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The Development and Operation of Virtual Manchester(s), 1989-2001: A Research Report

Abstract

The present research paper attempts to address the lack of in-depth case studies, based on empirical evidence, regarding the virtual city development and its potential interplay with the real city and urban policy. It does this by analysing and discussing the overall development of virtual city in Manchester, UK, throughout 1990s so to define the basic features of its profile and also by examining if and how the virtual and real city are interrelated. Accordingly, the paper initially provides an overview of the research results. Next, it examines the seven virtual city applications developed in Manchester looking at five aspects: background information; design and architecture; contents and services; Web statistics; and main issues and future plans. Finally, the paper discusses the overall findings from the case study on the basis of identified concurrencies and contradictions that condition the virtual-real city interplay. In concluding the paper argues that Manchester is a proper case study in order to draw lessons from both positive and negative aspects, as well crucial details for the formation and suggestion of an integrated 'virtual city planning' framework that includes seven general guidelines.

Cyberspace and Virtual Cities: A Brief Literature Review

Cyberspace, term coined by the cyberpunk American writer William Gibson in early 1980s, is a living virtual space backed by telecommunications infrastructure and developed mainly over the network of Internet and the World Wide Web (or simply Web), the Internet's main multimedia backbone. It is conceived as a 'living virtual space' because although it is accessible and operates only on screen interfaces in the same time it is concerned with actual information, communication and various types of interaction as well with the diversity of personal interests and values. It is able to embrace and integrate many forms of human activities related to real places and physical proximity/movement (i.e. shopping and banking).

Therefore, the development of cyberspace as a virtual spatial system is defined around the notions of 'real virtuality' (Castells, 1996) and 'place-metaphor' (Adams, 1997; 1998). For Castells (1997), the culture of real virtuality is a historical product that is mainly concerned with new generations that are coming of age spending much of their time in virtual environments using the coded representation in interactive electronic systems, such as the Web. He further explains that "it is real virtuality, and not virtual reality, because when our symbolic environment is, by and large, structured in this inclusive, flexible, diversified hypertext, in which we navigate every day, the virtuality of this text is in fact our reality, the symbols from which we live and communicate" (Castells, 1997a: 10-11). The virtual place-metaphor implies a mapping of real places onto virtual places, and having that cyberspace is perceived as a spatial system we should approach it not by treating it as an artefact but as a serious ontological challenge to modern spatial and urban studies (Adams, 1997).

On the other hand, the development of cyberspace, and especially its potential for being a global virtual market-place and a new space for social and political interaction, stimulated the interest of governments around the world towards the development of an 'information society'. Thus, in the 1990s many countries have elaborated and applied 'information society' policies that aim to exploit cyberspace as a means of boosting national competitiveness, employment, and for promoting social cohesion. They further aim to develop advance telecommunications infrastructures, while they develop programmes that promote the digitalisation of public

administration and management, i.e. 'e-government', and address the issue of the so-called 'digital divide'.

On the whole, Information and Communication technologies (ICTs) are seen as a key-means for the social, cultural and economic regeneration and that is being grasped by many cities. As a result, and within the 'information society' context, many city governments have introduced various policy initiatives involving cyberspace within urban policy. Therefore, the shift in terms of urban policy/planning is concerned with the fact that it is no longer reasonable for local authorities, policy-makers and planners to ignore cyberspace, as they did in the past with telephony and early ICTs networks. Reviewing the related literature we identified that urban cyberspace scholars share a common view, which can be summarised as 'cyberspace paradigm in urban policy and planning'. Thus, it is in general terms argued that the current burgeoning importance of cyberspace, which has become much more visualisable and tangible through the multimedia interfaces of the Internet and the Web, fundamentally challenges the modern paradigms underpinning urban planning and policy-making (i.e. Batty, 1997; Mitchell, 1995, Graham and Marvin, 1996; 1999, Zook, 1998). Characteristically, Light (1996) asks planners and scholars of planning to use their expertise to participate actively in guiding the development of the virtual urban landscape, so to create public spaces in cyberspace that come closer to cultivating the 'community' that the hype rhetoric describes today, as well as to design physical spaces that offer convenient, low-cost, and welcoming access to digital spaces.

Virtual Cities: The Research Topic

The spatial metaphor on the Internet, starting from the transportation metaphor as the information highway, has now passed to the urban metaphor as the electronic abstractions or virtual analogues of real cities. The most characteristic expression of the cyber-urban metaphor is concerned with the rapid development of virtual cities on the Internet through city Web sites. Thus, the Web represents a method by which the city authorities, communities, institutions and local firms may begin to create 'stop and exits' from the global information highway (Nunn and Rubleske, 1997), contributing to the 'urbanisation of cyberspace' phenomenon (Graham and Aurigi, 1997a). Nowadays more than a thousand European cities have been recorded with

virtual counterparts-Web sites developed either by public or private bodies. In fact, Web-based virtual cities are considered as the most modern, tangible and promising utterance of urban cyberspace applications (Batty, 1997; Smith, Dodge and Doyle, 1998; Aurigi, 1997). However, despite the either optimistic or sceptical conjectures, and references to urban cyberspace policy agendas, there is a certain lack of empirical evidence on the development and operation of virtual cities, their involvement in the 'cyberspace paradigm', and eventually their interplay with real cities. As Graham characteristically argues "whilst is seems that the current growth of electronic based exchanges is inevitably going to be a key aspect of future urban development, we remain in a very poor position to analyse exactly how these exchanges and urban change are likely to relate each other" (Graham, 1997: 27). On the whole, "it is crucial to recognise how virtual cities are developed today, and to ask whether this is what we want for the information society" (Light, 1996: 131). This lack of empirical evidence is actually concerned with most of virtual cities' questionable aspects, especially regarding case studies beyond the well-reported cases of Amsterdam-DDS, Bologna-Iperbole and Anwerp-DMA.

To address this research problem the present research is ambitious to contribute further to urban cyberspace studies by providing empirical evidence about the virtual city phenomenon at the intra-urban level: in the context, therefore, of a characteristic de-industrialised European city: Manchester, UK. Through the case study of Manchester, which included extensive interviews and in-depth examination of Web sites, the current research attempted to map out the development of virtual city in Manchester throughout 1990s. The research provided crucial details and pinpointed distinctive processes, shifts and facts regarding the development and operation of virtual city applications. The focus here was to examine in depth and assess the virtual/real city interplay and the deployment and role of urban cyberspace policy, issues that will be discussed in the next sections of the paper. Thus, it may be soon to evaluate 'virtual Manchester' on its various long-term goals, but it is certainly appropriate to monitor and assess its progress towards these goals.

Before, however, proceed to the examination of the Manchester's case study it would be useful to present first a short discussion on the development of virtual cities in EU by the basic types as identified in a survey, conducted two years ago using

methods such as questionnaires to Webmasters and content analysis of 130 city Web sites in EU (see Fourkas, 1998; 2001).

Introductory Typology of Virtual Cities in Europe

The basic types of European digital cities can be described as follows:

On-line City Brochures: The most limited type that only provides some information on the city supported from photographs. Usually, this type does not overcome in information richness relevant brochures provided from tourist offices. This type is developed usually as a result of 'good will' of individuals, universities' departments or tourist agencies.

On-line City Guides: These are Web sites that promote the city through the provision of tourist information and updates on current cultural events in the city, and in some cases they include information on the local economy. Their orientation is obviously external and in most of the cases examined they resulted from local ISP companies, and/or the local press, or from more specific public organizations.

Virtual TownHall: These are the result of municipal authorities initiatives or of their collaboration with other bodies, and basically they offer information on the activities and structure of local authorities, local economy, research and technology, environment, urban planning etc. Moreover, most of them promote internationally the cities they represent using the Internet as a tool for city marketing aimed at attracting tourists as well as economic activities. Within this context their orientation could be described equally as external and internal. However, this does not mean that they are characterized especially from interactive function; most of them only provide the e-mail addresses of local authorities and the opportunity to publish electronic messages and advertisements in an on-line notice board, while in a very small percentage they include a virtual discussion forum. Most of the virtual cities included in the examined sample belong to this category. *Virtual Metropolis Hall* could be seen as a specific sub-type that in its infrastructure integrates the digital presence of the public administration bodies of the wider-metropolitan-urban area of the city.

Virtual City Arena: Virtual cities that belong in this type are mainly a product of initiatives from ISP companies and/or local press and media industry; however the

shape of their contents are in a great respect similar to those belong to the 'Virtual Town Hall' type. The difference lies to the fact that the virtual cities of this type provide additional information for other subjects besides local authorities, providing direct links to relevant Web sites.

Civic Information Network: This type resulted from the collaboration of different bodies such as local societies, local authorities and public organisations, and even private companies. The Web sites belong in this type has an explicit internal orientation aimed at using cyberspace as a new space/medium for communication between citizens and local authorities. Their function concern only the cities to which they refer to, emphasising horizontal communication and production of information, thus in the direct participation of citizens in the digital cities' development (e.g. provision of free Web pages, e-mail). Characteristic examples of this type are the Italian *Rete Civiche* - Community Information Networks (CINs) - developed in many Italian cities. We should also make clear that although some cases serve themselves as CINs they cannot be included in this category as miss the, basic for this qualification, bi-directional and interactive function. Therefore, although Community Information Networks in name, they offer only descriptive information services and are developed without the participation of citizens.

Integrated Virtual Cities: These virtual cities are a product of municipal initiatives or local partnerships and in essence they integrate all the above-mentioned types, meaning they provide information services that address both the enquiries of local people and outsiders, and promote internationally the city through their diverse contents. In the same time they include in their contents information on local authorities and they claim to be more social inclusive, similar to the 'Civic Information Networks' type, constituting a 'city virtual community'. Examples of this type are the fewest (11% in the examined sample).

Similar research in the area (Aurigi, 1997), although followed a different methodological framework, it indicated 7 types of virtual cities that are quite equivalent to the above-presented categorisation. What Aurigi calls 'holistic digital city', as the virtual city which is 'informative, participative and grounded', is similar to what we call in this research 'integrated virtual city' which provide services that cover the whole range of descriptive as well as interactive services. Besides, similarly

to the current research, Aurigi estimated that the percentage of this type of virtual city "is relatively low across Europe, at, approximately, 10%" (Aurigi, 1997: 99).

As a conclusive remark it should be stressed that although a virtual city application provides exclusive contents and services, it eventually bases its city-wide character on the provision of direct links to specific Web sites related in various ways to the city itself. Besides, quite a few cases examined symptomatically employ special online forms through which users can automatically list and link city-related Web sites that are not already included. This is especially the case of those virtual cities that aim to be more inclusive in terms of providing a cyber-space of virtual interlinking between a wide range of local Web sites.

On the whole, it was apparent that the most common element of European virtual cities is concerned with the promotion of local cultural identity, events, centres (museums, galleries), and the history of the city in a city-marketing manner. This is illustrated in the cities' Web sites contents by the interlinked presence of tourism and culture topics. Hence, the use of Internet for city-marketing-oriented purposes is mainly concerned with the tourist and cultural business fields, which have attracted the interest of both public and private sector, especially municipal authorities, local ISPs and media companies.

Virtual Manchester(s), 1989-2001: The Case Study

The analytical review is basically divided in two phases: 1989-93 and 1994-99. This division is based on the emergence of the Web in 1993, considering its widespread use crucial for the exceptionally fast diffusion and popularity of the Internet, and eventually of the virtual cities' development. However a brief review of the real city, documented in the following section, is essential in order to portray the general non-virtual context that the virtual city is, or pretend to be, embedded within.

The context

Manchester is the North-West region's capital and is called the 'second city' in Britain, having a multi-cultural population. It had always has an international role usually as commercial, economic and political centre (Williams, 1996). The City of Manchester is the centre of the Greater Manchester area, which has a total population

of 2.5 million and consists of ten distinct towns. Manchester's development in the 20th century was, and still is, close related to the waves of the industrial development and its, every time, associated economic and social changes. In terms of EU geography, it is characterised as one of the main urban centres in the Northern Arc intra-regional European area (CEC, 1994). However, Manchester, as well as the Greater Manchester Area, belongs to Objective 2 group of European Regional Development Fund, as it exhibits all the symptoms of a problematic de-industrialised urban area, i.e. high rate of unemployment, homelessness and poverty, high levels of crime and bad environmental conditions. On this context, Manchester is being characteristically nicknamed as 'Madchester', 'Gaychester' and 'Gunchester'; thus, Manchester is described as a 'fun city' with a buzzing night-life, a thriving Gay community but also as a city with significant crime rate.

