Project Acronym: Open-DAI

Grant Agreement number: 297362

Project Title: Opening Data Architectures and Infrastructures of European Public Administrations

Work Package: Management

Deliverable Number: D1.4

Revision History

Revision Date	Author	Organisation	Description
20/02/2013	Elsa Pilone	CSI-Piemonte	first Draft version (V01)
03/06/2013	Anna Cavallo	CSI-Piemonte	Final version

Legal Discaimer

Statement of originality:
This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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1 Executive summary

The Open-DAI First Annual Report aims to present a general overview of the first year of the project, taking into account all its technical and financial aspects, as they have been implemented from February 2012 to January 2013.

With respect to the context of reference, four main pillars have been identified:

I. a general summary;
II. a description of the main objectives in relation to the related work-packages;
III. the description and an assessment of the project management process implemented;
IV. the first year financial picture providing a financial overview for each partner of the consortium.

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Project type: □ **Pilot A** x **Pilot B** □ **TN** □ **BPN**

Periodic report: **1st x 2nd □ 3rd □ 4th □**

Period covered: **from 1st February 2012 to 31st January 2013**

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2 Declaration by the project coordinator

I, as coordinator of this project and in line with my obligations as stated in Article II.2 of the Grant Agreement declare that:

- The attached periodic report represents an accurate description of the work carried out in this project for this reporting period;
- The project (tick as appropriate):

  ☐ has fully achieved its objectives for the period;

  x has achieved most of its objectives for the period with relatively minor deviations;

  ☐ has failed to achieve critical objectives and/or is deviating significantly from the schedule.

- The public Website is up to date;
- To my best knowledge, the information contained in the financial statement(s) submitted as part of this report is in line with the actual work carried out and consistent with the reported resources and if applicable with the certificates on financial statements.

3 Publishable summary

In line with the priorities of the Digital Agenda for Europe, the Open-DAI project aims at fostering a wider use and uptake of innovative ICT, by citizens, business and especially government organisations.
This is being achieved by implementing, testing and validating a platform based on Cloud and Service Oriented Architectures within the real Open Data scenario offered by its public administration partners.
The Open-DAI project proposes a solution that emphasises openness, efficiency and architecture flexibility, starting from the experiences of a set of important partners from Public Administrations, who spent meaningful resources in the same direction during the last years.
The rationale of the project is based on the fact that, presently, it is difficult to use and re-use the extensive wealth of information stored in the Public Administration data bases, even though it is widely recognized that such information can be helpful to face a wide range of social needs and promote innovation and business opportunities. Moreover, current information systems of PA's are based on monolithic architecture models that include all the application software levels (silos).
PAs have few resources to dedicate on these silos since most of them are consolidated and not in need of update. This represents an obstacle to classic SOA reengineering approach.
Opening the data to external actors could even increase the load on the silos; this risk needs to be mitigated.
The Open-DAI project aims therefore to overcome those barriers, stimulating the opening of the huge amount of data stored in PA databases to the wide audience of potential users through the validation of an open architecture model for the PA information systems in order to overcome the monolithic and closed architecture models (silos).
The consortium has been brought together to successfully solve such concrete problems: the consortium reflects the ambitious and innovative nature of the project, while the industrial partners and end user service providers will ensure that the technical development will be steered in the right direction in order to ensure a rapid adoption of the technology in different European countries and situations.
The Open-DAI Consortium is a well-balanced working team that includes 11 independent organisations from across the European Union, and is made up of entities that represents the relevant stakeholders in the whole value chain dealing with e-government systems across different countries. In particular the following entities are represented in the consortium:

- Public Administrations of different sizes
- Technology providers (as commercial and non-profit organizations)
- Research and University institution
- Private industrial companies (Including SME's).

In order to accomplish the project's objective and guarantee the viability of the architecture, a pilot approach has been used for the execution and validation of the project. By doing so Open-DAI will contribute to:

a) Validate the added value of Cloud and SOA architectures on different PA scenarios and therefore assuring its usability in other legal domains than the ones tested on the project.
b) Facilitate the replication of the best-practices across the different PA participating in the project.
c) Foster the use and dissemination of standards needed to guarantee the interoperability of the solutions developed and deployed.
d) The creation of new pan-European business opportunities by, securely, opening PSI for a border-less approaches and innovative services as well as facilitating the access of cross-country competitive services for both the public and private sector.

4 Project progress

This document, beyond stating the advancement of the project at the end of the first year, reflects also the feedbacks received during the annual review.
As shown in the following Gantt the Open-DAI project started its work on February 2012. After one year, the project is on schedule on the activities and several objectives have been already accomplished according to the Description of Work Plan.

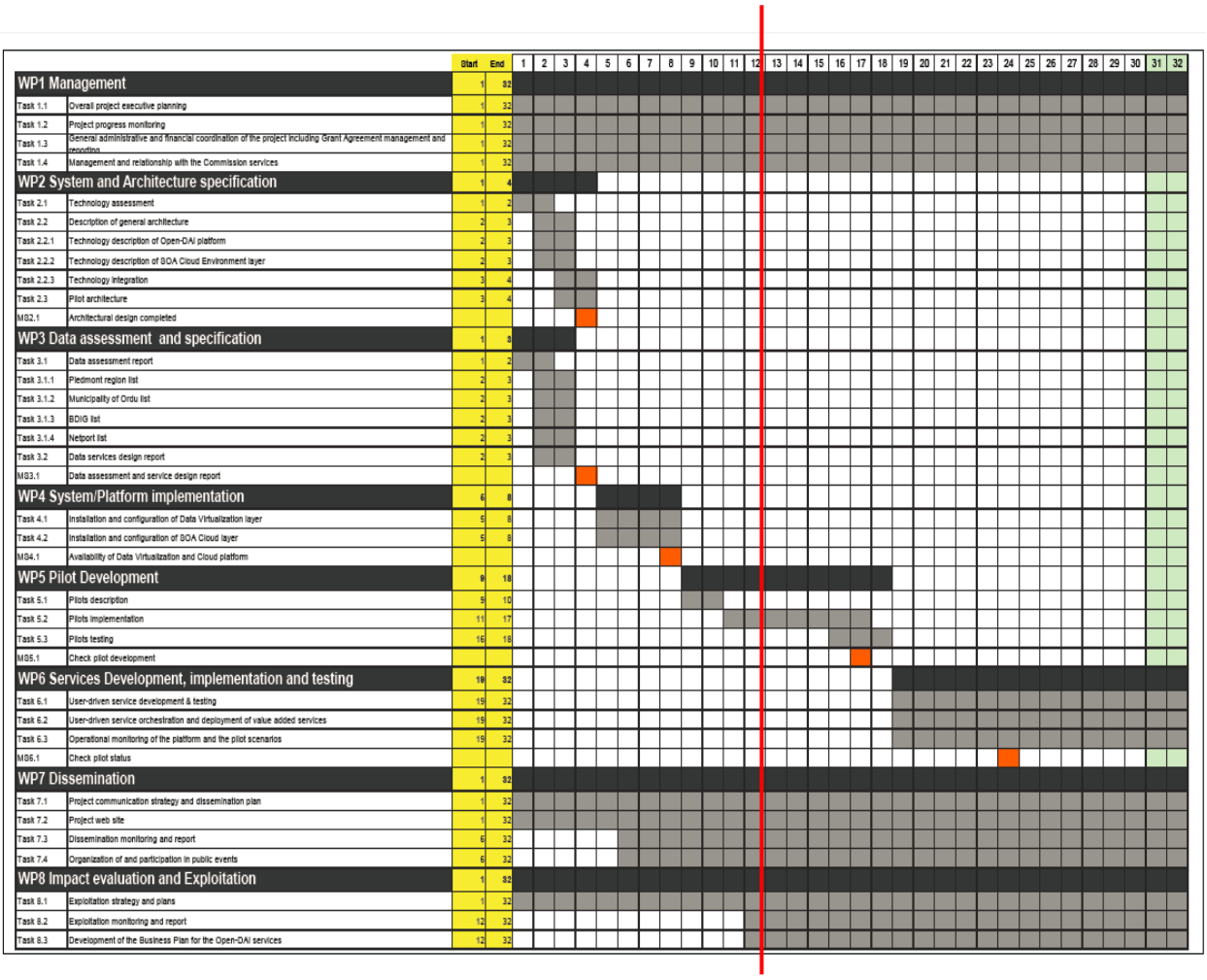


Figure 1 - Project Gantt

The main goal of the project “Contribution to the opening of the huge amount of data stored in PA databases to the wide audience of potential users” is the leading principle of the entire work of the project and it is the inspiring topic guiding all the different work-packages.
After one year project, we can surely report that Open-DAI is already contributing to this goal, by stimulating the opening of datasets stored in the following public administration partners of the consortium:

- Regione Piemonte (IT)
- Municipality of Lleida (ES)
- Ordu Municipality (TK)
- Municipality of Barcelona (ES)
- Karlshamn Municipality (SE)

As far as the other objectives are concerned, we report a table indicating the objectives of the project and a set of columns reporting their achievement status after one year, as follows:

OBJECTIVES	STATUS, after one year	Related WP
To strengthen the evolution towards an open architecture model for the PA information systems, in order to overcome the monolithic and closed architecture models (silos) implementing a data virtualization infrastructure deployed into a high availability infrastructure	This is considered to be one of the first crucial milestone of the project, achieved during the first year. A demo of the architecture will be presented during the Review meeting of March 2013 in order to have an external assessment of the EC, the PO and Reviewers.	WP2 and D 2.2 Description of the general architecture WP4 overall implementation
To facilitate software maintenance of existing silos, enabling PA to pace the evolution of legacy systems with Open Data initiatives.	The approach proposed with the Open-DAI platform ease the implementation of new solutions over existing silos. Achieved.	WP2 and D 2.2 Description of the general architecture + WP5 with the pilots as demonstrators
To implement a data virtualization infrastructure deployed into a high availability infrastructure	Achieved.	WP4 , D 4.1 Open-DAI Data Virtualization platform installation manual and D4.2 Open-DAI Cloud platform installation manual
To simplify access to legacy vertical applications data, by providing a virtualized version of the data bases in the Cloud	Achieved	WP2 and WP4; the WP2 designed the solution and the WP4 implemented it
To provide a new SOA data access layer, that could be combined in an appropriate manner in order to improve the products and services	In progress	The infrastructure has been built in WP4 during the WP5 the data services will be created and used
To implement the PA “open data” data hub, exposing it by using classic web services as well as other standard protocols.	In progress	The infrastructure has been created in WP4 and will be used during WP5 development. Data hub access will be at partner level, but in WP6 a federation access strategy will be explored
To assess the business benefits for both PA and private organizations by developing new third-party added value services, focused on the following topics: transport and mobility, localization and geographic information, environment and pollution	In progress	The topic has been investigated in the first draft of the business plan in the WP8. A deeper analysis will be performed with the final document

The KPIs of the project were meant to measure the project progress at WP level, but the ones described in the DoW have not been considered adequate to assess the actual project advancement for the whole of the work packages, so the Executive Board decided to improve them. This decision is also a consequence of the discussion in the first year review meeting.
The new vision applied to the KPIs is described in the Project management chapter, while the new KPIs will be detailed in the new and revised version of the “D1.3 Quality assurance and risk assessment guidelines”, for the second and third years of project life.
The following table summarizes the 1st year advancement in terms of KPI defined in the DoW former vision that guided the project for the first year: the majority and most significant ones have been fulfilled.
Two achievements underperformances (#1 and #9) are due to:

- (1) the project focused its efforts on delivering the project’s technical assets rather than on respecting the deadlines of some of the project’s documentation.

- (9) the project overestimated the number of contests that could be organized during the first year, in a phase when the development activities were still ongoing.

KPI No.	Relating to which project objective / expected result?	Indicator	Method of measurement	Expected Year 1	Achieved Year 1
1	WP1 – Management Number of reports	delivered on time	% on reports due	100%	85%
2	WP2 - System and Architecture specification	Number of systems / silos involved	Census of silos	8	8
3	WP3 – Data assessment and specification	Number of data set published	Census of data sets	0	>20
4	WP4 – System/Platform implementation	Number of services Per pilot	Census of services	0	0
5	WP5 – Pilot Development	Number of users of the new services per county involved in pilots	Registering service accesses	0	0
6	WP6 – Services development implementation and testing	Number of called services per month	Monthly average	0	0
7	WP7 – Dissemination	Participants in the project public events	Reports on events	200	>200 in 10 national events
8	WP7 – Dissemination	Number of article published by consortium members	Collection of article published	4	>4 on newspapers, TV channels on-line magazines
9	WP8 Exploitation	Number of services proposed by Apps developed	Public contests organization	2	1
10	WP8 Exploitation	Number of PA's willing share the Open-DAI Platform	Public presentations	0	0

The project has already delivered or it is completing activities to deliver the following assets

Open-DAI model:	this is the founding stone of the project approach and can be summarized as follows: data stays in the PA's datacenter since the PA has already invested on it, besides thus avoiding legal problems in transferring data into the cloud; data publishing will be performed through the cloud getting the benefits of this technology dynamic scalability and optimizing cost management
Open-DAI platform:	it is the outcome of the technical implementation, developed in a modular way to allow potential adopters to substitute their own preferred components, made available as an open source integration project
Data opened through the project:	data sets opened by the project as API
Single pilots:	the project solution to show how it is possible to easily use the data published by the platform and build new services over it

The Figure 2 displays the current Open-DAI cloud platform features as they have been demonstrated to the commission.

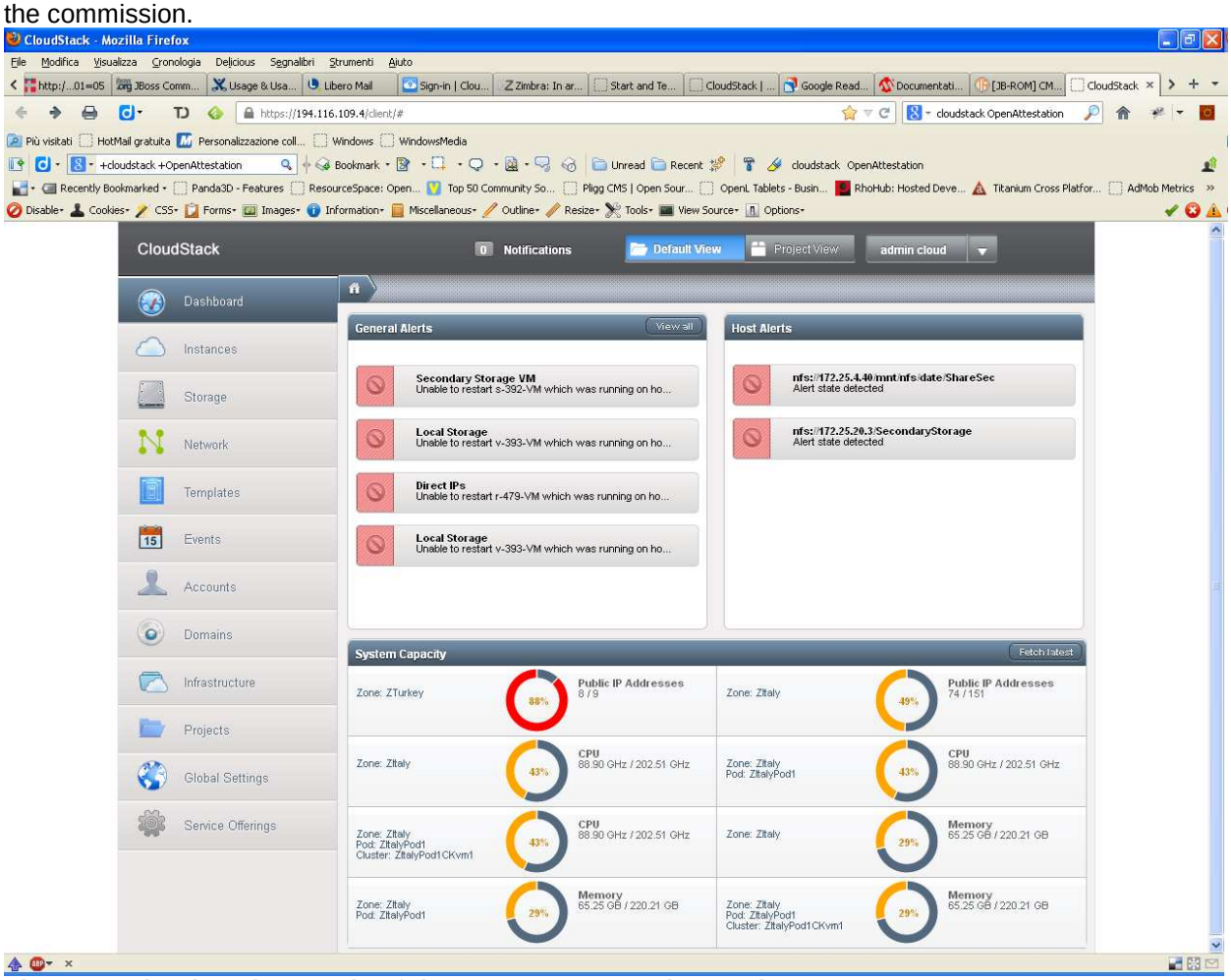


Figure 2 - cloudstack console of the Open-DAI operating environment

The project has identified a set of stakeholders of the project who will help guiding the dissemination and business plan activities.

Involved actors and administrations

Project consortium:	The partners participating to the consortium
European commission:	The funding actor that can support and sponsor the project at European level
Citizens of the consortium's PA:	Direct users of the pilots implemented in the project; interested in the reduced IT development expenses of local PA in order to obtain better services

Scientific community

Open Data Community:	academic and technical community interested/involved in open data
Open source developers:	developers of the technological components adopted by the project

Institutional stakeholders

Central PAs:	PAs that manage public procurement and takes decisions on the Digital Agenda or can solve legal issues on data sets
Local PAs:	owners of the data silos, purpose of the project business

Citizens:	citizens not involved in the pilots because they are out of the scope of the project or live outside the project's PAs borders, but could be interested in a wider adoption of some pilots
Other EU financed projecst:	projects like Stork, eHero or financed by other intervention lines like Homer

Business stakeholders

Private IT PA's service providers:	IT players offering services to PAs, potentially interested in a common and standard framework for public data deployment
Private IT:	Small medium business companies implementing applications based on public open data
Cloud providers:	actors offering cloud services to Pas, which could be interested in a new "application" solution to add to their offering

General media

IT and PAs opinion leaders
IT media

4.1 Work progress and achievements during the period

In this paragraph we provide a concise overview of the progress of the work in line with the structure of Annex I of the Grant Agreement. For each work package, except the one related to project management (WP1), which will be reported in section 5, we give an overall description divided per tasks, the main significant results achieved in the first year and, if applicable, any significant deviation from the work-plan and any proposed corrective actions.

4.1.1 WP2 "System and Architecture specification"

WP Leader: NETPORT

4.1.1.1 Task 2.1: Technology assessment report

The main objective of Task 2.1 is to assess the technological and architectural state of the art within partners' legacy data centres and to select technology components to be used in the.
The task result was delivered in May 2012 as a document describing the situation at each partner silos and the components to be used in the implementation. The physical connection was tested successfully and documented in terms of capacity. The legacy structure was documented and potential issues were identified.
Each partner owner of an involved data centre collected information on the legacy environment and on possible conflicting issues due to applying the Open-DAI future architecture.

