MACRO REGIONAL STRATEGY DISCUSSION PAPER - EUSALP

D.T3.2.9 | Relevance of LAirA Project for EUSALP

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1. Project background and programme context

The magnitude and growing trend of air traffic (on average 10% per year in the EU) requires actions also to improve the sustainable landside accessibility of airports to and from their respective FUAs.[1] Airports are key assets of regions and are transnational transport gateways for citizen traffic and commercial activities worldwide. The LAirA (Landside Airport Accessibility) project addresses the multimodal, smart and low carbon mobility integration of airports in the mobility systems of functional urban areas (FUAs). The project is supported by the Interreg Central Europe cooperation programme and includes Eastern and Southern regions of the EU and affects about 56 million passengers and 39 thousand employees of the FUAs of Budapest, Dubrovnik, Milan, Modlin (Warsaw), Poznan, Stuttgart, and Vienna. LAirA is a 30-months project (2017-2019), with a total budget of €2.3 million.

LAirA focuses on improving capacities for mobility planning in FUAs to reduce CO2 emissions. The ambition of the project is to facilitate a change in the mobility behaviours of both airport passengers and employees, by respecting the FUAs energy reduction targets, by the introduction of smart technologies and by observing environmental mobility impacts. It is important to develop a common new low carbon mobility strategy by involving local authorities, other organizations and stakeholders. Transportation today is one of the largest sources of carbon emissions in the European Union. The main overall objective is to reduce the carbon footprint of transport activities related to the airports' landside connectivity in FUAs and to develop strategies and capacities for transport planning with this goal in mind.

The most important factors in reducing CO_2 at airports and their FUAs would be the easing of the growing congestion around airports as well as managing the traffic and transportation flow in airport FUAs. The unlimited development creates the loss of the natural habitat, increases air and noise pollution and leads to high distress growth on the local population. The major challenge of the analysed airports and their FUAs is to find a sustainable strategic way of balancing the negative effects of airport traffic with the wellbeing of the affected population. The project employs a transnational and innovative, comprehensive approach that integrates seven key thematic areas:

Electric Vehicles: Electric vehicles are becoming increasingly practical in terms of their range, availability, cost and specification. Provision for these vehicles in terms of charging infrastructure is increasingly common at airports for convenience for customers and to support low carbon travel.

Air-Rail Links: Easy access to a fast, frequent rail link to the local city centre is an attractive alternative to road based transport to/from airports. Often faster services compete with cheaper slower rail or bus services so Air-Rail services need to be frequent, fast, high quality and well promoted.

Active Travel: To encourage cycling to the airport, particularly for airport employees, good supporting facilities and incentives are required. This includes good connectivity to cycle routes in the wider area, on-site facilities such as secure parking and showers, and incentives such as promotions and events.

Shared mobility: Car-pooling and car sharing offer alternatives to taxi, hire car and single occupancy car trips. Car sharing can be more economical than taxi or traditional car hire, depending on the timescale of use. The shared cars themselves are often low emission models, including electric options. Car-pooling is particularly useful to reduce single occupancy commute trips.

Intelligent Transport Systems (e.g. Apps): 63 percent of the world's population is estimated to have a smart phone and Apps are now a key method of accessing information on travel. Traditionally airport Apps have focused on parking and air-side information, however, modern best practice examples provide detailed information for passengers on landside transport options. Apps can also assist airport staff to provide high quality customer services to passengers by providing travel information, particularly at times of disruption.

Wayfinding: Airport terminals are complex buildings, often on multiple layers. Airports with multiple options for landside travel can have the associated issue of providing information in a

[1] A FUA (Functional Urban Area) is an urban core plus its hinterland and usually consists of several, often many municipalities.

way which is intuitive to an international and transient audience. Clear wayfinding to onward transport connections is vital to ensure these options are as easy to use as possible.

Road Based Public Transport: Bus and coach services often provide opportunities for low cost, convenient links to a wider range of destinations than rail services may provide. Special airport coaches, other coach operators and local bus services can provide excellent levels of accessibility. Local bus services also provide an important option for airport staff. Ensuring attractive and easy to use ticketing options and information is important for both passengers and staff.

