



## D.T3.2.2 Preparing ETP training & education model for non partner FUAs

Version 1 10 2019

Mobilissimus, 8.10.20





#### Introduction

The objective of the Enlarged Transfer Programme is to make use of the existing project experience and knowledge, that has manifested in several outputs and deliverables or in experience collected throughout the project implementation and to fosters the take up the LAirA low carbon mobility solutions to public entities in non-partner Central Europe functional urban areas.

The presentations given during the conference and included into this report provide knowledge about the followings:

- Learn potentials and ways to develop and govern of the airport regions that are key in planning the landside accessibility;
- Learn the essence of the airport as mobility hub and as a workplace at once;
- Learn about potential implementation of soft, active mobility;
- Learn the trends in e-mobility and what could airports do to foster e-mobility;
- Learn the latest trend of shared-mobility;
- Learn the potential of air-rail transport link;
- Learn the importance of wayfinding at the airport.

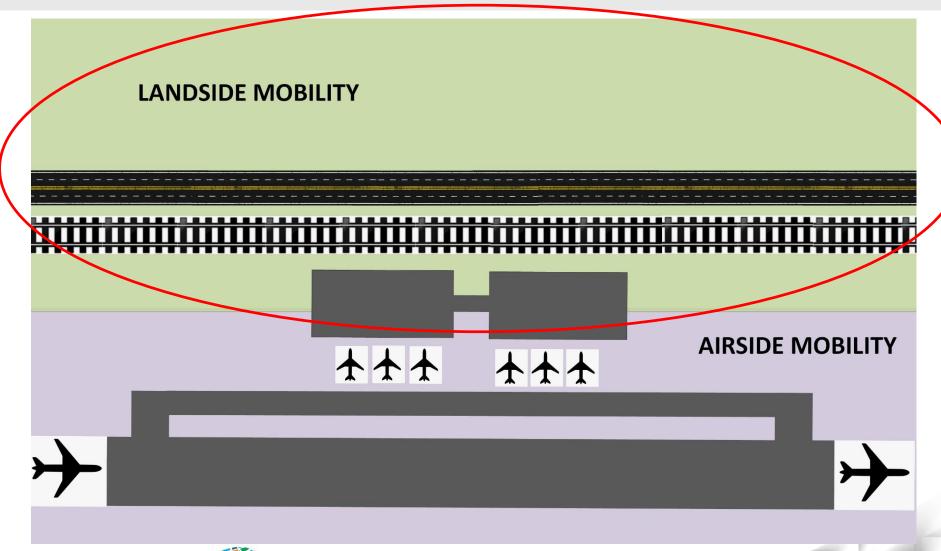


- Vienna, 30.09.2019
- Airports as Mobility Hubs
  - Mobilissimus Ltd.



## LANDSIDE / AIRSIDE MOBILITY



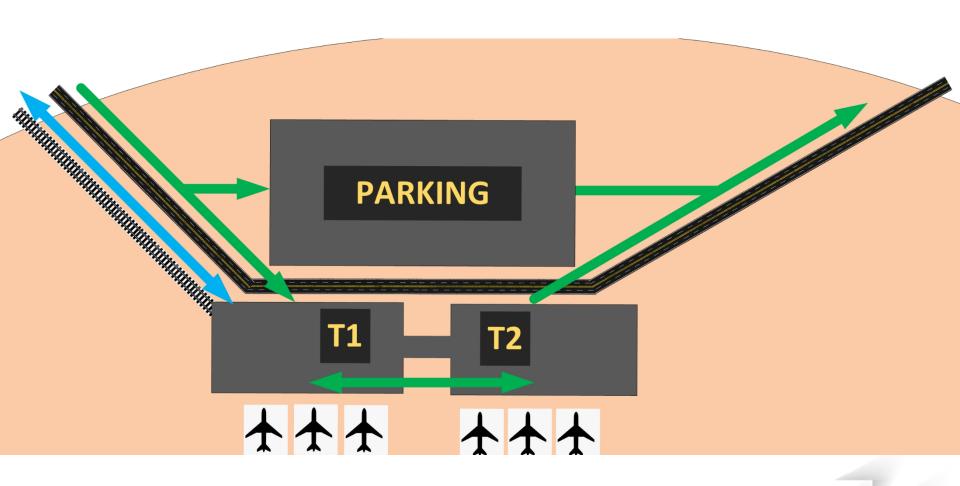






## LANDSIDE MOBILITY





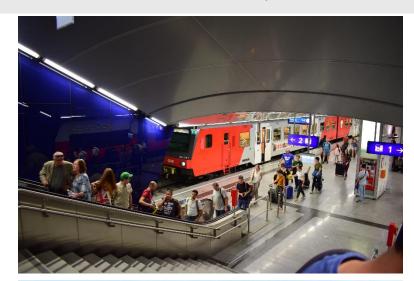




## ACCESS TO / FROM THE AIRORT



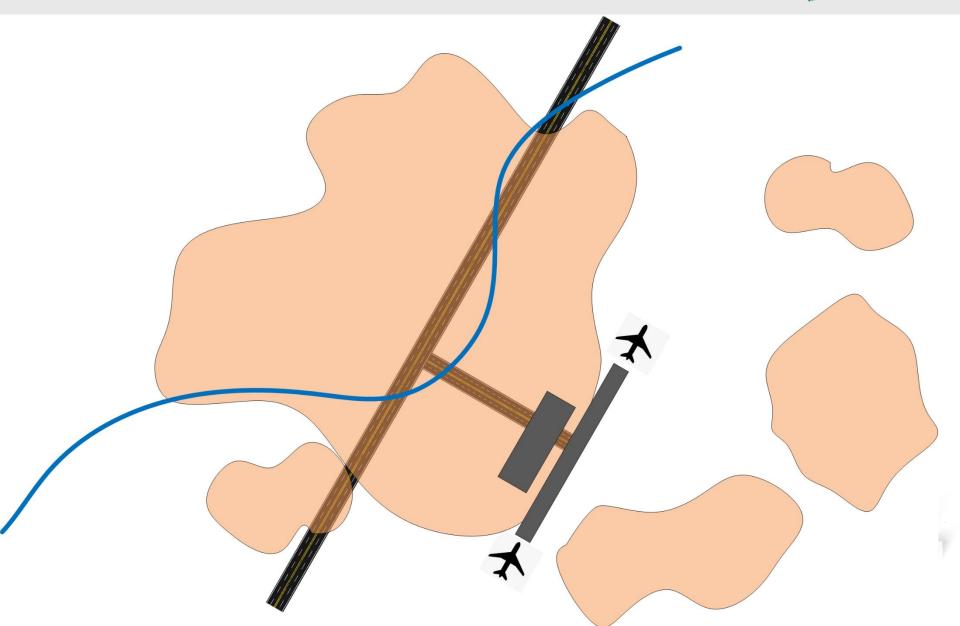
- How easy to get to the airport and to leave it?
- How predictable is the journey time?
- Frequencies of services
- How to get mobility information? (Frequent users / case by case users or foreign people)
- How big is the competition among transport services? (If competition is, among operators on in favour of passengers?)
- How likely people will recommend
   ★he \_\_\_\_\_ will ity solution?





## **ONLY ROAD CONNECTION**





## ACCESS TO / FROM THE AIRORT





- Only road access
  - Buses
    - Local bus
    - Express bus (is it more expensive?)
    - Regional / long distance bus
  - Taxi
  - Carsharing
  - Personal car (parking facilities?)
  - Bike, scooter, etc
- Road access solutions cause less predictable journey times and connections







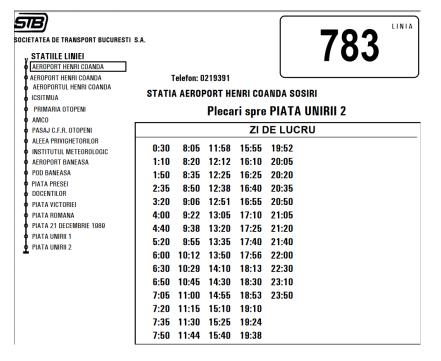


## **AIRPORT SERVICES - BUCHAREST (OTP)**





- 2013: 7,6 million passengers
- 2018: 18,8 million passengers
- Car + taxi domination
- Bus (express): every 15-25 min











## **AIRPORT SERVICES - PRAGUE (PRG)**



- 2013: 10,9 million passengers
- 2018: 16,8 million passengers
- Bus to metroconnection: every3-5 min



#### **Bus 119**

#### Nádraží Veleslavín - Letiště

Min.	Stop	Hour	30.9	.2019	Мо	nday								
0	Nádraží Veleslavín 🚏 🖳	4												
4	<b>▼</b> <u>Divoká Šárka</u>	5	13	13	23	33	43	53						
5	Nová Šárka (x)	6	01	08	14	20	25	30	35	39	44	48	53	57
6	◆ Dědina (x)	7	01 i	nt. 3	min.									
9	<u>K Letišti</u> (x)	8	01 i	nt. 3	min.									
10	▼ Terminál 3 (x)	9	01 i	nt. 3-	4 mi	n.								
13	<b>▼</b> _U Hangáru (x)	10	04	08	12	16	21	26	31	36	41	46	51	56
15	▼ Terminál 1	11	01	06	11	16	21	26	31	36	41	46	51	56
16	◆ Terminál 2	12	01	06	11	16	21	26	31	36	41	46	51	56
17	<u>Letiště</u>	13	01 i	nt. 4-	5 mi	n.								
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		15	02 i	nt. 3-	4 mi	n.								
		16	01 i	nt. 3	min.									
		17	01 i	nt. 3	min.									
		18	01 i	nt. 4-	5 mi	n.								
		19	01	06	11	16	21	26	32	38	44	50	56	
		20	03	11	19	26	34	41	49	56				
		21	04	11	19	26	34	41	49	56				
		22	04	11	19	26	33	42	52					
		23	02	12	22	32	52							





## **AIRPORT SERVICES - BUDAPEST (BUD)**



- 2013: 8,5 million passengers
- 2018: 14,9 million passengers
- Bus to metro connection: every 4-7 min





#### Liszt Ferenc Airport 2 ▶ Nagyvárad tér M

Az adatok tájékoztató jellegűek. A menetrendtől való eltérések előfordulhatnak. All data provided for informational purposes only. Deviations from the schedule may occur. Visszavanóság érvényes a következő dátumtól: Valid until further notice from (year/month/day): 2019.05.27.

felszálláskor mutassa be a

járművezetőnek. Köszönjük.

Please show your ticket, pass or other

travel ID to the driver while boarding

the vehicle. Thank you.

#### Indulási időpontok ebből a megállóból Departure times from this stop Munkanapokon **Liszt Ferenc Airport 2** Workdays 00: 20, 50 01: 20 1' Repülőmúzeum 02: 20 03: 20 04: 06, 27, 47 3' Vecsés-nyugat 05: 07, 27, 37, 47, 58 06: 09, 18, 28, 39, 46, 56 4' Repülőtéri Rendőr Igazgatóság 07: 07, 15, 22, 31, 40, 49, 57 08: 05, 13, 21, 30, 38, 44, 52 Felszállás az első ajtón 09: 00, 08, 15, 23, 30, 38, 45, 53 6' Repülőtér, D porta 10: 00, 08, 15, 23, 30, 38, 45, 53 Front-door boarding only 11: 00, 07, 15, 22, 30, 37, 45, 52 12: 00, 07, 15, 22, 30, 37, 45, 52 8' Ferihegy vasútállomás 13: 00, 07, 15, 22, 30, 37, 45, 52 14: 00, 07, 15, 22, 30, 38, 46, 53 Kérjük, hogy jegyét, bérletét, 15: 01, 08, 16, 23, 31, 38, 46, 53 utazásra jogosító okmányát 10' Szemeretelep vasútállomás 16: 01, 08, 17, 24, 32, 39, 47, 54

17: 02, 09, 17, 24, 32, 39, 47, 54

18: 02, 09, 16, 23, 31, 38, 46, 53

19: 01, 08, 16, 23, 31, 38, 45, 52

21: 07, 15, 25, 35, 45, 55

22: 06, 16, 26, 38, 50

23: 05, 20, 35, 50

20: 00, 07, 15, 22, 30, 37, 44, 51, 59





#### Liszt Ferenc Airport 2 > Deák Ferenc tér M

Az adatok tájékoztató jellegűek. A menetrendtől való eltérések előfordulhatnak. All data provided for informational purposes only. Deviations from the schedule may occur. Visszavonásig érvényes a következő dátumtól: 2019.07.14.

#### Repülőtéri közvetlen autóbuszjárat / Airport shuttle bus

Megállók és átlagos menetidő Stops and average journey time	Első és utolsó indulások / First and	l last departures							
Liszt Ferenc Airport 2		Mindennap / Every day							
	Első indulás / First departure:	05:00							
	Utolsó indulás / Last departure:	01:20							
Kálvin tér M	Járatsűrűség / Frequencies								
	ldőköz / Intervals	Mindennap / Every day							
C Kálvin tér M  O Astoria M	05:00 - 07:20	20 percenként minutes							
	07:45 - 09:08	13–20 percenként minutes							
	09:20 - 18:40	10 percenként minutes							
Deák Ferenc tér M	18:55 – 20:25	15 percenként minutes							
áratinformáció ine information	20:40 - 01:20	20 percenként minutes							
Baindon iérmeli ale comme dié	Ünnepnapokon, áthelyezett munkanapokon, ille	etve a hosszú hétvégéken az autóbusz közleke							



Minden jármű alacsonypadlós Low-floor service (all vehicles) Ünnepnapokon, áthelyezett munkanapokon, illetve a hosszú hétvégéken az autóbusz közlekedé rendje módsoulhat. Bővebb információ: www.blk/hu. The schedule may change during public holidays and long weekends. Please visit our website: www.blk/.



11' O Billentyű utca

13' Csévéző utca

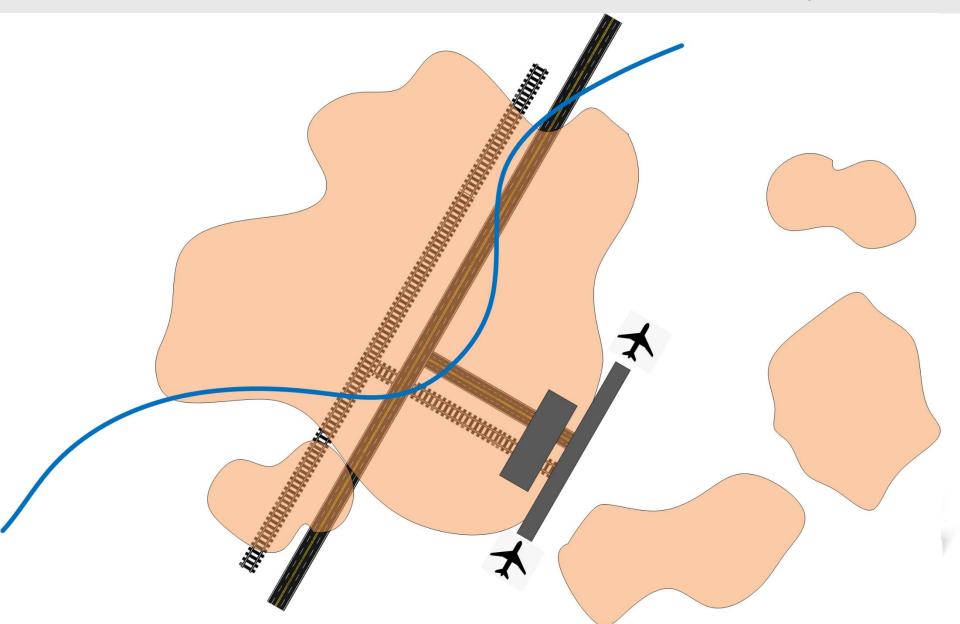
Postszontlőring vasútállomás





## **ROAD AND RAIL CONNECTION**





## ACCESS TO / FROM THE AIRORT



- Above the road access facilities
- Rail access
  - Local (e.g. tramway, local rail)
  - S-Bahn
  - Regional
  - IC / EC / RJ connections
  - High speed rail connections
  - Metro connection
- Fixed rail solutions give predictable journey times, plannable connections





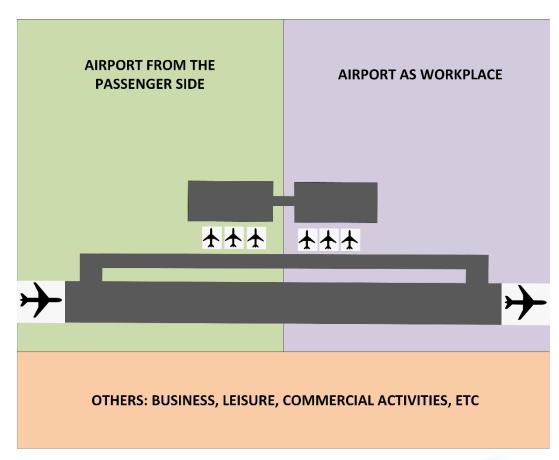




## **FUNCTIONS - TRAVEL / WORK**



- Different needs for work and for travel
- Different landside mobility needs and habits
- Different timing and working shifts
- Different transport solutions offered (public transport, parking)







## PASSENGER SIDE



- Mixture of frequent and not usual travellers
- Different mobility needs of the passengers
- Incentives for public transport
  - Is it faster than car?
  - Is it cheaper car?
- Integration, fare community
- Integration to the national and regional road structure
- Parking solutions (long term, short term, pricing)







## AIRPORT AS WORKPLACE

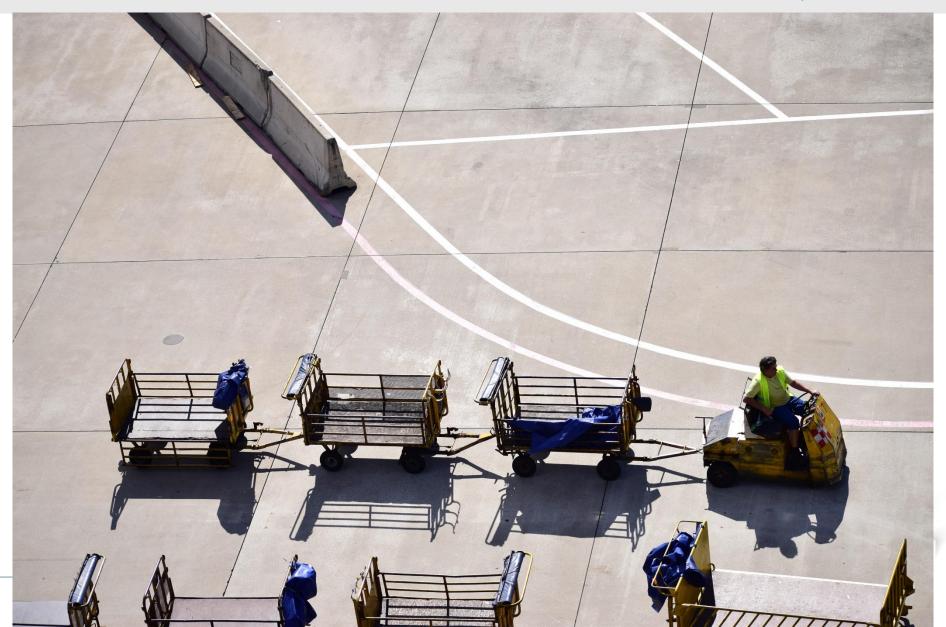


- Working shifts (nights also)
- Start of the shift (no delay option)
- **Parking**
- Connections to settlements
- Carpooling options
- Public transport to the main directions, also to less frequented solutions







