Chapter 12
eGovernment Initiatives in Italy

This chapter focuses on several initiatives carried out in Europe and in Italy in the last years; such initiatives are analyzed under the socio-economic point of view, providing quantitative measures that are behind the decisions previously described in the book.

The recent debate about the limiting factors to the growth of Italian economy has shown a convergence of at least two strategic aspects: (1) the need for innovation in order to improve the competitiveness of our products and services and (2) the inadequate allocation of material and immaterial externalities, which is plaguing the Italian economic system. Both of these critical factors highlight the lack of attention paid in recent years to the inefficiency of public and private services. This condition is likely to continue to distort the private and public strategies of overcoming the present difficulties.

Since the policy-maker strategy must seek to ensure both the economic and social development of Italy and the reduction of regional imbalances and of social inequalities, the related instruments are a priority for the creation of a network of services, rules, and organizations that serve this strategy. It is up to the government to create and/or to boost the incentives for an externality of networks and to implement a policy of services needed by the private sector in order to make advances in the European Union and also in terms of becoming an information society. A successful business strategy requires an extensive and innovative use of information technology and communication associated with the ability to operate in the network, both within and outside the company by relying on the spread of knowledge, the delocalization of the simplest and most labor-intensive activities, and the selection and acquisition of a service network in collaboration with other innovatory administrations. It is also up to the government to define the strategies as they seek to modify services, manufacturing processes, and especially all the intangible components (organization, sharing of knowledge, rules) without neglecting the wealth of knowledge that comes mostly from experience. In order to set up an innovation strategy, it is necessary on the one hand to be aware of the expected benefits and costs and on the other hand

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G. Viscusi et al., *Information Systems for eGovernment*,
DOI 10.1007/978-3-642-13571-2_12, © Springer-Verlag Berlin Heidelberg 2010

have human resources available at all levels in order to understand and to develop the actions needed for such a change.

Section 12.1 adopts a socio-economic point of view in the discussion of strategic guidelines for eGovernment initiatives, an issue that we have already considered in Chap. 4. The main topics of Sect. 12.2 are three different surveys performed in Italy on dematerialization of documents, ICT adoption in Italian companies, and cooperation among agencies. Section 12.3 critically analyzes open problems in eGovernment in Italy.

12.1 Technological Innovation as a Guide to Redesigning Government

Innovation strategies evolve along a narrow path from which it is easy to fall back into the previous indolent situation or it is easy to embark on an improbably formulated modernization without solid prospects of success. In tackling a reform of government with the support of technological innovation, it is necessary to start out from the elements of a polycentric model such as a network of information-sharing government departments, IT-imposed transparency, clear identification of official tasks and responsibilities, rapidity, improved work procedures, and awareness of the user's needs. The path leads to success if one can allow for the coexistence of technological innovation, organizational innovation, professionalism, and motivation of the staff and especially the improvement of services that are not only attractive but also statistically measured and controlled by the citizens [184].

12.1.1 The Strategic Guidelines

The strategic guidelines of the spread of technological innovation and information [230] focus on the need to

1. place citizens at the focal point of government's mission, reducing the layers of intermediation and simplifying compliance procedures and direct access to services;
2. enlarge the principle of subsidiarity to the relations between the private and public sectors in order to define the public – private alternative of service supply. This alternative should be based on the principles of efficiency as well as fair competition;
3. raise efficiency by improving the organization of self-administration and service provision, exploiting the potentialities of the networks;
4. leave the hypothesis that government is a single organization and implement a new architecture of government following a federate and/or decentralized model; the architecture proposed in Chaps. 9 and 10 goes in this direction;
5. separate data from applications in order to improve data quality and foster data-sharing and cooperative use of applications (see Chap. 2);

6. carry on direct and real time exchange of information;
7. introduce direct channels of communication (web sites, e-mail, traditional personalized information, calls centers, etc.), with periodic checks on the levels of service and user satisfaction.

It will also be possible to increase transparency in administrative action, decentralize the provision of services, bring government closer to people, and increase the accountability of all governmental offices. In brief, the characteristic elements of the government innovation are network administrations, information sharing, transparency required by computerized procedures, clear identification of tasks and responsibilities of officials, time saving and improvement in administrative processes, and awareness of the needs of citizens and enterprises. Central and local administrations have different missions and organizations that make them different and sometimes competitive if not in conflict with each other. Therefore, it is necessary to allow more discretion to the contracting organizations and to allow them full accountability in the allocation of human, technological, and financial resources. The choice of technologies is not just public demand, but it is a strategic decision that has ripple effects throughout the economic and social system, since it also has implications for the role to be played by the entire public sector, in powering or braking national economic growth.