Interestingly for urban planning studies, Manchester is one of the most experimented cities in terms of urban policy interventions, trying to renovate its socio-economic and physical profile. Hence, overall target of urban restructuring in Manchester during the 1990s is to establish a stable base for economic restructuring, to restore the physical appearance, and encourage the rehabitation of the inner-city area, and eventually promote the city internationally. To cope with the issues of competitiveness and effectiveness, local government has deployed an entrepreneurial concept, which is characterised by close partnerships with private developers/ investors and local actors (musicians, media, local entrepreneurs etc.). Strategic and wide entrepreneurial partnerships and inter-agency working, alert and supervisory local authorities, and effective city marketing strategies have been considered as the critical processes for success. The resulted urban regeneration strategic concept can be defined around five central themes: re-building, re-populating, re-imaging, re-inventing, and marketing the city (Robson 1999). These processes are very much based on the use of existing –mainly negative – images and places that have been renewed, manipulated, commodified in order to become fashionable. However, the well-known old urban questions of joblessness, social exclusiveness and polarisation, as well as of active participation of local community in public affairs remain without doubt in the centre of the urban regeneration policy and planning terrain in Manchester.

Nevertheless, the aspects of the above described urban restructuring process, thus the 'Manchester, a European Creative Regional Centre' question, has been also addressed in terms of advanced ICTs networking infrastructure, multimedia production and distribution, on-line information, city-related Web pages etc. (ibid.). The crucial question is if and how these developments are interrelated and in which degree they are associated and reflect the above discussed city's profile, the urban restructuring strategy and its implementation process.

The First Phase, 1989-1993

Manchester's involvement in ICTs started in the late 1980s, reflecting mainly an identified necessity to establish advanced ICT networks infrastructure in the city, so to gain competitive advantage in trying to address the socio-economic decline resulted by the strong de-industrialisation process during the 1970s and 1980s. The main concern was related to economic restructuring, trying to use ICTs as alternative to counterbalance the large scale of job losses in the city because of the occurring de-industrialisation. The policy shift then took place considering that in some other parts of Europe (like Germany, Holland and Scandinavian countries) there were already innovative urban regeneration initiatives using ICTs – basically online information and communications services, and public tele-centres. The resulted initiatives were two: the Manchester Host, an urban ICTs network that represents the first emergence of a 'virtual city' application in Manchester but not over the Internet/Web, and the Electronic Village Halls, centres that provide free access and training to ICTs.

Manchester Host

The Manchester Host (or simply Host) was an ICT system developed under a partnership between Manchester City Council, Manchester Metropolitan University/Centre for Employment Research (CER) – now called Manchester Institute for Telematics and Employment Research (MITER) – and Poptel Ltd. The development of this partnership was the result of the professional position that key-individuals had at the time in these three organisations, and who were already linked with each other through their involvement in left-wing student groups in the 1976-1979 period (see Graham, 1996: 119-121). Their inspiration and proposal for the introduction of the Host system in the city fitted with the 'new left' political concepts

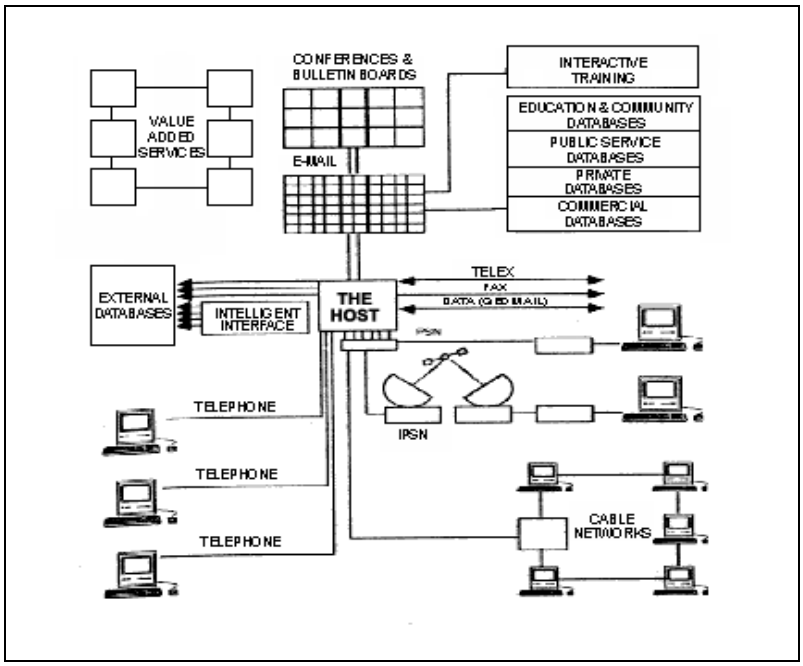
of influential persons within the City Council that "had to build up the necessary political coalition of support for the projects and to head off, or sideline, any opposition which arose" (ibid: 153). However, the Host was not an original 'made in Manchester' idea. The project had its roots in the 1985 Greater London Council funded Poptel (POPular TELecommunications), which was run by a workers co-operative, the Soft Solution Ltd. The Greater London Council though, abolished in 1986, and Poptel needed a new home in a sympathetic Labour-controlled City Council. Thus, in effect, the Manchester Host became a way in which Poptel initiative could get the funding needed to upgrade the technology by moving North.

The Host was eventually formally launched on the 1st of March 1991 through a £300,000 grant from the government's Urban Programme (Department of Environment - DoE), and additional funding from BT, and the City Council's budget. Actually the Host was the second largest economic development project in the city at the time – after the new 'Metrolink' urban tram network (Graham, 1996: 109).

- *Design and Architecture*

After a 'feasibility study' carried out by CER, Manchester Host was established and operated by Poptel as an ICT network based on the GeoNet system, an international user base originated in Germany, offering a wide range of services in a text-based environment: e-mail (with Internet and X400 messaging), fax and telex facilities, bulletin boards, access to local and external on-line databases and networks but not all services that had been proposed from the study (see Figure 1).

Figure 1. The Manchester Host Computer Communication System
(Source: Gibbs and Leach, 1994: 217)



Local firms, non-commercial organisations and citizens from all over UK could be registered and connected through a normal personal computer attached to the phone system with a modem. However, the system was not capable of supporting more than 2,000 registered users, while only sixteen and eight simultaneous users could access the Host and the database servers respectively.

- *Contents and Services*

The overall aim of the Host was to offer low-cost, effective and wide-ranging information and communication services to all those in the city who would be otherwise informational disadvantaged, particularly SMEs and non-profit organisations.

- *Web Statistics*

A crucial target was considered, to develop and then establish a 'critical mass of local users', especially in terms of SMEs, so that the Host could be popular enough in the region in order to attract more users. However, after two years of operation the Host's development failed to meet the above targets, especially in terms of SMEs networking. As Table 1 shows, in a total number of 700 users in February 1993 only 62 were firms. Gibbs and Leach (1994: 218-19) have pointed out two basic reasons

for this. On the one hand, the Host failed to develop the transactional services, such as electronic document interchange, that form the basis of industrial district networking.

Table 1. Users of the Manchester Host Computer Network, 1992-93
(Source: Gibbs and Leach, 1994: 219)

Type of user	1992		1993		Change 1992-93	
	No	%	No	%	No	%
Voluntary Organisations	113	32.9	199	28.4	+ 86	+ 76.0
Education/Training	61	17.8	104	14.9	+ 43	+ 70.5
Local/Central Government	50	14.6	130	18.6	+ 80	+ 160.0
Firms	47	13.7	62	8.9	+ 15	+ 32.0
Individuals	40	11.7	161	23.0	+ 121	+ 302.5
Unions	32	9.3	44	6.2	+ 12	+ 37.5
Total	*343*	*100*	*700*	*100*	*+ 357*	*+ 104.1*

On the other hand, the partners lacked the time and the skills to take a really active approach to commercial development of the Host, while local SMEs lacked the time/money to spend on learning and being active on computer networking. Furthermore, is questionable how many of the 199 voluntary organisations, 130 governmental bodies, 104 education/training institutions, and 44 unions were located in Manchester. By the end of 1993, Manchester Host had approximately 750 users providing the ICTs base for the Manchester's Information 'A-B-C' Network (*A*rts, *B*usiness, and *C*ommunity), which tried, but failed, to integrate the all ICTs projects run at the time.

Moreover, the first wave of Host e-mail use did not really take-off because of the widespread use of fax at the time. Most importantly, due to bad evaluation and bad advice the Host system was not compatible at the outset with the Internet.

- *Main Issues and Plans*

The technological limitations of the system were the basic reason that early efforts for further EC's funding failed: the Telecommunications Directorate (DGXII) considered Host 'not broadband enough' (Graham, 1996: 162). Besides, it was from the beginning made clear that Host is never to enjoy stable, core revenue income from the City Council or elsewhere, assuming that the subscription-fees would be enough to secure self-funded and long-term operation. So, Host's position was very difficult especially after the termination of the Government's Urban Programme in 1993, and the general shift in government's policy to cut off subsidises for urban initiatives, forcing the entrepreneurial and competitive shift in the local-level policy making.

Besides in 1993 Poptel was under increasing pressure from users to provide more access to the Internet. "The Web was especially significant here as with its graphical 'point and click' interface, its global ubiquity, and its huge rate of growth in information and database services, was threatening to erode the use of GeoNet Hosts, like that in Manchester" (Graham, 1996: 150). In 1994 the Host received a substantial amount of EC's ERDF money, thanks to the successful efforts by the City Council's EIG to attract EU money for ICTs applications (ibid: 162).

But although the initial plans was to transfer Host to a 'virtual city' system on the Web, closely modelled on the systems developed by Amsterdam (DDS) and Bologna (Iperbole), what finally happened was the Host's conversion into an Internet Service Provider (ISP), being anymore synonymous to Poptel. Therefore, in summer 1995, Manchester Host started to operate as full ISP owned and managed by Poptel, hosting most of local public organisations and communities Web pages, the City Council and the Labour Party Web sites, and having approximately 5,000 subscribed users in the whole Britain. Unfortunately, for the present research, Poptel's policy considers that statistical data regarding the subscribed users are not to be given to researchers. Based on oral discussion it can be reported that the majority of Poptel users are still voluntary organisations and individuals (using Poptel as ISP), and that the percentage of Manchester's subscribed companies is slightly over the 1993's one. In terms of Internet services Manchester Host-Poptel still emphasises the provision of access to databases through its Web site (www.poptel.net).

On the other hand although Poptel still makes a stand for the Manchester Host principles, this transformation to become an ISP was seriously criticised by several interviewees, mostly by Bernard Leach, one of the Host's instigators: "The original concept of Manchester Host is faded away. Yes, it was right at the time. It raised the profile of ICTs in the city enormously and for that sake it was really good. But to say that Host still exists in any real sense of the word, I would say it is a bit untrue" (interview transcript). On the other hand, Graham has argued that Host is the first municipal effort in UK "to apply the principles of quasi-public provision, so familiar in urban transport infrastructure to the development of local electronic infrastructure" (Graham, 1992: 776). Further, he characterises the Manchester Host project as one

amongst the most influential urban development projects in 1990s Britain (1996: 109).

However, the previously presented findings provide evidences that these enthusiastic views are rather challenging: the Host did not achieve to overcome the symbolic level and to practically provide the basis for a wide and inclusive development of Manchester over cyberspace. Basic reasons for that were the wrong selection in terms of technology applied and the dependence on short-term funding. In terms of business services, Host did not achieve to offer the equivalent of Teleport services and failed to attract local enterprises. In, terms of community and public services, the Host did not achieve to offer the equivalent of the FreeNets services, as its main shortcoming was that it did not provide a fully interactive facility. Hence, while the Host might be conceived as a pioneering project, its overall assessment proves its failure to meet the targets of the initial idea and plan.

The Second Phase, 1994-2001

The second phase of 'virtual Manchester' is 1990s is not surprisingly based on the development of Web-based projects. Besides, a grand technological convergence is developed over the Web, which is gradually becoming the most popular virtual environment worldwide. Undoubtedly, the Manchester Host project strikes very little in front of the global Internet/Web projects, something that was practically demonstrated through its failure to meet policy aims and its final abolishment.

However, although each virtual city application has exclusive contents and services, it eventually bases its city-wide character on the provision of direct links to specific Web sites that are variously related to the city itself. Hence, the study of a single city's development in cyberspace should extend its focus beyond virtual city projects and their strictly exclusive contents/services, and also look into the whole spectrum of local Web sites that are accessible through them. By this way the case study will be in a position to comprehend the general profile and appraise in total the structure and inclusiveness of the city's development over cyberspace.

