Qualification of territorial e-government policies through promotion of e-participation

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1 E-Participation as a case of e-government

E-participation is about the "framing of politics in the electronic medium"[2] and it deals with each of three basic nodes[3] around which ICT works: policy, administration, and civil society. What we have here is a set of processes that get linked together, processes such as those by which clients and organisations meet, policy objectives are set down (in ways that take tradition into account), and formal democracy gets revitalised in a professional and social meeting place such as the Web.

In a broader sense, e-participation is the process where citizens share information and knowledge in seeking to participate in the functions of government via information-and-communication technology (or ICT, such as the Internet) thereby interacting with their administrative and political bodies. Thus, new technological channels are developed to facilitate effective participation in the democratic process and in decision-making.

E-participation comes by way of two trends having to do with e-government:[4]

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2 Castells M., The rise of Network Society. Blackwell, 1996.

3 Gronlund A., Democracy in an IT-framed society, Communications of the ACM, v. 44, n. 1, 2001.

4 Maioli, C., A regional e-governance plan and implementation, Proceedings Innovations for an e-Society. Berlin, October 2001.

- the growth of technological potential; this growth offers opportunities to set up new businesses and develop existing ones, and it more generally allows citizens and administrators to effectively and creatively support and attain strategic development aims;
- the need for joint work and coordination among government bodies at different levels; the strategic aims and the challenges arising from the development of an information society are too much for an administration to handle on its own. An adequate response requires teamwork and active collaboration with the lower-level, administered system, setting up to this end a system of strategic agreements on shared objectives to which the participants are mutually committed.

Without such coordinated action in an area of the public sector, it will be impossible to achieve these efficiency results, which the innovation of public services is seeking and the citizenry is in urgent need of. ICT can significantly contribute to achieving such results, but only if used consistently with the changes that are taking shape.

ICT encourages communication among people and an integration of processes: ICT is most fruitful in just this sense, rather than in increasing individual productivity. But if we are to exploit this potentiality in full, we will have to act openly and collaboratively, promoting discussion, debate, and research in the processes of transformation, with a firm resolve to overcome intra-organisational and institutional individuality.

However much ICT instruments may be capable of supporting integration, they need clarity of purpose and determination, lacking which ICT is apt to reproduce and increase the fragmentation presently affecting sources of information, procedures, and potential partners in the public sector, further complicating, rather than simplifying, the lives of citizens and enterprises. It is in this perspective that the Italian Government, in association with the regions and the main provinces and city administrations, launched

national e-government plans in 1997 and 2001 (Bassanini laws 1997–2001; Phase One, 2001-2003; Phase Two started in 2003 and finished in 2006), the idea being to coordinate the use of the new tools available and to enable citizens to access all the e-government services offered by the public administration and also by private companies.
The challenge of modernisation, and the consequent need to use ICT as profitably as possible, is widely felt more or less urgently throughout the local public administration. The financial resources and the skills (often new skills) required to meet this challenge represent a common difficulty: we must therefore work at it together, with coordinated actions that are consistent over time, a strategy that makes it possible to save a lot of time and money (such as are needed to learn the new skills).

Looking at the results, recent e-government plans, especially those made by the European Union[5], stress as fundamental the need for greater coordination over wider areas if we are to avert, at least regionally, a situation of lapsing from "first class administration and citizens towards second class administration and citizens," even if only in regard to availability and access to the services offered through ICT. The spontaneous dynamics of the market notoriously tend to push ICT development in large urban centres, where the greater part of the population and the advanced-services sector are concentrated, which means that the cities offer better facilities and services at lower costs.

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[5] European Commission, Top of the Web. User satisfaction and usage survey of e-government services, http://www.innovazione.gov.it/ita/news/2005/gennaio/05_1_17.shtml, January 2005; and Holmes D., E-gov, e-business strategies for electronic government, Breatly, London, 2001.

2 Objectives of e-participation and relations with administrations

The main administrations having jurisdiction over wide territories are making proposals for agreements on e-government development: these proposals they are making in the first place to subordinate local organisations, but also to society at large; the need and the intent is to verify and discuss these proposals, thereby forging, with the contribution of all the interested parties, new programs of public interest.

We think that unless the political decision-makers become more interested in developing ITC policies, gaining insights along the way, the public sector risks a governance deficit that will prevent it from keeping pace with the processes that are reshaping everybody's life.

Also, if we appreciate the need for a constructive understanding between politics, business, and the public, we will see that the ICT industry can be a solution provider, but then we have to stress the need for politics to take the lead in interpreting and anticipating the public's requests and wishes. The e-government agenda is about ensuring that the entire population can access to all government services in ways that they find convenient and comfortable[6]. The national e-government strategies state that e-government can help councils adopt innovative approaches in engaging those who are currently excluded from democratic participation. Local government is not just about providing services; the point is also to encourage people to be involved in shaping their ideas and the future of their communities.

Once a virtuous cycle is in motion, citizen engagement in the public sphere will happen by progressive stages as follows: the citizens are provided with information, they enter into active participation and involvement, and then they undertake

[6] CapGemini, Online availability of public services: how is Europe processing?, 2006.

consultation. When this cycle does its work, not only do services improve, but ultimately the citizens become more actively involved in their community and will have a direct hand in the local democracy.

