

How can cross-border travel information in the Alpine region be improved? The LinkingAlps project aims to answer this question.

LinkingAlps is co-financed by the European Regional Development Fund through the Interreg Alpine Space programme

Working towards an operative LinkingAlps service

Ultimately, in order to have a functioning and sustainable LinkingAlps system, many different, parallel work steps are required in advance. Among other things, the technical infrastructure must be implemented. This includes the front-end for the end-user on the one hand and the back-end on the other hand. Both components are strongly interrelated and the development and implementation require a large number of tests and checks until the system is ready for use.

In addition to the technical work, it is also necessary to deal with organizational aspects of future cooperation. In this context, the future project partners play a role as well as the stakeholder who are interested in a future collaboration or a connection to the LinkingAlps service. The operators of the active system in the LinkingAlps service have already committed in September of this year to continue to work together after the project ends

next year and to operate and improve the LinkingAlps service. To make this possible, they are currently working of the so-called Memorandum of Understanding, the contractual basis for the collaboration.

We are very proud of the progress we have already made and look forward to finalizing the project next year within a motivated and committed consortium and continuing to work on the LinkingAlps service thereafter.



Stakeholder consultation

In November, the online stakeholder consultation within the LinkingAlps WP T3 – A.T3.3 was available. The survey aims to investigate aspects related to the network-wide collaboration structure of the LinkingAlps distributing system with reference to the governance structure, the decision-making structure, the regulative structures and the effective roles of different stakeholders involved in the LinkingAlps network. The final goal is to prepare a resilient and scalable collaboration structure for a long-lasting operation of the LinkingAlps service also beyond the project period (2019-2022).

The survey was addressed to all the stakeholders that could be potentially involved in the LinkingAlps Network (e.g. Traffic and Travel data/information providers, Developers and IT solutions providers, Transport companies and operators, Network operators, PAs,

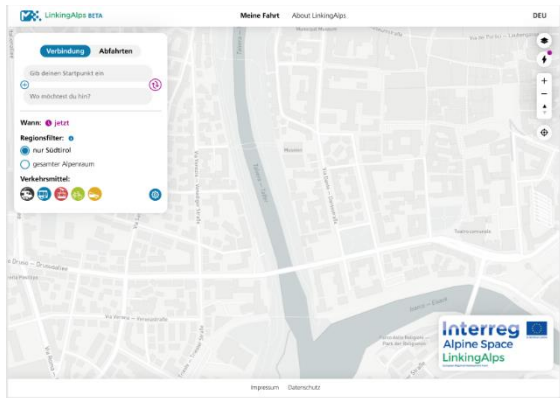
Policy Making Bodies, Transport authorities, Research and Academia) and was structured into three different categories:

1. Registry (for collecting information about respondents).
2. Governance structure (to investigate some aspects related to the management of the network).
3. Regulative structure and financial compensations (to identify activities, types of agreements and business model that regulate the network).

The outcome of the stakeholder consultation will provide input to the Framework Strategy (O.T3.1) as well as to the Deliverable D.T3.3.1, which will summarize the main activities and exchange with the observers.

Implementing the End-User Demo

STA has successfully started with the implementation of the OJP active and passive systems, as well as with the parallel implementation of an end-user service, the web demonstrator. By the end of November, the web demonstrator was not only connected to the “active system” that is responsible for the distributed routing planning across all systems, but also received the enriched digital design that significantly improved the



Source: South Tyrolian Transport Structures

user-friendliness. The main goal was to make the journey planning seamless and the navigation more intuitively.

The web demonstrator is an important milestone at this project stage. It allows to show-case and link the cross-border services of the LinkingAlps project partners together. Further, the web demonstrator helps to highlight and detect the important weak points to be addressed in the system requirement definitions and governmental frameworks to guarantee the continuation after the project’s end. With the purpose to demonstrate the maturity of the OJP interface, it was decided to develop two versions of the web demonstrator: one connected through a proprietary interface (i.e. EFA-XML) and the other one connected through the OJP interface. To guarantee a seamless and well performing journey planning, more and more passive systems have been gradually connecting to STA’s OJP active system through a careful selection and modeling of strategic Exchange Points.

Memorandum of Understanding

In LinkingAlps the Open Journey Planning (OJP) interfaces are implemented according to European specifications and standards in order to make the services interoperable and to enable information exchange across administrative and system borders.