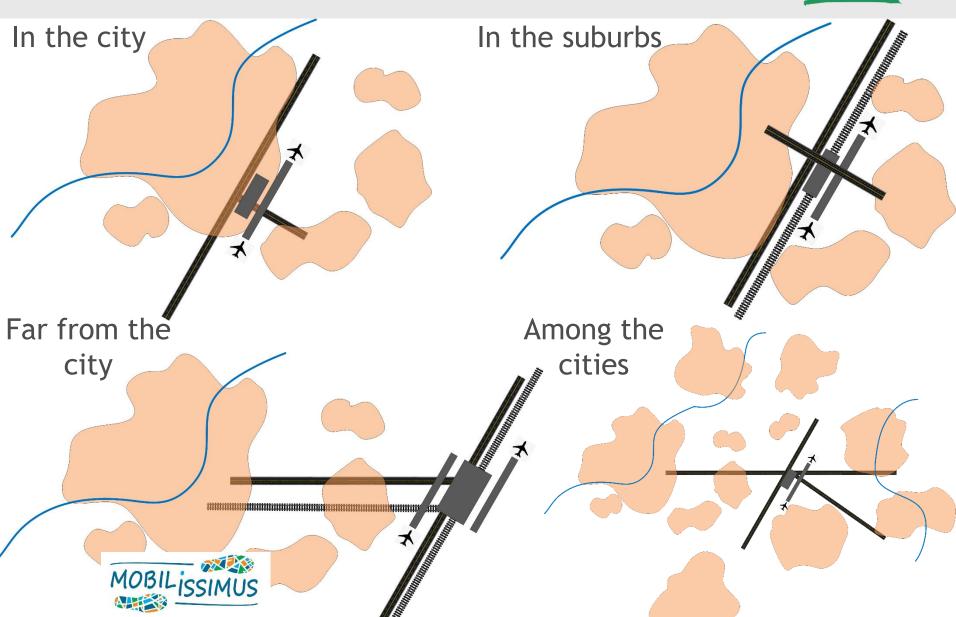






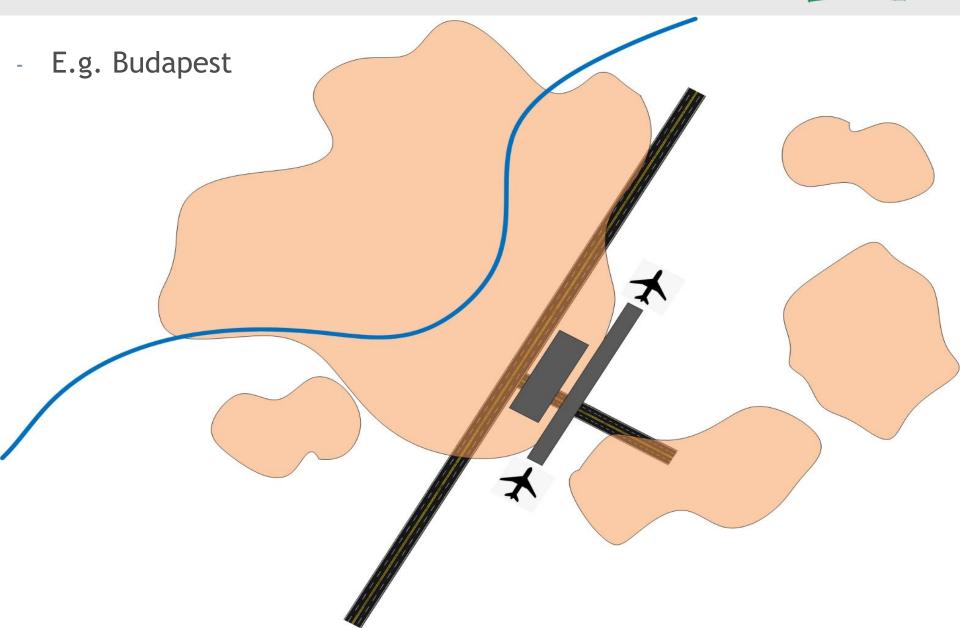
## **RELATION OF AIRPORTS AND CITIES**





# TRADITIONAL AIRPORT IN THE CITY WITH ROAD CONNECTION ONLY



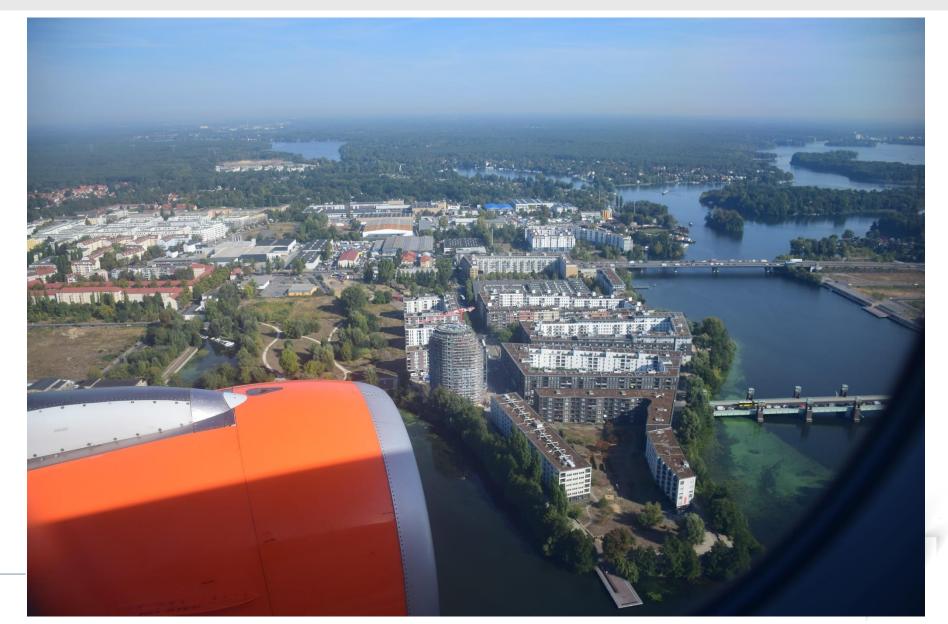






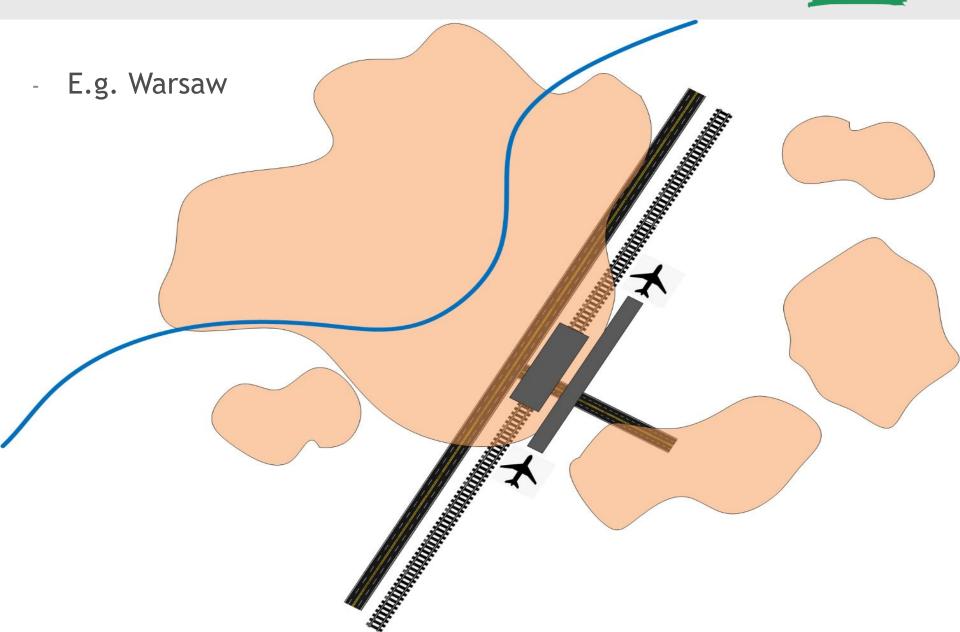
## TRADITIONAL AIRPORT IN THE CITY





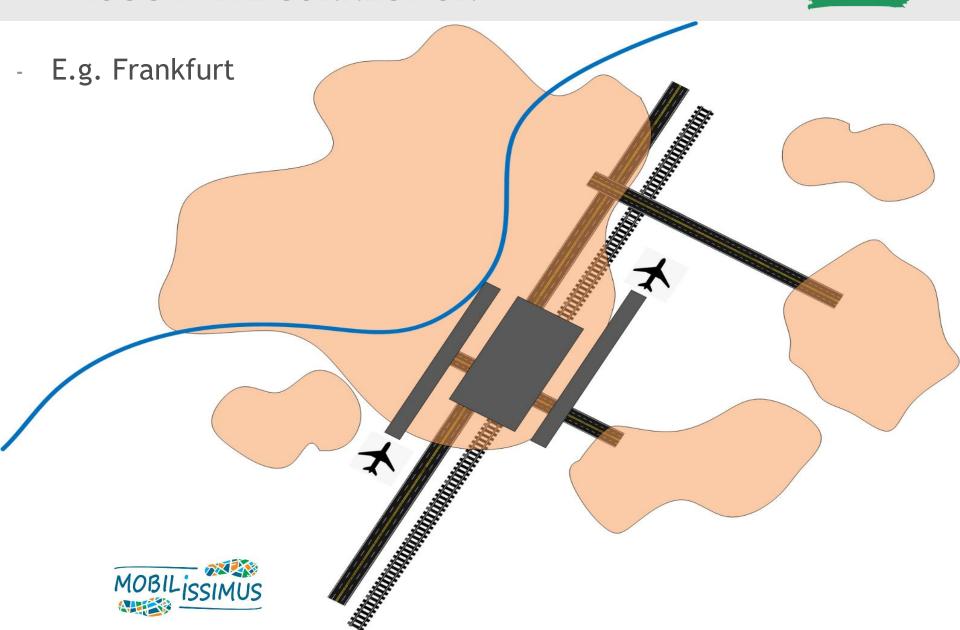
## TRADITIONAL AIRPORT IN THE CITY - WITH TRAIN CONNECTION





# TRADITIONAL AIRPORT IN THE CITY WITH THROUGH RAIL CONNECTION



















































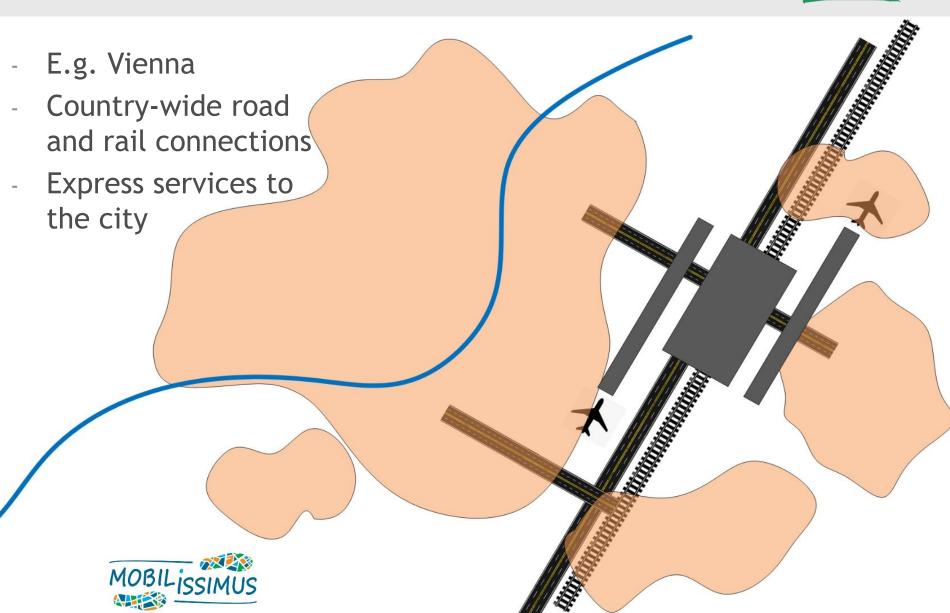






## **AIRPORT IN THE SUBURBS**

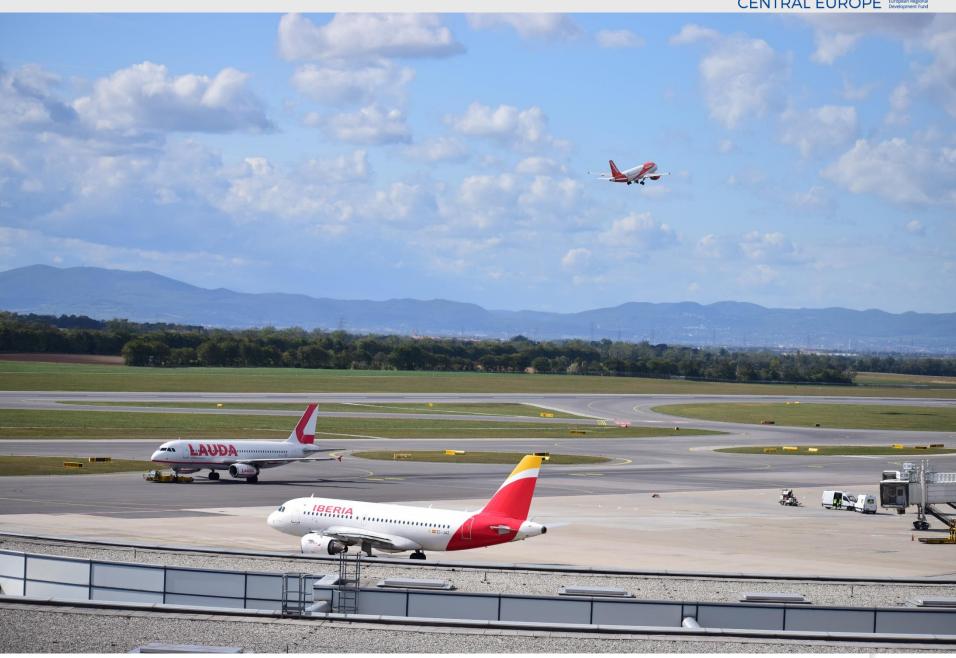








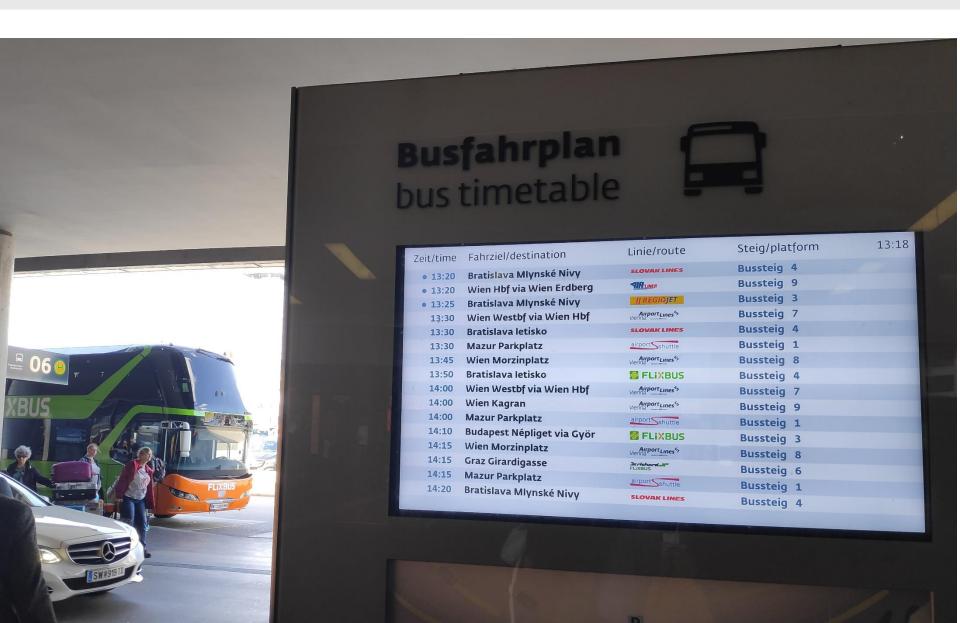
















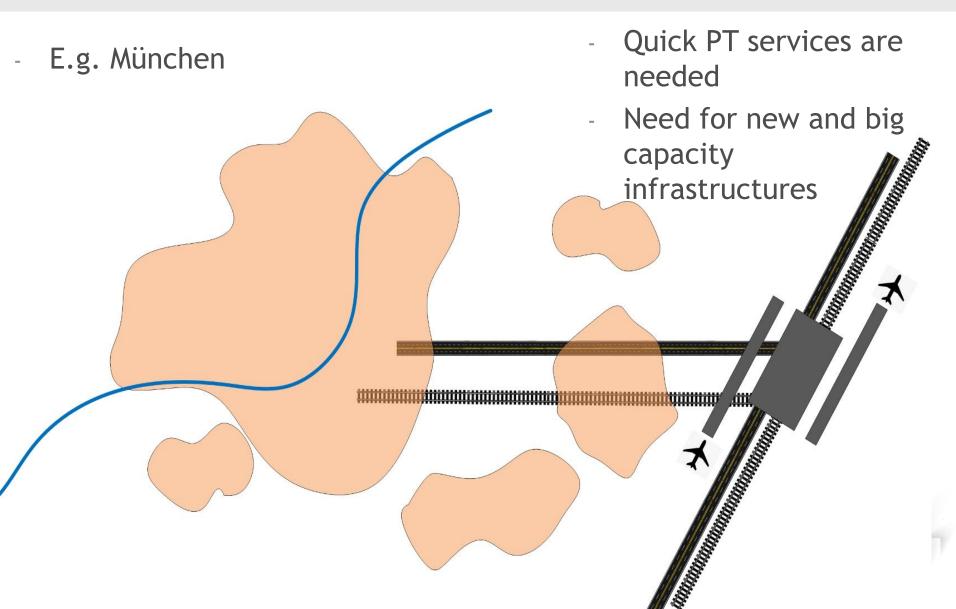






# **BIG AIRPORT FAR FROM THE CITY**





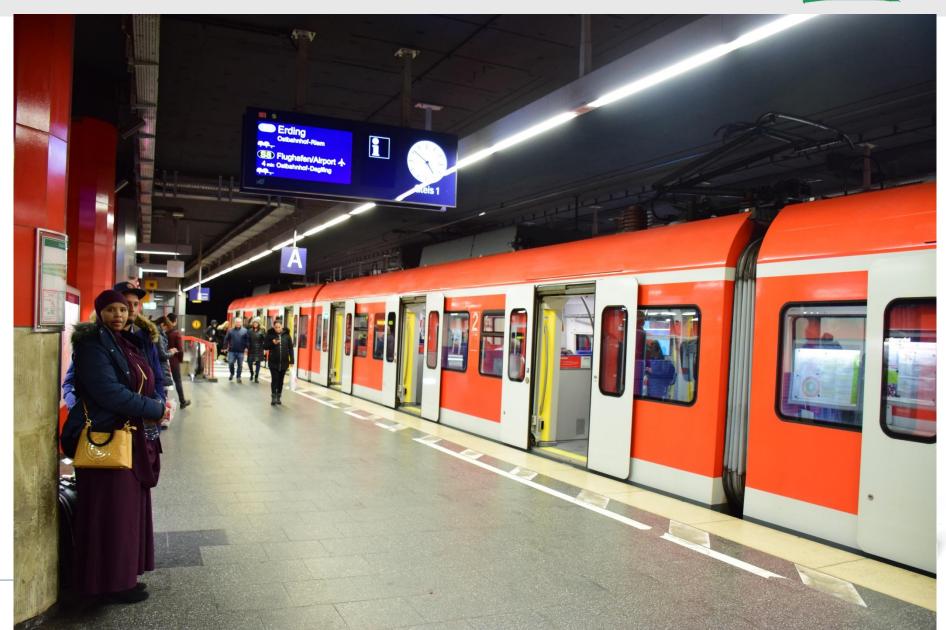




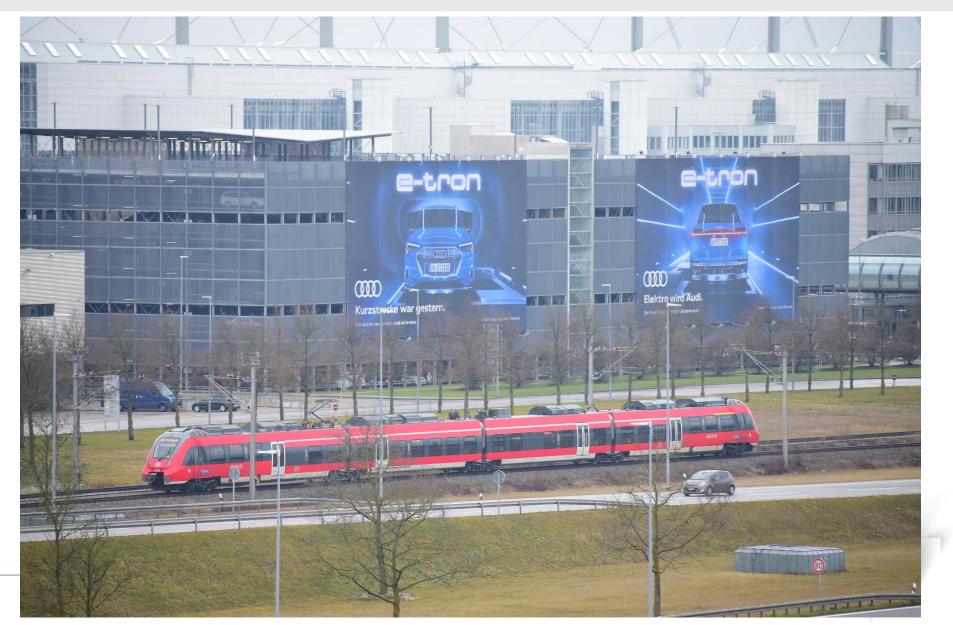














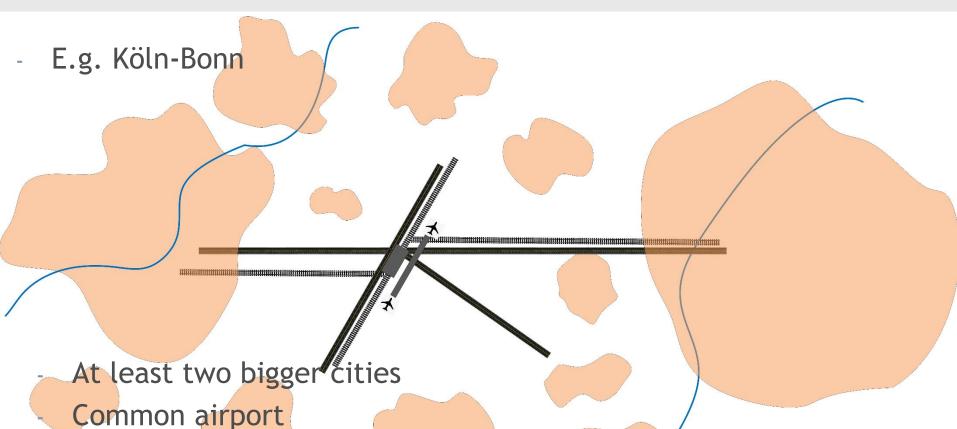






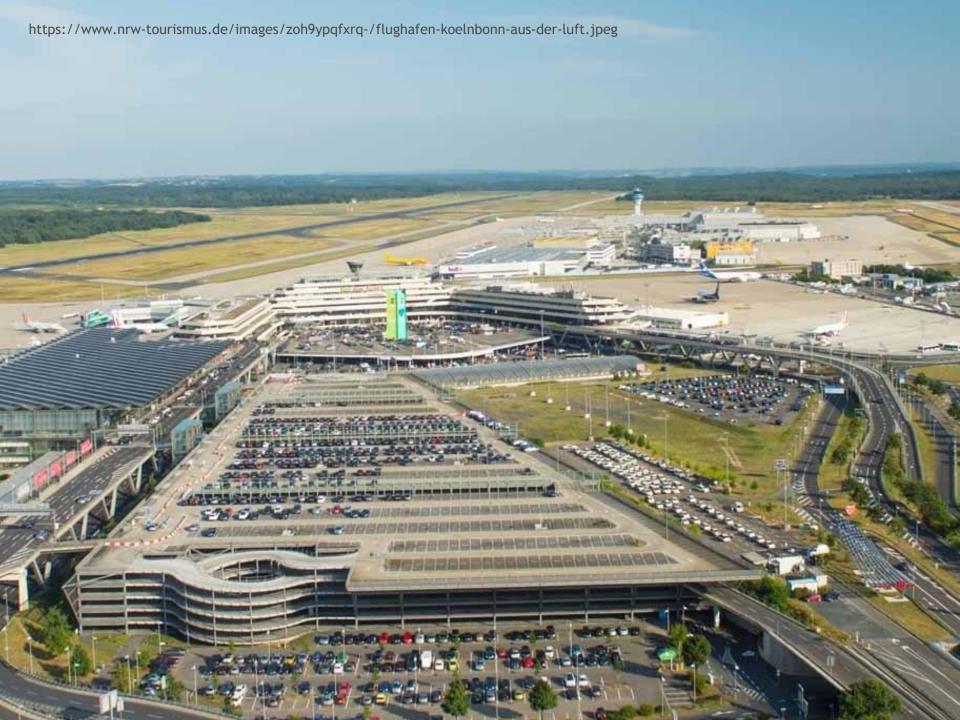
## AIRPORT BETWEEN BIGGER CITIES





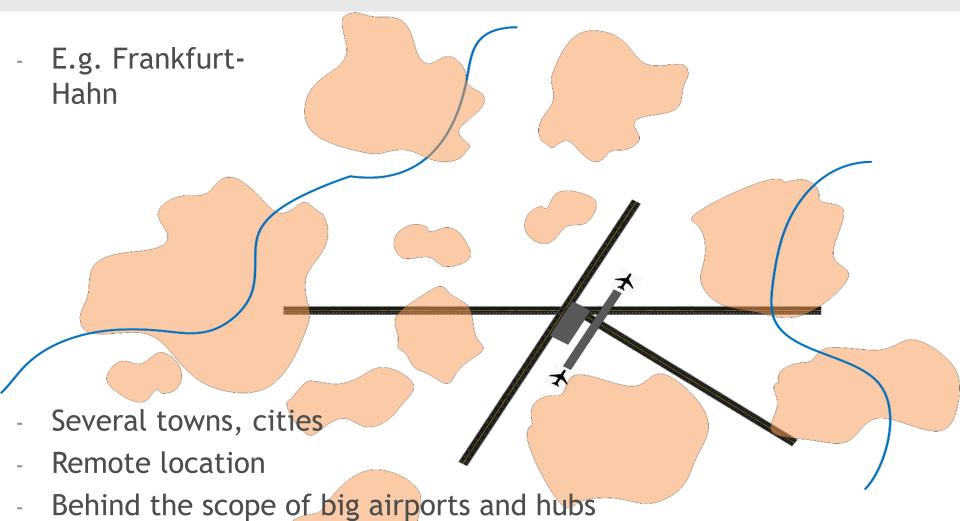
- Well balanced connections to both cities and the whole area
- Regional / national / international connections
- Long term parking needs





## **AIRPORT AMONG SETTLEMENTS**





Regional / national / international connections

- Long term parking needs



Kooperationspartner



IC Bus

Hahn Airport - Frankfurt Airport - Frankfurt Main train station

Abfahrt / Departure

	So/sun					
-	T	Mi/wen	Do/thu	FL\III	Sa/sat 0:00*	0:00"
Mo/mon	Di/tue	0:00*		0:00*	0:30	0:30*
0:00"	0:00*	0:30*	0:30*	0:30*	5:15	5:15
0:30*	5:15		_5:15	5:15 7:15	7:15	7:15
			7:15	8:00		8:45
7:15			- 00	9:45	9:30	
		9:00	9:30	10:30	10:30	10:30
10:00	10:15	10:30	10:30	12:30	12:45	
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18:30	20:00	20:00	20:00	20:00	20:00	20:00
20:00	20.00	21:15*	21:30*	21:00	21:30*	21:45*
22:00*	22:30*	22:30*		22:30*	A	0
23:00*	23:30*	23:45*	23:00*	23:30*	23/30*	23:30*

**DB** IC Bus

FLIXBUS

# THANK YOU FOR YOUR ATTENTION!





András Ekés

Managing director

Mobilissimus

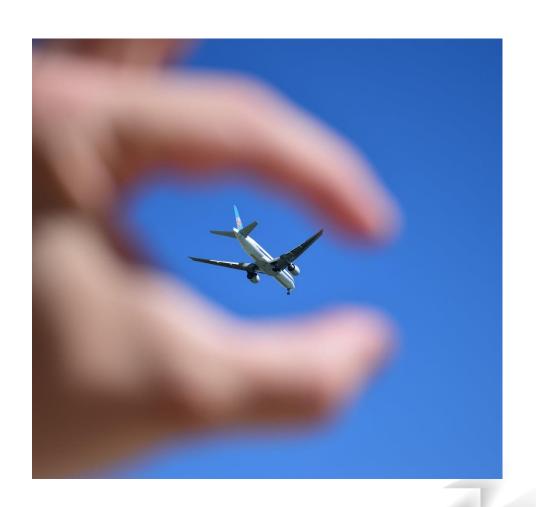


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- Vienna SC Meeting and Conference 30. September 01. October 2019
- LAirA Airport E-Mobility Actions at BUD
- LAirA | BUD PP2 | Kristof Boda

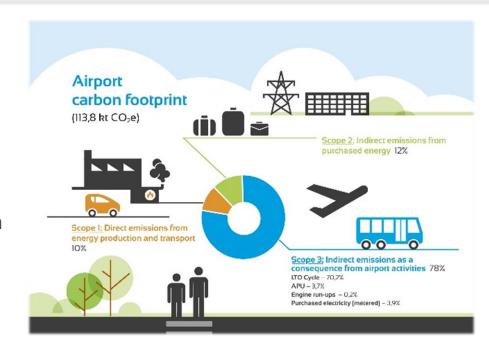
# **BUDAPEST AIRPORT - THE 1ST CARBON** NEUTRAL AIRPORT IN CEE



- Our mission is to become the most successful airport in CEE, while achieving sustainable, efficient and ethical daily operation
- BUD is participating in ACI Carbon Management Program since 2010
- BUD and its partners have reached ACA Level 3+ status in 2018 and maintains it in 2019
- Since 2010 CO2 emissions at BUD has decreased by 44% per PAX
- BUD is working on eco-friendly mobility solutions since 2014
- Main pillars are:
  - Company Policies and Carbon Neutrality
  - Airport partners
  - Traffic and Transportation development
  - E-Mobility Developments Landside and **Airside**















www.airportCO2.org

# **FURTHER EMISSION REDUCTION AT BUD: NETZERO**



**LAirA** 

- Airport industry facing multiple environmental challenges
- ACI's new Sustainability Agenda: NetZero until 2050
- BUD's new target is NetZero until 2030
- Specific Sustainability Strategy and Program Portfolio for further emission reduction -Various Initiatives, Programs, Measures and Projects, reflecting ACI KPIs, UN, EU and National Goals
  - E-Mobility Program for BUD
  - Alternative heating systems
  - Renewable energy systems
  - Further cooperation with our airport partners
  - New Airport Strategies. Regulations and Tenant Contracts, Development Roadmaps
  - Other sustainability related projects (deicing, rainwater, road developments, etc.)



































#### **Sustainability Strategy for Airports**



An airport that operates within planetary boundaries:

> GHG emissions - Air quality Material resources management - Water management



An airport that contributes to a better society

 Local communities - Employee experience Suppliers and subcontractors sustainability performance - Passenger experience



An airport which paves the way for change

> Revenue diversification - Support to innovation





## E-MOBILITY STRATEGY AT BUD



- Most promising areas for NetZero are E-Mobility and Heating developments
  - □ Total No. of fleet cars: approx. 70 manager cars, 40 departmental pool cars, approx. 280+ other service and airside vehicles
  - ☐ Approx. 1600 daily entrance permits
  - ☐ Approx. 200 air-side service vehicles of Ground-handlers
- International and Hungarian Market trends:
  - □ No. of EVs doubled in HU during 2017-18, trend continues in 2019
  - ☐ New models are continuously available
- Moving forces of E-Mobility at BUD Airport:
  - □ Sustainability
  - □ Battery size is not a limiting aspect in many cases
  - Official registration of the vehicles are not needed
  - □ Electricity supply is available