4.1.1.2 Task 2.2: Description of the general architecture

This task deliverable was a document released in July 2012, with the objective to describe the cloud computing and SOA approach to be used in the implementation phase. It also included a description of the pilot use cases at each partner and site.
The work has been performed with a continuous collaboration among partners to design the architectural details and investigating reasons and methodology to integrate the specific solutions and chosen components.
Each pilot site identified use cases to be implemented and tested in the interlinked WP5 in order to grant that the final architecture would fulfil all the pilots' requirements, and that -besides the core of the Open-DAI platform- all the components needed by the pilots would have been correctly set up for development.

4.1.1.3 Significant results

No major technical problems were identified. The network connections between the different sites performed as expected and this helped define the cloud topology and definition of the cloud domains to determine the pairing cloud node – user domain, taking into account network performances.
The technology component was defined after joint evaluations and discussions.
With the spread of use cases at the different sites and partners, a strong foundation was laid to test different aspects in the implementation phase, later in the project.
A component of the monitoring platform had to be changed during the WP4 activity, due to a request by WP4 leader, since the technology used in the chosen component (Zenoss) was too complex to manage in the integration phase, the consortium opted for an equivalent component with an easiest integration path.
Some components of the final architecture were added after the completion of the WP2, since new products were available in August 2012.
The WP2 leader together with the WP4 leader (involved in the delivery of the platform) decided for the change after a short debate involving also the technical partners.

4.1.1.4 Deviations

No major deviations were identified
All major objectives were fulfilled. Some of them affected by minor delays due to the complexity of the project and its technical implementation.

4.1.2 WP3 Data assessment and specification

WP Leader: DIGITPA

The main objective of WP3 is to provide a common reference framework for data assessment (legal aspect, legacy DB, ER diagram); the steps to achieve this goal:

1. Producing a list of data sets with their access rules and a schema;
2. Supporting the PSI holders in their choice of the proper copyright (and sui generis database right) licenses to be associated with the data, in order to maximize the re-use opportunities (also in the context of innovative business models);
3. Determining the output formats for each single data set and designing its required transformation:
4. Planning the data sets' usage for the pilots;
5. Designing the data services.

Items 1. and 2. are addressed by deliverable D3.1, while items 3., 4. and 5. are included in D3.2.

4.1.2.1 Task 3.1: Data assessment report

The work package leader prepared a data assessment checklist that was circulated among the partners to gather basic information about legacy databases held and managed by the partners.
This produced a detailed picture of the data sets available to the project.
Concurrently with the activities of WP2 legacy environment information was collected together with the database information to ensure data accessibility by the virtualization components.
All these information was reported in deliverable D3.1 which provides also a common reference framework for data assessment and some general scenario information about Public Sector Information, Open Data and Intellectual Property Rights. Finally D3.1 reports a description of legacy data environments, ER diagrams and data sets with further focus to data ownership and legal issues, for each data-providing consortium partner.

4.1.2.2 Task 3.2: Data services design report

In this task partners designed the new data set offering for the project accordingly to the constraints over the data sets.

Partners also had to solve data ownership issues, filter out part of the data that might or should not be part of the final data set (considering that, since legacy data sets are linked to silos applications many tables or columns are typical of the legacy applications and not useful for any external usage)

Deliverable D3.2 thus contains, after a brief overview, a description of data service calls necessary for the pilot. For each of the data-providing partners, data service descriptions include XML, JSON or WSDL schemas, were appropriate, plus legal considerations regarding ownership, availability, local regulations and so on.
The topic of semantic integration of different data sources related to common vocabularies is then approached, ending with the analysis of a series of general legal issues related to data protection and data security.
Concerning semantic integration, the Open-DAI platform provides a component which is able to expose data as linked data output format and the project has looked after common vocabularies and ontologies to apply to data sets.

4.1.2.3 Significant results

In general terms, this evaluation allowed to identify several already existing configurations. While in some cases datasets are already published as Open Data (e.g. Barcelona Municipality), in others some further steps are needed to address specific requirements (e.g. anonymity, legal clearance). However, in all cases partners act as data controllers, therefore in the position to autonomously process and isolate non-personal data.
The work package KPI evaluation achieved a result well above the initial planning, identifying more than 20 data sets.

4.1.2.4 Deviations

Work package 2 and 3 and the associated deliverables are formally terminated. However, partners agreed that the technical specifications described in the deliverables will be subject to validation and refinement in the implementation phases of the platform (WP4) and of the pilots (WP5).
In particular, the specification of how to integrate data semantics (Section 3 of Deliverable D3.2) appears too general and its applicability is focused on the datasets provided by the Piedmont region regarding air pollution, schedules of public services, traffic accidents. The application of methods to semantic dataset provided by the Municipality of Barcelona, Lleida, Ordu and Karlsham seems more difficult.
This is in part due to little homogeneity in the different data sets used by the partners, result of the different geographical scope and administration level of the involved public administrations.
Where datasets have not yet been published, the project proposed that most appropriate terms of reuse should be applied, taking into account not only the current legal framework assessed by their holder, but also the legal interoperability among licensing conditions (e.g. in the case a third parties uses two or more datasets with attached different licenses).
One of the data sets changed due to legacy silos reengineering in November 2013 (when WP3 was already closed). The project leader with the support of the involved partner decided to change the data set structure and the project decided to release an updated set of deliverables that will take into account this change at the end of development activity.

4.1.2.5 Corrective Actions

The project will pursue enhancing the number of published data sets still during WP6, while new requirements might come out during the activities of WP5 (Pilots Implementation).
In this scenario, same methodology -as developed in WP3- will be applied to manage the opportunity of opening new datasets. Should the WP3 deliverable documents be therefore updated, new releases shall be produced, spending some of the effort assigned to further work packages still in progress in due time.

4.1.3 WP4 System/Platform implementation

WP Leader: CSI-Piemonte

The WP4 objective is to implement the general architecture defined in WP2, which has been partitioned into a cloud layer and an application layer, which in turn is composed by a data virtualization layer and a SOA layer.

4.1.3.1 Task 4.1: Installation and configuration of Data Virtualization layer

This task was mainly implemented by CSI, SAMPAS and POLITO since the target was to build the cloud infrastructure needed to host the whole middleware architecture.
The hardware was setup and configured and the two nodes linked by a VPN connection between CSI and SAMPAS.

4.1.3.2 Task 4.2: Installation and configuration of SOA Cloud layer

The middleware development of the WP4 has been accomplished assigning to each partner the responsibility of a piece of technology:

CSI had the responsibility of installing and configuring

- the JBoss clusters
- TEIID server
- GeoServer component
- The management tools

SAMPAS had the responsibility of installing and configuring

- The ESB component of the WSO2 tool set

BDIGITAL had the responsibility of installing and configuring

- All the other WSO2 tool set

NETPORT had the responsibility of installing and configuring

- The web components of the architecture, namely: the Apache, PHP, nodejs and nginx

POLITO had the responsibility of installing and configuring

- The Puppet management tool giving support to CSI

4.1.3.3 Significant results

The version of cloud stack platform, main component of the cloud layer, was upgraded from 2.x to 3.x in March 2012 (is now in 4.0), when the project was in the WP2 phase; it was decided to adopt the 3.x version, more suitable to the project whole life span.
The availability of specific features of the 3.0 release of the cloud environment had a deep impact in the middleware design decisions.

4.1.3.4 Deviations

All the software products used in the project are selected from the open source ecosystem; this choice poses usually a higher level of risk in software maintenance and integration since this type of software progress with a higher release rate.
Due to the early adoption of the new “cloudstack platform” release some bugs affected the project requiring workarounds.
The project was impacted also a postponement in the internal scheduling of the WP4 activities caused by the long delay of the hardware delivery in the Turkish node.
In any case the cloud layer was delivered within the required deadline.
The application layer has also been affected by the evolution of open source products.
In particular the project decided to adopt the WSO2 API manager at the end of the WP4 activity since the product was released, in version 1.0, in August 2012.
The project technical team believed that this product could give the project an important advantage in the core task of publishing data and that, besides any incidental delay, it might bring benefits during development phase, due to less programming effort needed to achieve the API publishing and monitoring.

Some further simplifications were introduced over the initial architectural design: at first the design considered a generic scenario where the environment might need to scale both vertically (giving the service a bigger virtual machine) and horizontally (adding new virtual machine to the cluster); many clustering options were designed in the architecture (Apache and WSO2 ESB).
It occurred that since the need to use a new virtual machine for proxy (due to the impossibility to use the internal cloud stack proxy for problems in the SSL management) requirements of an Apache farm were reduced and also the need for an ESB cluster was not immediate.
Since the architecture could become too complex managing also the clustered environments the project decided to simplify those aspects.
Documentation has been made available to project team, because the whole technology is composed by lots of state of the art tools, which require deep knowledge to reach advantages in development.
Platform goal features are:

- As little operational effort as possible: most of the installation is done automatically by the platform.
- As little development as possible: most of the publishing work consists in data mapping, API designing and using IDE or web based tools to create the artefacts that will be deployed in the platform.

Automation and implementation taking into account ease of use require a big effort in the “behind the scene” work; therefore during the WP5 progress some bugs keep emerging and are being constantly fixed, so honing the platform to a better performance implementation.
The D4.1 and D4.2 (in its recent revised form to take into account some changes not correctly described in the first release of the document) describe the installation process to be able to reproduce the project infrastructure.
The developed integration software has also been released in a public repository.
The WP4 will keep a task running throughout all the WP5 and possibly also WP6, using budget of CSI Piemonte assigned to these WPs, to fix possible issues in the platform and middleware.

4.1.4 WP5 Pilot Development

WP Leader: BDIGITAL

The WP5 objectives for the first year were definition and description of each pilot over the platform provided by the WP4, to allow access to published data made available by the WP3.
The partners are committed to deliver the pilots on schedule through incremental development of pilot releases by

- Testing & refinement
- Joint management of pilots progress

4.1.4.1 Task 5.x.1: Pilot description

The project thus defined the tasks 5.1.1 , 5.2.1, 5.3.1 , 5.4.1 and 5.5.1 to describe the pilots with contributions from Piemonte, Barcelona, Lleida, Karlshamn and Ordu. This description includes the proposals and goals , the used data sources, the features descriptions with the use cases and the technical definition of each pilot.
The outcomes of these tasks are documented in the D5.1 deliverable

4.1.4.2 Task 5.x.2: Pilot implementation

The project team is working on this task at the moment of the first year review.
Depending on the internal schedule of each development pilot team, some deliverables are already available for reviewing.
In the following figure shows the working client application of the Piedmont Region pilot shown during the first year review meeting.