Table 2. The Overall Structure of the Virtual City Development in Manchester, July-August 2001

The City of Manchester on the Web	Number of Web sites

- Primary Level: Virtual City Applications	6	
- Secondary Level: Thematic Web Site Applications	339	
Culture-Arts		147
Community		53
Public Services		42
Education		40
Technology		25
Tourism		14
Economy		8
Environment		7
City Planning		3
Total number of reported Web sites	*345*	

On the basis of the above two stands, the research regarding the development of virtual city in Manchester followed a two-level analysis. It started by locating and investigating 6 virtual city applications (primary level), and through them it located various thematic Web sites (secondary level). Table 2 demonstrates the research results about the overall structure of virtual city development in Manchester as it appears on the Web on July-August 2001[1].

The total number of sites located is 345, 6 of which are classified as virtual city applications, and 339 are thematic Web site applications classified accordingly in the nine thematic categories/sectors shown in Table 2. Two out of six virtual city applications are privately initiated and managed, while the rest four are public initiatives close related to the urban cyberspace policy agenda in the city.

Table 3. The 6 Virtual City Applications In Manchester, July-August 2001

Virtual City Application	**URL** (http://)	**Launched**	**Initiator-Manager**	**Web pages**[2]	**External links**[3]
Virtual Manchester	www.manchester.com	1995	XTML Creative Ltd: Root 101 Ltd	2732	587
Manchester Online	www.manchesteronline.co.uk	1997	Diverse Media Ltd; MEN: Guardian Media Group plc	1443	124
City Council's Web site	www.manchester.gov.uk	1996	Manchester Advertising – M4 Group; Manchester City Council	1456	111
MyManchester	www.mymanchester.net	1998	Manchester Community	679	68

[1] The 'Web-Manchester' directory is stored at http://estia.arch.auth.gr/cyberspace/links_pages/The_CITY_of_MANCHESTER_on_the_WEB.htm.
[2] The size of Web sites in terms of Web pages was measured by '.html files' using the Teleport Pro software tool on 20-21 February 2000.
[3] The number of external links provided by these Web sites was also measured using the Teleport Pro.

			Information Network		
Mad For It	www.madforit.com	1997	Manchester Multimedia Centre and Network	113	20
Manchester-Virtual City	infocities.mmc.mmu.ac.uk	1998	Manchester Multimedia Centre and Network	137	27

The two private projects are 'Virtual Manchester', the earliest and largest city Web site in Manchester, initiated and managed by XTML (local ISP company), and the 'Manchester Online', launched and managed by the Diverse Media Ltd., a division company within the Greater Manchester branch of Guardian Media Group plc., publisher of the daily 'Manchester Evening News' newspaper. The four public projects are: the Manchester City Council Web site, initiated by an inter-departmental team and managed by the 'M4 Group' of the City Council; the 'MyManchester' Web site initiated and managed by the Manchester Community Information Network; and the 'Mad for It' and 'Manchester-Virtual City' Web sites developed and managed by the Manchester Multimedia Centre and Network.

Regarding the secondary level of 339 thematic Web site applications the 'culture-arts' category dominates by far. As Figure 2 indicates, the 'culture-arts' sector is marking the Web profile of Manchester getting more than 40% of the reported thematic Web sites. It is followed by the 'community' (16%), 'public services' (12%) and 'education' (11%) thematic categories, while the 'environment' and 'city planning' are the two with the poorest Web presence (both account for just 4%).

Figure 2. The City of Manchester on the Web by Thematic Web Sites, July-August 2001

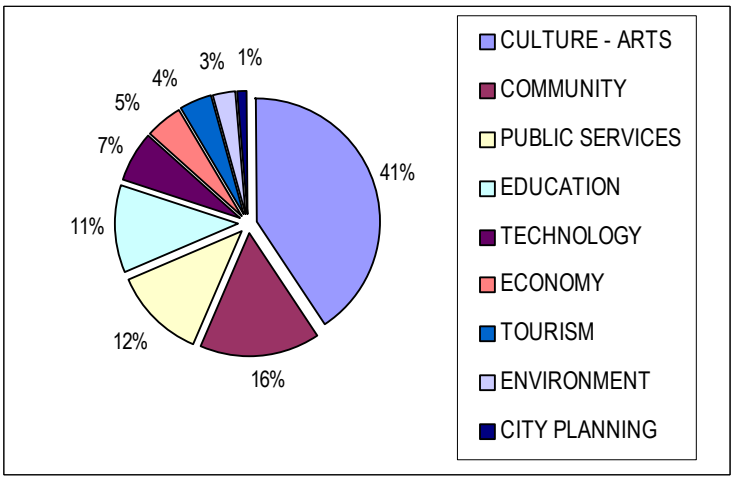
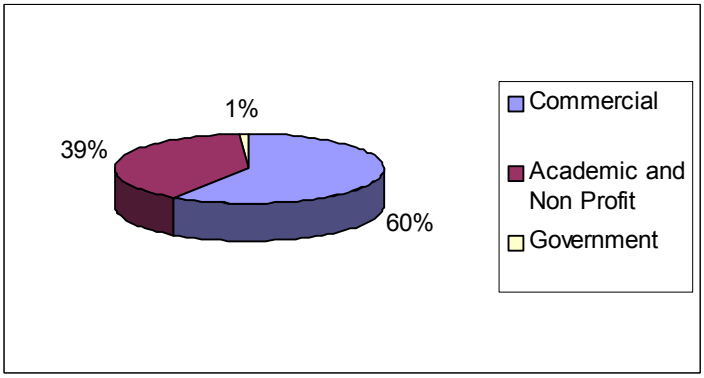


Figure 3. The City of Manchester on the Web by the Organisation Type of IP Address Space, July-August 2001



In order to identify the general character of the virtual city development the 339 thematic Web sites, plus the 6 virtual city projects, are categorised into three groups of Internet Protocol (IP) address space that express the nature of the organisation which owns or hosts them. These three groups are commercial (.com/.co.uk), academic/non-profit organisations (.ac.uk/.edu/.net/.org), and government (.gov.uk). The breakdown of IP address space by these groups is shown in Figure 3, with 60% of the Web sites being owned or hosted by commercial organisations.

Next the paper focuses and examines in detail the primary level of the 6 virtual city projects on the basis of five points: background information; Web design and architecture; contents and services; Web statistics; main issues and future plans.

Virtual City Applications

'Virtual Manchester'

'Virtual Manchester' is one of the first virtual cities in UK. It was founded on April 1995 by Nigel Stewart and Andy Blunt, co-owners of XTML, a Manchester-based Internet company. Its initiation, development and operation are exclusively up to XTML, while the U-Net (ISP company) sponsors the site by providing free hosting to its server. Since 1995 no collaboration with the City Council and/or with the European Union's relevant funding programmes took place.

The original idea behind the 'Virtual Manchester' (VM) was to set up a citywide Local Exchange Trading System scheme so to project to local business people the potential of the Web. The first emergence of VM was through several Web pages that provided online yellow pages and a short directory of local businesses. Soon after it started to operate as a regularly updated information resource on every aspect of Manchester's life. In a communication the author had with the co-founders of VM in January 1997, they stated that the development of VM was based on a combination of commercial and civic services. On the one hand, VM was used as a demonstration project for marketing the range of Internet services provided by XTML, charging also businesses for advertising or entering in the site's directories. On the other hand, VM was developed as a civic Web site, providing free-of-charge listing and even Web space for local community and non-profit organisations. Therefore, the overall plan was that, having secured the necessary financial viability through the commercial exploitation for business marketing, VM would be able to develop a very open and inclusive virtual place for the city of Manchester that would be very much based on users' inputs.

Under this original concept, VM was grown very quickly mainly thanks to hard work done by Andy Blunt. In the same time XTML itself grew up the turnover of Internet business activities, fact that caused the company's split in February 1998 into the XTML Ltd. and the new XTML Creative Ltd., which was launched as the Web design division of XTML being also in charge of the management of 'Virtual Manchester'. In the same time period Andy Blunt dies all of a sudden in the age of 37, and Nigel Stewart resigns from VM leaving it to Tim Gulson and later to Peter

Stewart from the XTML Creative (now Root 101[4]). Since then the 'Virtual Manchester' has been redesigned two times, while it has tripled its size and multiply its services.

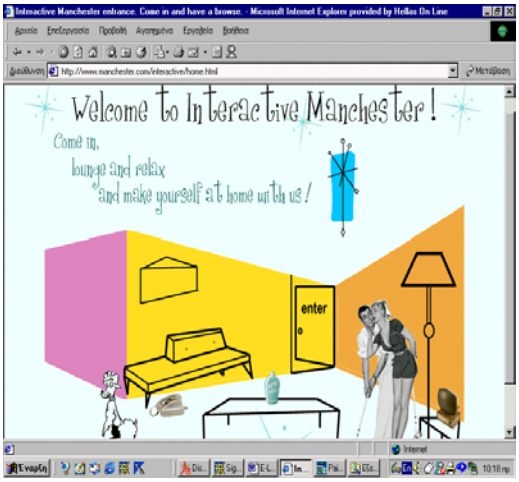
- *Design and Architecture*

'Virtual Manchester' is accessible in www.manchester.com, as well as through www.manchester.net IP addresses that were bought by XTML since 1994, along with several other Manchester-based IP addresses. The initial version of VM was designed using a simple, easily navigated HTML-based vertical collation of text and images on a white background, while its architecture was based on 11 sections: 'What's New', 'A-Z Index', 'Features', 'Notices', 'Virtual Forum', 'Local Communities', 'Public Organisations', 'Personal Communication', 'Business', 'Culture/Entertainment', and 'Feedback'. In early 1998 VM was redesigned by Tim Gulson using JAVA programming and it stayed the same till now. The background is black and the interface includes a frame on the left side of the screen with the basic headings (see Figure 8.3). Furthermore, with added short pieces of text in the 'home-page', this new version of VM provides direct links to more specific topics, such as weather forecast, local news, guide to city's bars and clubs, notices, adds boards etc. The 'Interactive Manchester' section, established in May 1998, was designed with a different concept and its layout has a 'cartoon-like' character, using also bright colours and script fonts (see Figure 4). Interestingly, the Web site's size fits the Web-TV technical and interface requirements.

Figure 4. The 'Virtual Manchester' Web Site

www.manchester.com www.manchester.com/interactive/

[4] In August 2000 XTML Limited was bought out in a multi million pound deal by Nextra, the largest telecommunications company in Norway. As a consequence of this deal - and to avoid confusion with XTML Limited/Nextra - the XTML Creative changed name to Root101 Limited.



The architecture of VM is in general structured around the basic sections, the special features and a comprehensive index along with a sophisticated search engine. The 12 basic sections are: 'What's On', 'Guidebook', 'Business', 'Community', 'Sports', 'Travel', 'Features', 'e-Commerce', 'Students', 'Local News', 'Interactive', and 'Index'. The user has the option to choose a non-JAVA version of the site that downloads faster. But regarding navigational aids the site is missing a 'help' section or a 'Web site map', essential for quick information retrieval. Another disadvantage is the non-printable and 'busy' interface resulted from many advertising and flashing icons. VM does not incorporate elements of urban metaphor in its design and architecture and there is no intension to do such. Also its design is not approved for disabled users.

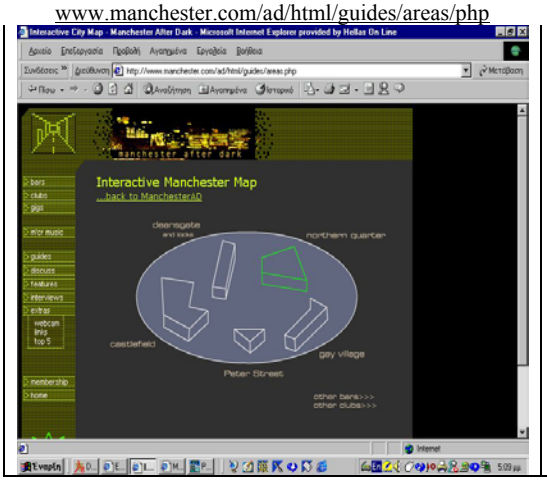
- Contents and Services

'Virtual Manchester' provides a wide range of descriptive as well as some interactive information services, while it operates as a virtual gateway for the city of Manchester providing links to more than 580 local Web sites through a specific directory. In total, the 'A-Z index' includes more than 300 themes divided in 12 basic thematic sections. The larger part of the site is concerned with sections like the 'Guidebook', 'Sports', 'What's on', and 'Features' that provide information about the cultural life of Manchester and the surrounding area. Also in a characteristically enthusiastic manner it markets the 'Madchester' profile of the city, however only in English. More specific, 775 out of the 1932 Web pages, thus the 40% of the whole Web site is covered by these sections providing various and rich information services

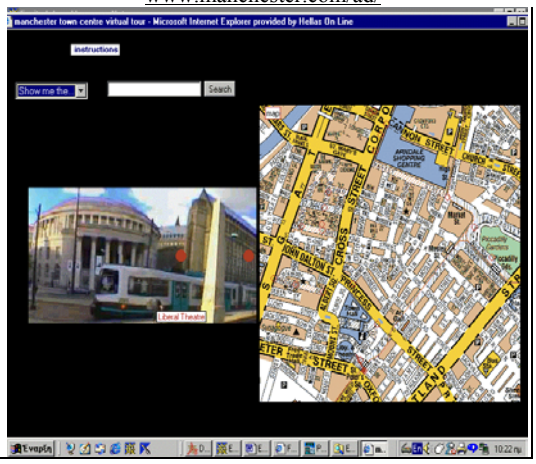
on the cultural/athletic attractions and events in the city. The 'Manchester After Dark' sub-section includes 140 Web pages dedicated to nightlife of the city, and besides general information it provides a virtual forum where users can post news or their opinion regarding various events and venues. Users can also join for free the 'Manchester first to know' e-mail list and the weekly 'Virtual Manchester Newsletter'. It includes also interactive maps and directories of local bars, clubs and restaurants, and up-to-date catalogues of events with direct links to host venues' Web sites where available (see Figure 5). Furthermore, VM provides a 'virtual tour' at the city centre through external links to Web cameras located out of several attractions that the user can view on the screen by clicking an interactive map (see Figure 5).

