jaarboek voor het democratisch socialisme, Amsterdam: Mets & Schilt/Wiardi Beckman Stichting, pp. 39-57.

[6] Martin, R. and P. Sunley (2006) 'Path dependence and regional economic evolution', Journal of Economic Geography, Vol. 6, pp. 395-437.

[7] Sabatier P. A. (1987) 'Knowledge, policy-oriented learning and policy change', Knowledge: Creation, Diffusion, Utilizations, Vol. 8, No. 4, pp. 649-692; Vermeijden, B. (2001) 'Dutch urban renewal, transformation of the policy discourse 1960-2000', Journal of Housing and the Built Environment, Vol. 16, pp. 220-232.

some extent also those based on FIRE services (financial, insurance and real estate), were already under pressure and losing momentum. Urban policies that had kept focusing on these economic sectors gradually shifted towards, or crossed, the margins of the optimal development paths (the grey belt in Figure 2.1), hence losing effectiveness for local economic development.

On the whole, urban economic policies have not stuck exclusively to manufacturing and traditional services. Actually, increasing policy efforts have been aimed at stimulating creative industries and the creative city since the turn of the century, more in particular since Florida became a best-seller.[8] This is illustrated by a survey conducted by EUROCITIES in 2008 that mapped 30 large European cities revealing that 80 percent of these had cultural and creative industries programmes supported by local and regional funding.[9] The big picture is rather diffuse, however. Over all, the embeddedness of the creative city in local policy is not very solid so far, implying that the downturn may be a stimulus to putting this type of policy into action, but also a threat.

2.3 Impacts of economic downturn for local and regional governments

In order to assess the possible effects of economic downturn on local and regional policy, we first present a brief characterisation of rapid evolution of crises that have lead to the current economic downturn and of its consequences for local and regional governments, in particular their finances.

What is being called an economic downturn or recession in the past few years is composed of a rapid accumulation of several subsequent but interconnected crises, none yet resolved, that started in 2007 as a mortgage crisis in the US.[10] The key catalyst for that crisis was "[t]he transformation of sub-prime mortgages [loans made to individuals and households that previously would have been subject to financial exclusion] into investment assets".[11] Problems started because regulation failed and "[t]he ability of these mortgagees to repay was undermined by a shift in monetary conditions and an increase in interest rates".[12] Due to a wave of fear that paralyzed investors, large banks could no longer obtain financing in the market and were forced to take commercial paper that had financed the booming market for mortgage-backed debt obligations back on their balance sheet, leading to enormous losses.[13] What started as a mortgage crisis, then extended into an international banking crisis due to

[8] Florida, R. (2002) 'The rise of the creative class; and how it's transforming work, leisure, community and everyday life', New York: Basic Books.

[9] EUROCITIES (2009) 'Towards a European Commission green paper on cultural and creative industries: Eurocities recommendations', http://www.eurocities.eu, retrieved August 2010.

[10] Experian/SEEDA (2009) 'The impact of the downturn on the creative industries', http://www.seeda.co.uk/_publications/impactDownturnCreativeIndustries09.pdf, retrieved August 2010; Lee, R., G.L. Clark, J. Pollard and A. Leyshon (2009) 'The remit of financial geography – before and after the crisis', Journal of Economic Grography, Vol. 9, pp. 723-747; Dymski, G.A. (2010) 'Confronting the quadruple global crisis', Geoforum, Vol. 41, pp. 837-840.

[11] Lee, R., G.L. Clark, J. Pollard and A. Leyshon *op. cit.*, p. 740.

[12] *Ibid.*

[13] Dymski, G.A. *op. cit.*, p. 837.

the high level of connectivity of the global banking system. Governments saw themselves obliged to astronomic loans to banks in order to avoid the fall down of their national financial systems, leading to large fiscal deficits (fiscal crisis).

A link between the financial crisis and the real economy became particularly evident in late 2008. Just saved from downfall by government loans, a spasm of fear among banks has rapidly declined their willingness for intra- and interbank lending, reducing their capacity to lending to businesses and households. A slump in demand that has yet to be fully played out for a great many goods- and services producing industries has led to a rapid spread of recession of the 'real economy' lead.[14] Public budget deficits in the advanced countries jumped from 1.2 per cent of GDP in 2007 to 8.9 per cent in 2008, and real GDP growth reached 2.8 per cent in 2007 but then fell to 0.5 per cent in 2008 and -3.2 per cent in 2009.[15]

Systematic information about the size and nature of impacts of the composite of crises on the different sectors in local and regional economies is still limited. But in spite of this lack of detailed information, it is clear that it has severely impacted upon both local and regional economies and governments. Local and regional policy making authorities became forced to stiff austerity policies, and the reduced preparedness by banks to risk-taking has rapidly declined their willingness to lend. In particular starting and small businesses in new economic activities were impacted by this lack of credit.

The Council of European Municipalities and Regions (CEMR) conducted a survey in March 2009 among its national member associations of local or/and regional authorities with the aim to assess these impacts. A summary of the response by 25 national associations includes seven main impacts.[16] Some additional information is obtained from a sample of four small and medium-sized cities.[17] These impacts are:

1) *Loss on investments in the banking sector* – To those local and regional authorities who invested in the banking sector, the banking crisis implies a depreciation of financial products in which they had invested, a drop of the market value of their shares in banks, and a loss in income from dividends. The worst case scenario however, is the loss of all their money because of bankruptcy of banks.
2) *Loss on tax revenues* **–** Types of tax revenues affected are personal income tax due to increasing unemployment, company income tax due to lower consumption, and real estate tax due to fall-out of local housing market and lower investments in construction. The latter is often a rather immediate manifestation of economic slowdown.
3) *Lack of credits and high cost of borrowing* – The crisis in the banking sector has affected the availability of credits. Banks are now seeking lower-risk borrowers than before. Although the municipal sector in general has a relatively high rating in this respect, the requested volumes of credits often are only available at high interest rates due to liquidity shortage on the market, if available at all.

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[14] Experian/SEEDA *op. cit.*, p. 2.

[15] Finfacts Team (2010) 'Direct cost of global financial crisis of 2007-09 may be lowest on record; indirect costs have been breaktaking so far', http:/www.finfacts.ie/irishfinance news/article_1019702.shtml, retrieved May 2010.

[16] CEMR (2009) 'The economic and financial crisis. impact on local and regional authorities', CEMR, Paris/Brussels, http://urbact.eu/fileadmin/corporate/doc/News/CEMR%20CCRE.pdf, retrieved August 2010.

[17] Rivas, M. (undated) 'Learning from troubled times: city reactions to economic crisis', http://www.urbact.eu/creative_clusters, retrieved Sept. 2010.

4) *Cash liquidity problems* – From some countries, difficulties in cash liquidity are reported due to lowered transfers of grants by the national to the local states. This involves either a general cut, a denial to some municipalities, or even an overall poor payment discipline by national authorities.
5) *Increased expenditure* –The responding associations have reported almost universally worries about expected increases of expenditures, in particular due to higher demand for social and welfare services as a consequence of citizens' loss of employment and income.
6) *Cuts in local authorities' staff* – Municipalities and councils, especially those severely affected by the direct impacts of the downturn, find themselves in the need to cut back on the number of employees in order to facilitate savings and decrease the personnel expenditure. This might contribute to the overall balance on the local job market and aggravate the social situation.
7) *Reduced service levels and slow-down of local and regional development* – The increased pressure on local governments' budgets and growing scarcity of credits affects ongoing expenditures in general service levels and investments in physical regeneration and infrastructure projects.

This a gross list of reported impacts. Their nature, size and even mere occurrence differ considerably between national associations of local governments and between local governments within one and the same association. Not all associations or municipalities have invested in banks or their financial products, municipalities in different countries levy different types and sums of taxes, and the proportion of their total budgets revenues that depends on local taxes differ. Likewise, municipalities' contribution to social expenditure and the types and size of 'packages' launched by national states to compensate for their liquidity problems differ between countries. However, hardly any city has remained undamaged by these impacts.

Urban and regional policy making authorities have invented and implemented an impressive variety of measures to counteract damages. Based on a survey responded by 131 European cities in 2009, URBACT distinguishes responses to two major challenges: employment (where will the future jobs come from?) and governance (how to manage of our cities in the face of major cuts of public finance?).[18] With regard to future jobs, the survey revealed three broad, non- exclusive categories of responses: Promoting the Smart, the Green and the Good; Working on the demand side with diversified 'jobs rich' industries; and Investment to increase quality of life and long-term attractiveness of the city.[19] Attempts by cities to grow and attract as many knowledge-intensive industries as possible and to improve conditions for business start-ups and entrepreneurship are mentioned explicitly in the exemplification of these responses, but creative industries are not. The scenario that suggests that the creative sector may eventually benefit from the economic downturn is plausible, but the opposite scenario - economic downturn as a threat to the creative economy and creative city policy – still may also be popular among urban policy makers.

2.4 Economic downturn as a threat

A first scenario can be imagined in which economic downturn emerges as a major threat to the creative economy. The creative economy is still considered by many (including policy-makers and credit providers) as a risky whim, rather than as a solid economic sector. Faced with

[18] URBACT (2010) 'URBACT cities facing the crisis. Impacts and responses.'

[19] *Ibid.*, p. 15-18.

economic downturn and budget cuts, policy-makers might therefore choose to focus on the 'real economy', as Felton *et al.* refer to manufacturing and FIRE services rather ironically, and on traditional competition factors such as physical infrastructure.[20] This may imply that creative city policies are downsized or completely ceased, and the creative economy disappears from the policy agenda. They may also be maintained in an austere form as strictly business-oriented policies, as for instance social policy and culture are more likely victims of budget cutting than 'hard-core' economic policies such as the provision of business spaces.

A number of specific characteristics of the creative industries can be distinguished that make this sector vulnerable in periods of economic downturn:

1) *Fragmented business structure* – The creative industries tend to consist of a bifurcated size-distribution of firms, including relatively large numbers of small or at best medium-sized business that have little resilience to financial setbacks. This may make them more vulnerable in the short term than the usually larger firms in most other sectors.
2) *High degree of specialization* – Many creative firms are not only small, but also highly specialized ('atomised') and dependent on supply chain linkages both inside and outside the creative industries. This makes them rather sensitive to the negative effects of downturn in other businesses or sectors. Advertisement is an example; so is architecture, which is highly dependent on the construction and development sector which, in its turn, used to be particularly affected by downturns.
3) *Limited access to credit facilities* – Compared to business in traditional sectors, creative industries find it relatively hard to gain access to credit facilities, mainly because traditional credit providers are not familiar with these new and 'experimental' activities.[21] This problem becomes worse in times of economic downturn, particularly during the current 'banking crisis'.
4) *Lack of entrepreneurial skills* – Many 'creatives' consider themselves not primarily as 'entrepreneurs' – Clews comments that "students and graduates in art, design and media are uncomfortable with the term entrepreneur" for fear of losing artistic integrity or aesthetic quality – although they operate on a more or less commercial base.[22] Actually, many lack the entrepreneurial skills that are required to guide their firm through the crisis.[23] Moreover, skills training tends to be among the first things that are cut when budgets become tighter.

The above factors indicate that creative industries are vulnerable in times of economic downturn, but so may be other types of industries. Policy may aim at, for instance, the provision of additional credit facilities or training modules for creative entrepreneurship. However, as policy-makers have to cut budgets or face massive expenditure on social benefits,

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[20] Felton, E., M.N. Gibson, T. Flew, P. Graham and A. Daniel (2010) 'Resilient creative economies? Creative industries on the urban fringe', Continuum: Journal of Media & Cultural Studies, Vol. 24, No. 4, pp. 619-630.

[21] Caves, R.E (2000) 'Creative industries: contracts between art and commerce', Boston: Harvard University Press; Henry, C. (ed., 2007) 'Entrepreneurship in the creative industries', Cheltenham (UK) and Northampton (MA, USA): Edward Elgar.

[22] Clews, D. (2007) 'Creating entrepreneurship: entrepreneurship education for the creative industries', Brighton: Higher Education Academy Art, Design, Media Subject Centre, p. 67.

[23] Aggestam, M. (2007) 'Art-entrepreneurship in the Scandinavian music industry', in: C. Henry (ed.) *op. cit.*, pp. 30-53; Pestrak, G. (2007) 'Managing the growth challenge in creative businesses', in: Hagoort, G., A. Oostinjen, M. van Thiel and J. Szita (eds.) Read this first. Growth and development of creative SMEs, Utrecht, CMKBU, http://www.cmkbu.nl/p/0/129/ECCE--English.

they may also choose to abandon the idea of the creative city altogether and focus on other priorities. Several factors account for that:

1) *Rising unemployment* – Economic downturn confronts policy-makers with acute problems of increasing unemployment. The debate in favour of the creative economy focuses on quite a set of objectives, including innovation, jobs, wealth creation, social cohesion and urban regeneration that are not easy to disentangle, hence appearing unattractive for policies to address the issue of unemployment directly and on a short-term. Moreover, the specialized nature of the creative industries implies that they can hardly be considered a 'safety net' to absorb unemployment in other sectors such as manufacturing.
2) *Relative invisibility of downturn in creative industries* – Creative industries consist for a large part of micro-business and freelancers, who go out of business gradually. In contrast, rising unemployment in traditional sectors may bring about sudden massive redundancies that attract more attention of policy-makers, media and the general public. An urgent call for measures to fight unemployment in these sectors is more likely, therefore, than a similar call in favour of the creative industries.
3) *Limited direct employment effects* – The importance of the creative industries as vital component of innovative (competitive) local economy is often underestimated. The creative economy is promising and receives a lot of attention, but its direct contribution to local employment is relatively small after all. Investment in creative industries is therefore often not thought of as a short-term solution for unemployment. Instead, it is more likely that policy-makers will focus on larger, more traditional sectors.
4) *Unpredictable policy effectiveness* – The creative sector is hard to define because it encompasses a wide variety of types of activities and jobs – Russo and Van der Borg speak of a "hodgepodge of estimation procedures and definitions."[24] Hence, the question whether this sector is well placed to weather the storm of the downturn is very difficult to answer. Despite the rhetoric about its large potential for the local economy, hard evidence remains relatively scarce.[25] The supposed contribution of creative industries to the local economy is rather unpredictable and uncertain, at least compared to that of traditional sectors. Moreover, the effects of stimulation policies for creative industries may be less than expected due to still insufficient knowledge and routine.[26]
5) *Limited affinity of policy-makers* – Traditional industries are 'mentally' closer to many policy-makers. These industries often have powerful and long-established lobbies, strong professional organisations and a prominent place on policy-makers' mental map. This may be regardless of their actual and potential performance. The same is often true for large-scale – prestigious – cultural or sports events and flagships of culture-led regeneration.

In partner cities and regions in the CCC project, the current economic downturn is certainly regarded as a threat to the creative economy, and to current creative city policies. As the below quotes from the SWOT Report (with the partner that made that quote between brackets) indicate, several of the above factors are being observed, often in combination:

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[24] Russo, A.P. and J. van der Borg (2010) 'An urban policy framework for culture-oriented economic development: lessons from the Netherlands', Urban Geography, Vol. 31, No. 5, pp. 668-690 [p.668].

[25] Oakley, K. (2004) 'Not so cool Britannia. The role of the creative industries in economic development', International Journal of Cultural Studies, Vol. 7, No. 1, pp. 67-77.

[26] For example: Evans, G. (2005) 'Measure for measure: evaluating the evidence of culture's contribution to regeneration', Urban Studies, Vol. 42, No. 5/6, pp. 959-983.

> "The expectation of the performance of the creative industry may have risen even further due to 2009 European Year of Creativity and Innovation, up to a level that is practically impossible to meet. It is a main threat to the creative industry that public policy redirects priorities to other, more traditional sectors to which it attributes higher growth capacities in times of austerity policies" (Bremen).
>
> "One of the threats to the further development of the creative industry due to the economic difficulties is the shrinking amount of resources available for supporting programmes and innovative research in Flanders" (Leiedal region).
>
> "It is thinkable that mainly non-commercial sub-sectors, i.e. the Arts Council, local authorities, regional development agencies etc., will be affected by public spending cuts. The same may be true in terms of place making, i.e. for public sector financial support for building conversions, developments, public realm etc." (Newcastle-Gateshead).
>
> "Local political culture tend to be to play off different policy fields – including creative industry – against each other, especially in difficult times" (Oldenburg).
>
> "Necessary budget cuts, for instance due to the current economic downturn, may lead to a reduced willingness to invest in the creative economy. What is more, it may also lead to a redirection of priorities – and investments – towards more traditional sectors that are perceived safer as the much more experimental creative industries. This is always a threat in regions like Skaraborg, with a traditional industrial structure. Skaraborg needs leaders that are more visionary, brave and persistent" (Skaraborg region).

It is clear that policy-makers in these cities fear that budget cuts may go at the costs of creative city policy, especially as the competition for funding between various policy fields is likely to increase. Furthermore, worries are expressed that decision-makers and politicians focus too much on short term results – such as immediate measures to fight unemployment – rather than on long term economic perspectives. As Thoma states "… the structural change that must occur to move resources out of housing and the financial sector and to other, productive uses will take time to bring about."[27]

2.5 A blessing in disguise? Economic downturn as an opportunity

An alternative scenario can be thought of in which economic downturn proves to be a blessing in disguise. If the creative economy was already considered to provide a way out of a (path-dependent) dead-end development trajectory, it may now also be regarded as an escape from the recession. In this case, policy-makers could deliberately choose to intensify creative city policies, or to strengthen the focus of policies on specific sectors within the creative industries which they consider most promising. This, then, should also include the relevant types of creative consumption milieu. Such a shift in policy would assume a 'reset' of urban development, as suggested by Florida.[28]

This positive scenario is not wishful thinking, but is founded on a number of characteristics of the creative sector:

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[27] Cited in: Florida, R. (2010) 'The great reset: how new ways of living and working drive post-crash prosperity', New York: Harper, p. 106.

[28] Florida, *op. cit.*

1) *'Elasticity' to (re-)start business or combine activities* – The micro-entrepreneurs and freelancers that characterise the creative industries are vulnerable to economic downturn, but they also find it relatively easy to set up a new business (Felton *et al.*, 2010). Their working patterns are flexible and allow them to combine different part-time and temporary activities and jobs. Even in more prosperous periods it is not uncommon to combine part-time work in the creative industries with a part-time job in another sector.[29]
2) *Flexibility to adapt* – The small size and innovativeness of creative business also makes them flexible and allows them to adapt to new business models if circumstances change. For instance, it may be observed that business adopt a 'shared risk and reward model' when credit facilities become scarce.[30]
3) *Downturn generates new types of demand* – Creative industries can also benefit from some shifts in demand due to economic downturn: "Those sectors which appear to be bucking the trends do appear those that are the most innovative as well as being, to a large extent consumer-facing". Prime examples are software and computer games "benefitting from a greater number of consumers choosing to stay home and spend money on experiences e.g. computer games rather than luxury items or […] eating out in Jamie Oliver's restaurant."[31] The challenge is to capitalize on such changing consumer demands.

The above reasons may explain the flexibility and resilience of the creative sector. The question is how policy should address these issues, and whether specific stimulation of creative industries during economic downturn is necessary at all. Nevertheless, there are a number of reasons why policy-makers should explicitly focus on the creative economy rather than on more traditional sectors. In other words, what factors can support the claims of – and supposedly on behalf of – the creative industries that they have a crucial role in the achievement of balanced and sustainable economic growth?

1) *Increasing importance of symbolic values* – A main argument can be found in the assumed positive spill-over effects of the creative economy for the wider economy. These effects are, among other things, related to a 'chain reverse' from a supply to a demand driven model of consumption in which "[i]t isn't so much material goods that drive our consumption as the perceived status we assign to them".[32] Culture – design, 'experience' – add value to otherwise more mundane products and services, ranging from sneakers, electronics or cars to cosmetics (e.g. Body Shop) restaurant dinners or drinks (e.g. Starbucks, Hard Rock Café). In many cases the symbolic value of products can hardly be considered separately from the product itself and represents very tangible additional revenues, sometimes the largest part of the product's value.[33] Moreover, without the variety of products with different designs and images – say just black and brown shoes

[29] Taylor, C. (2007) 'Developing relationships between higher education, enterprise and innovation in the creative industries', in: C. Henry (ed.) *op. cit.*, pp. 178-196; Brown, R. (2007) 'Promoting entrepreneurship in arts education', in: Henry, C. (ed.) *op. cit.*, pp. 126-141; Clews, *op. cit.*; Felton *et al.*, *op. cit.*

[30] Experian/SEEDA, *op. cit.*, p. 28.

