ONE GOOD PRATICTICE GUIDEBOOK

December 2013

Observatory Network
to Enhance ICT Structural
Funds Absorption

European Union
European Regional Development Fund

ACRONYM GLOSSARY

1.0

Acronym	Description
API	Application Programming Interface
ARD	Agence Régionale de Développement Paris île-de-France
ASP	Active Server Pages
CFI	Centre Francilien de l'Innovation
CMS	Content Management System
CRS	Regional Service Card
DataGM	Data Greater Manchester
DEHEMS	Digital Environmental Home Energy Managemen
DMS	Document Management System
ENOLL	European Network of Living Labs
EPIC	European Platform for Intelligent Cities
FabLab	Fabrication Laboratory
FVG	Friuli Venezia Giulia
GUI	Graphical User Interface
HW	HardWare
IIP	Information Identity Card
IPR	Intellectual Property Rights
ISO	International Organization for Standardization
LDAP	Lightweight Directory Access Protocol
LL	Living Lab
MadLab	Manchester Digital Laboratory
MMU	Manchester Metropolitan University
OSS	Open Source System
PASI	Innovative Service Access Point
PSP	Policy Support Programme
R&D	Research and Development
RFID	Radio-Frequency Identification
RUPAR	Rete Unitaria della Pubblica Amministrazione Regionale
SDK	Software Development Kit
SIAL	Local Administration Information System
SIAR	Regional Administration Information System
SISSR	Social and Health Regional Administration System
SOA	Service-Oriented Architecture
SW	SoftWare
SWR	SüdWestrundFunk
WI-PIE	Programma per lo sviluppo e la diffusione capillare della larga banda

INTRODUCTION

2.0

2. INTRODUCTION

The ONE project aims at improving regional capacity for planning investments in ICT through setting up of a network of regional ICT observatories. Thanks to the creation or consolidation of these observatories, partners seek to enhance the conditions within their innovation frameworks by documenting ICT penetration processes, making data available to relevant public and private stakeholders and helping with evaluation of ICT initiatives. Thanks to the activity of ICT observatories, ONE takes action to enable decision-makers to make informed choices about ICT investments based on ex-ante and ex-post analyses of their territories, helping to better tailor ICT interventions towards specific regional needs and thus enhancing absorption rate of ICT funds.

The outputs of the projects are:

- Good practice catalogue: all project partners participated actively in the thematic workshops and forums according to their expertise and interests, benefiting from the themes dealt with and collaborating in the drafting of the catalogue of good practices. The good practices that were proposed:
    - *"Indicators and statistics management: information identity card"*: CSI-Piemonte (Italy);
    - *"Regional organizational model for digital public policies*": La Fonderie (France);
    - *"Living Labs methodology and the use of Web 2.0 applications"*: Manchester City Council (United Kingdom);
    - *"ICT Regional Organisational Model"*: Insiel (Italy);
    - *"Data Until Eternity"*: MFG (Germany).
- Methodology set of guidelines on ICT Observatory development and exploitation, with the contribution of partners from Poland, Germany, Italy, Czech Republic, Cyprus, France and UK. Thanks to the interregional approach, existing models of observatories will be further developed and transferred through thematic workshops to all regions involved, enabling them to restructure the organisational setting and the innovation capacity hidden in ICT programmes;
- 9 Implementation Plans: the Methodology set of guidelines provides valuable material and insight for the development of 9 Implementation plans, that benefit from the studied practices in order to ensure a better planning of ICT investments and therefore a higher structural funds absorption rate.

In the present document the ONE Project aims at offering to all those interested a description of the partners' good practices, as sharing positive experiences – as well as mistakes – may prove helpful to those that, with different approaches and schedules, are setting up ICT monitoring support tools on their territory.

This catalogue may be of interest for:

- decision makers: politicians and their professional staff involved in development of regional policy at local, regional, national or EU level;
- programme bodies: members of the Monitoring Committee, MAs, JTS, IPs;
- end-users (i.e. the people directly affected by the projects) and other interested people living in the area around the project's activities;
- multipliers: journalists, regional agencies, etc..

The catalogue aims to deliver the following results:

- offer innovative approaches that could be relevant also to other regions in Europe;
- policy recommendations for the national and the EU level;
- possible synergies and mutual enrichment among the INTERREG IVC projects dealing with similar issues;
- projects links to related initiatives in other EU programmes.

Hereafter is a description of the 5 identified good practices: in addition to the description of the activity, of its objectives and beneficiaries, the catalogue also presents a proposal of the steps to be adopted to implement it in another territory, suggestions on how to avoid mistakes that have been made in the past and on how to maximize time and resources.

CSI PIEMONTE INDICATORS AND STATISTICS MANAGEMENT: INFORMATION IDENTITY CARD

3.0

3. CSI PIEMONTE INDICATORS AND STATISTICS MANAGEMENT: INFORMATION IDENTITY CARD

CSI-Piemonte was founded in 1977 with the aim of promoting the modernization of local administrations by using the most advanced information and IT-based tools to create information services and systems. CSI is a public consortium bringing together a large number of Public Administrations.

The mission of CSI is creating innovative public services to make life simpler for citizens and businesses, and streamline their dealings with public administration. CSI-Piemonte is a leading ICT agency serving all segments of the public sector – from governance systems to cultural heritage, health care, tourism, local services, training and employment.

3.1 THE GOOD PRACTICE

The main issue faced by the practice concerns information Interchange and integration. Actually, several statistics and indicators can be published on many portals, however:

- they may be semantically the same, even if they are presented in different manners (for example, different scale of measurement or frequency of updating);
- the domain concepts the indicators refer to are not clear;
- the quality of the data source/s on which they are built is not clear;
- it is difficult to understand the updating process.

These problems, along with others, make it difficult for organizations to interchange their experiences in a given context, because of the uncertainty level of the information being exchanged, as well as integrate their own information with external knowledge.

3.2 OBJECTIVE(S)

The practice aims at ensuring:

- governance of the data used in producing statistics, in order to monitor the quality of the data involved in the process;
- governance of the production processes of statistics, in order to monitor and improve the quality of the process itself.

3.3 ORIGINS

The Piedmont ICT Observatory was created in the framework of the WI-PIE programme as a support to evaluate the progress of the Programme itself, but it has now become a more generalised tool aimed at supporting Piedmont decision-makers for the future 2014-2020 programming period. To reach this objective the ICT Observatory has adopted an efficient and effective research methodology, led by a specific institution of the territory with the adoption of specific and state of the art tools to disseminate the ICT wealth of data of the Region.
Different decisional supporting systems use information coming from others and publish it on their own portals. Consumers of this information are not always aware whether what they gather by using a specific portal is the same information, or similar, to that coming from other points of access.
In a decisional process, metadata, or information about other data, is therefore crucial to understand and then make decisions at any level (operational, tactical and strategic).
It is important for decision makers to be sure about the numbers they are presented through reports and dashboards: if these numbers are based on low quality data, for example the data source is not complete nor updated, the decision maker must be aware of it.
Two activities in particular have been selected to boost the ICT Observatory Functions:

- Information Identity Card (IIP), a mean by which it is possible to monitor the production process of statistics and indicators and to add significant metadata to this information to improve understanding, exchange and integration;

- info-graphics, to better visualize and communicate the information assets of the Observatory.

Through these basic techniques the Piedmont ICT Observatory was able to involve not only a restricted number of very specialised users, but rather a larger number of policy and decision makers. It has also been able to evolve, with a view to improving its transparency, making the information it manages and the results it reaches understandable to a wider public.
Bodies/organisations involved in implementation:

- Piedmont Region
- CSI-Piemonte
- IRES

3.4 DETAILS

The IIP practice is based on a conceptual schema of metadata; with regard to a specific piece of information (metric, statistic or indicator) its components are:

- definition: domain specific and statistical concepts which identify the semantics;
- information source(s): the (raw) data source(s) input to the production process;
- informative system: this is related to the kind of process that deals with information;
- life cycle: the several phases of the production process in which raw data or other input sources are collected, transformed and integrated. These phases may be carried out in a single informative system as well as in different systems;
- collection: conceptual grouping of statistics or indicators, the classification may depend on several points of view and respond to different requirements. This is very important when building a system of indicators, that is when a real aggregation of elementary indicators into a complex one is not feasible nor convenient;
- dependencies: specific relations of dependency between the piece of information and others which are part of the same system, useful when the goal is to reduce redundancy during further analyses.

Ideally, the IIP should be integrated with the indicator at the beginning of the production process and updated along the various phases with the relative metadata, however in Piedmont it was done at a later stage as some of the data had already been collected by the ICT Observatory. Indeed, at times, it is necessary to compile it backwards: for example, if informative system did not take part in the early phases of collection or revision of raw data, but is in charge of producing the statistics starting from a certain point in the process. In that case, it is necessary to involve the other systems in order to be able to reconstruct the previous phases and be accurate. It is extremely important to retrieve the information about all the phases if you want significant metadata to be added.

In the IIP also focuses on the quality dimensions, i.e.:

- quality of the process: a set of good practices and guidelines to monitor and control the efficiency of the process;
- quality of the sources & quality of the results (effectiveness), referring to the following data quality dimensions:
    - relevance
    - accuracy
    - timeliness and punctuality
    - coherence and comparability
    - accessibility and clarity

The activity has been carried out together with all the institutions that compose the ICT Observatory, in particular with the Piedmont Region and IRES Piemonte. The indicators that have been taken into consideration for the implementation of the IIC were, mostly, those resulting from the surveys that the Piedmont Regional Competency Centre carries out for the Piedmont Region and the ICT Observatory.
As far as the actual compilation of the IIP is concerned, the following figures were involved:

- analysts: to study the phenomenon and the domain in which it develops, to build the conceptual model and to identify statistics and possible indicators that will explain what is being studied;
- designers: that elaborated the logical and physical architecture of the various information systems dealing with data, who were also involved when compiling the life cycle section of the IIP;
- data stewards: to deal with data quality problems. The data stewards investigated the production process and recommended effective solutions when they identified data quality flaws. Furthermore, they validated the IIPs, collaborating with the other two groups.

In order to be efficient and effective, CSI-Piemonte has set up a centralized repository where all the metadata regarding statistics and indicators are stored. Indeed the information structure of the Piedmont Region is quite complex as there are several information systems and thus there are many potential producers of statistical information that can support decision making at different levels.
Presently, the central repository is based on a relational data model, which will be shared and known among all the specialists who take part in data processing and it consists of:

- a registry of statistical and domain concepts;
- a registry of information systems and relative data sources.

