

# SHEFFIELD IN THE INFORMATION SOCIETY - A DRAFT STRATEGIC FRAMEWORK

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## Summary

Sheffield needs to coordinate and agree the vision of its potential as an active part of the a global information society. City-wide progress could be accelerated a co-ordinated effort to exploit information and communication technologies (ICT). Failure to respond (pro-actively) to existing opportunities will slow down the economic regeneration of the City and may hamper the City's ability to compete globally. Cities that exploit new technology first will gain the advantage and be reap economic and social rewards for doing so. Delay in investment will not become apparent for several years, when it may be too late to do anything about it.

Attempting to impose a "strategic blueprint" will not work. Instead we recommend a "strategic pattern" approach, based on shared vision, priorities and principles for how we initiate and cross-fertilise ICT development. This should allow flexibility and openness without stifling innovation.

The vision served by this strategy is that -

"Sheffield will help develop all its people to become producers as well as consumers in the ICT economy"

## Rationale - why Sheffield needs to be strategic about information and communications technology

We are already living in an information society. Successful organisations in the public, private or voluntary sectors are organisations which know how to use ICT to find, integrate, distribute, use and create value-added information.

The same will be said of places. Cities or regions which are able to bring together the totality of their information resources and use them for their economic and social development are the places which that will thrive. This "information architecture" should enable and improve communication, and enhance the human and technical infrastructure of the city.

Like any urban architecture, the information architecture does not need to be built, designed or controlled centrally. However, without any recognisable pattern (developed through planning and consultation, and evolving continuously through interaction and feedback) it will be ineffective.

The architecture must live and breathe. It must support and enhance relationships between groups and agencies in all sectors. The communications potential of ICTs is essential to achieving this. It should facilitate networking and coordination within and between interest groups, private, public and voluntary sectors, and support agencies. It will complement, but not replace, traditional forms of communication.

The potential of the information society has been and is being transformed by ICT. Any information strategy must include as a priority a number of ICT related strands. These include:-

- ICT as an enabling technology of a modern and efficient "information architecture"
- Universal ICT literacy as a precondition of people being able to apply it productively whatever their area of work, leisure or interest
- ICT as a growth industry which if fostered - skills development, development foci, ICT rich environment/infrastructure - can create local employment and wealth.
- ICT as a potential social cost: one which may exclude people, create and accentuate divisions and weaken society in the process

## SWOT Analysis for Sheffield

### Strengths

- Plethora of relatively successful small projects (see lists at <http://www.shef.ac.uk/~nuf/websites.html> and ICT "Audit Report" commissioned by Sheffield TEC, December 1997)
- Some innovative academic departments (e.g. Centre for Study of Networked Learning, CREDO, University of Sheffield; Centre for Multimedia in Education, Sheffield Hallam University)
- Both Sheffield universities, the college, and some private training providers are large scale providers of ICT education and training
- The city is home to some significant ICT-related companies (e.g. Sanderson, Fretwell-Downing Group, Midland Bank, Gremlin Interactive, LightWord Design Ltd and a developing media sector)

### Weaknesses

- Has a poor "Information Architecture", only likely to attract attention as a pub quiz question e.g. "which European City has 15 unlinked home pages on the Internet?"
- Suffers by comparison to the infrastructure, architecture and access in many other cities and towns (e.g. Manchester, Sunderland, Barnsley)
- Apparently little thought about the use of ICT for the delivery of public services (unlike Leeds, Kirklees, National Government and the EC)
- Currently has no senior figure or key organisation providing leadership
- At risk of projecting an image of a backward looking city unable to understand or respond to world wide trends. (The image of early 19th century Northampton refusing permission for the London - Birmingham rail line to go through the town springs to mind).

### Opportunities

- Harness the role ICTs can play in economic regeneration, learning, and "culture" (by culture, we mean a combination of communication, and access to information, images, know-how etc.)
- Communications potential of new enterprises - visitor attractions, sport etc. - and marketing and process potential for established industries
- Chance to build on applications of ICT where local organisations have established a strong profile (particularly, but not exclusively in learning, and media applications)
- Chance to attract new investment from ICT using these sectors, based on the strong ICT "labour supply-side" package provided by local large scale ICT education and training providers
- Chance to access EC, Government, Lottery etc. funds for ICT projects, which will be enhanced by evidence of local ICT partnerships.

