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Newcastle's Science Central project: views from critical friends

Results of the REDIS Implementation Lab, Newcastle, 26-28 May 2009

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More info on REDIS:

<http://urbact.eu/thematic-poles/growth-and-job-creation/thematic-networks/redis/presentation.html>

1. Introduction

The city of Newcastle is a member of the REDIS-project, an EU-sponsored exchange programme of eight cities that have the ambition to use their science base as a driver for local economic development. Newcastle has developed the Science Central project, a large and ambitious plan to transform a vacant brewery site in the city centre into a vibrant science quarter.

In the context of the programme, in May 2009, Newcastle hosted an Implementation Lab, a method that helps to audit a project using the expertise of project partners from different countries. A delegation of the partner cities paid a 3-day visit to the city and made a critical assessment of Newcastle's plans to create a science quarter at the site of the former Scottish and Newcastle Brewery. The audit focused on the theme of community participation, but other aspects of Science Central were covered as well. The first day of the implementation lab informed the partners in more detail on Science City and Science Central. A number of local stakeholders delivered presentations and presented their views to the audience, and a site visit was made. During the second day of the lab, the audience was split into three working groups, where each group was a mix of foreign and local participants/stakeholders. The groups analysed four dimensions of the Science Central project: the overall concept, process and management issues, branding and communication, and connectivity (social and physical).

This report contains the outcomes of the implementation lab. First, for readers not familiar with Newcastle and its Science Central project, it briefly sketches the background and nature of Science Central (section 2). Next, it summarises the views, visions and ideas that were developed during the implementation lab: on the concept of science central (section 3), branding&communication issues (section 4), process aspects (section 5) and connectivity issues (section 6). Annex 1 contains a number of very concrete ideas that were raised during the sessions. Annex 2 presents ideas for the physical development, as developed in one of the groups. Annex 3 contains a spider diagram indicating what each agency would like to see from Science Central as articulated by the participant representative at the session. Annex 4 contains a list of web references and contact persons involved in Science Central. A list of all participants is available.



2. Background to Science Central

The City of Newcastle (and the wider region) is looking for a new economic future. It is still in a transformation process from an industrial city but looking to move towards a city that thrives on knowledge, innovation and creativity. In recent years, the city has made progress in several respects, and it is clearly the main growth centre of the region. Substantial investments in culture and quality of life bear fruit, and the city has improved its image. The knowledge base is strong (but cannot match that of England's top university cities), with pockets of excellence. The weak point is the poor alignment between the business sector and the academic research in the region: the 'absorptive capacity' of the region's companies for academic research is low, and this reduces the opportunities for successful commercialisation of academic research.

To boost its knowledge economy, Newcastle has developed plans to create a science quarter in the heart of the city. The city is in the unique position to have a large site, near its city centre, available for development. It is the former location of the famous Scottish and Newcastle brewery, that moved its operations from the city centre and sold the land. Together with two main partners, the University of Newcastle and the Regional Development Agency (One Northeast), the City Council is now in the process of transforming this large site into a science quarter, termed 'Science Central' because of the site's central location and proposed future status as a central hub for regional scientific activity. 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. For more detailed descriptions, we refer to the website of the project. Also, the REDIS baseline study contains a more detailed description and analysis of the project. See <http://urbact.eu/thematic-poles/growth-and-job-creation/thematic-networks/redis/project-outputs.html>

It is important here to stress the difference between 'science central' (the brewery site) and 'Science City'. The latter is a broader initiative – also led by Newcastle Science Company Ltd on behalf of the three core partners that includes the redevelopment of the brewery site but also a number of other activities related to science, among which:

- ❖ Building the Partnership: extending the partnership beyond the three founding partners, and to explore beneficial collaborative networks.
- ❖ Creating more high growth science based businesses through the Newcastle Innovation Machine which will focus on insight-led innovation.
- ❖ Creating new science based businesses from the new science breakthroughs.
- ❖ Education and Community Engagement to develop awareness of future skills and careers opportunities in science, to a wide range of individuals across the city.

Already over £100m has been invested in Science City related projects. Our Implementation Lab focused on Science Central, taking the relations with other science projects within the city and the sub region into account.



3. Reflections on Science Central's concept

The following observations, questions and recommendations were made during the Implementation Lab:

Although the overall vision of Science Central is clear, there is a need to articulate it, e.g. based on the general concept, identify unique selling points and clarify how the aims of creating a world known place for best science and regenerating part of the city can be combined.