12.1.2 The Modern Public Administration: A Network of Systems

In order to analyze the elements necessary for the reform of public administration based on technological innovation, once it has been established that information is key to the functioning of government, it follows that a modern vision of the functioning of administrations requires not only the creation of managerial information, decision making, and control systems but also their integration into an informative unified but decentralized system based on the decisional and managerial autonomy, the cooperation of applications, and data sharing [5, 71]. Decentralization, a particularly complex organizational model, requires more information than centralization and implies the "re-engineering" of procedures (as we have seen in Chap. 11) to enhance the value of the information economy's ultimate function, namely communication. Without communication, information is stored but not used by public and private agents; the resulting informational asymmetry would render decentralization vain and justify centralization as an information-saving organization in which synthesis is performed by the authority at the organization's apex.

The premise of this technological vision of decentralized and/or federate government is the accomplishment of a network of networks, where each administration maintains its autonomy, but where all the organizations can share the technological structure and can exchange data, information, files, and documents in real time supplied together with security issues. This reorganization of the public administration should include the transportation network, the network of interoperable services, and the layer of applications, defined as technologies that allow cooperation among

information systems. The key factor in the re-engineering of procedures is to separate data from applications in order to be able to customize the procedures, while at the same time it is necessary to have cooperation between different procedures and the sharing of databases. All these principles are coherent with the organization of the reference ICT architecture described in Chap. 9.

12.1.3 eEurope and the Economic and Social Growth

The recent eEurope initiative of the European Commission aimed to accelerate the development of the new economy, of which e-commerce, e-banking, and eGovernment are just some aspects, in order to exploit the potential for economic and social growth. This has had an impact on the whole economic system, but it is indispensable to create the institutional and technological infrastructures in order to stimulate the use of new technologies and also to get the labor market to accommodate the new needs for professionalism and flexibility through training and permanent education. Consequently, the public administrations should be given the task of providing and stimulating the externalities of the web without which the private sector would encounter difficulties and by itself would not be able to create favorable conditions for the development of an information society.

It is indispensable to improve the functioning of institutions (markets, private and public enterprises, public administrations, rules, rights of ownership, controls) in order to reduce costs, help development, and create suitable normative and organizational conditions. This should be done so that public and private decisions and the behavior of all the operators, both private and public, have efficiency as their main goal. This is true not only for sectors where competition comes into play but also for the entire economic and social system. Agreements should be promoted for safeguarding the interests of consumers and in general the weak parts of the contract, even though it may be difficult to identify whose interests should be protected, particularly if the spatial and temporal dimensions are taken into account.

In addition, the evolution of technologies needs to be monitored in order to avoid the behavior of producers harming the public interest, such as the right to access technologies or save the investments made by administrations or by private individuals. This involves safeguarding the fundamental values of the economic constitution of a country and not just the sovereignty of the consumer. Thus, everyone should have the possibility to directly contact public offices in order to get services and receive information. If this principle is adopted, then this is automatically valid for all the operators on the web. Reaching this objective means having institutions that are equipped with wide-ranging technological knowledge, making large investments, and instigating considerable innovations even at the institutional level. However, there are substantial returns both for the national industry and for each individual citizen.

Related to the theme of governance is the need to establish a *culture of measurement*. This should be done in order to change the relationship between the public

administration and the citizens. It is essential not only to study a coherent set of indicators but also to review the system of formal and informal incentives tied to the performance of the new organization, especially in a system lacking indicators comparable to those provided by the market. If there is no culture of measurement, then a strategic element will be missing that is fundamental to the transparency in relations with citizens and companies.

On the other hand, limiting transparency to procedural aspects without pushing for comparisons in terms of results prevents the exercise of democratic control and delegates this control to professional controllers. If there are no established rules from the start, such controllers will not necessarily be bothered about checking the achievement of the results assigned, but will tend to emphasize the formal aspects of what the administration has done.

One can observe the move toward a form of state that is articulated on centers of autonomous decision and on different organizational models. This leads to hybrid organizational roles that have little to do with central government. One of the weak points in the functioning of public administrations is that there is a low level of information in terms of quality (we have considered this issue in Chap. 2). This is due not so much to limited opportunity to acquire information but rather to an incapacity to process it.

