

## Regional e-Barometer

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*The regional development as main pillar of the European cohesion policy is a very important pole of creativity and innovation, contributing to the increase of the competitiveness, goal of the Lisbon strategy. In this view, the regional development strategy and the concrete measures of its implementation represent the frame for the regional and sectoral projects development. The real impact of the implementation of the regional strategy could be evaluated only by a wide process of gathering the regional actors' views and opinions. A very efficient tool for the evaluation process is the integrated democratic-centric driver for the regional development, which offers the virtual frame for a large access to regional strategies implementation and for the wide expression of the regional actors' satisfaction, related to the regional projects and their implementation. The development of such an integrated framework needs to merge different viewpoints and technologies in order to create a regional portal for the wide dissemination of the regional programmes according to the development strategy, to ensure their transparency, to increase the opportunities to implement more innovative projects, and to collect the regional actors' opinions on the effectiveness of the projects implementation and the regional strategy objectives fulfillment. This approach aims at strengthening the regional partnership and the interaction between end users and public authorities at local level. This new generation of user-friendly digital tools supports a pro-active behavior of the regional actors, contributing to the measurement of the quality of the regional projects, i.e. the level of meeting the regional needs and the regional actors' expectations. The virtual platform involves the process re-engineering, especially at the public entities level, in order to integrate various informational sources and to collect and analyze the regional actors' opinions. The integrated virtual platform is a new concept aiming at providing a better framework for the citizens and businesses, an efficient access to information, and increasing the quality of the regional strategy and projects. The useful information concerning the regional actors' opinions will contribute to the improvement of the regional strategy and its implementation. The democratic-centric driver for the regional development contributes to the quality of the regional projects and public services, main goal of the local and central administration entities.*

**Keywords:** e-democracy, e-Government, regional projects quality, virtual public service, service oriented architecture (SOA), simple object access protocol (SOAP)

### **1 E-region platform – main tool for the public administration transition to the knowledge society**

The transition to the knowledge society involves a deep innovative process, mainly based on ICT, which involves all the entities representing public administration, business area, education, social or cultural areas. The reform of the public administration represents one of the major priorities in the knowledge society, due to its strong interaction with the citizens or juridical entities, contributing to the increase of the efficiency (priority of the information society i2010 ini-

tiative, main component of the Lisbon strategy).

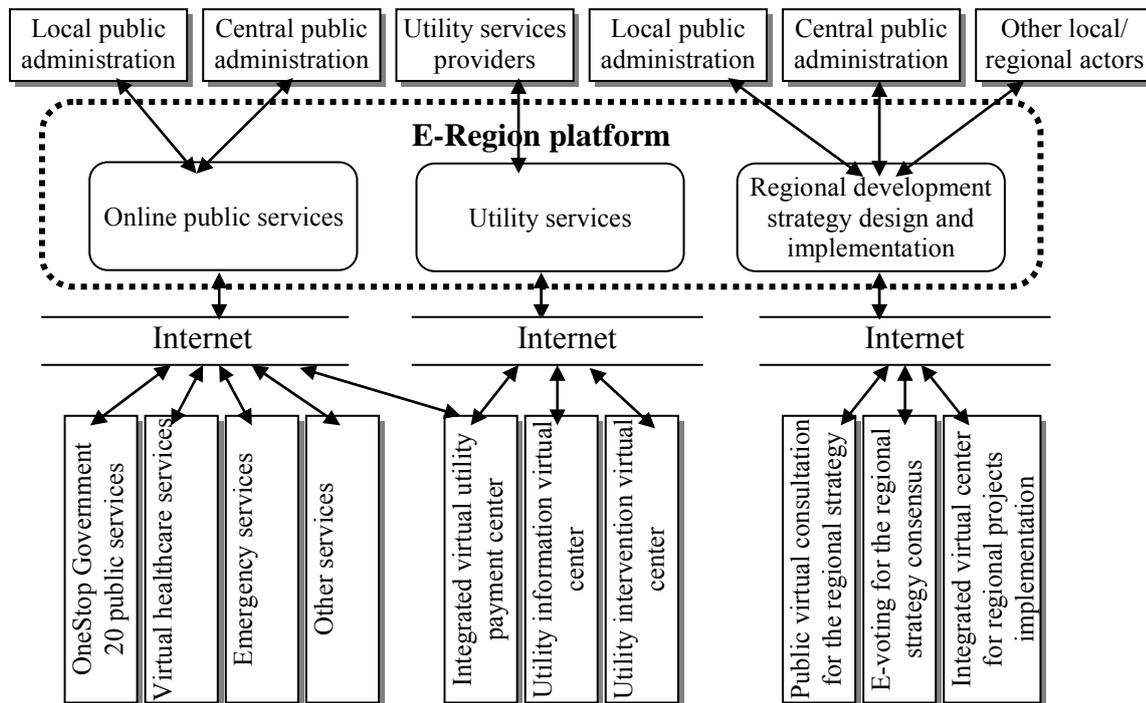
The development of a democratic-centric regional driver is included in a wider paradigm of the quality management at the local/regional administration level, focusing on the quality of the local administration main public services. This approach is also in line with the urgent need of the introduction of the new technologies in the current administration activities (back end and front end processes), and with the necessity of the transition to the online services. This wider approach leads to the concept of the e-region