  - □ Lower operation and maintenance costs than fossil fuel cars
  - □ Public credibility, marketing opportunities
  - □ Our e-car and hybrid fleet is expanding since 2015









## E-MOBILITY STRATEGY MILESTONES



#### Major milestones - short and medium term

Passenger and Employee car parking

By 2020 all major parking areas equipped with e-plug infrastructure

Tenant fleet car parking

By 2021 at least 3 company fleet car park equipped with e-plug infrastructure

BUD e-fleet development

By 2021 at least 25-25 company e-cars added to management/security/pool fleets

Airside GSE equipment charging

By 2024 only electric tugs and operation of 3 GSE charging locations on Airside











- Main elements of the E-Mobility Strategy:
  - □ Identification of usage and user patterns
  - Decision to gradually increase the No. of EVs in our own fleet, manager and pool cars
  - □ Installing e-chargers
  - ☐ Ground handler vehicles (buses, tugs, trolleys, push-backs)
  - □ Partner companies (tax authority, police, taxi companies, other tenants)



- to explore the opportunities, including clear areas of responsibility: technical team for electricity, EHS for management and strategy implementation, accompanied by a company wide environmental aspect - carbon neutrality, Greenairport Program
- Learning from others, international good examples, meeting market leaders of the industry













- Major differences between Landside and Airside needs and opportunities
  - Vehicle availability
  - **Regulation differences** 
    - > No need to comply with land -side regulations (GHs)
    - > BUD also can act as regulator
  - **Charging differences**
- Identification of usage and user patterns
  - Manager-, Fleet-, Service-, Employee-, Tenant vehicles
  - Public Car parks Short-, Medium and Long Term Parking
- Establishing locations for e-chargers
  - electricity supply
  - parking space needs
  - user patterns
  - huge cost variation between alternatives







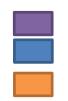






# GSE equipment charging and e-plug needs at the Airport

Airside GSE equipment charging
Passenger and Employee own car parking e-plugs
Company fleet car parking / Visitors e-plugs







#### Benchmarking the industry

- collecting market know-how and information
- □ alternative technical solutions for e-charging equipment
- Alternative designs for vehicle models
- □ Availability of vehicle models e-bus order time up to 1,5 years

#### Complying with relevant legislation

- □ EU, National but the legislation is to be created
- □ Security Service, etc. Vehicles has special requirements
- □ E-charging Permit
- OTÉK requirements vs. real needs

#### Complying with technical requirements and establishing minimum technical requirements

- ☐ Type2 or ChaDeMo?
- ☐ Fast charging is needed or 7,2 kWh?
- □ Open- or closed cell battery?











#### Creating a criteria system for technical equipment

16 questions: futureproof, reflects our needs, connectivity with future management and parking systems, rational solution in order to maximize usage of chargers, in house design or retail items, inhouse maintenance service



#### Establishing our own and tenant needs

- Individual metering, remote accessibility, RFID
- □ Different interests of e-charging equipment and software producers and retail suppliers and airports



#### Business models for e-charging

- □ Own fleet, manager cars
- □ Service vehicles
- ☐ Tenant vehicles
- ☐ Tenant financial needs











- □ Different models for each user group and usage pattern
- □ Framework contract, e-chargers and/or electricity supply?



- □ ADAC research, Prof. Barna Hanula
- □ Battery size, CO2, in-built kms, total life cycle
- □ Other alternative propulsion solutions (hidrogen, CNG, LNG, biogas, etc.)



- □ Research, pilot-, test projects
- Closed environment ideal for testing sensitive technologies











THANK YOU FOR YOUR ATTENTION!
KRISTOF BODA, GROUND TRANSPORTATION DEVELOPMENT SPECIALIST,
BUDAPEST AIRPORT
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### E-MOBILITY STRATEGY AT BUD



- Major differences between Landside and Airside needs
- Identification of usage and user patterns
  - □ Manager-, Fleet-, Service-, Employee-, Tenant vehicles
  - Public Car parks Short-, Medium and Long Term Parking
  - Establishing locations for e-chargers
  - Benchmarking the industry: collecting market know-how and information, alternative technical solutions
  - □ Complying with relevant legislation
  - Complying with technical requirements
  - □ Establishing our own needs
  - Creating a criteria system for technical equipment
  - Business models for e-charging
  - □ Budgeting the technical developments





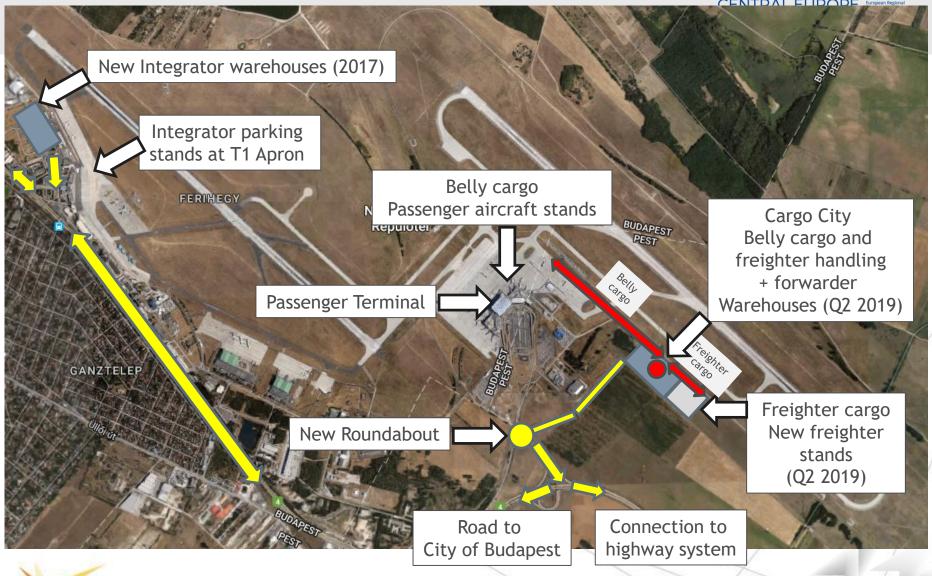


public credibility to the individual airports, increases brand reputation

- How and on what basis an Airport can decide about e-mobility development?
- What is the basis of their E-Mobility Strategies?
- What is the driving force? Stuttgart, Munich, etc.