The attribution of power regarding technical norms in the sector responds to the need to produce a discipline in that sector which has the following characteristics: (a) expertise and thus someone with extremely high technical and scientific professionalism; (b) flexibility toward continuous and rapid technological change; (c) quick reactions to ensure a simultaneous re-adaptation of the technical rules in relation to technological advances and to avoid irreversible efficiency due to ex post interventions.

Only the second solution allows individual citizens to access all the public offices from the same point in order to have the services provided by all of them. This online public administration network is thus one of the fundamental points of modernization because it allows a service to be provided by delocalizing the relationship between users and administrations. In this situation information desks are virtual and the administration office itself can be hundreds or thousands of kilometers away from the user since access to the desk is online.

This model breaks through the monolithic and monopolistic visions of most public functions. It opens up institutional options that are not restricted to the state market alternative, but are based on decentralized and federated solutions or on solutions based on competition between institutions. These solutions mean that realistic and well-documented cost – benefit analyses can be carried out. Finally, the relationships between the public administration and private intermediaries need to be clarified.

In fact, the web does not actually allow direct exchanges between administration and citizens and businesses, in reality it requires numerous intermediaries and brokers and it develops market niches. Thus, the idea of delegating some public functions to private enterprise may end up replacing a public monopoly with a private monopoly. Getting private enterprise to be a supplier of public services entails widening the network of the administrations to private enterprises, which then have

to be authorized to send data via the web to the administration in charge of the service. Moreover, for private bodies to carry out the service, they need access to public information services, and this entails having security regulations to identify who has access rights and who is authorized to modify public databases, etc.

12.2 eGovernment Development

Society bears the costs of insufficient information on the selective public services which help the weaker members of society and enhances the efficiency of private enterprises. Unfortunately, government inefficiency, arising from complex procedures and a lack of transparency, encourages opportunistic behavior and discriminates against those who should be the real beneficiaries of assistance through solidarity policies. Cross-referencing the tax database with the social security database improves the tax compliance, and furthermore cross-referencing the beneficiary databases with the tax and social security databases reveals many false invalidity claims, and the multitude of people who collect benefits they are not entitled to. The dissemination of knowledge in governmental agencies has not remained at the strategic stage but has shown some success despite the budget difficulties.

12.2.1 Survey by CNEL on the Dematerialization and Network Transmission of Documents

In 2004, the Italian National Council of Economy and Labour (CNEL) commissioned the University of Roma Tre to make a survey on the computer services provided to private enterprisers by various public agencies and their degree of interaction. Four public agencies were involved in the case study: the customs agency, the union of chambers of commerce (Unioncamere), the social security agency (INPS), and the revenue agency. The aim of the survey was to collect information on the following:

1. Document exchange between the agencies and the enterprises, and the provision of network services by the government agencies
2. The identification of direct relationships or relationships through professional intermediaries
3. Estimates of costs and savings arising from the use of computer services and the ability to put them into practice
4. Identification of the most widespread technologies in this environment
5. Sharing of information between multiple agencies
6. Possibility of sending information simultaneously to various agencies

The exchange of e-documents from businesses to government agencies was done almost completely by using online documents (6 million a year for the customs agency, 2.2 million for the Unioncamere, 15 million for INPS, and more than 37

million for the revenue agency). The return flow by the agencies to the businesses was equally significant (42 million documents for the revenue agency, 23 million for Unioncamere, 12 million for INPS, while there are no data for the customs agency).

The companies' involvement was very high even though they were not legally obliged to use computerized tools. The reason for the online use was that companies wanted above all to save the time from going to the agencies, while they did not consider the savings in direct costs significant. Companies had the means to communicate directly to the agencies or through intermediaries. In general, services were activated directly by the users and their cost was borne by the agency, except for the Unioncamere.

As for the processes, all the agencies knew of the progress and processing of their files. The technological solutions were differentiated and often proprietary, while the solutions adopted for transmitting data and modules used Internet + VPN on http and https and ftp protocols, digital signatures, and public key infrastructures.