Figure 5. Sophisticated Interactive Applications in 'Virtual Manchester'

www.manchester.com/ad/html/guides/areas/php



www.manchester.com/ad/



In the 'shopping guide' section along with a long directory of local shops and links to local Web sites with e-shopping services, VM provides also an interactive map that the user can utilize to locate the exact address and the easiest route to get to the chosen shop. Similar facilities are provided in the 'travel' section where users can type in a special form their location and destination and get street-by-street directions and maps. In these two sections and in 'business' one, VM help users to get information about local businesses in an easy and rapid way through flexible search engines that work on the basis of criteria such as name, geographic area, and specialisation. In June 2001, the cost of listing or advertising business for one calendar year starts from £340+VAT, while for community and non-profit organisations the listing is available free-of-charge and can be done automatically through an online application form.

The section of 'Interactive Manchester' is the most interesting since it gives users the ability to have free access to chat-rooms, e-mailing lists, and virtual forums, and to get a free e-mail account. 'Interactive Manchester' however does not offer free Web pages to individuals because the U-Net that runs the Internet server does not allow such since there is no way to take control of the content that users would put up. Instead, like an ads newspaper, it provides various notice boards on job market, accommodation, personals, and sales. Special sub-sections are concerned with children games, JAVA multi-user games, as well as Manchester's myths, legends and science fiction stories written by users.

- *Web Users Statistics*

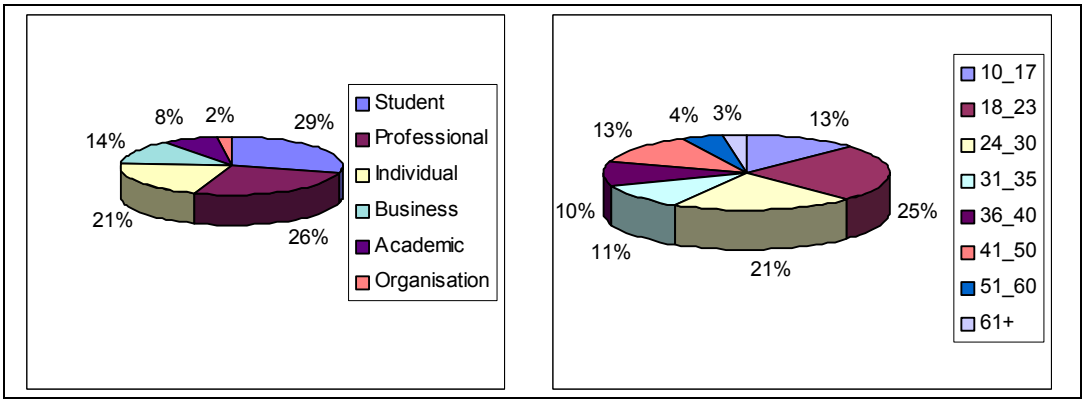
'Virtual Manchester' presents a remarkable growth in terms of users and size. According to VM's Web server statistics[5], while in May 1995 the average of weekly requests and users was less than 1000 and 250 respectively, the corresponding figures in February 2000 has risen up to 758,467 and 33,227 respectively. Further, VM presents a notable increase in terms of size since within 5 years the number of Web pages rises from 68 in April 1995 to more than 2600 in February 2000.

The basic findings from the statistics during July 1998 and November 1999 period are: The 'Interactive Manchester', the 'Guidebook' and the 'Sports Pages' sections are the most popular as they include the most requested Web pages. However, significant services regarding the operation of VM as a civic virtual space, such as the 'chat-rooms' and 'virtual forums', have limited popularity. Several times that the author entered in the 'chat-rooms' to observe their function and participate discover that except from the 'ex-patriots' one all others were always empty. The 'Virtual Forums' section covers 39 topics but the number of participants till July 2001 did not exceed the 220 participants, a very limited number compared to the figure of thousands daily visitors. Besides, 187 out of the 220 participants' contribution is on local music scene, gay issues, and mostly football topics, while the rarest participation rate is presented to topics related to civic affairs and the re-building process in Manchester.

[5] VM's Web server statistics are available on www.manchester.com/stats/domain.html, and on www.manchester.com/java/advertise/stats.html. A complete report was available for the present research thanks to a kind offer by Peter Stewart, Webmaster of 'Virtual Manchester'.

The number of users' sessions[6] level falls during weekends by 30-50%, while in terms of hourly rate most visits are taking place during 13:00-14:00 and 17:00-18:00. 61% of users access the site from other countries, 22% from UK and the rest 17% is of unknown origin. More specific, the 50% of the total number of users access the site from USA, mostly from the state of Virginia. Regarding the level of local access the figure is rather disappointing, as less than 1% of the total users' sessions are activated from the city of Manchester, while the corresponding European figure has been estimated at 17% (see Fourkas, 1998; 2001). Most activated cities from UK are London (12%) and Chesire (3%).

Figure 6. Users of 'Virtual Manchester' by Profession and Age[7]



Moreover, a survey conducted by the managers of the site during the first semester of 1998 showed that 88% of individual users are male, 57% of them are between 18-35, while the one third are students (see Figure 6).

- *Main Issues and Future Plans*

On the whole 'Virtual Manchester' can be defined as a private and commercial project that has developed into an important source of community, business and leisure information for the Greater Manchester area, without using public money and having no association at all with European programmes, local authorities or other local ICTs initiatives. In terms of the basic types of virtual cities determined earlier in this paper, VM can be classified in the 'virtual city arena' category as its operation is mostly related to business marketing and in general the online promotion of

[6] A 'user session' is determined when a user falls inactive for more than 30 minutes and in Web statistics terminology is synonymous to 'visit'.
[7] See www.manchester.com/java/advertise/stats.html

Manchester's night-life, sports and culture. Despite the fact that it presents a significant degree of interactivity it cannot be classified as 'civic information network' or 'integrated virtual city' since it has obviously commercial purposes, it does not provide free Web space and incorporates a very limited number of local users. Furthermore, although through its contents and services VM covers a wide range of topics, the overall style of the site is mostly characterised by a youth and pop profile; to enter in and get informed, have fun and discuss about football and music. However VM is rather most popular among Americans who seek information about Manchester and ex-patriots Mancunians mostly from the USA, who access VM in order to keep in touch with Manchester and to post nostalgic and 'looking-for-friends-and-relatives' messages.

Future plans expressed by the site's Webmaster are mostly aiming to enhance the interactivity of the site regarding the business marketing services so to increase the turnover of the project. For example, due to late 2002 the site aims to deliver sophisticated multimedia and interactive applications for online booking in local restaurants and for the development of a special 'e-shopping centre' section that will be available in a Web-TV platform. Hence, the problematisation on the future of 'Virtual Manchester' is mostly concerned with the further development of the project towards a more commercial rather than a more civic direction. Seems that the really crucial contribution of VM to XTML's business success constitutes the central guideline of VM's managers vis-à-vis the future development of 'Virtual Manchester'.

'Manchester Online'

The Diverse Media Ltd., a division company within the Greater Manchester branch of Guardian Media Group plc., launched 'Manchester Online' on November 1997 as the Web site for the Manchester Evening News (MEN) daily newspaper, but also with an intention to provide a 'gateway Web site' for the city of Manchester. Thus, the development of 'Manchester Online' has not been exclusively based on the electronic version of MEN. Additional contents from other sources related to the promotion of Manchester have been also aggregated and subsumed. Like 'Virtual Manchester', therefore, 'Manchester Online' bases its operation on the

commercial/civic twofold. As a clear private and commercial project, totally funded by the Guardian Media Group, 'Manchester Online' is aiming to provide profits to its owners in terms of both business marketing and direct turnover. On the other hand, as it name moreover indicates, it aims to provide comprehensive information services on the city of Manchester and its surrounding area, as well as a flavour of home and a point of contact to ex-patriots Mancunians all over the world. A team of four people manages 'Manchester Online' but its everyday updating is based on an inter-departmental and collective work at the Guardian Media Group offices in Manchester. For instance, the 'editorial department' is responsible for uploading the daily news while the 'systems and IT department' are responsible for uploading advertising banners, multimedia applications and maintaining the Web site's server.

- *Design and Architecture*

'Manchester online' is accessible in www.manchesteronline.co.uk, while the initial idea to use the www.manchester.co.uk IP address failed because, although inactive, it is owned by XTML and 'Virtual Manchester'. The design and architecture of 'Manchester Online' is based on examples from huge American commercial Web sites such as yahoo.com and cnn.com. Thus, after a few seconds welcome through an 'enter-page', the 'home-page' projects the full range of services and contents through small font headings and thumbnails, containing also various advertising images that provide links to commercial Web sites and online services (see Figure 7). The same, more or less, motif is followed in all Web pages, and eventually 'Manchester Online' does not present any kind of innovative and distinctive style in terms of Web design. Like 'Virtual Manchester' it does not incorporate the urban metaphor on its interface and it has been designed using JAVA programming on a basis of Web-TV technical requirements. Its architecture is structured around two main divisions: the 'daily highlights' which is exclusively concerned with the contents of Manchester Evening News newspaper, and the 'channels' which is concerned with the whole range of contents divided on 27 basic sections (see Table 4).

Figure 7. The 'Manchester Online' Web Site
www.manchesteronline.co.uk

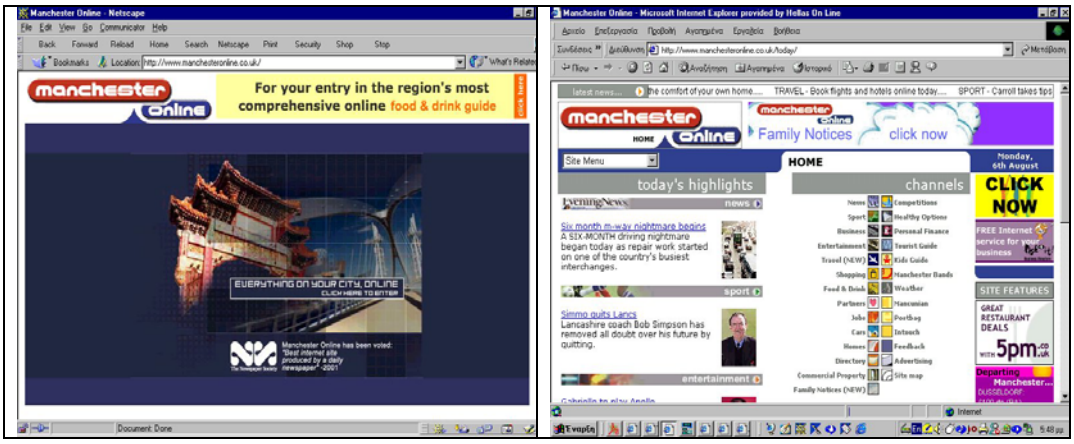


Table 4. The 27 Basic Sections of 'Manchester Online' Web Site

• Partners	• News	• Competitions
• Jobs	• Sport	• Healthy Options
• Cars	• Business	• Personal Finance
• Homes	• Entertainment	• Tourist Guide
• Directory	• Travel	• Kids Guide
• Commercial Property	• Shopping	• Manchester Bands
• Family Notices	• Food & Drink	• Weather
• Mancunian	• Intouch	• Advertising
• Postbag	• Feedback	• Site map

The site has a very good response time, it provides a useful site map, an 'A-Z' index and a local search engine but it does not include a 'help' section that could aid inexperienced users to explore the site. The interface is totally in a printable form as the background colour in all Web pages is white, but it does not include navigation means so to be approved for use by disabled people.