# NEW BUD CARGO CONCEPT - OPTIMIZED CARGO CORERATION

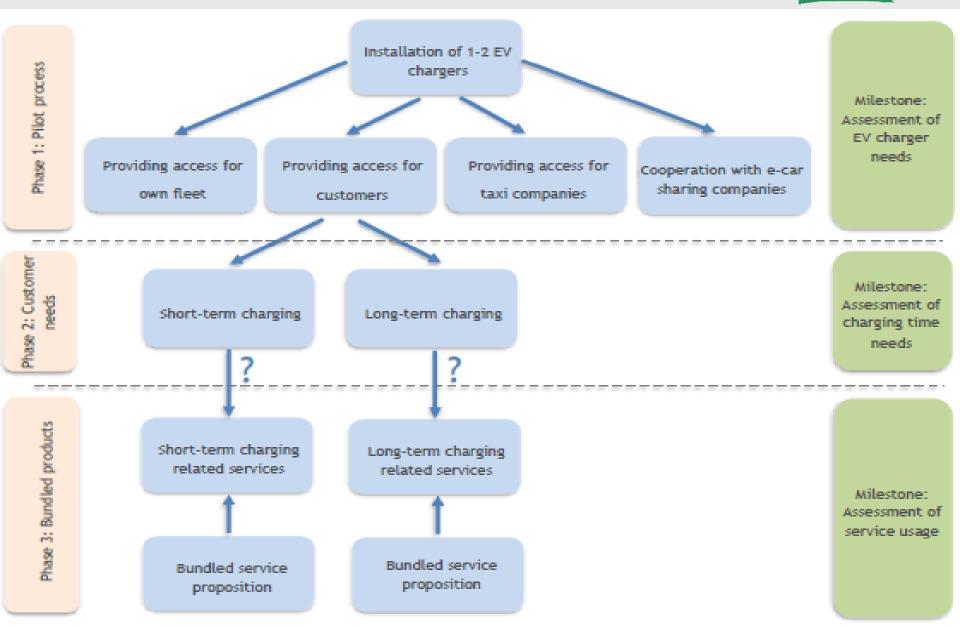




## E-MOBILITY DEVELOPMENT MILESTONES







#### We have identified 10 user groups for a potential charging network at LAirA Airports – (1/2)

		Technical requirement**	Fast charger**	Users, vehicle types	Method of statement	Special statement model
with BUD ov	Manager fleet	High- performance AC charger	Fast chargers are not necessary, EVs can be charged during the day (8- 12 hours)	BUD's employees, management, passenger cars used outside the airport area	Not transferred charging cost	No need to pay for the charging, but records shall be kept
	2BUD's support vehicles parking	High- performance AC charger	Fast chargers are not necessary, EVs can be charged during the day (8-12 hours)	Security (FBÖ), technical department, mostly passenger cars used within the airport area	Not transferred charging cost	No need to pay for the charging, but records shall be kept
	3 Guest parking*	Fast charger, DC	Few hours of stay, fast charger is necessary	BUD's guests, passenger cars	Not transferred charging cost	Verification of eligibility is required
	4 Authorities	High- performance AC charger	Fast chargers are not necessary, EVs can be charged during the day (8-12 hours)	Police, NAV etc., mostly passenger cars	Cost-based statement	Electricity metering
	GS	High- performance AC charger	Fast chargers are not necessary, EVs can be charged during the day (8-12 hours)	GS companies' staff, passenger cars and special GS vehicles (e.g. apron buses, forklifts, tractors) with own charging equipment	Parking fee and cost-based flat rate or overhead-based statement	Electricity metering



# We have identified 10 user groups for a potential charging network at LAirA airports – (2/2)

		Technical requirement**	Fast charger**	Users, vehicle types	Method of statement	Special statement model
Dedicated chargers with limited access	Integrators 6	Based on their special requirements.	Based on their special requirements.	Integrators' staff, trucks, vans, passenger cars	Cost-based flat rate or overhead- based statement	Electricity metering; the question of installing integrator-owned chargers
	7 Business partners' parking	Based on their special requirements.	Based on their special requirements.	Buses, taxis, rental cars	Charging fee- based statement	Electricity metering
Public	Paid, short- 9 term parking lots	Fast charger/Ultra fast charger, DC	Few minutes to a few hours of stay, (ultra) fast charger is necessary	Visitors on drop off/pick up trips, mostly passenger cars	Parking fee and charging fee-based statement	Tariff calculation; smart functions
	10 Paid, mid-term parking lots	Standard slow charger, AC	1-2 days of stay, fast chargers are not necessary	Passengers on short trips, mostly passenger cars	Parking fee and charging fee-based statement	Tariff calculation; smart functions
	Paid, long- term parking lots	Standard slow charger, AC	2+ days of stay, fast chargers are not necessary	Passengers on longer trips, mostly passenger cars	Parking fee and charging fee-based statement	Intelligent charging management; valet parking



#### Proposed allocation of charging stations at BUD









- Manager fleet
- BUD's support vehicles parking

- 7 Business partners' parking
- (8) Paid, short-term parking lots
- Paid, mid-term parking lots
- (10) Paid, long-term parking lots

#### Developing a more detailed strategy is needed along the following key points

Aspects	Conformity	Result of the review	Proposed next steps	Vision to be achieved
Market trends, policies	•	Market trends show that electric mobility will gain more and more ground in Hungary as well. Market players, including companies with different fleets and parking places, should respond quickly to this trend, which BUD has correctly recognized.	<ul> <li>Additional market research / assessment might be beneficial for a well established strategy and business model:</li> <li>Vehicle traffic forecast, charging behaviours</li> </ul>	<ul> <li>Following the example of other airports, BUD should also have a leading role in the field of electric mobility, while it might also reflect on the needs of the passengers</li> </ul>
Charger installation plan	•	BUD is well aware of the need to establish charging points with different functions in each parking lot, but more detailed plan is needed in order to the successful implementation.	<ul> <li>Preparation of feasibility studies</li> <li>Detailed charging installation plan adapted to user habits and the internal operation of the BUD</li> <li>Further calculations: charger installations by integrators, car sharing companies</li> </ul>	<ul> <li>By installing electric chargers, BUD will be able to meet not only the needs of its own fleet, but also the needs of its partners and passengers</li> <li>Further development of partnerships are possible</li> </ul>
Business model & strategy	•	There are several possible charging / parking models in the BUD area that require integrated e-mobility strategy and detailed business models for both B2B and B2C applications.	<ul> <li>Development of a more detailed strategy and action plan</li> <li>Development of differentiated business models for the different user groups</li> </ul>	<ul> <li>Integrated e-mobility strategy</li> <li>BUD applies appropriate pricing policy for each user group based on developed business models</li> </ul>
Legal requirements	•	Currently, there are no action plans how BUD would comply with current and future regulations of the Hungarian emobility market.	<ul> <li>Definition of regulatory areas where BUD has to comply</li> <li>Applying for a license for the operation of charging stations</li> </ul>	<ul> <li>BUD applies for the required licenses to install and operate charging stations</li> <li>Complies with all the regulations along the lines of a detailed action plan</li> </ul>
Technical requirements		BUD should define the specific technical requirements of the charging infrastructure, including connector types, user authorisation methods, payment, etc. Technical requirements should be aligned with the business models.	Compilation of technical specification prior purchasing, including supporting systems	Developing an advanced technical system that meets both the standards and business models
IT conception	•	BUD has not yet developed an IT concept and framework. BUD has installed an electric charger by PROLAN. PROLAN might be able to deliver complex solutions, however the required solution should be specified	<ul> <li>Compilation of IT back-end specification (PROLAN: OCPP;)</li> <li>Development of a detailed IT concept</li> </ul>	Developing a unified and up-to-date IT system that provides measurability and control and enables different business models





- ETP seminar, Vienna
  30 September 1 October 2019
- Landside Airport Accessibility (LAirA)
- Soóki-Tóth Gábor LP thematic expert

## **CONTENT**



Overall objective of project

**Focus Areas** 

What do we do?

Sharing knowledge and experience





### **OVERALL OBJECTIVE**





To reduce the carbon foot-print of transport activities related to the airports landside connectivity in Functional Urban Areas



### HOW TO REACH THE OBJECTIVE



#### **UNDERSTANDING**

The integration between airports and FUAs mobility systems is explored in form and educational approach in order to improve the capacities of public entities responsible for low carbonas mobility planning.

# **CHANGING BEHAVIOUR**

Intelligent Transport
System applications
are developed and
tested with the
purpose of
reinforcing behaviour
change and low
carbon travel
planning.

#### BUILDING STRATEGIES

Low Carbon landside mobility planning solutions are being mainstreamed within Functional Urban Areas



### MAIN OUTPUTS SHARED



Detailed analysis of participating airports FUA mobility integration and local strategies to improve low carbon mobility management

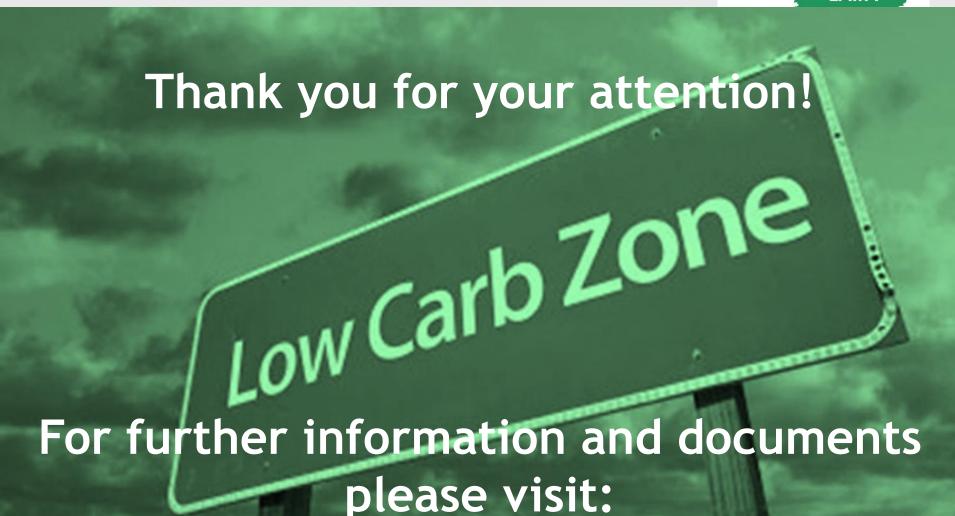
Thematic Action Plans and Education Handbook on electric mobility, air-rail links, soft and shared mobility, information technology systems, wayfinding and public transport

Passenger and Employee ITC mobility tools development and test results

Discussion Papers for EU Macroregional Strategies







https://www.interreg-central.eu/Content.Node/LAirA.html





- ETP seminar, Vienna 30 September 2019
- Regional cooperation metropolitan governance
- Soóki-Tóth Gábor LP thematic expert

### **CONTENT**



Functional Urban Areas

Airport Landside
Access
(Catchment
Area)

Urban Planning and Governance

Possible Scenarios for Cooperation





#### WHY STUDY FUAS?



"The OECD and the European Commission have jointly developed a methodology to define functional urban areas (FUAs) in a consistent way across countries. Using population density and travel-to-work flows as key information, a FUA consists of a densely inhabited city and of a surrounding area (commuting zone) whose labour market is highly integrated with the city (OECD 2012).

The ultimate aim of the OECD-EU approach to functional urban areas is to create a harmonised definition of cities and their areas of influence for international comparisons as well as for policy analysis on topics related to urban development."

https://www.oecd.org/cfe/regional-policy/functionalurbanareasbycountry.htm

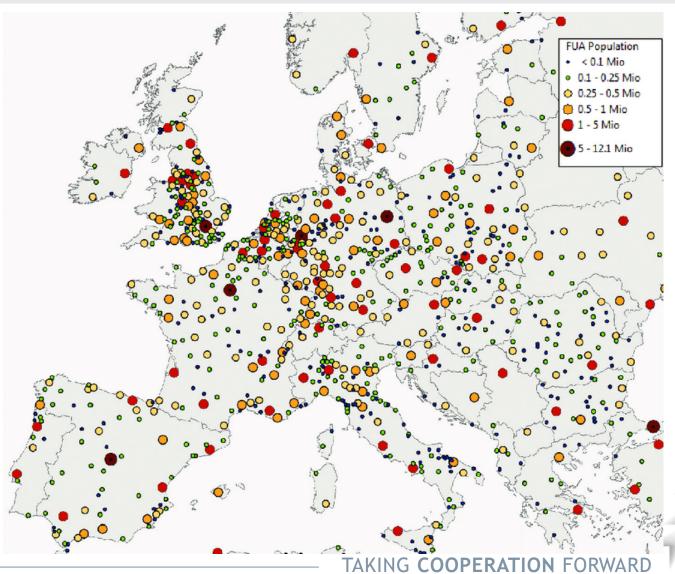
More details on the methodology:

https://www.oecd.org/cfe/regional-policy/Definition-of-Functional-Urban-Areas-for-the-OECD-metropolitan-database.pdf



# WHY STUDY FUAS?

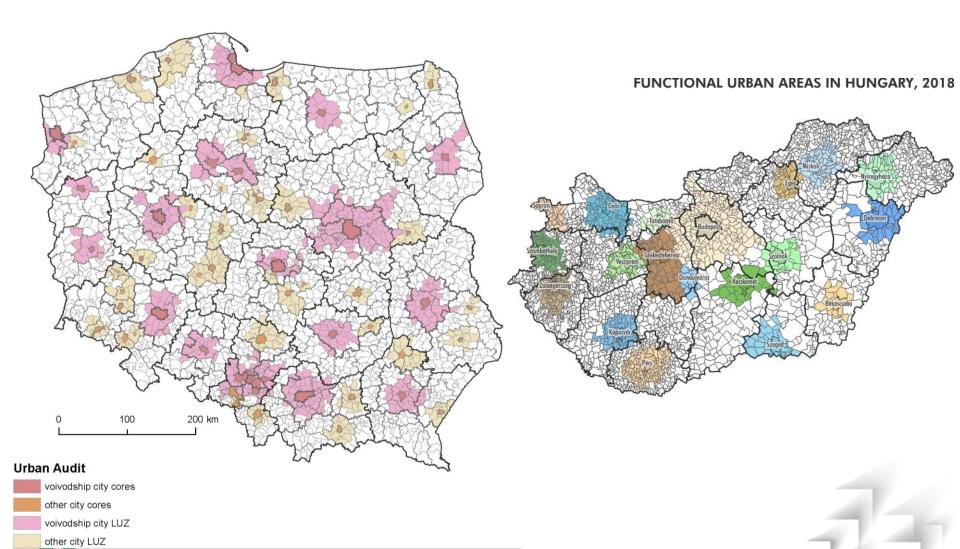






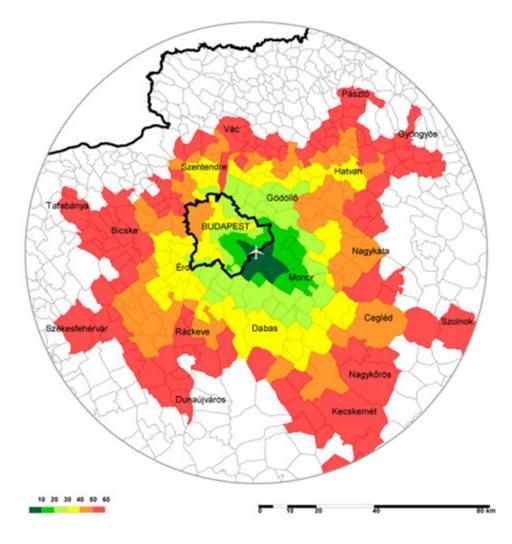
## WHY STUDY FUAS?