This approach improve standardization both in the structure and in the contents of IIPs.
The interface to this hub takes into account transactional operations. This repository is, in fact, operational as regards writing and reading, and must serve all the applications that need metadata on the statistics they show to the final users.

In order to implement the practice the following components were introduced:

- central data hub;
- the central repository has been built using a relational schema and implemented in an Oracle 10g database;
- web applications based on SOA paradigm.

For applications that need this kind of metadata, we chose to use a service oriented paradigm; in particular, applications can interact with the central repository by means of a service layer which implements CRUID (Create, Read, Update, Insert, Delete) operations. Therefore we identified three main profiles:

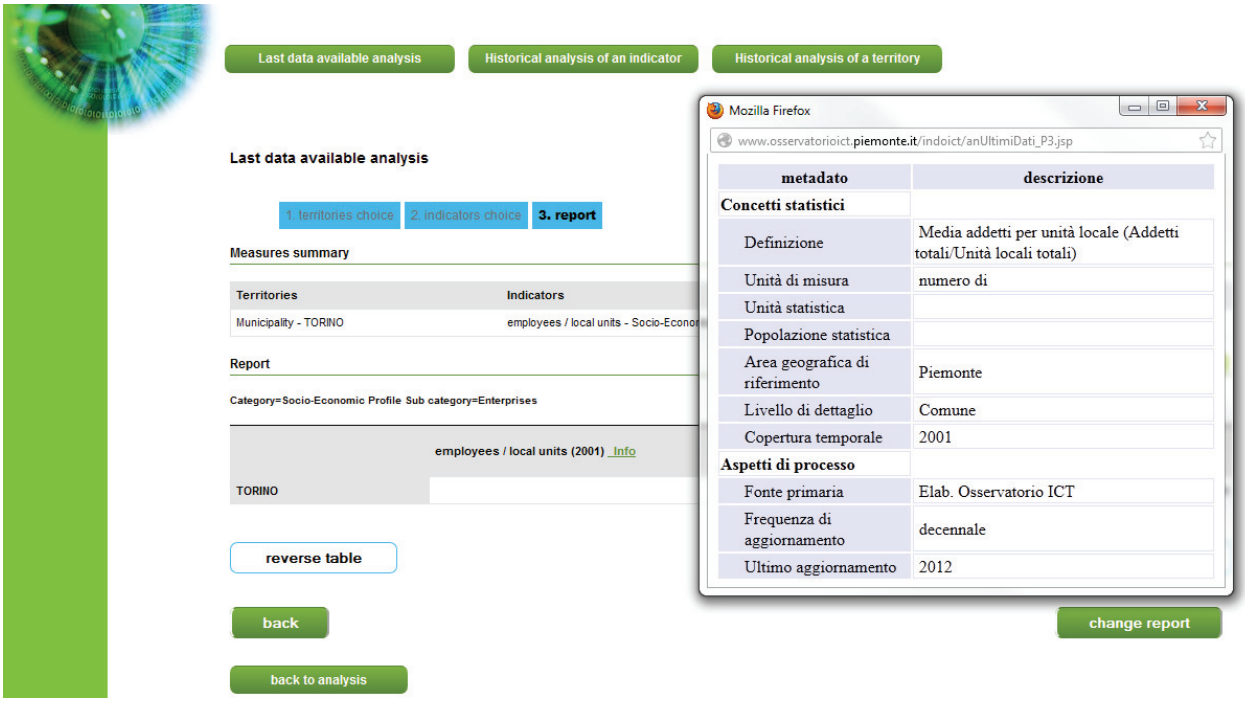
- administrator: this profile can read metadata from the repository as well as manage static and dynamic contents, that is it can create, update and delete structural objects of the database and manage dynamic contents such as statistical concepts, information systems, data sources etc.;
- power user: this profile can read metadata and write and update a subset of structural metadata into the repository (mainly domain concepts and data sources, along with their information systems) in order to compile IIPs;
- user: the profile can read metadata from the repository and use them to build and publish IIPS on their applications.

The activities to manage statistical data more effectively in the framework of the more general ICT Observatory activities were carried out in the economic framework defined by the General Agreement between the Piedmont Region and CSI-Piemonte for specialist support to the ICT Observatory. The transversal nature of the IIC makes it possible to take advantage of its structure for many other projects as well, as it simply requires the different projects to implement the contents in relation to the activities to be carried out.

The main beneficiaries are:

- decision-makers, who are provided with information useful in understanding and evaluating results achieved in implementing undertaken activities and in suggesting scenarios at regional, national and European level;
- researchers who need to analyse data and indicators from different (ICT) observatories;
- projects that need to use statistical information in order to better reuse the knowledge that already exists;
- citizens who have access to statistic information, in order to increase their awareness on ICT and what is available to them.

Moreover, the availability of a central hub and a service-oriented middleware ensures that development costs for new applications that need statistical metadata are significantly reduced.



3.5 TRANSFERRING

For the practice to be transferred, the institution that adopts it necessarily requires some form of information systems dealing with statistical information:

- data sources, internal or external to the organization – knowledge of data sources as regards the quality dimensions;
- processes for creating statistics and indicators – these must be supported by technical and descriptive metadata;
- portals and applications – where statistics and indicators are published (better if serviced-oriented).

As far as organization is concerned, the implementation of the IIC requires the commitment of the institution that owns the data, not only to make them public, but also to give more visibility and share the process that led to the elaboration of the indicators. It is furthermore necessary for the institutions to support and give visibility to the project, that increases its effectiveness when the wealth of data that are integrated and inter-related among each other reaches a large volume.

In terms of technology, indicators and statistics management requires the possibility to implement:

- central repository (hub): relational database
- application interfaces to the hub

The data of the ICT Observatory are among those published on the Piedmont Open Data Portal[1], in the ICT section, and are closely connected with the data presented by the WI-PIE Programme[2] on broadband distribution over the Piedmont territory.

1 http://www.dati.piemonte.it
2 http://www.wi-pie.org/

Often the ICT Observatory indicators are also built with data from other sources as well, both external and within the regional information system. Moreover, data are also provided by a set of data display or query and reporting applications. Integrating data with metadata thus becomes an essential pre-requisite for the correct setting up of the indicator, as well as for it to be usable by other systems or other user typologies.

After an analysis period the ICT Observatory developed the Master Indicator Management approach (and the relevant Indicators ID card) in 2011. This made it possible to have 52 indicator ID cards for the data produced by the ICT Observatory itself.
Thus, the report for 2012 ICT activities and policies will be produced on the basis of data provided by reliable and comparable sources. Indeed, the 2012 report that is already in preparation, integrates data collected by the ICT Observatory with other regional, national and EU data bases, already ensuring some savings as only data that are not already available from other systems are collected and reported by the ICT Observatory.

The objective for the future is to replicate the Indicator ID card for 2012 indicators, thus improving the inter-exchange of data and the possibility to understand the data that are used in different systems. Moreover, the data of the ICT Observatory are already in open data forma, and can thus be used by other actors to make comparisons or to derive other indicators.
Through these basic techniques the Piedmont ICT Observatory was able to involve not only a restricted number of very specialised users, but rather a larger number of policy and decision makers. It has also been able to evolve, with a view to improving its transparency, making the information it manages and the results it reaches understandable to a wider public.

The ideal course to be followed for an effective transfer of the practice entails:

- identification of the scope of action (internal process of institution interested in integrating the practice);
- IT and functional context that has or is expected to have a medium-to-high level of data inter-exchange, both at technical and knowledge level;
- identification of the internal references and the relative roles (data steward, etc…);
- verification of the timing and planning of the output;
- verification of the availability of the actors to be involved in collaborating and providing official commitment and support to the activity, also ensuring that it is maintained over time
- verification of the technical feasibility;
- data and metadata storage architecture and technologies;
- web service architecture and technologies.

Lessons learnt:

- strong commitment of the information systems managers in disseminating the good practice is of the essence, for the practice to be adopted by on a large number of systems and hence to prove more effective;
- the new system must have a centralised repository because of the complexity of the information environment; it is necessary that concepts are defined, managed and shared in a single place in order to enhance standardisation of both the structure and contents of IIPs.

3.6 BENCHMARK

CSI-Piemonte collected some information from the partners participating to the first project workshop in May 2012, on the status of ICT monitoring in their territories, what has already been implemented and what they would like to see in the future (with particular reference to the indicators supporting the Observatory activity). From the 7 questionnaires received it emerged that many partners have their own monitoring indicators on the level of ICT penetration, at different levels and with different detail. None of the partners, however, has monitoring tools on the process to produce the indicators or on the nature of the data.
More in detail for the different partners:

- La Fonderie has indicated as areas of interest for potential indicators: Open Data, online digital services, use of urban facilities, digital capacity of enterprises;
- the Marshal's Office of the Lodz Region already monitors a digital divide indicator among households, entrepreneurs, public administration entities and higher education in the Region; the ICT exploitation in the Region, the e-accessibility in the Public Administration, the e-services usage and e-development potential, and the Internet usage broadband;
- the OCECPR monitors the penetration of broadband access through the number of broadband subscribers (by fixed/mobile technology, by speed bracket as defined by EC, by bundle or services, by provider, by geographical/population coverage percentage) demographics (total number of households, concentration of population (urban, rural), number of people /household) and income available for telecom services (both as absolute and as a percentage of the income);
- EPMA/Vysocina Region monitors ICT infrastructure, electronic public services, electronic security, and ICT education;
- Insiel monitors, with different kind of parameters, 4 macro areas: the Regional Administration Information System (SIAR), the Local Administration Information System (SIAL), the Social and Health Regional Administration System (SISSR), and the Public regional network (RUPAR). Moreover, it has also other relevant indicators, such as the number of the technical support activities (SW, HW, helpdesk,..) and the related Service Level Agreement;

- Manchester City Council/MDDA monitors digital inclusion, in terms of number of residents with Internet access and their level of access, and digital industries, that is the number of digital businesses and employment/skill levels;
- MFG has indicated as areas of interest for potential indicators: mobile connections and network connection speeds in urban/rural/industrial areas.

