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Progress toward Sustainable Development in a Knowledge Society in Italy and EU

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ABSTRACT

The Lisbon European Council (CEC, 2000) sought to make Europe "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion." The Knowledge Society is seen as a key factor for achieving Sustainable development in Europe, the so-called eAgora model. Aim of this paper is to show that, though the use of ICTs is recently increased in Italy, the level of citizens participation and involvement in decision making is still very low. This suggests an eDomus rather than eAgora model of using ICTs by citizens. Similar results are recognized in Europe.
The paper is structured in two main parts. The first part discusses current use and access of digital technologies by Italian citizens as depicted by the results of recent surveys and compares this situation with the outcomes illustrated at a European level by the Intelcities EU IP project. The second part discusses the main implications of these findings, in term of risks and/or opportunities, for meeting the Lisboa strategy objectives.

Key words: ICT use, e-participation, benchmarking

1 INTRODUCTION

ICTs loom large in the EU's policies for sustainable development. Much hangs on their assumed capacity to generate and maintain more sustainable patterns of living and working. And ICTs are expected to deliver this transformation on at least four spatial scales: the EU as a whole, its regions, cities, and individual workplaces.
Given the breadth and depth of these ambitions (Cooper et al, 2005), it is difficult to exaggerate the importance of successful exploitation of ICTs to the delivery of sustainable development in Europe.
The Lisbon European Council (CEC, 2000) sought to make Europe "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion." The Knowledge Society is seen as a key factor for growth and employment, contributing to economic and social development in Europe. The conjoint realisation of sustainable urban development within a knowledge-based society is summarized by the notion of the "eAgora".
Ancient Greeks went to the Agora, a civic square used for public assembly or commerce, to do business or discuss plans for their community. The INTELCITY roadmap[1] (2003) envisaged modern Europeans acting similarly but in the eAgora. By bringing together unconnected sources of information in one place, and making that place available in digital space to everyone, from city planners, building developers, politicians, to individual citizens, the eAgora could support improved management of cities and help achieve long-term physical, social and economic sustainability"[2]. In turn, this vision of the eAgora is based on wider ICT-enabled participation in eDemocracy; on the active participation of citizens, using ICTs, in decision making and collaboration between disparate stakeholders for policy-making purposes.
The trajectory for achieving the eAgora is shown in Figure 1. The timeline shown here raises an obvious question: *how are we progressing towards achieving the EU's desired Knowledge Society?*
In the case of Italy, this question can be addressed by looking at the findings of recent surveys undertaken by Censis and Forum P.A. (2004), Istat (2005) and Censis (2006). In summary, these show a trend characterised by a limited use of Internet and by a number of stratified digital divides (by access, by use, by age, by gender, by education, by economical conditions, etc.). For Italy at least, these findings suggest that current use of ICTs approximates closer to an eDomus than an eAgora: use of ICTs by citizens is mainly domestic and privately centred, with a very small and limited drive towards their employment for public participation (Domicili and Piersanti , 2004). This situation is confirmed by recent outcomes illustrated at a

[1] INTELCITY roadmap, developed under the EU's 5th Framework Programme, projected a vision of an integrated open intelligent information city platform system to support and integrate achieving the knowledge society and sustainable development of cities.
[2] "Rebuilding civic pride through virtual communities", http://istresults.cordis.lu/index.cfm/section/news/Tpl/article/BrowsingType/Short%20Feature/ID/73073

European level by the Intelcities EU IP project (2004-2005). The main implications of these findings are finally discussed, in term of risks and/or opportunities, for meeting the Lisboa strategy objectives in the final part of the paper.

