



ALMANAC

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Preparing to exploit the results of the ALMANAC project

The ALMANAC project is committed to facilitate the successful exploitation of the results and a variety of activities are carried out with this goal in sight. This newsletter will describe some of these activities and the results achieved thus far.

Exploitation and dissemination goes hand in hand in the ALMANAC project. Dissemination activities are aimed at creating awareness of the project, its progress and results and this help to set the foundation for future exploitation of the project results. Project partners are therefore actively participating in relevant national and international conferences, exhibitions and workshops where the ALMANAC project can be presented to a wide audience. The project has also organised international workshops such as the M2M conference in Copenhagen, Denmark, in September 2015 and acted as a sponsor of the Meet IoT in Turin, Italy, in October 2015. Please visit our <http://www.almanac-project.eu/news.php> project website for information on these and other events.

Most recently, ALMANAC business partners represented the project at SIdO in Lyon in April 2016. The event is described in more detail in this newsletter (below).

Parallel to the dissemination activities, different activities aimed at preparing for the commercial exploitation of the ALMANAC Smart City Platform are also conducted by project partner. A first step was to carry out market research and develop a viable business framework for ALMANAC enabled Smart City Applications. The chosen business framework is based on value propositions and value creation and we will use the e3value methodology and tool developed by Jaap Gordijn (Gordijn, 2002) which is described in more detail in the next article. Currently, work is being done to develop sustainable business models and cases for two of the project pilot applications in the water and waste domain respectively. The finished work on the business models will be presented in the forthcoming deliverable D9.5 Final Exploitation Plan (August 2016). The final business models will also be made available on the IoT Open Platform portal (www.open-platforms.eu).

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The e3value methodology used in ALMANAC

In our view, the business model can take two very different approaches: The value model and the process model.

In ALMANAC we will use the value modelling approach in order to define the attractiveness of a given market segment for a given ALMANAC asset. This should lead to innovative business structures involving concept owners, service providers, system integrators, content providers and device manufacturers in collaborative efforts.

As the name indicates, value modelling focuses on value creation; how value is created, by whom and for whom. It is thus foremost a strategic tool with the aim of identifying new business opportunities and how the firm can position itself strategically to derive maximum benefits from new and emerging opportunities, which may or may not require substantial redefinition of the enterprise infrastructure.

A value model captures decisions regarding who is offering and exchanging what with whom and expects what in return, whereas a process model focuses on decisions with respect to how processes should be carried out, and by whom. Value modelling uses decomposition of value activities as a way of discovering new profitable activities, where decomposition of activities in process modelling serves the goal of clarity, or studying various resource allocations (e.g., operational actors) to activities.

Applying the value business model to ALMANAC enabled applications

In ALMANAC, we use the e3value modelling methodology and tool developed by Jaap Gordijn (Gordijn, 2002). The e3value methodology has proved very useful for the exploration of business ideas such as

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Meet ALMANAC

IoT Week 2016

May 31st – June 2nd 2016, Belgrade, Serbia

ALMANAC will be exhibiting selected components at the IoT Week and hackathon. IoT Week originated in the IoT European Research Cluster (IERC) and has become the pre-eminent event attracting industry and academia from around the world. IoT Week brings focus to the emerging opportunities; connecting the global business and research communities innovating at the boundaries of IoT; promoting international collaboration and addressing societal and market issues.

Deliverables

The following deliverables have been completed to date:

- D1.1 Project Quality and Risk Management Plan (restricted)
- D1.2.1 Periodic activity, management and financial reports 1 (confidential)
- D1.2.2 Periodic activity, management and financial reports 2 (confidential)
- D1.3 Plan for Managing Knowledge and Intellectual Property (confidential)
- D2.1 Scenarios for Smart City applications (public)
- D2.4.1 Updated Requirements Report 1 (public)
- D2.4.2 Updated Requirements Report 2 (public)
- D3.1.1 System Architecture Analysis & Design Specification 1 (public)
- D3.1.2 System Architecture Analysis & Design Specification 2 (public)
- D3.1.3 System Architecture Analysis & Design Specification 3 (public)
- D4.2 Features of the ALMANAC Platform for sustainable Smart City applications (public)
- D5.1.1 Design of the abstraction framework and models 1 (restricted)
- D5.1.2 Design of the abstraction



ALMANAC services, because it can be easily communicated to business oriented stakeholders in order to enhance the common understanding of the idea. It has an ontological approach that specifies generic terms and definitions for important concepts and provides a vocabulary for the language used to handle information and operational data in scenarios.

The e3value ontology is organised in three viewpoints, each related to different requirement expressions: The global actor, the detailed actor and the value activity. Actors exchange Value Objects through Value Ports. The resulting Value Exchange can be analysed in terms of value proposition and profitability, e.g., for the 'buyer' and the 'seller'. The challenge is to identify exactly what is the value in ALMANAC applications and what kind of value exchange can be expected in order to provide a real value proposition to actors. By adopting the ontology consistently over the business landscape, a complete value model can be developed.

A total of four business models and cases will be developed for the ALMANAC project; two for the waste application and two for the water application. Once all the actors and value propositions and value exchanges have been identified, real (or realistic for future values) monetary values will be added and the e3value tool then allows us to do a complete revenue calculation for all the actors in the model. The results are presented in excel and a profitability table will show clearly if the proposed model is sustainable (or profitable) for all actors in the model.