E-participation was originally[7] intended to help the disabled use ICT, but beginning in 2003[8], it was extended to provide e-government services to citizens at large.
There are two complementary processes that citizen action may be classed in[9]:
a) direct interaction between users and the administration; this process makes it possible to find points of interest and negotiate solutions; discussions are carried on and laws and rules proposed; pressure is brought to bear on decision-making, and forms of e-democracy are tested;
b) information exchange and knowledge-building among groups of people sharing an interest; this process is rather more connected with administrative data and information services; the idea is to evaluate operational systems and get the administration to handle citizen requests properly.

From the government's perspective, e-participation is intended to achieve four objectives as follows[10]:
1) granularity: the aim here is to reach as wide a public as possible in the effort to encourage citizen involvement;

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[7] Orita A.et alii, Tell, Know, and Act: A Case Study in e-Participation representative of Citizen Interaction, 4th Euro Conf. on E-government, ACI, Dublin, 2004.

[8] United Nations, World Public Sector Report 2003: E-government at the Crossroads, UN, 2003.

[9] Orita A. et alii, The three ways the Internet empowers an ordinary individuals, Proceedings of INET200, Yokohama, 2000.

[10] Macintosh A., Characterising e-participation in policy-making, in Lenk K., and R. Traunmuller (eds.), Electronic Government, Springer, 2002.

2) distribution: consist in supporting participation through multichannel facilities that help citizens use their different technical and communication skills;
3) usability: consists in providing relevant information that will make it easier to understand, access, and use different formats, thereby also enabling users to provide feedback;
4) motivation: consists in encouraging users to play a part in public debates.
Objectives (1) and (4) may be said to go with process (a) and objectives (1) and (3) with process (b). Objective (2) is mainly an enabling facility.
The new technologies play a central role when it comes to engaging citizens and supporting decision-making and democratic processes. The Internet is the main ICT technology we have, being widely accessible through personal computers, mobile phones, palm pilots, information kiosks, and interactive television.

We cannot have democratic political participation without adequate means of information and other tools that citizens can use to get involved, and hence without enabling citizens to contribute to discussion on political issues. The idea set out in the Green Book[11] whereby citizens must be enabled to contribute in a knowledgeable way to framing the political agenda requires that the digital services designed for citizen participation be expanded to include the following:

- information services: one-way delivery of digital services from government to citizens (as when requesting a telephone number);
- communication services: a two-way link allowing citizens interact with the government and hence play a part in administrative processes (as by completing and presenting forms

[11] European Commission, Green Paper on Public Sector Information in the Information Society, COM (98), EC, 1999.

over the Internet) as well as in the political process, as through opinion polls;

- transaction services: the government delivers to the citizens a full service (such as payment for another service) that requires access to different archives and information systems as well as collaborative processing operations activating different requests (as from one-stop shops, enabling developers and businesses to request authorisations to start construction or manufacturing).

The services available cut crosswise relative to the previous classification and so may be sorted according to three functions as follows:

- daily tasks and chores: pieces of information grouped together for requests relating to the tasks of everyday life;
- tele-administration: information is provided in reply to requests concerning the public administration;
- political participation: pieces of information are grouped together to meet the needs of users in furthering political activity.

3 Experiences in the making

The foregoing considerations can be illustrated by having a look at certain projects carried out in past years, projects requiring different skills and in which he have had different degrees of involvement. Following are the projects briefly described.

Partecipa.Net. The project is designed to test different methods by which citizens may participate in framing regional policies and managing institutional services. It was launched by Emilia-Romagna Region jointly with 21 local administration in 2005 in the framework of Italian e-government Phase One initiative. The first step taken toward this goal was to engage all the participants who may have an interest in the policies in question, providing them with complete information about the project and using targeted

channels of communication; part of the effort consists in working toward overcoming the digital divide. The second step was to provide administrators with methods and tools that they can put to use to augment citizen participation. These methods and tools consist in what is called the E-Democracy Kit. This Kit was designed for open-ended application, meaning that it is flexible and should allow different sorts of administrations to enact participation processes according to specific needs. Some of the methods and procedures are designed for active citizen participation: they include guidelines for organising a team, methods for moderating debates online, and methods for carrying citizen-participation projects to success and for publishing a project's results[12].

I-Care. The I-Care Project was designed to support local government bodies (city administrations, provinces, the region, and health-care organisations) in providing community services, and the service of care delivery at home in particular. It was launched in 2004 by municipal, county and health authorities of Forlì in co-operation with a few technical partners[13]: it eventually was implemented as a commercial product, named Icaro. Another part of the project consisted in setting up an observation point to be used in the effort to strengthen and integrate programs for the needy by providing for these programs effective organisation and management and the required technology.
It seems a fitting choice for a project of this sort to devote itself to exploring new health-care solutions. According to a report that CRC-Italia[14] issued in 2004 on innovation in the regions, health

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[12] A full illustration of the Partecipa.Net project is available at http://www.partecipa.net/, 2006.

[13] A description is available in http://first.aster.it/doc/rete/icare.pdf, 2004 and the results in http://www.cedaf.it/icaro.html, 2006 .