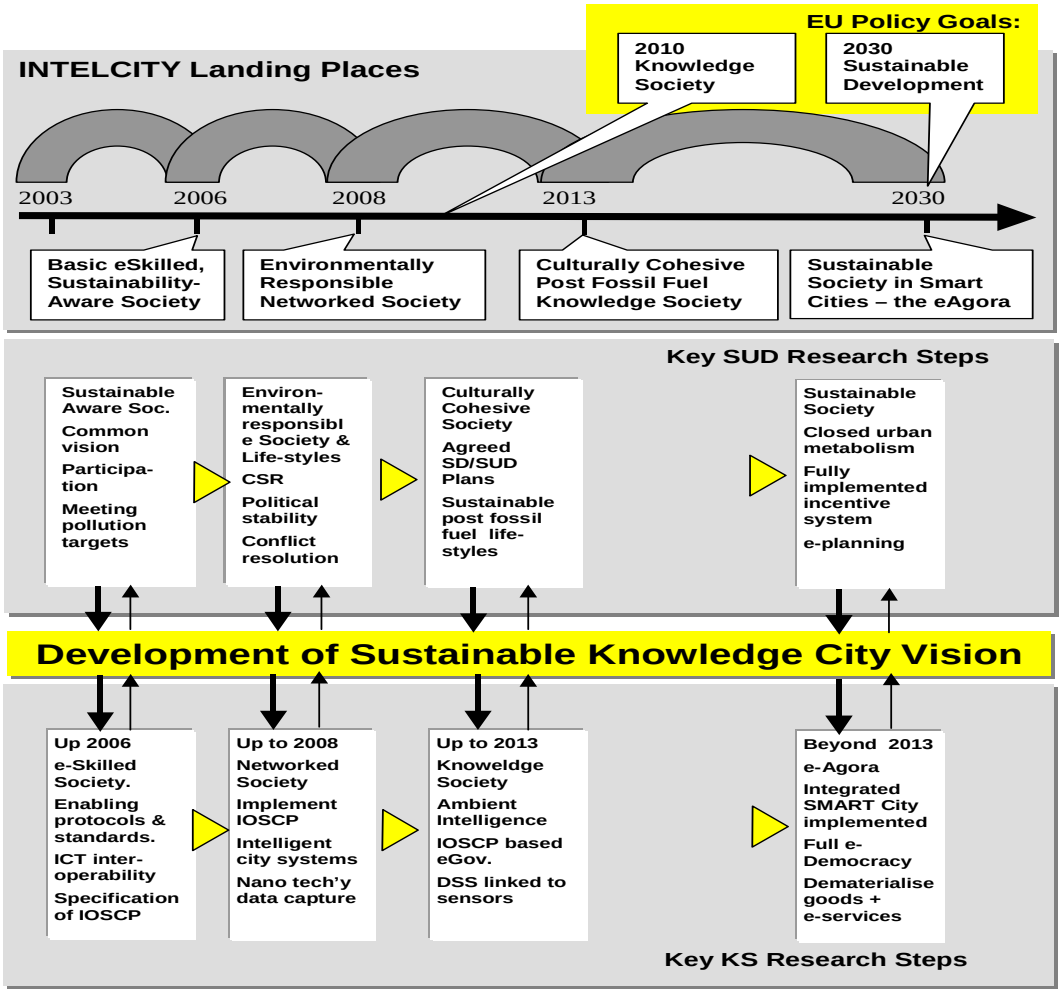

Figure 1: Summary Roadmap diagram developed by Intelcity Roadmap (2003)

2. THE E-DOMUS USE OF ICT

2.1 The Italian case

In Italy, the most popular ICT devices are the mobile phone, tele-video and video-recorder (Table 1): in other words, ICTs primarily have a domestic dimension. In particular, the country is leader in Europe for the use of mobile phones; according to OECD (2003), by 2001, the percentage was 87.1%, ahead of Finland with 80.4%.

This leading position of Italy has been recently confirmed in the Censis survey (2006), comparing Italy with France, Spain, Germany and UK. In Italy, personal computers are increasingly used and adopted inside families and this is typically driven by young people.

Table 1: Technological devices owned by Italians (%) (Censis and Forum Pa, 2004)

	18-34 years-old		**35-64 years-old**		**65 years-old**		**Total**	**Total**
	2003	**2004**	**2003**	**2004**	**2003**	**2004**	**2003**	**2004**
video-recorder	84,8	84,4	69,1	74,5	35,7	47,3	66,8	71,5
Televideo	85,3	83,7	73,6	78,4	49,1	61	72	76,2
mobile-phone	95	96,3	81,2	88,3	53,6	68,1	79,6	86,3
PC	57,8	72	36,6	55,2	6	16,3	36,5	51,7
cd-room player	59,4	69,3	30,4	48	3,2	14,7	33,2	46,9
Dvd-player	26,4	53,7	14,3	36,7	6,5	10,9	16,2	35,9
tv sat	24,3	24,6	17,7	21,2	11	13,1	18,2	20,5
Palmare	0	5,4	0	5,3	0	2,6	0	4,7
videogames	26,1	30,5	9	10,3	0,5	2,9	12,1	14,3

Italian citizens' interest in ICT devices is mainly based on practical and functional issues (about 40% of the total, as shown in Table 2). The technology is being used to support citizens in their every-day life, in their personal business, such sending email, getting information, home-banking, etc. In other words, the approach is typically an 'utilitarian' one (Domicili and Piersanti , 2004) And this appears to be confirmed by the use being made of the Internet, as illustrated in Table 3. The percentage of citizens with a genuine interest in and frequent use of ICTs is small, but increasing. A lack of interest among particular groups of citizens can be discerned, especially among the retired and those with lower levels of education (Santori, 2006).