- Contents and Services

The one aspect of 'Manchester Online' as the electronic version of Manchester Evening News gives it advantage in terms of updating for everyday local news. Besides, more than 60% of the site (893 out of 1443 Web pages) is covered by topics that are also published in MEN (i.e. the various adds, sports, daily news, weather etc.). The rest of the site is covered by descriptive information services regarding a wide range of themes solely in English. The Business, or 'Fish4', section lists for free contact details, locator map and external links for around one hundred local enterprises. However, the locator map provided in conjunction with Crown Ltd. is

usually out of order. The 'healthy options guide' offers useful information resources regarding advice and research on a wide range of health topics and reference to other Web sites related to each topic. The 'Tourist' section is poor in terms of both quantity and quality of contents and services, as it only provides small pieces of text for several attractions, accompanied by relevant images. The 'entertainment guide' provides a directory of events and venues through an advanced search engine, and the limited online version of the 'City Life' magazine.

Of special interest however is the 'Mancunian' or 'Eyewitness in Manchester' section, which is conceived and developed by the photographer Aidan O'Rourke to provide an experience of the Manchester area in attractive pictures and concise words under a personal view but with a general perspective. The 'weekly news roundup' summarises what is been happening during the week while pictures provide a visual document. 'Eyewitness in Manchester' also includes 10 QTVR Panoramas (video) and a massive archive of photographic and written documents related to the history of Manchester, as well as to the rebuilding process in the city centre. The Manchester Civic Society publicly acknowledged the high quality of 'Eyewitness in Manchester' project on the promotion of local identity and heritage over the Internet with the 'spirit of Manchester award' in 1998.

On the other hand, 'Manchester Online' interactive function is mostly associated to the provision of online application forms and search engines. By these means, users can automatically send feedback comments, publish adds and messages, get accommodation and travel information, do e-shopping, subscribe for newspapers and magazines edited by the Guardian Media Group, take part in online competitions or make contacts with others through the 'dating service' section. Regarding the latter, registered users can upload voice and video messages. The registration is initially for free but it requires a fee for continuous use. 'Manchester Online' also provides e-shopping services for various products in conjunction with 'shopperuniverse.com', offering secure credit cards transactions. E-shopping services includes also Web-delivered products of Guardian Media, i.e. the Eric Cantona's screensaver with his hand-written signature which had lots of sales.

- *Web Users Statistics*

As a matter of policy the managers of 'Manchester Online' do not permit access to Web sites statistics. The director manager of the project states that the project is a clear commercial initiative and such as it should first maximise its position in the market and then to disclose the figures regarding the rate of visits in the site (interview transcript). Although he claims that 'Manchester Online' is the most popular local Web site, he denies giving even an indicative number of users that access the site on a daily or weekly basis.

- *Main Issues and Future Plans*

'Manchester Online' continues the tradition of Guardian Media Group, which is an information provider and publisher since 1930, marking the shift from print and hard copy to electronic materials and changing the delivery method. From this viewpoint it is really hard for the project to disclaim its mainly commercial mission and promote more civic contents and services. It does show an interest to provide such services for local people but again according to a 'making-business-online' style, which dictates the priority of projecting and marketing commercial contents and services. Therefore, the 'Manchester Online' is classified among the 'virtual city arena' types of virtual cities, however it should be distinguished from 'Virtual Manchester' as it has adopted a more clear profit-seeking profile. Accordingly, future plans are concerned with the enrichment of e-commerce services that would attract the special interest of local people as well as of Mancunians who live abroad. Besides, the critical market has been identified around these two groups of users, and that is why the managers of 'Manchester Online' plan to accompany the e-commerce applications with wider inter-linking with other local sites, and to advance the sections of 'local news', 'sports' and 'entertainment' using multimedia applications such as video and Web-TV.

Manchester City Council's Web Site

The Wizard group initiated by the Economic Initiatives Group and the IT Unit, and the M-4 team launched the Manchester City Council's Web site in July 1996 with an initial budget of approximately £75,000. The M-4 team is the communication services division of the 'Manchester City Advertising' (MCA) that is the City Council's in-house commercial Media Buyer and advertising sales agency. More

specifically the M-4 team designed the site and its chief officer undertook the Webmaster position and the Wizard group developed the general concept and plan for the project. In order to incorporate all City Council's divisions, Wizard founded the Editorial Board, comprised by a multi-disciplinary and inter-departmental team of 13 representatives, as the driving force and checking mechanism to get quality information onto Web pages and report to the City Council. Furthermore, Information Action Groups are organised from officers representing like interests who aim to produce information of good content and avoid duplication. This is co-ordinated through the Editorial Board and Wizard but involves more officers from the Council. In parallel, another inter-departmental team is established as the Training Board so to promote and organise training courses on Internet use for the Council's officers.

The City Council's Web site was profoundly aimed to offer free, effective and wide-ranging information and communication services to residents and non-residents of Manchester while in parallel to promote Manchester globally. However, as Table 5 illustrates, the range of objectives include, among others, highly ambitious rhetoric such as the development of a Web site at the leading edge of digital publishing and the ability of users to participate in the planning and decision-making processes.

Table 5. Manchester City Council Web Objectives[8]

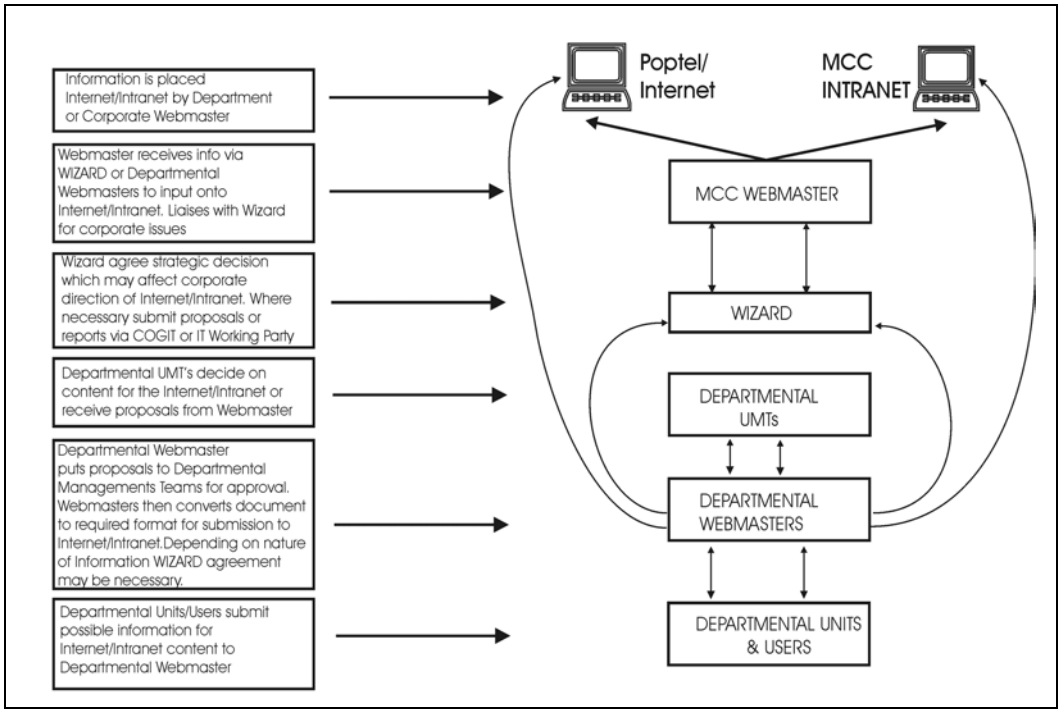
To establish and maintain a Web site of quality content, presentation and experience which is up to date, relevant and interactive. To achieve and maintain a position whereby Manchester City Council's Web site is at the leading cutting edge of electronic publishing, the benchmark against which all other governmental sites measure themselves.
To inform, involve, empower and gain the support of members and officers to the benefits of the Web, electronic publishing and the ongoing developments of ICTs. To encourage it's take up and use across the city council, and among all residents of the city of Manchester.
To provide up to date publicly accessible information of a high quality of content and presentation about Manchester to residents and others nationally and internationally as widely as possible with ease of access.
To encourage pro-active involvement of the residents of Manchester, and non-residents, to be part of the decision making processes of the city. Thus enhances localised and wide spread democracy, promoting the concept and implementation of virtual town hall/village halls, and building interactive relationships between the residents/non-residents of Manchester and their elected members/councils officers.
Empowerment, particularly for those who feel or perceive to be disenfranchised by current modes of participation in politics/bureaucracy/municipal machinery; i.e. differently baled people, young people, generation X's/zero status generation, black people, lesbians and gay men, women, young and older people.
To promote the city for economic benefit through encouraging inward investment, urban regeneration and economic initiatives.
To use ICTs, multimedia through the Web as a proven means of bringing young people disenfranchised by the current educational and social structures and personal environment (zero status generation) back into self

[8] Source: 'MCC Web Site project' archive: Economic Initiatives Group; Manchester City Council.

reliant peer based education through technology enabling then to develop self esteem, personal development and further training and employment opportunities.

Close related, if not twin project is the development of the Council's Intranet/Extranet system. As Figure 8 illustrates, thanks to the Intranet/Extranet the Council's various offices can get gradually FTP access to the Web server, which is hosted by Poptel. Besides, Poptel is since 1994 the 'official' ISP of the Town Hall, a result of its earlier leading role in the Host project.

Figure 8. Process of Developing the Manchester City Council's Web Site through the Intranet/Extranet System

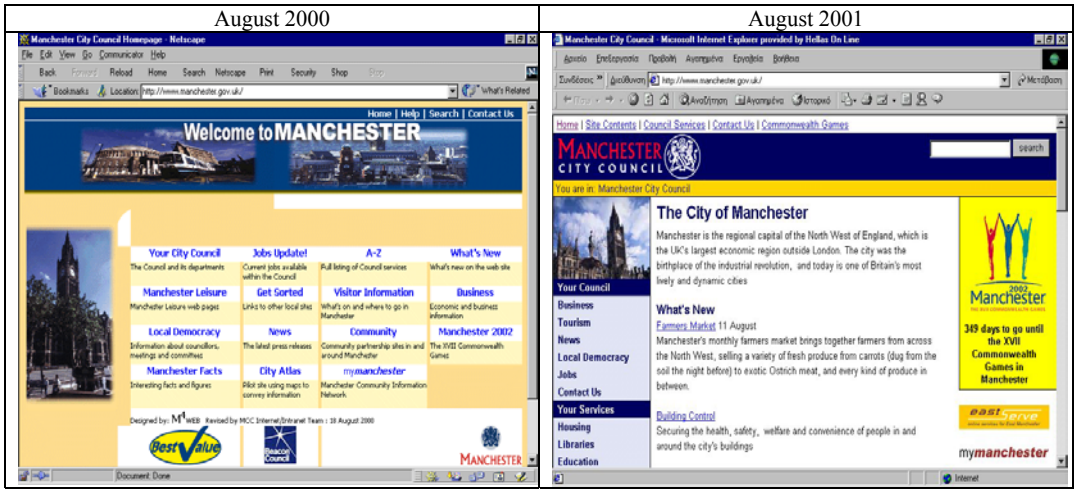


-Design and Architecture

Manchester City Council's Web site is located on the www.manchester.gov.uk IP address, offered in free by the UK government that owns all '.gov.uk' domains. Since the prioritised intension of the site's developers is to provide information, the design of the site is deliberately based on a concept that uses a simple printable interface, fast in terms of download and with high contrast between foreground and background. Thus, the site uses just a few graphics and images and it neither uses frames nor it incorporates sophisticated multimedia applications (video, sound etc.) in its design. Further it is not Web-TV compatible. It does not make use of spatial metaphor or any distinctive features beyond the Council's logo that differentiates it

from other sites. Since its inception on 1996, the site has been redesigned four times but always on the basis of the above concept, and thus any newer version presents slight differences to the older one. For example, as Figure 9 illustrates the latest version (August 2001) is similar to the previous and the only difference is in the placing of the basic headings on the left-hand side of the screen and the use of a new logo banner.

Figure 9. The Manchester City Council's Web Site (www.manchester.gov.uk)



The architecture of the site is based on two basic parts, that in turn are divided into 6 sections and numerous sub-sections, while from the 'home-page' users can directly jump to 'What's new' and 'Media Releases' sections as well as to the 'Contact the City Council' and 'A-Z index' pages (see Table 6).