## **AIRPORT CATCHMENT AREAS**

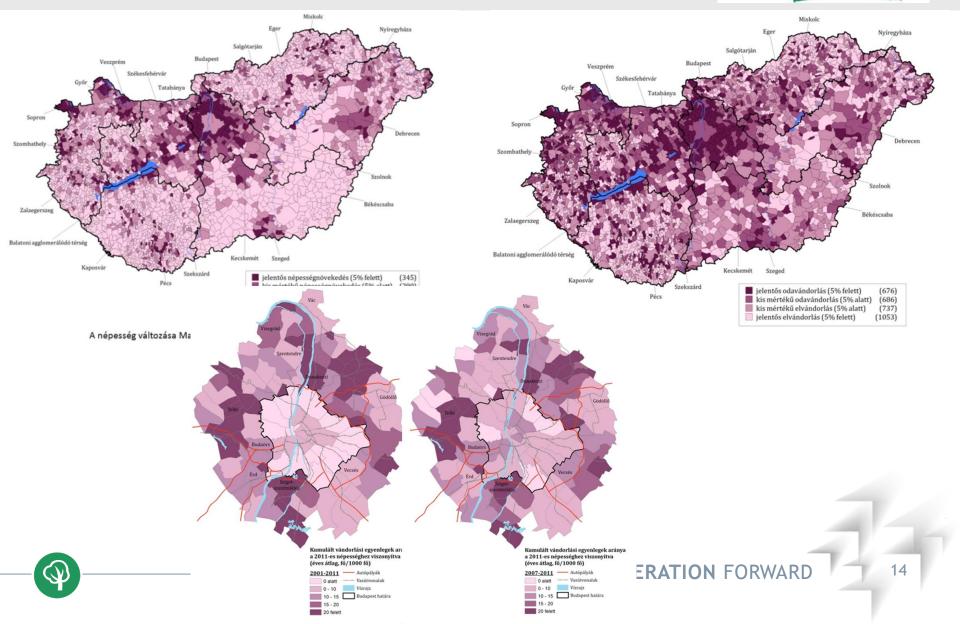






#### **AIRPORT CATCHMENT AREAS**



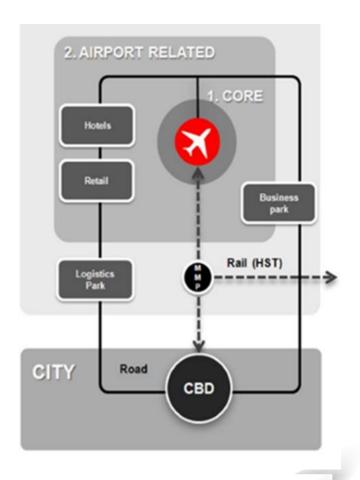


#### **URBAN DEVELOPMENT AROUND AIRPORTS**











#### **URBAN DEVELOPMENT AROUND AIRPORTS**

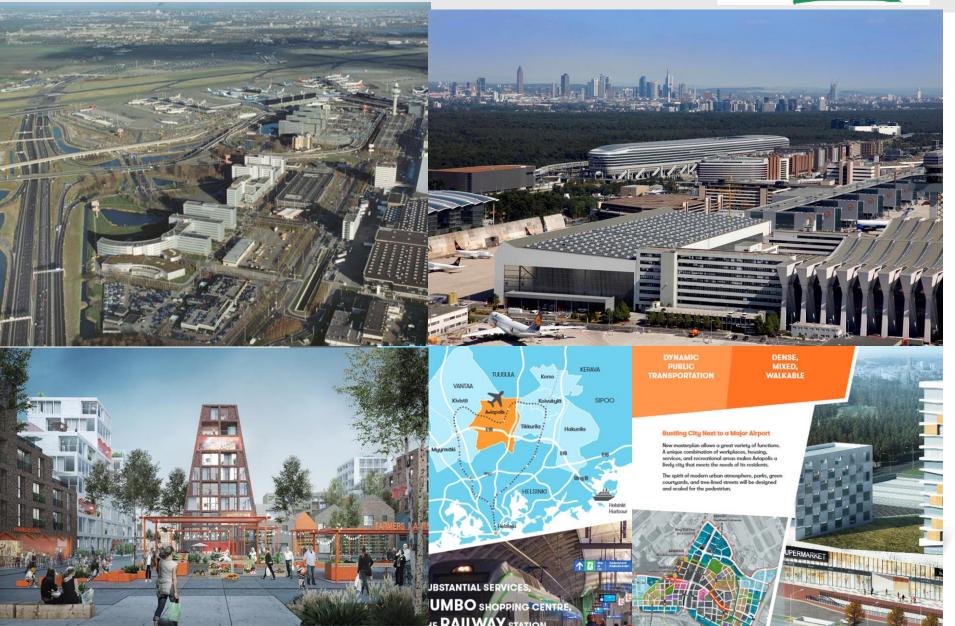






#### **URBAN DEVELOPMENT AROUND AIRPORTS**





## LANDSIDE ACCESS SUSTAINABILITY







# LAND USE AND MOBILITY PLANNING









#### **GOVERNANCE AND COOPERATION**

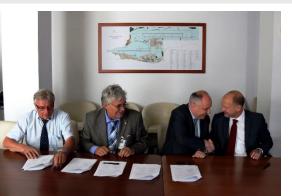


- Local partners: municipalities, airport operator, private sector companies
- Metropolitan partners: municipalities (metro or regional), public transport providers, infrastructure development and maintenance agencies
- National partners: ministries, national transport agencies, national infrastructure development agencies
- Long-term strategies / short-term investment programs
- Top-down and/or bottom-up
- Sectoral silos / communication gaps



# THE BUDAPEST AIRPORT REGIONAL **DEVELOPMENT CLUSTER**









#### **CLUSTER**





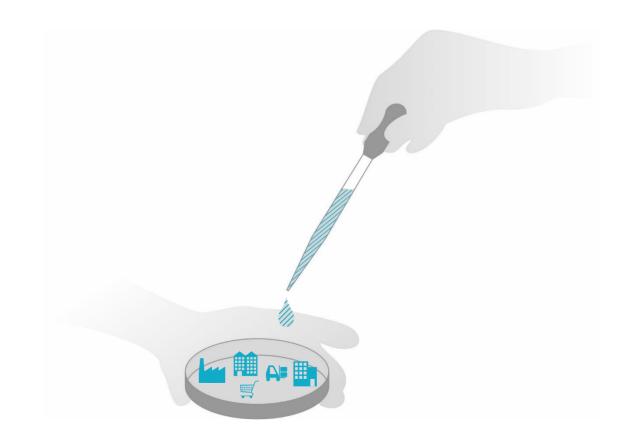














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# Thank you for your attention!



**BUDAPEST AIRPORT REGION** 



https://www.budcluster.eu





- LAirA Conference and Workshop
- Vienna International Airport, 30 September 1 October 2019
- Soft, active mobility
- 2





### THEMATIC FOCUS



- Environmental-friendly and people-friendly transport modes including any human powered (non-motorized) or partially motorized (e.g. electric) modes such as pedelecs, e-bike, e-scooter etc. and gaining multiple benefits to the users, and at environmental, economic and at society level.
- EU WHITE PAPER Roadmap to a Single European Transport Area Towards a competitive and resource efficient transport system
  - "facilitating walking and cycling should become an integral part of urban mobility and infrastructure design
- Key challenge:
  - ☐ Finding common intersections at airports for defining concerted actions in the functional urban area
  - □ Coordination: large employer with multiple companies on-site







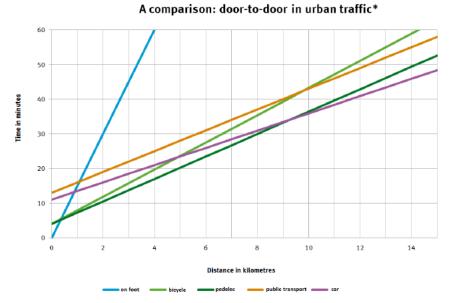


#### LIMITATIONS AND POTENTIALS



#### Each mobility mode has its own constraints and potentials

- □ Range
- Mobility needs
- ☐ Infrastructural possibilities
- □ Intermodality
- □ Weather
- □ Individual preferences
- □ Fitness
- Social pattern



\*An average speed is assumed for every mode of transport: on foot = 4km/h, bicycle = 15.3 km/h, pedelec = 18.5 km/h, bus/train = 20 km/h, car = 24.1 km/h. In addition, travel times to and from each travel mode were determined = shown on y-axis.



#### HAVE A VISION - PLAN AHEAD



# Infrastructural development - integration into the FUA pedestrian and cyclist network

- Revision existing urban development and master plan in the FUA of the airport;
- Enhancing multi-modal transportation with special focus on soft mobility modes in regional and urban SUMPs / mobility plans;
- Building main infrastructure corridors (network integration) for cycling and walking in the direction of the airport.









# SET UP OWN OBJECTIVES AND GOALS AT AIRPORT AND AT REGIONAL LEVEL



#### Short-term and medium-term (2025)

- Connect the airport in the local and regional pedestrian and cycling infrastructure in a barrier-free and safe way.
- □ Determine a noticeable share for active mobility users (e.g. walking, cycling, pedelec or scooter users) in the modal split of employees.
- ☐ Use a complex planning method for road and public transport development providing equal chances for all mobility modes including active mobility and put much emphasis on seamless multimodal accessibility of the airport.

#### Long-term (2030)

□ Increase the ratio of sustainable commuting modes to employees including public transport to 60%





# ENHANCE THE EXISTING INFRASTRUCTURE



Making the commuting easier and better is a key in making soft modes more attractive.

- ☐ Increase safety along the roads and at crossings
- ☐ Improve the quality of roads thereby increase the comfort of commuting e.g. barrier-free
- ☐ Give priority of equal chances to active modes (waiting time at crossingsetc.) comfort of bicycle and pedestrian roads, crossings (quality, waiting time etc.)
- Allowing the use of soft mobility and enhancing soft mobility infrastructure at the landside areas of the airports











# EXTEND THE INFRASTRUCTURE CONSCIOUSLY



# Complement existing infrastructural pedestrian and cyclist network

- Quality before quantity
- □ Provide real alternative
- Eliminate bottlenecks and facilitate seamless, barrier-free traffic
  - > Sidewalks
  - > Cycle highways, greenways
  - > Open-new connections
  - > City of short distances









### MIND YOUR WORKPLACE



#### Improving auxiliary infrastructure at the workplace

- ☐ In some aspects, human-powered modes may be less comfortable when arriving to the workplace due to the required physical effort.
- Creating changing and shower room for employees and providing them lockers
- ☐ Establishing safe parking facilities for bicycles and scooters etc. at a convenient distance from the workplace
- ☐ Making all pedestrian roads comfortable (short, solid surface)











#### THINK BEYOND THE INFRASTRUCTURE

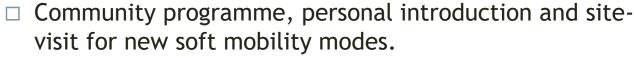


# Awareness raising activities, promotion of soft mobility modes

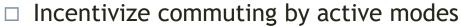
- Appoint a responsible person
   Active promotion of active mobility modes and the lifestyle



 Participation of major stakeholders e.g. airport in awareness raising activities of thematic days such as EU Mobility Week, Cycle to work campaign, Earth Day, etc.







- Establishment of community/corporate bike sharing system
- ☐ Create a mobility smart phone app for employees to track their achievement, routes to receive feedback
- ☐ Gamification





### WAYFINDING I.



#### **Amsterdam & Vienna**



#### Jump on your bike

If you park your bike at one of the three bike sheds at Schiphol, you can pick it up when you return and be on your way in no time. That's perfect after sitting still on the plane!

Getting to and from Schiphol by bike >









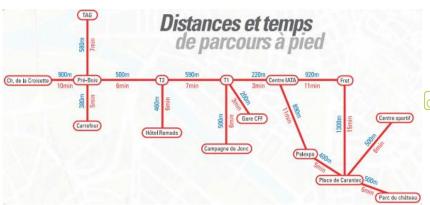
## WAYFINDING II.



#### Geneva



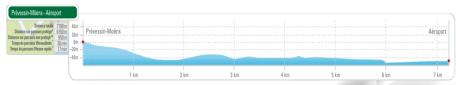
















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# Thank you very much for your attention!







#### SOURCES OF PHOTOS AND FIGURES



- www.kerekparosklub.hu
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- viennaairport.com
- Umweltbundesamt E-Rad macht mobil Potenziale von Pedelecs und deren Umweltwirkung, hintergrund // August 2014, https://www.umweltbundesamt.de/themen/verkehr-laerm/nachhaltige-mobilitaet/radverkehr
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- András Ekés,
- Antal Gertheis,
- Balázs Kozák



# Verkehrsverbund Ost-Region

# **Integrated Public Transport Vienna Region**

LAirA Conference and Workshop

Andreas Rauter October 2019



# Verkehrsverbünde -Public Transport Associations



## **Public Transport Associations in Austria**

	VOR	OÖVV	SVV	VVK	VVSt	VVT	VVV	Austria
residents	3,7 million	1,4 million	0,5 million	0,6 million	1,2 million	0,7 million	0,4 million	8,5 million
area	23.562,71 km <sup>2</sup>	11.980 km <sup>2</sup>	7.156 km <sup>2</sup>	9.538 km <sup>2</sup>	16.401 km <sup>2</sup>	12.640 km <sup>2</sup>	2.601 km <sup>2</sup>	83.879 km <sup>2</sup>
passengers	1,034 billion							
staff	~ 30.000							
lines	891		_	_				
stops	11.213	_	Oberösterreich (OÖVV)					
km per year	rail ~38 million	Obcrosterición (OO VV)						
	bus ~65 million							
	Wiener Linien ~135 million	1						
Vorarlberg (VVV)  Salzburg (SVV)  Tirol (VVT)  Kärnten (VKG)								
DER VERKEHRSV	/ERBUND		- Kaiiik	en (VKG)				

#### **Shareholders Verkehrsverbund Ost-Region (VOR)**

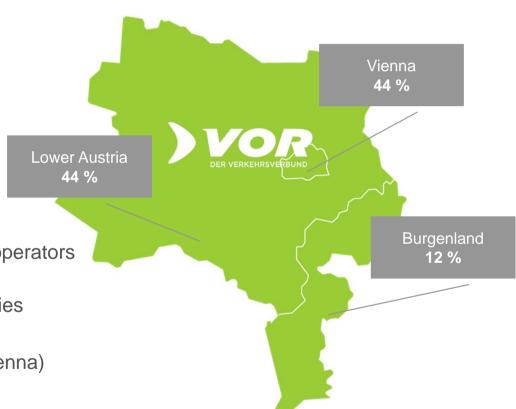
Founded in 1984

Shareholders:

Province of Vienna

Province of Lower Austria

Province of Burgenland





~ 40 regional bus operators



4 railway companies



1 urban traffic (Vienna)



# Forms of organization and partners

- **Limited Liability Company ("GmbH")**
- **Partners**



~ 40 regional bus operators



Niederösterreichische Verkehrsorganisationsgesellschaft



**ÖBB** ÖBB Personenverkehr AG



Raaberbahn AG



Wiener Linien Gmbh & CoKG



Wiener Lokalbahnen AG





### **History**

- 1974: First organisational preparations
- 1984: Start of the tariff integration for Vienna & railways
- 1988: Tariff integration of regional bus services
- 2010: Responsibility for PSO contracts for the railway
- 2012: Responsibility for all regional bus services
- 2016: New tariff structure "A nach B"
- 2020: Next PSO contracts for the railway



#### **Task Portfolio**

#### Shareholders

- Planning and management of end-to-end mobility (public transport)
- Procurement of transport services
- Research

#### Partners

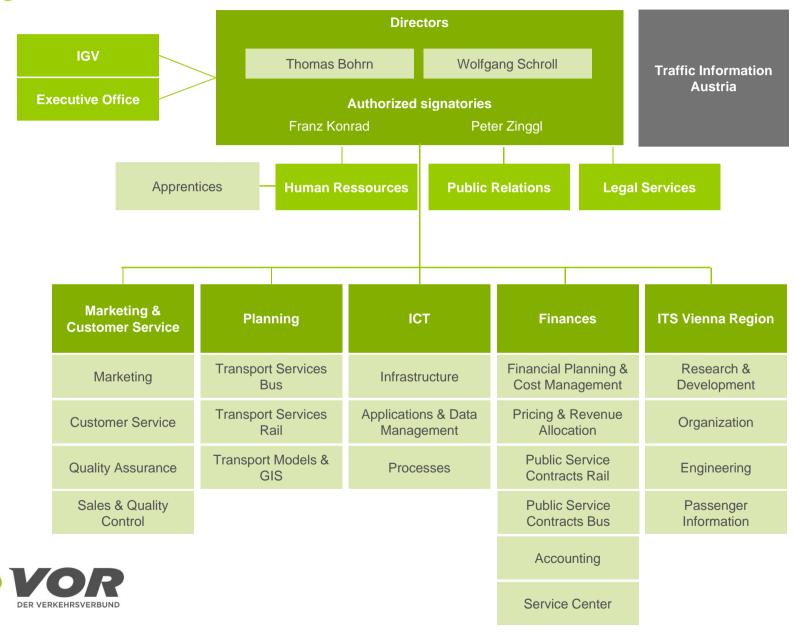
- Clearinghouse
- Public Service Contracts
- Planning

#### Customers

- Standardized and consistent pricing system
- Passenger information (VAO)
- Quality management and customer service
- Marketing and PR



#### **Organisation**



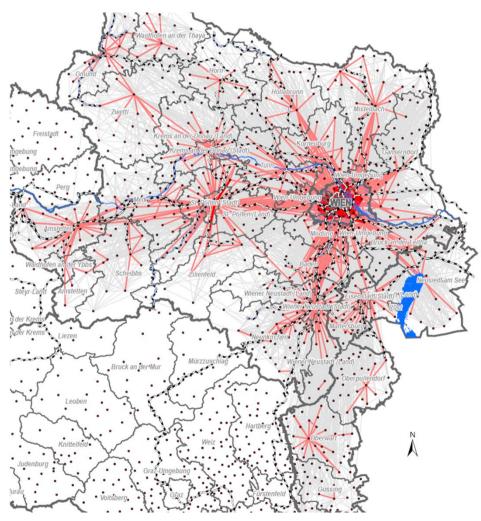
# Mobility in Vienna, Lower Austria and Burgenland



## **Megatrend Mobility & VOR**

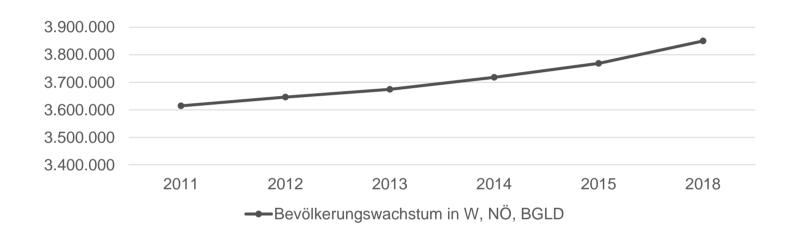
#### **Commuters including Vienna:**

- Eastern region one mobility area
- Commuter flow from and to regional centers
- Vienna and surrounding area as mobility hotspot
- Population growth





#### Population growth in Austria's Eastern Region 2011 - 2018





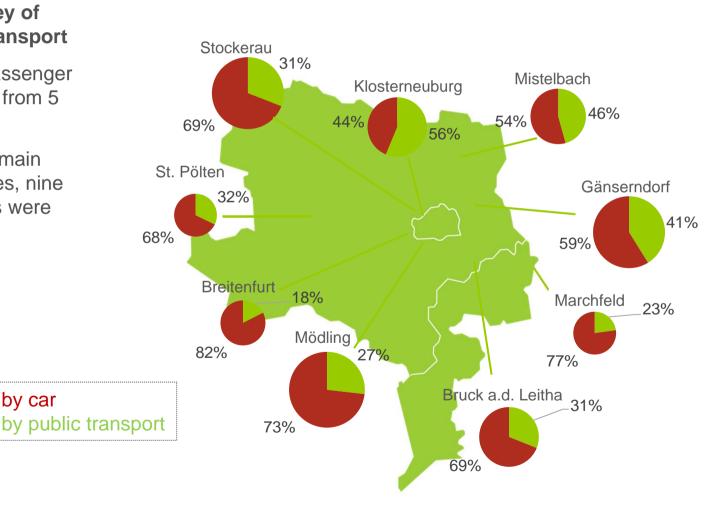
#### Choosing transportation in the surrounding area

#### **Cordon survey of** passenger transport

(Rush hour passenger transportation from 5 to 9 am.)

Based on the main transport routes, nine entry corridors were identified.

by car





# The simple way from A to B Pricing and Revenues

New VOR tariff system since July 2016



1984 - 2016:

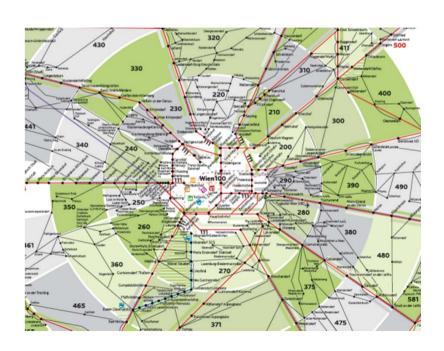
## one mobility area, two tariff systems!