[14] The Centre of Regional Competence (CRC) in the development of e-government issues regular reports such as: CRC, Linee guida per la

care and manufacturing are the two areas where policy is keenest to address issues relating to ICT and the information society—and they are likewise the two areas in which citizens are most interested. In fact, most regions have drawn up health-care and community programs that often have required setting up information systems and online medical services. The pilot programs run in Bologna and Basilicata, offering single access points for setting up appointments online, are already in full swing and have proved popular as well as useful[15].

People. The PEOPLE (Progetto Enti On-Line Portali Locali E-government)[16] project, financed by the national government under the 2000 e-government Action Plan, was designed to simplify and innovate relationships between public administrations and the citizen, this by setting up a multichannel online system providing about 200 services. The project ended in October, 2006. More than 50 territorial administrations participated to the initiative. This system is served by a portal giving access to the services of different city administrations, thereby enabling these territorial administrations to form a network in which they each have an equal standing. The driving force of this partnership is the willingness of sharing experiences and know-how, and it was based on the capitalisation on successful stories and best use of local innovative capacity for driving the innovation at the national level. Therefore the approach of PEOPLE was mainly bottom-up oriented with regard both to the strategy and its implementation. In fact, the project was based on a federal model within which the diversity (both cultural and technical) of the actors involved had to be preserved.

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promozione della cittadinanza digitale: e-democracy, care of Formez, Progetto CRC, Suprema srl, February 2004.

[15] See in Fondazione Censis, Ottavo Rapporto "Le città digitali in Italia" 2003–2004, Rome, September 2004.

[16] Full information in http://www.progettopeople.it, 2006.

The Fourth Knowledge Initiative[17]. In 2000, Emilia-Romagna Region launched the Regional Plan for Online Services (RTP), an e-government initiative aimed at using ICT to improve the services delivered to citizens and enterprises. The idea was to help the region's businesses become more competitive through ICT and to help its residents become more familiar with it, this through a coordinated effort involving more than 500 autonomous local administrations and their investment in ICT. A distinctive part of this RTP project was the Fourth Knowledge Initiative, aimed at supporting ICT teaching and learning.

3.1 *Increase of digital citizenship*

As the first phase of the national e-government plan wound down and the second phase is just finished, new experiences had been gained that imparted a new direction to the effort to use the new technologies to get citizens more involved in the life of their government and institutions. It was in particular in the process of bidding for the e-democracy competitions that have been put to tender (for services offered to citizens and businesses) that many administrations gained greater insight, often being able to share their experiences through cooperative projects. There is now a clearer understanding of the role that information and communication technologies can play in supporting cooperation locally and even across borders.

Projects can be shared among several administrations, and they can be "adopted" or "repurposed" and put to a different use. Even technological solutions and the organisation can be designed ad hoc, this thanks to a wide availability of skilled professionals.

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[17] "Fourth" after the three basic skills of reading, writing, calculating. The project evolved into a set of tools to support ICT learning and teaching, whose basic reference is http://www.scuolaer.it/, 2006.

Phase Two of the national e-government plan set out by the Italian Ministry of Technological Innovation singled out e-democracy as one of five main action lines to be pursued in the years ahead. The ministry announced, in this regard, that it would have selected and funded, under a common budget, two-year projects aimed at developing digital citizenship. These were e-government projects whose point is to use ICT technology as a tool with which to get citizens to take part in the life and decision-making of public administrations. Specific attention in these projects is being devoted to all those citizens who risk exclusion by not getting their chance at e-participation, and the idea is to support a sense of community by encouraging groups, associations, organisations, and businesses to also have a part in the process. A great many bids were made nation-wide for the selection, so we had in these numbers strong evidence of just how alert the local administrations are to the opportunities that technology offers in facilitating the human transaction, and just how eager they are to build a new relationship with citizens in designing services and framing local policy. This is certainly one of the changes that we saw with this second phase of the national e-government plan.

It emerges from a well referenced survey[18] on e-democracy that citizens are thus far more interested in seeking information than they are in getting involved. But then if they do find the information they look for and get the answers they need, they will see that the administrations are responsive and responsible: they will in consequence be encouraged to get involved and participate, appreciating that they do have a voice in the decision-making process by which their local government frames policies, and that they can make a difference in this regard.

Partecipa.Net was the project that Emilia-Romagna Region presented for the selection announced under Phase Two of the national e-government plan in favour of e-democracy. The specific

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[18] Rur-Censis, E-democracy: un'opportunità per tutti?, Report, Rur-Censis, Roma, June 2004.

aim of the Partecipa.Net project is to encourage citizens to participate in the territorial planning and development program being brought forward under Regional Law 20/2000.
The idea is to provide tools and channels easily accessible to all citizens in the region so that they may understand regional and local policies, form opinions about them, express these opinions, and get feedback in the process. The basic assumption here is that it is necessary to put out full information and make it accurate before one can even begin to think about getting the citizens involved and then seek their opinions.
But it is only as we go along, as the interaction proceeds, that we can figure out what works best in the effort to elicit participation: what the best way is to make the information available, and what the services should be like, so that targeted communication channels can be set up.
Part of the point in getting as many people involved as possible is to overcome the digital divide in its every form, which means placing a focus no only on those who are at a disadvantage but also on the divide between cultural backgrounds, generations, and forms and types of employment.
Another important focus in the effort to start up participation processes is the policy-makers.