Table 6. The Basic Sections of Manchester City Council's Web Site

• About the Council - Business - Tourism - News - Local Democracy - Jobs - Contact Us	• Council Services - Housing - Libraries - Education, - Leisure - Social Services - Advice
• What's New	• Media Releases
• Contact the City Council	• A-Z index

The structure of the site is also based on an extensive, and in fact very helpful, inter-linking of Web pages that assists significantly the navigation process. However, the site does not include navigation aids such as 'help' and 'site map' and, further, it does not provide special technological means so to make its contents/services easily accessible by disabled users.

- *Contents and Services*

As the profession of site's owners/managers indicate, the contents and services are predominantly concerned with a wide range of information regarding the Manchester City Council's structure, activities and services. The biggest sections are the 'news' and 'media releases' ones as they contain online archives for the last three years. According to the 'A-Z index' the site contains information services and external links for 110 topics, which are covered by the two basic parts of the site: 'About the Council' and 'Council Services'. The first provides information regarding the structure and activities of the Council. It includes online versions of the Council's agendas, reports, calendar and minutes of meetings, providing also information on electoral services, planning terms and regulations, the decision-making process, councillors and local MPs. This section also covers topics related to the local economy: information, reports and facts for potential investors, the online versions of the Council's economic development statement and the bulletins of 'Manchester Update' (economic development issues), 'Jobs Update' (jobs bulletin) and 'Manchester People' (community newspaper). Moreover, it includes limited tourist services: basic information for local attractions, an up-to-date listing of events solely in English, while further services refer users to the 'Manchester Visitor Centre' Web site. On the other hand, the 'Council Services' part basically provides descriptive information on the Council's various departments/offices regarding the range of services, areas of liabilities, terms and conditions, and contact details. It is subdivided into six sections that are managed and regularly updated by the corresponding Council's departments/offices: housing, municipal libraries, education, leisure, social services and advice.

The interactivity of the site is mostly related with the ability of users to communicate with the Council's officers and elected councillors via e-mail. In each department/office there is a person responsible for the departmental e-mailing and online transactions with the public. Online application forms are also included, however in most of the cases users have to download and print the form, fill it in and send it through the post. Problematic is the function of online application forms that can be send via the Internet when the user is filling non-UK details (post code, phone number) that are not recognisable by the server and eventually the transaction fails to

proceed. The 'virtual forum' application provided is concerned with the function of a bulletin board for local schools. Interestingly, the site contain the INFORM database where over 800 local groups and societies are listed including children's and youth groups, drama societies, sports clubs and pressure groups such as Amnesty International.

- *Web Users Statistics*

The Web site's managers have not yet deal with the statistics of the Web site, although it was scheduled that by the end of 1998 they would come up with a progress report and summarise the site's growth. The Webmaster claims that this never happened first because of the focus on the site's information base and the Intranet project and, second because of the inadequate Internet services provided by Poptel (interview transcript). Nevertheless, the research managed to access a limited range of Web site's statistical data for the period February-May 1999. According to these, the average of weekly requests is 43,895 corresponding to 6,456 users, far smaller figures compared to those of 'Virtual Manchester' Web site. In terms of where from users access the site, the Web statistics indicate that 42% of the users access the site from UK, 44% from other countries (20% from the USA) and the rest 14% is of unknown origin. Unfortunately, the research cannot determine the percentage of local users since Poptel uses out-of-date software for Web statistics that is unable to provide such data. However, the Web site's managers claim that due to the highly local character of the site's larger parts and according to messages received the percentage of local users could be roughly estimated at the half of the UK users rate, thus at approximately 20% on the total number of users (ibid). Accepting this, the site performs like the average European virtual city, the survey of which identified that 17% of users are local people.

- *Main Issues and Future Plans*

The Manchester City Council's Web site is a clearly public, very ambitious, continuously updated, easy navigated and user-friendly virtual city project but with a low profile regarding of Web design. In terms of the EU virtual cities' typology it can be without doubt classified among the 'virtual town hall' cases. Although it started with a very ambitious and all-inclusive development plan, at the end of the day what it

has achieved is to provide a comprehensive information source regarding the City Council's policies, services, and structure, while it gradually increases and improves the online interaction between local authorities and citizens. However it has a long distance to cover yet in order to meet the policy target concerning the development of an 'holistic virtual city' application. Thus it has to deal with a redesigning process, that would properly express and project the re-building and re-imaging process of the actual city, as well as with the further expansion of the Intranet/Extranet to cover all local authorities and public initiatives/organisations. The interactivity should be also essentially improved, not only through the use of more online transaction platforms, but also through the promotion of a process that could make the on-going decision-making process available to users' views and inputs.

The managers' medium-term plans are based around three central priorities. The first priority is concerned with the appointment of an 'executive manager' who, having a great degree of knowledge, experience and contacts regarding the overall development of Manchester-related projects over the Internet/Web, would exclusively undertake the co-ordination of the further expansion and promotion of the site. The second priority is concerned with the aim to make the project self-financed by adding sponsorship and advertising banners/pages and the third concers technical issues, since there are serious problems in developing the site in dependence to the out-of-date Poptel's Web server. Therefore, there are plans to develop a new up-to-date Web server which will be located at the Town Hall and thus to quit the collaboration with Poptel. On the other hand, it is aimed to develop the Intranet/Extranet system beyond the office spaces and officers to special spaces where the Council's manual workers can have also access to the system and its services.

'MyManchester'

The Manchester Community Information Network (MCIN) launched the 'MyManchester' Web site on 1998 as a community-portal site[9], which would inter-link and eventually integrate a wide range of Web sites that offer information, and communication services to local community over the Internet. Spawned from the

[9] Portal is a new term, in general synonymous with 'gateway', for a Web site that is a main starting point for Internet users (see section 3.5.2 in Chapter 3)

MCIN's Web site at www.mcin.net and thus exclusively managed by the MCIN, 'MyManchester' is primarily targeted at Manchester's citizens and secondary at its visitors. On the Web site and through promotional brochures its developers argue, that "what makes this online resource so different is that it is *run by and for* the community; we work closely with many of the information providers, often providing training and technical support to ensure that their information is available to all". Besides, 'MyManchester' distinguish itself from other local Web sites by being available not only on the Web but also on the MCIN's six 'Magic Touch' infokiosks in the city.

- *Design and Architecture*

Originally, the developers of 'MyManchester' wanted to use the www.manchester.net IP address for the site. However, this was not feasible as this address was owned by XTML since 1993, and as a result they decided to use www.mymanchester.net instead. The design and architecture of the Web site is very straightforward and self-explanatory, and complies with the basic guidelines on effective and appealing screen design. It uses HTML files mostly resulting in fast downloads and it maintains throughout the site high contrast between foreground and background; white, black and red mostly (see Figure 10). Moreover, the use of adequate white space compared to the presented information makes the viewing of the site comfortable and it allows printable files of high quality. However, the design does not make use of any spatial metaphor, and it is not approved for disables. Further, the site does not have a distinct character, it is an ordinary site similar to many other portals available, but without advertisements.

Figure 10. The 'MyManchester' Web Site (www.mymanchester..net)

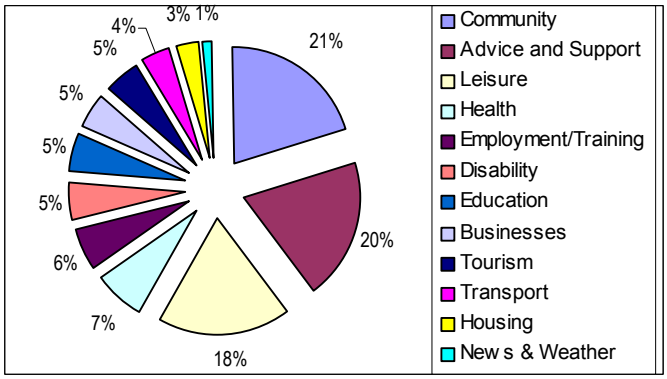
It is organised in 11 main sections: 'local news', 'discussion forums', 'events', 'radio', 'site info', 'e-mail us', 'survey', 'work opportunities', 'training' and 'Manchester Community Information Network'. The last section is a link to its twin site, the Web site of Manchester Community Information Network. Moreover, it includes 12 sub-sections that are in essence initial links to information on 'Advice and Support', 'Community', 'Education', 'Health', 'Leisure', 'Tourism', 'Businesses', 'Disability', 'Employment/Training', 'Housing', 'News and Weather', and 'Transport'. It contains also an 'A-Z' of the site, a search engine and a 'What's New' part that supplements the sub-sections giving links on news related to the subsections' topics.

- *Contents and Services*

The Web site does not offer exclusive content to users but mostly links to organisations, agencies etc. related with the sub-sections' topics provided from the developers of the site but also from other individuals that can add a link to the site. However, there are criteria for sites to be included on 'MyManchester' such as: All sites should contain information relevant and useful to individuals and organisations within the Manchester area and should not contain racist or abusive language and do not conflict with MCIN's equal opportunities policy. The board of MCIN reserves the right not to include or remove sites that it feels may cause offence or are overtly religious or political in nature. No charge is made for putting information online, and despite commercial pressures, MCIN does not sell information.

The links provided in the sub-sections contain the Web addresses and a small description of more than one thousand organisations/initiatives. In many cases (e.g. 'Tourism', 'News and Weather') the links are divided in local, national and international. The breakdown of these links by the 11 sub-sections is shown in Figure 11 and indicates that the subsections of 'Advice and Support', 'Community' and 'Leisure' have the largest concentration.

Figure 11. Concentration of Links in 'MyManchester' Web site's Subsections



In 'discussion forums', one of the main sections of the site, users can find a list of all general discussion forum and bulletin board topics that involve training and volunteer opportunities, local events, funding/grants, community notices, jobs computer issues/licences, healthy living networks and the Web site itself. Anyone who visits the discussion forums can read the discussions going on there and also put anonymous postings onto it, or can become a registered user.

In MCIN Web site, that follows the same design and architecture principles as 'MyManchester', these subsections are not included. This site presents background information on MCIN, its projects and partners. Moreover, it provides details of local job vacancies and training courses through a mixture of text and databases that are either searchable or scrollable. E-mail links enable the public to communicate with information providers, one of whom, the Citizens Advice Bureau (CAB) promise to answer queries from local people who submit their name and address. A useful part of this site is the 'MCIN Factsheets' with links to various texts that aim to provide aid to inexperienced Internet users.

- *Statistics*

No statistics on the Web site's operation were available as a matter of policy. They will be released on a forthcoming evaluation report from MCIN. However, through observing and participating in 'User Forums', we found out that their use is limited and most of the contributors are staff and volunteers from MCIN who usually update various news and events. More specifically, only 32 users are registered and the statistics on threads (discussion subjects) and postings in July 2001, shown in Table 7, indicates that the 'Local events' forum is the most popular, followed by 'Community notices'. These results are in line with the large concentration of links observed in the 'Advice and Support', and 'Community' subsections discussed earlier.

Table 7. 'MyManchester': Statistics on Threads and Posts in 'User Forums' for July 2001

Community Bulletin Board	***Threads***	***Posts***
Training & Volunteer Opps	32	43
Local Events	62	76
Funding/Grants	36	43
Community Notices	41	48
Jobs	18	25
Community Discussion Forums		
Have your say	7	18
Computer issues/Licences	3	6
Healthy Living Networks	1	3
Mymanchester.net		
What do you think of our site?	3	8
Add a site	17	43

- Main Issues and Future Plans

'MyManchester' Web site is of significant importance for the case study since it is the outcome of a wider project, the Manchester Community Information Network (MCIN), which gets central role in addressing the digital divide and promoting community networking over the Internet. From this view 'MyManchester' is developed to demonstrate in cyberspace the work done by MCIN; thus, to develop a 'community information network' run *by* and *for* the local community, transmuting by this way the title of 'Manchester Community Information Network' from theory into practice. However, despite the fact that is providing links to information for advice, job opportunities, health etc. in a comprehensive and user-friendly manner, it misses those exclusive contents and operational features that could permit us to verify the above claim. One proof for this is related to the low participation of users in the

'discussion forums'. Besides, 'MyManchester' does not give free Web space or e-mail services to its users. Above all, it does not provide any kind of exclusive information services but is rather operating as a mediator between various organisations/initiatives and the public.

The development of 'MyManchester' till now, therefore, does not present those characteristics that according to our typology would validate the 'Manchester Community Information Network' title. Hence, it cannot be classified in the 'civic information network' category of virtual city applications. It is rather a 'virtual city arena', specialised as a portal for community services. Besides, the managers of the site cannot plan such development because the project is a hundred percent dependent on the financial situation of MCIN, which is based on short-term funding process. Thus, the financial viability of the project it is not firmly confirmed so to permit the MCIN's stuff to plan and develop the 'MyManchester' site on a longer-term prospect.