platform, integrating the main public services delivered by the local administration and for which the public administration is responsible, i.e. utility services. Consequently, the main goal of the e-region platform is to contribute to the regional development and to increase the regional competitiveness.

The e-region platform could integrate the online public services platform, built taking into account the regional organizational infrastructure and the relationship between the local and central public authorities and implements SOA concepts. The concept of the e-region platform is introduced in order to offer a more flexible access to specific virtual services at regional level, including links to central points for accessing other virtual services. Other specific module of the e-region platform could be the public utility services virtual center, which offers access to the main utility services information, intervention services and online payment. This virtual

center could also ensure the direct link with the utility service providers.

A specific interest of the e-Region platform is to facilitate the development of regional projects. In this perspective, the virtual regional platform facilitates the access to regional main information (regional strategy, priorities etc.), strengthens the regional partnership and increases the transparency in the regional projects development and implementation, through various virtual consultation tools integrated in the e-region platform. The design of the e-region platform focuses on the regional strategy implementation, disseminating the various opportunities for the regional strategy implementation, facilitating the development and implementation of the regional development projects. The active life-event regional platform focuses on main regional goals, supporting their fulfillment, in a democratic approach.



**Fig.1.** The generic architecture of the e-region platform

The holistic approach, implemented by the e-region platform, facilitates the regional development, and deliver of integrated online public services, contributing to the efficiency increase of the interaction with public ad-

ministration entities, as illustrated in the figure 1.

The model implemented by the e-region platform involves the interaction of the following items (internal actors of the system):

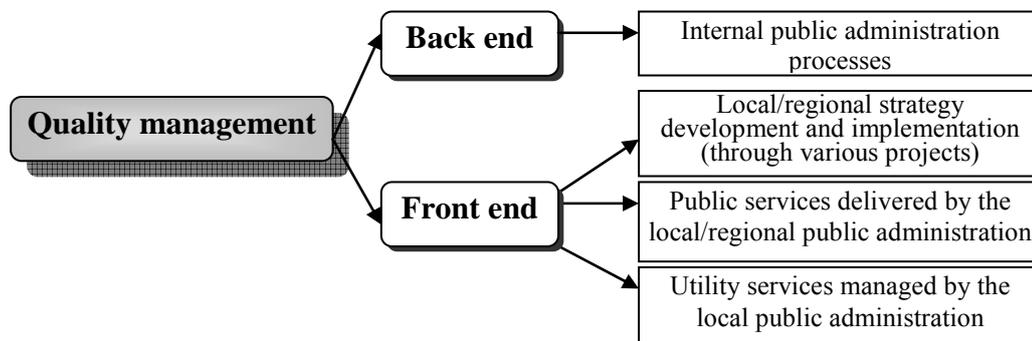
- Service Provider – the regional development agency an entity responsible for building, deploying, and managing services and to ensure the links with other regional and central public authorities;
- Service Requestor - an entity that requests a service (portal or application which wants to use a service);
- Service Runtime Administrator - a person or management system that performs management tasks for the portal;
- Service presentation - holds all information required for publishing, finding, and invoking services in the e-region platform;
- Service Repository - holds all information required for describing and executing services.