The project is based on techniques of citizen-relationship management designed to establish a stable and fruitful interaction between citizens and the public administration. To this end, participating administrations (and a broader pool of administrations thereafter) have been provided with what is called the E-Democracy Kit, an open-ended software product making it possible to replicate participation processes in as many administrations as possible and with the greatest flexibility.
The Kit is not going to cost too much: the software is distributed through an open-source licence, for one thing, and for another, each administration will be able to make it functional to its specific needs. The citizens, for their part, have at their disposal

participatory methods and procedures, such as guidelines for putting together a group, methods for moderating debates online, and methods for publishing the results of their democratic-participation initiatives and carrying them to success.

The Kit has different technological components built into it and makes available different support methods (such as manuals and guidelines) by which to manage the citizen-participation process. Each such method and technology can work on a stand-alone basis, too, and can easily be put to a new use depending on the task at hand.

As all the national reports on e-government have been stressing for some time now[19], this idea of reusing a software program or component or a method is proving to be an excellent way to give wide currency to e-government services and, no less important, to standardise the basic processes and functions of front- and back-office systems and to share solutions, including solutions to the problem of organisation.

The administrations whose projects were selected under the phases of the national e-government plan have since made these projects available for any other administration that should wish to adapt them to its own context, and the newer tenders are already making it a requirement to present projects designed from the outset with an eye to their reuse.

Reuse comes in handy especially for the smaller administrations, which often lack the resources necessary to plan and develop on their own an e-government project capable of answering to their specific needs.

What should also be pointed out is that when a single project is extended to cover an entire area (perhaps a region) with a uniform, consistent service, it becomes that much easier to foster a sense of community throughout that area and to achieve quality relationships among its residents and administrators.

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[19] IDC, A comparative analysis and market forecast of e-government services in Europe, http://www.idc.com/research/reshome.jsp, January 2004.

3.2 *Online access to life-event services*

What The core part of any e-government plan consists in its online services, which in Italy and Europe are considered the citizen's gateway to the information society. Government and institutional Web sites in Italy are providing better and better information services, but more-innovative services enabling modes of transaction and interaction between citizen and government are still in embryo. And this is precisely the challenge for the future, the challenge that comes with the social changes brought about by the new technologies: getting citizens to play a more active and direct role in the life of their institutions.

When the first national e-government competition was announced, the administrations presenting their bids for selection were urged to cooperate, to envision broader and more ambitious solutions that would otherwise not be possible, and especially to make specific what had theretofore been vague criteria for framing services (criteria setting levels of interaction, types of service, and modes of communication).

The People project was designed to set up a front-office system enabling citizens and businesses to have the widest possible online access to the services offered by the public administration: these services are organised to respond to the needs of citizens and businesses as they go through life events, and they make for an occasion of interaction and exchange between the citizenry and the public administration.

The People Aggregation is a network comprising 55 government bodies, mostly city administrations, that serve about 7.5 million citizens in 12 regions across Italy. The services offered have been grouped in five categories: local taxes, grants and authorisations, information about each area, individuals, and vital statistics. In each such category there are community services as well as online services making it possible to fill out forms, make payments, and find documents and sources; many of the services can be accessed

through different channels (over the phone, for example, or over the counter, or by e-mail); connection to the online services is facilitated by specific communications protocols, and some of these services, e.g. file sharing, are specifically dedicated to administrative users making separate contributions in working to carry out a single task.
So everyone is and will be able to use the Web portal ask questions specific to their case; file their taxes; access real-estate records and view different sorts of documents; apply for grants and authorisations; obtain certificates of vital statistics, such as birth and change of address; and take part in the social and institutional life of the community, as by joining forums; and find information, including information relating to tourism, the environment, and traffic.

Regarding the system's architecture, the information and online system are so structured as to enable each city government to retain its autonomy in running its administration and affairs, at the same time as it will enable individuals and businesses to use the services according to their needs and roles.
The structure conceived for this purpose is based on domains through which each government body can communicate with the others. On top of this structure comes an architecture having three layers: a front-end service layer, a virtual service layer, and a back-end service layer.
The front-end layer is for services provides to citizens, businesses, and other administrations; the virtual layer provides life-event services; the back-end layer makes available information provided by government bodies and service providers.
The government bodies participating in the People project (all of them local governments) are able to provide their services through dedicated Deployment Centres instituted to serve either a city or a larger territory. Each Deployment Centre will enable citizens to find the information they need or to obtain a service directly, and though different channels are available through these centres may

be accessed, each channel will present a standard user interface. Government bodies, too, will be able to use the deployment centres to get access to services and infrastructures, and government bodies larger than city administrations will be able to do so at lower prices by sharing tools and pooling resources.

Each centre makes different sorts of services available, among which hosting data and applications, providing centralised management of authentication and documents (through archival and protocol functions), providing automated management and monitoring of networks and systems, providing certified mail, and enabling virtual private networks with reliable interfaces to the open network and intelligent voice responders making it possible to use the Web by voice instructions.

This was not just an e-government project, designed for such purposes as streamlining administrative procedures and making them speedier and more transparent; it was also an aggregation project enabling citizens to access the services of any of the participating government bodies, even across districts; so, too, the services so bundled, being provided in uniform fashion and covering the territory with a thick network of access points, will work in the long run toward the goal of overcoming the digital divide. In fact, only by providing equal access to services and infrastructures will it be possible to carry to completion the above-mentioned process of change, the inclusion process by which citizens will have equal access to the information society and services will be provided in uniform fashion. The digital divide, separating those who are computer literate from those who are not, is a real problem rooted in different causes - cultural, generational, social, and psychological - and the risks involved are those of turning this into a social divide proper and thinning out the interaction that citizens can have with their institutions.