4.1.4.3 Task 5.x.3: Pilot testing

This task will progress together with development, dedicating an intense activity before releasing the pilots.

4.1.4.4 Significant results

The partners are actively developing over the Open-DAI platform with good feedbacks.
A steep learning curve is required to properly come to use all of the technology components available in the Open-DAI model, but once reached the correct knowledge level, development becomes just a mapping exercise.

4.1.4.5 Deviations

The WP5 started on the month 9th as expected, in line with the pilot definition tasks, but the delivery of the document D5.1 was delayed from the month 10th to the month 11th. This deadline was shifted because a few changes on the available data sources and some modifications to the architecture (provided on the WP4) caused adjustments on the pilots' definitions.
Some of the selected datasets have not yet been published due to for problems of availability of the data sources. This delay might change the implementation detail planning for WP5, nonetheless remaining within the scheduled dates.
As far as use of resources is concerned, the WP5 activities required the persons-months planned by each partner to perform the definition tasks. These are 4 p/m by BDigital (WP leader) and 2 p/m by the other technical partners involved on the WP: CSI Piemonte, NetPort, SAMPAS .

4.1.5 WP6 Services Development, implementation and testing

WP Leader SAMPAS

WP6 activities are planned to start at month 19th and the work will be finalized by the end of the project, month 32. Therefore, only initial planning has been shared in joint discussion with the partners at the Barcelona Meeting at the end of 2012.
Main goal of this work package is to ensure the governance on the creation and operation of Open-DAI services:

- Developing new services
  - Orchestrating exposed services and exposing new ones
  - Integrating Open-DAI platform with other projects (es. Homer: federated catalogue)
- Involving third parties
  - Hackatons
  - Operation
- Monitoring pilots usage
  - Keep infrastructure up and running

To achieve this goal, tasks below are determined in the DoW:

4.1.5.1 Task 6.1: User-driven service development & testing

The deliverable of this task (and the following) is D6.1 "Users driven development and orchestration" expected in month 20 for a typing error, since there are scheduled x man/months to deliver in 1 month of elapsed.
The project proposes to correct the due date to the month 30.
This task will develop new services and will try to extend the Open-DAI platform usage both from the participating PA and involving other administrations.

4.1.5.2 Task 6.2: User-driven service orchestration and deployment of value added services

In this task the project will try to involve external actors through hackatons and other strategies to spread the knowledge and usage of the Open-DAI platform and data sets.

4.1.5.3 Task 6.3: Operational monitoring of the platform and the pilot scenarios

This task will be dedicated to the operational monitoring and the goal is to confirm the operational costs indicated in the business plan.
Also the usage and the success of the pilots will be monitored to check the impact that the pilots are having on the PA.
D6.2) Operational monitoring reports 1: Operational monitoring reports period 1 [month 24]
D6.3) Operational monitoring reports 2: Operational monitoring reports period 2 [month 32]

4.1.5.4 Deviations

As described above the project propose to shift the due date of D6.1 from month 20 to month 30.

4.1.6 WP7 Dissemination

WP Leader: CSI-Piemonte

The dissemination aspect of Open-DAI (related to WP7) is considered a crucial activity in order to produce project's outcomes as sharable and reusable by other European Administrations and organizations, as well as services usable by European citizens and businesses.
During the first year of the project we can report that the first "preparatory" dissemination objectives have been achieved by the consortium. These objectives are:

- The Identification and establishment of a dissemination plan (that will progresses with the growth of the project and produce its outcomes during the second year of the project);
- The participation in some selected events in Sweden, Turkey and Italy addressing software Developers and public stakeholders active in the IT domain;
- The dissemination of the launch of the project through all the partners' channels and trough web-portals and newspapers.

The overall dissemination goals are:

- Community enlargement: To support and facilitate the re-use process of Open-DAI architecture and services by other European Administrations and organizations, as well as by European citizens and businesses.
- Scalability: To spread results transferability across Europe to different domains (scalability of platform is not limited to new regions but it may also be extended to different domains such as e-health, e-government /e-governance, and e-democracy).

As far as the specific tasks are concerned, here below are the main activities carried out and their outputs.

4.1.6.1 Task 7.1: Project communication strategy and dissemination plan

This task has been finalised and resulted in the development of the Open-DAI communication strategy reported in the Dissemination plan (Deliverable 7.1).
In this task the WP coordinator produced the dissemination plan, all the communication materials to be used by the partners in the frame of the project communication (the logo for the project, the coordinated image design for publications and reports).
The dissemination strategy has changed in the first months of 2013 due to the following factors:

- Change of project coordinator giving to the project a new vision
- Upgrade of the partners' awareness of the Open-DAI assets: being able to touch and work on the Open-DAI platform and not only have an "on paper" design helped the whole consortium to better appreciate the strengths and potentialities of the project and to better tune the dissemination.

The new plan will sort out around these lines of action

- Leverage on regional policy instruments 2014-2020
- Capitalisation of existing EU networks at cross-border level funded under ERDF
- Spread of OPEN-DAI results to cross-border running projects funded by CIP PSP ICT
- Participation in EU/national events targeting the IT community

4.1.6.2 Task 7.2: Project web site and dissemination tools

The Open-DAI public website (http://www.open-dai.eu/) was designed and implemented on February 2012 by CSI-Piemonte, the coordinating partner of the project, based on the open source content management platform "Joomla!". The website matches the Deliverable 7.2. The project coordinator is responsible for performing website updates on a regular basis. In particular, CSI-Piemonte is responsible for operating news updates on a monthly basis and ensuring that press releases, publications, and deliverables are posted with proper timely pace.
At the moment the site appearance shows a classic institutional project approach and does not fully communicate the Open-DAI model, goals and achieved results.
The work package leader is aware of the problem and is pursuing its improvement.

4.1.6.3 Task 7.3: Dissemination monitoring and report

The deliverable 7.4 reports all the communication activities performed by the partners from February 2012 to January 2013.
This was delivered on schedule and according to the former communication strategy.

4.1.6.4 Task 7.4: Organization of and participation in public events

The WP7 coordinator monitors on a regular basis the dissemination activities performed by the partners, to measure the impact obtained on the different audience, according to the dissemination plan.
Partners use different communication channels, online and off-line; besides, an effective promoting campaign of the launch of the project has been performed during the kick off meeting.

4.1.6.5 Significant Results

The WP7 activity performed during the first year produced the following main results:

- Awareness raise of the potential benefits from the Open-DAI project in the countries where the consortium will implement the pilots during the second year;
- An enhanced list of stakeholders in Sweden, Turkey, Italy and Spain, in order to define and create links with the exploitation plan of the project (WP8);
- Identification of an European initial community potentially attracted by Open-DAI achievements, which might constitute a relevant audience to be targeted by organisation of conferences and workshops, thus improving effectiveness of second year communication activities

4.1.6.6 Deviations

As part of the first review the work package leader points out that there is a misprint in the deliverables numbering in the DoW: the D7.5 deliverable is missing.
The proposal is to change the numbering so that it will become:

D7.5	Annual Dissemination report Y 2
D7.6	Annual Dissemination report Y 3
D7.7	Public workshop or satellite event

4.1.7 WP8 Impact evaluation and Exploitation

WP Leader: SAMPAS/POLITO

As stated in the DoW, the objective of this work package is to identify an exploitation strategy and to analyse in depth the socio-economic impact of the Open-DAI project over the European countries. More in detail the objectives of the WP are:

- To precisely identify the exploitable services/products achieved within the project (and the source of their value for actual and potential users);

- To define the basic exploitation model of the project outcomes;
- To extract market characteristics and monitor the emerging market trends regarding the systems/services;
- To develop detailed business plans for the Open-DAI services and tools;
- To perform a cost benefit analysis at the level of each Open-DAI application/module;
- To define the rules of exploitation of the results.

4.1.7.1 Task 8.1: Exploitation strategy and plans

This task focuses on identifying the exploitable services/products realized within the project and defining the basic exploitation model of the project outcomes. Within this scope, a survey has been conducted before drafting D8.1: Exploitation Plan first version, in order to:

i) Analyse the current situation related to exploitation of open government (PSI) data in partner countries;
ii) Offer an overview of the EU approach on exploitation of open government (PSI) data;
iii) Identify exploitable Open-DAI Services/Products and their potential use;
iv) Identify best practices/success stories/scenarios from partner countries.

Following this survey, the findings were used in shaping D 8.1, which outlines in brief the PSI regulations in Open-DAI partner countries, Open-DAI exploitation objects and the exploitation strategy. The evaluation of the possible impact of Open-DAI Services to build a new platform for all EU Public Administrations are also discussed in this deliverable. Overall, D8.1 represents a draft, preliminary discussion, which is currently expanded and deepened, in order to draft D8.2. (Exploitation Plan 2: Exploitation Plan update version)
The partners developed an overall exploitation plan

- A not acceptable worst-case scenario
  - open data; open source code for pilots and platform
- A more challenging achievable scenario (building on 1.)
  - with a partner maintaining the open code and community
- An ambitious but realistic scenario (building on 1. and 2.)
  - public procurement by a Group Purchasing Organization
- A completely market-based scenario

4.1.7.2 Task 8.2: Exploitation monitoring and report

This task will collect the exploitation results.
It did not yet deliver any tangible result, since the actual exploitation activities of Open-DAI are still in an initial phase.