Table 2: Italians' attitude towards technology (%) (Censis and Forum Pa, 2004)

	Employed		**Unemployed**		**Student**		**Retired**		**Total**	
	2003	**2004**	**2003**	**2004**	**2003**	**2004**	**2003**	**2004**	**2003**	**2004**
Lack of interest	11,5	12,1	13,8	17,8	2,7	0	41,4	39,8	21,2	21,3
Interest in practical things	41,7	35,8	46,3	34,2	30,9	30,7	42,2	36,5	42,4	37,3
Interest, difficult approach	6,8	8,2	8,7	13,7	2,7	5,7	9,4	9,5	8,4	10
Interest and use	19,9	18,8	11,6	17,8	25,5	28,4	4	6,8	14	14,4
Interest and frequent use	20,1	25,1	19,6	16,4	38,2	35,2	3	7,4	14	17,1
Total	100	100	100	100	100	100	100	100	100	100

Italy is not a leading country in terms of Internet access and use in Europe (see also

recent Censis survey, 2006) but the percentage of families with such access is increasing: in 2004, 19 million citizens were connected (10 millions more than in 2000), but 4% of population remains permanently excluded (Domicili and Piersanti, 2004). The digital divide in Italy is both generational and educational (Santori, 2006).

Table 3: Internet users

	2000	**2003**	**2004**
Potential users	67	63,8	53,9
Lack of interests for the present subjects and services	30	19,2	27,7
Lack of competences	25,2	24,2	19,5
Excessive expenses (of PC and telephone links)	11,8	4,6	6,7
Other matters	0	15,8	0
Excluded	11,7	4,1	4
It isn't known what it is and what services it offers	11,7	4,1	4
Internet users	21,3	32,1	42,1
From home	9,2	17,3	20,8
From job/school	7	4,6	7,5
From home and job/school	4	9,4	13,3
From other places (friends or public places)	1,1	0,8	0,5
Total	100	100	100

Italian internet users prefer to access the web from home (Table 3). They are mainly the younger members of families who access the Internet from their home or universities and schools. Public spaces are still poor relations when it comes to digital provision in Italy. As shown in Figure 2, the main activities done by Internet are of a personal type, such as visiting a site, searching for information or services, sending email. Very few activities refer to public aspects of life and civic participation, such as chatting, forum, etc. It is this picture that suggests that the current adoption of ICTs in Italy is eDomus- rather than eAgora-centric.

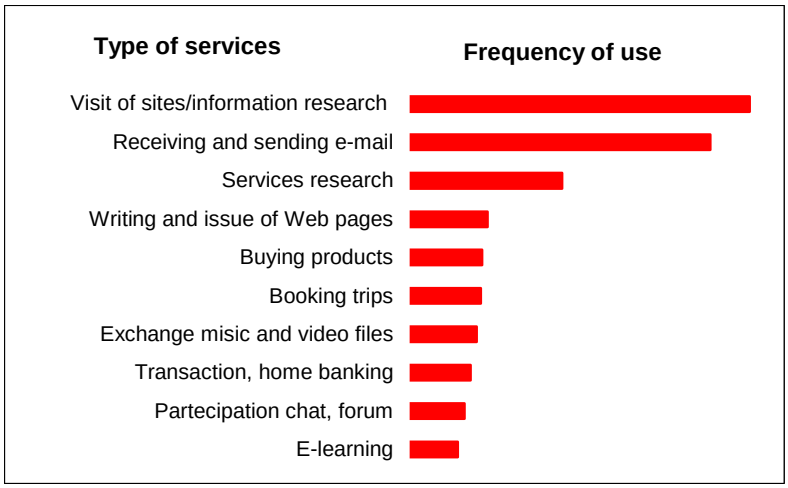

Figure 2: Frequency of use of civic on-line services .