[31] *Ibid*, p. 21.

[32] Florida, *op. cit.*, p. 138.

[33] Cf. Pratt, A.C. (2009) 'The creative and cultural economy and the recession', Geoforum, Vol. 40, No. 4, pp. 495-496.

would be available – the wider economy would also be smaller as far less production and retail facilities would exist.

2) *Increasing importance of innovativeness in the global economy* – The competitiveness of western urban economies in the current global playing field requires creativity and innovativeness – competing on production costs is no option. This implies that from a long-term regional-economic perspective an explicit focus on the creative and knowledge economy is necessary. This calls for more than a number of measures aimed at specific creative industries. The symbolic value of cities and places – the creative consumption milieu – also has become an important factor of urban competitiveness.
3) *Sharpened focus due to austerity policies* – Austerity policy is inevitable in times of economic downturn. However, a restriction of the budget for creative city policies may also lead to a sharper focus of policies. Creative industries are diverse. Various sectors operate in different markets, have different location preferences and are more or less embedded in the local production structure and labour market. Many creative city polices are rather diffuse and general, while, as Jarvis *et al.* suggest, "[…] a more effective approach might be to focus specifically on mapping, understanding and supporting particular niches within the creative industries rather than viewing them generally as a tool for economic regeneration and job creation".[34] Focusing creative city policy may at first require investments – primarily in research – but may eventually pay off as policies become less expensive and yet more effective.
4) *Human creativity is an untraded resource and relatively resilient against economic downturn* – In periods of economic downturn creative people do not lose their creativity. On the contrary, they have more time and more reason to critically consider their concepts and to adjust these to demand if so desired. Further, the creative scene in cities often exists of an upper- and an underground, i.e. formal and informal relations and meeting places.[35] Whereas the upperground of 'theatres and galleries, knowledge-intensive industries and formal boards and partnerships' is supposed to be hit by the current downturn, the underground of 'online blogs, communities of practice in squatted warehouses, and informal bars and cafés as popular meeting places' appears to be much more resilient and to remain largely intact. On the other hand, once vanished the underground is very hard to restore when the economy recovers from a downturn.

While policy-makers in CCC cities and regions regard economic downturn as a threat, they also recognize that the crisis may provide new opportunities for the creative industries and creative city policy:

> "Due to the economic recession, there is a lack of easy jobs for school leavers, graduates and other, plus for those made redundant from other sectors. This makes it likely that more business start-ups will occur in non-traditional sectors such as creative sector" (Newcastle-Gateshead).

> "Many traditional companies, both large and small, in Dundee lack the vision and do not meet their potential to re-evaluating their market place through the lens of design and other

[34] Jarvis, D., H. Lambie and N. Berkely (2008) 'Creative industries and urban regeneration', paper presented at the Regional Studies Association Annual International Conference on 'The dilemmas of integration and competition', 27-29 May 2008, Prague, p. 10.

[35] Granger, R. and Ch. Hamilton (2010) 'Creative sustainability: a relational examination of underground scenes and creative lock-in', paper presented to the 8th Conference of European Urban and Regional Studies (EURS), 15-17 September, Vienna.

symbolic values of their products in order to find new opportunities to continue functioning. Creative workers and entrepreneurs can help them to develop these important assets. What is more, the modern creative companies in Dundee tend to be very small and as such perfectly placed to adapt fast to changes in technology and thrive; they may just need more support and encouragement to do so" (Dundee).

"The current economic downturn clearly hits traditional industries. In reply, a new policy perspective that is more in favour of creative industry than before may receive more attention. This may even offer opportunities to achieve a necessary change of priorities of economic policy in Bremen towards the creative industry, with particular attention for establishing or strengthening relations between creative and traditional industries to the benefit of both. The benefit of traditional industries would be the increase of the innovative capacity and individualization of products" (Bremen).

"To be able to adapt to the constantly changing environment as well as the needs and wants of actual and potential consumers companies need to be creative. It always has to spot new opportunities and look for ideas which lead to innovation. In this context creativity as a pre-stage of innovation serves as an essential resource for a company.[36] Moreover, creativity and innovation are not only needed for product creation nowadays. As Business Week states "(creativity and innovation) is about reinventing business processes and building entirely new markets that meet untapped customer needs".[37] Traditional industries can learn a lot from the creative industry in these respects, and the importance of creative industries rises because of its high potential for creativity and innovation" (Hamburg).

"The effect of economic downturn and quality of life choices encourage migration of creative sector business to smaller, cheaper cities with better lifestyles – less congestion, more access to countryside etc. There is evidence of both businesses moving from e.g. London to Newcastle and brain gain, i.e. creative practitioners looking for jobs in smaller cities as well as returning Geordies [people from Newcastle]. All this is made possible by the ease of operating from anywhere in world by technology improvements over recent years" (Newcastle-Gateshead).

"Property price reductions, lower interest rates and the collapse of the UK housing market reduce competition for sites and buildings, and leaves more opportunities for creative sector expansion" (Newcastle-Gateshead).

These quotes clearly indicate that CCC partner cities and regions are well aware of the resilience and flexibility of creative industries compared to other sectors. Also, it is remarked that side-effects of the downturn, such as lower real estate prices of a search for cheaper cities rather than expensive 'hotspots', may be advantageous for some creative industries and for some cities. In fact, this is about the only reference that is made to the effects of economic downturn on the creative consumption milieu, such as housing.

[36] Clegg, B. and P. Birch (2007) 'Instant creativity: simple techniques to ignite innovation & problem solving', London/Philadelphia: Kogan Page.

[37] McGregor, J. (2006) 'The world's most innovative companies', Business Week, 24 April 2006.

2.6 Discussion

As a matter of conclusion to the paper, we raise two questions for further discussion by local policy-makers with regard to the position, significance and potentialities of creative industries in urban development in this period of economic difficulties:

1) The basic, most challenging question is why, or why not, policy-makers should pursue creative industries at all in a period of economic downturn? *Is this really the best way to survive the crisis or should we save our limited means for more urgent priorities?*
2) The overarching issue in this period of downturn and decreasing budgets is to work more efficient. Assuming that we choose to further develop the creative economy, this raises the question: *How to pursue creative industries in a period of economic downturn? How to do more with less?*

The current paper reveals major qualitative differences between the two opposite perspectives on creative industry development. The decision to neglect the creative economy for the moment and focus on traditional sectors in many cases seems to be inspired by short-term, perhaps even electoral motives. Media and their impact on the public opinion reinforce this effect. Mass redundancies tend to generate more publicity than the gradual reduction of employment in specific sectors, and end up higher on the priority list of politicians and policy-makers. Dutch newspaper *NRC Handelsblad*, for instance, signals that due to economic downturn one in four architects and urban planners in the Netherlands is unemployed.[38] This means a loss of about 5,000 jobs, which took place without significant media attention apart from the mentioned article. In contrast, the loss of about 2,200 research jobs due to the planned closure of the Organon biomedical lab not only generated ample media attention but also political interference on the highest level, although futile so far.[39] This is not to say that one is worse than the other, but to show the striking difference in media coverage and policy-makers' attention between events that are rather similar in many aspects.

In addition to this, the decision to neglect the creative economy is likely to cancel out recent investments in the, often still fragile, infrastructure of the creative sector. The societal, economic and technological trends underlying the rise of the creative economy - such as the increasing importance of design and ICT - are unlikely to be reversed or even brought to a halt due to the economic downturn. Therefore, a decision to stay in the course of the creative economy seems more in line with the future.

In the end, the question is not simply to focus on the creative industries *or* on the support of other sectors. Much more relevant, and probably more efficient, is to focus on the relations between the creative and other industries. The main challenge seems to be how innovations from the creative sector - in itself still a niche - can get through to more mainstream sectors, increasing and consolidating the market for creative products and stimulating innovativeness on other sectors. This would serve the interests of the urban economy as a whole, rather than dividing scarce means between creative and other policies.

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[38] Luijt, M. (2010) 'En weer tien werkloze architecten erbij; CBS meldt kleine afname werkloosheid, maar sector architectuur is hard geraakt', NRC Handelsblad, 21 October 2010, p. 11.

[39] Banning, C. and E. Wittenberg (2011) 'Hoe Rutte de strijd om Organon verloor; verkoop Organon liep op laatste moment spaak ondanks politieke bemoeienis', NRC Handelsblad, 26 February 2011, p. 13.

Figure 2.2: The first expert meeting, 20 October 2010, Kortrijk.

3 The creative city – a sustainable city? An exploration of the impact of sustainable innovation and sustainable urban development on the performance of creative industries

Expert meeting organized in Høje Taastrup on 6 May 2011. This chapter includes a revised version of the discussion paper, presented at the RSA Annual International Conference 2011'Regional development and policy – challenges, choices and recipients', Newcastle upon Tyne, 17- 20 April 2011.

3.1 Introduction

Since at least ten years the creative city concept is very much en vogue. Culture and creativity are regarded drivers of urban economic development, and are therefore important elements of urban economic policy. At the same time, however, concerns about for instance climate change and liveability have led to an increased focus on sustainability in urban development and policy. In contrast to the creative city concept, the idea of sustainability does not generally take the urban economy as a starting point or main objective. In fact the increased focus on sustainability is often regarded as detrimental to economic development, although it has also been recognized that this view is not necessarily right.

Yet, the influence and longevity of the concept of sustainability seems at least as certain as that of the creative city concept, if not much more. Concrete policy objectives have been elaborated in international treaties such as the Kyoto and Copenhagen agreements, and the European Union's Gothenburg agenda. Moreover, the sense of urgency behind the sustainability movement is of a different order than that behind the creative city: the risks involved not merely concern a lack of economic development, but are associated – although not undisputedly – with natural disaster, failing food supply, exhaustion of natural resources, etc. From the perspective of the creative city, therefore, the question about the relation between these two influential concepts is highly relevant. The drive for sustainability is strong enough to potentially harm the development of the creative economy, while the opposite seems less likely.

In view of the above observations, this paper explores the relation between the creative city and the sustainable city: between the creative production and consumption milieu and the creative industries on the one hand, and the drive for sustainable development on the other. It does so primarily from the perspective of the creative industries. It addresses the questions 1) to which extent the drive for sustainable development may provide changes and opportunities for the creative industries, and 2) how the impact of sustainability on urban development may affect the specific urban milieu required by the creative industries. The discussion of these questions is an explorative exercise: we strived for a concise and though-provoking rather than for a comprehensive paper. It is largely informed by insights derived from a number of EU projects, notably the NRS INTERREG IVB project *Creative City Challenge* and the FP7 project *Sustainable Urban Metabolism for Europe* (Sturzaker *et al.*, 2010; Gunn *et al.*, 2011).[40]

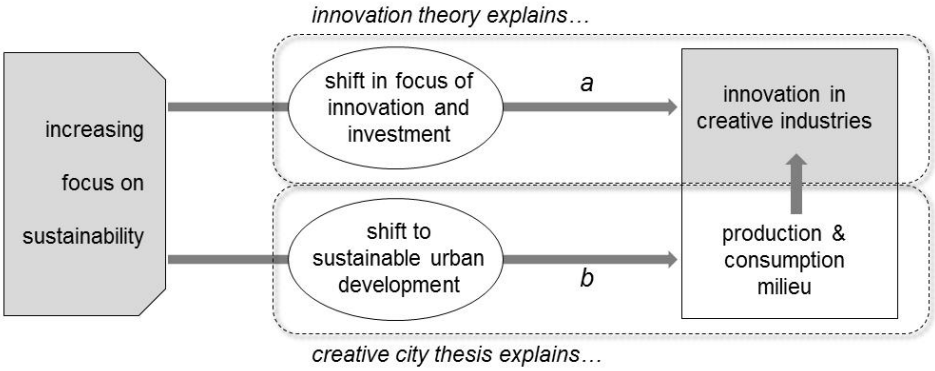
[40] Romein, A. and J.J. Trip (2010) 'The creative production and consumption milieu. Framework Report 6.1, written within the framework of the NSR INTERREG IVB project Creative City Challenge', Delft: Delft

The next chapter briefly discusses, on a conceptual level, the way the increasing focus on sustainability may affect innovation in the creative industries through the innovation system and by way of its impact on urban development. After that, Section 3 briefly discusses the concept of sustainability and the various types of sustainability involved. The influence of these different types of sustainability on creative industries through the innovation system and urban development are further analysed in Sections 4 and 5 respectively. Finally, Section 6 presents a brief discussion about the implications of our findings for policy-making, and some clues for more detailed research.

3.2 Theoretical framework

The key question addressed in this paper is how the increased attention of policy-makers and investors for sustainability affects the generation of innovation by the creative industries. This is not an unambiguous relation. In this paper we focus on two main ways in which the increased focus on sustainability may affect the creative industries: through the innovation system, and by way of urban development (Figure 3.1).

Figure 3.1: Two perspectives on the relation between sustainability and the creative industries.



First, the increasing focus on sustainability, and the larger sense of urgency that is currently prevailing in relation to this, affects innovation directly. It brings about a shift in the focus of innovation policies and investments. More public and private means are directed to those sectors in which innovation is aimed at increasing sustainability. This is represented by arrow a) in Figure 3.1. The question is, then, how this affects innovation in the creative industries. To explore this relation more in detail, it is useful to gain more insight in the way innovations are

University of Technology; Romein, A. and J.J. Trip (2010) 'The creative economy in CCC cities and regions. SWOT Analysis Report 6.2, written within the framework of the NSR INTERREG IVB project Creative City Challenge', Delft: Delft University of Technology; Sturzaker, J., Z. Gunn, S. Davoudi, A. Madanipour, J. Milder and D. Stead (2010) 'SUME - Sustainable urban metabolism in Europe; Deliverable 4.2', Newcastle upon Tyne: Newcastle University; Gunn, Z., S. Davoudi, A. Madanipour, C. Megginson, J. Sturzaker, D, Stead and J.J. Trip (2011) 'SUME - Sustainable urban metabolism in Europe; Deliverable 4.2 - Explorative testing of key outputs and case study reports', Newcastle upon Tyne/Delft: Newcastle University/Delft University of Technology.

generated and implemented. Innovation theory, such as the theory of technological regimes introduced by Nelson and Winter, provides a useful starting point for this.[41]

However, innovation theory as such is rather general and mostly focused on technological innovation. It does not take into account the distinct characteristics of the creative industries. For one thing, what we may call the creative city thesis states that the creative industries strongly depend on a specific the creative production and consumption milieu. Because the increasing importance attached to sustainability also affects the way urban areas are planned and (re)developed, the question arises how it may influence the creative production and consumption milieu, and thereby the performance of creative industries. This second relation is represented by arrow b) in Figure 3.1.

In short, the increased focus on sustainability may affect the creative industries because it shifts attention and funding to specific fields of innovation, possibly at the cost of other fields; but it may also influence the creative industries because it induces a more sustainable urban development, which may affect the specific production and consumption climate these industries require. Both relations may be positive or negative; but whereas the first concerns the qualitative and quantitative effects of the drive for sustainability on the *demand* for creative innovations, the second focuses on the impact of sustainability on the *conditions* for creative innovations to emerge.

The remainder of Section 3.2 discusses these relations through the innovation system and urban development from two different conceptual perspectives; these are then elaborated in Section 3.3 and 3.4 respectively.

Sustainability affecting innovation in the creative industries though the innovation system

To explore the way the increased focus on sustainability may affect the generation of innovations in the creative industries, it is useful to have a look at general innovation theory, such as the ideas of Nelson and Winter on the role of technological regimes. Subsequent authors have elaborated on these.[42]

Geels, for instance, describes the innovation system as a nested hierarchy consisting of three-levels (Figure 3.2); these should explicitly not be understood as spatial scales.[43] Innovations – inventions or novelties – are generated in a system of '*niches*'. These concern incubators that largely outside the regular business practice, such as specialized laboratories, R&D departments or the archetypical garages and sheds. The concept of technological regimes explains whether, and how, these novelties become mature innovations, in the sense that they are marketed and become part of what we might call social and physical reality (the *socio-technical landscape* in terms of the model).

Inventions and novelties are induced by a perceived demand from society, explicitly by for instance stimulation programmes of funding, or implicitly by perceived social pressure or a common sense of urgency. However, whether specific innovations succeed or not is for a large part defined by the intermediate level of *technological regimes*. These regimes entail the routines, practices, values and conventions shared by engineers and firms in a particular field of technology, which are embedded in infrastructures and institutions. Moreover, they also

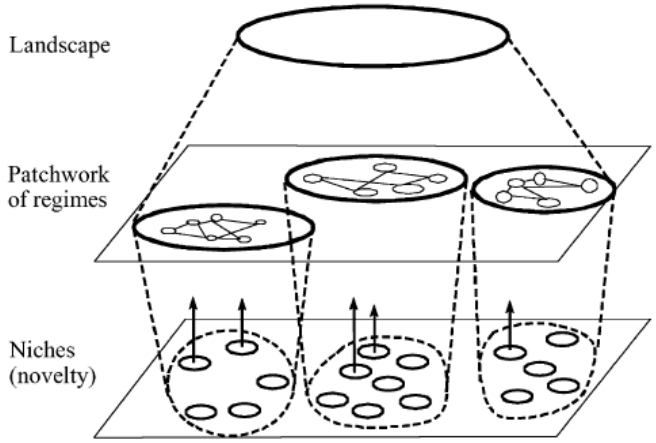
[41] Nelson, R.R. and S.G. Winter (1982) 'An evolutionary theory of economic change', Cambridge MA/London: The Belknap Press,.

[42] *Ibid.*, p. 258.

[43] Geels, F.W. (2002) 'Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study', Research Policy, Vol. 31, pp. 1257-1274.

entail the ideas of engineers, users and policy-makers about how technology could be applied in society. The regime largely defines how certain problems are defined and dealt with, and which means and skills are being applied; accordingly, it also relates to engineers' (and to a lesser degree policy-makers') attitudes about what is 'what is feasible or at least worth attempting': which novelties are considered promising, and which are not.[44] This not merely of academic interest, since it implies technological regimes for a large part define where attention and investments go.

Figure 3.2: Multiple levels of the innovation process as a nested hierarchy.[45]



The above implies that technological regimes may considerably affect technological development paths. They may effectively block innovation in a certain field if actors that define the prevailing regime are reluctant to adopt novelties because of vested interests based on past decisions and investments – the idea of path dependency which leads to a lock-in in a suboptimal situation – or if they just fail to see the benefits of an innovation, or consider them not worth the effort needed to implement it.[46] Conversely, it also implies that a change in the technological regime may 'unlock' innovations that were not considered feasible before. Moreover, since such a process improves the societal climate for a certain type of innovations, it may in itself lead to an increase in the number of new innovations.

Technological regimes are relatively stable in time and changes in the regime are most likely to occur gradually. Nevertheless, societal or economic processes may cause more abrupt changes in the regime and the increased focus on sustainability seems to be an example of this. Knight already commented as early as 1993 that "the new paradigm of sustainable development provides a framework for advancing science and other types of knowledge in a more holistic way".[47] In recent years, however, especially the rising awareness of the potential dangers of climate change led to an increased sense of urgency.

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[44] Nelson and Winter, *op. cit.*, pp. 258-259.

[45] Source: Geels, *op. cit.*, p. 1261.

[46] Cf. Romein, A. and J.J. Trip (2011) 'Economic downturn: a threat for creative city policy or a blessing in disguise?', paper presented at the RSA Annual International Conference 2011'Regional development and policy – challenges, choices and recipients', Newcastle upon Tyne, 17- 20 April 2011.

[47] Knight, R.V. (1993) 'Sustainable development - sustainable cities', International Social Science Journal, Vol. 45, No. 1, pp. 35-54 [p.39].

An example of the above can be found in the development and mass introduction of electric vehicles.[48] Although these have been present since the dawn of the automobile, they did not play a significant role for most of the time.[49] Development in the 1990s and early 2000s focused on hydrogen and fuel cell technology as the most promising alternative for the internal combustion engine. Only since about five years the increased focus on sustainability and the prevention of global warming, accompanied by rising oil prices, brought about a new sense of urgency and a shift in priorities – a change in the technological regime. Since hydrogen technology still requires a long development trajectory, attention shifted to electric vehicles. As a result the societal climate for innovation in electric mobility has largely improved, as well as the efforts and investments made by the automotive industry. Moreover, requirements seem to have been reduced. The generation of electric vehicles that is currently prepared for the market still has a limited range which was not considered acceptable until recently.