4.1.7.3 Task 8.3: Development of the Business Plan for the Open-DAI services

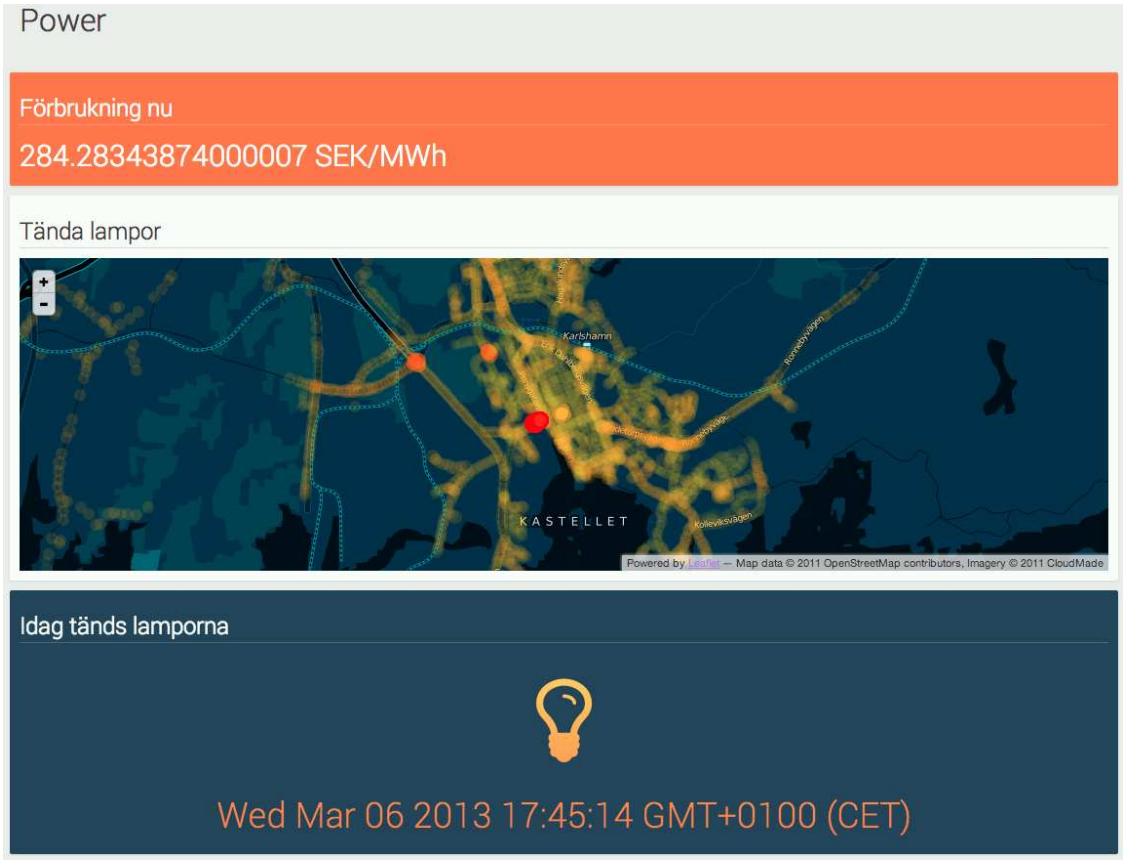
The project delivered its first analysis in the form of D8.4 Business Plan Draft: this deliverable represents one of the possible declination of the Open-DAI business model, namely the exploitation of Open-DAI as a product offered on the market by private players and/or in-house firms supporting public administrations.
This was a first approach to the difficult task of identifying the different models for the artefacts that the project is delivering.
The new work package leader is finalizing the final business plan defining and gathering key quantitative parameters to verify the financial viability of a market-oriented exploitation of Open-DAI collecting data on:

- Market size
  - PSI holders' customer base
  - PSI holders' consumption profile
  - Developers/re-users' customer base
  - Developers/re-users' consumption profile
- Cost structure

  - Start-up costs
  - Fixed recurring costs
  - Variable costs
- Additional considerations on pricing

4.1.7.4 Significant results

For many partners, the work directed at preparing the first version of the exploitation plan represent the first occasion ever to design a consistent strategy for the publication and reuse of their public sector information (by private parties or other public administrations). Therefore, even if the first documents delivered by this WP (D8.1 and D8.4) just represent draft versions, they significantly raised the level of awareness of project partners with respect to the WP goals and supported the partners to determine their exploitation plans. This work was also used in the pilot design and description.
Moreover, the work directed at the drafting of D8.2 is currently producing significant results, testifying a higher level of awareness and cleared exploitation goals.
One of the hackatons produced a first interesting result:a small pilot on energy consumption form streetlights starting from the data of the Karlshamn partner.
This is the kind of results that the project expect to obtain and this first result will be analyzed as an example of return of investment caused by an Open-DAI adoption.



4.1.7.5 Deviations

The delivery of D8.4 Business Plan draft was significantly delayed with respect to the scheduled date in Annex I (month 10, with actual delivery at month 13). The main reason for deviating from Annex I is that project partners (and, in particular, public sector bodies which are members of the consortium) encountered more difficulties than they expected to figure out possible business and exploitation scenarios, primarily because of the novelty of markets related with making public sector information available for re-use by third-parties and other public administrations. Moreover, the WP Lead beneficiary

(SAMPAS) realized that, in Turkey, these markets are even less developed than in the rest of Europe and building the internal competences and knowledge to lead this WP proved more challenging than expected.
As a consequence of the delay in the delivery of D8.4, also D8.2 was delayed (from month 12 to month 13), since the two deliverables should be consistent and it was impossible to complete D8.2 without taking into account the results of D8.4.
As a remedial action for not being on schedule with respect to the delivery of WP results, CSI.Piemonte as project Coordinator, SAMPAS as the WP beneficiary Leader and POLITO as second highest contributor to the WP (and most experienced partner in the domains which are concerned by WP8, with significant international connections) decided to increase the pace at which POLITO was spending person-months on this WP. Admittedly, this remedial action was probably not undertaken in a completely timely manner, however it was reinforced by the new project manager at CSI and its results are currently being delivered (in particular, the drafting of D8.4 was de facto led by POLITO).
As far as corrective actions are concerned and consistently with the aforementioned corrective actions, in agreement with the WP Lead beneficiary (SAMPAS) and POLITO, the Coordinator proposed to the Commission an amendment to Annex I, in order to reallocate some resources and the leadership of this WP from SAMPAS to POLITO. In this way, POLITO will be able to continue its ongoing effort to keep on track the activities concerning WP8. The effect of the amendment, if accepted by the Commission, would be to reduce by 5 person-months the effort of SAM, increasing at the same time the effort of POLITO by 6 person-months (all that without changing the overall amount of monetary resources allocated to WP8).

5 Deliverables and Milestones tables

TABLE 1. DELIVERABLES

Del. #	Deliverable name	WP #	Lead participant	Nature	Dissemin. Level	Due delivery month from Annex I	Delivered Yes/No	Actual / Forecast delivery date	Comments
D1.1	Project Kick off meeting	WP1	CSI-Piemonte	O	P	1	Yes		
D1.2	Project intranet and filestore	WP1	CSI-Piemonte	O	P	2	Yes		Revised version in February 2013
D1.3	Quality Assurance and Risk Assessment Guidelines	WP1	CSI-Piemonte	R	P	3	Yes		Revised version in January 2013
D1.4	Annual report Y 1	WP1	CSI-Piemonte	R	P	12	Yes	15 February	In order to provide the PO and reviewers a general overview of the project during its first year of life, the annual report has been produced in Month 13, even if the collection of financial data of the first year actually require 45 days after the deadline to be finalized and assessed. In March, therefore we plan to finalize the D 1.4 further

TABLE 1. DELIVERABLES

Del. #	Deliverable name	WP #	Lead participant	Nature	Dissemin. Level	Due delivery month from Annex I	Delivered Yes/No	Actual / Forecast delivery date	Comments
D2.1	Technology assessment	WP2	NP	R	P	2	Yes	March 2012	
D2.2	Description of the general architecture	WP2	NP	R	P	4	Yes	June 2012	
D3.1	Data assessment report	WP3	DIGPA	R	P	4	Yes	First version in April 2012, revised version in January 2013	
D3.2	Data services design report	WP3	DIGPA	R	P	4	Yes	May 2012	
D4.1	Open-DAI Data Virtualization platform installation manual	WP4	CSI-Piemonte	R	P	8	Yes	October 2012	
D4.2	Open-DAI Cloud platform installation manual	WP4	CSI-Piemonte	R	P	8	Yes	September 2012	
D5.1	Pilots description summary	WP5	BDIGITAL	R	P	10	Yes	Revised version delivered on January 2013	
D7.1	Project leaflet	WP7	Csi Piemonte	R	P	2	Yes	Revised version delivered on January 2013	
D7.2	Project web site	WP7	Csi Piemonte	O	P	2	Yes	Revised version delivered on January 2013	
D7.3	Dissemination Plan	WP7	Csi Piemonte	R	P	4	Yes	May 2012	
D7.4	Annual Dissemination report Y1	WP7	Csi Piemonte	R	P	12	Yes	20 February 2013	

TABLE 1. DELIVERABLES

Del. #	Deliverable name	WP #	Lead participant	Nature	Dissemin. Level	Due delivery month from Annex I	Delivered Yes/No	Actual / Forecast delivery date	Comments
D8.1	Exploitation Plan 1	WP8	SAM	R	P	4	Yes	30 May 2012 and revised version	All WP 8 deliverables were further revised, taking into account the WP 8 leadership change amendment. The process influenced the expected delivery plan. Revised version submitted on 20 February 2013
D8.2	Exploitation Plan 2	WP8	SAM	R	P	12	Yes	28th February 2013	Slightly delayed delivery (see above for explanations)
D8.4	Business Plan Draft	WP8	SAM	R	CO	10	Yes	18th February 2013	Significantly delayed delivery (see above for explanations)

TABLE 2. MILESTONES

Milestone no.	Milestone name	Due achievement date from Annex I	Achieved Yes/No	Actual / Forecast achievement date	Comments
MS1	Architectural design completed	4	**YES**		The architecture is documented in WP2.2 document "Description of the general architecture".
MS3	Data assessment and service design report completed	**4**	**YES**		Partners agreed that the technical specifications described in deliverables D3.1 and D3.2 will be subject to validation and refinement in the implementation phase of the platform (WP4) and implementation of the pilots (WP5).
MS4	Availability of Data Virtualization platform and Cloud platform	**8**	**YES**		Thee platform has been delivered to the partners and been used also in the Barcelona meeting for the "hands on" technical session. It has been up and running since the delivery.