In a transnational policy learning dialogue action plans for low carbon mobility of airport passengers and employees were developed, that took into consideration multiple types of measures according to the above mentioned thematic areas) not only related to public transport but also to further integrate other low carbon mobility solutions (e.g. e-mobility, car-sharing). Taking into consideration the characteristics of the covered FUAs, the broad and in-depth of information collected and analysed, the concepts and strategies drafted on local, regional and transnational level and the concepts tested on local level, the strategies and proposals formulated by LAirA have relevance to broader EU sectoral and spatial development strategies. The ambition of this discussion paper is to highlight synergies and help to define further improvements to relevant macro-regional strategies, or in case the specific topic is not presented even to initiate the broadening of the scope of such strategies.

2. Macroregional Strategies of the European Union

The macro-regional strategy of the European Union is a policy framework to allow countries of the same region to jointly tackle and find solutions to problems (e.g. environmental hazards, climate change, navigability, economic or social) or to better use their common potentials (e.g. by building networks to better utilize locational advantages, natural resources, human capital). By doing so, they benefit from strengthened cooperation, thus making their policies more efficient than if they had addressed the issues in isolation.

The EU macro-regional strategies may be supported by various EU funds, like the European Structural and Investment Fund. EU macro-regional strategies are initiated and requested by EU Member States concerned, located in the same geographical area, via the European Council. Following the European Council request, the strategies are drafted and adopted by the European Commission. As a result, such strategies are intergovernmental initiatives. Their implementation relies heavily on the commitment and goodwill of the participating countries.

An important aspect is, that macroregional strategies do not come with new EU funds, legislation or formal structures: they rely on coordination and synergy, enabling the optimal use of all existing financial sources including EU, national, regional and private funding, better implementation of existing legislation, and better use of existing institutions at all levels. EU macro-regional strategies address challenges and opportunities specific to the respective geographical areas they are concerned with, that are too local to be of direct interest to the whole EU, but too broad to be dealt with efficiently at the national level.

The objectives of the strategies are long-term and jointly agreed by the participating countries. They vary according to the needs of the macro-region concerned, focusing on strategic issues that bring added value to horizontal EU policies. Each strategy involves a broad range of actors at various levels (international, national, regional, local), sectors (public, private, civil society) and fields of expertise, thereby providing a platform for consistent multi-country, multi-sectorial and multi-level governance. To date, four EU macroregional strategies have been adopted. Each is accompanied by a rolling action plan updated regularly to accommodate emerging needs and to remain relevant in a changing context:

- the EU Strategy for the Baltic Sea Region (2009);
- the EU Strategy for the Danube Region (2010);
- the EU Strategy for the Adriatic and Ionian Region (2014);
- the EU Strategy for the Alpine Region (2015).

These concern in total 19 EU Member States and 8 non-EU countries, representing over 340 million people. The EU member states involved are Austria, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovenia and Sweden, whereas the non-member states participating are Albania, Bosnia and Herzegovina, Liechtenstein, Moldova, Montenegro, Serbia, Switzerland and Ukraine. Some EU countries are involved

in multiple strategies: Germany and Slovenia are involved in three, while Croatia, Italy and Austria are concerned with two. Three non-EU countries, Bosnia and Herzegovina, Montenegro and Serbia, are part of two EU macro-regional strategies.[2]

2.1. The EU strategy for the Alpine Region (EUSALP)

The Alpine Space is one of several programme areas of the European Union's Interreg programme. By creating a number of overlapping regions in Europe and asking for project cooperation among several partners within one of these regions, the project work can focus on a distinct area. "The Alpine Space programme is a European transnational cooperation programme for the Alpine region. It provides a framework to facilitate the cooperation between economic, social and environmental key players in seven Alpine countries, as well as between various institutional levels such as: academia, administration, business and innovation sector, and policy making."[3] The Alpine Space region centers around the Alps and includes some areas adjoining them. It covers all of Switzerland, Lichtenstein, Austria and Slovenia, as well as parts of Southwestern France, Northern Italy and Southern Germany. See the map below.

Map of the Alpine Space region *(source: https://www.alpine-space.eu/about/the-programme/which-area-is-covered-)*

What is EUSALP?

The EU Strategy for the Alpine Region (EUSALP) is based on a joint initiative of Alpine states and regions to strengthen cooperation between them and to address common challenges in a more effective way. Seven countries (Austria, France, Italy, Germany, Slovenia, Liechtenstein and Switzerland) and 48 regions are involved in it.

The EUSALP aims at addressing Alpine-specific challenges, such as the balancing of development and environmental protection, the enhancement of competitiveness, and the reduction of territorial disparities.

