

itAIS 2010



VII Conference of the Italian Chapter of AIS Information technology and Innovation trend in Organization



www.itaais.org

Villa Doria D'Angri, "Parthenope" University, Naples (Italy), Oct. 8-9, 2010

www.aisnet.org

ISBN: 978-88-6105-124-9

[Link to the CD cover](#)

Program Details

FRIDAY, October 8, 2010

10:00 - 12:00 - Pre-conference Plenary Session (sala convegni)

13:00 - 14:00 - Registration

14:00 - 15:00 - (Plenary) Welcome by the Conference and Program Chairs (sala convegni)

15:00 - 16:00 – Parallel sessions

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Chair: G. Vitiello

Room: "Sala Convegni"

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Daniela Angelucci, Annalisa Cardinali and Laura Tarantino

77 - METRIC PICTURES: SOURCE CODE IMAGES FOR VISUALIZATION, ANALYSIS AND ELABORATION.

Rita Francese, Sharefa Murad and Ignazio Passero

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Marcus Giamattei and Michael Scholz

Org/1 – Organizational Change and Impact of IT 1

Chair: M. Sorrentino

Room: "Aula Mergellina"

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Paola Adinolfi, MITA Marra and Raffaele Adinolfi

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Giulia Ferrando, Federico Pigni, Cristina Quetti and Samuele Astuti.

97 - NARROWING ORGANIZATIONAL INFORMATION COMPLEXITY

Luca Sabini and Alfredo Valentino

ESA/1 - Enterprise systems adoption

Chair: P. Rippa

Room: "Aula Procida"

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Liam Doyle, Jiahong Wang

67 - THE SIGNIFICANCE OF RFID IN GREEN SUPPLY CHAIN INITIATIVES
Rebecca Angeles

Wii/1 - New ways to work and interact via Internet

Chair: C. Metallo
Room: "Aula Capri"

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Rocco Agrifoglio and Concetta Metallo

36 - TRUST AND CONFLICTS IN VIRTUAL TEAMS: AN EXPLORATORY STUDY
Paola Briganti and Luisa Varriale

25 - STAYING CONNECTED OR SWITCHING OFF? THE IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGIES ON AN INDIVIDUAL'S LIFE SATISFACTION.
Filomena Buonocore, Marcello Russo and Mauro Romanelli

InfKM/1 - Information and Knowledge Management

Chair: K. Passerini
Room: "Aula Nisida"

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Alessia Albanese and Alfredo Petrosino

58 - THINKING STRUCTURALLY HELPS BUSINESS INTELLIGENCE DESIGN
Claudia Diamantini and Domenico Potena

EServ/1 E-Services in Public and Private Sectors

Chair: M. De Marco
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Raffaella Naggi and Pietro Luca Agostini

40 - THE GOVERNANCE OF E-SERVICES IN PUBLIC AND PRIVATE SECTORS: A DESTINATION ORGANIZATION MANAGEMENT PERSPECTIVE
Frank M. Go and Mariapina Trunfio.

16:00 - 17:00 – Parallel sessions

HCI/2 Human-computer interaction

Chair: L. Tarantino
Room: "Sala Convegni"

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Org/2 – Organizational Change and Impact of IT 2

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100 - THE ROLE OF THE INFORMATION SYSTEM FOR AN EFFECTIVE EVALUATION OF THE COMPANY CONTROL SYSTEM
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24 - THE EVALUATION OF IS INVESTMENT RETURNS: THE RFI CASE
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InfKM/2 Information and Knowledge Management

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95 - SIMILARITY-BASED CLASSIFICATION OF MICRODATA
Silvana Castano, Alfio Ferrara, Stefano Montanelli and Gaia Varese

EServ/2 E-Services in Public and Private Sectors

Chair: M. De Marco
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Tommaso Federici, Alessio Maria Braccini, Valentina Albano, Edoardo D'Atri and Angela Sansonetti

86 - OPERATIONAL INNOVATION: FROM PRINCIPLES TO METHODOLOGY
Matteo Della Bordella, Aurelio Ravarini, Rong Liu and Frederick Wu