At the external level, the main actors who interact with the portal could be citizens, representatives of various public or private entities etc. The common operations executed by the external entities in their interaction with the e-region portal are:

- main page of the portal opening;
- persistent and dynamic parts from the content metadata displaying;
- life-event choosing;
- service requested identification;
- link to the service.

## 2. ICT tools for the quality management in the local administration

Romania is involved in a large administration re-engineering process, in line with the new goals of the local administration, according to the decentralization strategy. A very important concern of the local/regional administration is the synergy with the quality management, which involves the quality of the internal processes as well as the quality of the services provided by the local/regional public administration entities. The quality management in the local public administration entities involves a multidimensional view, as presented in the figure 2.



**Fig.2.** Main quality views in the local public administration

The development of an e-region platform is an innovative solution for the local/regional administration, in line with the Information Society Advisory Group (ISTAG) vision of creating an ambient, intelligent, virtual public services [13]. The new information and communication technologies have a significant contribution to the efficiency and the quality of the local authorities' activities. This approach integrates various dimensions of the development framework to be applied in the design of the e-region platform, such as: the users' view, the processes perspective and the technical aspects.

The end users' view focuses on the main needs of the end users and their perception of the degree in which the regional development strategy implementation fit these needs. The processes perspective takes into account the legal and organizational framework, data workflows and security.

The technical issues focus on the best solutions for the front-end and back-end processes management and also on the best technical communication solutions to ensure the flexible and rapid online access and interaction using various devices, including mobile communication. The development of the e-regional platform involves the use of open

standards, such as: W3C [14] standards (XML, Web Ontology Language - OWL: URI and RDF, Web Service Description Language - WSDL, ebXML etc.) and OASIS [15] standards (Universal Description, Discovery and Integration – UDDI).

The technical solution to support the network architecture for the e-region platform implements the SOAP/UDDI/WSDL framework [8]. SOAP lets an application invoke a remote procedure call (RPC) on another application or pass an object to a remote location by using XML messages and the Internet. As such, it functions as a wire protocol that connects multiple service providers and requestors, each of which might use facilities such as an information server or object broker in order to integrate and process the data exchanged via SOAP. To maximize flexibility and scalability, SOAP is loosely coupled to the transport protocol as well as to the programming or component models internally used by Service Requestors or Service Providers, such as Microsoft's COM, Java's Remote Method Protocol (RMP) and CORBA. The UDDI framework – consisting of the SOAP messaging scheme and APIs for working with Web services – lets organizations describe themselves and their services, in a particular vision using the Internet. WSDL [16] is an XML vocabulary that standardizes the description of Web services. It describes Web services as collections of endpoints that exchange information about each others' capabilities.

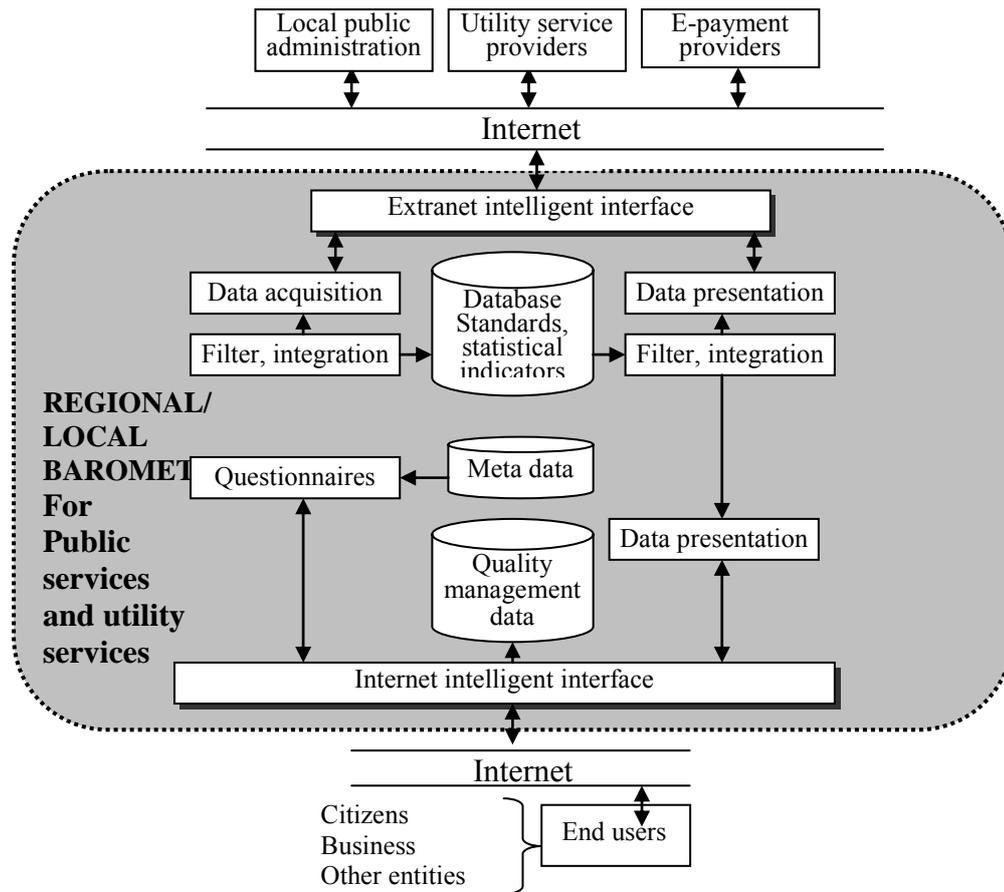
The new ICT solutions ensure a better and operative interaction with the local actors, facilitating the quality management. The development of the online tools for the regular queries of the community satisfaction related to the local administration's activity represents an objective and efficient way of analysis of the feedback concerning the projects implementation and the public services delivery. The regional barometer as a part of