So if we want e-government to have any chance at success, we must first make sure we understand the mechanisms by which citizen participation is fostered, and we must also set in motion

synergistic processes by which to increase the quality of social interaction.
The People project, then, offers a concrete technical and organisational solution on which basis to attain the goal (first set out in scholarly writings, subsequently translated into proposals for legislation, and finally finding expression in the national e-government plan) of enabling citizens and businesses to converse with the public administration by way of a single online access point. The type of administration around which the People Project was specifically designed - the type acting as the chief e-government interlocutor - is the city government, this on account of the sheer number of such governments in the territory and the closeness that they have to the citizens and businesses under their administrative purview.

To understand the structure of the services we have to stress that the primary objective of the People Project, then, was to set up a front-office system enabling wide online access to the services through which citizens and businesses have occasion to interact with the public administration.
To this end, it proved necessary in the first place to single out the different services to be offered and to group them according to the "life-event" they respond to. With that done, the project entered its second stage, which consists in designing uniform access channels and a standard graphical user interface with the functions to be built into it.
It should be borne in mind here that many of the participating administrations had already designed online services that they were running. For this reason, the first thing the working groups did under the People Project was to make a selection from the services that the administrations in the People aggregation were already offering.
Much of the success of an online service depended on how well the administration has rationalised its back-office procedures, for

this making it possible to avoid duplicate operations and useless passages.
Equally important is that each e-government plan be reusable. The technological solutions therefore had to be portable, or exportable to other administrations, and it is for this reason that it was decided to have a three-layer architecture with uniform modes of access and standardised services.

The services are being set up on the basis of a preliminary study in which it was figured out what technical requisites each service should meet and what regulations it needs to comply with.
The services were sorted in six groups as follows:

- access to personal information. The user requests personal data stored in the records of the public administration—data describing one's vital statistics, for example, or one's status as a taxpayer—and the information so disclosed cannot be modified. This kind of service is immediate and user-activated: the information is delivered on the spot and is made available only upon request;
- access to administrative information. This service works exactly as the previous but for the kind of information that gets requested, namely, public-access information such as legislation, regulations, legal notices, conventions, and policy and information about administrative processes, procedures, and the like;
- requests placed on the public records. These are services performed on the public records storing information about natural or legal persons. The user will either place a request for existing information or give notice of new information. The service is not immediate, meaning that the request makes it necessary for the public administration to do some back-office work to either retrieve information or update a record. In this latter case, processing the request means modifying the information on record; examples of such services are enrolment in a school, registration for a course, granting licenses and authorisations, and filing taxes;

- calculating or estimating figures. These calculations are based on data produced through back-office processes, and which does not get modified as a result of the calculation. The data may be provided, in part or in full, by the user, as when calculating property taxes on the basis of data relative to a given piece of real property. These services are immediate, in that they get called up at the user's request and the process is fully automated, requiring only a single session between user and system;
- making arrangements. These services are immediate and enable the user to make an appointment to meet with someone in the city administration responsible for a certain service, for example, or to make a reservation to use an athletic facility, or to place a request to obtain a password;
- making payments. The citizen can make a debit- or credit-card payment due to the city administration. The service is not immediate, and the payment may be preceded by a notice.

Following are the functions through which the services so grouped may be integrated.

- displaying information. Display of information may require an authentication or an authorisation and may carry different levels of security depending on the kind of information requested. This is a single-session function at the end of which service delivery is complete;
- meeting requests. This is a two-phase service in which a request is placed by selecting from among a number of options (the user must first provide authentication or obtain an authorisation) and then a connection is re-established either by the user inquiring about the status of the request or by the public administration notifying the user of any matter relating to the request or of completion of the service itself;
- making arrangements. The user selects a service and makes an arrangement to use it. This kind of function may require authentication or authorisation;

- making payments. The user signals the payment due, and to this end may have to provide an authentication or get an authorisation. The service is assumed to come to completion in a single session. The payment itself may be made using a debit or a credit card, and in this case the public administration will have to have a second interaction, this time with the bank or credit institution that issued the card.

The services may be accessed in a number of ways, such as over the counter (for walk-up assistance), over the telephone, or over the Internet (with an online connection provided through designated access points), or by SMS, fax, e-mail, or regular mail.
Online and e-mail services may require increased security (as through encryption), and the required level will be established on a case-by-case basis by conducting studies that go into the legal matters connected with the service in question.