2.2 Other European experiences

This section of the paper reports on the findings of user needs studies undertaken in the first and second phases of the European Union (EU) IST Framework 6 research project - IntelCities (2004). This project developed a prototype integrated information system for cities, known as the `eCity platform', which links the range of electronic local government services (e-government.) with those of local planning, urban development and regeneration (e-planning). This project introduced a user-provider paradigm of service delivery where it is the needs of the former that set the technological requirements of the latter (Curwell et al., 2005).
Previous experience and the literature on the development of on-line services (Campbell and Deakin, 2005) suggest that citizens tend to be unclear about the new possibilities presented by the applications making up the e-city platform. It is for this reason that, in addition to a range of traditional surveys using questionnaires, structured interviews and telephone interviews, the IntelCities project embarked on a number of roadshows in Marseille, Rome and Manchester to help their citizens to envision future possibilities. The roadshows were used to identify what kinds of services and types of devices citizens currently preferred to use. Typically (but not universally), the participants recruited by each city of their roadshow had good e-skills. Internet technologies were most frequently used as a means to access services (via PC and laptop). The very low preference expressed for using local television was seen as surprising (see bars in Figure 3), especially since this is the predominant mode being employed by Siena - one of the case study cities in IntelCities (Curwell et. al., 2005). However, the low preference for public access points, such as kiosks, indicates the poor experience and low take-up of this type of

terminal in these cities.

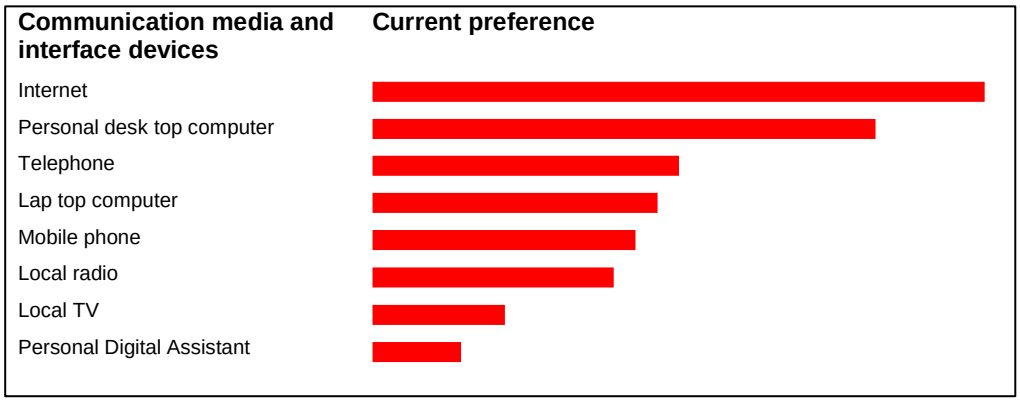

Figure 3: Preferences for remotely accessing civic services (adapted from Lombardi, 2006)

There was a noticeable lack of cross-regional differences in the level of e-skills and technology preferences expressed in the three cities taking part in the roadshows. As illustrated above, the Internet technologies were most frequently used, via computer and laptop. This is clearly the main form of access either at home or at work. One noticeable distinction was a strong Italian preference for the mobile phone, whereas French participants expressed a preference for supplementing this technology with personal, face-to-face contacts. They were also interested in future development of TV. A lack of interest in personal digital assistants (PDAs) was common to participants from all three cities.

The roadshows also identified the types of services the participants currently accessed. Roadshow participants did not yet contact public services on a daily basis. In Marseille, only transport services were contacted daily by a significant number of workshop attendees, otherwise, the majority of proposed services were only contacted on an infrequent basis. Figure 4 shows the most common activities undertaken using the Internet. Getting information, leisure and entertainment were the most frequent. And this suggest a personal/domestic focus for participants from these European cities as well.

In the roadshows, concern was expressed over:

- the expanding digital skills gap
- the `digital divide' - how the technologies are distributed and access for all (e.g. high cost versus low income, disabled users, etc.), and
- other underlying structural issues related to security and ownership of the data and access by third parties.

There was a clear balance of opinion in favour of public rather than private provision of civic on-line services in terms of creating greater trust and confidence in citizens (Curwell et al., 2005).