The OJP implementation involves interface deployment at different levels in the overall system architecture. Passive systems (OJP interfaces) are fully integrated into the operational environments of the operators within the project duration. The active system that contains the distribution system and the end user GUI is developed on an operational pilot basis. Therefore, the LinkingAlps project will show up with operational OJP interfaces and an operational pilot service for cross-border travel information.

The LinkingAlps consortium is already thinking beyond the end of the project. It wants the efforts done in the project to be sustainable, therefore all partners are already committed to operate their OJP interfaces and active systems beyond the project end in a so-called BETA operation phase. In order to make OJP not only in the project a success, but allow it to become the relevant technology for cross-border travel information in the

long term in Europe, the pieces of the puzzle must also fit together in the future. The goal of the BETA phase is to operate the service within the network, evaluate the service from operational and quality perspective. The BETA phase aims to be a focused learning and evaluation phase for the whole interplay of the network parts.

The pilot operation will be founded on a Memorandum of Understanding (MoU) between the network partners, which provides for a concrete period of operation and a fixed "expiration date". Hence, the OJP interfaces and components are operated in the "friendly environment" of the LinkingAlps network. It is also discussed, whether co-existing projects like EU-SPIRIT and OJP4Danube could be included into the “friendly environment” to reach even more harmonisation.

The network will give the BETA operation a clear focus and work programme in order to address the challenges ahead. Besides of technical topics, like full harmonisation of the interfaces and strategies to deal with different content availability and quality between the individual local systems, learnings are envisaged with regard to the processes that are defined for the organisational operation of the network.

Status of Implementation

The current setup of the LinkingAlps project foresees that all participating implementing partners provide their own passive system, i.e. an OJP API. A passive system contains the schedule data in the corresponding territory and answers journey requests in its territory. Passive systems are developed by the following partners: LUR, 5T, Aria, VAO, STA, SBB.

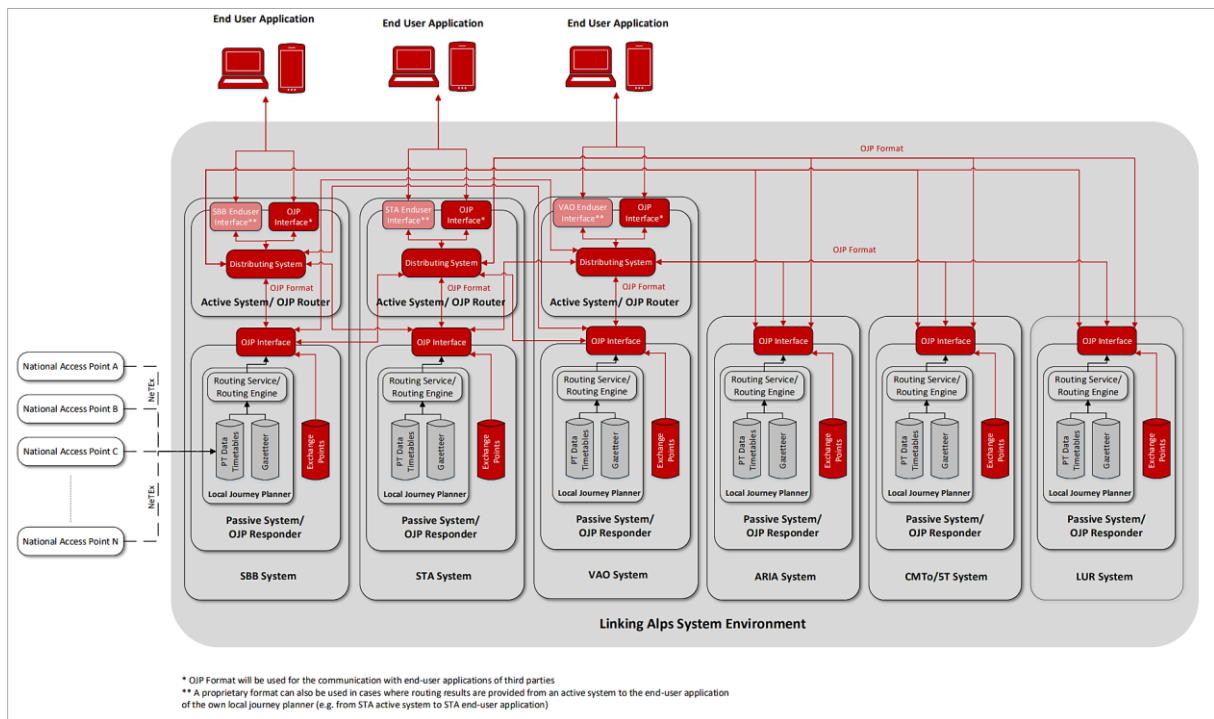
In addition, VAO, STA and SBB are developing an active system. An active system receives a transnational travel request and distributes it to the passive systems concerned. It then compiles the responses of the passive systems into one routing result and returns it to the requesting application.