MFG FOR CITY OF SCHWABISH HALL DATA UNTIL ETERNITY

4.0

4. MFG FOR CITY OF SCHWABISH HALL DATA UNTIL ETERNITY

MFG Innovation Agency for ICT and Media of the State of Baden-Württemberg is a regional public innovation agency for ICT and media, based in the South-West of Germany.
MFG's mission is to support and foster the IT, media and related business sectors in the region of Baden-Württemberg.

With its two main shareholders – a regional state ministry and the regional public broadcaster (SWR) – MFG has now been active for nearly 15 years at the interplay of creativity and technology by fostering an interdisciplinary sector approach. This encompasses ICT, creative industries and IT application areas.

MFG also hosts a variety of clusters and networks and delivers targeted services (ISO 9001 certified) in the area of innovation management, technology transfer and regional development and marketing.

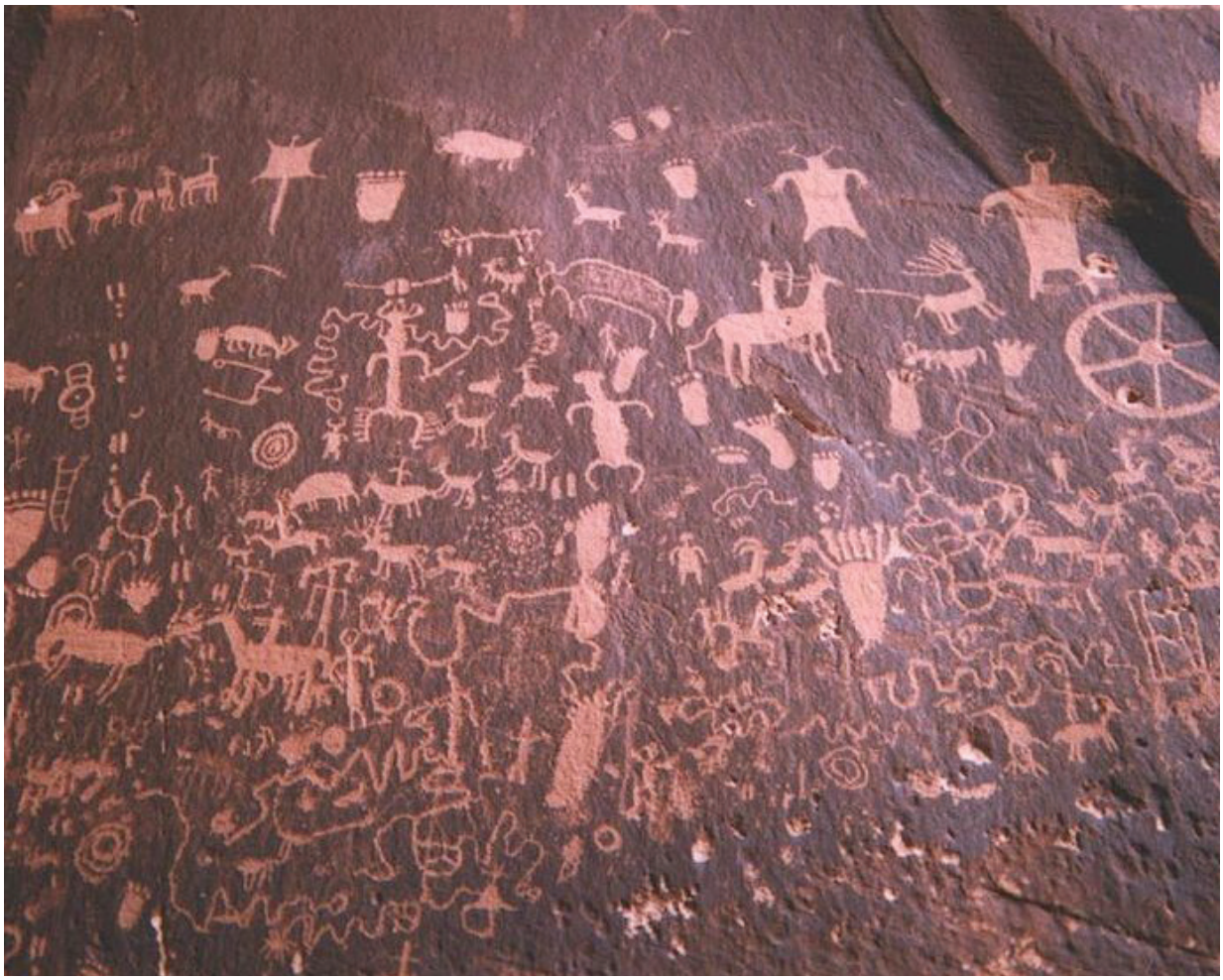
4.1 THE GOOD PRACTICE

Public Administrations need to preserve their documents for centuries. With the current proprietary techniques it is not certain if data formats used by e.g. Microsoft Word can be read in 20 years' time, not to mention 100 years. With data storage and open source data tools the project attempts to keep data records machine readable for a very long time.

4.2 OBJECTIVE(S)

The objective of this practice is to fulfil the requirements of data preservation and guarantee readability in future years.

Eternal data?



4.3 ORIGINS

In Public Administration the requirement of preserving data for centuries exists. The oldest data in the archives of the city goes back centuries. There is a need to preserve this, and all future data, in a format that will be accessible for several centuries with little maintenance required.

This project has been going on since early 2011, and is an on-going process.

The City of Schwäbisch Hall is involved in the project implementation; it purchases services such as:

- COMback GmbH (archiving);
- OpenXchange (email, calendar…);
- Deutsche Wolke (cloud service);
- Agorum (DMS);
- Ubuntu (fileserver).

4.4 DETAILS

Invisible DMS, open formats, open structure, archiving as a service. Services and software are purchased from aforementioned organisations. Technical solutions are:

- OSS-Desktops;
- central (File-)Server structure based on OSS (SuSE, Ubuntu);
- documents in OpenFormats (ODF) with OpenSource Software (Open/Libre-Office);
- PDF/A;
- OpenSource DMS from agorum (based on Tomcat, Java);
- OpenArchive from Graudata.

This practice is a continuation of several previous projects implementing open source solutions to the Schwäbisch Hall ICT structure. All desktops are 100% open source at the moment. Future development will look at creating an app for mobile ("world wide") access; client for tablets (better GUI); integration in webdav directory; etc.

Investment costs within the city ICT budget; running costs ~ 1,000 € / month, depending on the kind of service and (disk-)space used.

Open solutions save money, improve transparency and benefit local suppliers. These benefits are directly transferrable to tax payers and historians who will be secure in knowing archives will last. The solutions purchased are from local vendors, so support of local IT-/Service-/Cloud-Providers = support of local economy.

4.5 TRANSFERRING

Transferability of the practice is good. It requires some effort, but pieces of the puzzle are publicly available. The main challenge would be to find a comparable, certified secure datacentre like *"comeback."*

Data until Eternity complements the city's ICT plan of relying on Open Source Software and includes local companies in the realisation of the project.

Practice is on-going, but initial results are a secure data, open structure and long term storage of data. Local sourcing benefits local companies and creates jobs in the private sector.

Steps to follow are: finding local partners / service providers which support the above mentioned OSS solutions; looking for a certified datacentre and contract that matches the legal issues for public authorities.

Open Source requires commitment; here we managed to achieve that through training, openness and positive image campaign with Tux.
There are very few datacentres which can be used by PA (legal issues).

MANCHESTER CITY COUNCIL LIVING LAB METHODOLOGY AND THE USE OF WEB 2.0 APPLICATIONS

5.0

5. MANCHESTER CITY COUNCIL LIVING LAB METHODOLOGY AND THE USE OF WEB 2.0 APPLICATIONS

Manchester Digital Development Agency is part of Manchester City Council and develops projects promoting digital inclusion, digital industries and digital innovation.
The Manchester Living Lab aims to give citizens an opportunity to contribute to the development of the city's future as we aim to become one of Europe's leading *smart cities*.

5.1 THE GOOD PRACTICE

Exploring how a city can use Living Lab methodologies to drive forward digital development.

5.2 OBJECTIVE(S)

Living Lab is a concept to support the processes of user-driven ICT systems. The European Network of Living Labs (ENoLL[3]) defines a Living Lab as a methodology for User Driven Innovation (UDI).

3 http://www.openlivinglabs.eu

There are two key objectives to the practice:

- developing new products and services – Living Lab activities are situated in real-world contexts, not constructed laboratory settings. In this way they involve citizens in the development of new products and services that can help develop a product and potentially make the city a better place to live;
- co-creation – provide a real life test bed and experimentation environment where users and producers co-create innovations.

5.3 ORIGINS

Living Labs are a relatively new concept supported by the ENoLL as an initiative sponsored by the European Community through a number of European projects and coordinating actions. The aim is to place new solutions development into real-life applications and to put technology-driven innovation to the test and spur new demand driven innovation ideas. The practical, user-centred approach to project development aligns with the Living Labs methodology.
The focus is on integral involvement of users and their representatives throughout the duration to ensure end-user acceptance and uptake. Solutions are tested in real life and a consolidated set of requirements and validated functional specifications emerge as a result.
Manchester is one of the founder members of the ENoLL and has been using user-centred practices in developing innovative new digital services and products over the last ten years.
The development of Living Labs has been incremental and is now focused on working with key organisations in the city such as MadLab, a community “hack space” for the development of new digital services.

The Manchester Living Lab provides a mechanism for working together with a broad range of initiatives as well as a funnel for innovation and experiments.

Manchester has taken a dual approach to its own Living Lab, developing new services for particular communities (e.g. in Hulme, East Manchester and the Northern Quarter) or for specific users (e.g. environmental metering, innovation and business clusters) and looked for opportunities to scale this in more top-down regeneration projects.

The key components of the Manchester Living Lab are:

- Connectivity – sufficient broadband infrastructure;
- Technology – including hardware, software, sensors;
- People – smart citizens in smart cities; involved in co-design, co-creation as well as user-testing and crowdsourcing ideas;
- Services – about services for the city to make Manchester a better, more efficient and more dynamic place.

Manchester supports both a network of organisations and a cohort of individuals who are the *"Living Lab for Manchester"*. Together, this delivers a depending on focus.
The Living Lab model has been used in numerous projects in the city.
The Manchester Hackathon is one example of Living Lab activity in Manchester.