the e-region platform represents a tool of quality evaluation.

### **3. The architecture of the regional e-Barometer**

The e-region platform could integrate online tools for the assessment of the main public authorities' activities and services, delivered to the citizens, and other public and private entities. In this view, the e-region platform is improved with the democratic-centric ongoing and ex-post evaluation of the impact of the public services, and the projects implemented by the local/regional authorities. This virtual barometer represents a democratic-centric regional driver, used for gathering and analyzing the local/regional actors' satisfaction, in order to improve the local/regional development strategy and the services delivered by the public local administration.

According to the generic architecture of the e-region platform, the regional/local barometer has three main modules, measuring the quality of the public services, utility services, regional/local strategy development and implementation. Consequently, the fulfillment of the local/regional public administration mission depends on this three dimensional quality view, in the actual context of the decentralization process, which represents a real challenge for the local administration. The assessment of the quality of the public services and utility services through the Regional Barometer has as main goal the acquisition of the information concerning end users' satisfaction related to this kind of services, as presented in the figure 3. The benchmarking tools could operate comparing the standards, the providers' indicators and the end users' satisfaction, contributing to the improvement of the services' quality. This approach aims at developing virtual iterative processes in order to increase the quality of the regional administration's public services.

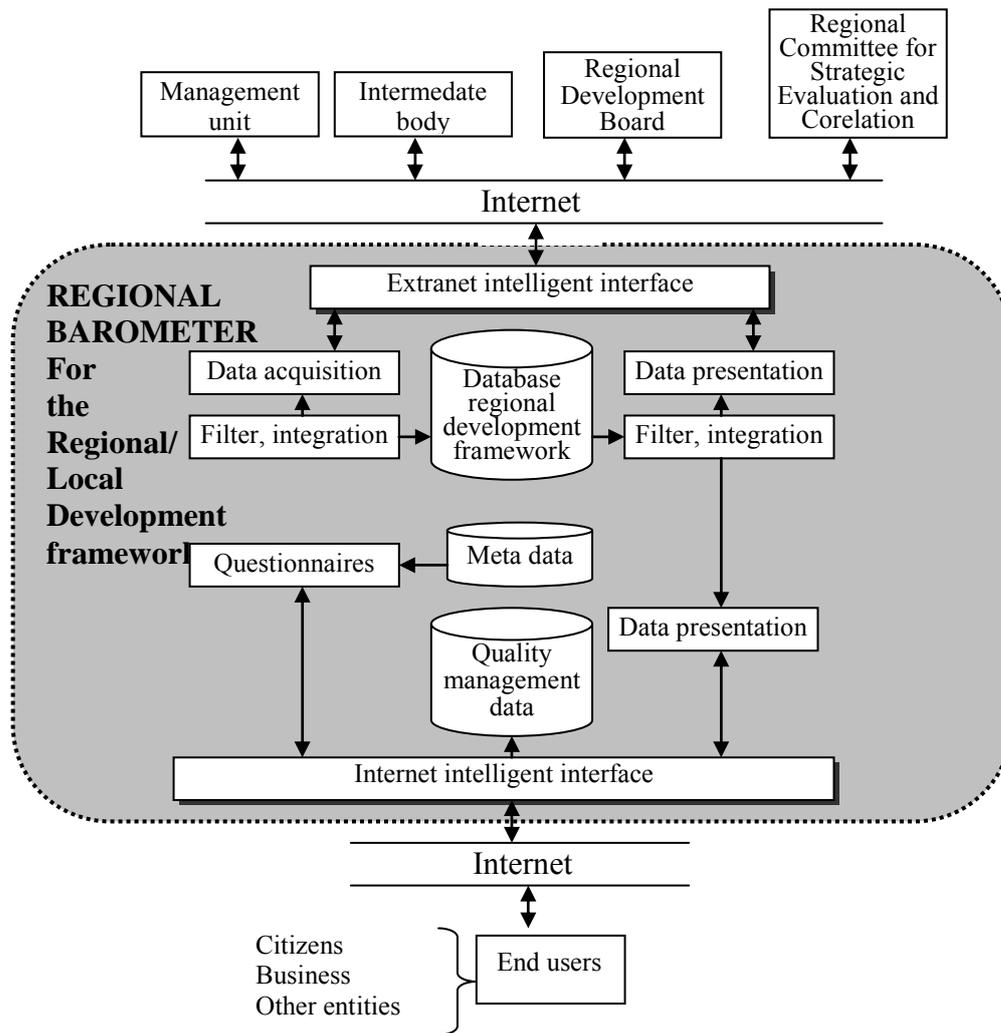