17:00 – 17:30 Coffee Break

17:30 – 18:30 – Parallel sessions

ISDDM/1 IS Development and Design Methodologies

Chair: C. Cappiello
Room: "Aula Capri"

50 - LEGAL ISSUES IN E-GOVERNMENT SERVICES PLANNING (BEST TRACK PAPER)

Gianluigi Viscusi and Carlo Batini

15 - USE CASE DOUBLE TRACING LINKING BUSINESS MODELING TO SOFTWARE DEVELOPMENT

Gaetanino Paolone, Paolino Di Felice, Gianluca Liguori, Gabriele Cestra and Eliseo Clementini

ISSME/1 ICT-IS as enabling technologies for the development of SMEs

Chair: P. De Paoli, R. Winter

Room: "Aula Mergellina"

45 - UNDERSTANDING THE ICT ADOPTION PROCESS IN SMALL AND MEDIUM ENTERPRISES (SMEs) (BEST TRACK PAPER)

Raffaella Naggi

22 - RECOGNISING THE CHALLENGE: HOW TO REALISE THE POTENTIAL BENEFITS OF ICT USE IN SMEs?

Peter Bednar and Christine Welch

Creat/1 ICT in individual and org. creativity development, professional skills and online education

Chair: N. Casalino

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2 - HOW CAN EFFECTIVE COMMUNICATION FACILITATE INFORMATION RETRIEVAL IN CREATIVE ORGANIZATIONS?

Sandy Chong and Felix Müller-Wienbergen

115 - INTERNET AND INNOVATIVE KNOWLEDGE EVALUATION PROCESSES: NEW DIRECTIONS FOR SCIENTIFIC CREATIVITY? (BEST TRACK PAPER)

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117 - CREATIVITY AT WORK AND WEBLOGS: OPPORTUNITIES AND OBSTACLES

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Sara Sterlocchi

BlntS/1 Business Intelligence Systems their strategic role and org. impacts

Chair: C. Rossignoli

Room: "Sala Convegni"

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75 - ALIGNING CORPORATE PLANNING AND BI: A COMBINED MATURITY MODEL

Frederik Marx, Gerrit Lahrmann and Robert Winter

23 - Factor ANALYSIS, KNOWLEDGE MANAGEMENT AND VALUE CREATION

Nicola Castellano and Roberto Del Gobbo

Sec/1 IS, IT and Security

Chair: A. Resca

Room: "Aula Nisida"

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Maurizio Cavallari

85 - A BUSINESS AWARE INFORMATION SECURITY RISK ANALYSIS METHOD

Moufida Sadok and Paolo Spagnoletti

29 - A PROTOTYPE SERVICE-BASED RISK MANAGEMENT SYSTEM FOR WORK ENVIRONMENTS (BEST TRACK PAPER)

Mariagrazia Fugini, Claudia Raibulet and Filippo Ramoni

EServ/3 E-Services in Public and Private Sectors

Chair: D. Salvatore

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Paola B. Floreddu, Francesca Cabiddu and Daniela Pettinao

105 -IL SISTEMA E-WAY NELL'ASSEMBLEA REGIONALE SICILIANA: UN PRIMO PASSO VERSO UNA NUOVA AGORÀ O SOLO UN'UTOPIA?

Luisa Pulejo.

109 - THE DIGITAL DIVIDE IN SARDINIA. A CASE STUDY

Pier Paolo Carrus, Giuseppe Melis and Roberta Pinna.

18:30 – 19:30 – Plenary ItAIS members annual meeting (sala convegni)

21.00 – Social Dinner

Saturday, October 9, 2010

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ISDDM/2 IS Development and Design Methodologies

Chair: C. Cappiello

Room: "Aula Ischia"

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64 - SEMIOLOGY IMPROVEMENTS IN PDA MAPS FOR THE PEDESTRIAN TOURISTS

Robert Župan, Stanislav Frangeš and Vesna Poslončec-Petrić

113 - A SYSTEMATIC METHOD FOR THE INTENTIONAL MODELLING AND VERIFICATION OF BUSINESS APPLICATIONS

Islem Igmati, Selmin Nurcan and Michele Missikoff

Org/3 Organizational change and Impact of IT

Chair: F. Pennarola

Room: "Aula Mergellina"