In most cases, several offices of the same agency shared the same documents, while both the customs and the revenue agencies shared the documentation with four other agencies. Process modeling tended to make the online/computerized service as close as possible to the traditional service in order to provide a smooth transition from the use of traditional services and the use of computerized ones. Long-term storage was purely digital, but the speed of innovation in the market and in technologies could make even established standards quickly obsolete.

The survey showed also the involvement of intermediaries, to which businesses are turning to liaise with government agencies on the basis of non-uniform regulations. This solution has certainly simplified the work of public administrations and intermediaries, but it has not shown an advantage in terms of monetary costs for businesses, while there were certainly time-saving advantages. Intermediaries are a factor in the spread of e-documents, but it is unclear whether this process of innovation also extends to businesses and if the savings are passed on to companies. The transparency of the process has improved because it is now possible to get information online with regard to individual files/records that are still open, but there are no obvious advantages in the re-engineering of the processes.

12.2.2 Survey on ICT in Italian Companies

The Italian National Statistics Institute (ISTAT) carries out an annual survey on the spread of ICT in Italian enterprises that have at least 10 workers employed in industry and services. In Italy, 97.9% of companies are connected to the Internet having adopted the necessary technologies to do so, with small differences in percentages found among companies of different sectors, locations, and size (see Fig. 12.1). Consequently, the focus is now shifting to the differences in how companies make use of these technologies to improve their processes and to increase their competitiveness. Within companies, there is still substantial room to utilize the ICT services to their fullest potential and to share and to integrate information (see again Fig. 12.1).

BUSINESS ACTIVITY SIZE CLASS GEOGRAPHICAL LOCATION	Company strategy	internal Newsletters	Work documents	Manuals, guides, training materials	Products and services catalogues
BUSINESS ACTIVITY					
Total industry	32.6	54.6	76.6	63.0	60.0
Total services	40.1	65.1	76.0	73.0	58.7
SIZE CLASS					
10–49	34.0	57.5	74.2	64.1	59.3
50–99	42.2	63.0	83.9	77.5	60.1
100–249	44.7	69.4	81.0	80.4	58.0
250 +	49.1	77.1	82.5	89.9	59.2
GEOGRAPHICAL LOCATION					
North west	34.0	59.7	74.9	68.2	56.7
Northeast	35.4	60.8	75.1	67.4	58.8
Center	40.9	62.9	82.6	72.7	64.7
South and islands	39.1	56.7	73.5	64.5	59.4
ITALY	36.6	60.1	76.3	68.3	59.3

Fig. 12.1 Enterprises with at least 10 staff and with intranet by the type of shared information within the internal network and by business activity, size classes, and location (2008). Several answers to the same question are possible on the questionnaire. Thus, the sum of percentages per line may be over 100

For example, only 37% of all enterprises share information on business strategies, while more than 75% use internal networks for the simple exchange of work documents. These differences are related not only to the complexity of the tasks but also to the characteristics of the sector. As the size of a company increases so too does the need to share information regardless of the type of industry or location.

Nearly 50% of all enterprises shares information automatically within the enterprise on sales orders and more than 40% on purchases. This same information involves accounts and inventory management. Only 11% of the companies use enterprise resource planning (ERP) systems, but with great variability between small and large enterprises: from 7.6% which have 10–49 employees to 63.4% which have more than 249 employees.

For businesses that have Internet access, it was found that 87% of them get network services from public authorities, with minor differences found by location (see Fig. 12.2). The percentage rises to 98% for companies with 100 employees and more and to 85.6% for companies with 10–49 employees. Over three quarters of companies use the network to receive information and forms, with wider differences between them with respect to the previous case.

BUSINESS ACTIVITY / SIZE CLASS / GEOGRAPHICAL LOCATION	All purposes	PUBLIC SERVICES EXPLOITED ONLINE: Obtaining info	Obtaining forms	Returning filled in forms	Treating administrative procedure completely electronically	Offers for contracts	Other procedures /activities
BUSINESS ACTIVITY							
Total industry	87.0	77.8	75.7	43.6	43.4	9.9	30,5
Total services	86.9	80.2	75.2	46.0	44.9	8.8	34,8
SIZE CLASS							
10–49	85.6	77.1	73.2	40.8	41.0	8.5	31,1
50–99	95.9	88.9	89.4	64.4	59.5	13.8	36,9
100–249	98.2	93.7	95.8	80.3	73.1	17.5	43,9
250 +	98.1	95.6	95.7	84.6	78.3	22.1	48,5
GEOGRAPHICAL LOCATION							
Northwest	88.6	80.9	77.5	47.8	47.4	10.0	30,2
Northeast	87.4	78.5	76.7	45.1	40.7	7.5	28,7
Center	84.4	77.1	74.0	41.5	45.1	10.4	36,6
South and islands	86.0	77.4	71.9	41.2	41.7	10.2	36,7
ITALY	87.0	78.8	75.5	44.6	44.0	9.4	32,3