The **Manchester Hackathon** was organised over a two month period in 2012.
The planning for this activity involved liaising with MCC departments (ICT and Communications, Environmental Strategy, Transport for Greater Manchester) to release data and working with the developer community to advertise and promote. Other details included venue and practical arrangements. The event took place in November 2012 bringing together experts and innovators to hack, code, programme and experiment, with the city's sets of open data to build new applications and develop future services. Utilising the open data sets made available by MCC and public sector partners, participants were invited to hack, code, programme and experiment with the city's open data to build ground-breaking new applications and develop digital services for the future.
The bodies/organisations involved in implementation were:

- MDDA: lead organisation for the development of a Digital Strategy for the city of Manchester and part of Manchester City Council;
- technology – including hardware, software, sensors;
- people – smart citizens in smart cities; involved in co-design, co-creation as well as user-testing and crowdsourcing ideas;
- MadLab[4];
- FutureEverything[5] - a festival and innovation lab;
- FabLab[6] - a digital fabrication laboratory;
- University of Manchester;
- Manchester Metropolitan University;
- University of Salford;
- Open Data Manchester[7] - for people who are interested in realising the potential of open data to benefit citizens, business and public bodies in Greater Manchester and beyond;
- Manchester Internet Entrepreneurs[8] - a group for people interested in internet marketing;
- Transport for Greater Manchester – responsible for transport services across the city region.

4 http://www.madlab.org
5 http://futureeverything.org
6 http://www.fablabmanchester.org
7 http://opendatamanchester.org.uk
8 http://www.meetup.com/Manchester-Internet-Entrepreneurs

5.4 DETAILS

Living Labs provide a way to structure research and innovation so that those involved work together cooperatively, and the end result constitutes a better response to the problem. Researchers, industry, government and end-users collaborate on the research and development, testing it out in real world settings. Hence the very diversity of the Living Labs presents a challenge to demonstrate impact in a uniform way. There are a number of factors to be considered:

- national indicators are probably not be useful given diversity of type and purpose;
- common indicators not useful for the above reasons;
- need to tailor the indicators to the specific objectives of the LL;
- indicators relate to accountability;
- indicators need to be defined by users/beneficiaries.

The aim is to create an environment for experimentation and co-creation with real users in real life, where users together with researchers, companies and public institutions look together for new solutions, new products, new services or new business models.
Living Labs are also about societal involvement, they aim to contribute to a new innovation system where users and citizens become active actors, not only passive receivers.
A number of new grass roots initiatives have grown from Manchester's participation in Living Labs and they continue to provide a mechanism for working together. These continue to be a funnel for innovation and experiments within the city. They include:

- MadLab – a creative technology space run by the community set up in 2008 and continuing to grow as an independent vibrant space delivering its own projects and initiatives developing new digital services. It is an open-access venue providing space, programming, education and workshops for practitioners in digital media, the arts, and development. They foster cross-disciplinary thinking and engagement and encourage bottom-up creative approaches to personal and professional innovation.
- Hackathon Concept – two hackathons have been held in Manchester generating new relationships and real applications that can be utilised by the city authority. This work continues to underpin the city's commitment to open data (described above);
- EU project delivery – Manchester has a track record of the successful delivery of EU projects delivered using the Living Labs model – e.g. DEHEMS (Digital Environmental Home Energy Management[9]) and EPIC[10] both offering carbon reduction opportunities to householders. Living Labs work underpin our approach to the delivery of projects. SmartIP[11] a Living Labs project focused on co-creation for smart citizens and cities in the areas of mobility, environment and engagement;

9 http://www.dehems.eu
10 http://www.epic-cities.eu
11 http://www.smart-ip.eu/

- Carbon Coop[12], a community cooperative of Greater Manchester residents who have begun to carry out changes in our own houses and communities to reduce carbon emission working with housing specialists;
- Go On Manchester[13], a network of volunteers – digital champions to inspire, encourage and support people to use the Internet.

In August 2013 the Living Labs summer school will be held in the city in conjunction with ENoLL, Manchester City Council and the Metropolitan University of Manchester. This will provide a platform to bring together Living Lab knowledge from across Europe as well as serving as showcase for activity in Manchester[14].

Focusing on recent Living Labs activity, the Manchester Hackathon brought together experts and innovators to hack, code, programme and experiment, with the city's sets of open data to build new applications and develop future services. Utilising the open data sets from DataGM[15] which were made available by Manchester City Council and public sector partners, participants were able to make develop whatever they wanted – develop applications to help people find their way round, stay safe, discover new experiences. The Manchester Hackathon was a productive and exciting collaboration between Manchester's brightest minds in software development and data processing. 76 people signed up for the Hackathon with 20 teams creating applications.

The hackathon was part of Manchester City Council's commitment to open data and was the motivation for the release of datasets, APIs and documentation for the event. The variety of data available ranged from trees, Contact Centre data, and Contaminated Land. The data was released in consultation with the open data community.

Applications developed on the day included a bus tracker application to help people find their nearest bus stop and provide times and destinations of the next bus due, a taxi rank finder app and an application called Manchester Voice which allows the public to submit ideas to the council and then checks records to see if other people have made the same suggestion. When an idea is developed it would allow the public to vote on it.

12 http://carbon.coop
13 http://go-on-manchester.com
14 http://4thenollsummerschool.wordpress.com/
15 http://www.datagm.org.uk/

The main prize of £4,600 was won by Data Crossfader, a visualisation tool that plots information on a map of Manchester to allow people to compare important sets of data. For example, using postcode details it shows the locations of road traffic incidents on a map, and then adds where speed cameras are, so if there is a particular area where accidents happen which are not covered by a camera, it easily shows that on a map.
Data Crossfader will be developed further in collaboration with Manchester City Council and Open Data Manchester over the next few months.
The other winners were as follows:

- Best Under 21's Creation – £600 – Bus Tracker by 19 year old MMU student, the Bus Tracker app will let you find the nearest bus stop to you, direct you to it and give you the times and destinations of the next bus due;
- Best Solution for an Identified Problem (£600 prize) was won by Manchester Voice which would allow the public to submit ideas to the council, then checks records to see if other people have made the same suggestion. When an idea is developed it would allow the public to vote on it.

The Manchester Hackathon was an intense, productive and exciting collaboration between the brightest minds in software development and data processing.

A full report of the event is available on request from MDDA.

In general Living Lab activity is funded on a project by project basis. The general method of funding is to bring together support from a number of sources, combining both in kind and direct funding.
MadLab is funded via a number of different sources – grants from foundations (Welcome Trust for specific project work); income from service delivery in partnership (e.g. Manchester Festival); facilities hire; structural funds ESF for training; income generating courses; donations and fund raising; volunteers. Income 50K to 100K Euros a year.
The Hackathon was financed by three ways:

- MCC provided the prizes from its own central funding with the department
- Via the City SDK project under the the ICT Policy Support Programme (ICT PSP) as part of the Competitiveness and Innovation Framework Programme by the European Union.
- Community volunteers gave their time for no charge

The costs were approximately €25K including €8K prizes.

Living Labs in general target citizens. However they also target local government in that they provide a way to test and develop concepts and services. For example testing domestic energy monitoring or developing skills as a digital champion.

MadLab - the MadLab community is open to all citizens of Manchester with a particular focus on technology. They offer courses for the public and well as volunteering opportunities.
They generate income from a range of sources including grants, paid services and running courses.

Hackathon - the targeted beneficiaries were as follows:

- Manchester City Council;
- Transport for Greater Manchester;
- Open Data Manchester;
- Open data and developer communities;
- Ultimately the citizens of the city benefiting from access to data.

5.5 TRANSFERRING

To a large degree the Living Lab model is based on flexibility, both in terms of content and delivery mechanism.
The transferability lies in the concept and lessons learnt rather than a step by step process or set of instructions. Funding is generally mixed which reflects both the flexible delivery model and the joint working approach. For the practice of Living Labs to be successfully transferred, the institution that adopts requires the resources and positioning to network with a wide a range of organisations from the business, voluntary sector and academic communities along with

a wide range of organisations from the business, voluntary sector and academic communities along with a willingness to involve citizens in the development of products and services:

- an understanding to the Living Lab and co-creation methodologies;
- access to products and services that a suitable for the approach;
- a willingness to experiment;
- small amounts of funding to facilitate the involvement of third parties with little or no funding support;
- technology – is this the right technology or the right time in its development?
- connectivity – have you the right place to be trying things out?
- people – have you got people who you can work with? Who has an interest? Who has the skills?

The implementation a Living Lab requires the commitment of implementing institution. This is because developing a successful Living Lab is a partnership of a number of organisations and takes place over the long term. Hence building relationships and developing trust is fundamental.

There are numerous resources available to support the implementation of Living Labs[16].

The Manchester Living Lab provides a mechanism for working together and a funnel for innovation and experiments, from a project focus to a city focus and is both virtual and physical. Living Labs provide a unique opportunity for community engagement directly with citizens as well as stakeholders and community organisations. The approach supports the city in the delivery of a number of objectives across a range of strategies:

- the Core Strategy[17] is the city's main strategy for Manchester's future development for the next 15 years and the Community Strategy for Manchester[18] brings together key sectors, organisations, and community representatives that are actively tackling the toughest problems affect that residents lives. The involvement of citizens in city governance and development is a key to a successful city where people want to live, work and play. Living Labs underpin this approach;
- Environmental Strategy – challenging targets for the reduction of carbon emissions have led the city to develop a cooperative approach with a range of sectors (Manchester A Certain Future[19]);
- Digital Strategy – "*digital by default*" where services are delivered online as the first call for customers requires citizens to have the necessary skills to participate[20];

16 http://www.ltu.se/cms_fs/1.101555!/file/LivingLabsMethodologyBook_web.pdf
17 http://www.manchester.gov.uk/info/500002/council_policies_and_strategies/3301/core_strategy
18 http://www.manchesterpartnership.org.uk
19 http://www.manchesterclimate.com/
20 http://www.manchester.gov.uk/egov_downloads/DigitalManchester.pdf

- earlier this year Manchester also submitted a bid to a national initative to be a Future City Demonstrator. Although not the successful bid, the city is committed to driving forward towards being a smart, intelligent city. This requires new products and ways of engaging with citizens and Living Labs are a key mode of delivery.

