

The intelligent city will aim to position itself as a key site of the knowledge economy. Whether the aim is to capture the increasing dispersal of economic operations and talent, or to emerge as one of the centres of power and control, is irrelevant to this discussion, and more likely to depend on factors of history and scale. Either option will require the city to meet the business requirements of the new economic paradigm. In summary these are:

- **employing the right people**
- **increasing interaction and communication**
- **promoting accessibility, openness and convenience**
- **achieving flexibility of operation: functional, financial and physical**
- **maintaining and promoting value through image differentiation**
(Harrison *et al.*, 2004)

If a city is to effectively provide for these business requirements, it will need to address them in terms of both its hard and soft systems that is, its fabric and processes. It is self-evident that a city will need to provide appropriate infrastructural conditions, including digital networks, but what is less well understood is the need for cities to address more generic needs such as requirements for diversity, intensification and the city's quality of place.

As history has demonstrated, few cities can grow or even survive in the long term through specialization. Cities will need to attract and provide for a diversity of organizations and cultures, through maintaining diversity in its neighbourhoods, buildings and spaces, including a range of public to private space. Providing for diversity increases the agility of the workplace, building, development or city; in other words, its ability to be flexible in the face of change is critical.

At the same time, competing (and co-operating) knowledge industry organizations will seek to concentrate functions and people in a particular locale. Intensification of the city through increasing its density, especially at central locations, through the promotion of effective transport networks and by ensuring that transport accessibility and densification are related which maximizes the potential of high-value locations, increases the potential for activity and interaction, and optimizes infrastructure provision. This facilitates the clustering of related economic functions, and allows more effective access to goods and services. This is not a new idea; research by Newman and Kenworthy (1989), amongst others, has demonstrated the link

between transport and urban form, in particular car dependence and urban sprawl. This has been picked up in key policy documents in the UK, such as the influential report by the Urban Task Force (1999), and the Sustainable Communities Plan (ODPM, 2003). However, it seems to be an idea that has been overlooked as cities spread out to merge with the suburbs, which in turn can blend into peri-urban business parks. It is also intrinsically linked to the next factor, identity.

City identity, or sense of place, will become increasingly important for two reasons. Highly educated workers are becoming increasingly discerning of their own value and therefore more confident in demanding better terms; this increasing mobility of the workforce allows a greater focus on quality of life issues. These factors create a greater demand for access to, and therefore provision of, cultural and leisure amenities. Attracting the increasingly mobile workforce requires that cities achieve differentiation not by specialization, but by enhancing their quality of place.

Achieving the intelligent city: a focus on social sustainability

Conventional approaches to sustainability pit environmental protection against economic development. But a holistic approach to the question will find that the greatest hurdles to achieving sustainability lie neither in the environmental or economic spheres, but in the social. Global environmental problems have their origin in local action, and changes to the global environment have significant local impacts. Cities are open social systems integrated into the broader systems of the global economy and global environment. They are increasingly indistinct from their hinterlands and are globally connected to one another in a progressively more complex web of links: in production systems, finance, resource usage, and through the environmental problems caused, and suffered, by them.

Achieving social sustainability is a prerequisite both for environmental and economic (Figure 2.10) sustainability, which will by necessity take place in the urban realm (Wu, 1998). Despite being closely associated with crime and vandalism, deprivation, unemployment, deteriorating infrastructure, inner-city decay, socio-economic problems and neighbourhood collapse (i.e. the most serious symptoms of unsustainable development), the city nevertheless provides the greatest opportunities for their remedy.