6 Project management

6.1 Management bodies within Open-DAI

Project management has to balance various needs and requirements for the overall successful execution of the project. It was anticipated that the main management challenges of the Open-DAI project are:

- The complexity of SOA and Cloud technology;
- The significant pre-existing know-how and system infrastructure of the "data provider" partners;
- The concurrency and heterogeneity of the different organizations involved in the project.

The Open-DAI consortium deployed a lightweight three-level management structure, facilitating central control and decision making:

- Executive Board (EB)
- Work Package Leader (WP)
- Coordinator.

CSI-Piemonte was in charge of the management of the project.
During the first kickoff meeting held in Turin in February the other management structures were formalized.
The Executive board members were nominated and the board formally set up.

Partner	Board Member in year 1	Board Member from Y2 –if changed
CSI-Piemonte	Diego Feruglio	Anna Cavallo
BDIGITAL	Antoni Felguera	
Netport	Petra Arrenas	
SAMPAS	Gonca Kara Demir	Serdar Yümlü
DIGITPA	Daniele Tatti	
POLITO	Federico Morando	
Regione Piemonte	Alessandro Fidanza	
Barcelona	Isaac Aparicio	
Karlshamn	Annette Sandberg	
ORDU	Esref Oner	
Lleida	Antoni Saldaña Lapeña	

Work Package leaders were identified, as represented in the following table, which reports also the new work package leadership appointments after project coordinator substitution.

Work Package	WP leader in year 1	WP leader from year 2
WP1	Diego Feruglio	Anna Cavallo
WP2	Mats Jonsson	NA
WP3	Daniele Tatti	NA
WP4	Luca Gioppo	NA
WP5	Marta Palanquez	Marc Planaguma
WP6	Caner Tosunoglu	Caner Tosunoglu
WP7	Luca Gioppo	Elsa Pilone
WP8	Caner Tosunoglu	Federico Morando

6.1 Open-DAI Management policies

Consortium partners have agreed on project management general approach, policies and rules, as described in D1.3 document.
Project intranet and files repository structure have been organized.
To overcome a general organization complexity due to heterogeneous approaches, choices have been made towards reduction of cooperation rules and policies; an internet "drop box" feature has been established as the primary tool for sharing information and documents
The project also decided to try to use a web project management tool as Redmine, but after a couple of months of usage it became evident that it was not actually helping the project management and therefore it was discarded.
The project adopted Skype as a communication tool for quick confrontation and discussion, to share desktop and show by example the usage of the technologies adopted in the project.
It also has been decided to prepare when possible video to document user guides for specific operations on components.
Conferences were held in a by-weekly scheduling or when needed.
A minute of each conference call was to be produced and distributed.
The project leader also asked members to produce a quarter financial report (for the first two project's quarters) to monitor advancement on expenditures and be prepared for the annual report.
The project also set a peer review approach to support deliverables QA.

6.2 Project Consortium reorganizations

Some changes in the consortium partners' organization have happened during the first year.
DigitPA has been transformed into Agenzia Digitale by the Italian government; since DigitPA was involved also in other European projects their juridical status change has been recorded in the European commission systems at central level and this has been reflected in Open-DAI project without affecting the project work estimates and funding.

In August 2012 BDigital changed the WP5 leadership appointing Marc Planagumà in place of Marta Palanquez that was leaving the company. This had minimal impact on the scheduling of activities.
In January CSI-Piemonte changed the project leader since Mr. Diego Feruglio was leaving the company; Anna Cavallo took his place and the CSI team was reorganized.
During the activities for WP8 emerged that SAMPAS had a limited view on the overall European market and that polytechnic of Turin was more competent on the general European models; therefore, even though at first the project leader decided to apply an internal budget reallocation from SAMPAS to POLITO to allow the partner to strengthen its contribution to the project, afterwards it was considered more appropriate to shift Work Package 8 responsibility from SAMPAS to POLITO.

6.3 Open-DAI Meetings summary

The project held three meetings during the first year:

- The first in Turin for the kick-off (February 2012) where project planning general view and strategy was defined and agreed by all participating partners
- The second in Karlshamn (Sweden) in June 2012 to check the status of finished work packages and to agree on technical design decisions along with evaluation of the consequences on pilots, exploitation considerations and pilot overview.
- The third in Barcelona, dealing with a more technical approach including hands on sessions on the cloud platform and sharing platform usage examples to ease pilot design and implementation

Another restricted meeting with Italian small and medium enterprises has been jointly held by CSI-Piemonte, Agenzia Digitale and Politecnico of Turin in Rome in January 2013 to discuss business plan and exploitation scenarios while presenting the project to potential external users to get feedbacks.

6.4 Project KPIs review

As stated before the quality and risk assessment for the project has not been described adequately and a new version of the related deliverable (D1.3) shall be produced -as required by the 1st year review team.
A few initial mistakes have been recognized in the DoW –mainly due to mistyping, and the project coordinator agreed with all partners to mend them.
This chapter explains the vision that has guided the KPI's revision while the new set will be detailed in the new D1.3 deliverable version
The main logic behind the revision is:

- Indicators should be measured during the duration of each related WP, in order to monitor the WP activities performance; after the end of a WP, when no further effort may be dedicated to its tasks, it is worthless to keep measuring its KPIs values; example given by WP2, WP3 and WP4 which ended within 1st year: their performance evaluation is already over, thus the corresponding KPIs tracking is no longer useful.
- Some of the KPIs are not properly consistent with the related WP deliveries (e.g. by WP4 indicators). Project team shall review the whole KPIs list –results will be in the new D1.3 version, and produce a new improved set of indicators more properly related to activities and deliverables of still in progress WPs (i.e. WP1, WP5, WP6, WP7, WP8).
- The project agrees with the commission on finding more adequate KPIs to measure the success of the whole project; these will have to be tied with the WP8 business plan and exploitation strategy.

6.5 Use of resources

6.5.1 Person-Months Status Overview (cumulative)

	WP1		WP2		WP3		WP4		WP5		WP6		WP7		WP8		TOTAL per Beneficiary	
	Actual	Planned	Actual	Planned	Actual	Planned	Actual I	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned
Coordinator Csi Piemonte	14,25	32	3,97	4	2,875	3	15,16	16	8,42	26	0	18	0,99	1	0	2	45,66	102
Beneficiary 2 BDIGITAL	0,14	2	0	4	0	3	0	3	8,56	34	2,61	21	0	2	1,12	2	12,43	71
Beneficiary 3 NP	1	1	7,51	8	2,60	3	7,42	8	9,54	24	0	20	0	1	0	2	28,07	67
Beneficiary 4 SAM	0,4	1	4	4	2	2	10	10	5,4	24	0,0	24	0,4	1	1,75	8	23,95	74
Beneficiary 5 DIGPA	0,3	1	2	4	5	6	0	4	0	0	0	0	0,4	2	1,9	4	9,6	21
Beneficiary 6 POLITO	0,5	1	8	8	6	6	0	0	0	0	0	2	1	4	7	7	22,5	28
Beneficiary 7 RP	0,59	1	0	0	0,22	2	0	0	0	0	0	1	0,66	1	0	1	1,47	6
Beneficiary 8 IMIBCN	0,60	1	0	0	1,80	2	2,05	3	0,20	5	0	4	0,15	1	0	1	4,80	17
Beneficiary 9 Karl	0	1	0	0	1	1	0	0	0	0	0	1	0	1	0,18	1	1,18	5
Beneficiary 10 ORDU	0,20	1	0	0	1	1	1	1	0	0	0	2	0	1	0,30	1	2,50	7
Beneficiary 11 IMIAL	1	1	0	0	2	2	2,78	3	4,86	5	0	5	0,15	1	0	1	10,79	18
TOTAL	18,98	43	25,48	32	24,495	31	38,41	48	36,98	118	2,61	98	3,75	16	12,25	30	162,95	416

6.5.2 Resources employment details

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. CONSORZIO PER IL SISTEMA INFORMATIVO (CSI PIEMONTE)				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP1	Personnel costs	60,930€	Staff costs as per 14,25 PMs	P/Ms 0,30 of Danilo Capitani,P/Ms 2,82 of Ivano Gauna,P/Ms 9,28 of Luca Gioppo,P/Ms 1,46 of Alexandra Lovisolo P/Ms 0,10 of Elsa Pilone,P/Ms 0,29 of Saverino Reale
WP2	Personnel costs	17,094 €	Staff costs as per 3,97PMs	P/Ms 0,45 of Willelm Campo,P/Ms 1,06 of Danilo Capitani,P/Ms 1,24 of Cassano,P/Ms 0,29 of Ivano Gauna,,P/Ms 0,45 of Luca Gioppo,P/Ms 0,48 of Alexandra Lovisolo
WP3	Personnel costs	10,586 €	Staff costs as per 2,875PMs	P/Ms 0,45 of Willelm Campo,P/Ms 0,60 of Bucciantini,P/Ms 1,25 of Luca Gioppo,P/Ms 0,57 of Alexandra Lovisolo
WP4	Personnel costs	78,707 €	Staff costs as per 15,16 PMs	P/Ms 3,13 of Ardissono,P/Ms 1,80 of Willelm Campo,P/Ms 0,21 of Luca Gioppo,P/Ms 2,18 of Danilo CapitaniP/Ms 4,16 of Gastaldi (in house consultant),P/Ms 0,17 of Olivieri,P/Ms 1,70 of Rossino (in house consultant),P/M s1,80 of Guaglianone
WP5	Personnel costs	35,579 €	Staff costs as per 8,42 PMs	P/Ms 1,27 of Campo,P/Ms 4,44 of Gastaldi (in house consultant),P/Ms 1,25 of Stefano Monasterolo,P/Ms 0,48 of Fabrizio Corsanego,P/Ms 0,99 of Morsaniga
WP7	Personnel costs	3,416 €	Staff costs as per 0,99 PMs	P/Ms 0,18 of Valeria Gernone,P/Ms 0,30 of Luca Gioppo,P/Ms 0,51 of Manuela Sarchioni
WP1	Other direct cost	6,672 €	Travel and other direct costs	Name of Travellers: Danilo Capitani and Diego Feruglio, Meeting in Brussels for Coordinator's day, 14-15 June 2012. Name of Travellers: Luca Gioppo and Diego Feruglio, project's meeting in Barcelona, Spain 11-13 November 2012. Kick off meeting cost (dinner and coffee breaks), 22-24 February 2012, Turin, Italy
WP2	Other direct cost	4,052 €	Travel and equipment	Name of Travellers: Ivano Gauna, Diego Feruglio, Luca Gioppo, meeting in Karlsham, 08 June 2012. Hardware for the cloud infrastructure (depreciation).
WP7	Other direct cost	2,484 €	Travel and dissemination costs	Name of Travellers: Luca Gioppo and Diego Feruglio, Participation in the Italian event