The two Manchester examples demonstrate impact of the practice as follows:

- MadLab employs two full time posts as well as creating a range of other opportunities on an as required basis e.g. engaging individuals to deliver freelance courses;
- many of the applications and services developed during the Hackathon, particularly the Data Crossfader will be developed further in collaboration with Manchester City Council and Open Data Manchester over the next few months. The development funding and support of city partners to adopting the applications is critical to the success of these type of interventions. The model of using Hackathon's as part of the city's Living Lab strategy to develop new applications and services is being rolled out further, and another Innovation Challenge / Hackathon "*Routes to the Future*" was supported as part of the Future Everything Festival in March 2013. The city is keen to hold further events.

The Manchester workshop included the presentation of a provisional roadmap for any city region looking to develop their own *Living Lab*:

- decide what it is you want to test
- who is your audience?
- consider issues of intellectual property rights (IPR)
- technology – is this the right technology or the right time in its development?
- is the scope wide enough or is it too narrow? Can a Living Lab be used to test policy?
- is what you are testing Rapid Application Development – Co-Creation – and Rapid Market Testing?
- how you are you going to fund the work?
- identify key partners and stakeholders
- look for other examples of Living Labs which may have done something similar e.g. energy monitoring, hackathons
- determine practicalities

5.6 BENCHMARK

The nine ONE partners have a wide range of experiences of the Living Lab concept. The Living Labs concept was new to five of the partners. Eight of the nine felt they could apply the concept in some way in their own city / country. This ranged from ideas such as twinning with other labs; creating a joint Living Lab (Manchester / Paris). Universities were felt to be a key potential partner for many.

The areas identified for potential Living Lab development included: e-crime, evaluation on new businesses, sharing ideas and developing prototypes, public services, e-tourism, e-culture,transport and ecological issues, e-government services, sustainable city, transferring knowledge through traineeships, e-administration and open data community, digital literacy.

Some partners were interested in adopting the methodology presented during the workshop in their general practice as a means to introduce and test more innovative and advanced ideas according to ONE objectives: to aggregate, in each region, individuals and organisations in the innovation process of their territory (research centres, ICT implementing agencies, managing authorities) encouraging their collaboration.

The key point of Living Labs is that they are unique and that whilst the concept is the same for all, each Living Lab is individual and deals with a unique set of circumstances.
The ENoLL knowledge centre[21] provides a wealth of knowledge from across Europe.

21 http://knowledgecenter.openlivinglabs.eu/

INSIEL ICT REGIONAL ORGANIZATIONAL MODEL 6.0

6. INSIEL ICT REGIONAL ORGANIZATIONAL MODEL

Originally established in the 1970s to develop and implement a complete information system for the Friuli Venezia Giulia Region, Insiel, today entirely owned by the Friuli Venezia Giulia Regional Authority, has more than 700 employees and is among the most important ICT companies operating in Italy's public sector.

Insiel has great experience in designing, implementing and deploying complex IT architectures that integrate heterogeneous systems and/or open to interoperate with other systems, with applications in the fields of e-government and e-health as well as in environmental, territorial and mobility management.

6.1 THE GOOD PRACTICE

The main issue faced by the practice concerns the model implemented in a Region to manage the Information Technology inside the Public Administration and to provide services to citizens. Each Public Body dedicates financial resources in Information Technology, but first of all must to decide the Entity or Entities that will be assigned to design, to develop, to maintain the regional information system.

There are several models that a Region or other Public Administration can adopt to manage its Information System, including hardware and software structures:

- to do by itself each kind of planning and buying from an ICT company selected by public procurement rules;
- to do by itself creating an internal department composed by technician employees;
- to create a public independent company, controlled through corporate bodies, that is assigned to implements and to carry out the public Regional indications;
- other models.

Each of these models has positive and negative aspects that the Region must evaluate considering the efficiency in management financial resources and the progress of the IT push a continuous innovation and evolution in work procedures and processes used to provide public facilitations and services. The chosen model should ensure:

- the governance of the IT in Public Sector, in order to improve the efficiency of the public processes and comply with limited financial resources;
- the good integration of the Public Administration and the IT Company.

The Friuli Venezia Giulia Region has a unique Integrated Information System that includes IT solutions, applications, database, office procedures, network etc., used by all regional departments, local bodies, Health structures and eventually by the citizens themselves; the System has been given in charge to Insiel.
Insiel S.p.A. is the in-house ICT-providing enterprise owned by the Friuli Venezia Giulia Region and working for and with the Public Administration and with the Health System, as established by the regional law n. 9/2011. Insiel expertise is an added value that the company also exploits outside the regional territory, by collaborating with numerous partners in Italy and abroad, in European and e-government projects aimed at testing innovative technologies, methodologies and models.
The ICT Regional organization model can be summarized as follows:

- the Region assigns the management of Regional Information System to Insiel and decides a strategic plan to organize and improve the System in its three main components:
    - SIAR: Regional Administration Information System
    - SISSR: Regional Social Health Information System
    - SIAL: Local Government Information System

The regional plan also includes:

- e-government area: that improves integration system between Public Administration and citizens
- Innovation, Research and European Projects area

In cooperation and compliance with the Region requirements, Insiel designs a strategic plan for the forthcoming three years defining the company vision and mission for the long term along with the concrete objectives for the period. Moreover, each year Insiel designs an operative plan for the upcoming year, highlighting the key actions to undertake in the short period, to ensure the timely and proper fulfilment of the strategic objectives. The Plan includes an analysis of the on-going projects, their priorities and required effort, along with budget considerations:

- the Region verifies and controls the proper advancement of Insiel projects and activities on the basis of a set of reports produced by Insiel itself;
- the IT solutions used by the public bodies are therefore the outcome of a joint effort;
- in the wide portfolio of solutions and services developed, deployed and maintained by Insiel for the Region, two have been in particular chosen as examples of best practice of the ICT regional organizational model, since they offer a concrete and tangible service to the citizen as the result of the collaboration between the PA and Insiel as operational arm. These practices are the Regional Service Card (CRS) and the PASI (Innovative Service Access Point);
- the CRS deals with an eGovernment tool allowing the citizen to access online services provided by the PA in a safe and secure manner, via a strong authentication mechanism;
- the PASI practice faces the issue of the digital divide in the FVG Region, in a context of ever increasing virtualization of the services for the citizen provided by the PA, by offering the citizens who lack the proper skills, devices and Internet connections with access points and support to access online services.

6.2 OBJECTIVE(S)

The Regional Service Card (CRS) practice aims at:

- providing the citizen with a multifunctional tool;
- realizing a strong authentication tool;
- allowing the citizen to access services through the Internet, improving the efficiency and reducing the costs of the services;
- reducing the Digital Divide and improving the eInclusion and the active online participation of citizens.

The Innovative Service Access Points (PASI) practice aims at:

- increasing the access of citizens to online services, particularly those provided by the PA, with a special focus on those citizens who are unable to access them and benefit from the resources and advantages of the Web;
- tackling and reducing the digital divide in the FVG Region, by providing devices and support to citizens who lack the IT skills and do not own a personal computer.

6.3 ORIGINS

The Regional Service Card (CRS)

The CRS is the result of an initiative launched by the FVG Region with the objective of providing the citizen and the operators in a number of contexts with a strong authentication tool for the access to both regional and national online services. The initiative saw the collaboration of the FVG Region with the Income Revenue Authority and different Regional Directions including the Regional Healthcare Authority, along with Insiel as operational arm. It started with an agreement with the Italian Ministry of Economy in the context of the SMART project that planned the experimental use of a Regional Service Card, back in 2004. The project involved the realization of a number of services, infrastructure and dedicated apparatuses for the user support, detailed in the below sections. The first Cards were distributed to the citizens in 2006.
The CRS was conceived as a multifunctional tool: based on an agreement between the Region and the national Income Revenue Authority, the Card is an authentication tool to access online services and in general to access Health services in the national and EU healthcare institutes, since it substitutes the previous Health Card. Moreover, it is an authorized Fiscal Code Card, thus unifying (at least) three different authentication tools and avoiding useless duplications.
The FVG CRS was nominated for the 2009 European eGovernment Award in the category *"eGovernment empowering citizens"*.

The Innovative Service Access Points (PASI)

The FVG Region has launched the PASI Project with the aim of eliminating the digital divide in the FVG Region and of increasing the access of citizens to online services, particularly those provided by the PA, with a special focus on those citizens who are unable to access them and benefit from the resources and advantages of the Web.
The project is in line with the development framework of a digital society and starts from the fact that yet not every citizen or family either has a personal computer at home or a broadband Internet connection, or has the required IT skills to access online services.
For them, a dedicated public assistance is required to ensure their fruitful access to the PA services provided through the Web.
The initiative is running since 2011, when over 100 PASI centres were activated.

6.4 DETAILS

The Regional Service Card (CRS)

When a citizen receives the CRS, he can use it immediately as personal Healthcare Identification Card (valid in Italy to access the Healthcare services and in the EU for the Healthcare insurance) and Fiscal Code Card.

The CRS best practice is the result of the realization of a number of services, infrastructure and dedicated apparatuses for the user support, among which:

- a service centre, including the dedicated infrastructure, the Card Management System and the Connect Service;
- a set of online services for the citizen;
- a set of dedicated user support services, including a call centre and a service counter;
- a set of supporting services for the management of authentication codes (PIN and PUK), service promotion and official communications, bureaucracy.

The first two items are in particular what make the Regional Service Card a best practice and they will be described in more details below.

The Card Management System (CMS)

The core of the CRS is the Card Management System (CMS), which is transferable in other contests and can be customized for specific situations. The CMS manages the CRS life cycle and has been developed in compliancy with the requirements of the PA in terms of security.
The CMS includes a strong authentication integrated platform, characterized by a public key infrastructure and an electronic signature/cryptography system.
Other components of the CMS deal with the user data, the services accessible online (including an authorization registry), a flux management system and a set of use cases to manage the different events of the Card lifecycle (activation, access to services, data changes etc).

The Connect Service

This service verifies the citizen identity via a definite and guaranteed piece of information, such as in this case the fiscal code that is stored in the Regional Service Card. Through this information, the electronic signature of the authentication component ensures the correct and completed authentication of the citizen to the system.

