



NEWBITS

- ✓ NEWBITS is a Coordinated and Support Action project funded under the EC Programme Horizon 2020.
- ✓ NEWBITS aims at providing a deeper understanding of the changing conditions and dynamics that affect and influence the deployment of ITS innovations.
- ✓ This improved understanding contributes to
 - minimise the failures inherent to ITS innovation diffusion,
 - evolve present business models, and
 - identify effective policy incentives to accelerate ITS deployment.

NEWBITS

New Business Models for Intelligent Transport Systems

Programme

European Union's Horizon 2020

Duration

10/2016 - 03/2019

Project Coordinator


Ortelio Ltd. (UK)

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Get to know the Consortium

Interview with Iván Zaldívar – project manager at
and NEWBITS partner from **ATOS Spain SA**



www.atos.net

What does your organisation contribute to NEWBITS?

Atos SE (Societas Europaea) is a leader in digital services with pro forma annual revenue of circa € 12 billion and 100,000 employees in 72 countries. Serving a global client base, the Group provides Consulting & Systems Integration services, Managed Services & BPO, Cloud operations, Big Data & Cyber-security solutions, as well as transactional services through Worldline, the European leader in the payments and transactional services industry.

We lead the holistic intelligence process in NEWBITS, aiming at providing relevant market data about C-ITS which will serve as input for the implementation of the value network analysis (VNA) and the development of innovative business models. The results of this process provide a general ITS market overview along with specific data through the analysis of the NEWBITS case studies (including market and stakeholders information), a benchmarking of the ITS innovation diffusion in EU vs US and understanding of the end-users preferences extracted from the implementation of a conjoint analysis.

Did you take part in projects concerning the transportation sector before NEWBITS? What else does Atos do?

Atos is involved in NEWBITS through Atos Research and Innovation (ARI), the R&D hub for emerging technologies and a key reference for the whole Atos group. With almost 30 years of experience in running Research, Development and Innovation projects, we have become a well-known player in the EU context. Our multidisciplinary and multicultural team has the skills to cover all the activities needed to run projects successfully, from scientific leadership to partnership coordination, from development of emerging technologies to the ...



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...exploitation of project outcomes, with a strong focus on dissemination, innovation adoption and commercialisation.

ARI has been involved in many transportation projects, such as [AEOLIX](#) (Architecture for European Logistic Information exchange), [AUTOMAT](#) (Automotive Big Data Marketplace for Innovative Cross-sectorial Vehicle Data Services), [I-CARGO](#) (Intelligent Cargo in Efficient and Sustainable Global Logistic Operations), [HOPE](#) (Holistic Personal Public Eco-Mobility) and [CORE](#) (Consistently Optimised Resilient ecosystem implementation).

Atos accomplished a market research analysis (D3.1) within NEWBITS, which provides a general ITS market watch and identifies current needs and trends: From your point of view, where is the ITS market heading to?


The results of the market research analysis show that even when North America is still leading the ITS market, Asia-Pacific is expected to grow at the highest rate in comparison with other regions and will become even a more relevant actor in the upcoming years.

Some of the major trends in the ITS market right now are connected car, autonomous vehicle, big data and smart cities which are in close relation with the big transversal trend constituted by the IoT (Internet of Things) and are affected by the socio-economic shift defining the way we consume, the on-demand economy which has derived in a Mobility-as-a-Service.

In the last years the market has seen (and is still seeing) a lot of movements and transactions towards these tendencies from both the public and private sectors, so we could see them shaping the future of ITS and transportation.



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Why we need a Network-Based Approach to craft new Business Models for ITS

Due to the complex nature of ITS markets and technological innovations, a single stakeholder may not have all the capabilities to offer value-added services or at least, to do so autonomously in order to reach the market. Instead successful deployment of ITS innovations requires multiple stakeholders to efficiently cooperate with each other.



The NEWBITS project analyses the deployment of ITS initiatives from a **business ecosystem** viewpoint, rather than an individual organisation's perspective. This is essential to come up with sustainable business models.

The business model approach employed is based on a tailored **Value Network Analysis (VNA)**. As a method to explore the competitive environment, the analysis outlined a theoretical framework (find out more in [D4.1](#)) and is in process of identifying where and how value is created within a distinct network of stakeholders.




The NEWBITS project intends to develop novel business models in a number of **case studies**, effectively involving the target core stakeholders into such a tailored VNA modelling method. To this end, the project performed two surveys with all cases' stakeholders and deploys ideation workshops at local level (Spain, the Netherlands, Italy and the UK) with the following objectives:

1. identify the highest value-producing interactions between the most relevant stakeholders
2. map the value flow identifying interactions and major relationships between actors
3. craft value propositions and debate Lean Business model canvas for start-ups



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Case Studies – An Overview

The four NEWBITS case studies have been carefully selected as representative for ITS key business areas covering

- all ITS market segments: ATIS, ATMS, ATPS, APTS, CVS
- several transport modes: road, maritime, rail transport
- being linked to implemented or on-going projects and initiatives
- representing market opportunities triggered by Internet of Things, Big data analytics and sharing economy

in order to ensure a feasible parameterization of the business ecosystem concept.

The **focus** of these case studies are the **business ecosystems** of specific ITS services and the role of **stakeholders** within these ecosystems, as well as the **interactions** (projects, skilled workforce, clients, etc.) between them, complemented by a thorough assessment of the **market** (market size, demand, supply) and **user preferences** with respect to the ITS services.