The conceptual framework sketched above focuses on technological innovation. However, there is hardly reason to assume that a similar process would not affect innovation in the creative industries as well. Innovation in this sector may not all be technological, although branches such as serious games development or industrial design have a strong technological component. But the challenges set by the drive for sustainability are not merely technological; they are social and economic as well. The implementation of electric or hydrogen vehicles, mentioned above, not just involves car technology, but also involves the implementation of new infrastructures, effects on power supply and perhaps a change in the mobility behaviour of people. For reasons of comparison, just try to imaging the impact of technological innovations such as television, the PC, internet and mobile phones without taking into account the – often unforeseen – social and economic innovations they have brought about.

The possible impact of the increased focus of policy-makers and investors in sustainability on the creative industries will be elaborated in Section 3.4. For now we turn to another possible impact of sustainable development on the creative sector, by way of sustainable urban development.

Sustainability affecting innovation in the creative industries though urban development

Not only does innovation theory, like many urban-economic theories, focus on technological innovation; neither does it take into account the specific characteristics of the creative sector. The increased drive for sustainability not only may influence the direction of innovation, but it also manifests itself in many other ways. Urban development is an important example of this (see Figure 3.1).[50] This is highly relevant with regard to the performance of the creative industries, because theories concerning the creative economy state that the creative industries

[48] Cf. Carson, I. and V.V. Vaitheeswaran (2008) 'ZOOM; the global race to fuel the car of the future', London: Penguin Books; Bakker, S. (2010) 'The car industry and the blow-out of the hydrogen hype', Energy Policy, Vol. 38, No. 11, pp. 6540-6544.

[49] Kemp, R., J. Schot and R. Hoogma (1998) 'Regime shifts to sustainability through processes of niche formation: the approach of strategic niche management', Technology Analysis & Strategic Management, Vol. 10, No. 2, pp. 175-195.

[50] Cf. Haughton, G. and C. Hunter (1994) 'Sustainable cities', London/New York: Routledge; Evans, J. and P. Jones (2008) 'Rethinking sustainable urban regeneration: ambiguity, creativity, and the shared territory', Environment and Planning A, Vol. 40, pp. 1416-1434; Sturzaker *et al.*, *op. cit.*

depend on a specific type of urban milieu, presumably more so than other industries.[51] The question is, then, what a more sustainable type of urban development would mean for this 'creative' urban milieu. This question has a distinct spatial dimension that is not addressed by innovation theory.

What is often labelled the 'creative city' may be considered to consist of a creative *production milieu* an a creative *consumption milieu*. In practice these partly overlap, as living and working in the creative economy are to a large degree intertwined. Nevertheless, both in the academic literature and in policy practice the two milieus are addressed rather separately. Authors focusing on the production milieu emphasize the creative industries as a 'normal' economic sector, although with some rather specific characteristics: small, but crucial for the innovativeness of the urban economy, and to a large extent based on small firms and face-to-face contacts in 'third places'.[52] Authors that focus on the consumption milieu stress the role of qualities of cities in attracting creative talent.[53] This perspective starts from the assumption that 'jobs follow people', which is opposite to the traditional view. Thus, cities should attract creative talent and businesses will follow.

Both the production and consumption milieu are defined by a complex and unique set of urban qualities. To unravel these, three types of urban space may be distinguished: 1) physical space includes both the morphology and the location pattern of urban functions; 2) social space involves the network of functional relationships and social interactions; 3) symbolic space represents the perception of the specific significance of places by the people that used these places. Both the creative production and consumption milieu in a certain city or neighbourhood are defined by place qualities that may be related to these three types of space.

In view of the above, a relevant question is how the focus of planners and policy-makers on more sustainable types of urban development may affect the creative production and consumption milieu, and thereby the performance of creative industries. Or in other words: how do the requirements of sustainable urban development relate to the place qualities of the creative city? Section 3.5 will address this question in detail. Before that, Section 3.3 briefly discusses the concept of sustainability.

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[51] E.g. Landry, C. (2000) 'The Creative City', London: Earthscan; Florida, R. (2002) 'The rise of the creative class; and how it's transforming work, leisure, community and everyday life', New York: Basic Books; Trip, J.J. and A. Romein (2009) 'Beyond the hype: creative city development in Rotterdam', Journal of Urban Regeneration and Renewal, Vol. 2, No. 3, pp. 216-231; Trip, J.J. and A. Romein (2010) 'Creative city policy: bridging the gap with theory', Paper presented at the Eighth EURS Conference 'Repositioning Europe in an era of global transformation', Vienna, 15-17 September 2010.

[52] E.g. Scott, A.J. (2000) 'The cultural economy of cities; essays on the geography of image-producing industries', London/Thousand Oaks: Sage; Pratt, A.C. (2004) 'Creative Clusters: towards the governance of the creative industries production system?', Media International Australia incorporating Culture and Policy, Vol. 112, pp. 50-66; Currid, E. (2007) 'The Warhol economy: how fashion, art, and music drive New York City', Princeton/Oxford: Princeton University Press; Kloosterman, R.C. (2010) 'Building a career: labour practices and cluster reproduction in Dutch Architectural design', Regional Studies, Vol. 44, No. 7, pp. 859-871.

[53] Most notably Florida, *op. cit.*; but also e.g. Glaeser, E.L., J. Kolko and A. Saiz (2001) 'Consumer city', Journal of Economic Geography, Vol. 1, pp. 27-50; Clark, T.N. (2004) 'Urban amenities: lakes, opera, and juice bars: do they drive development?', in: T.N. Clark (ed.) 'The city as an entertainment machine', Amsterdam: Elsevier, pp. 103-140; and, with hindsight, Jacobs, J. (1961) 'The death and life of great American cities', New York: Random House.

3.3 Three types of sustainability

The essence of sustainability is the idea that "the current generation should not foreclose options for those that follow".[54] Current processes and decisions should take into account the interest of future generations, passing on an 'undiminished stock' of capital and resources.[55] In other words, the time dimension is key to sustainability.

Although the concept is often associated with environmental criteria such as biodiversity and air and water quality, a broader definition of sustainability may also entail social and economic aspects. This is particularly relevant when sustainability is considered in the context of urban development. Shen *et al.* discuss a number of definitions of sustainable urbanization, virtually all of which explicitly refer to sustained environmental quality, economic competitiveness and social wellbeing.[56] Likewise, various definitions of for example the EU, UN and WWF quoted by Tukker also include these three elements.[57] The latter definition, for instance, states that sustainable development "must take account of social and ecological factors, as well as economic ones: of the living and non-living resources base, and of the long-term and short-term advantages and disadvantages of actions". The UN Johannesburg Plan of Implementation likewise mentions "the three components of sustainable development – economic development, social development and environmental protection – as interdependent and mutually reinforcing pillars".[58] Goodland, finally, also mentions social, economic and environmental sustainability, as well as human sustainability (focusing on maintaining human capital).[59]

The above makes clear that it is not hardly useful here to think of sustainability as a single and simple concept. Moreover, various types of sustainability are mutually related and to some extent overlapping. We will focus here on environmental, economic and social sustainability as the and most generally recognized and presumably most influential types. We consider human sustainability as part of economic sustainability, because human capital is the most important production factor in creative and knowledge industries.

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[54] Fiorino, D.J. (2010) 'Sustainability as a conceptual focus for public administration', Public Administration Review, Vol. 70, Sp. Iss. Suppl. 1, pp. S78-S88 [p. S79].

[55] Weingaertner, C. and A.R.G. Barber (2010) 'Urban regeneration and socio-economic sustainability: a role for established small food outlets', European Planning Studies, Vol. 18, No. 10, p. 1653; cf. Tukker, A. (2008) 'Sustainability: a multi-interpretable notion', in: A. Tukker, M. Charter, C. Vezolli, E. Stø and M.M. Andersen (eds.) 'System innovation for sustainability 1: perspectives on radical changes to sustainable consumption and production', Sheffield: Greenleef Publishing, pp. 14-43.

[56] Shen, L.Y., J.J. Ocha, M.N. Shah and X. Zhang (2011) 'The application of urban sustainability indicators - a comparison between various practices', Habitat International, Vol. 35, pp. 17-29.

[57] Tukker, op. cit, pp. 16-17.

[58] *Ibid.*, p. 16.

[59] Goodland, R. (2002) 'Sustainability: human, social, economic and environmental', obtained from http://www.balticuniv.uu.se/teacher/index.php/resources/downloads/doc_download/610-sustainability-human-social-economic-and-environmental, 11 April 2011.

Environmental sustainability

As Tukker observes, environmental, social and economic sustainability are equal, but environmental sustainability seems to be 'more equal' than others.[60] It is probably related to the strongest sense of urgency, and is therefore the most influential at the moment.

Environmental sustainability refers to the sustained use of natural capital, often with the aim to improve environmental quality and, by that, also human welfare.[61] This includes for instance the protection of biodiversity, clean water and clean air, the reduced use of minerals and a focus on renewable resources. As such, especially in urban areas it is often directly related to human health. In all these areas government regulations – such as the EU's birds/habitat, water and air quality directives – haven been implemented that may affect e.g. economic activities and urban development.

Fierce discussion has emerged in particular over the effects of climate change due to the emission of greenhouse gasses such as carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O) and several others, including water vapour. These are emitted by industry, traffic and generally all activities in which hydrocarbons are burned, but also e.g. by intensive livestock. Rather than a general global warming, possible effects are more diverse, varying from increasing aridity or excessive rainfall, chances in currents such as the Gulf Stream or El Niño, to floods due to a rise of the sea level. However, wide and heated debate – in which we will not involve here – focuses on the extent to which this climate change actually takes place, the degree to which it is caused by human activity, and the question which will be the impact and how it will affect different regions.

Regardless of the outcomes of this discussion, climate change has risen to dominate the top of the policy agenda for many national, regional and local governments. Many focus on ways to limit the emission of greenhouse gasses by reducing oil consumption, compensating measures such as planting trees (that absorb CO_2) or developing alternative energy sources. Specific targets have been set for the reduction of CO_2 emission, for instance in the UN Kyoto Protocol of 1997, as well as in subsequent European and national policy documents, but at this moment it is uncertain whether these targets will be met.

Economic sustainability

Economic sustainability focuses on maintaining economic competitiveness on the long term. Like environmental sustainability refers to the use of natural capital, economic sustainability concerns the sustained use of economic capital.[62] This involves the sustained use of production factors, in order to prevent exhaustion – or develop alternatives – and to maintain the capacity of the economy to generate income also in the long term. It entails the classic production factors capital and resources – including oil and gas, land or forest.[63] Indeed there is an overlap with environmental sustainability here.

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[60] Tukker, *op. cit.*

[61] Goodland, *op. cit.*, p. 2.

[62] *Ibid.*

[63] Cf. KPMG (2009) 'Sustainable integrated development plan for Rodrigues; Part IV: Promoting economic sustainability', KPMG/Rodrigues Regional Assembly, obtained from http://www.gov.mu/portal/sites/rra_portal/chiefcomm/download/sipdr/finalsipdr/11sipdr.pdf, 11 April 2011.

However, economic sustainability should also include the most important production factor of the creative and knowledge industries: human capital. Creativity and knowledge of individuals and groups of people, formal and informal networks, education and knowledge infrastructure such as universities and laboratories all contribute to the viability of the urban and regional economy in the long term.

This human sustainability aspect is increasing important. Production factors that were of decisive importance for economic performance in the heydays of the manufacturing economy such as the availability of raw materials, large numbers of blue collar workers and a deep sea port have lost a large part of their importance. It is a dead-end street, or already simply impossible to continue trying to compete with the current manufacturing workshops of the world in middle- and low-wage cities and regions. Concomitantly to the emergence of the post-industrial urban economy in high-income countries, the international economy has globalised, i.e. become increasingly interconnected, and the national welfare state that redistributed part of the national income to urban governments has gradually ceased to exist. In this composite context, sustainable development of urban economies first and foremost aim at a strong as possible competitiveness in the national and international perspective in the longer run.

Social sustainability

The attention paid to social sustainability is more recent than that for environmental and economic sustainability.[64] Social sustainability focuses on maintaining social wellbeing, or social capital.[65] This involves the key characteristics that 'keep together' society, such as trust between people and between social groups, social cohesion, sense of community and tolerance. Many of these are 'intangibles' that are hard to measure or influence.

Social sustainability has been under pressure in the last decades, particularly where a neo-liberal climate prevails. This brought about sometimes severe budget cuts on social welfare, education, healthcare etc. – in the past, but certainly since the recent economic downturn – and increased social inequality. Governments themselves often adopt a more entrepreneurial approach, in various policy fields from healthcare to urban development. All this seems at odds with the objective of social sustainability of an inclusive society.

Sustainable urban development

One of the issues that are considerably affected by the increased focus on sustainability is urban development. Since environmental quality, economic competitiveness and social wellbeing all important for the sustained development of cities, environmental, economic and social sustainability are all relevant to urban development.

Nevertheless, what is commonly labelled sustainable urban development – e.g. as a policy field – mainly refers to environmental sustainability, despite the fact that most formal definitions of sustainability also include economic and social sustainability. Policies concerning economic and social sustainability do exists, and are in fact quite common. They are presented as for instance competitiveness or economic policy and social or social cohesion policies respectively, rather than sustainable urban development. Nonetheless, in the remaining

[64] Parra, C. and F. Moulaert (2011) 'Why sustainability is so fragilely "social"', in: S. Oosterlynck, J. van den Broeck, L. Albrechts, F. Moulaert and A. Verhetsel (eds.) Strategic spatial projects; catalysts for change, London/New York: Routledge, pp. 163-173.

[65] Goodland, *op. cit.*, p. 2.

sections we will consider these policies that aim for economic and social sustainability as part of sustainable urban development, as they may just as well affect the development of creative industries and the creative production and consumption milieu (cf. Section 3.5).

3.4 Sustainability as a challenge for innovation in the creative industries?

> "[…] the emerging challenge of global sustainability is a catalyst for a new round of creative destruction that offers unprecedented opportunities".[66]

The question to be addressed here is how these different types of sustainability may pose a challenge of an opportunity for the creative industries, either by increasing the demand for creative innovations – opening new markets – or by inducing a shift of attention and funding away from the creative industries to other, probably more technological sectors. The answer to this will not be unambiguous, since the great many aspects of sustainability and the variety of creative branches make it most likely that the two processes occur simultaneously.

Environmental sustainability

The increased drive for environmental sustainability is an important incentive for innovation. Existing processes and activities have to be 'greened' in order to become more energy efficient, less polluting etc.; often this is not possible or insufficient and alternatives have to be found and developed. For the most part, however, the focus seems to be on technological innovation. This is the case for important fields of attention such as the reduction of energy consumption, the development of alternative, renewable sources of energy or vehicle technology. The creative industries are not primarily the sector for major technological breakthrough in e.g. hydrogen or nuclear fusion technology. Moreover, as ever scarcer government subsidies increasingly go to development of sustainable technology, creative and cultural activities may suffer.

How we should estimate opportunities for the creative industries therefore partly depends on which activities we focus at. Branches such as industrial design or serious gaming have a rather technological focus and may benefit from increasing demands, for instance because simulations and serous gaming may increasingly be applied to avoid less sustainable physical testing. Examples of these entail for instance simulations of traffic flows to improve circulation (reducing emissions), or simulation of noise levels that reduces the need for on the spot measurement.

Following the above line of thought, opportunities for the creative sector as such – for instance arts and media – seem to be limited. However, environmentally sustainable innovation requires 'out of the box' thinking, which is more or less the core business of the creative sector. Many forums, websites and blogs express the current opinion that sustainable development requires creativity.[67] The Dutch site ClubGreen, a platform for sustainable

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[66] Hart, S.L. and M.B. Milstein (1999) 'Global sustainability and the creative destruction of industries', Sloan Management Review, Vol. 41, No. 1, pp. 23-33 [p. 24].

[67] E.g. Spot the future (2011) 'Spot the future, see the future', obtained from http://spotthefuture.web-log.nl/spotthefuture/page/3, 13 April 2011; Creative City Lab (2011), obtained from http://www.creativecitylab.nl/pages, 13 April 2011; P+ People Planet Profit (2011) 'Creative vrijplaats

product development, for instance, states "to come to radical innovations creativity is required. […] Creativity helps to look beyond existing or easy solutions. The first solution often is not the most sustainable solution, therefore it is necessary to look further, i.e. to apply creativity, in order to reach sustainable solutions [our translation]".[68] P+ People Planet Profit calls for a creative refuge where creative can, in relative freedom, focus on sustainable innovation.[69]

Many environmentally sustainable innovations do not so much concern the development of new technology, but the development of new applications of technology. This may be illustrated by the already mentioned examples of internet and mobile phone, that induced the development of numerous services, many of which were never anticipated by the developing engineers. Another example is the dancing floor installed in 2008 in Club WATT in Rotterdam, that generated electricity by means of the dancers' movements; although not an economic success in Rotterdam, there was interest from the US, Brazil and other countries.[70] Another firm developed a devise for an automated rental bike dispenser, in order to stimulate reduction of car traffic in cities.[71] Fashion designer engage in the design of clothing that can be produces in a more sustainable way, and from more sustainable materials. Design is particularly important to make innovative sustainable products – think of electric vehicles – 'cool' and attractive for trendsetting consumers. The drive for more sustainable and energy efficient housing also provides chances for innovative architects.

The above implies that in order to benefit from the focus on sustainability – and indeed to contribute more to sustainable innovations – the creative industries should team up with other, probably more technological sectors. In terms of the innovation model discussed in Section 2, creative industries should be included in the technological regime, alongside with engineers, policy-makers and users of innovations.

Economic sustainability

In this composite context, sustainable development of urban economies first and foremost aim at a strong as possible competitiveness in the national and international perspective in the longer run. Thereto, local policies and programmes focus primarily on regional and international multimodal accessibility; a diversified economic structure (including sizeable service and knowledge-based sectors) that is able to cushion changing economic circumstances; a strong knowledge base (including high-quality universities, other tertiary education institutes and R&D activities); and an attractive people climate for tourists, skilled professionals and, lately, also creative talent. Some of these policies explicitly reflect the increased importance of creative industries as important components of the competitive urban economy.

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nodig voor duurzame innovatie' [Creative refuge needed for sustainable innovation], obtained from http://www.peopleplanetprofit.nl/artikel.php?IK=1505, 13 April 2011.

[68] Onselen, L. van (2011) 'Duurzaam produceren - duurzame productontwikkeling' [Sustainable production - suatainable product development], obtained from http://www.clubgreen.nl/vraag/Duurzame-productontwikkeling.html, 13 April 2011.

[69] P+ People Planet Profit, *op. cit.*

[70] Green2 (2011) 'Energieopwekkende dansvloer ook naar buitenland' [power generating dance floor goes abroad], obtained from http://www.green2.nl/2008/09/energieopwekkende-dansvloer-ook-naar-buitenland, 13 April 2011.

[71] Spot the future, *op. cit.*

Social sustainability

As mentioned in section 3.3, social sustainability is particularly relevant for the creative city. Nevertheless, this relevant concerns aspects such as diversity, tolerance and social cohesion, which will be discussed in the next section as they are mostly connected to place qualities and urban development. A direct impact of social sustainability on the creative industries by way of the innovation system is not evident, however.

3.5 Sustainable urban development and the creative production and consumption milieu

The various spatial-physical, social and symbolic place qualities that define the creative production and consumption milieu can be summarized in a matrix-type of analytical framework (Table 3.1). The schedule of qualities as presented in this table is being based on an overview of academic and semi-academic literature about creative city development.[72] It is far from exhaustive, but provides a good impression of the range of place qualities that rare relevant to the development of the creative economy. As the table shows, many place qualities refer to either the production or the consumption milieu. Nevertheless, several also refer to both types of milieu, reflecting the close relations between working and living of people active in creative industries, either as entrepreneurs, in employment, or as freelancer.

Table 3.1: Analytical framework of the creative production and consumption milieu.

	production milieu	**consumption milieu**
physical space	quality and price level of working spaces availability of business services presence of knowledge-intensive industries research and education infrastructure concentrations of businesses (creative clusters) accessibility diversity and density of built environment 'quality architecture' availability of combined working-living spaces availability of amenities	quality and price level of housing availability of household amenities (child day care, schools, shops, sport etc.) urban public transport
social space	relation networks (within creative industries and between creative industries and other sectors) creative meeting places ('third places') presence of 'buzz' diverse labour pool liveliness, 'street life' (tolerance of) cultural diversity (tolerance of) social diversity	diversity of people diversity of jobs
symbolic space	authentic cultural heritage 'tale' or 'DNA' of the area sense of community 'creative' image	

[72] Trip, J.J. and A. Romein (2009) 'Beyond the hype: creative city development in Rotterdam', Journal of Urban Regeneration and Renewal, Vol. 2, No. 3, pp. 216-231 [pp. 218-220].