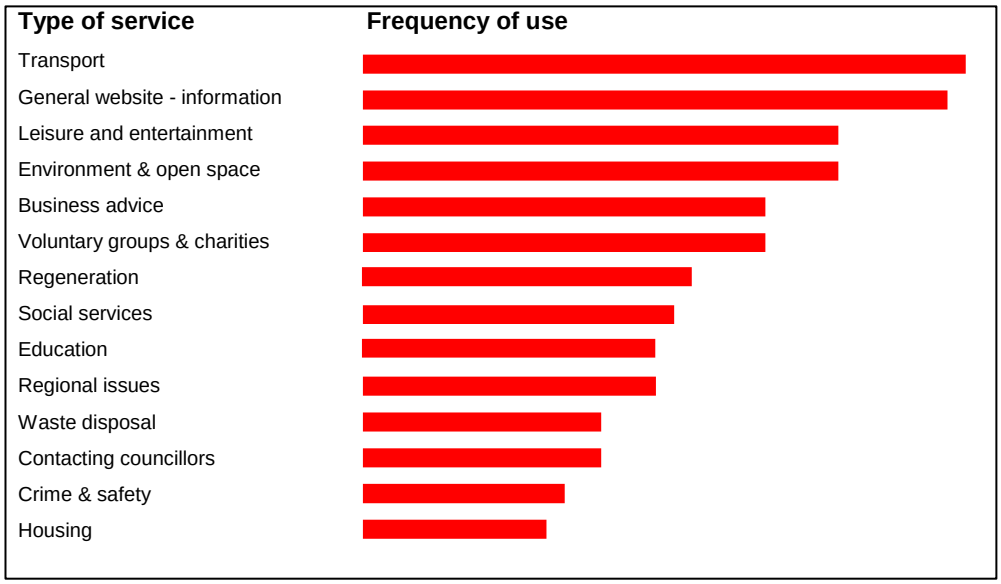

Figure 4: Current frequency of use of civic on-line services (adapted from Lombardi, 2006)

In the second stage of the IntelCities project, three further roadshows, one in Barco (Belgium), one in Central Manchester, and one in East Manchester were held to investigate the priorities citizens have for where and why online civic services should be provided. The main findings showed that although some citizens do want be able to access e-services through local community centers and libraries (71% in East Manchester) they mainly want to do so in their own homes (83% and 85% in Barco and Central Manchester). Such results also suggest that, in Europe, we are current moving towards an eDomus model of using ICTs rather than the eAgora proposed to support the Knowledge Society.

The citizens who took part in the IntelCities roads shows also indicated that they want to be able to use local council services and tools whenever they want them - 24/7. In addition, they want their cities to consider, when developing online services,

- the ability new digital technologies to speed up service delivery, allowing citizens fast and flexible access to information which is currently paper-based (86% in East Manchester) and
- to provide citizens with equal access to the services their city can offer, because new technologies can help include people who currently find it difficult to access and use city council service (70% in Barco).

3 BENCHMARKING AGAINST THE OECD ePARTICIPATION MODEL

Citizens cannot build the eAgora on their own. Its effective development and

deployment will depend on reciprocal actions by cities and their citizens. Civic authorities need, in the first instance, to provide a virtual version of the public realm that their citizens can then move into and occupy. Corsi (2006) reported a series of consultation workshops on eGovernment held in 2005, in which 22 countries participated, to prepare for the EU's Framework 7. These workshops sought to identify, using foresight methodology, breakthrough R&D ideas and policy developments for citizen involvement and empowerment up to 2020. This foresight exercise was driven by a clear set of preferences.