[2] https://ec.europa.eu/regional_policy/sources/cooperate/macro_region_strategy/pdf/mrs_factsheet_en.pdf

[3] https://www.alpine-space.eu/about/the-programme/what-is-the-alpine-space-programme-

The partner states and regions are currently defining the cooperation fields and an action plan is being developed. For further information please check the EUSALP website.

EUSALP implementation: the Action Groups

The implementation of EUSALP is the task of the EUSALP nine Action Groups (AG). They are organised thematically along the 4 Objectives of the strategy:

1. Fostering sustainable growth and promoting innovation in the Alps: from theory to practice, from research centers to enterprises:

AG1: To develop an effective research and innovation ecosystem

AG2: To increase the economic potential of strategic sectors

AG3: To improve the adequacy of labour market, education and training in strategic sectors

2. Connectivity for all: in search of a balanced territorial development through environmentally friendly mobility patterns, transport systems and communication services and infrastructures:

AG4: To promote inter-modality and interoperability in passenger and freight transport

AG5: To connect people electronically and promote accessibility to public services

3. Ensuring sustainability in the Alps: preserving the Alpine heritage and promoting a sustainable use of natural and cutural resources:

AG6: To preserve and valorise natural resources, including water and cultural resources

AG7: To develop ecological connectivity in the whole EUSALP territory

AG8: To improve risk management and to better manage climate change, including major natural risks prevention

AG9: To make the territory a model region for energy efficiency and renewable energy

4. Improving cooperation and the coordination of action in the Alpine Region.

Source: *https://www.alpine-space.eu/about/eu-regional-policy/macroregional-strategies/what-is-eusalp-*

The LAirA project promotes inter-modality and interoperability in passenger transport and thus refers first of all to Action Group 4 of EUSALP. To a lesser extent, it refers to AG 5 and AG7 to AG9.

2.2. The relevance of LAirA project results in the context of the Alpine Region

To understand the magnitude of LAirA relevance for the Alpine Space region, we need to know the number and size of commercial airports within Alpine Space region. As a rule of thumbs, commercial passenger traffic needs a connection with a morning flight and an evening flight, using a typical 30-seater as a minimum. This would result in 20,000 passengers per year at the very least. However, all airports in the Alpine Space region with scheduled commercial passenger services, as listed below, report at least 100,000 passengers.

Austria

Location served	IATA code	Airport name	Passengers
Graz	GRZ	Graz Airport	1,030,929 (2018)
Innsbruck	INN	Innsbruck Airport	1,092,547 (2017)
Klagenfurt	KLU	Klagenfurt Airport	228,372 (2018)

Location served	IATA code	Airport name	Passengers
Linz	LNZ	Linz Airport	465.798 (2018)
Salzburg	SZG	Salzburg Airport	1,890,164 (2017)
Vienna (Wien)	VIE	Vienna International Airport[4]	27,037,349 (2018)

France

Location served	IATA code	Airport name	Passengers
Nice	NCE	Nice Côte d'Azur Airport	13,850,561 (2018)
Marseille	MRS	Marseille Provence Airport	9,390,371 (2018)
Grenoble	GNB	Alpes-Isère Airport	320,647 (2014)
Strasbourg	SXB	Strasbourg Airport	1,297,177 (2018)
Mulhouse	MLH	EuroAirport Basel Mulhouse Freiburg	8.578.064 (2018)
Lyon	LYS	Lyon-Saint-Exupéry Airport	11,037,698 (2018)
Chambéry	CMF	Chambéry Airport	212,018 (2016)
Toulon	TLN	Toulon-Hyères Airport	570,140 (2018)

Germany

Location served	IATA code	Airport name	Passengers
Freiburg im Breisgau	QFB	Flugplatz Freiburg (identical with Basel/Switzerland and Mulhouse/France)	see Basel / Mulhouse
Friedrichshafen	FDH	Friedrichshafen Airport	539,698 (2018)
Memmingen	FMM	Memmingen Airport	1,492,553 (2018)
Munich	MUC	Munich Airport	46,253,623 (2018)

Italy

Location served	IATA code	Airport name	Passengers
Ronchi dei Legionari / Trieste	TRS	Friuli-Venezia Giulia Airport	780,776 (2017)
Genoa (Genova) / Sestri Ponente	GOA	Genoa Airport	1,455,626 (2018)
Bergamo	BGY	Bergamo-Orio al Serio Airport	12,938,582 (2018)
Milan	MXP	Milan-Malpensa Airport[5]	24,725,490 (2018)
Milan	LIN	Milan-Linate Airport[6]	9,233,475 (2018)
Cuneo	CUF	Cuneo-Levaldigi Airport	129,847 (2015)

[4] Vienna International Airport is associated partner within the LAirA consortium.