The key question we examine here is how sustainable urban development as a field of urban policy relates to these place qualities. Although these two composites mutually impact upon each other, this paper concentrates on the possible impacts of expanding policies aiming at sustainable urban development on the urban creative economy. Table 3.2 to and including 3.4 present selections of place qualities from Table 3.1 that we consider to be influenced by policies on the three different types of sustainability. The conducive or detrimental nature of these policies' impacts are indicated by (+) and (-).

Environmental sustainability

In our view, insofar policies that aim at environmental sustainability are related to qualities of urban places, these are exclusively physical qualities, most in particular density and diversity of these places (Table 3.2). Higher densities of population and urban functions, reflected in more dense built-up environments, reduce the necessity for the people involved to bridge distances for their daily activities, including commuting, and create a concentrated potential demand for passenger transport that justifies the supply of urban public transport, both reducing the need for private car use. This is the more so in case of a diversity of urban functions on close distance, including shops, educational and health institutions, sports facilities, and least but not least concentrations of jobs such as offices. Hence, environmental quality policy measures aiming at reduction of motorised transport may go hand in hand with development of elements of production and consumption milieus that are favoured by creative industries. Of overriding importance in this respect is that many who earn a living in creative industries are self-employed without personnel or employed by very small businesses (not seldom as freelancer) in highly specialised activities. These attach great importance to spatial qualities like concentration of creative businesses and people (density), houses that make working from home possible and a variety of household amenities (diversity). Of particular, i.e. direct significance from the perspective of environmental sustainability are the importance these people attach to amenities like parks and systems of safe bicycle lanes.

Table 3.2: Place qualities related to environmental sustainability.

	production milieu	**consumption milieu**
physical space	(+/-) quality and price level of working spaces (+) concentrations of businesses (creative clusters) (+/-) accessibility (+) diversity and density of built environment (+) availability of combined working-living spaces (+) availability of amenities	(+/-) quality and price level of housing (+) availability of household amenities (child day care, schools, shops, sport etc.) (+) urban public transport
social space		
symbolic space		

Table 3.2 also includes accessibility. Creative businesses are 'normal businesses' in the sense that they also favour good accessibility of their locations, including availability of parking spaces, both for their workers and clients. In theory, environmental sustainability policy may approach accessibility in two different ways, although the first one is by far most common. This first one concerns urban access restrictions in the form of for instance environmental zones,

low emission zones or city tolls that have been introduced in ever more cities, in particular in inner cities that are also the favourite locations of creative firms. The other approach involves policy measures to optimise accessibility in order to avoid unnecessary emission of exhaust gasses by cars in traffic jams or driving around to find parking space. These policies are not uncommon, but usually substantiated with economic rather than environmental arguments. These two approaches imply respectively a conducive and a detrimental impact on the performance of creative industries.

Finally, environmental policy of many cities include measures to insulate buildings, often by means of subsidies to stimulate owners and occasionally by more compelling regulation. On the whole, insulation improves the quality of both working and living spaces of entrepreneurs and workers in creative industries. However, it also means costly investments – even in case of subsidies for these rarely cover all costs. For the small-scale enterprises that are quite common in creative industries, these measures cost an arm and a leg, which can be recovered at best only in the long term due to lowered costs of heating and air-conditioning in insulated buildings.

Economic sustainability

As was mentioned in Section 3.4, the drive for economic sustainable development implies cities must rely on a diversity of innovative, creativity- and knowledge-based activities. To the extent that policy programmes in the drive for a competitive economy aim at a service- and creativity based urban economy, including sizeable sectors of education and research, health care, leisure, hospitality, culture, arts and the like, these contribute to environmental sustainability in the sense that they are clean economic activities. One exception is ICT-based creative industries due to its consumption of enormous amounts of electricity. However, this paragraph deals with the question how the drive towards a more competitive urban economy in the longer run impacts upon spatial qualities, and therewith indirectly upon the potentialities for the development of creative industries.

In general, policies that aim to provide and maintain good quality and affordable working spaces is of crucial importance for a competitive local economy in the longer term. As economic policy, this contributes to the physical space that favours the development of creative industries if it takes into account the particularities of the demand by creative industry firms for working spaces which has proven to be somewhat out of the ordinary. By and large, redevelopment of old industrial buildings like factories, workshops, silos and warehouses, but also out-dated office and school buildings that have fallen into disuse, have been successful in this respect. This implies that policies to demolish such obsolete buildings in order to use the vacant ground for new and often expensive residential, office or leisure developments may be economically profitable for the city, but are detrimental for creative industry development.

What is stated about working spaces can also be true with regard to housing. Due to several widespread features of people who earn a living in creative industries – usually highly educated, young, pre-family household stage, unsteady incomes – these prefer low-priced rental housing in diverse neighbourhoods. Demolition programmes of that part of the housing stock for substitution with luxurious apartment buildings might contribute to attraction of other types of people that contribute to the local economy by means of their expertise and purchasing power, but harms the development of creative industries.

Strengthening of the knowledge base and advancement of knowledge-intensive industries are both widespread elements of urban economic policies. The main objective of these policy elements is increasing the innovative capacity of the local urban economy, and therewith strengthening its competitiveness. Spatially this is manifested by concentrated clusters of high-tech firms and redevelopment of university campuses, not seldom including

residential functions, culture and leisure venues and incubators for starting firms. Although not aimed directly at the enhancement of local creative industries, these benefit in several ways from strong knowledge generating institutes and knowledge-intensive industries. Most people that decide to start a creative firm or a career as freelancer working for such firms have received at least part of their education and training at these institutes. Furthermore, it is not unusual for knowledge-intensive industries to maintain supply chain relations with creative firms, for instance in the industrial design branch.

Table 3.3: Place qualities related to economic sustainability.

	production milieu	**consumption milieu**
physical space	(+/-) quality and price level of working spaces (+) presence of knowledge-intensive industries (+) research and education infrastructure (+) concentrations of businesses (creative clusters) (+) accessibility	(+/-) quality and price level of housing
social space	(+) diverse labour pool	(+) diversity of jobs
symbolic space		

Further, multimodal accessibility of the city and diversity of the economic structure are also rather common elements of economic policy, also with an eye on competitiveness in the longer term. As already observed in the paragraph about environmental sustainability, creative industries do not differ essentially from many other types of industries when it comes to appreciation of accessibility. Further, it is – on the whole - undeniable that a more diverse labour pool and more diversity of jobs as social space qualities that are … to creative industry development, are inextricably bound up with a more diverse economic structure. A side effect of a greater diversity of jobs is its positive impact on environmental sustainability: the greater this diversity, the greater the opportunities for people who lose their job to find a new one in the city, the lesser the necessity to commute over longer distances.

Finally, policies to get creative industries off the ground or to further stimulate already flourishing creative industries often aim to develop spatial concentrations or clusters of such industries. Indeed, concentrations of creative firms in spatial clusters is not only beneficial for environmental sustainability (reduction of polluting mobility) but also for economic sustainability. Depending on the performance of such physical clusters, they are self-reinforcing due to their attractiveness for new firms.

Social sustainability

As mentioned in Section 3.3, social sustainability in the urban society is essentially characterised by the drive to include as many members in that society's main domains of development, including employment and income generation, social cohesion and sense of community belonging. With the gradual shift from welfare society policy to entrepreneurial urban policy, this type of sustainability has been under increasing strain.

Insofar local policies to counteract the social impacts of this increasing strain would focus on place qualities, several would be in harmony with place qualities that are favoured by creative industries. These include socio-cultural diversity of people living in the city; general levels of tolerance for their particular lifestyles; liveliness in the street not in the last place due

to their presence; and third places where they meet one another (Table 3.4). Social sustainability then, is a recurring theme in the creative city debate, although the term sustainability as such is hardly being used in that debate.

Table 3.4: Place qualities related to social sustainability.

	production milieu	**consumption milieu**
physical space		
social space	(+) creative meeting places ('third places') (+) presence of ' buzz' (+) liveliness, 'street life' (+) (tolerance of) cultural diversity (+) (tolerance of) social diversity	(+) diversity of people
symbolic space	(+) sense of community	

The improvement of such place qualities in favour of talent that (attempt to) earn a living in the creative industry is, however, only partly in favour of social sustainability in general. For, the creative class consists of subcultures or scenes which appreciate other place qualities than most people who are on the side-lines of social inclusion, social cohesion, and community development. What is more, the creative city concept that is underpinned by the place qualities listed in Table 3.4 is considered by many as elitist, i.e. as inconsistent with social sustainability as a whole. The concept should presumably lead to a focus on individualism rather than society as a whole, to the exclusion of socio-economic groups that cannot cope with the demand of the advanced service economy, and to gentrification of neighbourhoods at the costs of low-income groups. Peck concluded that the thesis, in particular Florida's version, had become popular among mayors, city councils and urban development officials "not because it is revolutionary, but because it is so modest".[73] Even Richard Florida – arguably one of the main advocates of the creative city – who on the one hand envisioned creativity to be the 'great leveller' that is socially less exclusive than comparable categories such as education, on the other hand expresses his concerns about the possible growing socio-economic inequality in the creative economy.[74] On the whole, then, this might include that purposive policy to improve social sustainability may create conflicts of interest with the creative economy, although not necessarily through damaging qualities of place.

3.6 Discussion

It is plausible that the increasing focus of policy-makers, planners, engineers and investors on sustainability affects the performance of the creative industries. The current paper only presents a limited exploration of this issue. It explores in particular two ways in which this impact can take place: through the innovation system, and by way of sustainable urban

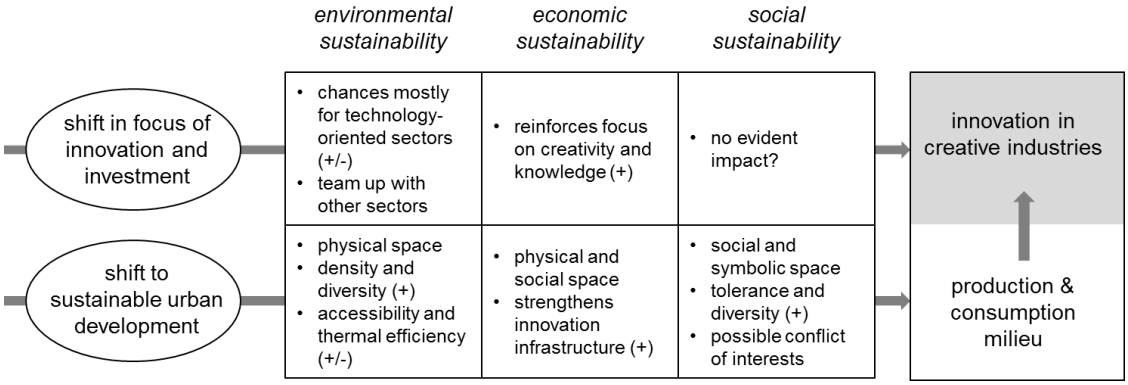
[73] Peck, J. (2005) 'Struggling with the creative class', International Journal of Urban and Regional Research, Vol. 29, No. 4, pp. 740-770 [p. 760].

[74] Florida, R. (2005) 'Cities and the creative class', New York/London: Routledge, pp. 4-5; Florida, R. (2005) 'The flight of the creative class', New York: Harper Collins.

development. These impacts concern the demand for creative innovations, and the creative production and consumption milieu respectively. Other perspectives might be imagined, but have not been taken into account here.

Figure 3.3 shows an overview of the main findings in the framework of these two perspectives. On the whole the impact of sustainability on the innovative capacity and practice of creative industries is likely to be positive, or mixed in some cases. Of the three types of sustainability that are generally distinguished, environmental sustainability has the largest and most direct potential impact, social sustainability the least.

Figure 3.3: Overview of potential impacts of sustainability on the creative industries.



Despite this generally positive impact, several conflicts of interest may emerge between the creative industries and sustainable development. These mainly concern the domain of policy-making, which has not been discussed systematically in the previous sectors.

For one thing, policies to increase social sustainability – although they are rarely labelled such – should be likely to aim for diversity and tolerance, but also for the inclusion of less favoured socio-economic groups. This may easily result in an 'overdose' of interventions and active measures taken by local authorities that do not correspond to the preferences of 'creatives', which are not seldom seen as unconventional by these policy-makers. In other words, the aims of sustainability and creative city policies partly overlap as far as place qualities are involved, but they may conflict with each other when different target groups are addressed, with different needs and preferences. Similar conflicts may be imagined in the area of environmental and economic sustainability, particularly where the demands of sustainability policy contrast with the needs of creative businesses, such as accessibility and inexpensive accommodation.

Another possible point of discussion may be the different policy cultures in which sustainability and creative city policies are rooted. By and large, sustainability policy – particularly sustainable urban development – seems to be based on a belief in a society that can effectively be planned, at least more so than creative city policy. It is often based on a system of carrots and sticks, financial incentives, fines and binding measures. This is in contrast with the more restrained way creative city policy operates – or should operate – which is by creating conditions for development, much more than by binding regulation. This is partly due to the acknowledgement that many aspects of the creative city can hardly be planned in practice, partly perhaps also by the less broad coverage of creative city policy and the smaller sense of urgency.

The creative city and the drive for sustainability are currently both influential concepts in urban planning and policy. Yet, as the limited exploration in the current paper indicates, little is known about the impact of sustainability, as a broader concept that recently gained a lot of influence, on the creative economy, which has been on the agenda of policy-makers since the 1990s. This paper tried to gain more insight in this by means of a limited exploration. The influence of policy – local, national as well as European – mentioned above, is just one of the aspects on which further research would be justified. Other relevant questions are how the drive for sustainability turns out for specific creative branches, and what could be the role of social and symbolic factors.

Figure 3.4: The second expert meeting, 6 May 2011, Høje Taastrup.

4 Scene meets science: exploring the interactions between creative industries and knowledge institutions

Expert meeting organized in Bremen on 23 November 2011. This chapter includes a revised version of the third discussion paper, presented at the Regional Studies Association European Conference on 'Networked regions and cities in times of fragmentation', Delft, 13-16 May 2012.

4.1 Introduction

Ample attention has been paid in recent years to the relation between knowledge institutions, particularly universities, and urban and regional development. This relation often is phrased in terms of urban development, either by the involvement of knowledge institutions in urban development projects in the city, or the development of housing and other urban functions on the university campus.[75] It is also approached from an economic perspective, analysing for instance the impact of purchases and jobs by knowledge institutions on the local economy,[76] or the way knowledge institutions contribute to a city's knowledge economy,[77] technological knowledge base[78] and hence, it is assumed, innovativeness.[79]

Richard Florida and other advocates of the creative city concept stress the importance of knowledge institutions also for the creative industries. The latter may also benefit from relations with knowledge institutions. At the same time, however, relatively little is known about the specific relation between creative industries and knowledge institutions. On the one hand, the above debate on the relation between knowledge institutions, businesses and urban development focuses on technological (high-tech) rather than conceptual (high-content) innovation. Whereas creative industries such as serious gaming or audiovisual industries have a distinct technological profile, other subsectors such as design or advertising mainly focus on

[75] E.g. Wiewel, W. and D.C. Perry (eds.) (2008) 'Global universities and urban development; case studies and analysis', Armonk NY/London: M.E. Sharpe; Den Heijer, A. (2011) 'Managing the university campus; information to support real estate decisions', Delft: Eburon.

[76] Felsenstein, D. (1996) 'The university in the metropolitan arena: impacts and public policy implications', Urban Studies, Vol. 33, No. 9, pp. 1565-1580; Armstrong, H.W., J. Darrall and R.Grove-White (1997) 'Maximising the local economic, environmental and social benefits of a university: Lancaster University', GeoJournal, Vol. 41, No. 4, pp. 339-350.

[77] Van Geenhuizen, M., P. Nijkamp, H. Rijckenberg (1997) 'Universities and knowledge-based economic growth: the case of Delft (NL)', GeoJournal, Vol. 41, No. 4, pp. 369-377; Perry, B. (2008) 'Academic Knowledge and Urban Development: Theory, Policy and Practice', in: T. Yigitcanlar, K. Velibeyoglu and S. Baum (eds) Knowledge-based urban development. Planning and applications in the information era, Information Science Reference, New York: Hershey, pp. 21-40; Franz, P. (2008) 'From University Town to Knowledge City: Strategies and Regulatory Hurdles in Germany', in: T. Yigitcanlar, K. Velibeyoglu and S. Baum (eds), *op. cit.*, pp. 101- 115.

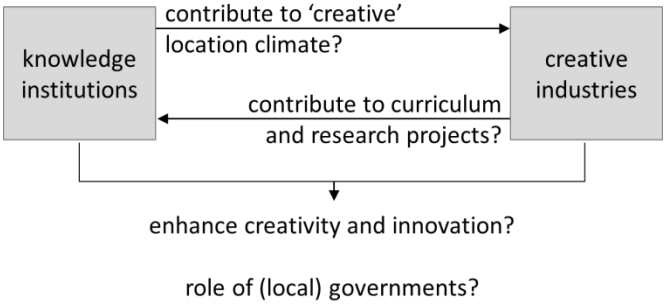
[78] Abramovsky, L. and H. Simpson (2011) 'Geographic proximity and firm-university innovation linkages: evidence from Great Britain', Journal of Economic Geography, Vol. 11, pp. 949-977.

[79] Caniëls, M.C.J. and H. van den Bosch (2011) 'The role of higher education institutions in building regional innovation systems', Papers in Regional Science, Vol. 90, No. 2, pp. 271-287.

conceptual innovation. The creative city debate itself, on the other hand, for a large part tends to be inward-looking, focusing on definitions, employment data and creative clusters. In addition to this, the economy has been relatively 'invisible', being tied to occupations rather than branches, and partly connected to activities in the 'underground'.

From this perspective the current paper focuses specifically on the ties between knowledge institutions such as universities, polytechnics and academic research institutions on the one hand, and creative industries and entrepreneurs on the other. It addresses the questions 1) how knowledge institutions may contribute to improve the location climate for creative businesses and creative talent, 2) how knowledge institutions cooperate with the creative sector to stimulate innovation and creativity, and 3) how creative industries contribute to the curriculum and research projects of knowledge institutions (Figure 4.1). Last but not least, an overarching question is what local governments could do to stimulate the cooperation between creative industries and knowledge institutions in such a way that urban and regional innovativeness benefits.

Figure 4.1: Questions regarding the relations between creative industries and knowledge institutions.



The paper explicitly represents work in progress. It is mainly informed by, on the one hand, a series of in-depth interviews with creative entrepreneurs in Delft,[80] and on the other hand by an expert meeting with policy-makers, creative entrepreneurs and representatives of knowledge institutions, organized by the authors in Bremen on 23 November 2011 as part of the INTERREG IVB project *Creative City Challenge*.

The following sections provide an overview of the various types of interaction that may exists between creative industries and knowledge institutions, based on the primary tasks of knowledge institutions and three main pillars of the creative economy (Section 4.2). A simple analytical framework results from this. This is then applied in a illustrative concise case study of Delft (Sections 4.3 and 4.4). Knowledge institutions and knowledge-intensive businesses constitute an substantial part of the local economy of Delft, and public authorities, businesses and knowledge institutions pursue dedicated strategies to reinforce the local and regional knowledge economy. Furthermore, Delft has a sizable creative industry with explicit connections to its knowledge infrastructure, making it an interesting case for the issue

[80] Trip, J.J. and A. Romein (2010) 'Creative city policy: bridging the gap with theory', paper presented at the 8th EURS Conference 'Repositioning Europe in an era of global transformation', 15-17 September 2010, Vienna.

addressed here. A discussion on the results of the analysis, and the conditions for and circumstances in which successful cooperation between creative industries and knowledge institutions may evolve, concludes the paper.

4.2 Positioning interactions between creative industries and knowledge institutions

> "While the university is a key institution of the Creative Economy, what's not so widely understood is the multifaceted role that it plays. It is not merely there to crank out research projects that can be spin off into companies. To be an effective contributor to regional growth, the university must play three interrelated roles that reflect the 3T's of creative places - technology, talent and tolerance".[81]

Although it is hardly surprising in this context to refer to Florida's 2002 bestseller, the above quote is in several aspects key to the role of knowledge institutions in the creative economy. Florida focuses on universities, but what he says to some extent also applies to other higher education and research institutions.

