Community participation in knowledge-based local economic development projects: the case of Newcastle's 'Science Central'.

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Abstract
Several European cities are developing large-scale 'knowledge quarters' or science-based campuses in or near their city centres. This development trend marks a contrast with the 1970s and 1980s, when technology parks and science campuses were typically created at the edge of cities, at suburban locations. In this paper, we focus on the community involvement in the planning of these developments, using the Science Central plan of Newcastle (UK) as an illustration. We argue that community involvement needs to go beyond the 'traditional' approach of informing and consulting citizens in the masterplanning process. The transformational aspects of large knowledge-driven urban development plans ask for a deeper involvement approach, that does not only address the spatial and physical aspects of the development, but also the functional and conceptual linkages between the new knowledge hub and the city. This may benefit the knowledge quarter in several ways, and contributes to its physical and functional integration in the city as a whole. Also, a smart participation approach increases the acceptance of knowledge hubs that would otherwise be considered by many residents as elitist urban enclaves to which they have no relation. This is especially relevant for (former) industrial cities

1. Introduction

Developing the local knowledge economy has become a key ambition of almost any city in Europe. A variety of knowledge based economic strategies are being implemented. An increasing number of cities seek to develop knowledge quarters or creative districts as integrated part of the urban fabric. This 're-urbanisation' of knowledge reflects the nature of innovation and knowledge creation as iterative and interactive process, that thrive in diverse, mixed and networked environments. This development trend marks a contrast with the 1970s and 1980s, when technology parks and science campuses were typically created at the edge of cities, at suburban locations. The shift from the isolated campus model to integrated approaches has brought knowledge-based development to the heart of Europe's cities. Examples include the Digital Hub in Dublin, the Arabianrantta area in Helsinki, and the new technology park in Dortmund, and there are many more.

A key difference between old style knowledge locations and newer 'urban' development locations is the complexity of interaction with the environment. In urbanized locations, the planning process is more complex, as more stakeholders (neighboring communities, local businesses) are directly involved in and affected by the development. Many European cities aim to seek to reconcile the dominant economic objectives (knowledge-driven economic development), with social inclusion and urban regeneration goals.

One of the emerging issues is how to organize the process of community involvement in the design and development in these types of development projects. In this paper, we will focus this theme. We will argue that community involvement needs to go beyond the 'traditional' approach of informing and consulting citizens in the masterplanning process. The transformational aspects of large knowledge-driven development plans ask for a deeper involvement approach, that does not only focus on the spatial and physical aspects of the development, but also on the functional and conceptual integration of the new knowledge hub and the surrounding urban areas and communities. This may benefit the knowledge quarter in several ways, and contributes to its physical and functional integration in the city as a whole. Also, a smart participation approach increases the acceptance of knowledge hubs that would otherwise be considered by many residents as elitist urban enclaves to which they have no relation. This is especially relevant for industrial cities with a strong 'working class' identity.

In this paper, we start with a brief review of earlier studies and reports on community involvement and community participation. Next, we will discuss the case study of Newcastle, UK.
Near its city centre, Newcastle has a large plot of vacant land –a brewery used to be located there- available for redevelopment. The university, the city council and the regional development agency have jointly taken the initiative to develop a masterplan to turn the area into a mixed-use quarter, with a distinctive 'knowledge economy' character including academic institutes, knowledge transfer agencies, and knowledge intensive businesses. To the west, the area borders to one of the most deprived areas in Newcastle. To the east and south of the area, there is the economically thriving city centre. In section 3, we will describe the project in more detail. Section 4 describes how communities have been involved in the development so far in Newcastle. The methods deployed in Newcastle are typical for similar development plans in other European cities. In section 5, we critically analyse this approach, and suggest ideas for the improvement of the participation process. We discuss how community involvement may be extended beyond the 'traditional' approach of informing and consulting citizens in the masterplanning process. Section 6 derives some implications for the organization of community involvement in this type of developments.

This paper is based on field research, desk research, and a brainstorming session. We made use of the reports on the consultation events that were held over the last years, and the author conducted a number of face-to-face interviews in July 2009 with stakeholders, including the project management, the university, city council representative, companies, and community organizations. Moreover, in the context of the REDIS[1] project (part of the URBACT- programme), a three-day peer-review event was organized in May 2009, in which the development project was analysed in-depth by representatives from the cities in the REDIS network and external experts. One session was dedicated to the process of community participation, and it generated a number of innovative ideas.

2. Community involvement in urban policy
In this section, we briefly review the history and recent debates on community involvement and participation. We mainly focus on developments in the UK, as our case study is located there, but in other countries, similar debates took place.