[5] Milan-Malpensa Airport is managed by SEA Milan Airports and project partner in the LAirA consortium.

[6] Milan-Linate Airport is managed by SEA Milan Airports and project partner in the LAirA consortium

Location served	IATA code	Airport name	Passengers
Turin (Torino)	TRN	Turin-Caselle Airport	4,084,923 (2018)
Treviso	TSF	Treviso-Sant'Angelo Airport	3,308,955 (2018)
Venice (Venezia)	VCE	Venice Marco Polo Airport	11,184,608 (2018)
Verona	VRN	Verona-Villafranca Airport	3.098.683 (2017)

Slovenia

Location served	IATA code	Airport name	Passengers
Ljubljana	LJU	Ljubljana Jože Pučnik Airport	1,812,411 (2018)

Switzerland

Location served	IATA code	Airport name	Passengers (2014)
Basel, Switzerland / Mulhouse, France / Freiburg, Germany	BSL, MLH, EAP	EuroAirport Basel Mulhouse Freiburg	6,523,874
Bern	BRN	Bern Airport	271,111
Geneva	GVA	Geneva Airport	14,436,000
Lugano	LUG	Lugano Airport	167,371
St. Gallen	ACH	St. Gallen-Altenrhein Airport	115,710
Zürich	ZRH	Zurich Airport	25,512,134

Source for the tables above: Wikipedia, "List of airports in Austria", resp. for France, Germany, Italy, Slovenia and Switzerland, retrieved on 2 October 2019.

Note: Liechtenstein is also located within the Alpine Space region but does not have airports for commercial traffic on its territory.

The tables above list 33 airports with significant commercial traffic (note that Freiburg / Basel / Mulhouse are listed three times, in its respective national tables). Of these airports, 9 handle more than 10 million passengers a year (and two more get close to that threshold). 13 handle between one and ten million passengers, and 11 below one million.

Beyond the airports listed above, a number of other airports technically are well able to handle regular services. Some of them have done it in the past, but presently they do not have regular flights. Among them are Lahr and Augsburg in Germany, Maribor in Slovenia as well as Bolzano and Brescia in Italy. Brescia also reports significant cargo traffic. Other airports may have plans to add scheduled flights, but so far they have not been successful or the necessary technical equipment is not yet in place. Furthermore, the lists above do not include heliports.

3. Proposals for consideration

3.1. Specifics of the Alpine Space

3.1.1. Position in Europe

With regard to centrality, the Alpine Space likely ranks second among the Interreg areas, right behind the Central Europe area. Thus, travel distances to the rest of Europe are relatively short.

With Switzerland, Austria, parts of Southern Germany, parts of Northern Italy and Western France, the Alpine Space region is within the economic core area of Europe and mostly a high-income region, both in relative and absolute terms.

3.1.2. Topography

The core of the Alpine Space, the Alps, are very mountainous. Even most of the landscape around is at least rather hilly. Only a small part of the area can be considered rather flat – mainly the Padavian plain, the area around Munich and the Upper Rhine Valley. Some of the area's largest airports are located in these flatlands: Munich, both Milan airports, Bergamo and Venice. However, most of the airports in the Alpine Space region are located more or less in valleys between hills.

With few exceptions, mountains usually do not come as individual heaps. Instead, they form ranges, with valleys in between. This creates typical belt structures in settlements and transport infrastructures (road and public transport). This helps to offset a typical problem of landside infrastructures around airports:

Airports are typically located near agglomerations, but purposely not in their centers. They can rather be found in areas with less population than elsewhere in the agglomeration. This has consequences for accessibility by public transport, which often is good between the airport and the city, but limited when it comes to serving the area around the airport for passengers and employees. Belt structures minimize this problem. A belt of settlements is easier to connect with the airport than a full 360-degree neighbourhood.

3.1.3. Tourist destination

The Alps are a tourist destination. Due to their central location, less of the tourist traffic is by air, compared to the typical Mediterranean destinations. Furthermore, due to the size and wealth of its population, the Alpine Space is also a significant source of tourist traffic. For most of its commercial airports, this may even be the more important aspect when it comes to tourism.