MAD FOR IT

The MAD FOR IT Web site was launched on October 1997 by the Manchester Multimedia Centre and Network (MMCN) to market Manchester globally through the Internet. Its name indicates both a reference to IT and to 'Madchester' profile. It was developed by CAKE and The Boot Room Web design companies, which are hosted in MMCN workspace. The project managers and coordinators however are the Manchester City Council through the Economic Initiatives Group. Except the Web site, the MAD FOR IT project includes the operation of an online radio station called MCR FM that only broadcasted for a month in December 1997, and the production of a CD ROM which includes the Web site and other related information and was sent to all Telecities members.

The whole project was funded with £100,000 by the ERDF, and the Web site took half of this budget because its development used many sub-contractors; approximately 11 people were working on it. A piece of text in the home page states "Mad For It is a tourist guide to Manchester, a place to look for information about clubs, culture, restaurants, sport; including Manchester United and Manchester City. It gives a flavour of the youth culture and UK nightlife that Manchester is famous for. Provides detailed guides to clubs and up to date reviews on places to eat and drink".

Therefore, although the target group of the Web site are local, national and international people, priority is given to the youth market and that is why it includes more information on nightlife, café and bars than to arts and museums.

- *Design and architecture*

Part of the brief that the developers of Mad For It had from the City Council was to go for a high-end Web site that looks good and uses the latest technology, as the City Council tried to pull SMEs into the Mad For It multimedia environment. Three caricatures/animated characters take visitors to the site. The one is Bez, a very well known character in the Manchester scene that in real life is Mark Berry, a member of a pop group called Happy Mondays. The other is Jenny and her physical counterpart is Jenny Ross, a co-host in BBC's 'Sunday Show' that aimed at youth audience 15-25 ages group. She is well known in Manchester as well, as that program was made in Manchester and she is from the area. And the third is an imaginary dog, called Mad Dog. The developers actually involved Jenny and Bez in the site using their voices. These animated characters were chosen so to be a humorous reference for locals and attract their attention. Keith Jobling from The Boot Room group explains that the concept of Mad For It is based on the fact that "Manchester is vibrant and youthful, its selling point is the youth culture that people associate with" (quoted in MMCN, 1998:7).

The site extensively uses Shockwave technology and this results in big download time that frustrates the user. The colour that dominates in the background is black with basic foreground colour for text blue marine and many vivid colours for other foreground information and for the animated characters; a quite tiring combination especially for those people that decide to use the site for long time.

- *Contents and Services*

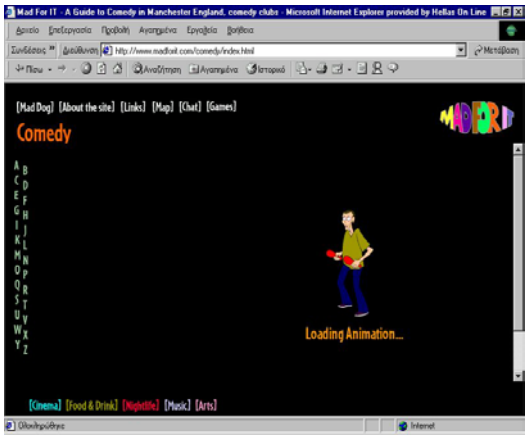
The Web site is delivered into two versions: with and without animation. However, the content provided in these is not the same. The animation free one is in essence a condensed version of the site providing only the basic sections that are the following six: a) 'Mad dog' with information on the animated dog concept, b) 'About the site', with a short description of the project and the people involved, written in slung, but with no links to relevant people or project coordinators; c) 'Links', with a

selection of links to other sites of interest concerning the Manchester area; e) 'Chat' that includes a quite incomprehensible 'chatter box' and links for chatting with the animated characters that when accessed load an e-mail window. However, this section is rarely used according to Ken Campbell; and f) 'Games' that is under construction since 1997.

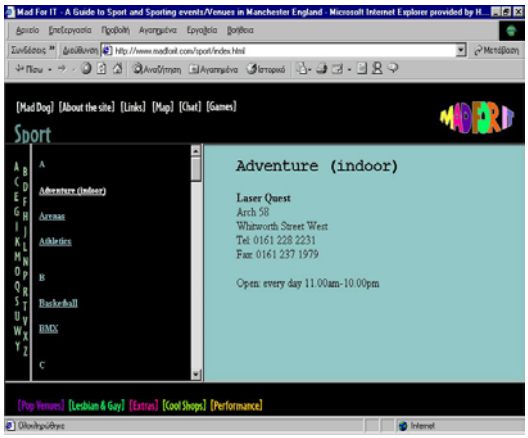
The animated version expect from the above sections include also 12 sub-sections that are not all loaded in the same screen. The second page, after the home page, includes 5 links to 'Food and Drink', 'Lesbian and Gay', 'Pop Venues', 'Music' and 'Comedy'. However, if for example the 'Comedy' link is accessed more links appear that are not exactly the same with the previously mentioned ones: 'Cinema', Food and Drink', 'Nightlife', 'Music', 'Arts'. In turn, when the 'Arts' link is accessed, links on 'Performance', 'Cool Shops', 'Cinema', 'Comedy', and 'Music' appear and so on. As shown from this example the user is never sure about the contents of the site and where to find exactly what s/he wants. All these links provide an active A-Z directory on the left-hand side of the screen that when accessed information about each entry appear in the right-hand side as shown in Figure 12.

Figure 12. Part of the Mad for IT Web site

www.madforit.com/comedy/index.html



www.madforit.com/sports/index.html



- Web Users Statistics

Authorised statistics are not available but according to server administrator, approximately 4000 users per week used to visit the site during the first six months of operation. Gradually however the figure fell off to approximately 2000 users/week,

mostly from USA and Australia, while the most popular section is the 'music' and 'night-life' ones (interview transcript).

- Main Issues and Future Plans

MAD FOR IT presents serious inadequacies and it is really doubtful whether it has contributed to the 'marketing the city globally' affair or not. Evidence of this is the low rate of users, perhaps resulting from the complicated, non-printable and slow in terms of responding time interface. Its pioneering design that deserves acknowledgement undermines the overall effectiveness of the project. Another proof is the abandonment of the project after the first two years of operation. The site was last updated on December 1998, and having that there was never real interest to monitor the growth process through the study of Web statistics. It could safely argued that eventually the association of MAD FOR IT to general urban cyberspace policy in Manchester is mostly related with the funding-seeking approach. Therefore, the project was rather initiated due to the availability of funding at the time, than because of its incorporation in a long-term, well-elaborated and defined plan for the development of a virtual city application that would incorporate local 'creative' youth. So, in terms of the EU virtual cities' typology MAD FOR IT is classified among the 'virtual city arenas' and distinguished from other cases by its public, youth and pop, but static character, as well as by its sophisticated multimedia, but at the end of the day ineffective design.

'Manchester-Virtual City'

The 'Manchester-Virtual City' Web site is part of the European INFOCITIES initiative. The Manchester Multimedia Centre and Network launched this project on February 1998 for the cultural work package of the INFOCITIES having a budget of £120,000. Like MAD FOR IT, it was aimed to internationally promote the cultural profile of Manchester using state-of-the-art multimedia applications. To be more precise, a local company called Ten22 hosted by the MMCN undertook the Manchester-Virtual City project. Ten22 consists of two partners with design and artistic backgrounds and was assigned to create a cultural work package that involves more than just a run of the mill guide to the city, by incorporating as much in the way

of interactive devices as possible to create a more intimate and almost 'first hand experience' feel to the Web site. Alan Murray of Ten22 explains:

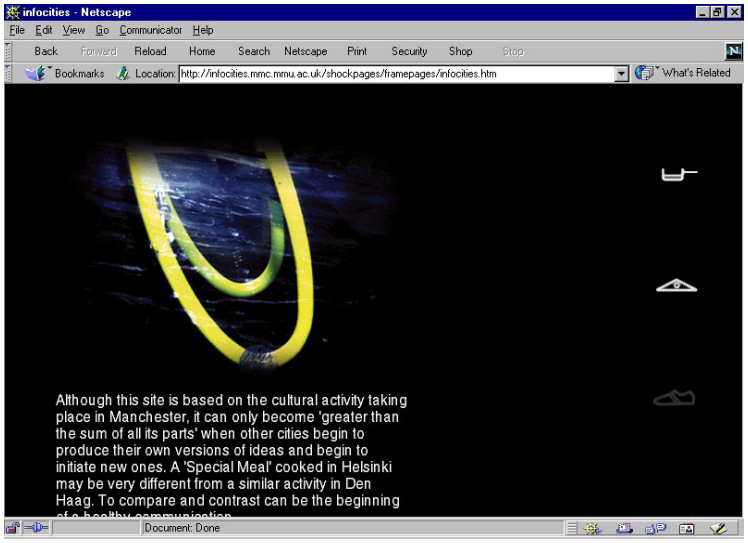
> One of our aims is to emphasise the significance of allowing local artists like ourselves to get access to the kinds of technical equipment available at the Manchester Multimedia Centre labs. We believe it's our role as artists to really get under the skin of what goes in the city and develop cultural awareness through that (interview quoted in MMCN web site).

Some of the techniques they have made use of to develop this aim include handling out disposable cameras to bar staff in night-clubs, bars and pubs across the city, the results of which are combined with sound and minimal text. The team claims that the atmospheric results really get across each venue's specific appeal, from the traditional British pub hospitality to fashionable bars. Other idea included inviting street sweepers in busy areas to take photos, as well as footballers in local teams and taxi drivers. In other words the Web site attempts to describe the culture of the city through the eyes of its people and regarding various aspects of city life such as cooking and eating, taxi journeys and club culture.

- *Design and architecture*

Similarly to MAD FOR IT this site extensively uses Shockwave technology and this results in big download time that frustrates the user. Also, the colour that dominates in the background is black with vivid foreground colours and more than one animation at a time on view; something that discourage long navigation. Moreover, it is more problematic than the Mad For IT one as it makes use of small incomprehensive symbols that represent the sections of the site that are constantly on move alongside the right-hand side of the screen and in order to access them the user should point the cursor on a very specific point; otherwise the links cannot be used. Also, the design does not take into account the standard monitor size and does not incorporate scrolling bars resulting in missing much information on the screen (see Figure 13).

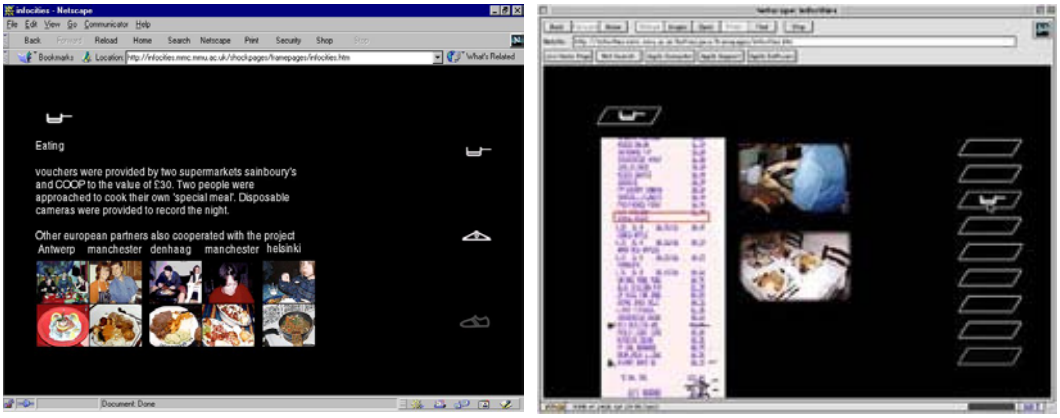
Figure 13. Manchester-Virtual City 'Home-Page'
http://infocities.mmc.mmu.ac.uk



- *Contents and Services*

The site is divided into 8 sections: 'sports', 'reading', 'eating', 'museums', 'nightlife', 'infocities site', 'e-mail', 'taxi info'. When accessed these sections provide video and sound with suggestions from local people on what to do or visit, according to the sections' theme, or pictures and links on related issues. Figure 14 illustrates the 'eating' section with a list of restaurants in a combination of photos, video and running text. However, similarly to MAD FOR IT, the 'Manchester-Virtual City' is neither regularly updated nor it offers the ability to users to participate with inputs in its development process.

Figure 14. The 'Eating' Section of Manchester-Virtual City
http://infocities.mmc.mmu.ac.uk/shockpages/framepages/infocities.htm



The interactivity of the site starts and ends around the multimedia projection of its contents, without providing any kind of online services that could permit users to communicate or interact with.