91 - EFFECTS OF INFORMATION SYSTEMS ADOPTION, IMPLEMENTATION AND ASSIMILATION ON ORGANIZATIONAL IDENTITY DURING THE INTEGRATION PROCESS AFTER A M&A

Luigi De Bernardis

51 - TOWARDS A FRAMEWORK FOR BPM COMMUNICATION

Sandy Chong and Michael Rosemann

BlntS/2 Business Intelligence Systems their strategic role and org.impacts

Chair: E. Giudici

Room: "Sala Convegni"

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Antonella Ferrari, Cecilia Rossignoli and Alessandro Zardini

32 - IMPLEMENTATION AND UPGRADING OF BUSINESS INTELLIGENCE SYSTEMS: AN EMPIRICAL RESEARCH ON TWO DIFFERENT APPROACHES

Carlo Caserio

96 - PATENT-BASED R&D STRATEGIES: THE CASE OF STMICROELECTRONICS' LAB-ON-CHIP

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AIS/2 Accounting Information Systems

Chair: R.P. Dameri

Room: "Aula Procida"

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Daniela Mancini and Katia Corsi

84 - MISSING INFORMATION AND RATING JUDGEMENTS: AN AI APPROACH

Greta Falavigna

InfKM/3 Information and Knowledge Management

Chair: D. Bianchini

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Daniel Stock and Robert Winter

76 - APPLICATION OF FEATURE RANKING TO DECISION SUPPORT: CHARACTERIZATION OF GEOSPATIAL DECISIONAL ZONES

Alberto Gemelli, Claudia Diamantini and Domenico Potena

93 - THE DEBATE DASHBOARD: A MOCK-UP TO FOSTER KNOWLEDGE MANAGEMENT IN ORGANIZATIONS

Ivana Quinto and Luca Iandoli

InnBM/1 IS, Innovation Transfer, and new Business Models

Chair: D. Saccà

Room: "Aula Posillipo"

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Marco Manna, Francesco Ricca and Lucia Saccà

71 - IT OFFSHORING: BEST PRACTICES FOR THE INDIAN CONTEXT

Roberto Candiotto and Silvia Gandini

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HCI/3 Human-computer interaction

Chair: M. Tucci

Room: "Sala Convegni"

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52 - SIMULATING EMBRYO-TRANSFER THROUGH A HAPTIC DEVICE

Andrea Abate, Michele Nappi and Stefano Ricciardi

65 - ENHANCING THE MOTIVATIONAL AFFORDANCE OF HUMAN-COMPUTER INTERFACES IN A CROSS-CULTURAL SETTING

Christoph Schneider and Joseph S. Valacich

Org/4 Organizational change and Impact of IT

Chair: A.M. Braccini

Room: "Aula Mergellina"

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Alessandro Spano and Benedetta Bellò

122 - STRATEGIE ICT E RUOLO DEL CRM A SOSTEGNO DELL'IMPRESA MINORE: UN CASO DI STUDIO

Maria Zifaro

9 - OPPORTUNITIES FROM ICT FOR AGRO-FOOD SUPPLY CHAINS.

Flavio Boccia and Tiziana Volpe

AIS/3 Accounting Information Systems

Chair: F. Schiavone

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16 - INTERNAL CONTROLS AND FRAUD PREVENTION: THE ROLE OF INFORMATION SYSTEMS

Lara Borrello

Wii/2 New ways to work and interact via Internet

Chair: C. Metallo

Room: "Aula Ischia"

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41 - CROWDSOURCING AND THE PARTICIPATION PROCESS FOR PROBLEM SOLVING: THE CASE OF BRITISH PETROLEUM

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116 - THE MODERN INFORMATION TECHNOLOGY IN ITALIAN INSURANCE COMPANIES: THE ROLE OF GENERALI GROUP

Antonio Coviello

InfKM/4 Information and Knowledge Management

Chair: C. Diamantini

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101 - ONLINE ADVERTISING USING LINGUISTIC KNOWLEDGE

Ernesto D'Avanzo, Tsvi Kuflik and Annibale Elia

102 - THE WISDOM OF NETWORKS: MATCHING RECOMMENDER SYSTEMS AND SOCIAL NETWORK THEORIES

Roberto Dandi

119 - ODISSEA: TO PARALLEL OR TO GRID DATABASE?