The identification of focal science domains is based on the research strengths in the university and the regional economic strategy (3 pillars).. However, there is no link between the focal science domains and the rather unique location of Science Central in the middle of an urban environment (which can be considered as a 'living lab' in its own right; for more see <http://www.openlivinglabs.eu/concept.html>). The concept could benefit from capitalising on the unique opportunity to link science to urban daily life. User and community involvement in innovation is a key international trend, and Science Central could be perfectly situated to be a frontrunner in that respect. Other promising areas that could thrive in such an environment are market research, consumer behavior, sociology, anthropology, or urban studies.

How does Science Central relate to the wider economic profile of Newcastle, and to what extent will there be a 'waterbed' effect in the region when a large knowledge site is added? The city has developed knowledge-based activities but the scale is yet limited. Competition with other cities is fierce, and the potential for indigenous growth is restricted. Therefore, Science Central must be part of a realistic wider knowledge based strategy as developed by the Newcastle Science City Company and to be aligned with ONE's Innovation Connectors programme and the University's strategic development plan.

Indigenous science-based development will be a cornerstone of Science Central's success. For this it is absolutely critical to have effective knowledge transfer mechanisms, well-functioning incubation structures, and venture capital. Currently, these issues require much improvement in Newcastle, and there's a lot of work to be done. Moreover, science central needs a vision on the agglomeration economies at the site: how to create a fruitful interaction between science, business, the public sector and users/communities (the 'quadruple helix'); what type of shared facilities or labs will be created?

Science Central's masterplan is built on a redlined area, but redlining has some drawbacks. Alternatively, the redlining could be abandoned and replaced by a more hybrid vision in which adjacent areas are part of a wider science zone. For instance, West End could be added as experimental neighbourhood where innovations are applied first, and where daily problems are solved. The City Council could consider making the West End a pilot area for innovation in public services (water collection, street lightning, etc.), and offer free WiFi access in the area to test e-government solutions etc. Strategic co-operation with the university is essential here. Moreover, the redlined Science Central area should also have public spaces that serve as a meeting place for communities, i.e. open, accessible squares, or a place where football fans can gather before a match.

A clear distinction is needed between the short, medium and long term development perspective. Given the poor economic climate, the site is likely to be largely empty for several years from now. Therefore, temporary use of the site is critical in the short (and maybe even medium) term. It is recommended the panning of temporary activities that are in line with the future destination of the area: applied science and knowledge based activity. This will help to brand the site's reputation as a



locus for science and discovery even before the science quarter is built. Moreover, involving local communities in planning these activities may help to generate support for the development, and increase its quality and integration in the urban and social fabric of Newcastle.

4. Reflections on Branding and Communication

To outsiders, it is very difficult to distinguish between Newcastle Science Central (the site) and Science City (the broader science policy framework). There was some confusion, even when the participants of the Implementation Lab were in Newcastle for three days. This, however, can be explained by the recent changes in the management of the Site and the fact that a marketing protocol is currently being developed. This marketing protocol should provide a more clear and unified communication to citizens and the outside world on what the City's plans and ambitions are concerning science in general and the development of the site in particular. The current distinctions are too subtle and the message should come across in a clearer way .

There is a need to clarify what types of Science are to be showcased in the site.. Newcastle has a long history of science based innovation and development, but it is not a Cambridge or Oxford.

To have an effective branding, the future identity of the site needs clarification. Who will be the customers and users? Multinational companies, indigenous firms, university labs, elderly people, students? To attract investors and users (which will be hard anyway in the current economic climate), answers are needed. Moreover, investors and future customers may want to know what the site will be, not only in 25 years time but in a short and medium term perspective. Thus, branding and communication activity must be aligned with a realistic phasing exercise. Start marketing and branding only after having more clarity on the future of the site in different stages.

It makes sense to consider the West End as integrated part of the science city. In this respect, many existing innovative Council activities in the West End (or projects of New Deal for Communities) could be rebranded under the banner of Science City, so that a sense of unity is created.

5. Reflections on process

Involving the business sector (perhaps a large player in the region, or a set of smaller ones) could help to find direction and elaborate unique selling points and value propositions. Currently, the project is strongly public sector driven.