Theory and praxis of community involvement have evolved substantially in the last decades (Wilks-Heeg, 1996). In the 1970s, community involvement was widely seen as an effective democratic involvement of communities in urban development plans, and Community Development Programmes were set up. In the 1980s, during the Thatcher's conservative government, urban policy making became more centralized, dominated by national policy and market actors. Also, there was a growing involvement and reliance on the private sector in the planning process. Planning outcomes increasingly had to comply with the goals, interests and profitability criteria of the private sector, especially where area-based special-purpose authorities had been created to oversee redevelopment (Malone, 1996). Community involvement practice was largely abandoned. The 1990s, under the Labour government, saw a strong revival: partnership-based regeneration programmes were set up (urban partnerships could bid for national funding), and community representatives/organizations were part of these alliances (often even mandatory).

In many countries, planning currently takes place in a climate of 'entrepreneurialism'. Special-purpose regeneration authorities are set up to redevelop or regenerate a particular area of the city; market actors are important players. Also, there is a trend towards integrated local-area planning, including economic, social and physical aspects simultaneously.

Raco (1998) is critical on the community involvement practice as it has emerged since the 1990s. He argues that in the UK, the introduction of competition for national funds has been used to constrain the autonomy of locally based regeneration strategies, as policies are encouraged to follow the lines set by the national government. This did not encourage the development of real 'bottom up' approaches in which local voices of communities are incorporated. Moreover, even where communities are involved in policy partnerships, their impact on the decision making process is low because they lack power and resources (Colenut and Cutten, 1994). Communities may be used merely to legitimize policies (Raco, 2000). Adversaries of community participation argue that the population is already involved through the normal democratic process.

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[1] The REDIS project unites eight European cities that intend to develop knowledge quarters. In the project, city officers and other stakeholders seek to learn from each other's approaches, and develop new ideas. In the REDIS meetings, a range of themes are addressed, always related to knowledge-based urban development.

The 'community involvement' sounds simple, but it is far from unproblematic. The selection of the community to be involved is critical. Development agencies may be tempted to incorporate groups with a positive attitude towards their programmes and plans, to increase the legitimacy of their policy (Raco, 2000). The issue of 'selective' participation is widely recognized in the literature. Often, local communities emerge as a reaction to the new plans: they unite in a campaign against a development project (Dalby and Mackensie, 1997). In reality, (notwithstanding the rhetoric of many official policy documents, the needs of local governments and local communities often clash.

For larger economic development projects (such as the one discussed in this paper), the question can be raised at which spatial level communities should be involved. Local communities adjacent to the development site are the obvious target group: they are directly affected by it (in many counties, some form of community involvement of these groups is regulated by law); this is the traditional realm of community participation. But if the project is large, and takes up substantial tax money, it may make sense to involve the entire urban population. Also, besides residents, affected local companies or employees may be involved in decision making processes.

There are different levels and degrees of participation. A useful distinction was made by Arnstein (1969). In her seminal work on citizen participation, she presented a "ladder of empowerment". The rungs on the ladder are described below. At the highest level, citizens have some degree of formal power and influence over development projects. The second level is labeled 'tokenism'. Here, citizens are informed of asked for advice to a reasonable degree, but they do not have decision power or 'real' influence. At the lowest level, 'non participation', citizens are seen as a hindrance or adversary elements that have to be educated or even 'cured'.

Ladder of empowerment (Arnstein, 1969, derived from MacLaran et al, 2007)

Degrees of Citizen Power
- ❖ Citizen Control: participants & residents control a programme or an institution, govern policy and managerial aspects, and negotiate the conditions under which outsiders can make changes
- ❖ Delegated Power: negotiations occur between citizens & public officials which give citizens the power to make decisions and control plans & programmes
- ❖ Partnership: power is redistributed through negotiation between citizens and power holders, agreeing to share planning & decision-making responsibilities

Degrees of Tokenism
- ❖ Placation: ground rules allow the 'have-nots' to advise, but decision-making power lies elsewhere. The successful appeasement of the citizenry depends on the quality of technical support available to express their priorities & the extent to which community is organized to argue for them
- ❖ Consultation: inviting citizens' opinions (surveys, meetings etc.); power holders are thereby able to show they have attempted to involve them
- ❖ Informing: advising citizens of their rights, responsibilities & options. Often one-way communication (from officials to citizens) with no means for citizens to express their opinions and no power to negotiate

- ❖ Cynical Consultation: power-holders involve citizens in extensive activity, but the focus is on 'curing' them of their 'pathology' instead of changing the social structures which create their 'pathologies'
- ❖ Civic Hype: citizens are arranged on advisory committees or Boards merely to 'educate' them or to get their support. Participation becomes distorted into the power holders' public relations instrument

In the remainder of this paper, we will discuss community involvement in the development of Science Central in Newcastle, a large knowledge-based redevelopment project. Their approach is typical for many similar development projects in Europe. Among other things, we will see how the participation process fits in this ladder. First we will sketch the context and describe the plan and its development stage. Next, we turn to the issue of community participation, and describe how CP has been pursued so far in the project. Next, we critically analyse the approach, and identify a number of options and possibilities to improve it.