Alfredo Petrosino and Gianluigi Riccio

InnBM/2 IS, Innovation Transfer, and new Business Models

Chair: D. Baglieri

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Carmelo Luciano Mallamaci and Domenico Saccà

62 - A SUCCESSFUL MODEL FOR TECHNOLOGY TRANSFER IN SOUTHERN ITALY, IN THE ICT FIELD: POLO DI ECCELLENZA LEARNING & KNOWLEDGE
Matteo Gaeta and Rossella Piscopo

124 - Giovanni Bruno and Giuseppe Visaggio. KNOWLEDGE EXPERIENCE BASE (KEB) FOR TECHNOLOGICAL TRANSFER
Pasquale Ardimento, Maria Teresa Baldassarre, Nicola Boffoli

11:00 - 11:30 – Coffee break

11:30 – 12:30 – Parallel sessions

HCI/4 Human-computer interaction

Chair: R. Francese

Room: "Sala Convegni"

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Vincenzo Deufemia, Massimiliano Giordano, Giuseppe Polese and Genoveffa Tortora

28 - AN INTEGRATED ENVIRONMENT TO DESIGN AND EVALUATE WEB APPLICATIONS
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74 - A QUESTION OF PROGRESS: FACE-TO-FACE RELATIONSHIPS VERSUS FACE-TO-SCREEN RELATIONSHIPS
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ISSME/2 ICT-IS as enabling technologies for the development of SMEs

Chair: P. De Paoli, R. Winter

Room: "Aula Mergellina"

6 - SECOND LIFE AND ENTERPRISE SIMULATION IN SMEs' START UP OF FASHION SECTOR. THE CASES OF ETNI, KK PERSONAL ROBE AND NFP.
Laura Tampieri

94 - THE USE OF ICT IN MANUFACTURING SMALL FIRMS FACING THE CRISIS
Francesca Maria Cesaroni, Domenico Consoli and Paola Demartini

ESA/2 Enterprise systems adoption

Chair: G. Campagnolo

Room: "Aula Procida"

11 - CARE AND ENTERPRISE SYSTEMS: AN ARCHEOLOGY OF CASE MANAGEMENT (BEST TRACK PAPER)
Gianluigi si and Federico Cabitza

55 - AWARENESS OF ORGANIZATIONAL READINESS IN ERP IMPLEMENTATION PROCESS: RESULTS FROM CASE STUDIES
Guido Capaldo and Pierluigi Rippa

12 - DOMINANT PATHS OF NEGOTIATION IN ERP IMPLEMENTATION: A SUPPLY/USE SPACE BASED ANALYSIS
Gian Marco Campagnolo

Wii/3 New ways to work and interact via Internet

Chair: S. Za

Room: "Aula Ischia"

87 - LEARNING AND KNOWLEDGE SHARING IN VIRTUAL COMMUNITIES OF PRACTICE: A CASE STUDY (**BEST CONFERENCE PAPER**)

Federico Alvino, Rocco Agrifoglio, Concetta Metallo and Luigi Lepore

47 - INTERACTION AND COLLABORATION WITHIN WEB COMMUNITIES

Claudia Dossena and Alberto Francesconi

68 - ONLINE DIDACTIC REFLECTIONS: METHODOLOGICAL PRINCIPLES AND GUIDELINES

Antonia Cunti, Fausta Sabatano and Francesco Lo Presti.