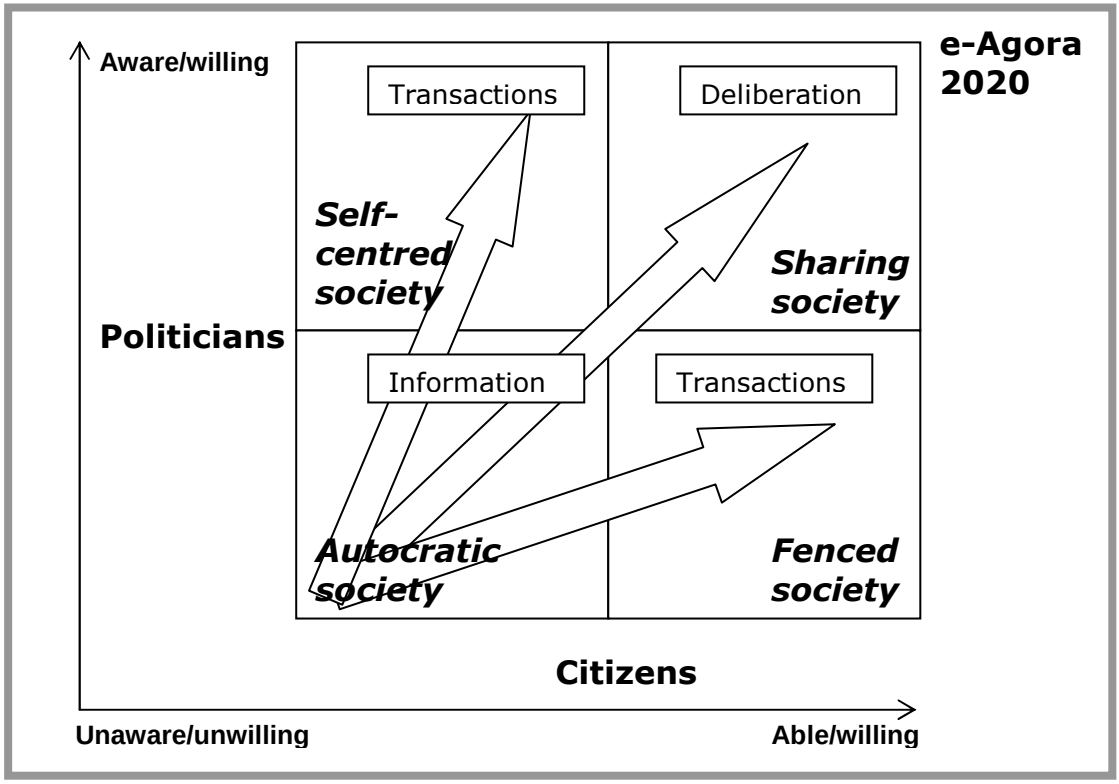

Figure 5 FP7 workshop's scenarios showing potential engagement in e-spaces by politicians and citizens (adapted from Corsi, 2006)

For instance, citizens were depicted by 2020 as expecting low-cost, user friendly, broadband, interactive, constantly updated, mobile and instant access that will allow them involvement in political decision-making at every level. This ICT-based opportunity, seen as necessary as a means of renewing the relationship between them and (local) government, maps directly onto the workshops' vision of a 'sharing society', as shown in Figure 5.

However this is only one amongst competing possible outcomes identified by the workshops. Corsi argued that, whether this preferred option arrives is dependent on

not just the ability, but also the willingness, of politicians and citizens to engage with each other in e-space. If politicians are unwilling to cede a fully developed virtual public realm to citizens - to enable them, for instance, to take part in deliberative decision-making - then civic e-spaces are likely to remain restricted to the provision of information or, at best, be used for transactions of civic services, as illustrated by the left-hand side of Figure 5. Conversely, if citizens refuse to move in and occupy civic e-space, then this is also likely to result in similar restrictions to information provision and service transactions, as illustrated by the bottom row of the diagram. Only if politicians are willing and able to provide an appropriate virtual public realm and citizens are willing and able to move in and exploit it, will the desired eAgora become established.

Working as part of the IntelCities project, Campbell and Deakin (2005) devised a Citizen Engagement Matrix to examine the types of policies currently being adopted by cities to engage their citizens as active participants and key stakeholders in the community. This matrix consists of a list of 40 on-line tools and services mapped against increasing categories of engagement. Using the OECD's model of information, consultation and active participation as a starting point, the Citizen Engagement Matrix examines 5 possible levels of city-citizen engagement in e-space, see Figure 6.