The management model is based on a partnership. Although this was recognised as a significant and unique asset, it is rather complex and comes with its own challenges..There are three main partners (City Council, Newcastle university, and OneNorthEast) which are sometimes internally divided, and two 'hybrids': the delivery organisation ING (a joint city development company with Newcastle Council Gateshead Council and OneNorthEast), and the Science City company (see annex 3). Each individual organisation has its own dynamics and interests, and the development of Science Central is the combined result of a large number of decisions. It is difficult to streamline visions and views, or to have a clear and unified branding of the development. It would help to have a 'project champion' in each of the three partner organisations, a heavyweight person that is able to mobilise the organisation, promote the project internally and externally, and get things done. Also, it would be helpful to appoint a supervisor or moderator, to critically assess the process and judge its current outputs and make suggestions for the future. Define clear goals for the working process and underlay them with a timetable.



Moreover, the suggestion was made to integrate external experts periodically for defined topics or a critical review of your ideas. A ‘critical friend’ can help to keep the process on track.

The three partners are in the driver’s seat, but given the ambitions of the site, it makes sense to be open to integrate ideas from the non-paying partners (Northumbria University, Chamber of Commerce, community initiatives, Newcastle College and the Newcastle upon Tyne Hospitals Trust).

In the process, community participation is essential. A distinction can be made between communities that live immediately adjacent to the area that will directly be affected (West End), and those at some more distance (users and residents of the city centre, and residents of Newcastle, the Tyne and Wear City-region or even the region at large). After the Masterplanning stage, the participation process has come to a standstill, and this needs to change. Participation should not be a ‘once every 6 months’ exercise, but should be fully integrated in the process. It is recommended to design a strategy for this, supported by all the organisations involved. A working group on community participation could be formed, consisting of the relevant people of all the organisations involved in the development of Science Central, as well as New Deal for Communities.

Moreover, it makes sense to formally involve the community (representatives could be the elected people from New Deal for Communities) in the decision making process, i.e in the board of Science City or ING.

6. Connectivity (physical and social)

There is a large contrast between the communities in the West End and the ambition for the Science Central site, and the wall is a physical barrier that keeps the two worlds apart. Many ideas were generated to bridge the gap and create connections (see annex 1 for detailed ideas). Some general recommendations:

- ❖ Make sure that there is a link between science activities on the one hand, and the character the area and the daily life of residents and visitors (i.e. science activities related to sports/football, linking to the football stadium) on the other. Provide community facilities in the first phase together with initial buildings and infrastructure.
- ❖ Let science and scientists help to solve daily problems of the communities in West End. This will have very practical use, connecting societal problems and technological opportunities (after all, science can improve people’s lives).
- ❖ Organise community-based activities related to science, not only in Science Central or the adjacent areas but anywhere in the city. In Barcelona, professors organise science demonstrations in shopping streets, including activities for kids. That helps to raise interest and support.
- ❖ Develop a ‘science of involving communities’. Use scientific methods to optimise community involvement and measure the effects. Science Central is the ideal testing ground, and may help Newcastle University to excel in this social research field. Identify the relevant research groups in the university and involve them.



- ❖ Process: See community involvement as a permanent process. Link involvement activity with the stages of the development. Create a working group to organise all this, and reserve budgets.

The site has a very important function for enlarging the city centre with social, retail, leisure and office functions. Also, the site has a cultural function (heritage function). Therefore, create a soft “mental connection” to the former use as the brewery.

The physical access to the site is in order, with a metro nearby; the question is how the west end of the area will be served by public transport. Extension of the metro line could be a (admittedly) costly option; an alternative is a monorail system. A funicular railway could be a possible transport solution as well as a local attraction (but is site steep enough?). Consider a Travelator also.

To link West End to Science central, good physical connections are needed, that run through the area. The street plan and public transport planning should be geared towards this.

Moreover, connections are needed between Science Central and other science site in the city, such as ICfL and the university campus.

The large wall is a barrier in several respects. It helps to secure the site, but at the same time it prevents people from relating to what’s going on at the site; it gives the impression of an isolated development, which it is not meant to be (rather the opposite).



Annex 1: Some more concrete ideas

On Community Participation

- ❖ Establish free WiFi access in West End, combined with activities to bridge the digital divide. This will not only empower people in the community, but also could make the area attractive for firms to test new ICT services there. The City Council can test new e-government solutions.
- ❖ Involve residents in research. They may test new inventions or consumer products.
- ❖ Try to empower residents so they can become researchers themselves
- ❖ Involve residents in animating the site (it has been dormant for too long). Organise a contest for ideas how to use the site temporarily.
- ❖ Connect to the community by showing that there's something in it for them: public space, squares, but also job opportunities and challenging events.
- ❖ Brand some existing community services (e.g. nurseries, schools) as 'science locations', and add extra science-related components to them. Regular events could create a link with science. For example: a school with special science projects in the curriculum.
- ❖ Create the REDIS local support group on the issue of community participation; The local Action Plan can be developed in this context.

