



Mobility
People
Goods

Intermodal mobility solutions, interfaces and applications for people and goods, supported by an innovative communication network



The **BONVOYAGE** project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 635867

The aim of **BONVOYAGE** is to find the best way to go from a place to another, door to door, by using any combination of any transport means, i.e., with a multimodal trip. BONVOYAGE optimizes multi-modal trips by taking into account also real time conditions and user preferences, and offering at the same time geo-located services.

Objectives

The project is developing a cloud platform that gathers **both static data** (e.g. schedules) and **real time data**, including traffic reports, weather forecasts, data from smartphones and wearable sensors, data from vehicles and other road sensors.

Our solution will allow transport providers to **keep their data in their premises**, with their specific formats and interfaces, rather than asking them to transfer data to a third, centralised party or to comply with specific formats.

All gathered data are processed by a **distributed journey planner** that identifies the best route and service providers in real time. Our distributed approach enables the necessary scalability to handle continent-wide travel networks, combined with **personalized travel preferences** and fast response to **real-time events**.

BONVOYAGE applications and services allow heterogeneous actors to seamlessly interact with our platform, including e.g. individuals wishing to publish transport solutions, for example to share a car. A mobile application provides the user with **real-time route information** and collects relevant **user feedback**, by using **participatory sensing** while traveling.

During the trip, the application guides the user with required information and **reacts on dynamic, real-time conditions** that interrupt and affect the ongoing trip.



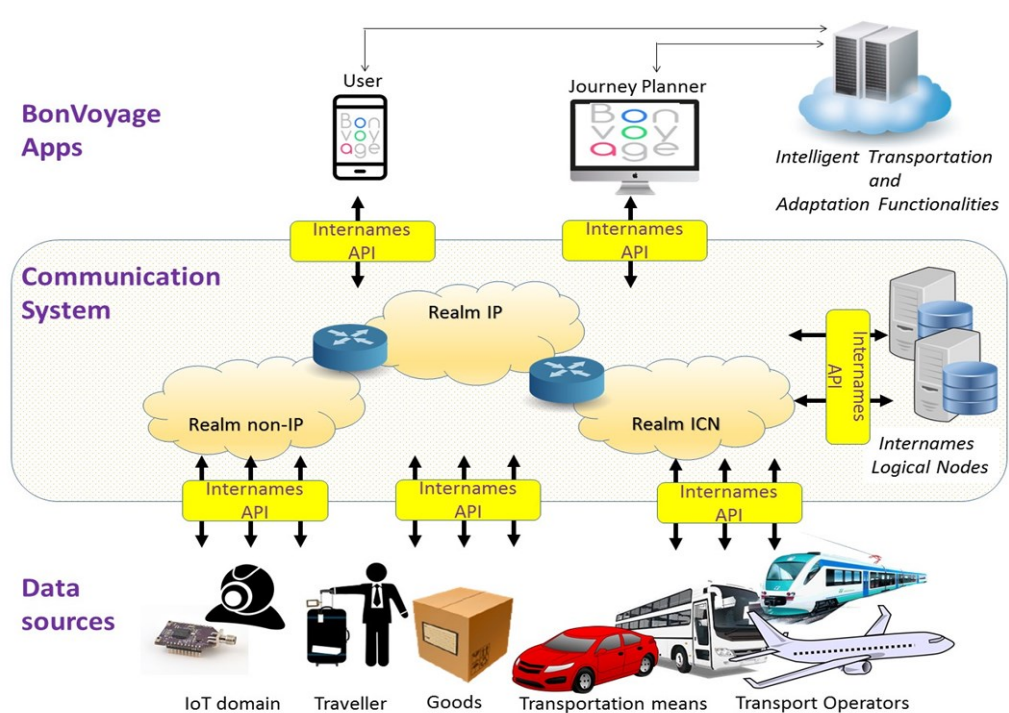
Communication Network

BONVOYAGE exploits an innovative communication paradigm devised to operate the Internet more efficiently, called **Information Centric Networking (ICN)**.

With ICN, all information, an image for example, is given a name, which does not include references to its location; then, users' requests for that image are routed toward the 'closest' copy of such information, which could be stored in a server, in a cache contained in a network node or even on another user's device.

ICN caches content at servers closer to users, making it available to them faster, and naturally supports mobility and multicast.

ICN secures the content itself, instead of securing the communication channels, allowing for a more flexible **protection of content** and **user privacy**.



Contribution to ITS and EU Policy

The project intends not only to exploit its results through its commercial partners, but will also offer its solutions to support an **EU Directive (2010/40/EU)** having the aim to adopt specifications to address the **compatibility, interoperability** and **continuity** of ITS solutions across the EU.

For instance, the Directive requires the setting up of a single **National Access Point** by each Member State, enabling those interested in accessing the data to find it all in one place, and offering a single point of access to the road and traffic data of a given territory or network, which are **available for re-use** by any potential user.

We believe that the service platform BONVOYAGE is conceiving could very well be used for that purpose.