Sec/2 IS, IT and Security

Chair: M. Cavallari

Room: "Aula Nisida"

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Antonio Grillo, Alessandro Lentini and Gianluigi Me

82 - ELECTRONIC ORAL HEALTH RECORDS: ETHICAL ISSUES

Antonio Gioacchino Spagnolo and Pietro Refolo

InnBM/3 IS, Innovation Transfer, and new Business Models

Chair: F. Cesaroni

Room: "Aula Posillipo"

90 - MANAGING CREATIVITY AND INNOVATION IN WEB 2.0: LEAD USERS AS THE ACTIVE ELEMENT OF IDEA GENERATION

Riccardo Consoli

42 - COMBINING CREATIVITY AND STABILITY: RESPONSES TO SPECIALIZATION AND GLOBALIZATION

Ad Breukel and Frank Go

104 - OPEN INNOVATION AND CREATIVITY: CONCEPTUAL FRAMEWORK AND PROPOSITIONS OF RESEARCH

Tindara Abbate and Raffaella Coppolino

11:30 – 12.30 – Parallel sessions

HCI/5 Human-computer interaction

Chair: A. Abate

Room: "Sala Convegni"

72 - A MOBILE AUGMENTED REALITY SYSTEM SUPPORTING CO-LOCATED CONTENT SHARING AND DISPLAYING

Rita Francese, Andrea De Lucia and Ignazio Passero

17 - FROM FOLKSONOMY TO USABILITY THROUGH TAG CLOUD

Agostino Marengo, Antonio Piccinno, Clotilde Bellizzi and Alessandro Pagano

56 - CODE: A GRAPHIC LANGUAGE FOR COMPLEX SYSTEM VISUALIZATION

Paolo Ciuccarelli, Maria Immacolata Sessa and Maurizio Tucci

Wii/4 New ways to work and interact via Internet

Chair: N. Casalino

Room: "Aula Ischia"

112 - RELATIONAL NETWORKS FOR THE OPEN INNOVATION IN THE ITALIAN PUBLIC ADMINISTRATION (BEST TRACK PAPER)

Adriana Capriglione, Nunzio Casalino and Mauro Draoli

114 - OPEN INNOVATION AND CROWDSOURCING: THE CASE OF MULINO BIANCO

Maria Chiara Di Guardo and Manuel Castriotta

EServ/4 E-Services in Public and Private Sectors

Chair: V. Albano

Room: "Aula Posillipo"

73 - E-MARKETPLACES FOR PROFESSIONAL E-SERVICES: TRUST, REPUTATION AND PERFORMANCE

Alberto Francesconi and Claudia Dossena

107 - SINGLE SIGN-ON IN CLOUD COMPUTING SCENARIOS: A RESEARCH PROPOSAL (BEST TRACK PAPER)

Stefano Za, Andrea Resca and Edoardo D'Atri

99 - FLORA AN ITERATIVE APPROACH FOR LEXICON CHARACTERIZATION IN JURIDICAL CONTEXT

Flora Amato, Antonino Mazzeo, Sara Romano and Sergio Scippacercola

13:30 – 14:00 – Plenary closing Session

The Digital Divide in Sardinia: a case study

Pier Paolo Carrus¹, Giuseppe Melis and Roberta Pinna²

Abstract

This paper analyzes the implementation of e-government strategies in Sardinia, with the aim to modernize, make public administration more efficient and transparent, improve the quality of services granted to citizens and businesses, reduce community costs, as well as to assist public administration in the facilitation of economic development within the country. Nonetheless, full e-government implementation is still far from being complete. E-government and the digital divide, which have been relatively disconnected research areas, have important parallels and potential intersections. These parallels may be useful in understanding e-government projects and policies in a more comprehensive way and, consequently, for developing effective digital strategies.

Introduction

Digital innovation is the use of innovative information and communication technologies capable of creating great social value in terms of quality of life and social and civil progress, the dissemination among all citizens of culture and knowledge, the provision of essential services and the enhancement of new opportunities in areas such as employment, health, education, social relations and institutions. In particular, digital government services include public administration management procedures and access to information resources by making them easily available through the use of digital interfaces. A widespread use of e-government, also entails the use of services which satisfy openly declared or implicitly granted citizen and firm requirements. (see Papadomichelaki, Magoutas, Halaris, Apostolou, & Mentzas, 2006) Proper digital service quality is mandatory feature in order to satisfy the needs of citizens and enterprises and favour the acknowledgement of the importance of information and communication technology in our lives and the improvement of “government management.” In this context, e-government refers to the “use of ICT in public administrations combined with organizational changes and new skills in order to improve public services and democratic processes and strengthen support to public policies” (Commission of the European Communities, 2003, p. 7). These technologies allow governments to enhance both the delivery of government services to citizens and the interaction with the business and the industrial world.