On temporary use of the site

- ❖ Create public art at the site
- ❖ Organise science-related events and exhibitions
- ❖ Break the walls or create windows in it so people can see what's going on
- ❖ Use the site for energy production (solar panels; geo-thermal energy)
- ❖ Archaeological exhibition: the site will probably contain archaeological treasures; they may be exhibited in an attractive way
- ❖ Farming (in connection to school programs); the site has a history of farming (middle ages).
- ❖ Community gardens/allotments
- ❖ Use eco-animation to showcase green ecology

Other ideas

- ❖ Examine the potential for "Professors of Practice", dedicated to Science Central?
- ❖ Make a residential area for young people and create space for start-ups to make the site a real innovative cell in the city centre.
- ❖ Concentrate the University's student entrepreneurial activities in Science Central.
- ❖ Make the site a centre of life long learning addressing all ages and skill levels.
- ❖ Provide a training / resource centre on site to enable local people to train for science skills. "Sharing Knowledge".
- ❖ Use health sciences to be focus of Science Central as this is most accessible to wider public.
- ❖ Integrate external experts periodically for defined topics or a critical review of your ideas.
- ❖ Run a dedicated 'science bus' service through the site.
- ❖ Secure accessibility by public transport and enough parking facilities. Avoid traffic and don't let parking take the area over.



Annex 2: A concept for the area: some suggestions

The implementation lab in Newcastle generated a number of concrete suggestions on how the planning and development of the Science Central site might be improved. These are listed below. Figure 1 illustrates some of these concepts and how they relate specifically to the planning of the site.

- ❖ To create a vibrant and livable quarter at Science Central it is important that the streets and vehicular access is planned carefully. Streets cutting through the site can split and divide the site creating barriers. It is important to create non threatening traffic calmed environments which will encourage greater pedestrian use and encourage interaction and other activities to take place. Access traffic should be possible but there should be no through traffic which may prevent the development of a positive environment from the very beginning. Thus Wellington Street and Corporation Street should be closed.
- ❖ Physical connections to all sides of the site are crucial for the well functioning of the proposed development and its future function of interlinking the adjacent neighbourhood areas. Pedestrian access and footpaths in particular need careful consideration and have to be designed to the highest standards. Thousand of people pass the site and use the access roads around it, mainly in an east to west direction to get to and from the football stadium at least once a fortnight during the season. Due to the difference in levels the north-south connection to the site in particular has, in design terms the potential to be a very special part of the overall design and image of development.. The 800m Central Mid-Level's Escalator at Hong Kong's Queen's Road or the Lombard Street in San Francisco are two examples of how innovative design responses to access problems can be successfully overcome on sloping sites.
- ❖ The planned Newcastle University Business School and the refurbishment and reuse of the former Scottish and Newcastle office block at Gallowgate are good 'starters' for a further development because both buildings provide the base for a critical mass with integrated public space and related functions which should set the standards for future design and development of the former brewery site.
- ❖ As part of the creation of a new identity and a new point of identification it is essential to design an iconic building which will create the distinctiveness of the place and create the "postcard quality" which is the aspiration of the vision of the partners for the development of the site. The location of the first iconic building should be in the southern part of the quarter to maximise visibility from the main roads close to the site and because at this stage Phase 1 of the brewery development consisting of the new business school and refurbished hotel development will have already been completed. Rather than be preoccupied by a high rise iconic building it is more important to ensure a high quality building in terms of design and architecture. These three buildings will form the frame for much needed main square which will be the complementary point of identity in a high quality network of public space throughout the site.
- ❖ Because of the different land uses and functions in the surrounding neighbourhood and the fact that a lot of people cross the area in and around throughout the day including evenings and weekends the outside main business hours mono-functions in uses on the site should be avoided.