Online Services

The services provided to the citizens are accessible 24h/7days via web applications reachable on a web portal. Services are provided by the Region or by other bodies, both related and independent to the Region.
In the specific case of the Regional Service Card in the FVG region, the Regional Service Card is the Web authentication tool of the citizen and it uses an authentication certificate released by Italy acknowledged societies. Once authenticated to one of the authorized web portals with the Card, the citizen accesses a number of services described below.
Online Services accessible with the Regional Service Card:

- transversal services:
    - profiling/messaging: citizens can create their own profile to manage the services they have access to by themselves and those they are delegated to access for a third person. Moreover, they can activate an SMS/email messaging service for each activated service;
    - personal document area: citizens can upload personal documents in a private folder for their management and storage;
    - on line payment: through this service, citizens can pay online a set of services they are exploiting (e.g. children school canteen, health service);
    - digital signature.
- healthcare system personal data management;
- e-government services;
- fiscal services;
- school services.

The CRS is a smart card characterized by a cryptography system to guarantee the strong authentication. The Card is in particular provided with:

- an electronic certificate for the strong authentication (compliant with the Digital Administration requirements);
- a microchip with 24bit CPU and 160kb ROM;
- an RFID tag for RFID communication (max distance from reader: 10 cm);
- braille characters to allow blind users recognizing the card fiscal code;
- a magnetic band with three traces, storing the citizen fiscal code, name and surname and the card ID;
- a barcode for the citizen fiscal code.

To read the information stored in the Card, and therefore to authenticate to the online services, a specific device is required.
The CMS has been realized in ASP 3.0 for Windows Server 2003, with an Oracle 9.2 database, and it has been planned for usage within the territory (RUPAR network) and for a single organization providing the online services (the FVG Region, counting around 1,300,000 users).

The infrastructure and technical requirements of the Card and CMS are detailed above.
Any change should be planned taking into account the requirements of the PA providing the services, in terms of security, performance of the services and functionalities to be provided via the web apps (see the section on Transferability).

The financial framework is defined by the organizations who decide to provide the citizens with the Card and the access to online services, those who provide the online services and those who operate to set up the required IT infrastructure.

The beneficiaries in the FVG case are:

- the citizens, who use the Card and access to the services through it and who can use the same Card also as a Fiscal Code and Healthcare identity card;
- the FVG Region, who provides the services online and thus enjoys an improved quality of the provided service;
- the Income Revenue Authority, who can delegate the management of the Fiscal Code card to the FVG Region.

The Innovative Service Access Points (PASI)

The name PASI stands for Innovative Service Access Point; each Access Point provides a free access to the Internet and the online PA services by offering:

- the technological infrastructure (devices, Internet connection, maintenance);
- the support to properly use the PASI facilities and access the services;
- a dedicated portal collecting the links to all the different and spread sources of information and services provided by the PA, and thus guiding the citizen through a facilitated access to these services.

The realization of the PASI involves the installation of the proper technological infrastructure (devices, network connection, software installation and maintenance) and the activation of the proper support services organized by the hosting actor. Besides, the Project foresees the proper training of the citizens unable to access online services in the use of the PASI structures, devices and services, to allow them a certain autonomy in the use of the system and of the PA services.
The Access Points have been opened in the Municipalities of those areas that most suffer the lack of infrastructures (such as small communities) and are located in public areas, associations, PAs and aggregation centres open to the public. The PASI dedicated portal is accessible online[22].

Each PASI is equipped with one or more personal computer, provided with an Internet connection as well as other facilities (e.g. a printer, a Regional Service Card reader).
Each computer offers a minimum set of software for reading and editing documents of different types (word documents, slide presentations, images, spreadsheets) and surfing the Web.
Special equipment is dedicated to handicapped citizens (voice to text software, Braille display, zooming software etc).
Access to the PASI facilities is granted to each citizen via the Regional Service Card.
As for the financial framework, the funding is public.

The main beneficiaries are the citizens of communities lacking the broadband infrastructure and in general the citizens who do not have a personal computer, a fast Internet connection or in general the IT skills required to effectively use these tools and access to the online regional services.

22 http://pasi.regione.fvg.it

6.5 TRANSFERRING

The Regional Service Card (CRS)

The main conditions to transfer the CRS can be summarized as:

- the existence of a set of online services a citizen can access to, offered by the PA or other organizations and involving the access to sensitive data, requiring a strong authentication mechanism. Other, less restrictive services can be added to increase the functionalities of the Card and unify it with other identity or authentication cards;
- an agreement among the organizations responsible for the services – both online and offline, at counters etc – offered by or accessible with the Card. In the FVG CRS case, these are the FVG Region, responsible for the local Healthcare services as well as for a number of other PA services in the territory, and the Income Revenue Authority, responsible for the tax management on the national territory.;
- the proper know-how to manage the technical aspects of the implementation and maintenance of the Card and in particular of the CMS.

The practice provides a tools to safely access online services and it is in this sense strongly integrated with the policies and the panorama of services offered by the FVG Region.
It is in particular related to the policies for diffusing the eInclusion and eliminating the Digital Divide in the territory.

In the presence of the conditions listed above, the steps to transfer the best practice regard in particular the Card Management System:

- the definition of the services and of the security level required by the organization that provides the services through the Card. The number of services is subject to changes on the basis of the emerging needs of the population and the PA, however without at least an initial set of services the Card would be meaningless. The security level is both referred to the infrastructure hosting the CMS and the authentication/authorization protocol used to access the services;
- the definition of the target beneficiary of the Card, which defines the performance requirements;
- the definition of the functionalities to be accessed online;
- the definition of the indexes and fluxes of the CMS, the database management and the processes of database update (which data should be stored and exchanged by which services and components, how they should be managed upon activation of the Card, of new services, authentication to a service and the other events related to the use of the Card by a citizen, how this should work offline);
- the realization of the CMS and the online services in compliancy with the above requirements;
- set up of a proper assistance service with personnel trained to help the users and the proper online informative portals;
- realization and distribution of the Cards and readers to the target citizen.

The Innovative Service Access Points (PASI)

The main condition for transferring the practice is the availability of areas open to the public and where the Access Points can be installed along with the proper desks for the support and immediate intervention of the PASI operators. Municipalities, public libraries, headquarters of associations and societies are all examples of PASI hosts in the FVG Region.

The practice is integrated with the Regional Service Card best practice, which is needed to the citizen for the online authentication and access to services.

In order to transfer the best practice, the steps to follow are:

- definition of the technological kit to be made available in each Access Point; this provides an estimate of the minimum capacity required by the areas where the PASI will be installed;
- identification of the available PASI headquarters. Once the available room is defined, it will be possible to determine the capacity of each PASI (how many computers and other devices; how many people providing assistance; possibility to organize training courses in the area, etc);
- set up of a dedicated portal for the assisted access to the online PA services. In this way, a citizen who is not familiar with the available online services can easily find the service he is looking for and understand how the service is provided (which data he should enter, what he should do with them etc);
- identify skilled personnel who can support the citizens during the use of the PASI facilities;
- installation of the PASI centres and of the technological apparatus; each computer should contain a minimum set of software to read and edit documents, surf the Web and access to the online PA services. In the FVG region, these require authentication via the Regional Service Card; thus the computer should be provided with the required reader and drivers.

The main lessons learnt is that citizen must be informed of the availability of the PASI facilities and must be assisted to acquire familiarity with the new devices and procedures.

6.6 BENCHMARKING

ONE gave the opportunity to Insiel to know how other European regions/public entities manage the different aspect releated to the ICT field to face the Societal Challenges.
It is clear that the ICT Organizational Model in Friuli Venezia Giulia Region is the outcome coming from a remote decision of Regional Policy Makers, so Insiel:

- provides services to all regional public areas;
- serves in all the stage ICT processes.

All the other ONE partners act in ICT area, but not covering all production stages, they are much active in specific topics (digital divide, broadband, new ICT challenges) and they act like a bridge between the present IT systems and the new goals (digital divide, open data, broadband monitoring). So the difference between Insiel and the others is that Insiel can face the societal challenges and the IT goals using data provided by itself, using its own regional network, this could be a plus element for the Regional Policy Makers.
On the other hand, even if the other ONE partners do not cover all IT public sectors and all IT production stages, because are small entities compared to Insiel, they are more flexible to operate and switch in IT environments and to test innovative solutions for citizens and to monitor the results using specific indicators in order to evaluate the progress in specific sectors. In conclusion, the ICT model of Friuli Venezia Giulia is not comparable with the others ONE good practices, but it is possible to find common points with the Piedmont Region, where CSI Piemonte has a role similar to Insiel regarding the ICT services provided, moreover the two Regions have both a project on the broadband, WI-PIE in Piedmont and Ermes in FVG.

LA FONDERIE ÎLE-DE-FRANCE REGIONAL ORGANIZATIONAL MODEL FOR DIGITAL PUBLIC POLICIES 7.0

7. LA FONDERIE ÎLE-DE-FRANCE REGIONAL ORGANIZATIONAL MODEL FOR DIGITAL PUBLIC POLICIES

Associated body of the Île-de-France Regional Council, La Fonderie (former ARTESI Île-de-France) is the regional ICT development agency. Its main objective is to support the Regional Council in forecasting, implementing and evaluating ICT regional policies.

La Fonderie fully participates in the digital development within the Île-de-France territory. It is acting as a catalyst for a wide range of targets, including SMEs, non-profit associations and public local authorities in their appropriation process of ICT.

La Fonderie encourages innovation in all societal issues. It considers emerging topics of importance getting inspiration from other French and European regions.

7.1 THE GOOD PRACTICE

The main issue of this good practice refers to the organisational model established by the Île-de-France Region to define, implement and assess digital public policies on the whole territory. Being aware of how important the issue is, the Île-de-France Region took up this subject at the end of the 1990s and created an ad hoc agency, ARTESI, to look at social changes induced by new technologies and to act as a think tank on it.

The needs of Île-de-France Region has evolved, ARTESI's activities and tasks have changed much since then and ARTESI became "*La Fonderie*" in March 2012.

Digital public policies are very specific ones for the following reasons:

- rapid changes entail reactivity from public authorities;
- digital issues are invasive so that they are able to impact a wide range of local public policies.

It is then crucial for local public administrations to adopt a specific organizational model able to meet new these digital challenges.

That is why in 2012 the Île-de-France Region decided to transform ARTESI in La Fonderie, an operating body able to anticipate changes due to digital evolution and to make its territory a smart one.

7.2 OBJECTIVE(S)

The main objectives of this organisational model through the creation of a digital agency are:

- to provide to regional decision-makers elements of analysis and new ideas on emerging digital subjects that could lead to new digital public policies;
- to be able to implement and to assess in an agile way existing digital public policies;
- to sustain economic development by supporting start-ups growth and traditional SMEs appropriation of digital strategies.