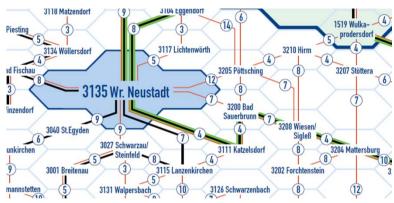


#### 1984 – 2016:

## one mobility area, two tariff systems!

- Complicated VOR zone system
- Numerous exceptions
- Cluttered zone plan with too many details





- VVNB honeycomb system
- Different fares for bus and train
- Integrated city rates in the VOR area (not in the VVNB region)

#### **Since 2016:**

## three provinces, one tariff system

- Relational fare: ONE fare from A to B
- Pricing according to route and distance travelled
- "Personal network" for season tickets



# **Jugend- and Top-Jugendticket** - a fair fare for younger people

- ca. 511,000 eligible students and apprentices
- more than 340,000 tickets sold throughout the school year 2014/2015
- 365 days 3 provinces €70

Nur € 60 für Wien, NÖ & BGLD

#### **Top-Jugendticket**









O Für wen?

Für SchülerInnen und Lehrlinge bis 24 Jahre

Wo und wann gilt das Ticket?

Auf allen Öffis in Wien, NÖ und BGLD von 1. Sept. bis 15. Sept. des Folgejahres

Wo bekomme ich das Ticket?



In Postfilialen, bei teilnehmenden Post Partnern und auf shop.vor.at







# Mobility & VOR









© P. G. Liebhart und Postbus

# Reorganization of the regional bus system





#### Calls for tender

= reorganization of the regional bus system

- New bus routes and timetables
- New buses
- New passenger information systems
- 20 regions until 2019
- 8 year intervals
- 65 million bus kilometers per year





## Calls for tender – reorganization process

- Censuses and surveys
- Legal tendering process (approx. 1 year)
- Alignment and harmonization within the region

Municipalities

Schools

Industry

- Alignment and harmonization with the transregional transport system
- Public Relations

Media activities

Customer information

Stakeholder information









#### Calls for tender – standardized buses

- Handicapped accessible buses
- Two information monitors for information on stop sequence,
   audio announcement of next stop
- Emission standards Euro VI
- Standardized bus design
- Multi-purpose compartment
- WiFi





## **Quality management**

#### Regular quality checks:

- Quality control for bus service and bus stops
- Passenger numbers / frequencies
- Passenger surveys
- Research on mobility (modal split, modal selection reasons etc.)
- Complaint management



# Public Service Contracts Railway







# Public Service Contracts (VDV) Relevant Authorities

# National Level

Public Service Contracts for the "basic service" in the railway sector (based on the service level of 1999/2000)

→ SCHIG

# Provincial Level

- Transport planning
- Public Service Contracts for railway services that go beyond the "basic service" provided by the national level
- → VOR has been made responsible for these topics (by its shareholders)



#### **Public Service Contracts with ÖBB**

#### Until 2010:

- Annual "GWL-Vertrag" with ÖBB at national level
- Additional contracts at regional level by "Länder"

#### Since 2010:

- PSO-contract "Verkehrsdienstevertrag" with ÖBB until end of 2019 at national level providing the "basic service" by SCHIG
- PSO-contracts with ÖBB at regional level providing "additional services" by regional authorities (e.g. VOR)
  - ⇒ Clear definition of services in all contracts
  - ⇒ Net contracts with bonus-malus
  - ⇒ Several contracts by authorities at different governance levels



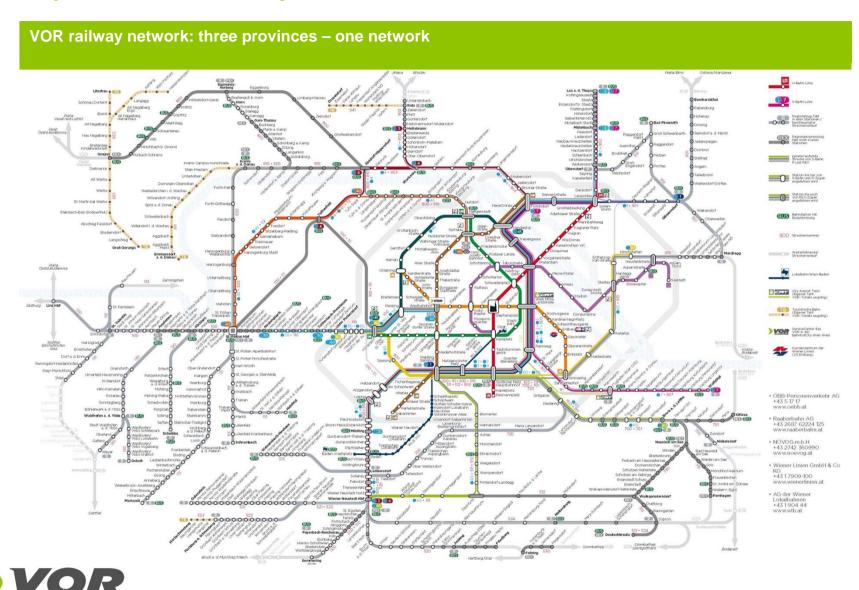
# Development of the Railway Services







#### **Development of the Railway Services**



## Activities of VOR as a competent local authority

Timetable planning / annual adjustments:

- Timetable concepts short-term
- Performance verification & Quality management

#### Strategic development:

- Infrastructure needs assessment
- Service concepts mid-term & long-term
- Strategy
- Quality
- Implementation

#### Challenges:

- Urban agglomerations capacity
- Rural areas basic services
- Connections railway bus
- ⇒ Additional knowledge required
- ⇒ Additional human resources required



#### **New Public Service Contract "VDV Neu"**

- New contract from 2020 for a period of 10 years
- ~ 37 mio. trainkm/year within the VOR area
- Additional rolling stock
- Additional services
- Timetable development
- Infrastructure development
- One contract for the entire rail service in the region by SCHIG





# **VAO & VOR Services**

VAO: Traffic Information System Austria



What is VAO

# **Traffic Information System Austria**

#### provides traffic-related services which are

- multimodal
- high-quality
- Austria-wide coverage



#### → Routing (route planner) for various means of transport

- Public transportation (train, bus, underground,...)
- Walking (foot path)
- Bike+Ride (including bicycle transport)
- Park+Ride
- Kiss+Ride
- Road (motorized individual traffic)



## **Traffic Information System Austria**

#### External data source

- Public transportation timetables
- Stations and connecting points
- Intermodal graph (GIP Graph Integration Platform)
- Traffic messages
- Level of service data (for major freeways and highways)
- Addresses in Austria
- POIs
- Park+Ride and other parking facilities
- Short-term parking zones
- Bike rental stations





Basis for VOR | AnachB Trip Planner

#### **VOR AnachB Trip Planner**

- mobile and multimodal transport information
- available at anachb.vor.at and as app
- Basis: Traffic Information Austria (VAO)



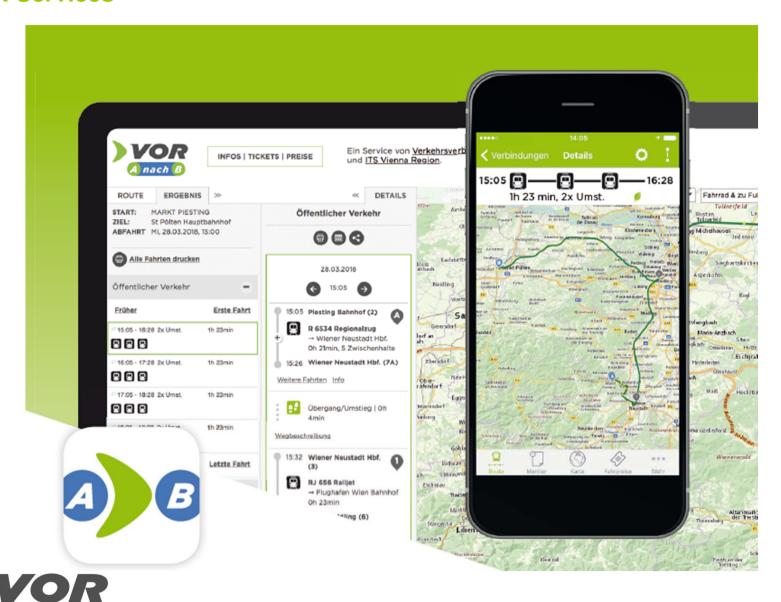
#### What does the VOR AnachB trip planning tool have to offer?

- countrywide planning tool with pricing information
- current traffic information
- realistic travel time comparison

- environment check (CO<sub>2</sub> emissions)
- monitor: departures and arrivals
- "ÖV Mobility Radar": availability of public transport options within a radius of up to 20 minutes



#### **VOR Services**



# Mobility as a Service

Car/Bike Sharing Ride Sharing Cooperative Systems Micro PT

Autonomous Driving Integrated Ticketing E-Mobility





# Thank you.

We are happy to answer your questions.

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www.vor.at







VIENNA INTERNATIONAL AIRPORT 01.10.2019

LAIRA CONFERENCE AND WORKSHOP ON IMPROVING
LANDSIDE ACCESSIBILITY OF AIRPORTS IN CENTRAL EUROPE





## **AGENDA**



Sharing Mobility
Overview

Sharing Mobility in Austria

Sharing Mobility at Airports



## **SHARING MOBILITY - OVERVIEW**



"Sharing Mobility is the organized use of mobility services or vehicles by several people on the basis of a framework agreement."

- Passenger Cars & Vans
- Bikes & Cargo Bikes
- E-Scooters
- Rides
- Parking lots, ...



© Nikolaus Walter



# **SHARING MOBILITY - OVERVIEW**



## Forms of organization:

- B2C, B2B
- P2C, C2C

#### Forms of offers:

- Station-based
- Free-floating

## **Additional Services:**

- Carpooling / Ridesharing
- Ridesourcing
- Rideselling



© Thayaland



## SHARING MOBILITY - OVERVIEW



## **Economical Effects**

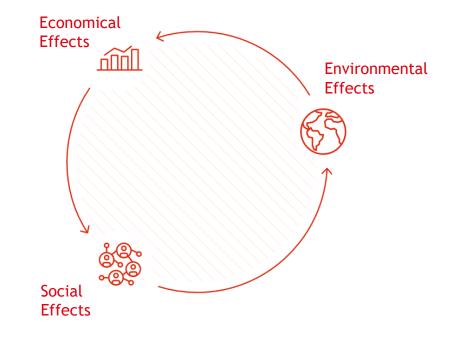
- Cost reduction
- More efficiency & utilization
- Reduction of vehicles

## **Environmental Effects**

- Reduction of emissions, energy and resources
- More aware of usage

## **Social Effects**

- Inclusive offer (affordability)
- Get-together
- Saving time









77 services in 236 municipalities

**58 M.** Carsharing kilometres/a

**0.12%** of all kilometres in AUT

**61.500** users in AUT

0.71% of all inhabitants are users

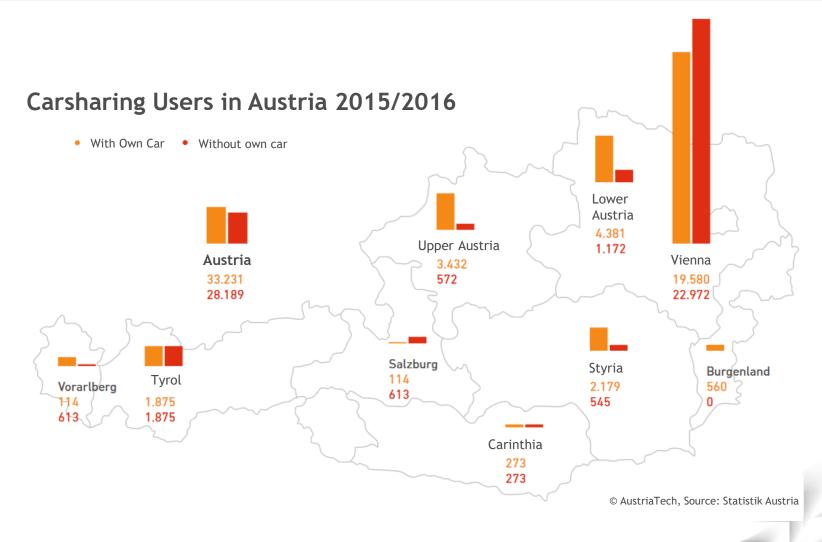
69% of all users are in Vienna



© Caruso Carsharing

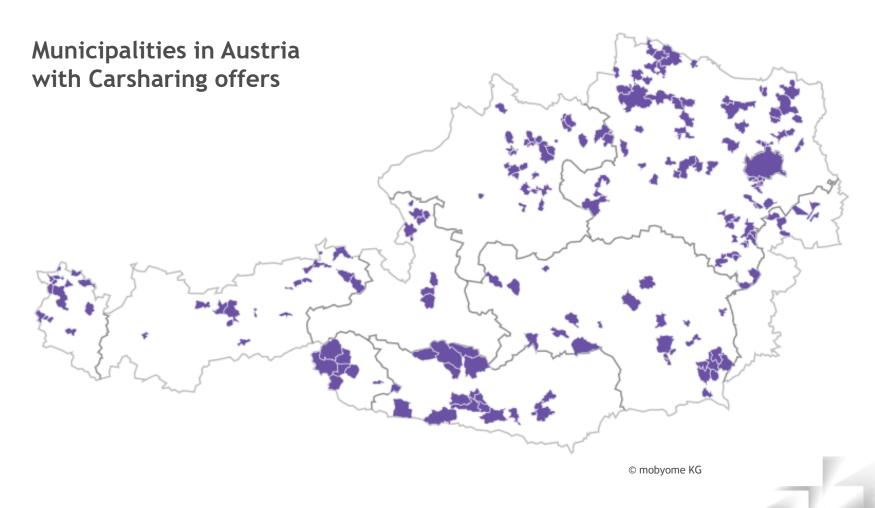










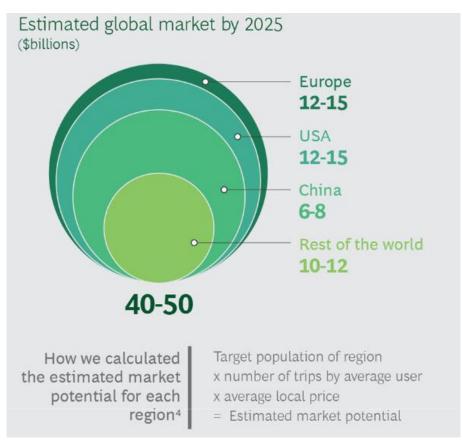






## **Austria:**

- 11 providers in 7 cities (August 2019)
- Chances for cities
  - Additional mobility offers
  - Less traffic jams
  - First/Last Mile
- Risks for cities
  - Safety issues
  - Public space
  - Data Security



© Boston Consulting Group





# Shared Mobility Action Plan in LAirA

Within the LAirA context we cover: shared vehicles (motorised, non-motorised)
and rides that are either commercial or privately organised and operated
station-based or free-floating



https://de.wikipedia.org/wiki/Datei:2011-08-18\_Frankfurt\_am\_Main\_Fahrradverleih\_Nextbike\_Hbf.JPG (10.9.2018)



https://www.bmwgroup.com/de/marken/now-mobilitaetsdienstleistungen/drivenow.html (10.9.2018)



https://www.climbonmarswiese.at/mitfahrboerse-flinc-marswiesen-gruppe/ (10.9.2018)





# Goals & Key Actions

#### **GOALS**

- Increase the share of employees and passengers using shared mobility offers (esp. in regions with weak public transportation network/connections/areas of low demand)
- Increase of travelled kilometers in vehicles occupied with >1 person (to/from the airport)
- Expand commercial car-sharing parking spaces at the airport when/where needed (in time)
- Engage employees for paring up for commuting to/from the airport
- Motivate employees (and where feasible passengers) for commuting by bike to/from the airport

#### **KEY ACTIONS**

(1) Establishment of (commercial)car-sharing services



- (2) Implementation/promotion of bike-sharing services
- (3) Promotion of (informal) ride-sharing services/platforms for employees





# Car-Sharing at Airports

Airport	Provider
Vienna International Airport	Car2go, DriveNow
Stuttgart Airport	Car2go
Milano Malpensa Airport	E-vai
Milano Linate Airport	Car2go, e-vai
Amsterdam Schiphol Airport	Car2go
Airports Berlin (Tegel, Schönefeld)	Car2go, DriveNow, MILES
Bromma Stockholm Airport	Car2go, DriveNow
Brussels Airport	Zipcar, DriveNow
Düsseldorf Airport	Car2go, DriveNow





# Car-Pooling at Airports

Airport	Provider
Budapest Airport	BeeRides
Vienna Airport	Drive2VIE
London Heathrow Airport	Liftshare
London Stansted Airport	





# LAirA Pilots and Awareness Campaigns on Car Pooling

Airport	
SEA Milan Airports - Linate Airport, Malpensa Airport	IT tool
Budapest Airport	IT tool
Mazovia Airport	IT tool
Dubrovnik Airport	Awareness Campaign
Poznan Airport	Awareness Campaign
Stuttgart Airport	Awareness Campaign



## **SHARING MOBILITY**



# Questions & Answers





## CONTACT





DI Thomas EBERHARD

AustriaTech - Automated & Clean Mobility



thomas.eberhard@austriatech.at



+43 1 26 33 444 - 11 | +43 676 431 53 55



www.interreg-central.eu/laira



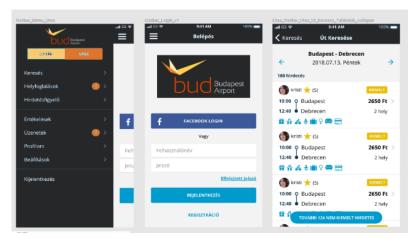


- Vienna SC Meeting
  29. September 01. October 2019
- BUD-Oszkar: Employee Ride-Sharing Application
- LAirA | BUD PP2 | Kristof Boda

#### EMPLOYEE RIDE-SHARING IT APP. DEVELOPMENT



- Car-Sharing vs. Ride-Sharing
- BUD has successfully contracted Oszkar.com in August 2019
- 2 Bids have arrived but very varied price and very different IT architecture
  - Oszkar, Cabsolutely, BeeRides
  - BeeRides has not responded to multiple requests
  - Oszkar become the winner due to the offered services and price, as well as experience in similar employee ride-sharing schemes



- 4 pillars of the pilot activities:
  - □ ride-sharing platform
  - specific communication and awareness raising campaign for airport employees
  - company policy initiative
  - □ good locations for the map