3.3 *Online access to social and health services*

The idea behind I-Care, a collaborative project entrusted to a group of university research centres, local agencies, and private companies, was to provide online access to health and social services, chief among which the service of providing care, medical or otherwise, at home. The ICT system necessary to this end will have to support a number of functions, including processing and assessing requests for service, putting together a work plan and the team entrusted to do it, providing the service itself, up to the eventual balance of the provided services.
So the main I-Care mission was to integrate social and health services, and to do reversing the model on which basis this kind of care is typically provided, which means setting up a situation in which the citizens in need of care become the focal point around which revolves the entire organisational system, rather than the other way around.
A part of the work aimed at working out all the legal issues involved in setting up and running an e-health service: of special concern in this regard was the issue of the privacy and security of

medical and other personal records. A reconstruction of all the legislation, jurisprudence, and precedents bearing on the issue of the privacy of medical data made it possible to figure out the requirements that such a system had to meet. There were in particular at least three questions that needed to be addressed in this regard:

- the question of the right to privacy: here it was necessary to publish a legal notice setting out the responsibilities and obligations of those in charge of processing the data and obtaining the user's consent to go ahead with such processing;
- the question of data-processing techniques: here it was necessary to set out requirement for cryptography and digital signatures and the responsibilities of the individual whose signatures these are;
- the question of authenticating the system operators: here, we need access codes and digital signatures for all documents needing to be underwritten for administrative purposes.

This work then served as a basis for drawing up a code of conduct setting out rules for all the operations required in carrying out the online service.

One important privacy area was that of interpersonal (so called micro/micro) relationship, which concern patients in their relationship not with physicians, health practitioners, and social workers, but also with any other caregiver, including family and friends. Given this broader range of application in which privacy has a role, the caregiver have to be especially careful in processing data pertaining to the cared for, complying with all applicable law and deontological codes.

Likewise, health practitioners have to undergo training qualifying them to make sure that the patients' data is processed properly and respecting confidentiality before family and friends. And we must also take into account the relationship between the cared for and the institutional health provider: this involved the use of medical data, a use extensively regulated by law, and data processor was

therefore required to give privacy notices to the data subjects and to obtain the latter's consent. Specific forms had thus been prepared in compliance with the law, these including the privacy notices and the consent form.

A second important privacy area was that of the (micro/macro) relationship that service personnel have with service providers (hospital and field nursing staff, social co-operatives, service sector institutions) and with service managers (municipality and local health authorities). Privacy requires here that practitioners be identified or authenticated and that they go through the appropriate access authorization profiling depending on the kind of practitioner involved, on the kind of institutional function he or she is entrusted with.

There was also a third privacy area, this being the (macro/macro) relationship between agencies, and this too has been a point of legal analysis. In fact, we had to make sure that each agency was compliant with privacy law, especially as the Italian Code on Privacy[20] of 2003 introduced several important innovation. The major innovation has consisted in regulating information flows among agencies, a process that has hitherto taken place in paper form and is now in digital. The reason why European and Italian legislation has focused on information exchange by way of ICTs, is that this poses a greater risk to privacy and carries a greater likelihood of data misuse, which may come to light only subsequently, when different pieces of data are cross-checked.

For the I-Care project we first classified the data to be processed and services to be provided, and then built this classification into the ICT model for interaction between citizen and service provider, and this made it possible to single out the main privacy issues involved in processing personal, sensitive and health data along with the security measures to be adopted to this end. Our focus with respect to health and social practitioner was on the obligations to provide privacy notices and obtain the citizens'

[20] Legislative Decree n. 196, June 30, 2003.

consent before processing their medical data. The classification of data made it possible to process it according to appropriate rules and procedures in compliance with the law.
Data was classified into three groups: health, sensitive and personal data. Also, we had to focus on the legal status of practitioners. Indeed, Italian law requires that processing be carried out by public health providers and medical professionals , a group that does not include social workers. This made it necessary to use two different privacy standard depending on whether at-home service to the cared for is carried out by a health professional or by a social worker. Thus legislative decree no. 196/2003 section 34, and annex B, single out different authorization levels ranked according to classes of practitioners (e.g. specialized physicians, general practitioners, nurses, social workers - seventeen classes in all): accordingly, we had to work out different forms of authentication and authorization that different practitioners need in order to access different services.
Another problem was that of using personal records - as well as health and sensitive data - to see if the I-Care software modules could be used outside the control of the institutions legally competent to store and use the same data. Indeed, when a governmental institution builds a digital archive using data coming from other agencies, the data processor at this agency will have to comply with the rules established by the Privacy Authority for such communication, and will also have to offer a reason or justification based on the institutional role of the receiving agency. Personal records are subject to specific rules thus Italian law (DPR 223/1989) requires that personal records be viewed and extracted exclusively by the municipal officials specifically designated to that purpose. This requirement have been implemented into the I-Care platform by making it impossible to anyone except for the municipal records official to access the data used for the project; therefore I-Care software components filter medical records accordingly.

Thus the legal issues involved in the I-Care project brought out at three problem areas that needed to be looked at:

- the first problem was that the project, being designed for delivery of both medical and social services, accordingly made it necessary to process two types of personal data, medical and non-medical. So here we needed to set up two standards (a double set of regulations) according as the data to be processed is classified as medical (under art. 76 of the Italian code on privacy) or otherwise;
- the same problem applies to the personnel themselves: under the above-mentioned art. 76, only medical personnel can handle medical data. So, here too, we need a double set of regulations, one for medical personnel and the other for social workers;
- the third problem was that of assigning a legal and administrative status to the document being processed and affixing a digital signature accordingly. This kind of specification made it necessary to work closely with the administrations involved, and it will also require a back-office apparatus capable of supporting the new document-management system and protocol.