7.3 ORIGINS

The Île-de-France Region is the most populated French region with 11,8 millions of inhabitants (19% of the national population). Its GDP accounts for almost a third of the national GDP and its administrative organization consists of 1,281 cities and 8 departments.

New technologies play a key role for the region, since the Île-de-France has the most important high-skilled IT workforce. Among European regions, the Île-de-France region is also the first one for the R&D expenditure, the second one for the number of filed patents and it regroups 24,000 IT firms.

The Region has early perceived the importance and the necessity of the public involvement in the digital sphere by acknowledging that the digital technology is a key sector for the territory and is able to play a seeding role for the economy and the whole society.

At the end of the 90's, the Region decided to implement a policy devoted to the digital technology and a framework for a public intervention.

This framework has the two main following political objectives:

- e-inclusion, that is to say the inclusion of all territories and actors into the new information society and the will to bridge the digital divide;
- creativity, that is to say the expected leverage effect on the excellence and influence of the region.

As a consequence of this, the main areas of activity are as follows:

- support to the digital communication infrastructures;
- dissemination and support to the uses, contents and digital services;
- animation of the regional digital ecosystem;
- dissemination of the new technologies into the remote areas.

An operational tool was needed to implement this regional digital agenda. It is within this framework that a digital regional agency (ARTESI) was created in 1998. In 2012, ARTESI became La Fonderie.

7.4 DETAILS

In 1998 the main task of the ARTESI was to support the local territories into their appropriation of the new technologies and their digital projects: public internet, public digital spaces, tele-services, e-administration, etc.

In the early 2000s these activities have met the needs of the territories that had to face the emergence of the digital challenge.

Progressively, the priorities of the Region have changed and moved towards more operational activities as the animation of the digital ecosystem dedicated to new beneficiaries (not only local territories) as private firms. In 2012 La Fonderie was created with the aim of prefiguring and implementing public policies from the Regional Council and supporting private firms into their digital strategy.

Its main missions can be described as follows:

- consider emerging digital subjects (including projects led by other European regions);
- forecast new models and new digital public policies, to support the elaboration of a regional digital agenda and to implement innovative territorial projects;
- enable better use of the projects and events funded (bar camps, hackhatons, etc);
- create links between private firms, digital networks and private or public institutions (nurseries, funds, etc.).

Besides, the region is very sensitive to the difficulties met by the local SME's (especially industrial ones) when facing to the new possibilities offered by IT. La Fonderie aims at raising awareness and supporting SME's into their digital strategy.

Mains areas of La Fonderie's work are:

- changes at work with the development of third-places and coworking places. Since 2012, La Fonderie is in charge of a call for tender aimed at supporting the growth of coworking spaces in Île-de-France. La Fonderie was also partner of the Europe Coworking Conference organized in November 2012 in Paris;
- Open Data. La Fonderie supports the implementation of the Open Data strategy of the Île-de-France regional council. Its main goals are to promote the release of data, to implement the release and to animate an ecosystem of SMEs and citizens able to use it thanks to hackhathons and similar events;
- economic development. La Fonderie acts as go-between for digital startups and digital networks, public and private funding, and support structures;
- territorial public innovation. La Fonderie supports new and innovative public policies implemented by local public authorities of the Île-de-France region;
- social innovation. Thanks to an annual call for tender, La Fonderie supports IT projects that meet social and societal needs;
- objects revolution/DIY. La Fonderie supports events and projects focused on Do It Yourself approach in considering that such practices are the beginning of a new industrial revolution.

Financial framework:

- annual digital budget of the Île-de-France Region: 13 M€;
- annual digital budget of La Fonderie: 1.8 M€ (it includes operating expenses but also a part dedicated to fund innovative projects and events);
- staff: 13 permanent people;
- juridical structure: non-profit association (law 1901), with a board composed of regional advisers, experts, and a President elected among the regional advisers;
- beneficiaries: four categories of beneficiaries of the projects led by La Fonderie: associations, firms, local authorities, and citizens.

7.5 TRANSFERRING

Required conditions to transfer effectively this good practice are:

- a clear and strong politic will on the necessity of creating and implementing a regional agency in charge of digital issues. Decision-makers have to be aware of it and to take action to address it;
- partnership between the digital agency and the Regional Council (or the public body that is the parent institution). It is also essential since it is necessary to find a balance between two dimensions that can be opposite: the political authority needs to keep the political power but has to let to the agency a relative operational autonomy;
- political leadership: the local public authority is always legitimate to take decisions and has to keep its power on the agency. For example, elected regional advisers are members of the board of La Fonderie, so that they are able to approve or disapprove annual action plans of the agency;
- operational autonomy: Digital time and political time are very different. Politic time is significantly longer because of administrative constraints. To better implement digital public policies, there is a need of operational and reactive follow-up. A digital agency needs to understand new emerging topics and needs to be able to fund quickly emerging topics;
- topics covered by the digital agency: ideally the agency should be in charge of all digital public policies – policies that concern both infrastructures and uses, under the leadership of the local political institution;
- networks and partnerships: the agency needs to be well integrated in digital networks, including main private and public actors of the ecosystem.

The main goal of a digital agency is to act as a major player of the regional digital ecosystem. Obviously, the digital agency should develop strong relationship with public players and hybrid structures (clusters, chambers of commerce, incubators, other local structures, etc.). It is also very important to build strong relationships and partnerships with private structures (digital companies, industrial enterprises interested by innovation) that could be away from public structures and theirs approaches. In this way, existence of an operational agency makes sense.

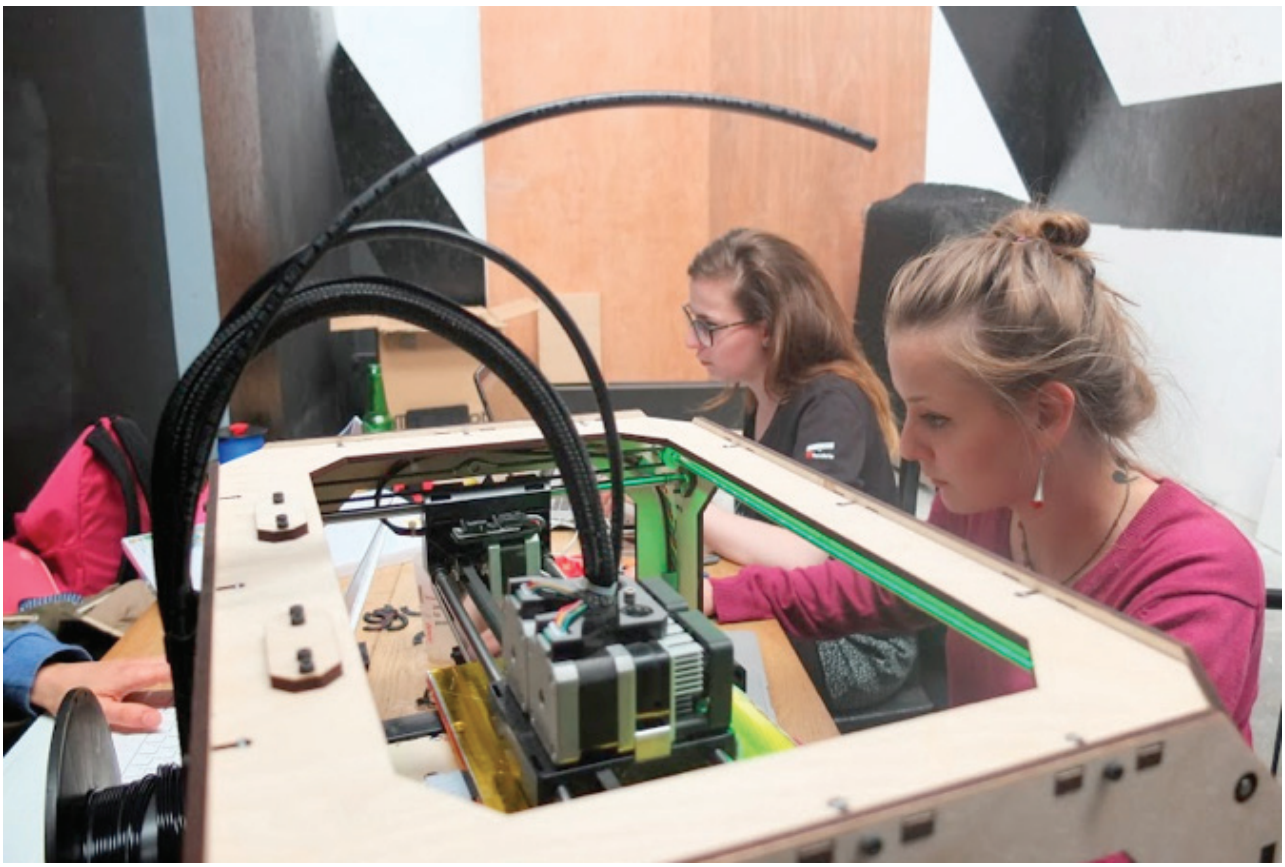
Moreover, digital issues are by definition invasive. Digital public policies are not just another public policies, because digital ones have to be articulated with other regional policies as economic development, innovation, transport, etc.

Actions led by the digital agency should be implemented in synergy with other local digital agencies, as for example the digital agency of Midi-Pyrénées[23] and with other regional agencies as ARD[24], CFI[25], etc.

23 http://www.ardesi.fr/
24 http://www.paris-region.com/
25 http://www.innovation-idf.org/fr/index.php

To effectively transfer the good practice the steps are as follows:

- define strategic objectives of the digital operational agency:
    - why is it necessary to create an agency?
    - what are the needs covered by the agency?
    - what will be the answers in terms of public policies?
- define the field of competences covered by each actor:
    - which local political authority defines public policies and which one willbe implemented by the digital agency?
- define the governance model able to answer to the following questions:
    - how public authorities could effectively control the activities of the agency?
    - how could the agency keep its operational, financial and decision autonomy?
- define a juridical structure appropriate to the local context and needs. For example statutes of associations are in France particularly flexible and easy to to implement;
- define financial aspects: operating budget and funding for projects and publics policies like calls for tender. Also it can be interesting for a local digital agency to mix different sources of funding, private and public ones;
- define the way public policies are going to be implemented. There is at least two ways of implementation:
    - selection over the time: for important projects that require to be supported;
    - selection by calls for tender: for less important projects (in budgetary terms) that need less support from authorities. The goal is to incite to the emergence of various projects thanks to a call for tenders open for a limited time span.