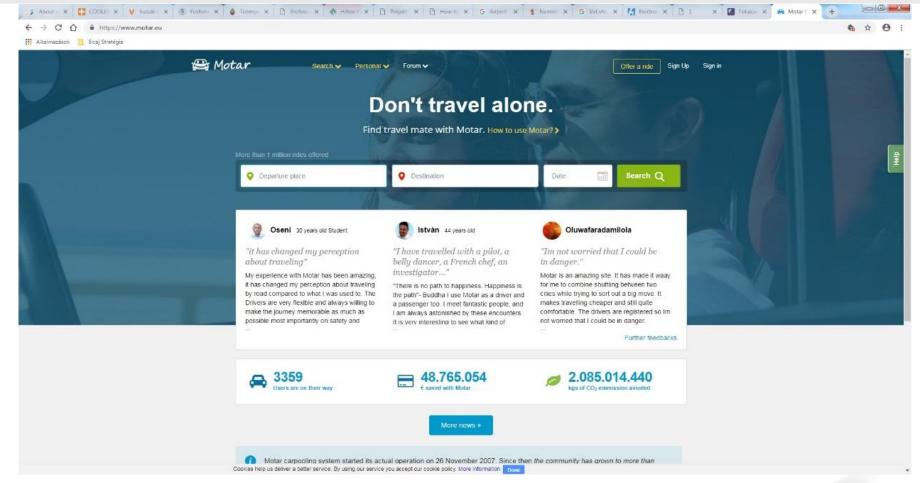




### OSZKAR.COM / MOTAR.EU







- Motar (MOre Tan A Ride) since 2007
  - easy travel search, reduce costs and protect the environment

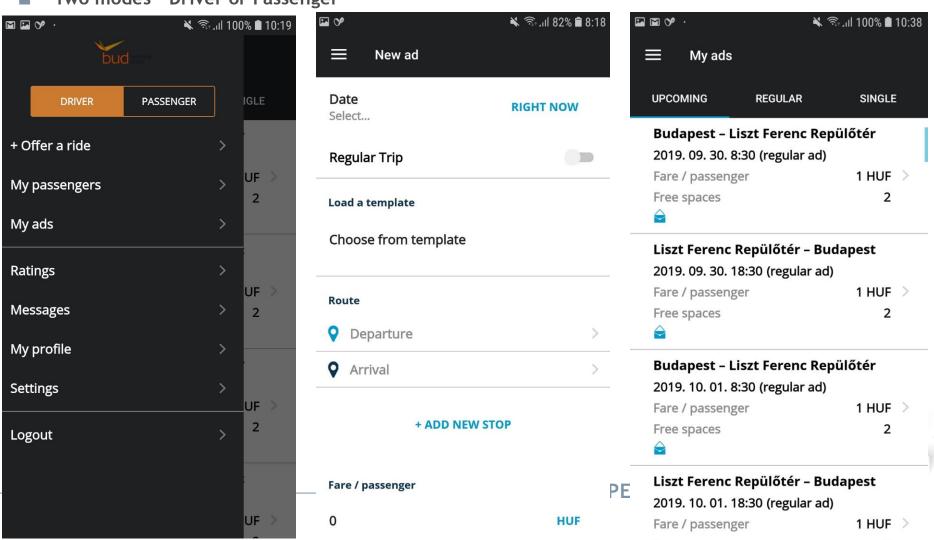




### **BUD-OSZKAR IT APP: DRIVER MODE**

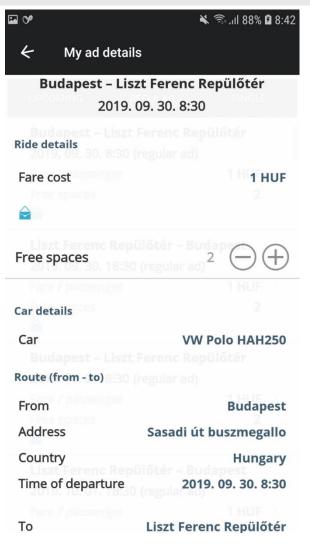


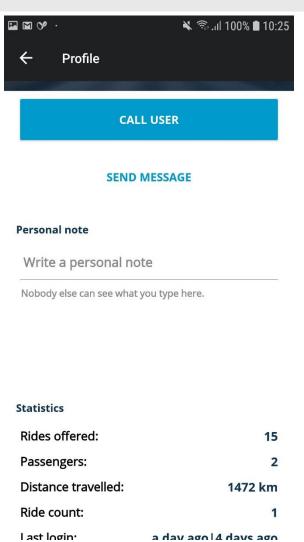
- IT App. can be downloaded at https://play.google.com/store/apps/details?id=com.zenheads.oszkar
- Idea, functions, etc. are the same as of the webpage
- Two modes Driver or Passenger

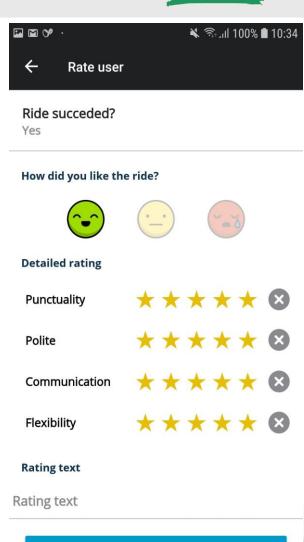


## **BUD-OSZKAR IT APP: DRIVER MODE**









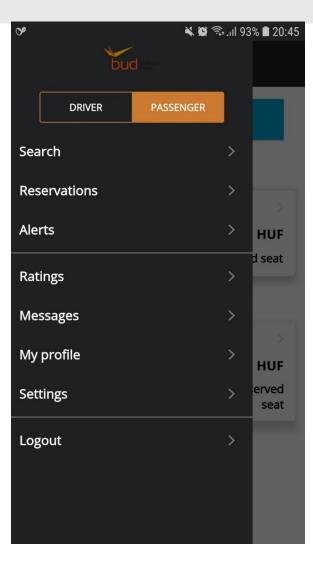
SEND RATING

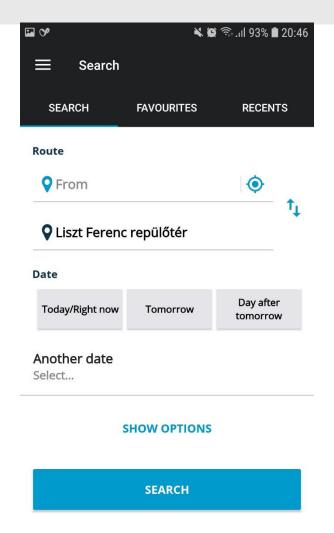




#### **BUD-OSZKAR IT APP: PASSENGER MODE**







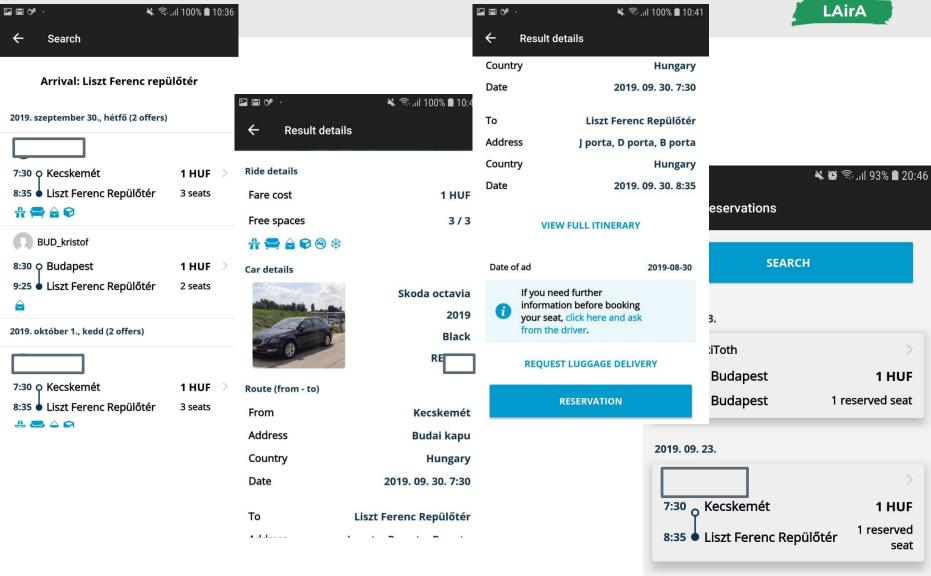






## **BUD-OSZKAR IT APP: PASSENGER MODE**









## **OSZKAR - COMPANY RIDE-SHARING**



Besides internet users, Company Partners since 2016

2016 WebEye strelematics of

2016

2018

Medical Firm at Szolnok (HU)

Large Energy Company at Budapest

2019 Inter



BUD - PP2

bud Budapest Airport









#### **INDICATORS**



#### **Quantitative indicators**

- Number of users (active, passive, "one-hit-wonder")
- Vehicle occupancy rate
- □ Frequency of use
- □ CO2 savings
- Tier 1 Methodology of EEA described in the Air pollutant emission inventory guidebook 2016

#### **Qualitative indicators**

- User experience on
- □ Accessibility
- □ Usability
- Availability on (personally)
   Relevant information
- Reasons for usage / nonusage
- Reasons for non-usage (in case a user registered, but not active)



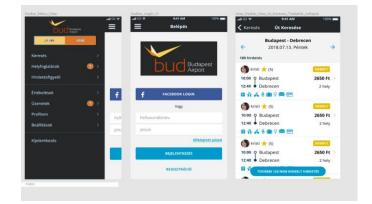
CALL USER

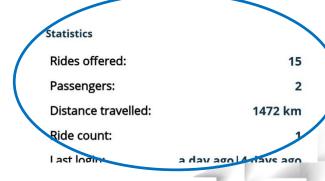
SEND MESSAGE

Personal note

Write a personal note

Nobody else can see what you type here.





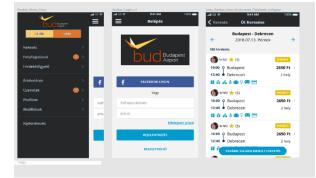




#### EMPLOYEE BENEFIT SYSTEM FOR RIDE-SHARING



- Critical balance of nr. of drivers and passengers
- Company benefit system is a MUST for a successful motivation of employees
- Company kind and size, existing benefit systems are key factors in choosing the right tools for employee motivation
- Various solutions:
  - Dedicated Parking Space closer to entrance (at Terminal 2)
  - ☐ Indirect payment: new tire set, free service at BUD partner
  - Direct Payments had been rejected
  - □ Employee competitions: offered the most travels during the month, travelled the highest distance, etc.
  - □ Prizes, cupons
  - Annual BUD Awards Gala: New Award for the user travelled the most and/or transported the highest nr. of passengers







# RIDE-SHARING PLATFORM AWARENESS CAMPAIGN

- BUD Communication Team and Oszkar are working together
- Communication tools:
  - □ BUD Weekly newsletter distributed through e-mail, message boards on office corridors and in hard copies
  - ☐ BUD Employee Facebook Group (closed group) Social Media Posts and Pictures
  - □ Company e-mail
  - ☐ Guerilla videos (script)
  - Communication releases at the main stages of the Pilot
  - BUD-Oszkar Ambassadors videos, helping and spreading info among colleagues, leading role
  - User feedback channel at dedicated email box
  - ☐ Users can suggest to add more airport locations
  - □ Poster
  - ☐ How to Ride-Share Guide









## INDUL A BUD OSZKÁR! Csatlakozz Te is!



Tegyélakörnyezetünkért, utazzegyütt másokkal!



Regisztrálj a www.bud.oszkar.hu-n és töltsd ki a profil lapod!

Fel tudnál venni valakit?
Hirdesd meg az autódban lévő
szabad helyeket!









Szívesen csatlakoznál valakihez?

Keress utat az autós hirdetések között!

VEGYÉTEK FEL A KAPCSOLATOT, TALÁLKOZZATOK, ÉS UTAZZATOK EGYÜTT!







# UPSCALING EMPLOYEE RIDE-SHARING IT APP. AMONG BUD AIRPORT PARTNERS



- BUD is making efforts to upscale the Employee-Ride-Sharing Scheme to our airport partners
  - ☐ Greenairport-LAirA Meetings: BUD provides information about the project and app. development + testing
  - □ AVIS, DHL is interested, SPAR also difference in commuting of employees









#### THANK YOU FOR YOUR ATTENTION!

KRISTOF BODA, GROUND TRANSPORTATION DEVELOPMENT SPECIALIST, BUDAPEST AIRPORT KRISTOF.BODA@BUD.HU









- Vienna, 30.09.2019
- Awareness raising campaign for employees
  - City of Poznan

## IDEA



Instead of running a traditional advertising campaign among the airport employees, we wanted to involve them in creating ideas for reducing their own ecological footprint through daily commuting. That way they could feel responsibility for their choices and find out about the benefits of changing the way they commute to work.

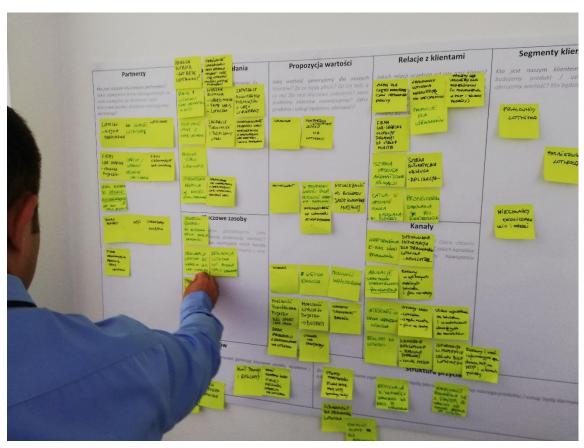


Source: www.inzynieria.com



## **BMC WORKSHOPS**





We've organized one-day
workshops led by
professional moderators and
experts. With our help during
these workshops employees
created Buisness Model
Canvas

Source: own photography



## **BUSINESS MODEL CANVAS**



**Key Partners** 



#### **Key Activities**



#### Value Propositions





#### **Customer Segments**



- Who is our key partner?
- What external companies or organizations are necessary for us to operate?
- What are the key resources and activities of our partners?

- What actions do we need to take to deliver value to our customers?
- What actions do our customer-facing channels require?

#### Key Resources



- What resources do we need to offer our value proposition?
- What resources do our customer reach channels and relationships require?

- What value do we generate for our customers?
- What customers will pay for?
- What is the customer's problem and what is the key for them?
  - What customer problems do we solve?
- What products and services will we offer?

#### Customer Relationships



- What kind of relationships do our customers expect from us?
- Do they expect personal support or maybe fast and automatic service?

#### Channels



- Where are our customers?
- Where do we want to meet our customers?
- What channels will we use to contact. our customers?

- Who is our client?
- Who do we build the product/service for?
- To whom do we offer value?
- Who will pay?

#### Cost Structure







- What are the costs of our business model?
- What financial outlays are generated by key resources, activities and partners?

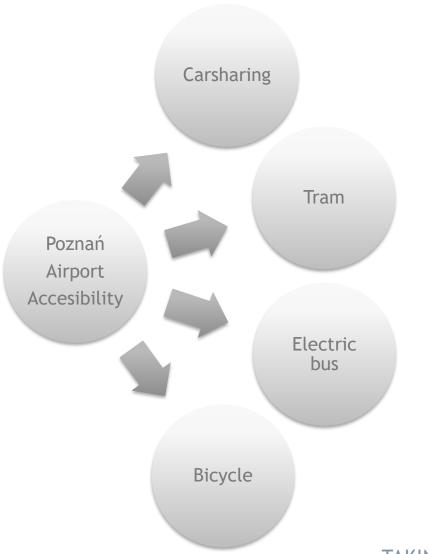


- What are customers willing to pay for?
- What will they pay for and how much?
- Which elements of our product/service will be free and which elements will be paid for?

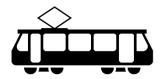


## **HOW TO GET TO THE AIRPORT?**









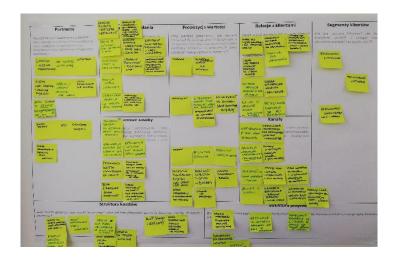


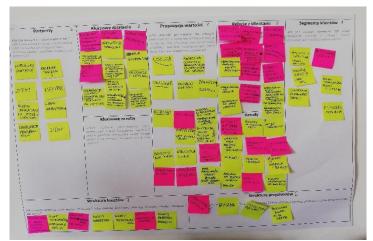




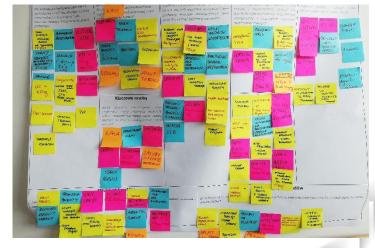
### **RESULTS**













### **RESULTS**

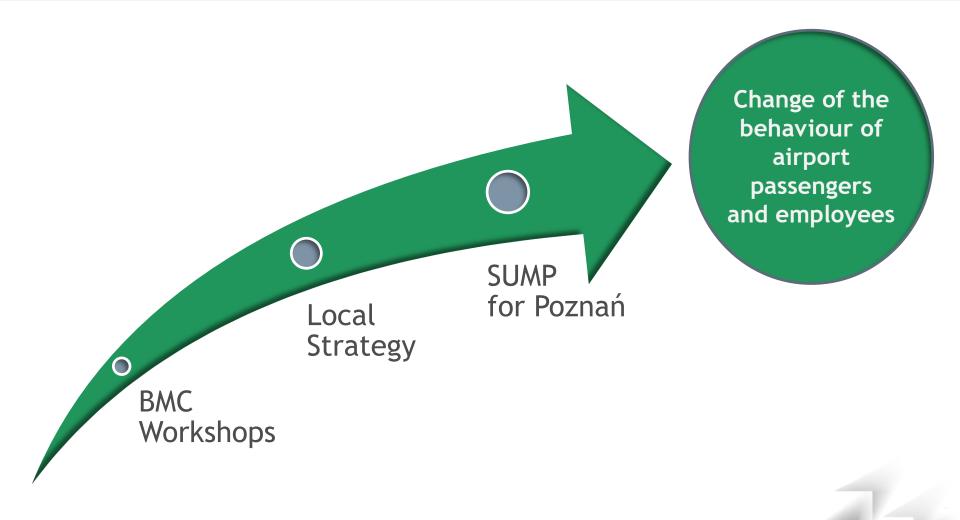


	Electric Bus	Poznan City Bike	Tram	Carsharing
<ul> <li>Cost of implementing the solution</li> <li>The level of difficulty of the solution (implementation speed, resources, procedures)</li> </ul>	3 3	2	4 4	1 2
Social impact	2	3	1	4
<ul> <li>Environmentally friendly (impact on emissions reduction, noise, etc.)</li> </ul>	1	2	3	4
<ul> <li>Flexibility of the solution (possibility of pilotage)</li> </ul>	3	2	4	1
Number of potential users	2	3	1	4
<ul> <li>Territorial scope of the service</li> </ul>	2	3	1	4
<ul> <li>Image effect for the city and the airport</li> </ul>	1	3	2	4
<ul> <li>Flexibility of the solution (possibility of transporting luggage)</li> </ul>	2	4	3	1
<ul> <li>Relationship potential with partners (how easy will it be for us to get along with partners)</li> </ul>	3	1	4	2
Total Score	22	24	27	27



### **CONCLUSIONS**







### City of Poznan





Martyna Kąkalec

Mobility and Transport Policy Department

Office for Coordination of Projects and Revitalization of the City of Poznan

 $\times$ 

martyna.kakalec@um.poznan.pl lairapoznan@gmail.com



+48 061 878 50 38











- Vienna
  30 September, 2019
- Final Report Dubrovnik Airport
  - Josip F

### CONTENT



Employees Evaluation framework

Context

Actions

Final media report

Recomenda tions and conclusions



### CONTEXT



### CONTEXT

The overall objective of the project is to reduce energy consumption and ecological impacts of transport activities at airports and in their wider surroundings.