**Fig.3.** Public services/utility services Barometer

The presentation will focus mainly on the assessment of the regional/local development strategy and the impact of the implemented projects, the public administration being responsible for the development and implementation of the development strategy at the regional/local levels in synergy with the sectoral approach. The local/regional authorities are the main beneficiaries of the structural funds, being involved in the development of regional projects and their implementation, according to the main goals and objectives of the regional strategy. This new view involves the strengthening of the local partnership, and the consensus of the local community related to the local development. The regional/local democratic-centric driver will be included in the e-region platform as the regional barometer for the impact of the regional strategy implementation. The development of the regional e-Barometer offers an efficient tool for disseminating and collecting information, aiming at improving the regional development strategy. The inno-

vation of the e-region portal consists in supporting two main kinds of activities: virtual services providing and quality of the services assessment. Other innovation is represented by the online support for the regional strategy development and implementation, and the evaluation of the quality of this process. One of the major goals of the virtual regional democratic-centric driver is the efficient interaction of the regional/local entities with the management and intermediate units for the regional development plan implementation. This innovative approach at the regional level increases the possibility to identify valuable initiatives and supports the regional consensus building for the regional development strategy implementation. The increase of the interactivity between the local authorities and the regional actors will stimulate the pro-active behavior in the benefit of the regional/local development. The use of various questionnaires and e-voting techniques will contribute to a better measurement of the regional actors' satisfaction, related to the re-

gional development strategy implementation, as illustrated in the figure 4.