Florida's quote refers, partly implicitly, to two dimensions that may be used to position the relations between knowledge institutions and creative industries in a more systematic way. First, there are the various tasks and roles of knowledge institutions. Second, the three 'pillars' of the creative economy Florida mentions: technology, talent and tolerance.

The first of these dimensions refers to the three primary tasks of knowledge institutions:

- *teaching* and *learning* are particularly important for universities and other institutions of higher education. It involves the classes and coaching of the formal curricula, as well as less formal ways of learning. Formal teaching is not so much a task of dedicated research institutions, but even here forms of learning by for example internships or on the job training are likely to be indispensable;
- *research* is the essential task of research institutes, but is also a primary task of universities and some other higher education institutions, where it tends to be related to teaching. Especially in the master phase the two may be closely interwoven;
- *valorisation* of knowledge has become much more important in recent years, due to a decrease in public funding, a more business-like approach and an increasing pressure to deliver 'value for public money'.[82] According to Etzkowitz and Webster[83] this third task of knowledge institutions implies a 'second academic revolution', defined as "translation of

[81] Florida, R. (2002) 'The rise of the creative class; and how it's transforming work, leisure, community and everyday life', New York: Basic Books, p. 292.

[82] Rodrigues, C. (2011) 'Universities, the second academic revolution and regional development: a tale (solely) made of "techvalleys"?', European Planning Studies, Vol. 19, No. 2, pp. 179-194; Barge-Gil, A., L. Santamaría and A. Modrego (2011) 'Complementarities Between Universities and technology Institutes: New Empirical Lessons and Perspectives', European Planning Studies, Vol. 19, No. 2, pp. 195-215.

[83] Etzkowitz, H. and A. Webster (1998) 'Entrepreneurial science: the second academic revolution', in: H. Etkowitz, A. Webster and P. Healey (Eds) Capitalizing Knowledge: New Ineractions of Industry and Academia, Albany NY: State University of New York Press, pp. 21-46.

research findings into intellectual property, a marketable commodity and economic development".[84]

The second dimension refers to technology, talent and tolerance, Florida's '3 Ts'. This catchy term hides a lot of nuance, as each of the three terms is significantly broader than is being suggested by the indicators used by Florida in his (mostly quantitative) analyses. Therefore, the '3 Ts' are used here as useful framework, in which the three elements are interpreted as follows:

- although the focus is often on *technology* (too often, as Florida acknowledges)[85] the creative economy involves important non-technological sectors. Rather, the focus here is on technology, design and other creative knowhow;
- *talent* involves attracting talented people, but also the management of human resources in a broader term. Thus, it includes for instance education in creative disciplines, training of entrepreneurial skills, and the recruitment and employment of creatives;
- *tolerance* may be considered a synecdoche for a city's social climate in a broader sense, including 'intangibles' such as social and cultural diversity, safety, authenticity, openness and progressiveness.

Although these two dimensions are by no means the only way to position relations between creative industries and knowledge institutions, within the context of this paper they provide a versatile and pragmatic framework. Accordingly, Table 4.1 presents a framework to position possible relations between knowledge institutions and creative industries, structured by way of the two dimensions elaborated above. It shows a number of different types of interaction, distinguished on the basis of a concise literature review. Although this is far from an exhaustive overview, it is noticeable that the relations between creative industries and knowledge institutions are clustered in four out of nine cells, leaving the other five cells empty.

One cluster concerns relations involving teaching and learning, aimed on the development of talent. Higher education institutes may attract creative talent to a city, but the extent to which graduates stay after their studies differs, graduates in the US generally being more mobile than those in Europe.[86] The presence itself of students also tends to have a considerable impact on the social climate in university towns. In general the presence of large student populations leads to more tolerance, liveliness and a progressive cultural and political climate.[87] Furthermore, the cultural climate may also be enhanced by courses and cultural

[84] The first academic revolution in the first quarter of the nineteenths century added the generation of knowledge by research as a second primary task to teaching.

[85] Florida, R. (2005) 'The flight of the creative class; the new global competition for talent', New York: Harper Collins.

[86] Florida, R. (2002) 'The rise of the creative class; and how it's transforming work, leisure, community and everyday life', New York: Basic Books; Florida, R., C. Mellander and K. Stolarick (2008) 'Inside the black box of regional development - human capital, the creative class and tolerance', Journal of Economic Geography, Vol. 8, No. 5, pp. 615-649; Krätke, S. (2011) 'The creative capital of cities; interactive knowledge creation and the urbanization economies of innovation', Chichester: Wiley-Blackwell; Perry, M. (2011) 'Finding space for the creative class: a review of the issues', Urban Policy and Research, Vol. 29, No. 4, pp. 325-341.

[87] Florida, *op. cit.*, p. 292; Krätke, *op. cit.*, pp. 81-82.

events supplied by knowledge institutions, but accessible to the general audience.[88] Many universities, for example, accommodate museums and a university theatre.

The research task of knowledge institutions is largely related to the 'pillar' of technology, design and other activities of creatives and creative industries. In this regard, knowledge institutions are considered important 'hubs' in networks of knowledge exchange.[89] The extent to which this is relevant to creative industries per se is likely to depend on the type of institutions involved.

Table 4.1: Framework of possible relations between creative industries and knowledge institutions.

		dimension 2: 'pillars' of creative economy (3 Ts)		
		technology, design, creative activities	talent, education, entrepreneurship	tolerance, social climate
dimension 1: primary tasks of knowledge institutions	teaching and learning		▪ higher education attracting creative talent (Florida, 2002:292) which largely stay in city after graduation in Europe (Krätke, 2011:85) but less so in US (Florida *et al.*, 2008:616; Perry, 2011:4)	▪ higher education as a factor of open social climate (Florida, 2002:292; Krätke, 2011:81-2) ▪ 'open access' courses contributing to cultural life (Doyle, 2010)
	research	▪ public research institutions as 'hubs' in knowledge networks (Krätke, 2011:115)		
	valorisation		▪ higher education institutions providing incubation facilities (Arroyo-Vázquez *et al.*, 2010:66) ▪ higher education institutions as source of spin-off firms (Florida, 2002:292)	

A final cluster concerns the valorisation of knowledge by knowledge institutions, a task that is of increasing importance. Valorisation in this respect is related to the ways in which knowledge institutions provide labour market opportunities for creative graduates, and in particular the ways in which they support business start-ups. Knowledge institutions participate in founding and funding incubator-type of spaces (buildings) and adjoining programmes for start-ups. They may also stimulate near-graduates to start their own business.[90] What is required here is the kindling of ambition and drive for entrepreneurship and training of required entrepreneurial

[88] Doyle, L. (2010) 'The role of universities in the 'cultural health' of their regions: universities' and regions' understandings of cultural engagement', European Journal of Education, Vol. 45, No. 3, pp. 466-480.

[89] Krätke, *op. cit.*, p. 115.

[90] Florida, *op. cit.*, p. 292; Arroyo-Vázquez, M., P. van der Sijde and F. Jiménez-Sáez (2010) 'Innovative and creative entrepreneurship support services at universities', Service Business, Vol. 4, pp. 63-76.

skills which are often not or insufficiently met in the standard curriculum. At the root of this is a 'non-conventional' image of entrepreneurship that should be established by institutes for higher education in creative disciplines throughout their curriculum.[91] Again, the type of institutions involved is likely to determine the involvement start-ups in the creative sectors.
The next section combines this conceptual framework with evidence from the Dutch town of Delft. It discusses how knowledge institutions and creative industries in Delft are cooperating, and how their mutual relations may be positioned within the framework discussed above.

4.3 The case of Delft [92]

Delft is a city of almost 97 thousand inhabitants in the densely urbanised western part of the Netherlands. It is situated between Rotterdam and The Hague, both at about 15 minutes by train. Both cities are considerably larger than Delft, with 593 thousand and 489 thousand inhabitants respectively.[93] This 'sandwich position' is reflected in many aspects of Delft's social and economic development. It enables the city to borrow size from its neighbours when this is advantageous, as a wide range of facilities and amenities are available at short distance.

However, the proximity of both large cities also has less desirable effects. First, this makes it relatively easy for students, recently graduated knowledge and creative workers and young starting entrepreneurs to move to these cities in response to the shortages of affordable housing and working spaces in Delft. Furthermore, commuting to and from (and via) Delft is considerable, causing congestion on the A13 motorway between The Hague and Rotterdam and hampering the accessibility of Delft by car for a large part of the day. Also, the range of cultural and leisure amenities, especially for young graduates, is relatively small in Delft.

Despite these disadvantages, many inhabitants of Delft value its social and residential climate. As Delft itself is relatively small, it lacks a larger city's amenities but also its problems. Furthermore, it has a historic inner city which is lively as well as picturesque. It is now an important element of the city's creative production and consumption milieu, as a location for creative firms, a meeting place and a podium for cultural activities. However, it is also an expensive location, protected by preservation legislation, and to some people too much of an 'open air museum'.

Before the 1960s Delft was a typical industrial city: almost half of its economically active population worked in the manufacturing sector whose main branches were metal, chemical, optical and technical instrument, construction, food and drinks industries. But due to the structural trend of de-industrialisation, manufacturing has all but disappeared from Delft. A last icon of manufacturing Delft, the Unilever peanut butter factory moved to Rotterdam in 2007.

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[91] Brown, R. (2007) 'Promoting entrepreneurship in arts education', in: Henry, C. (ed.), Entrepreneurship in the Creative Industries. Cheltenham (UK)/Northampton (MA): Edward Elgar, pp. 126-141; Taylor, C. (2007) 'Developing relationships between higher education, enterprise and innovation in the creative industries', in: Henry, C. (ed.): *op. cit.*, pp. 178-196; Jacobs, D. (2009) 'Een creatieve stad is meer dan een stad van creatievelingen [A creative city is more than a city of creatives], in: S. Franke and G.J. Hospers (eds.) De levende stad. Over de hedendaagse betekenis van Jane Jacobs, Amsterdam: SUN Trancity, pp. 57-67.

[92] This section has been partly based on Romein, A., A.M. Fernández-Maldonado and J.J. Trip (2011) 'Delft blues: the long road from university town to knowledge city', International Journal of Knowledge-Based Development, Vol. 2, No. 2, pp. 148-165.

[93] Statistics Netherlands, 1-1-2010.

Knowledge institutions

Delft is home to several major research and education institutes, notably Delft University of Technology (DUT) and the Netherlands Organisation for Applied Scientific Research (TNO). Both are located south of the inner city, respectively on and adjacent to a university campus. DUT has about 4,600 employees and 17 thousand students, making it the largest university of technology in the Netherlands.[94] TNO has several locations in Delft, together accommodating almost 1,200 employees (figure acquired by e-mail). In addition to DUT, the city harbours two multi-disciplinary higher vocational training institutes and the UNESCO-IHE Institute for Water Education. Together, the slightly less than 20 thousand students in Delft are distributed over technical studies (61%), creative and design studies (31%) and social, economic and environmental studies (8%).[95]

Particularly relevant here are the faculties of Architecture and Industrial Design of DUT. They are among the largest faculties in Delft, and the largest of their kind in the Netherlands. They are teaching a range of creative disciplines. In the case of Architecture this ranges from design to building technology to urbanism, while Industrial Design for instance includes automotive design. Both faculties have strong relations with creative industries in Delft.

Creative industries

Creative industries in Delft provide over 2,200 jobs, 4.7% of total employment (Table 4.2). Creative producer services are by far the largest subsector, including relatively many architects and designers. This can be related directly to the abovementioned importance of the faculties of Architecture and Industrial Design of DUT. Many of the city's creative entrepreneurs and workers studied here and still maintain close relations with the university. However, the number of creative business at and around the university campus is limited and mainly includes technology-oriented firms in for instance electronics and ICT. In contrast, the inner city with its attractive production and consumption milieu for creative entrepreneurs is somewhat of a hot spot for creative businesses.

Table 4.2: Creative industries in Delft (1 Jan. 2008).[96]

	no. of jobs	% of total employment	no. of firms	no. of jobs per firm
arts	576	1.2	153	3.8
media & entertainment	256	0.5	108	2.4
creative producer services	1,381	2.9	255	5.4
total creative industries	2,213	4.7	516	4.3
total Delft	47,299	100.0	3,134	15.1

Regarding the creative production and consumption milieu, Table 4.3 shows an overview of strengths, weaknesses, opportunities and threats regarding Delft as a location for creative

[94] DUT [Delft University of Technology] (2011) 'TU Delft Highlights', available from https://epub01.publitas.nl/84/42/magazine.php#/spreadview/40/, obtained Sept. 2011.

[95] Own calculations based on annual reports and information acquired from DUT and TNO by e-mail and telephone.

[96] Figures obtained by e-mail from Haaglanden Register of Companies (2009).

industries, based on creative entrepreneurs' assessment of place qualities and identification of opportunities and threats. Strengths include the historic inner city (for its urban space and atmosphere rather than as a meeting place), the general residential climate and atmosphere, and — of particular relevance here — the relations between creative industries and higher education institutions, particularly DUT. With regard to cooperation and customer relations, the central location of Delft in regional perspective is often mentioned as an advantage. Weaknesses can be found in a number of practical issues such as accessibility and parking, and the supply of affordable working space and housing. Whereas creative entrepreneurs appreciate Delft, they generally consider the image of Delft as a creative city to be weak. Finally, while there is no lack of 'third places' as such, creative entrepreneurs do not use them very often.

Opportunities include the redevelopment of industrial buildings to lessen the shortage of working spaces for creative industries, and the more open attitude of the university towards relations and cooperation with creative industries. Threats entail the difficulty to retain creative graduates. It is remarked that the inner city tend to be too much of a 'historic museum' in the eyes of young creative talent, and has little to offer for graduates who can no longer depend on student-oriented amenities and student housing. Furthermore, particularly larger creative businesses felt that policy focused too much on starting entrepreneurs, rather than addressing for instance the problem of business expansion in the protected inner city.

Table 4.3: Creative entrepreneurs' assessment of Delft as a location for creative industries.[97]

strengths	**weaknesses**
▪ built environment in inner city ▪ solidarity of creative entrepreneurs with city of Delft ▪ availability of formal relation networks ▪ relation to higher education institutions ▪ intake of young creative talent ▪ situation between Rotterdam and The Hague	▪ insufficient supply of affordable and suitable working spaces ▪ no creative city image ▪ insufficient supply of affordable and suitable residential spaces ▪ accessibility by car/congestion due to construction works ▪ parking ▪ 'open-air museum' character of inner city ▪ few 'big players' or 'drivers' in creative sector ▪ insufficient spatial quality of DUT campus
opportunities	**threats**
▪ availability of spaces for redevelopment into working spaces for creative industries ▪ more open attitude of university towards creative industries	▪ city is unable to retain young urban talent (graduates) ▪ policy does not evolve with growth of creative sector and creative businesses

4.4 Interactions between knowledge institutions and creative industries

In this section, relations between the creative industries and knowledge institutions in Delft will be discussed more in detail, according to the scheme elaborated in Section 4.2. Starting point are the tree main tasks of knowledge institutions: teaching and learning, research and valorisation.

[97] Trip and Romein, *op. cit.*

Teaching and learning

In the field of teaching and learning, relations between the creative industries and knowledge institutions are most notable in the case of the faculties of Architecture and Industrial Design of DUT. In both faculties, creative entrepreneurs and businesses contribute to the curriculum by part-time lectureship and tutorship, giving guest lectures, or providing opportunities for internships. On the flipside of the coin, for creative entrepreneurs this is a way to scout future employees among creative graduates.

Many internationally renowned Dutch architects, mostly educated in Delft, hold or have held special chairs in the faculty of Architecture. At the moment this involves e.g. Kees Kaan (Claus and Kaan Architects), and earlier examples include Pi de Bruijn and Carel Weeber (Architecten Cie.) and Francine Houben (Mecanoo), who designed the university library and reorganized public space on the campus. Vice versa, many professors whose primary tasks are in the faculty are active as architects or urban development consultants as well for one or two days a week. The relation between chairs and design practitioners is less explicit in the faculty of Industrial Design, but several active designers from Delft hold or have held chairs in the institution, as have several former designers (from e.g. Philips and furniture company Gispen).

The presence of a relatively large number of students has a notable influence on the social climate in Delft. Even though a considerable amount of students actually live outside Delft, the city has a relatively large number of active students' unions, and about half of all students is a member of a union. Student facilities and student life is largely concentrated in and around the inner city, where most pubs and student societies are located. This is in sharp contrast to the university and other knowledge institutions, virtually all of which are located outside the centre. However, while students and student facilities have a distinct positive effect on liveliness in the inner city, many of these facilities are accessible for students only, and graduates suddenly find facilities in Delft to be rather limited.

A different but no less notable impact of student life in Delft is the presence of the dedicated student party STIP ('Students of Technology In Politics'), which has three of the 37 seats in the city council. STIP currently has one alderman in local government, responsible for knowledge economy (including creative industries), city marketing, spatial planning and student housing.[98] As such, he is also responsible for several projects involving the relation between creative industries and knowledge institutions, such as the Bacinol and Yes!Delft incubator buildings and the development of the Technological Innovation Campus (TIC), which will be discussed below.

Research

Co-development and sharing of research between DUT or TNO occurs on a regular basis, for instance in the development of electronics, but it is still an ad hoc phenomenon. Plans exist, however, to stimulate this type of cooperation on a structural basis. A recent initiative that is particularly relevant for co-development and shared research is the Technological Innovation Campus (TIC), an extensive scheme to transform the DUT campus and its wide surroundings. The existing DUT campus, should be made more attractive and better connected to the surrounding areas. Public space on the campus has been refurbished in recent years — although it would be euphemistic to say the result does not appeal to everyone — and the

[98] STIP (2011) 'STIP in English', http://stip.live.valentnet.nl/stip-in-english/93-77.aspx, obtained Oct. 2011.

campus area still lacks any public amenity other than a student employment agency. South of the campus area a science park is planned for mostly technology-oriented business that cooperate with each other and with nearby knowledge institutions in an open innovation[99] system.[100] This implies that businesses and knowledge institutions share knowledge in a reciprocal, non-competitive way.

The elements of the TIC plan described above have a strong relation to the research task of the knowledge institutions in Delft; nevertheless, it also includes elements that are more related to valorisation (see below). The project is a joint effort of DUT and the Municipality of Delft. They are part of the plans for a wider knowledge region reaching from Rotterdam to Leiden, which should contribute to strengthening the competitiveness of the southern Randstad region in the international knowledge economy. However, all these plans are still in a rather preliminary state. Considering the strong involvement of DUT, the strong technological focus of the plans, particularly on clean tech and bio sciences, is hardly surprising. Nevertheless, a final component of TIC is 'creative city', which has also been the most elusive part of the project so far. The creative sector in Delft started a lobby to strengthen the position of creative industries in the project and guarantee the position of the 'creative city' in the next, more concrete stage of planning.

Valorisation

Valorisation has become more important in recent years and is also taken very seriously at DUT. The university initiated the incubator Yes!Delft (Young Entrepreneurial Society Delft), to facilitate graduates who what to start their own business. Other participants include the Municipality of Delft, TNO and higher vocational training institutions. Initially Yes!Delft focused on techno-starters, but recently it has been seeking to expand its focus to include creative starts-ups also, for instance in design. A creative incubator would be particularly welcome as an addition to the main existing incubator for creative start-ups, Bacinol 2. However, for Yes!Delft this implies a significant change in focus, which raises questions such as whether the same approach can be applied to techno and creative starters, and whether specific facilities are required.[101]

Yes!Delft provides start-ups with affordable working spaces and shared facilities, but it provides other facilities in relation to this. The Yes!Delft Students section provides training in entrepreneurial skills for students, as well as opportunities for internships with start-up firms. On the other hand, entrepreneurs who grow out of the start-up phase can remain a partner in the network around Yes!Delft. But here again, the focus so far has been on the technology sector, rather than creative industries.

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[99] The term 'open innovation' was introduced by Chesbrough to describe how, increasingly, firms do not have a monopoly on specific knowledge. Thus, "… valuable ideas can come from inside or outside the company and can go to market from inside or outside the company as well. This approach places external ideas and external paths to market on the same level of importance as that reserved for internal ideas and paths to market in the Close Innovation era". See Chesbrough, Chesbrough, H.W. (2003) 'Open innovation; the new imperative for creating and profiting from technology', Boston: Harvard Business School Press, p.43.