### Threats

- Exclusion from developing regional information architecture by "missing the boat"
- Exclusion from new government initiatives (of all types) through inability to use preferred means of communication
- Better users of information dominate markets and local companies fail to remain competitive
- Ignored by potential ICT inward investors
- Development may be thwarted due to a growing shortage of people with ICT skills

## **Benefits - what we can gain from a more strategic approach**

### Public discourse and accountability

- Raise awareness
- Enable "users" to shape Sheffield's approach
- Spread best (effective?) practice
- Actively work to include disadvantaged groups in the move to an information society through creating access to ICT resources

### Practical actions

- Draw all key players into concerted action
- Create a regularly updated summary of significant local ICT projects and activities
- Help organisations (public/private/voluntary, big/small, etc.) think about how they manage information and how their ICT links with the wider context
- Tackle the local ICT skill shortage (e.g. by linking training and placement offerings by large providers)
- Ensure a minimum entitlement to/level of access to ICT resources (e.g. no-one in main urban areas should live more than 15 minutes walk from an ICT access point)
- Utilise talents within the City to develop State of the Art facilities (nationally and at a European level) which will support business development, training and assist in attracting inward investment (perhaps this should be in the section "positioning the City")

### Coordination and economies of scale

- Encourage cross-project and cross-institution synergies/links between complementary facilities; and pre-empt "turf wars"
- Set up processes which will enable local policy makers to get policies put through an "ICT mill" before being finalised.

### Positioning the city

- Increase the amount of funds which Sheffield attracts into ICT projects
- Inform local/regional etc. policy making
- Put Sheffield on the map when it comes to information communications and media developments of regional, national and international significance

## **Shape - our approach to strategy development**

Information, communications and technologies are so all-pervasive that it is not possible for any group of players, no matter how "powerful", to control them and specify a blueprint for their development.

Accordingly we propose a strategy which is more "pattern" than "plan". That is a Sheffield ICT strategy which does not dictate to local organisation but which encourages them to approach ICT development in a broadly consistent way.

Such an evolutionary, pattern-based approach to developing information, communications and technologies in the city ensures flexibility in the face of a changing environment.

The flexibility should not be mistaken for vagueness. The pattern will need some defined features and values which organisations are encouraged to "sign up to". Signing up should commit them to approachability and accountability, without stifling innovation or their exploitation of their own good ideas .

These may consist of:-

*a vision :-*

"Sheffield will help develop all its people to become producers as well as consumers in the ICT economy"

*some common values :-*

- avoid top-down imposition of projects, without the involvement of intended users
- avoid, where possible, competing provision and bids, and duplication of facilities
- exploit, wherever possible, opportunities for collaboration and connectivity between projects
- use generic, rather than proprietary standards, to support networking between initiatives
- widen access to, and use of, ICT infrastructure
- use ICT to support learning, and widen access to it, whenever opportunities arise.

*agreement on priority development foci :-*

These might start as

- a learning focus: to give people the skills to create their own, and/or use, digital "content" for business, community development, leisure, or learning, and to widen access to learning opportunities within Sheffield, through initiatives such as CITINET;
- an enterprise focus: creating "spin-off" companies from Universities and "incubator" units like Science Park developing products and services for on-line media (for distance learning, information services, culture and entertainment markets); encouraging ICT-using inward investment;
- a community focus: empowering people to use ICT to create and interpret their own circumstances, to interact with public services, to organise themselves, and to "publish" their own experiences (rather than have BSKYB do it for them)

As developments in these foci reach out into the body politic, further strands may supplement them, including, for example, initiatives focused on investment and tourism.

*some common understanding of how interventions interact :-*

Interventions may be located on

- a "horizontal axis" - i.e. cross-sectoral developments such as training and development in ICT, using ICT to support learning, ICT infrastructure, inward investment
- and on
- a "vertical axis" - focused on particular sectors such as cultural industries, multimedia and ancillary Internet services, education, business support, the third sector and its interaction with others - e.g. local government, health authority

A draft "map" of ICT interventions identified in the Sheffield ICT Project Audit (December 1997) is included in the Appendix.

Interventions should also be conscious of the global dimensions of ICT developments. Any actions must benefit the communications and infrastructure of the City itself, but should also enable the City, its people and enterprises to engage with the wider global market and society.

# Appendix - Map of ICT Interventions