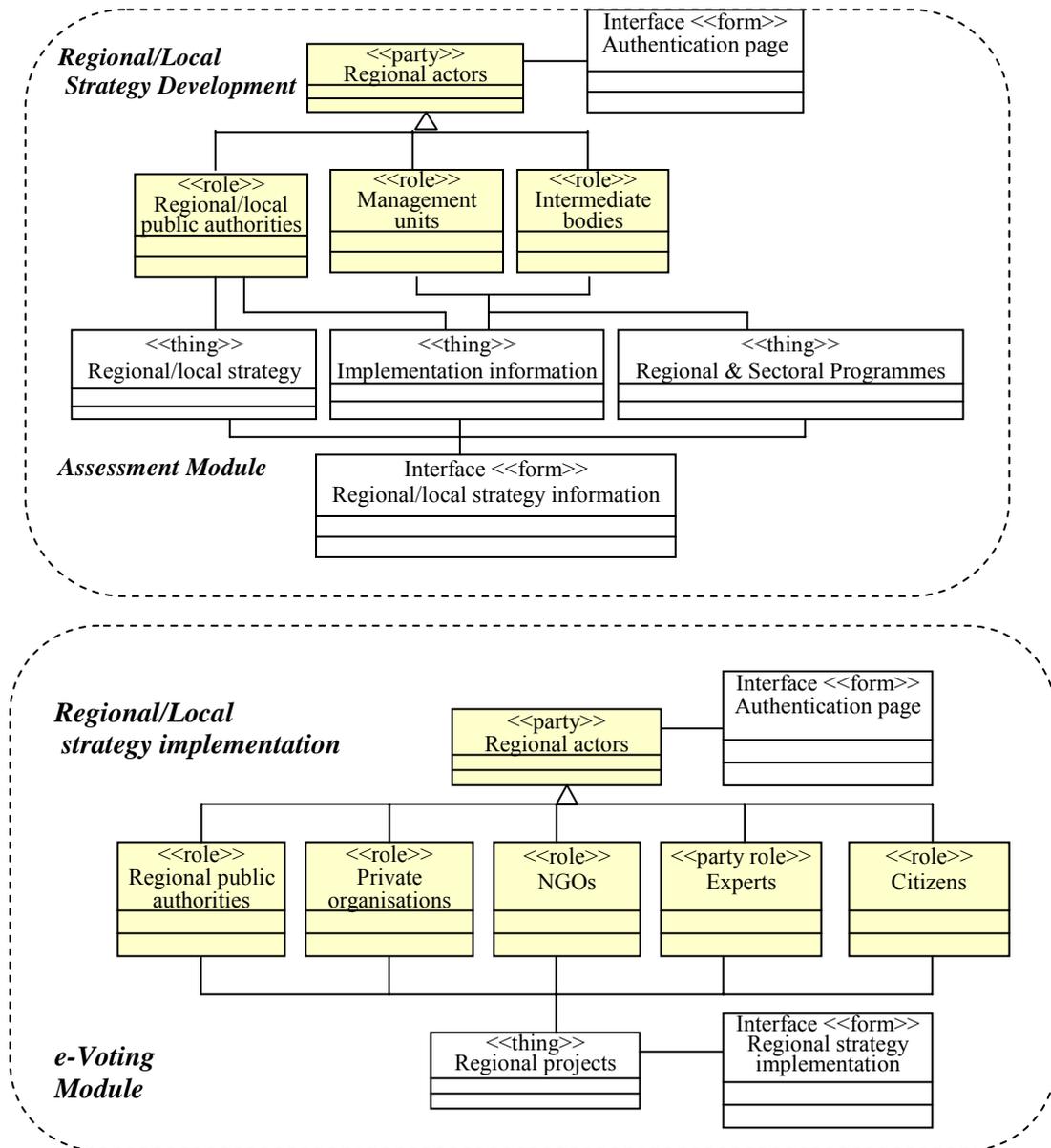


**Fig.4.** Regional/local strategy implementation barometer

This democratic-centric approach is a qualitative change at the local administration level. The feedback obtained is an important information for the regional decisions makers (Regional Development Board and Regional Committee for Strategic Evaluation and Correlation), in order to improve the implementation of the regional strategy and to update the regional and sectoral plans. The implementation of this generic architecture involves technical solutions for the development of the infrastructure supporting the various virtual processes, the information management, as well as communication

techniques according to the open communication standards (flexible access from various platforms, including mobile devices).

The model of the democratic-centric driver for the regional development will be designed taking into account the generic structure presented above and using the archetype concept, as it is illustrated in the figure 5. The presented generic architecture is only a part of the whole system developed as a democratic-centric tool for the public administration quality assessment.



**Fig.5.** Generic architecture for the regional/local strategy development&implementation barometer

The presentation is not an exhaustive one, it intends only to open the way to the development of e-regional platforms as an efficient digital administrative and operational tool, extended with a valuable virtual regional-local barometer. The design of the regional/local administration barometer is integrated in the e-region platform, aiming at evaluating the end users' satisfaction. The implementation of the regional barometer offers the best way of supporting the quality management strategy for the local public administration, and to obtain a real feedback from the end users, as stipulated in the ISO 9001 standard.