The introduction of e-Service solutions within the public sector has primarily been concerned with the moving away from traditional information monopolies

¹ Faculty of Economics, University of Cagliari, Italy,

² Faculty of Economics, University of Cagliari, Italy

and hierarchies. More importantly, e-Service and e-business (through digital government) have fundamentally transformed the way in which the logistics and supply chain dynamics are managed within the public sector. However, e-Service remains a challenge for both citizens and public sector agencies as well. Governments must not only maximize the benefits that are offered (through the application of digital government and e-Service) but they must also avoid the many pitfalls (economical, social and cultural) associated to rapid technological change. A variety of e-Government initiatives have been undertaken to improve the efficiency and effectiveness of internal government operations, communication with citizens, and transactions with both individuals and organisations (Warkentin et al., 2002).

Within the last decade, many public sector strategists have acknowledged the strategic value of e-Technologies. They also recognize the need for improved efficiency of business processes, the enhancement of citizen access to information and services, and more dynamic relationships with both citizens and private sector organizations as well. Consequently, many innovative public sector entities world-wide have had to create new e-business models and e-Service solutions (known as electronic or digital government) so as to respond to the need for change (Heeks 1999).

This paper, analyzes the present state of digital services within the Sardinia Region. In order to validate our approach, we considered an existing shared services management system known as the Comunas portal - a portal developed by the Sardinia Region. The following section is based on a review of previous studies and analysis of digital government. The last two sections examine the case study of a digital local government and e-service project within the Sardinian region while the final section sets forth our conclusions and our suggestions for future work.

Theoretical Background

In literature, several e-government definitions are readily available. Some of them are focused on the role of services, others contemplate the point of view of citizens, while others are primarily focused on the internal processes embodied by public administration. E-government is defined as “the use of ICT in Public Administrations combined with organizational changes and new skills in order to improve public services and democratic processes and strengthen support to public policies.” (European Commission, 2003) Furthermore, when dealing with the particular domain of e-government it is necessary to consider the kind of users dealt with. These may include individuals, organisations, technical systems, social relations and value systems (Traunmüller, 2003). Some studies focus on the-commerce/e-business domain; for instance, Tiwana and Ramesh (2001) refer to “internet-based applications that fulfil service needs by seamlessly bringing together distributed, specialised resources to enable complex, (often real-time) transactions.” In this domain, the true nature of digital services is that of “providing consumers with a superior experience with respect

to the interactive flow of information” (Rust and Lemon, 2001). In this paper we adopt a broad definition of e-government, such as the one suggested by the Organization for Economic Cooperation and Development (OECD, 2003). According to this definition e-government can be considered as a Public Administration innovation process in order to achieve innovative forms of government and governance through the use of ICTs. In this sense, the evaluation of an E-government system must be referred to as the capacity of entirely improving the performance of the organization adopting it. If well implemented, e-Government enables all citizens, enterprises and organisations to carry out their business with government bodies in an easy fashion, and allow for a more prompt and lower cost implementation. It deals with delivery of improved services to citizens, businesses, and other members of society by significantly changing the way in which governments manage information (Accenture, 2002). However, the e-Government challenge is not a technological one. It is rather, the challenge to use technologies in order to improve the capability of government institutions that tend to improve the quality of the life of citizens by redefining the relationship between the latter and their governments (Gautrin, 2004). Initially, e-Government may seem like another option for the communication with citizens. However, when considering the demands of demographic, economic, social, and global trends, e-Government no longer appears to be a matter of choice, but rather a true need for any country wishing to advance towards the 21st century as a competitive nation in the world arena.