[100] DUT/Gemeente Delft [Delft University of Technology/ Municipality of Delft] (2011) 'Technologische Innovatiecampus Delft Masterplan 1.0' [Technological Innovation Campus Delft Master Plan 1.0], Delft.

[101] Interview with Mr. Hans Huygens, director at YES!Delft (29 Nov. 2010).

DUT is also involved in several other projects that aim to provide affordable working spaces for creative entrepreneurs and cultural facilities. Most of these are part of the 'creative city' component of the TIC scheme, particularly a number of former industrial buildings including a glue factory ('Glue & Culture') and an extensive cable factory along the river Schie ('Schiehallen'). The RDM Campus, a former ship building wharf, in Rotterdam is a similar project outside Delft in which DUT participates, and which includes affordable working spaces for starting entrepreneurs.

Overall picture

Table 4.4 summarizes the relations between creative industries and knowledge institutions in Delft according to the concise scheme elaborated in Section 4.2. An overall picture emerges from which some interesting points may be highlighted.

Table 4.4: Mutual relations between creative industries and knowledge institutions in Delft.

		dimension 2: 'pillars' of creative economy (3 Ts)		
		technology, design, creative activities	talent, education, entrepreneurship	tolerance, social climate
dimension 1: primary tasks of knowledge institutions	teaching and learning		▪ education of future creative workers, particularly in large Architecture and Industrial Design faculties ▪ creative business offer traineeships and apprenticeships, meanwhile scouting future employees ▪ guest lectures by creative entrepreneurs ▪ active architects and (to a lesser extent) designers hold chairs in Architecture and Industrial Design faculties	▪ impact of students on social climate and liveliness, mostly in inner city: pubs, student societies ▪ engagement of students in local politics, notably in the field of knowledge economy
	research	▪ TIC science park as an environment for reciprocal open innovation (co-development etc.) ▪ co-development on a B2B basis (e.g. in electronics)		
	valorisation		▪ TIC Creative City, incl. Glue & Culture and former cable factory ▪ possible expansion of Yes!Delft techno-starter incubator by Yes!Delft Creative ▪ entrepreneurial training for students (Yes!Delft Students)	

Creative entrepreneurs in Delft highly value the proximity of knowledge institutions, in particular of DUT. For many DUT is the alma mater to which they still feel a special affection. Many also cooperate with knowledge institutions in the field of research and education. Furthermore, creative graduates from local knowledge institutions are a major source from which creative business in Delft recruit new employees. Finally, as some of the largest organisations in Delft, DUT and other knowledge institutions also have an important role as a client of creative industries, for instance in design and communications.

In view of the type of knowledge institutions located in Delft, which for the most part are strongly technology-oriented, it is not surprising that the relations between creative industries and knowledge institutions focus on the faculties of Architecture and Industrial Design of DUT. These are the two largest faculties in creative disciplines, also large in absolute figures. Their presence, and the sheer number of creative graduates and starting entrepreneurs they generate, are also reflected in the composition of creative industries in Delft. This in turn leads to a natural focus of many creative entrepreneurs on these two faculties.

For a long period the city of Delft and its main knowledge institutions lived back-to-back. Knight pointed to a limited synergy between the knowledge sector and the city of Delft, both spatially, economically and socially.[102] The university mostly had an international focus and was strongly technology-oriented. In spatial terms the two were separated more and more, as the university gradually left the inner city for the new, suburban campus. However, in recent years DUT and the municipality of Delft 'rediscovered' each other, resulting in cooperation in projects such as 'Glue & Culture' and Yes!Delft. Creative industries now also notice a more open attitude of DUT towards the creative sector. This is a gradual change, as most of DUT remains focused on 'engineering'. Nevertheless, the inclusion, in some form, of creative industries in the TIC scheme, the plans for Yes!Delft Creative, and the involvement of DUT in for example the abovementioned 'Glue & Culture', difficult to realize as they are even now, would hardly have been imaginable ten years ago.

4.5 Discussion

> "But a university cannot do this all alone. The surrounding community must have the capacity to absorb and exploit the innovation and technologies that the university generates, and also help put in place the broader lifestyle amenities and quality of place sought by Creative Class people".[103]

As the above quote of Richard Florida indicates, the presence of knowledge institutions alone are not sufficient to stimulate the local creative economy if they are not embedded in the city. This embeddedness has largely been missing in Delft for a long time, and while the university and the municipality of Delft have now found each other, in practice there is still a long way to go. The question arises whether Delft itself is large enough to provide the range of lifestyle amenities and place qualities Florida mentions. It is telling in this respect that 61% of the higher-educated workers employed in Delft do not live in the city.[104] Nevertheless, particularly the university is like an octopus, having multiple tentacles in the local society, for example by

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[102] Knight, R. (1995) 'Knowledge-based development: policy and planning implications for cities', Urban Studies, Vol. 39, No. 5/6, pp. 929-945.

[103] Florida, *op. cit.*, p. 292.

[104] Bureau Louter (2007) 'Economische monitor Delft 2007' [Economic Monitor Delft 2007], Delft: Bureau Louter.

the large number of students it attracts, by the students' involvement in local government, by its contacts to creative and other businesses or by the university cultural centre. This illustrates the broadness of the arena in which the relations between knowledge institutions and creative industries occur.

Scope of interactions

The preceding sections explored the ways in which universities and other higher education and academic research institutions cooperate with the creative sector to stimulate creativity and innovation and contribute to improve the location climate for creative businesses and creative talent, as well as several ways in which creative industries contribute to the curriculum and research projects. However, while several fields of cooperation between knowledge institutions and creative industries may be distinguished, at the same time there are extensive areas in which cooperation is less obvious and hardly exists. The question could be asked, then, whether truly innovative ways of cooperation between creative industries and knowledge institutions might be found in these 'gaps'. Frequent examples of interactions between creative industries and knowledge institutions entail guest lectures, internships and participation in incubator buildings and training of entrepreneurial skills of young graduates. Nonetheless, other types of cooperation between creative industries and knowledge institutions can be imagined, particularly with the more 'creative' departments of these. Sharing of facilities might be mutually beneficial, for instance of meeting rooms or workshops that are only used part of the time.

Mutual understanding

'Scene meets science' implies not just creative entrepreneurs dealing with researchers, teachers or university managers. It is also about two communities that meet. The relations between creative industries and knowledge institutions are not that far-fetched, considering that 'scene' and 'science' represent two models of innovation. Creativity as fostered in the creative industries often seems to originate from unsystematic inspiration and intuition, but in fact can be trained and focused by practice and by applying dedicated methods.[105] Research and teaching often are just as creative, and often just as unpredictable, but are structured by their own set of rules. In both cases, however, curiosity is a major driver of the choices that are made, and creativity is applied to find innovative solutions to the problems at hand. These parallels perhaps make it plausible that mutual benefits can be achieved between knowledge institutions and creative industries.

To a certain extent science and creative industries share a common language and aims, but they differ for example in their conventions, appraisal system and institutional organisation. A relevant question is, then, how to encourage the evolvement of a 'common language' between knowledge and creative workers. Despite the parallels that may be drawn, Rae indicates there is a 'cultural discontinuity' between the formal educational system that is predicated on formal goals, targets and standards while education for creative activities should emphasize experiment and discovery.[106] How does for instance the rigid scientific appraisal

[105] E.g. Fraley, G. (2007) 'Jack's notebook; a business novel about creative problem solving', Nashville: Thomas Nelson.

[106] Rae, D. (2007) 'Creative industries in the UK: cultural diffusion or discontinuity?', in: Henry, C. (ed.): Entrepreneurship in the Creative Industries, Cheltenham (UK)/Northampton (MA): Edward Elgar, pp. 54-71.

system based on peer review and citations relate to more flexible, but to a large extent also peer review-based, ways in which creatives discuss and assess their output? Could there be a role for 'liaison officers' to facilitate the match between scene and science?

Despite these parallels, the final question posed in the introduction to this paper remains a point for discussion. How can scene and science brought together, and more specifically, what could local governments do to stimulate the cooperation between creative industries and knowledge institutions? And where, within such a broad field, and how should policy focus on this cooperation in such a way that urban and regional innovativeness benefits? After the preceding sections several issues come to mind that do not constitute a comprehensive approach, but provide relevant starting points for discussion.

Mutual benefits

Creative industries may learn from the research and training provided by knowledge institutions, and they may contribute to the education of young creative talent. Other examples can be thought of in view of the distinct qualities of the creative industries. For one thing, the question arises to which extent creatives might influence knowledge institutions not only by contributing to education and research, but also by way of their possible impact on university culture and organisation? The presence of creative in 'non-creative' industries can have positive and unexpected impacts on their culture and organisation. Can creatives unveil the curiosity that drives creative as well as scientists, but in practice often fades to the background due to formal institutional structures and bureaucracy? These examples, and the more detailed discussions we had with creative workers and entrepreneurs, learn that interaction between creative industries and knowledge institutions could, and probably should, be reciprocal, based on mutual benefits.

Bottom-up

Evidence suggests that most successful cooperations between creative industries and knowledge institutions evolve in a bottom-up manner rather than by top-down planning. Moreover, creative entrepreneurs stress the role of serendipity in establishing relationships with knowledge institutions. Networks of social relations, elusive and partly hidden from view, are crucial for this. First contact may occur in an informal or non-formal setting and may evolve as people discover a mutual benefit in cooperation. This is in contrast to many formal policies to foster cooperation between knowledge institutions and the creative sector, which tend to be based on a more top-down approach, including 'planned serendipity' by means of networking activities. The Technological Innovation Campus Delft is another example, although in this case there has been some opportunity for bottom-up influences from the creative sector itself.

A relevant question is what this means for the role of local government. The above factors suggest that it should be a facilitator and a mediator, rather than a director, and be careful to implement large-scale masterplans that may easily develop a logic of their own. On the other hand, if local government leaves the floor entirely to bottom-up initiatives, how could it be certain local or regional innovativeness benefits?

Figure 4.2: The third expert meeting, 23 November 2011, Bremen.
Pictures: © Norbert Egdorf | www.egdorf.com

5 Lessons learnt: partners' reflections on the process and outcomes of Creative City Challenge

Expert meeting organized in Groningen on 19 September 2012.

5.1 Introduction

Previous expert meetings dealt with the effects of economic downturn on creative city policy (Kortrijk, 20 October 2010), the relation between creative city development and sustainable urban development (Høje Taastrup, 6 May 2011), and the interactions between creative industries and knowledge institutions (Bremen, 23 November 2011). In the wake of the Final Conference of CCC, the fourth meeting deals with 'lessons learnt': partners' experiences and reflections with regard to the project. This may concern the tangible results of CCC in partner cities and regions, but also thoughts about for instance the approach and the organisation of the project or the cooperation within the consortium.

We asked the project partners to think about what they 'learnt' from the project so far. As a starting point, we suggested that partners might think of, for instance:

- results of the project: what have been the results in terms of stimulating creative businesses? Did the project indeed spark off new business start-ups?
- transnationality: for example, if partners had a lot of exchanges of students or entrepreneurs in their city, what have been the results in terms of e.g. new fruitful contacts between entrepreneurs?
- the project itself: what did partners learn from the project itself? How did the project compare to other EU projects they know? Would there be things we should do differently next time?

We explicitly provided these suggestions only as examples, rather than a guideline, since lessons learnt may be very different and we did not want to restrict partners' imagination in any way. Nevertheless, in the end most partners structured their input largely according to the three above issues.

The quantity and quality of partners' input was impressive.[107] It is worth to note in this respect that many project partners are or have been involved in other EU projects and can compare these to CCC. This makes the 'lessons' they submitted all the more interesting. Altogether about 80 'lessons' were submitted. An inventory learnt that several themes could be identified that cut through the above three broad categories of results, transnationality and project aspects. These themes are:

1) creating awareness among policy-makers; generating a platform for action and involving actors;

[107] The following partners provided the input on which this paper was based: Hamburg University of Applied Sciences, Wirtschaftsförderung Bremen, Stadt Oldenburg together with Kulturetage GmbHg, Gemeente Groningen, Intercommunale Leiedal, HOWEST University College, Høje-Taastrup Kommune, Newcastle City Council, Delft University of Technology, and TILLT Culture & Working Life in West Sweden.

2) networking among creative entrepreneurs, and between creative entrepreneurs and other business sectors;
3) networking within the 'triple helix', between local and regional governments, businesses, artists, knowledge institutions etc.;
4) discussion and the exchange of knowledge and experiences;
5) stimulating business start-ups and entrepreneurship;
6) relation to other projects; possible spin-off projects;
7) aspects connected to the project itself, e.g. organisation, focus, coherence and communication.

Together these issues cover the large majority of partners' input, even if we necessarily aggregated and could not explicitly refer to all individual issues submitted by partners. The above themes leave a few 'lessons' that were mentioned only a few times.

The next sections each discuss one of the above themes, each time by means of a series of quotes from partners' input, followed by a brief elaboration. We did not make explicit which partners we quoted, but, on the other hand, if the source of a quote was quite evident we also did not 'anonymize'. It should be emphasized that the below quotes represent only an illustrative selection of all 'lessons' submitted, whereas the elaboration is obviously based on the total input submitted with regard to that theme.

5.2 Creating awareness among policy-makers; generating a platform for action and involving actors

"When CCC started the INTERREG project had a driver role because of severe budget cuts in local government. […] We learnt that we could use this event for the agenda setting of this issue in our own city. And also that we had very nice showcases in Groningen, which by the same token could use the promotion evoked by CCC for their own development and networking."

"Influenced by the CCC-project growth and creativity is now more explicitly on the agenda of the city council. In relation to the development of a new part of the city, Hedehusene, there is special focus on creative and innovative entrepreneurs and the possibilities of establishing a campus in Hedehusene is to be investigated."

"The CCC-project has developed the role of the municipality to take more active part in the cooperation with businesses, educational institutions etc. in the city and to support clusters and networks among businesses. For example, the municipality now takes the initiative in establishing a local Forum for Growth."

"[Transnationality] can act as a facilitating factor for local involvement; because it is an essential requirement, together with the triple helix approach, it sometimes helps involving local actors that otherwise might have been willing to get involved, or would even have been thought of to involve."

"This City of Talent concept is a broadly shared view in Groningen and the Groningen partnership in the bid for the CCC project was supported by other actors in the triple helix and by stakeholders in the action area: universities with their knowledge transfer facilities, the northern Confederation of the Netherlands, Industry and Employers, the northern SME Association, the northern Chamber of Commerce, as well as the Ebbinge Quarter Association of SMEs. We learnt that in practice it is difficult to sustain this support on a more permanent basis and to establish more synergetic actions and active involvement (in particular full triple

helix involvement). The INTERREG project played a crucial role though because it turned out to be the permanent present engine/flywheel/framework if you like for local actions, new coalitions and for stimulating transnational exchanges of fresh and out-of-the-box ideas, other mindsets."

"The leverage effect is impossible to determine. But we see small changes in attitude. Where 8 years ago design (and by extension creativity) was a strange thing in our region it starts to grow. Small projects occur, the atmosphere shifts from critical to slightly positive (we still tend to be rational Flemish people). Start-ups are moving to Kortrijk, policy makers became aware of the meaning of design/creativity for their city/village."

"A good network creates a creative climate. The feeling that something is going on in the city and you are on the inside is very important to generate new ideas which promote creative industries. This motivates people to start a new initiative."

Many partners mention the role of CCC in creating awareness among policy-makers and generating a platform for action and involving (public and private) actors. This may take various shapes in practice. Participation in the project often made policy-makers and politicians aware of the relevance of creative industries for local urban-economic development, and thereby help local creative city development to gain momentum. In some cases this resulted in a higher priority on the local policy agenda, or the possibility to actually influence or set the agenda. It also helped to attract financial means for creative city development, as the topic became 'eligible' for funding and creative industries, or to build a network of parties interested in cooperation.

Participation of a city in CCC indicates that there must have been at least some interest in creative city development already before the project started. With regard to this, several partners also indicate how CCC fitted in their long-term activities. Several partners also describe how CCC relates to new or existing initiatives, such as a growth strategy in Oldenburg, the 'Strategy for Growth' in Høje-Taastrup or the 'City of Talent' in Groningen. In other cases participation in the project led to a new perspective on for instance city branding, or to the promotion of local initiatives at an international forum. (On the other hand the project also includes projects that have been dubbed CCC activities but would probably have taken place in almost the same form, had there been no CCC project, although they might not have received the same international exposure.)

5.3 Networking among creative entrepreneurs, and between creative entrepreneurs and other business sectors

"I think it would have been important to have more stakeholders from the CCI – next to public and science institutions involved. That might have made it easier to write an application which is much more practically orientated, featuring tasks which are easier to fulfil for the partners."

"It is important to build up a network for and with people from creative industries. They learn from each other – as precondition for an eventual cooperation. They receive new input and widen their horizons. But you have to continuously give input to keep the network alive."

"What we did: we gathered people from the creative sector to define our aims for Oldenburg and to implement them successively: regular meeting point was created, events, projects, an

information platform and support of newcomers. “A network” of creative industries was set up and now a lot of activities have taken place under its roof.”

“The network should be implemented by people from creative industries and not by administration. Some people are even rather sceptical about the project, if administration plays a too large role in it. There are a lot of very engaged people in Oldenburg, who are very interested in networking and promoting development. Administration has the role of supporting and implementing good ideas of creative makers, but not necessarily to invent the ideas itself.”

Literature on creative cities emphasises the importance of ‘buzz’, ‘third spaces’ and other forms of networking between creative entrepreneurs and workers. No surprise then that this was also a major topic in the CCC project. The activities within the CCC project entailed not only networking between creative entrepreneurs, but also cross-sectoral interaction between creative entrepreneurs and other businesses, and between specific groups such as artists en businesses.

Several partners mention the Best Collaboration Award as a useful networking tool, but apart from this many meetings and exchanges between entrepreneurs were organized. This involved face-to-face meetings as well as networking tools on internet. On the whole, partners consider this an important aspect of the project, and one of the aspects of which they are mostly satisfied. Nonetheless, several partners also indicate that they do not know of actual cooperation or other fruitful contacts between entrepreneurs that have been established because of CCC activities; some also remark that this is not conclusive, because they would not necessarily be aware of such contacts.

The involvement of creative entrepreneurs themselves in the project was limited, in fact too limited for several partners. Creative entrepreneurs have indeed been involved in many of the project’s activities, but never formally as a partner, sub-partner etc. Nevertheless, although the focus of CCC on creative industries may have made this a poignant issue, it is not specific for CCC. The small involvement of particularly SMEs in EU projects is a general problem, and is now a specific point of attention in for example recent FP7 calls.

5.4 Networking within the ‘triple helix’

“Never before have the 12 municipalities participating in this project cooperated in city-branding, or any other area for that matter, with such a cross-sectoral outlay. The results from this cooperation were that new ideas on how to merge the best qualities from different areas of public engagement in these municipalities arose very quickly, much to everybody’s surprise and benefit.”

“Never before have these 12 municipalities cooperated cross municipally, quite like they did in this project. They really did not think they had so much to gain from such a cooperation. But with this project, and the new knowledge of what gold-mines of creative city branding concepts the other municipalities were sitting on, they realised that they are too small to compete with other regions and areas without truly cooperating.”

“The triple helix is a wonderful idea on paper, but it is not that easy to realize sometimes.”

"Compared to previous EU-projects we participated in CCC is much more policy-oriented. It involves much more contacts with practitioners, entrepreneurs etc., which makes it very interesting."

"What I like about the project is that I had many opportunities to fill it with life and to support stakeholders from the creative industries in a sensitive and hopefully sustainable way."

A much-valued aspect of the project is that it has stimulated networking and cooperation between the 'triple helix' of government, businesses and knowledge institutions, occasionally supplemented by other organisations such as cultural institutions. It also enabled mutual cooperation between the local governments that participated, and between local governments and other government levels. This involved what in INTERREG terms is called 'vertical and horizontal integration'.

Partners value this aspect because it generated new ideas and opportunities for networking and cooperation. Many of these were not expected beforehand. With regard to this, partners appreciate the practical and policy-oriented approach of the CCC project.

5.5 Discussion and the exchange of knowledge and experiences

"In this project transnational activities and especially bi- or trilateral activities and exchanges really happened. Partners were keen to know what is happening in other regions to foster the creative sector and were therefore willing to contribute to transnational activities and events."