3. Newcastle Science Central

Newcastle (UK) is located in the North East region (2.5m inhabitants). The city region of Newcastle contains app. 1.65m inhabitants. During the 19th century, industry developed rapidly along the River Tyne. The region was a main cradle of innovation and a centre of growth. During the last decades of the 20th century, however, there has been a gradual decline. Industrial restructuring and heavy competition from emerging locations created a decline of the manufacturing base and an outflow of expertise and skills. Compared to other UK urban regions, the Newcastle city region scores poorly on a number of economic indicators (OECD, 2004). During the 1980s and 1990s, the region fell behind other UK core regions in terms of economic growth. Newcastle is in a transformation process from an industrial city towards a city that thrives on knowledge, innovation and creativity. Promoting the knowledge-based economy is on top of the cities' agenda. In recent years, the city has made progress in several respects. Substantial investments in culture and landmark archirecture have helped to improve the cities' grey image. The knowledge base is substantial, with four universities in the region and two universities based in Newcastle: Newcastle University and Northumbria University, both with pockets of excellence. The lion's part of the research base is publicly funded, and there are relatively few corporate research laboratories or high-tech firms in the region. The 'absorptive capacity' of the region's companies for academic research is low, and this reduces the opportunities for successful commercialization of academic research. Nevertheless, the city government wants to capitalize more on the existing research capacity, and makes strong efforts to encourage the commercialization of research. This is one of the cornerstones of the Science City and Science Central initiatives, as we'll see later.

The Science Central project
The city of Newcastle is in the rather unique position of having a large plot of land available for redevelopment, situated adjacent to its thriving city centre. It is the former site of the famous Scottish and Newcastle Brewery, that closed its operations in 2006. The city bought much of the land, and the vision arose to turn it into a knowledge quarter. A partnership of three key players are in the process of redeveloping the site into a science quarter. The three partners are the University of Newcastle, Newcastle City Council, and ONE Northeast, the regional development company for the Northeast of England. The three partners have the intention to transform the area into a new mixed-used city center quarter, focused on attracting and developing world-class knowledge and

business in science and technology. The ambitions are very high: Science Central is to become 'one of the world's premier locations for the integration of science, business and economic development' (Masterplan, 2007). Science Central will mainly focus on the creation and exploitation of cutting edge new technology, and given the regional economic structure it will rely strongly on spinoffs and spin-outs from academic institutes.

The development was ignited by the accidental events that happened more or less simultaneously. By 2004, the Scottish and Newcastle Brewery announced to close down the facility and put the land up for sale. The firm could no longer produce economically at that location. The City of Newcastle saw this as a great opportunity, and bought 25% of the plot (using funds from the national 'pathfinder' initiative, that aims to promote housing development in deprived areas). By then (accidentally), a national initiative was launched to develop 'Science Cities' in UK urban areas. Prime Minister Gordon Brown designated Newcastle a 'Science City' when he was Chancellor of the Exchequer, in recognition of its remarkable achievements in science and technology. The University formed a partnership with Newcastle City Council and One Northeast, the regional development agency, to create 'Science Central'. The Brewery site was cleared and the brewery demolished. In January 2007, a Master planning consortium was commissioned by the three partners to develop a strategy and a masterplan for the area.

Around 30% of the site is owned by a private developer; 25% is to be developed into a residential quarter by the City of Newcastle in the framework of the national Pathfinder programme. The remaining 45% (the central part of the area) is to be developed jointly by the Partnership. This is the heart of the project as it includes the main 'scientific' components. Recently, Newcastle College announced to open a School of Applied Sciences at the site. Also, the Business School of Newcastle University will construct its new premises at the East side of the planning area.

To the west of the new knowledge quarter, there is a large deprived neighborhood (the west end communities). In the last decades, a large variety of regeneration programmes have been carried out there, but despite this, it still belongs to one of the more impoverished and deprived areas in the UK. Recently, some improvements can be observed in the socio-economic indicators of the area. Some ascribe this progress to the new approach of the 'new deal for communities' programme (a regeneration scheme funded by Central Government and delivered at the local level through a community-led partnership) that focuses less on physical regeneration and more on social cohesion and 'soft' measures to improve the livability of the area. The area hosts a large ethic population (mostly Asians). It is separated from the Brewery site by a high wall. The development of the site should reconnect the city centre to the West end communities, and provide a catalyst for regeneration of the deprived communities there (Project brief, as summarized in Final Stage 2 report, may 2008, p. 13).