- *Web Users Statistics*

Similarly to MAD FOR IT, the Manchester Multimedia Centre and Network has not monitored yet the Web site's growth in terms of users statistics, and thus no authorised data were available so to speak off the site's popularity rate. According to server administrator, the site is accessed by approximately 1500 Internet users per week, in their relative majority from USA and Australia, while the most popular section is the 'sports' and 'night-life' ones (interview transcript).

- *Main Issues and Future Plans*

Although 'Manchester-Virtual City' is resulted by the core ICTs initiatives INFOCITIES and MMCN, its overall effectiveness regarding the online promotion of creative and cultural profile of the city is rather insignificant. This assertion is, like in MAD FOR IT, proved by several facts such as the low popularity, the modern but not user-friendly interface, and the static and one-way functionality. This project's inadequacy is also associated with the funding-seeking approach; developers consider that the work is complete once the Web site is online, instead of regularly updating the contents and setting up those mechanisms and interactive services that eventually would make the site's development an on-going, dynamic and participative process. Not accidentally, there are no any plans for further development of the site.

Overall Findings from the Case Study: Discussion

The results from the empirical case study showed that real and virtual Manchester are interrelated systems. This interrelation is conditioned by concurrencies and parallelisms, but also by discrepancies and contradictions.

In general, the most profound and obvious concurrency between the virtual and real city is concerned with the projection and promotion of local identity in a city-marketing manner. The development of Manchester over cyberspace is marked by those elements of Manchester's profile and urban regeneration/restructuring process that refer and promote it as an 'exciting European creative regional centre'. This

interplay is mostly expressed through the dominant online presence of Manchester's cultural life and economy, especially the music scene, night-life and sports as well the promotion of 'Madchester' and 'Gaychester' aspects. Likewise, the 're-building, re-imaging and re-inventing the city' urban regeneration process and resulted projects, especially in the city centre, affect the overall Web-profile of Manchester. Besides, most of cultural and entertainment venues as well as main virtual city developers such as the City Council and other public organisations, Universities, the Manchester Multimedia Centre and other ICTs agencies are located in the city centre area.

Therefore, the impact of the cultural and in general 'creative' enterprises' growth is obvious in the physical and virtual appearance of the city and in particular the city centre area. The online presence of the group around ex-marginal and underground people, activities, and spaces mostly concerned with youth, pop and rave culture, buzzing nigh-life, as well of the new sectors of graphic arts and multimedia design characterises the overall contemporary profile of Manchester both in spatial and cyberspatial terms. By turn, the growth of 'creative industries' sector is characterised by the increasing use of Internet and the burgeoning of relevant Web sites for business networking and promotion, while they are marketed through the virtual city, by both public bodies such as the City Council and private initiatives like 'Virtual Manchester' and 'Manchester Online'. In terms of urban policy, therefore, there has been a inter-connected expectation: as the regenerated areas and buildings would restore the local market and the physical appearance so to attract more residents and visitors, the virtual city would attract and serve effectively the interest of Internet users, so that by promoting the renewed city it would eventually transform them in potential visitors or investors in the real city.

In making some further parallelisms, it could be first of all argued that as Manchester is one of the most experimented cities in terms of urban policy and planning interventions the same occurs in terms of urban cyberspace policy and planning. Although finally failed, Manchester Host was among the pioneering projects in UK and especially after 1995 we witnessed a proliferation of urban cyberspace policy projects. Moreover, in accordance to the general policy shift towards entrepreneurial and wide partnerships that would exploit private and public, especially European, funding sources, the development of urban cyberspace policy

after 1994 is mostly based on the involvement of many public or private bodies, as well as on European funding. The role of private sector should be stressed since most of local Web sites are hosted or owned by commercial organisations, and the two largest virtual city applications are developed and managed by profit-seeking private initiatives. Meanwhile, most of important infrastructure projects like the G-MING network and the 'Magic-Touch' info-kiosks are very much based on the sponsorship and provision of technical equipment/support from commercial ICTs agencies. On the other hand, we should also highlight the significant role of Universities within city's life and economy that is also extended in terms of virtual city's development process.

Therefore, it is a mistake to compare the development of the virtual city and its infrastructure projects with the construction of the ship-canal on 1894. The ship-canal was constructed by the collaboration and hard work of thousands of manual workers, engineers and supervisors, being a visible and tangible project for the city and all its citizens. On the contrary the virtual city's construction process, is a matter of maximum few hundreds 'information workers and executives' working on behalf of several ICTs agencies, while the majority of citizens are ignorant or indifferent of the whole project. Although locally produced the virtual city is, contradictory, accessed by mainly people who live in other countries, in particular by ex-patriots who live in USA and Australia. If we would speak for a 'Manchester virtual community' this should be defined around this particular group of users. Local people who use rarely or not at all the Internet are rather unaware and can hardly capture visible and tangible effects of the virtual city's operation. On the other hand, the virtual city's development process several times reinforces competition rather than collaboration between relevant projects/actors in seeking for funding sources.

Parallelisms could be also extended to the fact that similarly to the regeneration and restructuring process of the real city in the 1990s, the quality of virtual city is varied enormously as some fine developments are combined with others having very low quality and usefulness. Interestingly, the virtual city development process combines the involvement of 'high-qualified' international ICT systems developers (like ICL, Sun Microsystems) with local ISPs, multimedia and cultural bodies/companies and an influential actors-network of individuals, in parallel to the identified involvement of corresponding in scale architects and developers in the re-

building projects in the city. In financial terms of course there is a great difference between the virtual and real city. For example only the Urbis shopping and leisure centre had larger budget than all the cyberspace policy initiatives and projects developed during 1994 and 1999. Relatively speaking, the huge and prestigious building projects developed in conjunction with local authorities could find their virtual analogies in Manchester's cyberspace and in large innovative Web sites similarly approved and developed on the behalf of local authorities. However while those buildings and surrounding areas are pulsing with life, even though on a solely commercial basis, their virtual analogies like the 'MAD FOR IT' and the 'Manchester-Virtual City' Web sites failed to attract the interest of Internet users, while they are rather irrelevant to local people. These cases demonstrate also the inability of local authorities to take full control of the virtual city's planning, design and development, probably because they lack the knowledge and skills so to develop by their own advanced multimedia applications or to crucially intervene in the development process. In general terms, local authorities do not have authorisation to control the virtual city's development process, unlike their authorised duty to control all projects concerning the physical development and appearance of the real city.

The physical and cyberspace urban development are aligned regarding the limited participation of citizens in the planning, decision-making and implementation process. The policy rhetoric underlines the importance of cyberspace in developing a more collaborative, participative and 'bottom-up' urban planning and policy-making system. Both physical and virtual developments in Manchester are based on 'top-down' approaches and initiatives and city planning related Web sites are the most rare in local Web sites. The most interesting application in this field derives from the recently renewal of City Council's Web site and the Intranet/Extranet project, holding serious promises towards the improvement of interaction between local authorities and Manchester's residents. In parallel, therefore, we should acknowledge the advances on the delivery of community services through an increasing number of relevant Web sites and interactive services such as online application forms, e-mail communication with officers, online information, advice services etc. The 'community' thematic category comes second in online presence rate (with 'culture'

first) connecting somehow the development of virtual city to the traditionally strong socio-political culture of Manchester.

Nevertheless, the virtual city's development does not concern all Manchester socio-economic and cultural aspects. The rough 'Gunchester' aspect of Manchester's profile is completely absent from the virtual city, while the socio-economic polarisation is briefly presented through some facts and reports. In general, the virtual city prettifies the real city's profile projecting an artificial picture. Several deprived areas with high unemployment and ethnic minorities rates, such the Ardwick, Moss Side and Longsight wards are very rarely referred in the contents of examined Web sites. If we consider that Internet access rate in Manchester ranges in the region of UK average, thus at about 30% of the total city's population, and the local Web sites are mostly visited by outsiders, it is really hard to imagine ethic minorities, unemployed, homeless, and under waged citizens to be aware or get access to a virtual city and its services.

Concluding Remarks

The chapter examined the development of virtual city in Manchester, identifying its basic characteristics and setting out the context of its interplay with urban policy and the actual city. The results of the empirical case study confirm that virtual and real urban places/spaces are recursively interlinked while urban policy is considerably involved in this interplay.

The research findings indicate that the development and operation of virtual city is conditioned by two contradictory and two consistent characteristics. The first contradiction concerns the conflict between civic non-profit-seeking initiatives and commercial profit-seeking ones. Hence, while virtual cities are developed as civic projects offering free information services to Internet users about actual cities, in the same time the issue of financial viability forces them to adopt a commercial profile. The second contradiction relates to the fact that although virtual city is locally produced is mostly used by people living in other places, in particular in other countries. Even in cases where the Web sites target to local population aiming to provide a Community Information Network for cities' residents, it is evident that their popularity is rather higher among non-local than among local users. The same is valid

regarding Web sites that have been developed by municipal authorities, although they mostly provide information services that mainly interest local people; significant percentage of the international group of users that access virtual cities are locals who live abroad, and who, by this way, get updated for and keep in touch with their native city.

This contradictory characteristic is associated to the first consistency observed, which concerns the issue of city-marketing. Thus, the most common feature of virtual city is the promotion of local cultural identity, venues and events, tourist attractions and services, infrastructure and facilities, history, and in a lesser degree local economy. Issues concerning typical urban problems and the everyday life in the city such as racial and social tensions, homelessness and poverty, environmental pollution, city planning applications etc. are usually ignored. Thus, Graham and Aurigi (1997a: 26) aptly argue that virtual cities constitute the virtual version of the perfect post-modern city; "exciting, aesthetic urban design; diverse cultural spaces, nightlife zones and restaurant areas; a high quality of 'business climate'; leafy business parks and office zones; and world class communication infrastructures are the most universal claims".

The second consistency refers principally to city Web sites managed by municipal authorities and is concerned with the provision of online public services. It was observed also that gradually these projects advance their services by giving the ability to users to communicate with officers and councillors via e-mail, to express a query or ask for an advice through online applications forms. This shift however does not guarantee the participation of community in the virtual city's development process.

Further, it was proved that the virtual city seem to generate a layer of expert developers and intermediaries both within public organisations and initiatives, as well in the thriving 'creative industries' sector of cultural, arts, multimedia and Internet companies. It became apparent that, as much as anything else, it is the pace of technological change, in particular regarding the Internet/Web growth that absorbed or displaced most other forms of cyberspace, which explains the failure of Manchester's brave pioneering efforts at a municipal-driven cyberspace policy and the subsequent flourishing of private sector initiatives. On the other hand, with the

benefit of hindsight it has to be mentioned that policy initiatives based solely on the use of advanced multimedia technologies were really a waste of public money, such as the 'Mad For IT' Web site. On the whole, it was proved that Manchester is a proper case study in order to draw lessons from both positive and negative aspects, as well crucial details for the formation and suggestion of an integrated 'virtual city planning' framework that includes seven general guidelines:

- Integrated approach: Incorporation of the virtual city within a strategic and holistic urban cyberspace policy framework developed under a widest possible partnership between local bodies and directly associated to the urban regeneration strategy and city-marketing policy-making.
- Organisational Work: Establishment of a special office that will be in charge for the virtual city's development, being the co-ordinating body for the various partners.
- Development Plan: Formation of a clear time-scheduled development plan in terms of aims, priority areas of application and corresponding actions. Priority should be given to the development of small-scale, thematic or district-based projects, which would be integrated within the virtual city.
- Pre-Development Work: Feasibility studies, pilot projects, surveys regarding local needs and lessons from the international experience. It is obvious however that there can be no universally applicable model.
- Parallel Work: Initiatives aiming to: a) advance the local ICTs network infrastructure (establishment of MAN or LAN, municipal Intranet/Extranet systems etc.); b) promote awareness, support access and training to ICTs, and encourage participation by the widest possible cross section of the community; c) keep pace and participate in governmental and European Union's related programmes; and d) secure the virtual city's long-term financial viability.
- Development Work: Effective and appealing Web design according to screen design principles in order to maximise readability and facilitate fast retrieval of information. Use of urban metaphor with distinct features related to the real city as navigation means. Free offer of informative and participative contents/services

using advanced and multimedia applications that would enhance the quality and accuracy of provision. Access to open and collective information resources such as databases, online libraries, standards etc. Offer of free Web space and e-mail services to users is of great importance since it permits them to participate actively in the virtual city's 'life'. Comprehensive listing of other local Web sites. Distinctive features and services for local and non-local users.

- Ongoing Work: Constant evaluation throughout development, implementation and provision of the virtual city from users, partners and experts is necessary in order to collect feedback on the virtual city's operation. Ongoing revision process based on evaluation results and incorporation of new technological developments.

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