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 1 for the period. CONSORZIO PER IL SISTEMA INFORMATIVO (CSI PIEMONTE)				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
				ForumPa at Rome, Italy, 18 June 2012. Name of Traveller: Luca Gioppo, Participation in the JBUG event in Milan, 26 September 2012. Leaflet design and printing, Open-DAI paper note pads and press kit translation for the Kick off meeting.
	Indirect costs	61,893 €		
	TOTAL COSTS	**281,413 €**		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 2 for the period. FUNDACIO PRIVADA BARCELONA DIGITAL CENTRE TECNOLOGIC				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Personnel costs	908 €	Staff costs as per 0,14 PMs	Effort provided by the P.I. of the project for the preparation and attendance to the Kick off meeting: Antoni Felguera (PI).
WP 5	Personnel costs	33,353 €	Staff costs as per 8,56 PMs	1,92 PMs for Antoni Felguera (PI), 1,14 PMs for Marta Palanques (engineer), 3,81 PMs for Fernando Mora (engineer), 0,50 PMs for Néstor Fernández (engineer) and 1,19 PMs for Daniel Susín (engineer).
WP 6	Personnel costs	11,795 €	Staff costs as per 2,61 PMs	2,61 P/Ms for Rafael Giménez (engineer.
WP 8	Personnel costs	3,606 €	Staff costs as per 1,12 PMs	1,12 PMs for Marta Palanques (engineer).
WP 5	Other direct cost	1,179 €	Travel and other direct costs	Kick Off meeting participation, February 2012, for Antoni Felguera and Marta Palanques, 22-24 February 2012, Turin, Italy

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 2 for the period. FUNDACIO PRIVADA BARCELONA DIGITAL CENTRE TECNOLOGIC				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 5	Other direct cost	211 €	Travel and other direct costs	Technical "Pilot" meetings participation with IMI (March'12 -Jan'13) "Lleida pilot" meetings (1 pax). Antoni Felguera, March 2012 and January 2013, Lleida, Spain
WP 5	Other direct cost	2,018 €	Travel and other direct costs	Consortium Plenary meeting participation, June 2012, 2 pax. Rafael Giménez and Marta Palanques. 06-08 June 2012, Karlshamn, Sweden
WP 5	Other direct cost	1,259 €	Travel and other direct costs	Consortium Plenary meeting (November 2012). BDIGITAL hosted the meeting, the costs claimed related to the catering for the coffee breaks and lunches services (2 days meeting, 20 attendees). 12-13 November 2012, Barcelona, Spain
	Indirect costs	14,898 €		
	TOTAL COSTS	69,227 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 3 for the period. NetPort Karlshamn AB				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 2	Other direct cost	7,631 €	Travel and Equipment costs	Project meeting in Karlshamn, Sweden 06-08 June 2012. Equipment for programming
WP 3	Other direct cost	3,390 €	Travel cost and Equipment costs	Name of Travellers: Fredrik Broman, Petra Charlotte Arrenäs, Mats Jonsson, Kick off meeting, Turin, Italy, 22-24 February 2012+Alexander Hansson. Equipment for programming
WP 4	Other direct cost	1,002 €	Equipment cost	Equipment for programming
WP 5	Other direct cost	1,002 €	Equipment costs	Equipment for programming
WP 7	Other direct cost	7,457 €	Travel costs and Dissemination costs	Participation in Sweden Social Web Camp 16-19 Aug, Petra Charlotte Arrenäs, Fredrik Broman, Alexander Hansson Participation in the Conference 22-23 Aug. Petra Charlotte Arrenäs, Fredrik Broman, Alexander Hansson, Mats Jonsson Participation in Forum Öppna data. 3 Oct & 7 Nov. Alexander Hansson Internetdagarna 22-24 Oct, Alexander Hansson Barcelona project meeting 12-14 Nov, Petra Charlotte Arrenäs, Fredrik Broman, Alexander Hansson Participation in Generator network 26-27 Nov Petra Charlotte Arrenäs, Alexander Hansson

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 3 for the period. NetPort Karlshamn AB				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Personnel costs	6,000 €	Staff costs as per 1 PM:	PM 1 for Petra Charlotte Arrenäs
WP 2	Personnel costs	45,060 €	Staff costs as per 7,51 PM:	PMs 2,79 for Petra Charlotte Arrenäs PMs 1,28 for Fredrik Broman PMs 1,69 for Mats Jonsson, PMs 1,23 for Karin Persson PMs 0,26 for Alexander Hansson PMs 0,26 for Emma Callerstig
WP 3	Personnel costs	15,600 €	Staff costs as per 2,60 PMs:	PMs 0,7 for Petra Charlotte Arrenäs PMs, 0,32 for Fredrik Broman PMs 1,14 for Mats Jonsson PMs 0,31 for Karin Persson PMs 0,07 for Alexander Hansson PMs 0,06 for Emma Callerstig
WP 4	Personnel costs	44,520 €	Staff costs as per 7,42 PMs:	PMs 2,18 for Petra Charlotte Arrenäs PMs 1,57 for Fredrik Broman PMs 0,83 for Mats Jonsson PMs 0,36 month for Karin Persson PMs 1,59 for Alexander Hansson PMs 0,89 for Emma Callerstig
WP 5	Personnel costs	56,950 €	Staff costs as per 9,54 PMs:	PMs 4,15 for Petra Charlotte Arrenäs PMs 2,01 for Fredrik Broman PMs 3,38 for Alexander Hansson
	Indirect costs	50,439 €		
	TOTAL COSTS	239,051 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 4 for the period. Sampas Bilisim Ve Iletisim Sistemleri Sanayi Ve Ticaret A.S.				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
	Personnel costs	1,670 €	Staff costs as per 0,40 PMs	PMs 0,40 for Serdar Yümlü

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 4 for the period. Sampas Bilisim Ve Iletisim Sistemleri Sanayi Ve Ticaret A.S.				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 2	Personnel costs	15,531 €	Staff costs as per 4 PMs	PMs 1,60 for Serdar YümlüPMs 0,80 for Caner Tosunoğlu PMs 1,60 for Hakan Kurtuluş
WP 3	Personnel costs	7,962 €	Staff costs as per 2 PMs	PMs 0,30 for Caner TosunoğluPMs 1,70 for Hakan Kurtuluş
WP 4	Personnel costs	46,165 €	Staff costs as per 10 PMs	PMs 1,20 for Caner TosunoğluPMs 4 for Hakan Kurtuluş,PMs 2 for Buket Baysa,PMs 2,80 for İnan Atıcı
WP 5	Personnel costs	17,999 €	Staff costs as per 5,4 PMs	PMs 1,20 for Caner Tosunoğlu,PMs 1,20 for Yusuf Kula,PMs 1 for Buket Baysa,PMs 1 for İnan Atıcı,PMs 1 for Hakan Kurtuluş
WP 7	Personnel costs	2,530 €	Staff costs as per 0,4 PMs	PMs 0,4 for Eser Karakaya
WP 8	Personnel costs	4,410 €	Staff costs as per 1,75 PMs	Salary of Gonca Kara Demir (1,75)
	Other direct cost	680 €	Travel costs	Name of Traveller: Caner Tosunoğlu, Kickoff Meeting, 22-24 February 2012, Turin, Italy
	Other direct cost	1,009 €	Travel costs	Name of Traveller: Caner Tosunoğlu, WP2 Meeting,Karlsham, Sweden, 06-08 June 2012
	Other direct cost	1,945 €	Travel costs	Caner Tosunoğlu and Gonca Kara Demir - project's meeting in Barcelona, Spain 11-13 November 2012
	Indirect costs	28,880 €		
	TOTAL COSTS	128,781 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 5 for the period. DIGITPA				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
	Indirect costs	0 €		
	TOTAL COSTS	0 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 6 for the period. POLITECNICO DI TORINO				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 7	Personnel costs	1,914 €	Staff costs as per 1 PMs	P/M 0,5 of Giusepe Futia, P/M of Luca Leschiutta
WP 8	Personnel costs	21,441 €	Staff costs as per 7 PMs	P/M 1,8 of Juan Carlos De Martin, P/M 1,5 of Federico Morando, P/M 3 of Raimondo Iemma, P/M 0,2 of Luca Leschiutta, P/M 0,5 of Giuseppe Futia
WP 2	Other direct cost	1,253 €	Travel costs	Giuseppe Futia, Barcellona, 11-14/11/2012 and Federico Cairo, Karishaammn, 06-08/06/2012
WP 8	Other direct cost	459 €	Travel costs	Federico Morando, Rome, 22/01/2013
WP 1	Personnel costs	1,285 €	Staff costs as per 0,5 PMs	P/M 0,5 of Federico Morando
WP 2	Personnel costs	15,314 €	Staff costs as per 8 PMs	P/M 0,5 of Raimondo Iemma, P/M 2,5 of Giuseppe Futia, P/M 4 of Federico Cairo, P/M 1 of Luca Leschiutta
WP 3	Personnel costs	13,168 €	Staff costs as per 6 PMs	P/M 0,4 of Juan Carlos De Martin, P/M0,2 of Federico Morando, P/M 1 of Raimondo Iemma, P/M 4 of Federico Cairo, P/M 0,4 of Luca Leschiutta