Fig. 12.2 Enterprises, with at least 10 staff, using Internet to interact with public authorities, by purpose, by business activity, by size classes, and by location, 2007 (percentage values on the total of companies with Internet). Several answers to the same question are possible on the questionnaire. Thus, the sum of the percentages per line may be over 100

In particular, in the textile and retail industry the percentage of enterprises getting this service makes up two-thirds of the total or 10 percentage points below the average. In general, online banking or financial services bring together all types of enterprises, more than 90% of the total (see Fig. 12.3). Instead, a difference is seen in the demand for online training services, which although rarely requested in general (only 19% require them) are relatively less in demand by small businesses, especially the traditional industries.

The automated exchange of data, practiced by 36% of all enterprises, is a variable that separates the small companies from the medium and large ones. More than 60% of medium and large enterprises use this type of exchange and when compared to small companies they make twice as much use of automatic data exchange (XML, EDIFACT, etc.).

The use of e-commerce is minimal among companies. Only 28% of enterprises buy online, and the value of these purchases represents less than 1% of the total purchases. Even fewer companies sell online: only 4.8%, with a total value of 2.9% of the total turnover. The use of e-commerce is greater in the service sector (hotel, telecommunications, etc.) with businesses of more than 249 employees (about 14%). Despite the significant use of security protocols, the percentage of firms making use of these procedures is nearly 40%.

BUSINESS ACTIVITY NUMBER OF EMPLOYEES GEOGRAPHICAL LOCATION	Access to banking and financial services	Acquisition of market data (e.g., prices)	Acquisition of services and data in digital format	Acquisition of post-sale services	Staff training
BUSINESS ACTIVITY					
Total industry	91.8	67.2	53.6	45.4	14.9
Total services	90.6	62.2	53.6	43.5	23.6
SIZE CLASS					
10–49	90.9	63.6	51.3	44.0	17.1
50–99	92.4	72.9	66.2	47.7	25.0
100–249	96.6	79.1	73.3	50.4	26.9
250 +	93.7	87.3	83.4	52.7	43.4
GEOGRAPHICAL LOCATION					
Northwest	93.3	67.5	54.6	46.3	18.5
Northeast	92.4	63.6	55.8	47.5	18.3
Center	89.6	64.2	51.5	42.7	18.6
South and islands	87.9	64.1	50.9	39.5	18.4
ITALY	91.3	65.1	53.6	44.6	18.5

Fig. 12.3 Enterprises with at least 10 staff using Internet, by type of online service used, by business activity, by size classes, and by location (2008 – percentage values on the total of companies with Internet). Several answers to the same question are possible on the questionnaire. Thus, the sum of the percentages per line may be over 100

12.2.3 ICT Cooperation Within Government Agencies

The extent and methods of interactions between public administrations both in the back office and between government agencies and external players exemplify the vision of a "network system" for the provision of end-user services (see Fig. 12.4). The use of information technology increases the potential of *horizontal* and *vertical cooperation* between levels of government by providing improved and expanded services. At the same time, with increased feedback possibilities, there is an improvement in implementation possibilities and in fostering innovation in the administrative processes of public administrations. Recent examples can be found in testing and the use of innovative technologies, such as VoIP, Wi-Max, RFI.

Another example of a public – private cooperative project with high-impact innovation is the role assumed by the public administration in the implementation of *single euro payments area (SEPA)* from the supranational level to the national level. The goal is to reduce the use of cash in retail transactions while increasing electronic payments (see Fig. 12.5).