3.4 *Online services for education*

Any e-government project risks failure if the three traditional skills required in the information society, namely, reading, writing, and calculating, are not supplanted with computer and communications skills. This is challenge not only for the public administration but also, and in the first place, for schools and society in general. Therefore, many regional administration, e.g. the Emilia-Romagna Region, are supporting teachers throughout their territory, and recognising their central role, and are supporting, too, professional training in the creative use of the new technologies. Parallel with this, there is a strong effort to reduce to a minimum the risk of excluding of sectors of the population from the growing use of technology in the information society.

Similar problems arise outside education and training. If the objective is to systematically reach marginal social groups and areas, programs will have to be worked out and managed locally. However, local planning in this field is extremely variable.
Another problem was that there are not models and financial means with which to train teachers in ICT (EU resources have been used, but these are not always easy to locate and access).
ICT training of the staff working in the Region's public administration is fundamental for the success of all the initiatives proposed, and that problem is being addressed.
On the growth of ICT culture in schools, among teachers as well as students depends importantly the area's ability to increase the quality and development of its economic competitiveness in the future.
The other educational challenge in ICT literacy is that of continuing studies, which means training in the new technologies those who did not get enough of it (or enough quality in it) to acquire the needed skills then they were studying. This applies to young people who have left school early or whose education was non-technical; it applies also to the elderly, to those whose trade is a craft, to homemakers, and generally to everyone unfamiliar with information technology or is otherwise on fringes of society. Outreach here is much more difficult to achieve, but crucial nonetheless if we are to have social equity and to prevent marginalisation. So those are the main principles on which regional policy is based.

The initiative had the aim to provide online access to the teachers and students in the 1,000 primary and secondary schools making up the region's school system.
There was not in Emilia-Romagna any homogeneous level of ICT literacy, just as there is not any uniform access to the Internet or to online public and private services. The Region therefore set up a Web site for schools, the objective being to provide a gateway where all the schools in the system, and anyone, really, can discuss

their experiences and learn how the new technologies can be brought to bear in education[21]. The project has been coordinated by the people staffing the institutions making up the region's school system[22].

Regarding the training of administrative personnel for online services we start from the consideration that ICT literacy is fundamental if people have to take full advantage of the administrative online services and the opportunities for public participation. The point with public services is that we need to guarantee universal access to them. So the Region has been promoting and supporting projects increasingly more consistent with the skills and technical equipment of users, so as to minimise risk of exclusion, and this means providing ICT training where these skills are required. The Region has also been working to enable easy access to its services even without the use of any of the new technologies. This is not to downplay the advantages that come with ICT services: they are considerable. But then, for all that these services are being made simple and friendly, their use is still bound to prove unintuitive to some, and it is for this reason that it is so important to make as many people as possible ICT-literate.

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[21] http://www.scuolaer.it/

[22] There are in the Region at least three centres with a long experience in the use of online technology for education. Bologna has KIDSLINK, the biggest Italian network, connecting a few hundred schools, instituted by National Research Council and ARCI and supported by the City of Bologna and the Provincial Board of Education. Forlì and Cesena have CRIAD (a centre for research on the use of computers in education), instituted by SERINAR (Integrated Area Services) in cooperation with the City of Cesena and the University of Bologna. Parma has LTT, instituted by the University, the Province, and the Provincial Board of Education.

The public administration works on several levels, from local to national, and there are great differences to be seen not only from one level to another but also from one government to another (such as the regional government) when it comes to the technological equipment available and the skills, including the management and organisation skills, of staff and personnel. It is worth noting here, in particular, that the investment put up to train staff for back-office and front-office work does not usually pay off, even when the skills being taught are non technical. These differences reflect on the quality of the online services provided.
There is not much analysis devoted to the user understood as the person around which and ICT-based service should revolve. Most of the analysis seems to focus, instead, on existing services and on the causes that prevent access to them.
ICT service providers generally invest more in technology than in training. This probably explains the difficulty involved in making these services widely available across all strata of society once a core set of users has been "acquired," the users who, owing to their age, background, and circumstances, respond more quickly and with fewer problems to the opportunities offered by technological innovation.

Information hubs and community networks need ICT technology and equipment to provide services of cooperation and community-building. The idea is to develop networks capable of linking together enterprises and public institutions, such as schools and public-relations offices, so as to encourage the formation of an online community where people can train in their professions. It is this kind of professional training, rather than ICT-literacy programs implemented on a mass scale, that most often results in online projects and services being launched[23].

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[23] Initiatives in Milan, Bologna, and Turin have shown how such active communities encourage citizens to use computers for many tasks and to

Other initiatives have been launched with the aim of bridging generational gaps and promoting community-building. These initiatives can be sorted into two main groups according to the kind of training they provide:

- ICT literacy programs for resident communities, animated and run by students, who either volunteer or work in exchange for credits for Internet access and Web-hosting services;
- emergency task-force programs for families, small enterprises, associations, etc., run by youths (students or otherwise) with skills in ICT.

Not only education and the school system are the focus of the initiatives to provide ICT training, but also to provide access (or equal access) to public online services for marginal groups; the aim here is to minimise this risk of exclusion, however unintentional its causes, since a lot depends on the features specific to the territory.
To achieve this result, we must in the first place raise a political awareness about this problem, which is more and more recognised and felt. Secondly, a series of agreements has been made with the organisations working in the interested areas, in order to:

- prepare internal trainers capable of acting from within the organisation and the communities;
- identify the people in need of training, and working out the contents of such training on the basis of their individual characteristics;
- work in coordination with business associations to bring ICT literacy to businesses, and with trade unions, community cooperatives, and volunteer associations[24] elsewhere;

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familiarise with the Web and online services. The training provided sets in motion a process that develops and grows by inherent force.