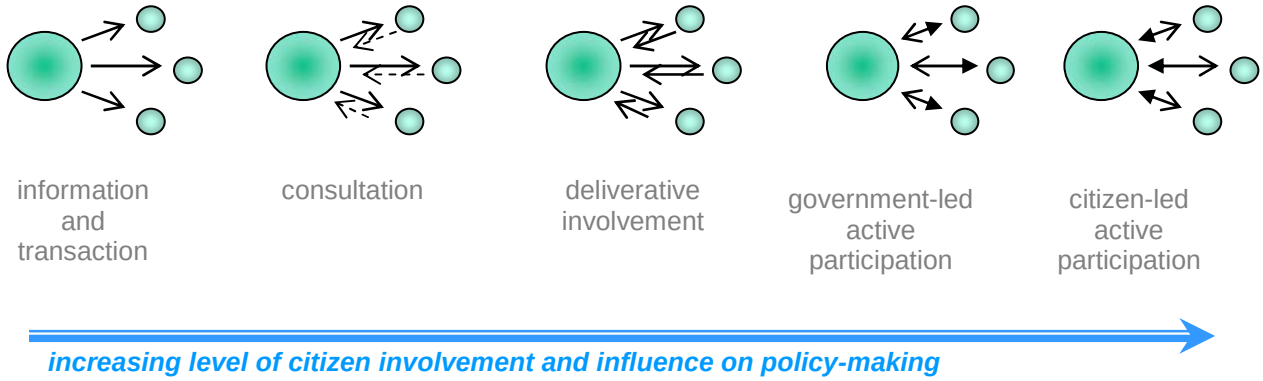

Figure 6, Defining the levels of information and transaction, consultation, deliberative involvement, government-led active participation and citizen-led active participation (adapted by Campbell and Deakin, 2005 from the OECD definitions).

At the most basic level, towards the left hand end of Figure 6, cities may provide their citizens with just on-line information or may allow e-based financial transactions. Citizens remain largely unengaged since information flows mainly from cities to citizens. Moving to the right across the Figure, next consultative e-services establish a degree of reciprocity through the use, for instance, of multiple choice polls and closed question surveys. Typically such cities are consulting their citizens through provision of fixed questions and a choice pre-determined responses. Further right in

Figure 6, deliberative involvement signifies greater engagement between cities and their citizens. In such cases citizens are being encouraged to review and consider background information before expressing their views. Finally, at the right hand end of the Figure, Campbell and Deakin divided the OECD's category of active participation to identify whether cities or citizens instigate decision-making processes. Campbell and Deakin used their categorisation system to review the web sites offered by European cities. They concluded that a large proportion of such cities now offer e-services that provide a wide range of information sources on-line and that encourage citizens to pay their bills using digital technology. Further, many cities are reported as having developed their e-services to enable more complex on-line transactions and consultative exercises. However, as Deakin and Campbell indicated, if cities are to reach the OECD's (2005) vision of:

> "… increasingly well-educated, informed and critical citizens [that] expect high quality services, streamlined administrative procedures and a government that takes their views and knowledge into account in public decision-making"

then cities will have to engage all their citizens in the use of new digital technologies for consultative and deliberative purposes. They concluded that, while improving access is a precondition of engaging citizens in policy making and consultative activities, at present few European cities currently offer the range of e-services expected by advanced ICT users or presupposed by the OECD.

4 CONCLUSION

The European Union has placed great faith in the transformative power of ICTs. These digital technologies are being expected to deliver against a wide range of EU policy imperatives. These relate not just the achievement of the Knowledge Society by 2010 but also to implementation of sustainable development in the EU by 2030. This paper has reviewed recent surveys of the take-up of digital technologies in Italy and the expectations and aspirations of citizens in the European cities visited by the IntelCities Roadshows. Both sources of information point in the same general direction. To date in Europe, citizens appear more inclined to use digital technologies centred on their homes, or for private purposes, than to engage in the eAgora – a virtual public realm in which citizens engage in democratic processes – just as the citizens of Ancient Greece physically participated in the agora in their cities.

But the development and deployment of the eAgora will not be driven by citizens alone. It depends on the reciprocal actions of both citizens and cities. Both parties have to be willing and able to engage in virtual space if a fully-embodied eAgora is to emerge to empower the critical and informed citizens engaged in democratic decision-making envisaged by the OECD. Analysis of the present contents of cities' existing web sites using the IntelCities Citizen Engagement matrix suggests that,

while some European cities are geared up for information provision and perhaps even complex on-line transactions and consultative exercises, few are currently offering the range and depth of e-services expected by advanced ICT users or presumed by the OECD. Until both sides of this equation – cities and their citizens – engage with and exploit digital technologies more fully, the eAgora will remain just an unrealized vision. At the current rate of progress, the eAgora will not be in place to help deliver the EU's desired Knowledge Society by 2010. And, at present, it has to remain open to question whether the eAgora will emerge to act as an effective vehicle for enabling citizen participation and engagement in time to help deliver sustainable development by 2030.

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