Access to ICT is critical for economic and social development. Similarly, differences in the dissemination and use of ICT appear to be broadening and intensifying the socio-economic divide amongst people, businesses and nations. The differences in the access to and use of ICT and electronic networks can lead to: divides between countries; social divides within countries. These may be linked to income, education, age, family type, and location; and business divides related to market sector, region, and firm size as well. On the whole, the development of effective e-Service solutions depends on the state of the ICT industry and e-Readiness within countries, organizations and societies (e.g. Information Society Index 2002 [www.idc.com], Workshop – Digital Divide – OECD 2000, META Group 2000 and Asgarkhani 2002b). In other words, the digital divide can be considered as a barrier to the successful rollout of e-Government initiatives. Some of the causes of the digital divide that have a limiting impact on the successful implementation of e-Service include, a lack of adequate telecommunications and network infrastructure and limited PC access; lack of financial resources for developing an infrastructure; lack ICT literacy and cultural resistance; limited networking and Internet access (lack of infrastructure or high cost). The digital divide can potentially limit the success of e-Service initiatives. Even though governments, in a number of developing countries, receive funding and support for the introduction e-Government solutions and e-Services, the effectiveness of these solutions are limited, unless the barriers to e-Readiness within these countries are addressed appropriately. A review of some of the studies on the digital divide and e-Readiness (e.g. UN E-Government

Report 2001, Accenture 2001a, COMNET-IT 2000, META Group 2000 and UNESCO/COMNET-IT 2000) indicates that there are significant differences in the level of ICT adoption and network economy worldwide. Studies (e.g. UNESCO/COMNET-IT 2000, Webster 2001, Wescott 2001, Asgarkhani 2003b and Asgarkhani 2003c, Lau 2004, Jenkins 2003, Muller 2004 and Nordby 2003) indicate that numerous other factors can hinder the successful introduction of e-Government and e-Service initiatives including: lack of ICT skills; inadequate resources; too many initiatives; resistance to change; low take-up; and lack of public access.

Research method

A case study was conducted in order to explore the research questions of this study. The case hereby examined is the Comunas Project and the e-government strategies implemented within the Region of Sardinia. The case study method provides in-depth and detailed information on the Sardinian e-government strategy. The data mainly consists of primary data collected through qualitative explorative and semi-structured interviews. Secondary, data such as reports and other material on e-services development has been collected through the material retrieved on the web and these were used as well. Seven face to face qualitative interviews were conducted. The interviews lasted about 2 hrs; all interviews were recorded and fully transcribed. Although the number of interviews may be considered relatively small, they were related to the key role that the respondents had in the planning and development of e-services, they provide a high level of reliability and validity to the research findings as in the case of Ozdemir et.al.. Through our reference to Yin, the data was carefully analyzed by following the general strategy of theoretical orientation of the case study. In order to boost the validity the article, partial reports of the study were introduced and discussed with one of the Sardinian Region's top managers.

The authors would also like to highlight that the project hereby examined is still an ongoing one. This could be considered a limitation of the study because some issues or findings may be subject to change over time and this may influence the final results of the study itself.

Comunas project case study

The Sardinia Region is characterized by a high level of administrative fragmentation and population dispersion. In December 2001, one of the local governments within Italy introduced an e-Service initiative. This local government aimed at introducing e-Services through the implementation of its electronic governance initiative in an attempt to increase the effectiveness, efficiency, and quality of information, improved interaction mechanisms, as well as better governance tools.

The goals of e-government service range from posting general information requested on a website in order to provide online enquires and processing such as the electronic payment of taxes and/or other fees. In order to make this happen as efficiently as in other countries, the Region required the adoption of stronger policies so as to tackle literacy digital divide (digital divide), among citizens. With this goal in mind the *Comunas* portal was created so as to increase interactions between public administrations and Citizens/Enterprises by means of ICT Infrastructures. The name "comunas" is the plural of the word "community" and may be applied to a wide range of meanings. In fact, other than indicating the administrative headquarters of a center or a community that is governed by laws, it may be also be defined as "the things and everyday tools, their usage as well as the customs and traditions shared within the community"; it is from this broad and rich sense in meaning that the term "comunas" was coined: "Comunas" is to be seen as a place of innovation and tradition as well, which is to be equally shared by Sardinians. The project Comunas is a typical example of *application cooperation*. This term refers to the practice of applications developed software (either at the back office or front office) and the use of different databases, an- that geographically distant and distributed, you can talk to each other and exchange information of any kind, with secure and controlled processes through one-to webservices operating systems . Comunas allow all local governments to adopt a high standard of services provided online to its territory and provide the integration into a regional network of new advanced services directed towards transparency, democracy and e-Government Municipalities which lack appropriate management solutions and who are willing to use the ASP methodology portal (Application Service Provider) provided by the Comunas. They will be able to join together into the Comunas network, without incurring into additional costs, simply by making the data managed available by their information systems.