A **market study** for your ITS service, providing assessments such as customer analysis, competitors and market trends analysis ([D3.1](#))

A **stakeholder analysis** for your ITS service, discussing issues like costs and revenues of the ITS service.

A analysis of (potential) **users and their preferences** with respect to your ITS service, discussing which elements of the ITS service are key for the potential users of the service.




A **Value Network Analysis** for the business ecosystem in which your ITS service is developed and/or deployed, providing insight in the **key actors** and their **interactions**.

European wide exposure of your ITS case.



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Case Study 1: University Carpooling Service

an example of the sharing economy collaborative consumption

CS1 is an intelligent carpooling service for daily intercity mobility to University campuses in Spain with a B2C approach.

This case study aims to increase the average occupation achieving a more rational use of cars in a university environment with a high daily influx of private vehicles. Thereby it promotes the reduction of users' carbon footprints and decreases traffic congestion.

- Market Segments: ATMS, ATIS
- Transport Mode: Road
- Transport Type: Personal
- Geographic coverage: Urban/Motorway
- Purpose:
 - Traffic management
 - Real-time parking information
 - Public transport
 - Environmental protection



Case Study 2: Intelligent traffic light intersections

an example of the ,Internet of Things' (IoT) market opportunities


CS2 focuses on an intelligent traffic light infrastructure to optimize how vehicles pass through crossroads in a city in Italy with a B2C approach.

Communication flows are based on real-time messages run through short- and long-range communication systems between the traffic light control units and equipped vehicles or mobile devices.

- Market Segments: ATMS, ATIS, APTS, CVS
- Transport Mode: Road
- Transport Type: Personal/Public
- Geographic coverage: Urban
- Purpose:
 - Road safety
 - Traffic management
 - Environmental protection



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Case Study 3: Synchromodal container track-and-trace solution

an example of how smart data analytics can be applied to sustain the network's competitive advantage

CS3 focuses on an ICT platform currently developed in the Netherlands to increase the efficiency in container transport from deep sea terminals to the hinterland, in a B2B approach. The platform offers a web-based information service providing up-to-date arrival times and allowing logistic agents to monitor container handling along the entire transport chain. This enables actors to choose the most optimal transport mode at trans-shipment points and effectively plan available transport capacity and resources.

- Market Segments: ATMS, ATIS
- Transport Mode: Road, Rail + Inland waterways
- Transport Type: Private
- Geographic coverage: Corridor
- Purpose:
 - Efficiency of freight transport from sea to hinterlands
 - Security at inland terminals
 - Profitability + Attractiveness of inland waterway transport



Case Study 4: Predictive maintenance solution for rail


an example of 'Internet of Things' (IoT) developments

CS4 focuses on the collection and analysis of railway infrastructure data from a pilot run on the London-North West routes, in a B2B approach. The solution aims to support predictive maintenance as well as decision-making and thereby provide better and safer railway services to the public.

- Market segments: ATMS, ATIS; APTS, CVS
- Transport Mode: Railway
- Transport Type: Public/Freight
- Geographic coverage: Regional
- Purpose:
 - Safety
 - Maintenance of railway infrastructure



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Case Studies (CS) 1 and 3: Insights from the Ideation Workshops

CS 1: University Carpooling Service

Workshop on 18.01.2018 at Autonomous University of Barcelona

CS 1 is an excellent example of how the sharing economy has gained momentum in recent years. The underlying business model targets those customers, that are more adaptive towards new ways of collaborative consumption rather than solely rely on individual means and pure ownership of goods. This circumstances require the use of new business models as well as modern means of social communication.

Lessons learnt from this workshop:

- Better results will be obtained in the definition of new C-ITS business models, if stakeholders are involved from the design stage on.
- The key is building and retaining trust between stakeholders. Such stakeholders include public authorities, final end users, solution and knowledge providers.
- Crucial steps in this process:
 - (1) clearly establish the value chain involving all those actors,
 - (2) establish communication channels and
 - (3) a feedback management reporting strategy.

CS 3: Synchromodal container track-and-trace solution

*Workshop on 14.02.2018
in Villa Flora in Venlo*

CS 3 demonstrates how modern organisations become more and more data-driven by constructing its own data-driven ...





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... business model in collaboration with involved stakeholders.

Lively discussions took place at the workshop between the stakeholders about the value network analysis (VNA), the business model and the value proposition of the service.

Lessons learnt from this workshop:

- The applied VNA method forces stakeholders to consider and understand the needs of each other and appeared an excellent tool to start discussion.
- Collaboration between ICT and logistic companies is essential for market introduction.

Upcoming Events

- **4th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS)**
(16.-18.03.2018 | Funchal, Portugal)
<http://www.vehits.org/>
- **Intertraffic**
(20.-23.03.2018 | Amsterdam, Netherlands)
<https://www.intertraffic.com/amsterdam/>
- **Transport Research Arena (TRA) 2018**
(16.-19.04.2018 | Vienna, Austria)
<http://www.smart-mobility.at/en/tra2018/>
- **ITS Asia Pacific Forum**
(08.-10.05.2018 | Fukuoka, Japan)
<http://www.itsap-fukuoka.jp/>
- **4th Conference on Sustainable Urban Mobility**
(24.-25.05.2018 | Skiathos Island, Greece)
<http://csum.civ.uth.gr/>
- **Automatic Vehicles Test & Development Symposium**
(05.-08.06.2018 | Stuttgart, Germany)
<http://www.autonomousvehiclesymposium.com/en/>