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 6 for the period. POLITECNICO DI TORINO				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Other direct cost	1,371 €	Travel costs	Federico Morando project's meeting , Barcellona, 11-13/11/2012 and Raimondo Iemma, project's meeting Karishaammn, 06-08/06/2012
	Indirect costs	15,936 €		
	TOTAL COSTS	72,141 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 7 for the period. REGIONE PIEMONTE.				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Personnel costs	2,525 €	0.59 P/M	0.59 P/M of A. Fidanza for work done in February 2012 for the preparation of the kick-off meeting held in Turin on 23-24/02/2012
WP 3	Personnel costs	954 €	0.22 P/M	0.22 P/M of A. Fidanza for work done in June 2012 to identify and gather data to be published and released as “open data” (data from GTT)
WP 7	Personnel costs	2,838 €	0.66 P/M	0.66 P/M of A. Fidanza for work done in May 2012 on the preparation of the project leaflet and the contribution to dissemination activities
	Indirect costs	1,895 €		
	TOTAL COSTS	8,212 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 8 for the period. INSTITUT MUNICIPAL D'INFORMATICA DE BARCELONA				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Personnel costs	3,558 €	Staff costs as per 0,6 PMs	P/Ms 0,05 of I. Aparicio P/Ms 0,20 of E. Félez P/Ms 0,05 of J. López P/Ms 0,15 of L. Sanz P/Ms 0,15 of X. Roca
WP 3	Personnel costs	10,245 €	Staff costs as per 1,80 PMs	P/Ms 0,90 of I.Aparicio P/Ms 0,15 of E.Félez P/Ms 0,75 of X. Roca
WP 4	Personnel costs	12,051 €	Staff costs as per 2,05 PMs	P/Ms 0,75 of I. Aparicio P/Ms 0,25 of L. Sanz P/Ms 1,05 of X. Roca
WP 5	Personnel costs	1,259 €	Staff costs as per 0,20 PMs	P/Ms 0,05 of I. Aparicio P/Ms 0,10 of L. Sanz P/Ms 0,05 of X. Roca
WP 7	Personnel costs	1,373 €	Staff costs as per 0,15 PMs	P/Ms 0,15 of Manel Sanromà
WP 1	Other direct cost	812 €	Travel cost	E. Félez:, project's Kick off meeting, Turin, 23, 24 February 2012
	Indirect costs	8,545 €		
	TOTAL COSTS	37,843 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 9 for the period. Karlshamns kommun				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 3	Personnel costs	5,961 €	Personnel costs	0,29 month of Anette Sandberg, 0,04 month of Ulrika Norden, 0,15 month of Einar Berndtsson, 0,125 month of Percy Matsson, 0,125 month of Jens Odevall, 0,475 month of Linus di Petris.
WP 8	Personnel costs	1,308 €	Personnel costs	0,18 month of Linus di Petris

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 9 for the period. Karlshamns kommun				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 3	Other direct cost	2,835 €	Travel costs/Tickets	
	Indirect costs	0 €		
	TOTAL COSTS	10,104 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 10 for the period. BELEDIYE BASKANLIGI ORDU				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Personnel costs	320 €	Staff costs as per PMs 0,2	PMs 0,2 of .Eşref Öner
WP 3	Personnel costs	2,140 €	Staff costs as per 1 PMs	P/Ms 1 of Lütfü Can Düzgören
WP 4	Personnel costs	2,246 €	Staff costs as per 1 PMs	P/Ms 1 of Lütfü Can Düzgören
WP 8	Personnel costs	657 €	Staff costs as per 0,30 PMs	P/Ms 0,30 of Lütfü Can Düzgören
WP 1	Other direct cost	1,943 €	Travel cost	Name of Traveller Seyit Torun and Esref Öner, project's meeting in Barcelona, 11-14/11/2012
	Other direct cost	22,000 €	Equipment cost	Server-IBM x3650 M4 (WP5)
	Indirect costs	1,608 €		
	TOTAL COSTS	30,914 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 11 for the period. AYUNTAMIENTO DE LLEIDA				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Personnel costs	4,556 €	Staff cost as per 1 PM	1 PM of X.Piñol
WP 3	Personnel costs	9,113 €	Staff cost as per 2 PMs	2 PMs of X.Piñol

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 11 for the period. AYUNTAMIENTO DE LLEIDA				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 4	Personnel costs	12,580 €	Staff cost as per 2,78 PMs	2,5 PM of X.Piñol, 0,14 PM of D.Calderó, 0,14 PM of C.Giné
WP 5	Personnel costs	22,144 €	Staff cost as per 4,86 PMs	4,86 PM of X.Piñol
WP 7	Personnel costs	639 €	Staff cost. 0,15 PMs	0,15 PMs of L.Comet
WP 3	Subcontracting	2,415 €	Services for protocol interchange modification for local data to Open Dai project	
WP 3	Subcontracting	4,000 €	Services for presentation layer development. Assessment of data set to be used in pilots and technical specifications and requirements	
WP 4	Subcontracting	14,000 €	Services for presentation layer development. Integration and configuration of data virtualization layer and cloud infraestructure includin customer software.	
WP 5	Subcontracting	20,878 €	Services for database and service layer development: Integration of services on the Open Dai platform and pilot implementation	
WP 1	Other direct cost	1,055 €	Kick off meeting. Turin 23/24 february 2012. Antoni Saldaña	

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 11 for the period. AYUNTAMIENTO DE LLEIDA				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP 1	Other direct cost	222 €	Project meeting. Barcelona 12/13 november 2012. Xavier Piñol	
	Indirect costs	14,709 €		
	TOTAL COSTS	106,311 €		

Table 3.1 Personnel, subcontracting and other Major cost items for beneficiary 12 for the period. Agenzia per l'Italia Digitale				
Work Package	**Item description**	**Amount in €**	**Explanation**	**Free Text**
WP2	Personnel costs	14,891 €	Personnel costs	Staff costs as per 2 PMs: 1 P/M of Daniele Tatti 0,5 P/M of Gabriele Ciasullo 0,5 P/M of Mauro Draoli
WP3	Personnel costs	37,228 €	Personnel costs	Staff costs as per 5 PMs: 1,75 P/M of Daniele Tatti 1 P/M of Gabriele Ciasullo 2,25 P/M of Mauro Draoli
WP7	Personnel costs	2,978 €	Personnel costs	Staff costs as per 0,4 PMs: 0,4 P/M of Daniele Tatti
WP1	Personnel costs	2,234€	Personnel costs	Staff costs as per 0,3 PMs: 0,3 P/M of Daniele Tatti
WP1	Other direct costs	783 €	Travel costs	Name of Travellers: Daniele Tatti, Mauro Draoli, Gabriele Ciasullo. Kickoff Meeting, 22-24 February 2012, Turin, Italy
WP8	Personnel costs	14,147 €	Personnel costs	Staff costs as per 1,9 PMs: 0,4 P/M of Daniele Tatti 1,5 P/M of Mauro Draoli
WP2	Other direct costs	470 €	Travel costs	Name of Traveller: Mauro Draoli. Project meeting in Karlshamn, 06-08/06/2012
WP3	Other direct costs	569 €	Travel costs	Name of Travellers: Mauro Draoli. Project meeting in Barcelona, Spain, 11-13 November 2012
	Indirect costs	21,443 €		
	TOTAL COSTS	94,743 €		

7 Glossary

Web Service	A **web service** is a method of communication between two electronic devices over the internet. A web service can be exposed through SOAP protocol or as a REST resource
SOAP	**SOAP**, originally defined as **Simple Object Access Protocol**, is a protocol specification for exchanging structured information in the implementation of Web Services in computer networks. Services are described with WSDL files
WSDL	The **Web Services Description Language** is an XML-based interface description language that is used for describing the functionality offered by a web service. A WSDL description of a web service (also referred to as a WSDL file) provides a machine-readable description of how the service can be called, what parameters it expects, and what data structures it returns. It thus serves a roughly similar purpose as a method signature in a programming language.
REST	**Representational State Transfer** is a style of software architecture for distributed systems. REST-style architectures consist of clients and servers. Clients initiate requests to servers; servers process requests and return appropriate responses. Requests and responses are built around the transfer of representations of resources. A resource can be essentially any coherent and meaningful concept that may be addressed. A representation of a resource is typically a document that captures the current or intended state of a resource.
Json	**JavaScript Object Notation**, is a text-based open standard designed for human-readable data interchange. Typically is the resource representation of a REST transfer.
PSI	Public sector information as intended in the EU's Directive on the re-use of public sector information
WSO2	WSO2 is a global enterprise middleware corporation with offices in USA, UK and Sri Lanka. All WSO2 products are 100% open source and released under the Apache License Version 2.0.
SOA	**Service-oriented architecture** is a software design methodology based on structured collections of discrete software modules, known as services, that collectively provide the complete functionality of a large or complex software application. Each service that makes up an SOA application is designed to provide a tightly defined set of functions.
ESB	An **enterprise service bus** is a software architecture model used for designing and implementing the interaction and communication between mutually interacting software applications in service-oriented architecture (SOA).
VPN	The **Virtual Private Net**work is an affordable and easy way to connect remote offices to corporate networks. Instead of building or leasing a system of lines, VPN uses the Internet to provide a secure access to data and applications like email CRM and extranet portals. VPN uses security policies on a shared public infrastructure for tunneling protocols and encrypting data.