The new democratic-centric view at the regional/local level is a real challenge for the public administration, having important benefits for the local cohesion and local community's consensus building.

**References**

[1] \*\*\* Capgemini. Online Availability of Public Services: How Is Europe Progressing?, Web Based Survey on Electronic Public Services, Report of The Fifth Measurement, October 2004, European Commission, Directorate General For Information Society And Media, [http://ec.europa.eu/information\\_society/eeurope](http://ec.europa.eu/information_society/eeurope)

[/ 2005/doc/all\\_about/online\\_availability\\_public\\_ser- vices\\_5th\\_measurement\\_fv4.PDF](#)

- [2] GISLER, M., SPAHNI, D. (eds), e-Government – eine Standortbestimmung, Verlag Paul Haupt, Bern et al, 2000
- [3] HAGEN, M., KUBICEK H. (eds), One-Stop-Government in Europe: Results of 11 national surveys, University of Bremen, 2000
- [4] LENK, K., Electronic Government als Schlüssel zur Innovation der öffentlichen Verwaltung, in: K. Lenk, R. Traunmüller (ed.), Öffentliche Verwaltung und Informationstechnik - Perspektiven einer radikalen Neugestaltung der öffentlichen Verwaltung mit Informationstechnik, Schriftenreihe Verwaltungsinformatik 20, R. v. Decker's Verlag, Heidelberg, 1999, S. 123 – 142
- [5] SUTER, W., Bericht über die Studie zu den Guichets Virtuels in der Welt, Studie der Schweizerischen Bundeskanzlei (Copiur) vom 20. Dezember 2000, <http://www.admin.ch/e-gov/de/GV/documents.php> [27/06/2001]
- [6] TAMBOURIS, E., An Integrated platform for Realising Online One-Stop Government: The eGOV Project, in: Proceedings of the DEXA International Workshop "On the Way to Electronic Government", IEEE Computer Society Press, Los Alamitos, CA, 2001 (in press)
- [7] E. Tambouris. The Governmental Markup Language (GovML), Journal of E-Government, vol. 1, issue 2 and Governmental Markup Language (GovML) for Online One-Stop E-Government, <http://xml.coverpages.org/ni2002-02-27-a.html>
- [8] E. Tambouris, E. Spanos, G. Kavadias, A. Gassner, A. Varkkola, O. Fox, M. Wimmer, J. Krenner, D. Papa, C. Minetou, J. Tsaliki, P. Eleftheriou, E. Maglara. An Integrated Platform for Realising Online One-Stop Government, IST-2000-28471, 2002
- [9] TRAUNMUELLER, R., WIMMER, M., Directions in E-Government: Processes, Portals, Knowledge, in: Proceedings

of the DEXA International Workshop "On the Way to Electronic Government", IEEE Computer Society Press, Los Alamitos, CA, 2001 (in press)

[10] WIMMER, M., TRAUNMUELLER, R., LENK, K., Electronic Business Invading the Public Sector:

Considerations on Change and Design, in: Proceedings of the 34th Hawaii International Conference on System Sciences (HICSS-34), Hawaii, 2001

[11] WIMMER, M., von BREDOW, B., E-Government: Aspects of Security on Different Layers, in: Proceedings of the DEXA International Workshop "On the Way to Electronic Government", IEEE Computer Society Press, Los Alamitos, CA, 2001 (in press)

[12] WINTER, A., [www.help.gov.at](http://www.help.gov.at) – Die österreichische Verwaltung im Internet, in: H. Reinermann (Hrsg.), Regieren und Verwalten im Informationszeitalter: Unterwegs zur virtuellen Verwaltung, R.v. Decker, Heidelberg, 2000, pp. 170 – 185

[13] \*\*\* IST Programme, Report of the IST Advisory Group concerning Strategic Orientations & Priorities for IST in FP6“, [www.cordis.lu/ist](http://www.cordis.lu/ist)

[14] \*\*\* World Wide Web Consortium, <http://www.w3.org/>

[15] \*\*\* The OASIS ebXML Joint Committee, The Framework for eBusiness, <http://www.oasis-open.org/committees/download.php/17817/ebxmljc-WhitePaper-wd-r02-en.pdf>

[16] \*\*\* <http://www.w3.org/TR/wsdl>