There are some very noticeable specifics of tourist air traffic, compared to business routes:

- Business routes are typically served several times a day. Airlines prefer to offer at least three, better four round trips a day on a fixed schedule, to offer out-and-back services as well as good connections. Tourist routes are served on a weekly base, typically once or several time per week, and there is less of a need for a specific departure or arrival time.
- The typical business flight carries less passengers than the average tourist flight. For Stuttgart airport, as a rule of thumbs the flights to and from main business destinations carry an average of roughly 100 passengers, for tourist flights, the typical number is around 150.[7].
- While the typical tourist flight utilizes aircrafts of the A320/B737 families, the equipment for business flights vary a lot more: Smaller routes will be served by smaller aircraft. In addition, business flights have a lower capacity utilization. As a result, at smaller airports the difference between tourist and business flights may be even larger.

[7] Source: Analysis of table "Verkehrsreichste Flugstrecken ab STR" on https://de.wikipedia.org/wiki/Flughafen_Stuttgart, 10 October 2019

- Tourists have a different behaviour than business travellers. At the average, they carry more luggage and arrive earlier at the airport. The airport's catchment areas may also be different for both kinds of traffic. And many if not most tourists are picked up at their destination by a tour operator, using buses or minibuses.
- Tourist traffic is more seasonal than business traffic. This is true for the airports in the source areas, but even more so for the destinations.

Overall, the hourly, daily and monthly traffic pattern of tourist airports varies a lot more than at business airports, and so does the behavioural pattern of travellers thus the relevant traffic management efforts should be different

3.2. Match of LAirA and Alpine Space

The airport specifics of the LAirA project and of the Alpine Space region match rather well. This is not only because three of the LAirA airports are actually located within the Alpine Space region (Milan-Malpensa, Milan-Linate, Vienna), but for further specifics of the Alpine Space region there are corresponding airports within the LAirA project:

- Warsaw Modlin Airport is a case of tourist traffic, outbound as well as inbound. The same can to a large degree be said about Poznan Airport, while Dubrovnik is a classic case of an airport mainly dealing with inbound tourism.
- Dubrovnik also is located within a belt structure of roads and settlements, which is typical for so many airports within the Alpine Space region.
- The size of the various airports within the LAirA project and thus their catchment areas also correspond rather well with their counterparts in the Alpine Space region.

As a result of this matching situation, apparently the measures proposed by the LAirA project will be well transferable to the airports and their surrounding metropolitan areas within the Alpine Space region.

3.2.1. Key measures for consideration based on the LAirA Transnational Action Plan

In its efforts to enhance the capacities of local and regional authorities, the LAirA project delivers knowledge through several transnational action plans related to multimodal, smart and low carbon airport access. You can check below the LAirA action plans: For each field of action, the key European policies can be found on the website in the thematic action plans, as well as best practices, also beyond airports involved in the project. For each thematic fields, the paper elaborates upon the proposed actions of the involved airports. It gives room to the experiences, the problems, and the proposed solutions.

A summary of the work within the key topic areas within the LAirA project is provided, taken from the final thematic action plans of the LAirA project where more information is to be found[8]:

- **Electric mobility**

This thematic report focuses on action plans from project partners to introduce landside e-mobility developments as part of the wider LAirA initiative. The rise of electric cars in the following period will be a trend that every market player has to adjust. Market forecasts also predict that more and more EVs will be encountered on the roads. In parallel, the annual passenger traffic of airports is growing steadily, and the most popular approach to airports is still the car. As a result, it is particularly important for the airports to adopt the challenges from e-mobility. The airports need to respond to the increased demand for services

[8] LAirA deliverable D.T2.1.12, available with all relevant thematic action plans and educational materials at https://www.interreg-central.eu/Content.Node/LAirA.html

soon, and they need to develop a strategy that goes beyond charging needs. Airports have to realize that they are in an exceptional position where they can experiment with solutions to e-mobility.

E-mobility development has two different approaches: the internal-driven airport development and the external-driven customer related developments. It is recommended that airports gradually replace their own fleet with EVs, or as a temporary alternative, with other alternative fuelled vehicles. On the other hand, they must provide the charging infrastructure, so that customers can use electric cars during their journey. It is also important that charging services should be adapted to the needs of users. During all these processes, airports should be in close cooperation with their partners, and measure the customers' attitudes in each phase of the process.