"We were inspired to hear Rune Fløe Bæklund and Lars Dyreborg-Gunslev from the Høje-Taastrup municipality in Denmark tell us all about how to brand a city using the concrete industry and designers specialised on using concrete as their raw material. And we were thrilled to have Griet Noë, project manager at Leiedal in the Kortrijk region in Belgium, giving us insights from the Ugly Spots program where 10 municipalities, a number of professional designers and creative students joined forces in defining the 120 ugliest spots of the region, and then providing the realisation of one creative design-based remake of the ugliest spot in each of the participating municipalities."

"Setting up and running a project completely transnationally turns out to be difficult in our case though, mostly the transnationality means expertise exchange and benchmarking. But we also learnt about successful activities, like the film project with Oldenburg, or the students project with Dundee."

"In comparison with another EU-project, where City of Oldenburg is partner, CCC is characterised by intense and regular contacts and transnational cooperation."

"Oldenburg profited a lot from other CCC project partners, especially as there were partners with more experience when CCC started. Oldenburg has observed their best practices and implemented some of them adapted to our conditions."

"HAW experiences by organizing transnational events in frame of the CCC project were very positive. HAW organized e.g. the European Creativity Night at HAW's faculty of Design and Media (Dundee, Groningen, TILLT, WFB and HOWEST contributed to the event – partly in personal by delivering workshops). It was recognized that the partner inputs were well

visited and participants – apart from making new contacts – got valuable insights from things organized or handled abroad (e.g. HOWEST hold a workshop about the INNOWIZ tool)."

"Bearing in mind the activities which were carried out in frame of the CCC project, we do feel that transnational collaboration not only makes sense but also gives added value to local activities and supports 'out-of-the-box thinking'."

"[…] how much other cities are doing around Creative Industries and the cohesive nature of support so that it has become a central part of their local economy. An anecdotal observation/comment about the backing and support that this type of policy receives from officers and elected members in other parts of the EU. […] How other EU members, dare I say this, are a bit more adventurous than us."

"Yes, Creative City Challenge was a great project to launch Howest Industrial Design Center in some new European and global networks. We welcomed a lot of transnational people in-house, e.g. for the Summer School Prototyping and the other events. We could make a lot of new contacts with other Design Schools worldwide (e.g. Cumulus network for Art & Design Schools, Aalto Design Factory Helsinki,…) and this is of immeasurable value for the future of our team."

A large number of 'lessons' refer to the importance of knowledge exchange and discussion within the project, particularly on the transnational level. Virtually all project partners explicitly mention this issue. Indeed, as the above quotes indicate, this has been one of the most valued aspects of the project.
Many activities within the projects aimed at encouraging interaction between partners and partner cities and regions. Workshops and expert meetings were organised, both scheduled at project meetings and separately from these in various partner cities and regions, often in additions to the activities planned beforehand during the application process. The conferences in Kortrijk and Bremen are also explicitly mentioned in this respect. (Most 'lessons' were submitted before the conference in Dundee in May 2012).

Partners mention that getting acquainted with examples and practices in other cities and regions opened their eyes to new possibilities at home. Moreover, it frequently also let them see existing practices their own city in a different perspective, as they had to present their local projects in an understandable way to people from different cities and backgrounds. In some cases the results of exchange were very concrete, such as the mutual 'transfer' of activities between Oldenburg, Bremen and Groningen.

Some partners suggest that the discussion between partners could have been improved by allocating more time to this, or applying other means to generate even more interaction. Furthermore, the process of interaction and exchange appears to have included a learning curve. Some activities, such as the expert meetings, that had a hesitant start but gained momentum during the project.

5.6 Stimulating business start-ups and entrepreneurship

"Until today, no new business start-ups – generated out of CCC – were made, but we were able to support stakeholders (e.g. Klub Dialog, Viertelfest, Breminale, FabLab Bremen meets FabLab Groningen) with money, knowledge, inspiration and networks."

> "This is simply impossible. We have no tools to measure in hard terms for instance the new creative start-ups […] made because of Designregio or CCC."

> "Workshops organised by HAW for creatives definitely contributed to the learning needs of the creative people. The workshops catered for the needs of skills development such as marketing tools, time management, concept selling etc. and positive feedback was received by participants."

> "The purpose of Creative City Challenge for Howest Industrial Design Center was at least to stimulate its own creative education, research and services. We must say that the project has been satisfying very much in that sense. We could deliver a lot of INNOWIZ brainstorm sessions made-to-measure for companies, for student teams and for non-profit organizations in Belgium and abroad; Howest Industrial Design Center organized a lot of great network events for companies (Shaping Light event, Prototyping Event, Summer Schools Prototyping, Keynote sessions at the Week of Design,….) with the support of Creative City Challenge."

The CCC project did not promise to generate so-and-so-much new jobs or business start-ups. The project aims to stimulate the creative industries, not primarily by directly generating employment in creative businesses, but by facilitating measures such as encouraging creative entrepreneurship and the exchange of knowledge and best practices. Accordingly, there is no evidence that new creative businesses have been started or attracted as a direct effect of the CCC project. Several partners remark that this has not, or not likely, been the case. Besides, it would be very hard to attribute possible start-ups specifically to the project.

Successes are reported, on the other hand, with regard to more indirect ways to support start-ups and entrepreneurship. Partners developed many hours of learning materials in order to enhance the entrepreneurial skills of start-ups and potential start-ups. Also, they organized workshops, master classes and guidelines for starting entrepreneurs.

5.7 Relation to other projects; possible spin-off projects

> "[…] outgoing visits can lead to new ideas or improvements. But people do not only observe the partner projects, so also ideas in other fields will be reported back, and these might lead to ideas for new projects […], new networking, so transnational activities can also lead to unforeseen positive effects, collateral if you like."

> "The partner meetings have inspired on a wide range of different activities which now is in the municipality's own toolbox for city-development. Overall the CCC-project has prepared the way for Høje-Taastrup Municipality's participation in other EU-projects and has thereby strengthened the transnational dimension of several of the municipal's strategic projects."

> "[…] the new connections that have been made leading to new opportunities (many still to be grasped) for closer working across the EU."

Some aspects of CCC, for instance the integral approach of creative activity and place for working and living, find their way into other projects. To which extent these projects might be considered direct spin-offs from CCC is not always clear, but it seems in most cases they are at best implicitly so. Partners mention the influence of for example partner visits within CCC, or the role of CCC in raising funds or involving stakeholders, aspects that already have been mentioned above.

A category specifically mentioned by partners concerns the relation to other EU-funded projects such as E-CLIC and Organza. Several partners also note that they are involved in new EU projects or proposals. Examples are the INTERREG IVB project E-Mobility NSR (involving HAW, TU Delft, HTK and WFB), the INTERREG IVC project InCompass (involving Dundee College and TU Delft), the (unsuccessful) FP7-proposal CLIP3 (involving Groningen, WFB, HAW and TU Delft), and the DANS-Cluster composed of CCC, Smart Cities and E-CLIC (involving several CCC partner cities and regions). In some cases these projects may partly be build on ideas from CCC (although this is not always evident), while in other cases such as E-Mobility NSR the relation to CCC is mostly found in the composition of the consortium.

5.8 Aspects connected to the project itself

"CCC is also more creative than previous projects in which we participated, not only in its topic but also in its activities such as workshops and conferences, the Creativity and Innovation Day, the award, the movie/exhibition, its ways of communication such as newsletters, websites and logos. We definitely have the feeling that CCC also made us as researchers more creative and required more out of the box thinking than previous projects."

"Creative City Challenge gave us the freedom to catch new opportunities along the way."

"Policy makers often focus on countable, numeric, targets and goals. Not everything can be quantified, and when we try to quantify complex ideas, they lose some of their force and power – they become reduced into the countable numbers. We need to be able to explain to policy makers that generating innovation capacity has a huge potential in a wider context than we are able to quantify and measure today, at the starting point, but nevertheless, it is a very realistic and, in a long term perspective, tangible (and ultimately also measurable) result."

"We were a bit surprised by the pragmatism by which e.g. a student visiting another city is 'checked' as a deliverable. Perhaps other indicators should be used to measure the project's results, but this is probably mostly the result of the focus on INTERREG on 'measuring' and 'counting'."

"We learnt that when ex ante evaluation of the impacts and delivering mechanisms is not elaborated enough or wrong, sticking to initial output indicators can be detrimental to potential impacts. Therefore we learnt that is useful to allow for some change in defining the projects for flexible responses and optimal impact of the activities. Allowing for optimal use of emerging dynamism. This seems to be in line with findings of the special advisor of Commissioner Hahn, prof. McCann. He advised to put more emphasis on impacts and less on output indicators."

"It was a good and valuable experience to note that organizing local events under a transnational umbrella (e.g. the European Creativity and Innovation Day) underlines 'a common project feeling' and a common responsibility to move things and activities forward."

"[…] the lack of coherence between the different WP and stakeholders actions is one of the weaknesses of the project. This is underlined by the constant struggle of having response from the different partners in regard to any action that is undertaken."

"In other EU-projects we are involved in every partner is dealing with every work package, even if your core business is not in that particular field. This obliges the partners to keep in

touch with the whole of the project. In CCC a lot of partners are only involved in one or two WP and this blocks the transnational exchange."

"I think it would have been important to have more stakeholders from the CCI – next to public and science institutions involved. That might have made it easier to write an application which is much more practically orientated, featuring tasks which are easier to fulfil for the partners."

Partners mention several issue related to the project itself, but on most of these opinions differ. On the whole the creativity and the considerable freedom the project offered are appreciated. Partners refer to the variety of activities, and the flexibility to include additional activities during the project, such as the European Day of Creativity and Innovation. The Best Collaboration Award is mentioned several times as one of the most valued activities of CCC. However, in some cases a discrepancy seems to exists between this flexibility and the budget. Partners point at the continuous budget discussion (presumably referring to the common costs, in itself (ironically) a means to facilitate a certain flexibility) and the fact that the budget did not always allow for the abovementioned flexibility, as additional activities had not been budgeted for.

A drawback of the freedom and flexibility mentioned above may be a lack of focus, indicated by some partners. On the one hand the objectives of the project as formulated in the application are relatively broad and complex; on the other hand it is stated that the variety of activities and deliverables provides insufficient coherence, and that partners tend to follow their local agendas. A stronger focus might also have led to more in-depth discussion within the project. This is far from the general opinion, and in fact the opposite is mentioned as well. Moreover, a broad objective most likely is a reflection of the variety of the partnership and vice versa. Nevertheless, at least to some the 'overarching' activities within the project such as the expert meetings or the European Day of Creativity and Innovation did not provide sufficient coherence according to some partners. A positive note is that despite the variety of activities nobody mentioned a problem of overlap, which is known to be a risk in some other EU projects.

The flexibility in the activities that partners praise is not found in the assessment of the project results. Several partners mention the focus on indicators rather than impact, on 'counting exchanges' and 'ticking boxes'. The actual impact of the project is felt to be much broader, but also more difficult to measure. Nevertheless, it is acknowledges that this is a consequence of the way the INTERREG secretariat (and many EU bodies for that matter) assesses projects, and that it is not a specific problem of CCC.

Finally, it was remarked that although cooperation in general was good, communication between partners was not always optimal, and it was occasionally hard to get other partners' input when needed.

5.9 Conclusions

The theme 'lessons learnt' was initially suggested by the Lead Beneficiary — Walter Leal — some time ago. We had no clear idea of what to expect when we asked project partners for their input. The 'lessons' that were submitted in the end resulted in a varied but, at first sight, also somewhat fragmented picture.

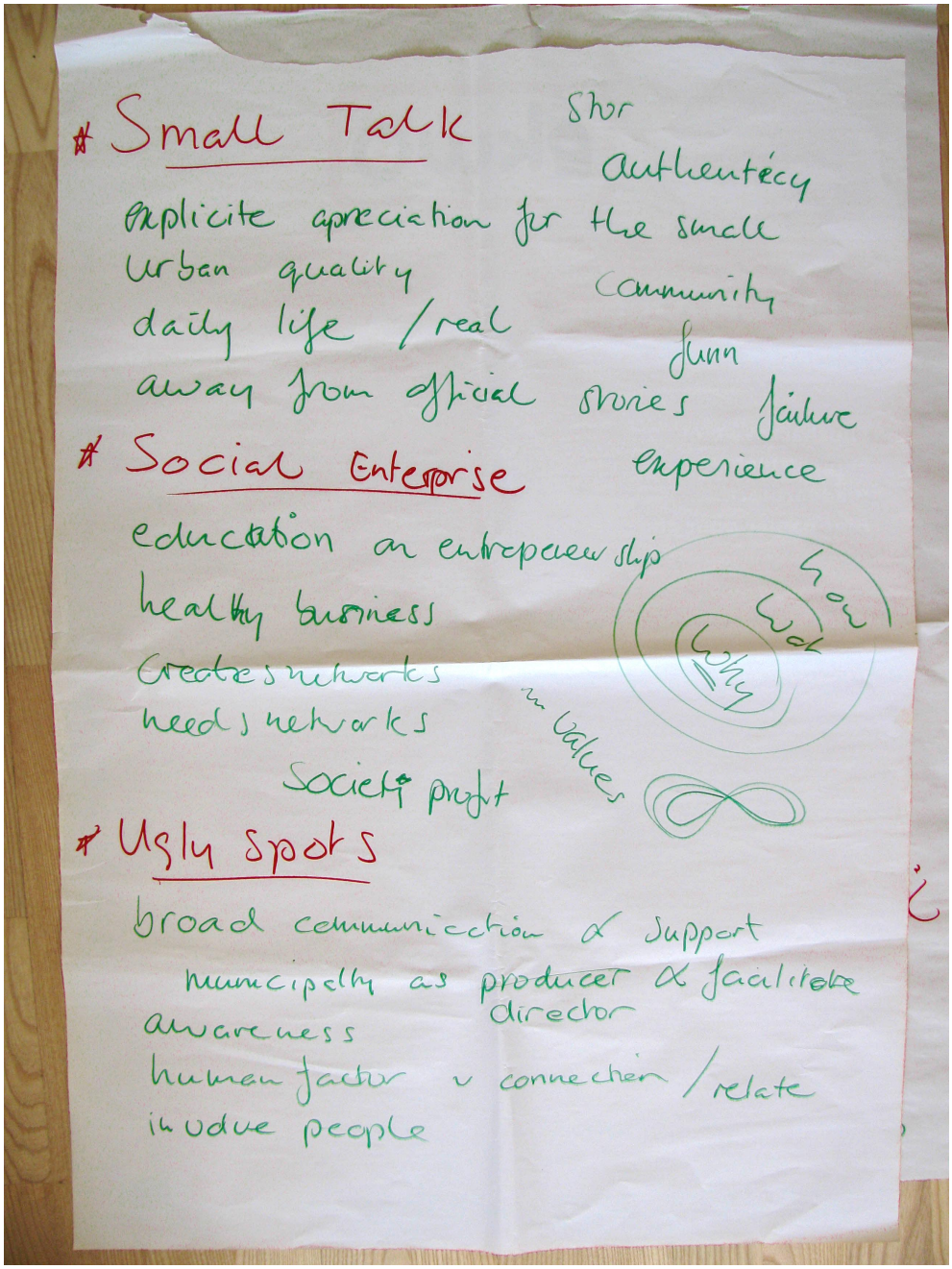
The seven themes described in the above sections together cover almost all 'lessons' that partners submitted. A number of threads can be distinguished that cut through several themes.

1) The transnationality of CCC is considered one of the most valuable aspects of the project. Visiting partner cities abroad not only generated new ideas, but sometimes also placed existing projects in a new perspective.
2) Part of partners' input refers to the results of the project, both tangible in terms of networking events, learning materials, workshops etc., and less tangible in terms of creating awareness and promoting the creative industries among local actors. On the whole partners are quite happy with the results of CCC. Especially the networking opportunities, in various forms, are a much-valued result.
3) The CCC project includes a wide variety of activities, local pilot projects, transnational events etc. Partners value the flexibility and openness of the project, which made it possible to include very different activities and to add activities along the way.
4) More critical notes are heard about the coherence between all these activities. Local agendas sometimes seem to prevail over a common focus.

With regard to the last two points, an overarching question could be to which extent there is a trade-off between flexibility and coherence of a project, and if so, whether this is unavoidable. To a certain extent this also concerns the choice between a project based existing local practices that share a more or less common aim, or a project started from a narrowly-defined question that serves a criterion for selecting case studies. Both have their distinct merits. However, the 'lessons learnt' indicate that the two may conflict as well.

The 'lessons learnt' show that CCC has successfully influenced local policy and policy-makers in partner cities and regions, which has increased the priority of creative city development and induced a number of spin-off activities. They also show how partners themselves have learned from the project.

Figure 5.1: The fourth expert meeting, 19 September 2012, Groningen (flip-chart image).



6 Creative City Challenge: Transnational learning in the North Sea Region

6.1 Introduction: the European Union as a 'learning machine'

There are many perspectives on the direction and implications of the European integration project. One of these perspectives is aptly described by Faludi as 'the learning machine'.[108] Interestingly enough this perspective is inspired by observing a whole range of activities which the European Commission – often together with the member states – has undertaken over a period of now more than twenty years under the umbrella of territorial cohesion and – in an earlier stage – spatial development and spatial planning. For instance there is ample evidence that the 1999 European Spatial Development Perspective or ESDP – prepared by member states and the Commission – stimulated planners from various backgrounds to learn about territory and territorial governance in the context of an integrating Europe. As the ESDP and the follow up documents – the 2007 Territorial Agenda and the Territorial Agenda 2020 which was finalised in 2011 – are predominantly prepared by representatives of member states, they are for a large part based upon uploading of policy objectives, concepts and approaches from member states and below and – in a later stage – the downloading of these to member states, regions as well as the Commission.

One of the key activities which should be mentioned here is INTERREG which started in 1990 as a so called Community Initiative but in the current Cohesion Policy period (2007-2013) has become a main funding objective in its own right.[109] INTERREG is about territorial cooperation, i.e. cooperation at the regional scale across national borders or cooperation at the so called transnational or even European scale. The accumulated participation in INTERREG over the course of now more than two decades is vast and almost uncountable. At least several thousand projects have been carried out or are being carried out with – probably – a total of tens of thousands of people involved. There is general acknowledgement that the main added value of this kind of trans-European cooperation lies not so much in physical or territorial transformations – on the whole the budgets are much too small for that – but instead in 'soft', more qualitative, learning outcomes and the overcoming of institutional barriers for cooperation.[110]

There is a great number of reasons why organisations from the public, non-profit and private sector become involved in cooperation across national borders.[111] Sometimes these reasons can be somewhat opportunistic: the chance to get additional funding for projects and activities which in many cases would not take off the ground without such funding. But approval for project proposals does not come easily, in fact needs quite an investment in terms of

[108] Faludi, A. (2008) 'The learning machine: European integration in the planning mirror', Environment and Planning A, Vol. 40, No 6, pp. 1470–1484 .

[109] Dühr, S., C. Colomb and V. Nadin, V. (2010) 'European Spatial Planning and Territorial Cooperation', London/New York: Routledge, p. 233.

[110] *Ibid*., p. 234.

[111] *Ibid*., p. 347.

manpower, negotiation and intellectual skills and political support. So it is fair to say that INTERREG provides an opportunity to address issues 'that require, or at least benefit from, cooperation with other actors outside their own member state.'[112] It is for this reason that INTERREG may be seen as a 'transnational learning model',[113] moreover since INTERREG does not constitute a coercive mode of policy change through some kind of supranational authority.[114] From this perspective the processes at stake in INTERREG can be referred to as lesson drawing: 'actors voluntarily choose to engage in an active search for new ideas as a rational response to the emergence of a problem or dissatisfaction with the status quo.'[115]

Assessing learning

The 'Creative City Challenge' project has a number of important learning objectives. The following quotes taken from the project application show this:

> To contribute, by means of a set of pilots linking government, educational institutions and private businesses [the governance model of the triple helix] to a strong programme of transnational interchange of learning, materials and best practice on creativity and innovation.
> Use e-learning, blended learning [face-to-face classroom methods combined with computer-mediated activities], studies and benchmarking in order to obtain tangible outputs to be fed into local and regional strategies.[116]

So leaving from objectives formulated like this learning within the project and its partnership and also beyond was expected to permeate the entire project. But how to assess learning in a project like Creative City Challenge? Leaving from the observation that official monitoring and evaluation approaches used by the European Commission and INTERREG managing bodies are not very well suitable to grasp the nature of the processes at stake in transnational cooperation projects, Colomb has developed a so called bottom-up framework for the evaluation and conceptualisation of learning.[117] This model which will be applied in this chapter has five steps (see Table 6.1).