The treasury annually places about 50 million retail credit transfers (13% of the total), and although only a few tens of thousands are related to cross-border

Type of local administration	Online services provided by										
	Ministries	Other central PAs	Social security offices	Regions	Provinces	Municipalities	Consortiums of mountain municipalities	Chambers of Commerce	Health authorities	Universities	Other local administrations
Municipalities	97.7	99.8	85.1	56.3	28.7	12.6	8.9	35.0	13.6	2.3	16.9
Mountain municipalities	63.7	91.2	67.7	58.1	31.1	18.8	13.3	26.3	3.1	1.9	14.6
Provinces	87.2	94.2	70.9	82.6	24.4	33.7	16.3	67.4	5.8	8.1	24.4
Regions and autonomous provinces	100.0	100.0	63.6	40.9	31.8	40.9	45.5	86.4	72.7	45.5	31.8
Total local administrations	96.3	99.4	84.2	56.6	28.7	13.2	9.3	35.2	13.3	2.5	16.9

Fig. 12.4 Local governments using online services offered by public administrations (2007 – percentage of the respective totals of local administrations). *Source*: 2007 ISTAT survey on ICT in local PAs

Type of local administration	Northwest	Northeast	Center	South	**Italy**
Municipalities	8.6	13.8	10.0	7.5	9.4
Mountain municipalities	4.3	0.0	3.1	1.4	2.3
Provinces	4.3	0.0	4.8	0.0	2.0
Regions and autonomous provinces	50.0	50.0	0.0	25.0	31.8
Total local administrations	8.5	13.3	9.5	7.2	9.1

Fig. 12.5 Local administrations that allow citizens to make online payments, by location, and type of administration (2007 – percentage of the respective totals of local administrations). *Source*: 2007 ISTAT survey on ICT in local PAs

operations, the implications of computerized administrative payment cycles are significant. This means that a new wave of investments is needed for

1. implementing new techniques (integrated treasury and administrative systems);
2. developing systems for the acceptance of micro-payments, especially by local administrations;
3. increasing security measures related to payments;
4. providing authentication systems;
5. reducing fraud and combating money laundering.

In parallel to the retail payments in the PA is the computerization of administrative payments, the basis of the *information system on operations by public agencies* (SIOPE), which is the archive maintained by the Bank of Italy on behalf of the RGS, the Italian general accounting agency. This system daily collects from government treasuries information about cash receipts and payments. It currently reports to the

system 12,500 subjects, equal to 92% of all agencies and 98% of all spending. Beginning in 2010 it has replaced the paper quarterly reports and becomes the main tool for monitoring the cash flows of the public administration. Further progress will be made in the computerized updates of ISTAT, the general accounting agency, and Bank of Italy archives. All this is intended to increase the supply of online services that from this point of view show evident delays.

Recent legislation has encouraged citizen and business interactions with the bureaucracy of the public administrations, by making certified electronic post-mandatory for enterprises for their inclusion in the business register and to the professionals. In addition, it has made the adoption of the XBRL standard for financial data collection and reporting mandatory (a requirement for financial statements closed from the beginning of 2009).

Currently, the quality levels for services provided by central administrations is still quite low and in many cases needs the intervention of qualified intermediaries as is reported by the CNEL survey.

12.3 Conclusion and Open Issues

Institutional reform would not generate major shocks to the information systems enabled by the new architecture, whose design centralizes in unitary databases information for decision support, while it decentralizes operational information systems and requires each administration to view the system as a whole and to respect the rules for dialogue between different administrations. If we have an organization based on the strategic use of information, we will hold the whole system, the whole country together. The transition is very delicate. It is not sufficient to enunciate the rules, even if these are handed down by the legislator. The change will make resource allocation more efficient. It also represents a hard-to-quantify but easily perceptible externality.

The view on network services discussed in this chapter is not universal, in spite of having been successful at different government agencies and private companies. Instead, the network concept is applied to the technological component and not to the exchange of services available online. In summary, not everyone agrees with the principle that service networks require the involvement of various stakeholders with a unified vision. If there is a lack of participation and incentives are given to individual agencies and firms, the result will be random, depending on the motivation of the individuals and not on the variety of services and the relative abundance of the clients.

According to economic theory, there are activities, functions, production, and consumption that cannot be left to the individual because their interest does not agree with the social welfare.

It is difficult to identify producers who are willing to supply a service whose cost is not definite or a consumer willing to buy a service whose price is not settled. Furthermore, there are scale economies that create a bias in favor of someone wait-

ing to enter the network and use the service. In these cases the debate is focused on identifying who and how, and what resources are necessary for the provision of these goods and services.

An approach is needed that goes beyond individualism (either enterprise or public agency), otherwise progress may not arrive, or if it does, certainly with much delay. The upgrading of the network service is feasible since system conditions exist, and the data analysis has been made by many research centers and has been shared.