[24] Non-profit associations, and volunteer associations in particular, represent a social base whose composition and numbers make these associations an important vehicle of ICT literacy programs, and the benefit works for them, too.

- provide the training and information necessary to access and use online services; this will help citizens get involved and will encourage administrations and other organisations to make a commitment to online service;
- support the effort to set up—at libraries, schools, recreational centres, and other public venues—free points of uninterrupted access to the Internet;
- promote awareness campaigns.

Finally, the Region has been promoting and supporting programs to train the trainers, and professionals providing recreational entertainment.

4 Enabling public services through technology

ICT helps promote citizen participation in public life, and it plays a role, too, in the way we go about organising our affairs and setting up processes in the world of business and manufacturing. New forms of e-participation stem from the ways the public administration uses ICT and makes it widely available in providing services.

The four projects outlined all rely on advanced digital technologies, and they were aimed at growing the potential that technology can bring to the public sector.

They were intended for a general public in People and Partecipa.Net and for sector-specific practitioners in I-Care and Fourth Generation. Here is how interaction was set up in each of these four projects:

- in People, interaction is based on multi-channel access to more than 200 services provided by the city administrations; passwords and smart cards are used to authenticate users and to sign the documents required for the legislative process;
- in Partecipa.Net, it is based on the E-Democracy Toolkit, a sophisticated suite of software programs designed to support cooperation and group decision; the programs are user-friendly and present a unified interface;

- in I-Care, it is designed for health practitioners and provides a responsive set of health and welfare services to citizens; users are provided with new tools such as cooperative interfaces and wireless palm pilots;
- in Forth Knowledge, it is mostly based on Web portals designed for a smooth and pleasant exchange of contents in an e-learning and e-teaching setting in line with high standards of usability.

The projects and initiatives described here are the result of a joint and coordinated effort among local, regional, and national government bodies and were preceded by long negotiations undertaken to reach formal definitions and agreements.
It was felt that the systems should be designed and implemented only upon establishing a common willingness to jointly give shape to the projects according to user expectations; serving as a guarantee was the existence of wide-area plans, such as the European initiatives for the information society and the national e-government plans; legislative bodies and financial institutions offered set of innovative and open-ended solutions to the problem of drawing up rules and regulations and the problem of cofinancing.

Public administrations are establishing best practices, and the idea of software reuse in the public sector is looking increasingly interesting to them, not only because it saves money, but also, and chiefly, because they share the idea that we need to rely on the teamwork of politicians, managers, lawyers, and technicians if we are to identify local problems and interests and integrate them in an inter-regional and European context, so that local public administrations may improve their operation.
From this perspective, we may notice the following:
- People was one of more than 400 projects presented in Phase One of a public notice issued by the Italian government. Public administrations at different levels took part in the initiative;

the vision driving the project was that of achieving balance and integration among local systems;

- Partecipa.Net was presented for a government program specifically intended for e-democracy; again, different public administrations shared a vision where the political agenda may stand to gain by informed decisions taken through the teamwork of decision-makers and stakeholders;
- I-Care presents the joint work of a group of public administrations and organisations coordinated by a regional administration and operating within a limited geographic area; the focus was on knowledge-building among groups of people having a common interest in welfare and health care; the point, beyond that of providing a service, was to build a practice and a set of transferable, reusable tools that different public institutions can share;
- Fourth Knowledge involves all the educational institutions of a large region; cooperation is among administrations that have similar educational contents and purposes; parallel with this, the project encourages establishing wide public access to ICT and to specific learning opportunities, this to avoid the risk of newly excluding sectors of the population in a growing technological society.

The last two projects explicitly identify social inclusion as a prerequisite for effective e-democracy. But even the first two stress the importance of providing access to digital services for as many citizens as they can.

The multi-channel mode of operation is not a secondary issue: the success of the systems depends crucially of consistent ICT tools that are easy to use and provide services in ways that accord with users habits and preferences.

Enabling citizens to control public policy seems to be a more difficult proposition: e-rulemaking is still in its infancy[25], and the

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[25] Noveck B.S., The electronic revolution in rulemaking, Emory Law Journal, v. 53, n. 433, 2004.

problem is addressed only by the Web portals of Partecipa.Net and Fourth Knowledge, so the decision-making process needs to be handled through knowledge-management techniques (in Partecipa.Net and People) that, starting from interaction and information gathering, make it possible to share, select, verify, transform, and disseminate information.
The multi-channel tools and the feasibility of participation in the decision-making process both help users and citizens place greater trust in e-democracy[26], especially when they see positive responses and participation on the part of the public administration and its institutions.

More generally, that citizens have a right to be fully informed, and to find that information easily, is a fact recognising which public institutions commit themselves to enabling wide access to data, thereby promoting a virtuous cycle of information exchange. It follows from this recognition that online resources need to be reorganised and online services reengineered.
Public institutions are therefore coming to appreciate that e-democracy and e-participation need a new perception of citizens as holders of an inalienable right to digital citizenship rather than only as users of ICT and online services. This new perception, when acted upon, will help to widen the democratic process and to empower people.

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