Every step will be briefly introduced in the following sections. These sections will also present evidence, or at least indications, that learning has been taken place or – most likely – could take place. Not all five steps can be elaborated with the same level of detail for Creative City Challenge. Like most other INTERREG projects, the CCC project lasted a relatively short time period, in this case three years. In general this is a very short time period for changes in policies and practices for various reasons, changes which are assessed in step four. One reason, for instance, is that changes at the policy level often require formal decision-making which will take a certain amount of time. Whether the fourth step has been taken as a direct

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[112] *Ibid*., p. 347.

[113] Dabinett, G. (2006) 'Transnational spatial planning - insights from practices in the European Union', Urban Policy and Research, Vol. 24, No. 2, p. 289.

[114] Colomb, C. (2007) 'The added value of transnational cooperation: Towards a new framework for evaluating learning and policy change', Planning Practice and Research, Vol. 22, No. 3, pp. 347-372.

[115] *Ibid*., p. 350.

[116] Creative City Challenge, Application Form 4th Call, section 4.2.

[117] Colomb, *op. cit*., p. 353, 356.

result of an INTERREG project – apart from methodological reasons – will thus often be difficult to assess.

Table 6.1: A bottom-up framework for the evaluation and conceptualisation of learning in transnational cooperation projects[118]

Step	Scale of analysis
(i) Establishing the rationale for transnational cooperation between project partners	Project partnership as a whole; individual institutional project partners
(ii) Recording learning in transnational networks: evaluation of learning, evaluation for learning	Project partnership as a whole; subprojects
(iii) Conceptualizing the observed processes: from individual to organizational learning, from regional to transnational learning?	Individual project participants; institutional partners; project partnership as a whole
(iv) Linking processes to outcomes: from organizational learning to changes in policies and practices	Institutional project partners; other external stakeholders at the regional and transnational territorial scale
(v) From local impacts to 'European added value': drawing lessons on the role of INTERREG in the 'Europeanization of spatial planning'	Transnational area; INTERREG programming areas; the EU territory as a whole

This counts even more for the fifth step where one has to look beyond the organizations and agencies participating in a particular project: one has to assess the level of learning beyond the regions and localities addressed by the project in question. Also this in many cases requires some time. One important condition is that the project should be known outside the project partnership. At this stage and in this report an important question then becomes whether the CCC project includes measures or strategies aiming for a diffusion of the results of the project across – for instance – the European Union.

The next sections subsequently discuss the five rows of Table 6.1, i.e. the five levels of the evaluation model.

6.2 The rationale for transnational cooperation in the CCC project

The first step in any sort of evaluation of learning in an INTERREG project is about the reasons for territorial cooperation: what are the issues and what kind of partnership is set up to address these issues? We will see that the issues addressed by the partnership and the geographical configuration of the latter highly determinates whether learning is at stake.

The thematic focus of the cooperation: 'common' or 'transnational' issues?

It is increasingly recognised that the label 'transnational' – which is also attached to the CCC project – could have two, quite distinct different meanings. One meaning is that 'transnational' relates to a problem or issue 'faced by several cities and regions in various locations across the European territory, which could be or has been tackled at the local, regional or national level, but for which transnational cooperation would bring more innovative and efficient solutions

[118] *Ibid*.

[…] through exchanges of good practice, transfers of knowledge and expertise and common pilot projects/activities.'[119]

The second meaning of transnational relates to issues 'affecting a transnational area across national and regional borders, which cannot be tackled adequately at the local, regional or national level and which requires trans-national co-operation'.[120] Issues like this are sometimes referred to as intrinsic cross-border as they are literally superimposed on country borders. This counts for physical structures like transport or water systems but also for certain kinds of environmental pollution. A softer example is functional integration where the interchanges – sometimes requiring physical structure - between areas and places at different sides of a border are considered that strong and important that cooperation is seen as a necessary approach. Cooperation in cross-border urban regions is based on this logic. In all these cases the emphasis is far less on learning than on finding joint solutions, addressing the transnational project area as a whole.[121]

The CCC project partnership clearly deals with an issue of the first category: the challenge of creative city development in a number of urban cities and regions. Undertaking different projects in each individual city or region because of the economic spin-off of these project is a prime goal but not for the sake of these projects and their (potential) local spin-off alone. In the CCC case '[t]he interest in cooperating with other regions originates from a desire to indentify new and more effective ways to improves one's own local or regional situation.'[122]

Then the question becomes relevant: what has been the intensity and scope of transnational cooperation? Figure 6.1 present a scale on which INTERREG partnerships could be positioned. As will be shown in the following section the CCC project can be placed on the first and second position of this scale and, to a certain extent, also the third and fourth position (see next paragraph). These involve for instance the discussion papers and expert meetings aimed at transnational learning – indicating an ambition to also strive for the third type of cooperation – as well as the mutual exchanges and visits between partner cities and regions. These first two positions constitute the basic level of transnational cooperation, without which the other types of cooperation and learning are hardly imaginable.

Some of the tangible products of the project also involve the third and fourth position of the scale, the more intense and broad types of cooperation. This includes activities such as the international conferences, the Best Collaboration Award. The latter is probably the best example of a 'jointly realized transnational action' found in CCC. Positions three and four also include the 'Toolkit' of policy initiatives based on the outcomes of the project, as well as for instance the publication 'Highlights and Best Practices',[123] which seek to expose some of the achievements to the outside world.

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[119] INTERREG IIIB North-West Europe Programme , Guidelines for Project Promoters, Version July 2003, quoted in: Colomb, *op. cit*., p.357

[120] *Ibid*.

[121] Colomb, *op. cit*., p. 357.

[122] Benz, A. and D. Fürst (2002) 'Policy learning in regional networks', European Urban and Regional Studies, 9(1), pp. 21 – 35, quoted in: Colomb, *op. cit*., p. 357.

[123] Kuhfuß, A. (ed.) (2012) Creative City Challenge; highlights and best practices', Bremen: WFB Economic Development Bremen.

Figure 6.1: The intensity and scope of transnational cooperation[124]

Exchanging experience	**Testing or transferring different approaches to tackle a common problem**	**Sharing or pooling tools and resources to tackle a common problem**	**Jointly realizing a transnational action/investment**	**Jointly producing and implementing a transnational spatial strategy**
		Nature of cooperation		
Sharing information about experiences, practices & policies between different partners	Flow of information from some partners to others with a view to apply new knowledge to solve a particular issue in one partner location with the help of the expertise of other partners	Multilateral flows of information and joint creation of a tool, resource, method (a 'hybrid' or a new tool) to tackle an issue occurring in one or several project partners' areas	Pooling of expertise, knowledge and resources with a direct application (investment or joint action of interest for the whole transnational partnership)	Pooling of expertise, knowledge and resources leading to a joint transnational strategy addressing transnational issues
		Forms of learning		
Not necessarily conducive to learning, or local/regional learning only	Testing an approach in another location means a slightly deeper form of learning involving a reflexion about the local context: 'why did things work there and how could they work here'	Partners are learning from one another towards the production of something jointly shared	Actors learn how to work at new scales and in new types of networks in order to better address certain issues of transnational importance	Actors learn how to work at new scales and in new types of networks in order to better address certain issues of transnational importance through a medium- to long-term strategy

The geography of the CCC cooperation

The CCC project is an INTERREG IVB project. The minimum requirement is that partners from at least three different countries participate, in this case from the North Sea Region, two of which must be EU member states.[125] The geography of the project partnership has an impact upon the nature and forms of cooperation which take place.[126] Böhme *et al*. have shown that there are at least five different types of transnational networks (see Figure 6.2).[127]

'Trans-national regional' and 'axial' co-operation projects are more suitable for developing ideas relating to transnational urban structures. 'Virtual networks' projects usually address common issues through exchanges of experience or the testing of different approaches, but

[124] Colomb, *op. cit*.

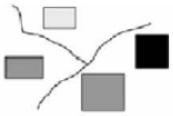
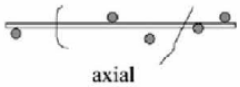
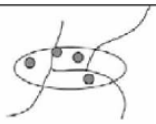
[125] Interreg IVB North Sea Region Project Development Info Sheets, available from http://www.northsearegion.eu/files/user/File/IVB%20Document%20Library/Info_Sheets/Collected%20Info%20Sheets.pdf.

[126] Colomb, *op. cit*., p. 357.

[127] Böhme, K., F. Josserand, P. Ingi Haraldsson, J. Bachtler and L. Polverari, L. (2003) 'Trans-national Nordic-Scottish Co-operation: Lessons for Policy and Practice', Nordregio Working Paper, Stockholm: Nordregio.

quite rarely display 'stronger' forms of cooperation.[128] The CCC partnership belongs to this latter type with 9 partners from 6 different countries. Although 3 partners are located within Germany and together with Groningen and Leiedal tilt the project somewhat to the southern part of the North Sea Region, it would go a bit too far to qualify the entire network as 'unbalanced': the large majority of the partners are from different countries.

Figure 6.2: Types of transnational cooperation networks[129]

 unbalanced	**Unbalanced cooperation** Any project in which the great majority of partners belong to the **same country**.
 virtual network	**Virtual networking** Projects aiming at the **sharing of experience,** gathering together partners undergoing similar problems (e.g. other metropolitan areas), or working with the same issues (implicitly: partners which do not necessarily share geographical contiguity or functional relationships).
 'add-on'	**Add-on projects** Well-established **national cooperation structures** cooperating with one another on transnational projects, implying the need to adapt national forms of interaction to a new structure.
 axial	**Axial cooperation** Project based on an existing or planned **transport axis** or waterway, with numerous possible aims (such as infrastructure development, tourism development, flood protection, water quality preservation etc.).
 regional	**Transnational regional cooperation** Projects based on an existing or emerging (transnational) **functional region**, or on a localized transnational cluster of enterprises – usually characterized by the relative spatial proximity of the partners.

The specific motivation of each project partner to participate in the CCC project has not been the object of a specific evaluation. If one takes a look at the 'lessons learnt' (see Chapter 5 of this report) while subscribing to the learning objectives of the project all partners to a certain extent tended to follow their local/regional agenda. This is not a-typical for a regional project. Above that: looking at the process followed over a period of 3 years time and at the range of activities which involved the sharing of knowledge and learning (see next sections) the participating partners strived to struck a balance between their own agenda and the (shared) learning objective of the project at large.

[128] Colomb, *op. cit.*, pp. 357-358

[129] *Ibid*.

The possibilities and potentials to learn in any INTERREG project will for a great deal depend on the equilibrium found between a narrow and a broad focus. In case the focus of the project is quite narrow partners are carrying out projects which show a great deal of similarity in their objectives or methods (typically for e.g. INTERREG IVC projects). So the coherence within the project is (quite) large which makes it easier for the partnership to communicate and share experiences. But too much of the same might result in sub-optimal potential to find something new and innovate. A very wide focus means a great deal of flexibility for all partners: this makes it possible to include very different activities and to add activities along the way e.g. as long as the project lasts (see section 5.7). A high diversity of situations will mean a fairly large chance for experiencing new things but also a high chance that the transferability of certain approached – due to their very specific context – could be less. It seems that the CCC partnership faced some challenges to find the right sort of equilibrium in this respect (again: see Section 5.7).

6.3 Learning within the CCC project

This step addresses the actual processes of cooperation and learning which took place within the CCC-partnership: which concrete elements structured cooperation and exchange processes between partners?[130]

First of all the project contained a separate so called work package called 'Research-based strategy development'. This particular work package was aiming to integrate all other work packages by means of guiding of and feedback on their activities. This involved a close and continuous two-way interaction with all the partners participating in the other work packages.

Second and more specifically the following activities have been carried out:

- The writing of a Framework Report entailing a further operationalisation of the project approach and a selection of indicators about creative city development which could be used by all partners, together providing an analytical background, a shared language and vocabulary and also a practical outline for the project.[131]
- The compiling and writing of an integrated report about Strenghts, Weakness, Opportunities and Threat (SWOT). This involved: a) the provision of a common outline for an interactive SWOT analysis; b) an interactive meeting between all partners about the SWOT for their particular city or region; c) an integration of all the results.[132] This activity contributed substantially to arrive at a joint understanding about the track record and potentials of all the participating cities and region in terms of the development of creative sectors.
- The writing of three discussion papers about key issues related to the development of creative sectors within the participating cities and regions. Together these papers aimed

[130] *Ibid*., p. 359.

[131] Romein, A. and J.J. Trip (2010) 'The creative production and consumption milieu. Framework Report 6.1, written within the framework of the NSR INTERREG IVB project Creative City Challenge', Delft: Delft University of Technology.

[132] Romein, A. and J.J. Trip (2010) 'The creative economy in CCC cities and regions. SWOT Analysis Report 6.2, written within the framework of the NSR INTERREG IVB project Creative City Challenge', Delft: Delft University of Technology.

for a further development of a shared language and vocabulary and a shared understanding of creative city approaches (see also Chapters 2-4 of this report).

- Based on these three papers a number of so called expert meetings have been organised for the entire partnership chaired by external moderators and involving a number of external experts on the development of creative sectors – including some representatives of these sectors – and how policies could stimulate this development.

Next to these activities, which had the prime objective to stimulate learning, a host of other transnational activities and bi- and trilateral activities and exchanges took place. Representatives of the partners who provided input to assess the learning process overwhelmingly stress the importance of knowledge exchange and discussion within the project. In fact this has been one of the most valued aspects of the project. In section 5.5 we have recorded that partners mention that getting acquainted with examples and practices in other cities and regions opened their eyes to new possibilities at home. It also stimulated them to see existing practices in their own city or region from another perspective, for instance on the importance of city branding (see Section 5.2).

6.4 Organizational learning and transnational learning

These two learning processes involve learning in ever wider circles. In general three different kind of learning can take place simultaneously or at different times in INTERREG projects: 1) organizational learning; 2) regional and national learning; 3) transnational learning.[133]

The previous step is primarily concerned with individual learning: what have the participants (i.e. representatives of all participating partners) learned within and from the CCC project? Organizational learning can be defined as the process 'when individuals acting on behalf of an organization and interacting with others in the organization learn in such a way that the beliefs, attitudes, or values of relevant organizational members change and […] organization behaviour changes'.[134] If individual participants do not share the knowledge gained with other members of the organization or with decision-makers, or if they do not use the knowledge gained in their work, there will not be any organizational learning.

An important conclusion in Section 5.2 was that many partners mentioned the role of CCC in creating awareness among policy makers. It seems likely that the organisations in which partners themselves work (for instance city administrations) have adapted as the consequence of the CCC project. When asked respondents found it difficult to be precise about this point but there was a general feeling that the impact of CCC project has been quite broad (see Section 5.8).

Regional, national learning and transnational learning are about interorganizational learning. The CCC project is a standard project in the sense that it consists of a number of regional subprojects brought together under a transnational umbrella.[135] So is it possible to identify

[133] Böhme, K., F. Josserand, P. Ingi Haraldsson, J. Bachtler and L. Polverari. (2003) in: Colomb, *op. cit*., pp. 361-363

[134] Wolman, H. and E. Page (2002) 'Policy transfer among local governments: An information-theory approach', Governance, Vol. 15, No. 4, pp. 477 – 501, in: Colomb, *op. cit*., p. 361.

[135] Colomb, *op. cit*., p. 361.

learning at the regional level? Here it is important to note that a lot of local/regional activities in the CCC project have been carried out following the triple helix approach (see Section 6.1 for a short description). This meant that a fairly large number of people and local or regional organisations not directly involved in the CCC project nevertheless have been addressed through CCC activities. The CCC publication 'Highlights and best practices' names quite a few of these activities. One in particular we would like to single out is the Best Collaboration Award, which in itself was a reward for networking, i.e. networking within the region. In general the CCC project can be described as a policy-oriented project involving setting up and/or extending contacts with and between policy makers, practitioners, entrepreneurs and a host of other people and organisations. This also becomes clear from the 'Toolkit' which integrates the results of the project. Aimed primarily at local and regional policy-makers, it discusses a framework of policy initiatives to foster creative city development, arranged by the various relevant policy fields and based on the practices and insights derived from Creative City Challenge.

Whether CCC activities have spilled over to other cities and regions than those which were involved in the project – so whether *national* learning took place – is rather difficult to assess. The scope of all the individual projects and activities in a territorial sense did not have the objective to reach beyond the region or city so it can be expected that if national learning took place it can only be modest. Transnational learning is in fact already discussed in the previous section. The fact that the CCC project was a 'classic' INTERREG project made up of a number of regional project carried the risk in it that the participants in all these regional projects just did their things so to speak as they were used to do. There is ample evidence though that this risk was avoided by the way the project has been organised as has been explained in Section 6.3.

6.5 Linking processes to outcomes: from organizational learning to changes in policies and practices?

Basically the question which this section title entails is about the lasting effects of the CCC project. Did the CCC project contribute to changes in the way matters are perceived and done? To what extent did the increase of knowledge and awareness to which the CCC project contributed lead to changes in the working routines in partner organizations?[136] We have already emphasized that there is a time dimension at stake here because the CCC project only lasted for a relatively short period of three years. Organizational change and policy learning have to be investigated over time, also after the lifetime of the cooperation project.[137]

Nevertheless are there indications of changes in policies and practices? Quite a substantial number of participants in the project emphasized that thanks to the CCC project creative city approached is more explicitly or higher on political agendas. As this is an important precondition for any policy change it could be expected that policy changes might follow. Establishing contacts between government, educational institutions and private businesses or bringing already existing contact to a new level of intensity might induces changes in policies and practices as well. What several project partners have mentioned is that the experiences which have been developed within the projects which were part of CCC have spilled over in

[136] *Ibid*., p. 363.

[137] *Ibid*., p. 365.

related other projects which were not carried out under the CCC banner (see Section 5.7). This can be seen as a change on the level of practices.

6.6 From local impact to 'European added value'

The final step in assessing the level and sort of learning concerns finding answers to the question whether the CCC project has contributed to any changes at the European level. Are the experiences gained in the CCC project picked up elsewhere in Europe, either in other cities or regions or by the European Union at large, for instance in structural funds programmes? This is quite a daunting question and there are many reasons for that. One (important) reason is that there are literally many hundreds or even thousands of INTERREG projects carried out across the European Union? Why would a relatively small project lead to something big as 'European added value'?

Although we do not imply that such added value is and was big, there are two reasons why the CCC project might draw a substantial amount of attention. The first reason has to do with the subject. As the creative city approach is normally associated with large cities or even mega-cities the CCC project was about fairly small (with the exception of Hamburg) or quite small cities. Could a creative city approach in a region where (very) large cities are on the whole absent – a basic characteristic of the North Sea Region – have any added value? For this reason the CCC project is interesting for countless cities and regions elsewhere in Europe although there are limits to the transferability of policies and practices.

A second reason has to do with dissemination. The CCC project has been quite active in this respect, for instance by organizing four international conferences, the abovementioned Best Collaboration Award and the Toolkit. Moreover, project partners wherever they could used opportunities to present the project at seminars, workshops and conferences at all relevant levels of policy-making.

Finally, transferability of experiences and policies is an important factor.[138] Transnational learning implies that policy experiences can be transplanted to settings in other regions and countries. There are limitations though which depend on the level of situated practice or contextuality. This means that each case is unique to a certain extent thanks to a number of contextual factors. There are three factors which to a high degree determine the level of transferability:

1) The nature of important contextual factors such as planning cultures and planning systems. In the regard it should be noted that the policy context belongs to the country from which policy transfer takes place as well as the country to which policies are transferred.
2) Important barriers for cross-national and cross-regional learning. The more ambitious the policy transfer is, the more difficult it is to be transferred. however, barriers for policy transfer are not just related to crossing regional or national borders. At the outset of policy transfer, attention must be paid to the willingness of politicians.

[138] ESPON (2012) 'RISE; Regional Integrated Strategies in Europe; Annex 1 to the Final Report | Literature Review', June 2012, Draft, Luxembourg: ESPON (http://www.espon.eu/main/Menu_Projects/Menu_TargetedAnalyses/rise.html)

3) National, regional and local specificities and needs that determine the transferability of policies, tools and instruments may prevent the success.

In the learning perspective, borders between different contexts are opportunities rather than barriers, often explored by planners and politicians, not just as individuals but usually as members of professional and political milieus and networks. Such networks are strong learning communities. On the other hand, they may develop as epistemic milieus not open to new ideas. Thus, if we leave policy transfer to some learning paradigm, we need to consider how to keep it vital and entrepreneurial.

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