Science Central is initiated and supported by the three core partners: the City Council, Newcastle university, and OneNorthEast). A delivery organization, 1NG, has been commissioned to elaborate the masterplan and guide the development of the area in the years to come. 1NG is a joint city development company with Newcastle Council, Gateshead Council (the city on the other side of Tyne river) and OneNorthEast.

4. Community participation

In January 2007, a masterplanning consortium was commissioned by the main partners to develop a strategy and a Masterplan for the area. The consortium's work was divided in three stages.

The first stage was the establishment of the baseline and the economic rationale for the vision. Among other things, it included a design study, a visioning process, and a property market assessment. The 'outputs' of this stage were a broad vision for the area, a proposition and a business approach. Seven strategic principles were formulated, one of them concerned the integration of Science Central in the city: 'Science Central is not an enclave for academics but a thriving, inclusive community providing training, employment and cultural opportunities for local people' (Newcastle Science City, 2008, p. 24). In this first stage, numerous consultations and discussions were held with stakeholders from the knowledge sector (research institutes, universities). There was no active participation of community groups in this stage of the design process.

The second stage concerned the further development of this vision into a number of options, and the selection of a 'preferred masterplan option' out of three main physical layout options. Three main approaches were suggested for the area: 1) Open up: placing the site on the mental map of citizens by encouraging as much through-movement as possible; 2) Contained: a more inward-looking approach, with one central space at the heart of the new quarter around which the scientific activities and institutes would be concentrated, and 3) Connected: open up the site to the city centre for pedestrians. Following the creation of these options, a number of community involvement events were held in November 2007, with the aim to update people on the development process and emerging proposals, and to test some of the options. The activities included several community workshops, a breakfast workshop for the business community, an exhibition session, and a special session for young people and children. Also, people could express their opinions on the plans using the website of the city council. In general, people supported the idea to have science as a driver for future growth in the area. Moreover, they stressed the importance of inclusion and integration of the area in the city; there were strong fears that the plan would create an elitist enclave of scientists in the middle of the city. The former brewery site should not become a 'ghetto for boffins' but a home for a more diverse range of residents. Also, people asked what's in it for them: they were keen to benefit from new employment and education opportunities, affordable housing, and additional community services. The preservation of heritage buildings was a common suggestion. The history of the brewery proved to be important to many people, and should be kept alive in the development somehow. Traffic and parking were the greatest concerns. Local residents feared heavy traffic flows, and strongly voiced their concerns about the current parking problems in areas surrounding the site.

Based on all these comments, the planning consortium created a fourth option, named 'Balanced'. It contained a lot of elements from option 3, and it included a number of suggestions that were raised during the consultation exercise. To select the best option, an 'options appraisal' method was deployed, in which each of the four options was ranked with regard to its contribution to the 'strategic principles' set out in the very beginning of the masterplanning process. Not very surprisingly, option 4 came out as the preferred option. This outcome suggested that the consultation round has produced concrete results, and what is more, that the ideas and recommendations of citizens and other stakeholders had a critical influence on the final Masterplan.

In the third stage, the planning consortium detailed the selected preferred option into a more concrete development framework and delivery plan (option appraisal; stage 2 report). In July 2008, a second consultation round was organized to collect opinions and views on the elaborated proposal. Over 180 residents and local businesspeople attended the sessions. The plan was criticized for doing not enough to make the area a lively place to visit and relax. Moreover, doubts were raised on where the funding of the plan would come from, and at the expense of what. And again, current parking and traffic problems were discussed intensely. The participants again stressed the need for the development to have clear links to the West End of the city as well as the city centre. It was said buildings must blend in, and there were mixed views about the proposed high-rise blocks. There were also concerns about new bars. People had a number of suggestions during the sessions as well, including using the rich and varied heritage of the area for street names on Science Central. In response to these comments, the planners made some more alterations to the plan.

Since July 2008, the three partners have focused on the delivery of the project. A city development company (1NG, a partnership of Gateshead Council, Newcastle City Council, and regional development corporation One NorthEast) was given the task to deliver the project. Since, no more consultation round have been organized. The site is still empty, although some academic institutes have announced to move establisgments to the area. The economic crisis and the deteriorating property market have made the commercial development of the site very difficult; substantial delays in the delivery process are the effect.