The results of the business modelling work will be presented in the forthcoming deliverable D9.5 Final Exploitation Plan.

For more information about the e3value methodology and tool please visit www.e3value.com

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ALMANAC exhibition at SIdO – The Internet of Things Showroom

ALMANAC was exhibited at the SIdO event in Lyon on 6-7 April 2016. The ALMANAC booth was manned by two of the project business partners, In-JeT and Telecom Italia, and by the academic partner, the Alexandra Institute. By joining business and academic forces at the exhibition, it was possible to highlight and demonstrate both the technical and the commercial value of ALMANAC.

The SIdO event attracted a large and wide audience and it was an excellent opportunity to disseminate the project activities and results outside the research community. "We had a lot of visitors to our exhibition stand and it was a very diverse group of visitors", Thomas Gilbert from the Alexandra Institute tells. "I spoke to university students who wanted to know more about Internet of Things (IoT), start-ups looking for ideas and technical input to solve their problems, representatives from the industry, both hardware manufacturers and software companies, looking for partners and solutions, utility companies interested in smart city knowledge, and, last but not least the general public."

The ALMANAC smart city scenarios and the proposed technical solutions were received very well and with interest by the visitors to the booth. Good contacts were also made with potential customers who are interested exploiting individual open source components when the project is completed. In fact, a few days after the SIdO event, the Alexandra Institute was contacted by a French waste management company who are interested in learning more about the ALMANAC solution and by an IoT hardware manufacturer who is interested in a future working relationship.

In conclusion, the SIdO event was very successful and clearly indicated that there is a real commercial interest in the ALMANAC results, whether offered as a complete solution or as individual components in readily exploitable packages that each solve a simple problem.

A special flyer promoting the ALMANAC Lab was produced for the event (available for download [here](#)).

ALMANAC
RELIABLE SMART SECURE
INTERNET OF THINGS FOR SMART CITIES

Try our free dockerized Smart City Enablers

We provide the ideal environment to experiment with IoT in a Smart City context. Use our components when building YOUR IoT solution, here at the ALMANAC-Lab.

You can experiment with the OPEN data we are publishing, or add your own. If you prefer, download our platform, and get started with things like storage, messaging, security in just a few seconds.

Our components can be used individually, or together as a comprehensive Reliable Smart Secure Internet of Things for Smart Cities platform.

All our components are freely available at the Docker Hub.

Download the free ALMANAC Smart City Enablers at almanac-lab.alexandra.dk

- Data Fusion Manager**
The Data Fusion Manager is a Smart City agent for Stream Mining. With it, we can discover context (most time in the city with millions of devices). Aggregate this into full packages in some scenarios using the smart models. It can discover or forecast more complex situations.
- LinkSmart GlobalConnect**
LinkSmart GlobalConnect enables the use of the network to interconnect local networks and enables the discovery and sharing of IoT services and resources across these networks.
- Resource Catalogue**
The Resource Catalogue discovers and keeps track of available sensors and devices in the network. It provides a set of RESTful interfaces to detect, locate and retrieve data from these resources.
- Security and Policy Framework**
The Security and Policy Framework enables to control IoT services. It implements identity management with OpenID Connect 2.0 and allows to define fine-grained access control for IoT services, providing an XACML Policy Decision Point.
- Smart City Resource Adaptation Layer (SCRAL)**
The Smart City Resource Adaptation Layer (SCRAL) provides a REST-based uniform and transparent access to physical devices, regulatory mechanisms, systems and services for monitoring (and activation) via Smart City context.
- Storage Manager**
The Storage Manager provides flexible integration of multiple storage solutions for IoT time series data and RESTful access using the OGC SensorThings API open standard.
- Virtualization Layer**
The Virtualization Layer offers a single endpoint to application developers, hiding the internal details and decoupling dependencies of all IoT components.

The ALMANAC IoT platform enables integrated smarter city proposals for green, citizen-centric and sustainable urban ecosystems. The platform enables integration of different communication networks and heterogeneous IoT technologies. Core functionalities of selected Smart City services and applications will be carried out in the city of Lyön, Denmark. Visit us at almanacproject.eu

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- framework and models 2 (public)
- D6.1 A scalable data management architecture for Smart City environments (public)
 - D7.1 Test and Integration Plan (public)
 - D7.3.1 Cloud based APIs for Smart City applications - Developers Guide 1 (public)
 - D8.2 Application Definition – Water Management (public)
 - D8.4 Application Definition – Waste Management (public)
 - D8.6 Application Definition - Citizen-centric Application (public)
 - D9.1 Project Website (public)
 - D9.4 Exploitation Planning Framework (restricted)

Public deliverables can be downloaded from the project website after they have been reviewed and approved by the EC. Currently, 12 public deliverables are available for download here: www.almanac-project.eu

FORWARD TO A FRIEND

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The ALMANAC project is co-funded by the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 609081, objective ICT-2013.1.4 'A reliable, smart and secure Internet of Things for Smart Cities'. Duration: 1st September 2013 to 31st August 2016.

Read more at: www.almanac-project.eu

You're receiving this newsletter because you have been in contact with one or more of the ALMANAC partners.

We thought you might be interested in following the progress of the project.

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