Analysis and Results

After a preliminary testing phase started in 2006, and after having witnessed the involvement of 111 municipalities, the project has now moved to a phase of consolidation and adaptation of new business models and has been extended to all communities (375 at 377). During this phase, the development of cooperative relations with partners operating within the Information Technology for the local public administration was critical. Through the interfacing of municipal information systems, the regional government ensures the standardization and publication of web services and holds suppliers to be involved and ensure the adaptability of their back-office software to the new regional standards of application cooperation.

Despite the high number of towns interconnected and the extent of population served and managed, the services offered are still insufficient and the access to informations remain content. The level of availability, and use, and consequently used by users, citizens and businesses of e-government not only varies

considerably depending on the type of water authority, but also to any interlocutor (citizen or company) and the degree of interactivity of the service.

In the case of , Sardinia which is characterized by many small towns located in areas where the territory itself makes it financially costly and technically complex to provide the availability of broadband services. An additional element of complexity of the digital divide phenomena in Sardinia is the great number of towns which are not covered by ADSL. This occurs particularly in the case of small towns located in disadvantaged areas of Sardinia. It is for this reason that the Sardinian territory has been divided into three main areas: **areas of long-term digital divide**: served by telephone exchanges without DSLAM and fiber links; **areas of medium term digital divide**: served by telephone exchanges equipped with mini DSLAM; **ADSL coverage areas**: served by telephone exchanges equipped with DSLAM and fiber. However, the problem of digital divide on the medium and long term is being tackled thanks to major investments funded by the Sardinian Region which has created a new wideband network. In 2009 over 400 km of optical fiber were laid down over all the Region, serving 27 municipalities (about 38% of those provided in the project). By September 2010, a further amount of 500 km of fiber optic will be placed throughout the territory and this will ultimately link all towns with a population exceeding 1500 inhabitants. ADSL coverage has been extended to as many as 140 municipalities and is expected to reach 100% of communes by 2010.

Another important feature in order to accelerate the extension of broadband and the bridging of the digital divide as for the level of *IT literacy*, is the ability of PC use by individuals and the extent of PC presence in households. In fact, in Sardinia the broadband market has developed to a larger extent when compared to the level of IT literacy which is still low. This indicates that is necessary reduce the IT gap. The case analysis shows that the growth of online services provided by the Sardinia Region is linked to the willingness to shift from cogency. The transition must be carefully planned and gradually implemented, and should primarily involve the most advanced users. Until we will set a process of switching over to a totally digital communication ports to pass any online does not reach a significant penetration or technology or services

Discussion, conclusions and limitations

It appears that practitioners and management experts tend to agree that the trend for government transformation and public sector reform through e-Service is to be considered irreversible. However, technical innovation on its own is not enough to drive the development of effective e-Service. In other words, access to the right technology to enable e-Service is essential but at the same time insufficient. Most of the shortcomings (concerning the effectiveness of e-Service) can be resolved by improving the technology of the infrastructure and the access to e-Technologies and the increase of the level of IT use literacy. The parallels between e-government and digital divide are important to understanding

how policies, society, organizations and information technologies come together. E-government initiatives have the potential to deliver better services. However, problems of access and use diminish this potential (Garson, 2004) The strategic conditions for the supply and distribution of services with high speed access depends on the optic fiber connection of the telephone network operator. Moreover, another important technical dimension is certainly represented by the presence of DSLAM equipment in the exchange of data. These two dimensions are very important to understand the complexity of the digital divide problem. The conceptualizations of the digital divide and e-government have important implications from a policymaker point of view. It suggests that policies aimed at reducing the digital divide should consider the specific type of gap they are aiming to bridge and the multiple perspectives of the people being served by government. Moreover, preliminary studies should be conducted in order to understand the specificities of the divide present in an area in which e-government initiatives will be implemented. Finally, this study is not free of limitation. As stated in the title, this work is an exploratory study based upon a limited set of empirical data relative to one region.

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