- **Air Rail links**

This thematic report focuses on action plans from project partners to introduce Air-Rail Links as part of the wider LAirA initiative. Airport rail link projects, whether it is a new connection or a modernisation project, involve many stakeholders and are capital heavy. Building strong and sustainable relations with the many stakeholders is key in ensuring the success of the project. LAirA project partners highlight the political and local support as one of the main challenges in delivering airport rail link projects. The political support can be strengthened if the local community is behind the project and is actively advocating for it. Naturally, some of the projects will be more favoured by residents than others. A dedicated airport-city centre rail link might not appeal to local communities as it will bypass their settlements, but it could help ease the road congestion in the area and reduce emissions from cars. A clear, open and reliable communication strategy is recommended to engage the stakeholders from the very start of the project development to secure their support.

One of the key barriers for airport rail link development is the lack of global best practice studies available for airports and airport regions to support their own projects. Beyond that, the data available might not be comparable as there is no global standard for airports to analyse public/private transport mode share changes and how different infrastructure projects affect passenger behaviour. However, the overall trend is to consider rail connection as an environmentally friendly, reliable, frequent, fast and affordable public transport option for a growing airport. All LAirA project partners agree that an airport rail link connection will help reduce road congestion, increase airport's catchment area for passengers as well as for employees, provide an alternative transportation mode for local communities and support airport's growth.

- **Soft mobility**

The scope of this action plan is the functional urban areas restricted to the optimal use of soft mobility modes in the vicinity of airports in order to foster the shift of the modal choice of airport employees to soft mobility. The paradigm of car-centred mobility for employees at airports is over. More sustainable transportation modes namely soft mobility shall be given equal opportunities too. Soft mobility modes do not take as much as space as car-use, however, they need other type of infrastructure, that helps the users themselves to feel comfortable, because most of these modes require physical effort to move. Auxiliary infrastructure at the workplace, under the authority of the employer is required such as shower room, changing room with lockers as well as safe storage for the bicycle, scooters etc. at a reasonable distance from the workplace.

Soft modes are often not taken into account, as a competitive alternative to car use. Often this is because people are not aware of the existence and the use of the mode, that these provide real alternative while changing people's lifestyle into a favourable direction. Promotion and awareness raising campaigns could contribute to shift in people's mind-set and to make them aware of these alternatives.

- **Shared mobility**

The aim of this action plan about Sharing Mobility for LAirA airports is to support decision makers in low carbon mobility planning for airports and their FUAs. The advantage of car-sharing or bike-sharing offers especially arises when it comes to intermodal/multimodal mobility behaviour and offers. Having the possibility of choosing between various modes of transport and not solely being dependent on individual private cars, may mitigate emissions in transport. Therefore, seamless travels (e.g. having continuous transport options between A and B), where sharing mobility options play a major role, may be highly demanded (in the future) and strongly promoted by transport policies. This means, that also other need such as the availability of integrated mobility platforms or travel planners as well as (physically installed) mobility points (such as tim in Graz) are needed. Of course, also electric mobility and soft mobility actions are affected by the measures stated in this action plan. Furthermore, also the overall area management of the airport must be involved, since the implementation of car-sharing offers also depends on the availability of respective parking spaces and accessibilities.

- **Intelligent Transport Systems (ITS)**

This action plan focuses on multimodal travel information and reliability in terms of landside accessibility by road and rail. ITS mobility developments and deployments are complex and located on a higher (governmental) level. Nevertheless, regional (and local) stakeholders can contribute to an overall connected and intelligent transport system by efficiently cooperating on small scale levels, such as in the field of (multimodal) travel information. As airports are important entry points to transport systems, information on transport modes and travel times should be available on-site and sufficiently communicated to passengers (and employees). With regard to the increasing passenger numbers and structural expansions of airports across Europe, traffic management (or rather, being part of traffic management) should be an important subject to airports. Otherwise, traffic will rise but may not be handled properly and the reliability when accessing or leaving airports may decrease. In its role as intermodal/multimodal hub, airports have the potential of consolidating relevant travel information and allocate them among their passengers (and employees). By being actively involved in ITS developments, airports may be able to better forecast current transport flows but may also better handle future scenarios by utilising available data for transport models. Furthermore, passengers (and employees) may be better guided when it comes to transport mode and route choice for traveling to/from the airport (e.g. in case of delays or disruptions in the landside transport network).