TWINNING EXPERIENCE 8.0

8. TWINNING EXPERIENCE

In consideration of the good practices and other example of activities on the territory emerged during project workshops and study visits, project partners decided to organise 8 twinning exchange visits to analyse more in depth some elements and exchange experiences. Hereafter is a short description of the twinning visits.

8.1 METHODOLOGICAL SUPPORT IN THE ORGANISATION OF A HACKATHON

Twinning exchange between MDDA/Manchester City Council and Piedmont Region and CSI-Piemonte

Focus: methodological support in the organisation of a hackathon and stimulation of a bottom-up approach to define digital public services.

8.2 METHODOLOGICAL SUPPORT AND IN DEPTH ANALYSIS OF PIEDMONT ICT ACTIVITIES, WITH SPECIAL REGARD TO CYPRUS OBSERVATORY ACTIVITIES ON BROADBAND

Twinning exchange between Piedmont Region and CSI-Piemonte and Office of the Commissioner of Electronic Communications and Postal Regulation, Cyprus (OCECPR)

Focus: Piedmont ICT Observatory activities (monitoring and support) to the WI-PIE Programme for broadband coverage in the Piedmont Region and architecture for the visualisation on data on broadband coverage.

8.3 ICT REGIONAL ORGANIZATIONAL MODEL

Twinning exchange between Insiel/Friuli Venezia-Giulia Region and the Lodz Region

Focus: good practices in reference to the ICT Observatory regional organizational model. Possibility to transfer gained knowledge to the Lodz Region in the future.

8.4 ICT OBSERVATORY EXPERIENCE AND ORGANIZATIONAL MODEL

Twinning exchange between CSI-Piemonte/Piedmont Region and the Świętokrzyskie Region

Focus: ICT Government and the Information System for Public Administration; focus on ICT Observatory experience and organizational model, by CSI-Piemonte (as one of the members of the Piedmont ICT Observatory).

8.5 MDDA TRANSFER OF KNOWLEDGE ON THE USE OF LIVING LABS METHODOLOGIES TO DRIVE FORWARD DIGITAL DEVELOPMENT IN CYPRUS

Twinning exchange between MDDA Manchester and Office of the Commisionner of Electronic Communications and Postal Regulation, Cyprus (OCECPR)

Focus: transfer of knowledge on wi-fi connectivity and technology utilisation with a focus on hardware and management software.

8.6 ICT GOVERNMENT AND THE INFORMATION SYSTEM FOR PUBLIC ADMINISTRATION; FOCUS ON ICT OBSERVATORY EXPERIENCE

Twinning exchange between Piedmont Region/CSI Piemonte and Insiel/Friuli Venezia-Giulia Region

Focus: good practices with reference to ICT Government and the Information System for Public Administration; focus on ICT Observatory experience. Possibility to transfer gained knowledge to the Friuli Venezia Giulia Region and Insiel in the near future.

8.7 ROLE AND ACTIVITIES OF A REGIONAL DIGITAL AGENCY

Twinning exchange between La Fonderie/ Ile de France and EPMA

Focus: the role of public agency in regional ICT funding schemes and detailed study of co-working spaces.

8.8 OPEN DATA STRATEGY AND VISUALIZATION

Twinning exchange between La Fonderie/Ile de France and CSI-Piemonte

Focus: exchange of experiences on the development of open data policy, data visualisation and the role of digital regional agencies in the process.

CONCLUSION

9.0

9. CONCLUSION

These good practices may seem a list of "*objects, descriptions, objectives, schemes, etc.*", but they are the result of the efforts of people and their ideas. Ideas to do something new, support regional strategies, create innovation, better analyse and preserve data, launch innovative services People who believed in their ideas, who invested time and efforts in their projects and who, perhaps with some difficulties, managed to create something new and functional for their territories. This Catalogue is intended to illustrate the process that led to the implementation of activities that over time have become good practices.
The cross fertilisation of ideas and the transfer and implementation of practices from one field of operations to another aims at solving problems, identifying innovative approaches and serving efficiently different stakeholders.

Following the objectives of the European Commission and of the INTERREG IVC Programme[26], the ONE partnership wants to share with local, regional and national policy-makers the access to ideas and techniques that have been successfully implemented by their European counterparts, and if any of the readers is interested in the practice and wants to know further details and possible conditions for transfer, the partners are more than willing to be contacted.

This Good Practices Catalogue aims to provide support to regional and national authorities to develop good polices to reach the digital growth potential stemming from the Digital Agenda for Europe (DAE). We would like to offer some examples of use of Information and Communication Technology to their national or regional research and innovation strategies for smart specialisation (RIS3) and related Operational Programmes (OPs).

At the same time, this Good Practices Catalogue offers some examples to better monitor and understand the DAE-related ex-ante conditionalities and scoreboard that form the basis for using the European Regional Development Fund (ERDF) for ICT investments.

The analysis of the respective guidelines has provided ONE project partners with interesting elements for the drawing up of their strategies, and we wish that other institutions may take a similar step towards the implementation of support tools to the implementation of ICT in their territories.

9.1 WHAT DO ONE PARTNERS THINK ABOUT THE GOOD PRACTICES?

The presentation of the open data strategy launched by the Stuttgart Region allowed to draw an interesting comparison with the Ile-de-France strategy (launched at the beginning of 2013). In particular, the Stuttgart Region seems to focus on democratic aspects whereas the Ile-de-France put the stress on economic development. (La Fonderie, France)

26 http://www.interreg4c.eu/

Whilst part of Manchester City Council, MDDA has also worked across boarders for a number of years hence it is of interest to learn about La Fonderie's role as a regional digital organisation. Manchester also has a regional governance structure as outlined in the Observatory document. The ten authorities in GM are the first in the country to develop a statutory Combined Authority and co-ordinates key economic development, regeneration and transport functions. (MCC, United Kingdom)

The Manchester Living Lab experience can be used at support of the other regional living lab experience to deliver some recommendations to Regione Piemonte policy-makers, also in the regional perspectives on Smart Specialization, showing them the value-added the Living Lab methodology not only locally but also cross-border. "Lesson learnt": setting up a Living Lab means involving end-users (or their associations) since the co-creation and engineering phase and creating a favourable eco-system where user-centred design, open innovation and concurrent enterprising are of main importance. (Piedmont Region, Italy)

Acquiring detailed knowledge on the organization model of ICT Observatory run by CSI and Piedmont Region in a very experienced way will be very helpful to draft the idea of a functioning ICT Observatory in Świętokrzyskie Region. It will be possible to adopt some ideas and solutions for implementation of ICT. It's quite significant that ICT Observatory's activities are in a large degree effective due to the Region's access to wide range of data, through CSI systems. (Świętokrzyskie Region, Poland)

The most interesting topic for Insiel is that Piedmont Region built on the WI-PIE experience the ICT Observatory, considering that in Friuli Venezia Giulia there is a similar project, it could be useful to learn from Piedmont experience how to create an ICT Observatory in order to monitoring the rate of the efficiency of the ICT public investment. (Insiel, Italy)

Each partner advanced in the ICT Observatory development has presented a different organizational model of such an institution. It was interesting to find that there are many ways to establish such an organization. The Lodz Region has a possibility to follow the example of other European regions that already established an ICT Observatory. Thanks to the project activities (workshops, study visits) and the Catalogue of Good Practice, that summarised all the best practices in terms of ICT Observatory creation, the Lodz Region could observe how to create an ICT Observatory, the way it functions and changes the information society's reality in each region. (Lodz Region, Poland)

Manchester City Council through its DDA branch has had extensive experience in implementing and managing free wi-fi zones within the City of Manchester as well as providing interconnection solutions for various administrative buildings using wireless technology. OCECPR is currently looking into alternative approaches through which budget solutions are offered in areas where commercially oriented operator activity is slow, non-existent or relatively expensive regarding broadband connectivity. OCECPR's visit and discussions with MDDA confirmed that MDDA's extensive experience on implementing and managing free wi-fi zones as well as wireless connectivity of public buildings can be adopted for a wide range of implementations in Cyprus. (OCECPR, Cyprus)

> *Current development of the Department of analysis in the Vysocina region brought a need for complex and sophisticated approach to a data management. Master indicator management presented by CSI Piemonte showed a very advanced way of data processing and was an inspiration for the Vysocina region staff. Especially the emphasis on proper metadata management showed to be useful when connecting external data resources to regional Data Warehouse. Also the translation of multidimensional analytical reports into figurative reports using the power of data visualisation opened a way how to make business intelligence reports friendlier to decision makers. (Vysocina Region, Czech Republic)*

Being the regional public innovation agency for ICT and media of Baden-Württemberg, the MFGs mission is to support and foster the IT, media and related business sectors in the region of Baden-Württemberg. Visiting Silicon Sentier showed us how the Île-de-France Region is structuring and promoting its biggest coworking space and thus let us learn some lessons about getting it publicly known and how to involve the public better. (MFG, Germany)

> *For CSI-Piemonte it has been very interesting and stimulating to see how a very similar organisation, such as Insiel, manages the regional services in general, and in particular those for the citizens in the Friuli Venezia Giulia region. A single point of reference for the whole services of the regional Public Administration makes it possible to ensure better governance and monitoring of ICT dissemination on the territory and among the population. (CSI-Piemonte, Italy)*

REGIONE PIEMONTE	Piedmont Region, Torino (IT)
MANCHESTER CITY COUNCIL	Manchester City Council - MDDA, Manchester (UK)
MFG Innovation Agency for ICT and Media	MFG Innovation Agency for ICT and Media of the State of Baden-Württemberg, Stuttgart (DE)
promotes lodzkie	The Lodz Region - Lodz (PL)
la fonderie Agence numérique ile de France	La fonderie, Regional ICT development agency - Paris (FR)
ΓΕΡΗΕΤ	OCECPR - Office of the Commissioner for Electronic Communications and Postal Regulation, Nicosia (CY)
insiel	Insiel S.p.A – Trieste (IT)
EPMA EUROPEAN PROJECTS & MANAGEMENT	EPMA - European projects and management agency, Prague (CZ)
	Marshall Office of Swietokrzyskie Voivodship - Kielce (PL)
csi piemonte	CSI-Piemonte - Torino (IT)

ONE GOOD PRACTICE GUIDEBOOK