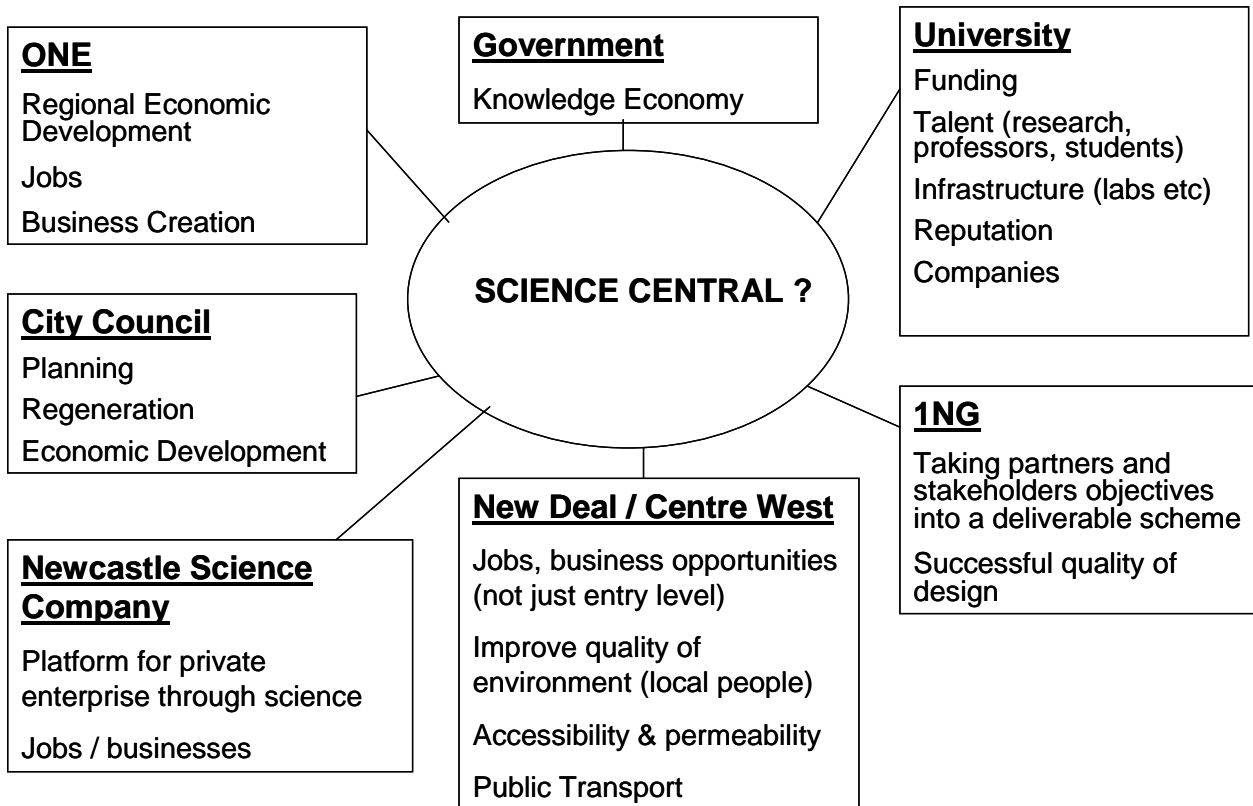


- ❖ Companies (preferable related to science activities), research institutions, incubators and housing would provide a good mix of functions. Housing uses should be carefully considered and because of an apparent oversupply of houses and apartments in Newcastle residential use should be specifically orientated at certain target groups. Newcastle Science City's specialism in Ageing and Vitality could provide an opportunity for a centre of research into housing for older people on the site. Additional temporary housing for which there is demand in other countries could be explored. High turnover in this type of accommodation is usual but this provides the potential for increased critical mass in the use of public spaces as existing residents will use the space alongside some of the former residents who may still live or work in the wider neighbourhood.
- ❖ The provision of open space in neighbouring areas is good particularly at Summerhill Square to the south of the brewery site. It is recommended that a network of smaller green spaces be created over the site which would widen the network of interesting public spaces which are also green leafy areas in the urban neighbourhood.
- ❖ To avoid a gated community, public artworks should be considered which can provide interest and curiosity leading pedestrians into the site. So called markers – public art strategically placed at key points and which is highly visible - should be placed around the site. Good quality public art will create an appealing well designed urban (public) environment for the site which will be the backbone of the future science district.

Figure 1. Suggestion for the area



Annex 3: What would each organisation like to see from Science Central





Annex 4: References and contact persons

Web References:

Website REDIS: <http://urbact.eu/thematic-poles/growth-and-job-creation/thematic-networks/redis/presentation.html>

Website Science Central: <http://www.newcastlesciencecity.com/>

Science Central on the website of Newcastle University: <http://www.ncl.ac.uk/sciencecity/>

Science Central At Wiki Northeast: <http://www.wiki-north-east.co.uk/topics/newcastle-science-city>

Video on demolition of the old brewery: <http://www.youtube.com/watch?v=hWxjmpOk3LI>

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