Public interest should not be limited to private individuals or to individual government agencies which often have substantial human and financial resources and realize projects that they consider will increase their power. However, they do not realize that with their individual initiatives they cannot fully exploit the advantages of the network, thus delaying the diffusion of network services in the country.

There is a cultural resistance to the use of network services, but there have been successful achievements, such as the provision of online banking services or the sending of documents to individual public administrations. In general, they consist of simple services, although they require careful security measures to overcome the psychological resistance of the end users. Surveys suggest that there is not a widespread desire to go online, especially among small and micro-enterprises and among families. On the one hand, companies are waiting for a large number of suppliers and/or customers to go online with more sophisticated services and on the other hand, consumers have not yet given up their preference for personal contact with the commodity choice and the manufacturer.

In conclusion, the development of an innovative design should focus not only on the interests of the individual agencies and enterprises but must also promote the social interest. This needs to be applied not only to the public administration but also to complex economic and social systems (industrial districts, associations, etc.) in order to get out of the present stalemate in Italy's economic and social system.

The modernization of government has a positive return for the whole country; it sends a message of change that compels economic agents and individuals to equip themselves culturally. The change also has positive returns for innovative industries and contributes to job creation in the private sector, without falling back on unproductive public spending and parasitic public sector employment.

Clearly, the effort of product, process, and organizational innovation in the public sector cannot be begun and managed in episodic fashion; it requires a unitary vision – political above all, then strategic – since the modernization of government is not just a technological problem. Information, service science, and ICT are elements of a strategic design that profoundly affects not just the functioning of government departments and agencies but the country's productive system [182].

Therefore, one must also be cautious in comparing data on the diffusion of ICT services. The criticism does not apply to official statistics that are now becoming part of eGovernment indicators such as the ones proposed by OECD [157]. However, many research centers are not able to accurately and completely analyze the statistics entrusted to them by the European commission and by many governments.

Within the context of eGovernment, the European commission has taken the initiative to provide the European Union with a number of indicators on ICT usage in households, businesses, and governments. This has provided a set of indicators that allow correct, adequate, and verifiable comparison of statistics, thus reducing the previous difficulties.

Eurostat's annual surveys on ICT usage and e-commerce in enterprises and ICT usage in households and by individual are used in the context of the i2010 initiative.[1] For the i2010 benchmarking the characteristics to be provided for enterprises are drawn from the following list of items: development of broadband, use of Internet and other electronic networks, security, e-business, e-commerce, impact of adoption of ICT, interactions, and contacts between enterprises and public administrations. For household and individual ICT utilization the characteristics provided concern access to and use of ICT systems, use of Internet for different purposes, barriers to use, ICT competence, contacts with public administrations. Indicators from these surveys are used to meet the targets of the i2010 initiative.

To build up a coherent and useful set of indicators it is necessary to have in mind a model to analyze the operators' behavior and their needs together with relations among them and the public administrations. This becomes stringent when the institutional framework is a polycentric model that involves a network of information sharing central and local administrations. It is widely recognized that decentralization requires a larger set of information and indicators compared with centralization [183].

As a second step it is necessary to identify uniform rules to define the variables investigated, the measurement units, and the distribution of statistics. Finally, lacking the comparison with analogous outcome supplied by the market it is relevant to select efficiency indicators to compare with the widely known best practices.

A few examples for different sets of indicators could help to identify the priorities in planning and control activities (see also some examples in Chap. 7). Examples of *performance indicators* are output of services either in quantity or in value, number of certificates issued, productivity measures, number of contacts with citizens and/or enterprises.

Efficiency can be measured with an average cost analysis, the length of queues, the standard costs, the opportunity costs, etc. Quality indicators are the number of wrong outcomes both from the information systems or from the offices, the time involved in the definition of an administrative procedure, etc.

12.4 Summary

In this chapter we have examined several eGovernment issues such as the network/cooperative approach, the need of homogeneous statistics and indicators, and others considered from a socio-economic point of view both in the Italian and in the

[1] A list of benchmarking indicators has been defined and set out in the i2010 benchmarking framework endorsed by the i2010 High Level Group in April 2006.

European scenery. In conclusion, the view on network services is not universal, in spite of having been successful at different government agencies and private companies. Instead, the network concept is often applied mainly to the technological component and not to the exchange of services available online.