- **Wayfinding**

This report considers the global best practice examples of wayfinding at airports to set out how signage and other wayfinding mediums are used to guide passengers through airports. The following principles of Wayfinding at Airports can be identified from global best practice, these principles are: Begin the wayfinding where the passenger relies on airport information, before they leave the Arrivals area. Provide simple information, targeted at people who are unfamiliar with the airport. Use standardised, visual way markers. Provide a consistent wayfinding style throughout airport campus. Show the way - lead the passenger the whole way. Confirm to the passenger that they have reached their destination.

In order to create Wayfinding Strategies that embrace these principles, two important notions are evident: that airports should use simple, obvious visual guidance across the whole airport area, and that to deliver this common signage, structures must be in place to ensure that wayfinding is coordinated throughout the airport experience. It is these underlying notions that will facilitate a Wayfinding strategy that is consistent with the Principles.

- **Road-based public transport**

This action plan includes examples of best practices of road-based airport access to Croatian airports.

3.2.2. Pilots for employee mobility behaviour

In regards of passenger and employee mobility behaviour, the consortium is working on multiple pilots for employees and on a pilot for passengers. Three of the six pilot airports, Budapest Airport, Milan Airports and Mazovia Airport, are going to implement an IT tool solution for pilot testing. The number of possible users differs between 500 and 30.000 employees at the airports. The main objective of the actions is to reduce environmental effects and thus CO_2 emissions produced by current mobility behaviour at the airport. The goal is to engage as many people as possible, also the less flexible ones as well as employees working at the airport, but not being employed directly by the airport and raise environmental awareness among all employees. Also, the better integration of employees, meaning bringing them together, even if they e.g. don´t know each other, was raised by two airports.

The car is the main transport mode to commute to and from the airport. The airports see a big chance in ridesharing/ride-pooling to change the employees´ behaviour and reduce transport emissions. An expected challenge is the engagement of employees; especially in regard of shift workers, workers worrying about being late or workers with a restriction of using apps and the like could be challenging.

The other three airports, Dubrovnik Airport, Poznan Airport and Stuttgart Airport, are going to set up awareness raising campaigns, as in these cases this is seen as a more effective way to mobilise employees using more low carbon mobility. Here as well, the actions shall lead to a reduction of energy consumption and a change in the employees´ mobility behaviour by the promotion of sustainable mobility options. One partner raised the importance of making employees aware of their actions´ impact on the local strategy of mobility to reach them. Challenges could be a lack of cooperation or communication problems. Further, one partner mentioned that it will not be possible to see the results after half a year of pilot testing, but after 2, 5 and 10 years. Initial response to these efforts will be presented at the final conference of LAirA in Budapest at the beginning of December and published on the website as well.

4. Transnational transferals for airport regions within EUSALP

LAirA defines in a transnational policy learning dialogue the action plans for low carbon mobility of airport passenger and employees, taking into consideration multiple types of interventions (the seven LAirA thematic areas) not only related to public transport (competence of authorities), but also to further integrate other low carbon mobility solutions (e.g. e-mobility, car sharing).

As well as best practices, such as the Landside Accessibility to Airports: International Best Practice Report. This study aims to improve landside mobility planning for airports and is suited well for the airports also beyond involvement in the project. It gives room to the experiences, the problems, and the proposed solutions.

On the website there is also an Educational Model on Understanding the Integration of Airports' Landside Access Into the Mobility Systems of Urban Areas. This handbook presents the multimodal and sustainable low carbon mobility integration of seven different airports in the transport systems of their functional urban areas (FUAs) were originally defined in order to make different metropolitan areas comparable when it comes to their economic, social and environmental performances. The handbook briefly introduces the objectives of the project in the Introduction section, as well as the main challenges and expected impacts.

Strategies for low carbon integration of airports in FUAs are defined in a governance process involving airports, authorities, agencies, transport providers, associations & nodes. Each airport region developed their own strategy for the improvement of landside airport accessibility. In the final weeks of the project there will be a transnational strategy for transferability purposes of other airport regions published.

In conclusion, the measures of LAirA will be well transferable to the airports and their surroundings within the Alpine Space region. If an airport region of Alpine Space is interested in the results, please visit our project website or contact Jana Janson, project manager transport and mobility, Stuttgart Region Economic Development Corporation (jana.janson@region-stuttgart.de) for more precise reports and best practice results.