Currently, the three partners involved are finalising the active systems. The productive systems are planned to be available by spring 2022. The first passive systems will

be available earlier. Internal and cross-system functional tests with jointly defined test data are currently taking place on five of the six planned passive systems. The aim is to fully harmonize the OJP APIs and establish common "acceptance criteria".

One challenge is to standardise the data from the different source systems. Not only must stops, for example, be modelled identically, but they must also have the identical, country-specific identifications. This initially requires a great deal of effort in data management.

Regarding Exchange Points, i.e., the stops that split a transnational travel request into two national requests, the partners involved need to gain experience in the coming months. We want to start with a minimal set of exchange points and will continuously expand the list.



Visibility and Outreach

The LinkingAlps partners were very active in presenting the novel 'Linking of Services' approach at diverse conferences, meetings and workshops. Some highlights of the last 6 months include the presentation of LinkingAlps at the OJP4Europe event, the ITS World Congress in Hamburg and the Interreg Alpine Space programme funding Kick-off conference in Salzburg.

OJP4Europe + PIM

On September 22nd, the OJP4Europe event took place, organised as a cross-project meeting of the consortia of the Interreg projects OJP4Danube and LinkingAlps as well as representatives of EU-Spirit. Bringing all interested and already involved stakeholder together, fostering knowledge exchange and strengthening the collaboration between the key OJP-based journey planning networks across Europe and even beyond was the overall objective of that day.

The agenda included presentations from the European OJP projects, setting the focus on their individual use-cases and contributions, as well as insights from the currently ongoing revision of the ITS directives presented by a representative of the European Commission.



OJP4Europe Event, September 2021,
Source: AustriaTech

ITS World Congress Hamburg

From October 11th to October 15th, the annually ITS World Congress took place in Hamburg, where 13,000 participants looked into the future of mobility. This year's congress focused, among other topics, on smart, connected, automated mobility, Mobility as a Service (MaaS), intelligent infrastructure solutions, and the services offered by cities to their citizens. Among lots of

interesting topics, LinkingAlps was also represented at the congress. Patrick Dejaco highlighted the importance of the LinkingAlps project in the regional public transport development and how LinkingAlps is supporting and contributing to the regional strategy towards MaaS. A great thanks goes out to all of our partners for bringing the project to Hamburg.

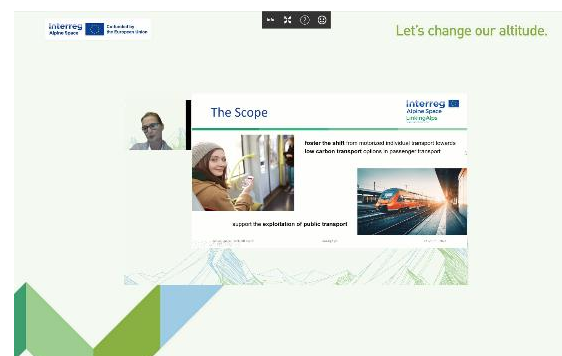


ITS World Hamburg, October 2021,
Source: Daniela Gam per

Interreg Alpine Space programme funding Kick-off

From November 22nd to November 23rd the Interreg Alpine Space programme funding Kick-Off conference took place in Salzburg, respectively as an online event.

Over 400 participants joined two interesting days of information and outlook on the new funding period. The highlight of the first day was the keynote speech by Dr. Lučka Kajfež Bogataj, a Slovenian climatologist and Nobel Peace Prize Winner, about climate change and the necessary steps to fight against it. Among the following project presentations, also LinkingAlps was invited to present the project scope and achievements.



Alpine Space Salzburg, November 2021,
Source: Interreg Alpine Space

Outlook on activities

In the coming months a range of project activities will take place, including the 5th and last PSG (Project Steering Group Meeting) in January 2022 and the 5th and last PIM (Project Implementation Meeting) in April 2022. Highlight will be the Final Event of the project in June 2022.

Furthermore, after implementing all systems, the testing of the system will take place in the next months. By already connecting other journey planners from the LinkingAlps network via the LinkingAlps OJP, the project will gain important insights towards the ongoing implementation activities.

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