5. Analysing the community participation process
During the masterplanning process, citizens were invited to express opinions in several ways, and the power holders were thereby able to show they have attempted to involve them. Moreover, suggestions were incorporated in the new version of the masterplan, so there was some real influence. It should be noted that communities or their representatives are not directly involved in the decision-making process: the decision power is in the hands of the three partners running the project. In terms of the Arnstein's ladder of empowerment (see last section), the approach of Newcastle can be placed in the upper part of the second category of 'tokenism'.

The participation process focused almost entirely on the physical aspects on the plan. People could comment on the design of public spaces, the street system, the type of buildings, and accessibility and parking options. This 'physical bias' is typical for many similar development projects in European cities, but is has important limitations, especially when the project is large and implies a significant structural transformation of the economy.

The early consultation rounds revealed that many residents feared the creation of an elitist new city quarter to which they would hardly have any access. The community participation process focused almost entirely on the physical aspects of this problem: the design of public space, road access, building structures, etc. It would have been helpful to collect opinions and ideas on conceptual and functional aspects well. The new project is not merely a physical regeneration project, but it represents a radical and very visible knowledge turn in the economic future of the city. It makes sense to involve citizens to see how they can relate to science and innovation as driver of growth and prosperity, and to prevent people from feeling alienated and excluded. For example, one could ask people to reflect on linking science and innovation activities to sports/football (the football stadium of Newcastle United borders the area). Perhaps more significantly, it makes sense to

identify how science and scientists could help to solve daily problems of the communities in neighboring West End and beyond. This would have very practical use, connecting societal problems and technological opportunities (after all, science can improve people's lives). A number of suggestions popped up during a brainstorming session. Existing community services (e.g. nurseries, schools) could be upgraded and branded as 'science locations', adding science-related components to them. Furthermore, communities could be involved in the temporary use of the site. Due to the economic crisis, it will take years before the vacant area will be filled up. To link with the future of the area, citizens could be invited to develop ideas for temporary activities that somehow related to science and innovation. This would also contribute to the re-profiling of the former brewery site as a location of science and innovation.

More in general, the development of a science quarter opens new windows for community involvement. Applied science is increasingly user oriented, and user involvement in R&D is a strong trend in research ('quadruple helix' approach). From this perspective, the adjacent community can be seen as a resource for the knowledge quarter, and vice versa. It makes sense to use community participation to identify opportunities. One idea suggested during a brainstorm session was to establish free WiFi access in West End area, and to organize ICT training activities for the inhabitants. This would empower people in the community, increase their job opportunities, and could make the area attractive for firms to test new ICT services there. Moreover, the City Council could designate West End as testing ground for new e-government solutions or any other policy innovations. That would make West End community virtually a part of the knowledge quarter.

Another relevant consideration is that science and technology are the cornerstones of future prosperity of the entire city, and Science Central is the flagship economic project of Newcastle. Therefore, it makes sense to organize community participation beyond the bordering neighborhoods and deploy activities related to science anywhere in the city. In Barcelona, university professors organize science demonstrations in shopping streets, including activities for kids. That helps to raise interest and support.

6. Some implications for the participation process
So far, community participation has been used to inform citizens on the masterplan, and to give people an opportunity to react on the options provided. The discussions focused on the spatial and physical aspects of the plan. We have made the point to move beyond the physical aspects and include conceptual and functional issues as well. In this way, community participation can help to relate knowledge-based development projects to the daily lives of citizens, and identify mutual benefits and win-win situations (this is far from saying that all tensions can be solved: conflicting interests will always remain, and some people will benefit where others lose).

This more inclusive approach has implications for the organization of the community involvement process in large economic development projects such as Science Central. Instead of a once-every-six-months exercise, participation should be organized as a permanent process. Participation should not be organized as an occasional confrontation of professional planners with ordinary citizens or business owners in the design stage only, but as a continuing dialogue.

In practice, some topics or conceptual areas could be identified in which community participation is likely to add value (examples suggested in this paper are the temporary use of the development site,

or the potential links between science and citizen's daily lives). To generate and elaborate ideas, working groups could be created, in which community representatives, relevant university researchers, civil officers and members of the delivery organisation have a role (depending on the topic). These groups should be appropriately supported. Mechanisms must be put in place to assess ideas and initiatives that emerge out of these teams, and funding should be available to put the ideas into practice. To make this approach a success, new connections have to be established between worlds that are normally separated; win-win situations need to be discovered and exploited. One of the key challenges is the identification of individual academics or research groups that would be interested in participation in such projects, and the formulation of concrete projects that really add value for both sides.

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