Chapter 51
The English Science Cities:
A New Phase in Science-Based Urban Strategy

David R. Charles
University of Lincoln, UK

Felicity Wray
University of Western Sydney, Australia

ABSTRACT

Six English cities were designated by the UK Government as science cities in 2004 and 2005, with the intention that local consortia develop strategies for the realisation of this vision. Previous definitions of science cities are explored to show how the concept has evolved over time, with the English initiative placed within a global context to show how it adapts previous models to the specific needs of the UK and fits with academic debates on the local governance of science and the role of innovation in urban and regional development. The six cases are briefly examined as to their aims and the nature of their governance and approach and potential benefits of the initiative are outlined to show how it may contribute to a new perspective on the role of cities in science and economic development in the UK.

INTRODUCTION

…as part of their £100 million technology investment programme, the northern Regional Development Agencies will promote 'Science Cities' for the North, starting with Manchester, Newcastle and York. (Gordon Brown, Pre-Budget report statement to the House of Commons, December 2004)

The announcement of the designation of science cities in the UK came as a great surprise to many, including the key institutions in the designated cities. Typically UK science policy has been national in focus and spirit, so the designation of particular cities for science outside of the usual golden triangle of London, Oxford and Cambridge was a major shift in policy. The three initial cities, all in the north of the country were joined a year later by three more, Nottingham, Birmingham and Bristol, in the Midlands

and South West, and together the six cities mark an interesting experiment for the UK in localised science and innovation policy. As yet the devolved administrations of Scotland, Wales and Northern Ireland have not followed suit, so these are English science cities specifically, although Glasgow has recently (in 2010) adopted a 'City of Science' strategy. Despite the radical nature of the initiative though there has been little published in the academic literature on its evolution, implications or early results (although see Webber, 2008; OECD, 2008 and DIUS, 2008a for a policy review). This paper seeks to place the Science City initiative within a global context of science city policies and explore how it adapts previous models to the specific needs of the UK and fits with academic debates on the local governance of science and the role of innovation in urban and regional development.

What is distinctive and perhaps most significant about the English experiment with science cities is the absence of a top-down plan or model from the national level. Although a national government initiative, the cities have been given little guidance or resources from national government to realise their objectives. Indeed the objectives themselves were left for the cities to develop themselves as part of the construction of local coalitions of public and private sector actors, new forms of governance, novel innovation and science projects and in some case major physical redevelopments. Whilst the programme, seen at the national level, seems remarkably ephemeral, the impact in the cities has been more substantial, and is worthy of study and consideration.

This paper therefore begins by reviewing the concept of the science city and its application in previous initiatives internationally, in order to place the English experiment within this evolving international context. We identify a phasing of science city developments with a shift of emphasis over time from a focus on basic science investments and physical developments (Anttiroiko, 1994) to an approach that works more closely with the warp and weft of the existing city. The English science cities still have an element of science and physical investment, but also have a stronger commitment to a greater integration of science and research into the life of existing cities.

Following this conceptual overview we examine the evolution of the initiative and how it connects with ongoing policy debates in the UK on science based economic development. We identify the aims of the six cities and explore how the implementation has proceeded, the nature of science city partnerships, and the kinds of projects that have emerged.

Finally we outline the potential benefits of the initiative and how it may contribute to a new perspective on the role of cities in science and economic development in the UK.

DEFINING THE SCIENCE CITY CONCEPT

The definition of a science city is an elusive and inconstant notion but it is important to define the parameters of such initiatives in order to assess the policies that should be implemented within a science city strategy. Castells and Hall (1994, 39) state that, in their simplest form, 'science cities are new settlements, generally planned and built by governments, and aimed at generating scientific excellence and synergistic research activities ….. within a high quality urban space'. There are certainly examples of such new planned concentrations of science infrastructures in various countries, but we argue that the UK science cities belong to a broader concept, within a typology which is developed below.

Science city initiatives are designed to advance the prosperity of cities by helping to build up infrastructure and human capital around predefined scientific areas. A network of universities, research institutes, governments and local partnerships work together to undertake science based investment and

Related Content

An Exploratory Study of How Technology Supports Communication in Multilingual Groups
Milam Aiken, Jianfeng Wang, Linwu Guand Joseph Paolillo (2011). *International Journal of e-Collaboration (pp. 17-29).*
www.irma-international.org/article/exploratory-study-technology-supports-communication/49662

Digital Education and Teaching of Printmaking Based on Big Data and Intelligence
Ge Yiand Yuanyuan Tan (2023). *International Journal of e-Collaboration (pp. 1-18).*
www.irma-international.org/article/digital-education-and-teaching-of-printmaking-based-on-big-data-and-intelligence/316825

Toward a Philosophy of Collaboration
Nils Randrup, Douglas Druckenmillerand Robert Owen Briggs (2018). *International Journal of e-Collaboration (pp. 19-36).*
www.irma-international.org/article/toward-a-philosophy-of-collaboration/231633

Feature Selection Using Elephant Herd Principal Component Optimization Technique in Big Data Streams Using Internet of Things
Gayathri Devi N.and Manikandan K. (2022). *International Journal of e-Collaboration (pp. 1-14).*
www.irma-international.org/article/feature-selection-using-elephant-herd-principal-component-optimization-technique-in-big-data-streams-using-internet-of-things/304041

A Tool for Assisting Group Decision-Making for Consensus Outcomes in Organizations
Faezeh Afshar, John Yearwoodand Andrew Stranieri (2009). *E-Collaboration: Concepts, Methodologies, Tools, and Applications (pp. 941-963).*
www.irma-international.org/chapter/tool-assisting-group-decision-making/8841