The specific objectives include the following:

- Changes in mobility behavior patterns of passengers and the airport's employees by creating innovative strategies of public authorities regarding planning of low exhaust emission mobility.
- The set ecological goals in the following period



### **ACTIONS**



 The main message of the campaign is raising the environmental consciousness of employees / passengers, and providing them with information on what they can do to reduce the harmful effects of travelling by car.

The first phase of the campaign includes the realization project "Bike to work" which represents an awareness-raising campaign for employees about environmentally conscious ways of travelling to work and reducing motorized traffic as well as achieving energy efficiency. The campaign includes promo activities of providing a cycling equipment to a local bicycle club. Airport employees are members of the bicycle club.



# **ACTIONS - COMMUNICATION ACTIVITIES**



- Communication mix:
  - 1. Print
  - 2. Broadcast (Video)
  - 3. Events / Promo activities
  - 4. Digital media (Social Media and Web page)
  - 5. PR activities
- Good awareness on the project activities on the local level
- Final Report providing a comprehensive picture of the report, including its context, methods and evidences of project monitoring
- Project implementation period: June 28 August 28 2019.



### **ACTIONS - EVALUATION METHODS**



- ANALYSIS OF DOCUMENTS (COMMUNICATION STRATEGY, HOMEPAGE)
- Analysis of articles / reports (press, TV, internet, social media)
  - > PUBLIC RELATIONS AND PUBLICTY Media coverage for the project
  - PRESS RELEASES which will serve to present project progresses
- Analysis campaign "Bike to work" with airport employees and members of the local bicycle club.
- Communication directed at younger groups on social networks



### **ACTIONS - EVALUATION METHODS**



- Campaign "Bike to work"
- The campaign was very successful in getting employees to try cycling
- Benefits of cycling:
- > Environmental Benefits
- > Health Benefits
- > Econimic benefits
- > Transport benefits
- Social benefits
- > Personal benefits
- The campaign was mainly marketed on media, which seemed the most efficient way to reach the target market.





1.1. evidence of project monitoring - Digital (internet)



#### VIJESTI

11.08.2019 u 08:15

#### Zračna luka Dubrovnik organizirala druženje s članovima Biciklističkog kluba Konavle











U Zračnoj luci Dubrovnik članovi projektnog tima LAira predstavili su ključne smjernice i ciljeve projekta LAira, te su tom prilikom



#### Iz teme



Napustio nas je Davor Grbić, veliki čovjek i "mali" hrvatski branitelj



VIJESTI

Dr. Pero Kolić ima novo radno mjesto i vrijeme u Konavlima



VIJESTI

Dubrovačka profesorica sve je rekla u nekoliko rečenica...



VIJESTI

Članovi Spasilačkog kluba "Neptun" ostvarili veslački rezultat karijere





U Zračnoj luci Dubrovnik članovi projektnog tima LAira predstavili

su ključne smjernice i ciljeve projekta LAira, te su tom prilikom

Podsjetimo, LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko-

promjenom obrazaca ponašanja mobilnosti putnika i zaposlenika zračnih luka.

Današnji događaj pod geslom "Biciklom do posla" još jednom nas je podsjetio kako velika

ugljične mobilne integracije zračnih luka. Cilj projekta je smanjenje upotrebe energije i

ekoloških utjecaja transportnih aktivnosti u zračnim lukama i njihovom okruženju, i to

ovisnost o korištenju automobila dovodi do zagušenja prometa, ali i fizičke neaktivnosti,

što društvu nameće izravne i neizravne <u>troškove</u>. Promicanje pješačenja i biciklizma

prepoznato je kao jedan od načina ublažavanja takvih negativnih učinaka. Članovima Biciklističkog kluba Konavle i zaposlenicima Zračne luke Dubrovnik uručeni su promo

Projekt LAira potiče modalni prijelaz na aktivna putovanja (biciklizam i pješačenje),

zračno-željezničke veze, javni prijevoz i / ili zajedničku mobilnost s ciljem smanjenja



paketi s biciklističkom opremom.

zagađenja okoliša



darivali članove Biciklističkog kluba Konavle.





PRIJEDLOG GRADU: Skaline od Jezuita preimenujte u "Walk of shame Staircase"!

Dubrovačka profesorica sve je rekla u nekoliko

Članovi Spasilačkog kluba "Neptun" ostvarili

veslački rezultat karijere

Konavlima

\_\_\_\_ DubrovnikTV.net



DUBROVNIKTV 07 07 07 19
PRIDRUŽITE SE U
HLADU IGORU & DADU:

Mali oglasi

< ,

09 | 09 | 2019

[url=http://lolasix.info/]buy furosemide online[/url] buy lasix usa

PREDAJTE OGLAS SVI OGLASI



Samo dobra glazba



Iz Zračne luke Dubrovnik naglašavaju kako će i dalje poduzimati različite pristupe i <u>akcije</u> kako bi se poboljšale razine pješačenja i biciklizma te smanjilo korištenje automobila u / iz Zračne luke. Voditelj projekta Josip Paljetak ističe kako se nada sve većem broju zaposlenika koje će ova i slične akcije motivirati na mijenjanje navika i korištenje drugih prijevoznih sredstava. I za kraj valja podsjetiti kako je bicikliranje dobro za zdravlje, okoliš i novčanik.



### **EVALUATION AND FINAL MEDIA REPORT ON** PROJECT IMPLEMENTATION



#### 1.2. evidence of project monitoring - Digital (internet)







Današnji događaj pod geslom "Biciklom do posla" još jednom nas je podsjetio kako velika ovisnost o korištenju automobila dovodi do zagušenja prometa, ali i fizičke neaktivnosti, što društvu nameće izravne i neizravne troškove. Promicanje pješačenja i biciklizma prepoznato je kao jedan od načina ublažavanja takvih negativnih učinaka. Članovima Biciklističkog kluba Konavle i zaposlenicima Zračne luke Dubrovnik uručeni su promo paketi s biciklističkom opremom.

Iz Zračne luke Dubrovnik naglašavaju kako će i dalje poduzimati različite pristupe i akcije kako bi se poboljšale razine pješačenja i biciklizma te



Iz Grada najavili: Park Pile zaključavat će se tijekom



RAZGOVARALI SMO SA SESTRAMA OB DUBROVNIK 'Ovo nije ni bunt ni revolt, jednostavno smo na rubu snaga'



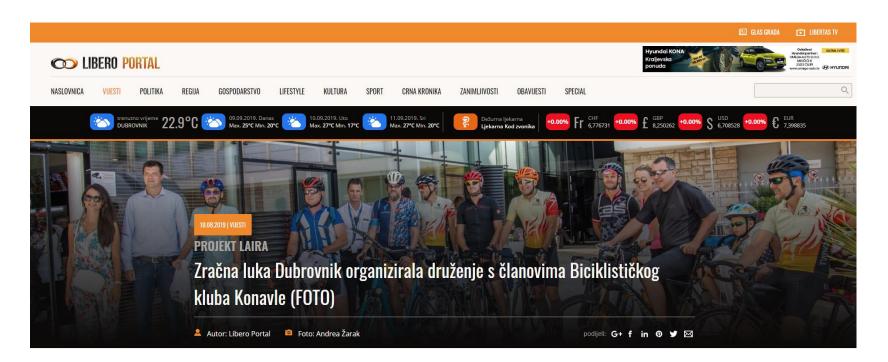
**ENERGETSKA OBNOVA Za** OŠ Ivana Gundulića iz vanproračunskih izvora osigurano do 70 posto







1.3. evidence of project monitoring - Digital (internet)



LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko-ugljične mobilne integracije zračnih luka







#### 1.3. evidence of project monitoring - Digital (internet)

LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko-ugljične mobilne integracije zračnih luka

**FOTOGALERIJA** 











U Zračnoj luci Dubrovnik članovi projektnog tima LAira predstavili su ključne smjernice i ciljeve projekta LAira, te su tom prilikom darivali članove Biciklističkog kluba Konavle.

Podsjetimo, LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko-ugljične mobilne integracije zračnih luka. Cilj projekta je smanjenje upotrebe energije i ekoloških utjecaja transportnih aktivnosti u zračnim lukama i njihovom okruženju, i to promjenom obrazaca ponašanja mobilnosti putnika i zaposlenika zračnih luka.

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Projekt LAira potiče modalni prijelaz na aktivna putovanja (biciklizam i pješačenje), zračno- željezničke veze, javni prijevoz i / ili zajedničku mobilnost s ciljem smanjenja zagađenja okoliša.

Iz Zračne luke Dubrovnik naglašavaju kako će i dalje poduzimati različite pristupe i akcije kako bi se poboljšale razine pješačenja i biciklizma te smanjilo korištenje automobila u / iz Zračne luke. Voditelj projekta Josip Paljetak ističe kako se nada sve većem broju zaposlenika koje će ova i slične akcije motivirati na mijenjanje navika i korištenje drugih prijevoznih sredstava.

NAJPOPULARNIJE

24 h

protekli tjedan



JUTARNJA ŠETNJA Najbogatija Srpkinja sišla s luksuzne jahte i napravila đir Gradom (FOTO)

08.09.2019



ROĐENJE BLAŽENE DJEVICE MARIJE Proslava Male Gospe u Gospinom polju (FOTOGALERIJA)

08.09.2019



#Zračna luka Dubrovnik

PODUELI





#### 1.4. evidence of project monitoring - Digital (internet)

IMPRESLIM MARKETING 50 dubrovački vjesnik

kluba Konavle.

zračnih luka

zagađenja okoliša.

< NASLOVNICA

VIJESTI ŽUPANIJA SPORT MOSKAR OSMRTNICI

L AIR PROJEKT

#### Zračna luka Dubrovnik i Biciklistički kluba Konavle



() 10 08 2019 | 18:02



lako u gradu pada kiša, konavoska brda su se zabijelila, a snijeg je pao i na Kuni na Pelješcu. Zabijelila su

iščupani reklamni panoi



zahvatilo nevrijeme, a područje oko Zračne luke Dubrovnik pogodila je



Konavoski komin se smijestio u ugodnom i prirodnom ambijentu malog mjesta Velji do gdje će vas dočekati liubazno.

PISMO ČITATELJA "Za promjenu posla pozivaju se samo djevojke, zašto ne udane žene ili muškarci?"

smjernice i ciljeve projekta LAira, te su tom prilikom darivali članove Biciklističkog Podsjetimo, LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko

U Zračnoj luci Dubrovnik članovi projektnog tima LAira predstavili su ključne

#### dubrovački vjesnik



U Zračnoj luci Dubrovnik članovi projektnog tima LAira predstavili su ključne

ugljične mobilne integracije zračnih luka. Cilj projekta je smanjenje upotrebe

energije i ekoloških utjecaja transportnih aktivnosti u zračnim lukama i njihovom

okruženju, i to promjenom obrazaca ponašanja mobilnosti putnika i zaposlenika

Današnji događaj pod geslom "Biciklom do posla" još jednom nas je podsjetio kako

negativnih učinaka. Članovima Biciklističkog kluba Konavle i zaposlenicima Zračne

Projekt LAira potiče modalni prijelaz na aktivna putovanja (biciklizam i pješačenje),

zračno-željezničke veze, javni prijevoz i/ili zajedničku mobilnost s ciljem smanjenja

korištenje drugih prijevoznih sredstava. I za kraj valja podsjetiti kako je bicikliranje

velika ovisnost o korištenju automobila dovodi do zagušenja prometa, ali i fizičke

neaktivnosti, što društvu nameće izravne i neizravne troškove. Promicanje

luke Dubrovnik uručeni su promo paketi s biciklističkom opremom.

dobro za zdravlje, okoliš i novčanik, pišu iz Zračne luke.

pješačenja i biciklizma prepoznato je kao jedan od načina ublažavanja takvih

smjernice i ciljeve projekta LAira, te su tom prilikom darivali članove Biciklističkog

Podsjetimo, LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko-

VIJESTI ŽUPANIJA SPORT MOSKAR OSMRTNICE



ugodnom i prirodnom ambijentu malog mjesta Velji do gdje će vas dočekati ljubazno.

PISMO ČITATELJA "Za promjenu posla pozivaju se samo djevojke, zašto ne udane žene ili muškarci?"



diskriminacije u policiji. Zašto samo djevojke, zašto ne mogu

#### NAJNOVIJE

More na 112 plaža izvrsno, na pet zadovoljavajuće



Prema Programu utvrđivanja kakvoće mora na morskim plažama Dubrovačko-neretvanske županije za 2019. godinu, Zavo..

Metkovci slave 300. godina Župe sv. Ilije



Župan Nikola Dobroslavić i zamienica Žaklina Marević primili



Snijeg u Konavlima i na Pelješcu



PIJAVICA POGODILA ZRAČNU LUKU "Letjeli" automobili,



Danas oko 15 sati Konavle ie pijavica koja..

Konavoski komin je otvorio svoja vrata!



ŽUPANIJA

Iz Zračne luke Dubrovnik naglašavaju kako će i dalje poduzimati različite pristupe i akcije kako bi se poboljšale razine pješačenja i biciklizma te smanjilo korištenje automobila u/iz Zračne luke. Voditelj projekta Josip Paljetak ističe kako se nada sve većem broju zaposlenika koje će ova i slične akcije motivirati na mijenjanje navika i



kluba Konavle.



#### 1.5. evidence of project monitoring - Digital (internet)

### Dubrovnik PRESS

Naslovna Aktualno Espresso Marketing Impressum Kontakt Uvjeti korišten

bota, 10 Kolovoz 2019 19:38

ZL Dubrovnik uz projekt LAira organizirala druženje sa članovima Biciklističkog kluba Konavle



Prvi dan škole: U Dubrovniku više prvašića nego lani



Prijeti mu dva mjeseca zatvora: Vozio 90 km/h više od dopuštenog



16 tisuća kuna i godinu bez dozvole, to je kazna za pijančinu tjedna













Foto: FB ZL Dubrovni

U Zraknoj luci Dubrovnik članovi projektuog tima LAira predstavili su ključne smjernice i ciljeve projekta LAira, te su tom prilikom darivali članove Biciklističkog kluba Konavle. LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko - ugljične mobilne integracije zračnih luka. Cilj projekta je smanjenje upotrebe energije i ekoloških utjecaja transportnih aktivnosti u zračnim lukama i njihovom okruženju, i to promjenom obrazaca ponašanja mobilnosti putnika i zaposlenika zračnih luka.

Današnji događaj pod geslom, Biciklom do posla" još jednom nas je podsjetio kako velika ovisnost o korištenju automobila dovodi do zagušenja prometa, ali i fizičke neaktivnosti, što društvu nameće izravne i neizravne troškove. Promičanje pješačenja i biciklizma prepoznato je kao jedan od načina ublažavanja takvih negativnih učinaka. Članovima Biciklištičkog kiuba Konavle i zaposlenicima Zračne luke Dubrovnik uručeni su promo paketa s biciklištičkom porpemom.

Projekt LAira potiče modalni prijelaz na aktivna putovanja (biciklizam i pješačenje), zračno-željezničke veze, javni prijevoz i / ili zajedničku mobilnost s ciljem smanjenja zagađenja okoliša.

Iz Zračne luke Dubrovnik naglešavaju kako će i dalje poduzimati različite pristupe i akcije kako bi se poboljšale razine pješačenja i biciklizma te smanjilo korištenje automobila u / iz Zračne luke Voditelj projekta losip Paljetak ističe kako se nada sve većem broju zaposlenika koje će ova i slične akcije motivirati na mijenjanje navika i korištenje drugih prijevoznih sredstava. I za kraj valja podsjetiti kako je bicikliranje dobro za zdravije kopišli i novako.

DPP





Opet više od tisuću kazni



Policajac udaljen s dužnosti zbog



Ovotjedni program "Ulicama našeg Grada"















1.6. evidence of project monitoring - Digital (internet)

### Jutarnjilist



#### Zračna luka Dubrovnik u sklopu projekta LAira organizirala druženje s članovima Biciklističkog kluba Konavle

AUTOR: Promo OBJAVLJENO: 13.08.2019. u 16:30

U Zračnoj luci Dubrovnik članovi projektnog tima LAira predstavili su ključne smjernice i ciljeve projekta LAira, te su tom prilikom darivali članove Biciklističkog kluba Konavle

Podsjetimo, LAira se bavi specifičnim i značajnim izazovima multimodalne i niskougljične mobilne integracije zračnih luka. Cilj projekta je smanjenje upotrebe energije i ekoloških utjecaja transportnih aktivnosti u zračnim lukama i njihovom okruženju, i to promjenom obrazaca ponašanja mobilnosti putnika i zaposlenika zračnih luka.







#### 1.6. evidence of project monitoring - Digital (internet)

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Projekt LAira potiče modalni prijelaz na aktivna putovanja (biciklizam i pješačenje zračno-željezničke veze, javni prijevoz i / ili zajedničku mobilnost s ciljem smanje zagađenja okoliša.

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Projekt czura pouce modanii prijelaz na aktivna putovanja (diciklizam i pjesacenje), zračno-željezničke veze, javni prijevoz i / ili zajedničku mobilnost s ciljem smanjenja zagađenja okoliša.

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#### 1.7. evidence of project monitoring - Digital (internet)

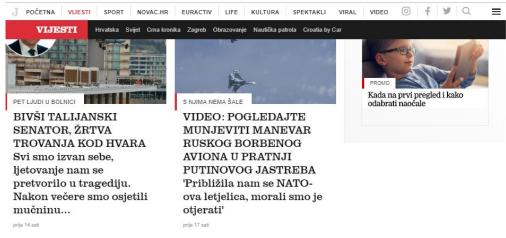




FOTO: BRILJANTNO RJEŠENJE DOSAD NEVIĐENO U HRVATSKOJ Čudo na Trešnjevci: Pogledajte na kakvu su ideju došli asfalteri nakon rekonstrukcije





sklopu projekta LAira organizirala druženje s članovima Biciklističkog kluba Konavle







1.8. evidence of project monitoring - Digital (internet)

# AKTUALNO ∨ POLITIKA CRNA KRONIKA DULIST IN SPORT KULTURA ZANIMLJIVOSTI VAŠE VIJESTI KOLUMNE ∨ f ⊚ ≥ Q

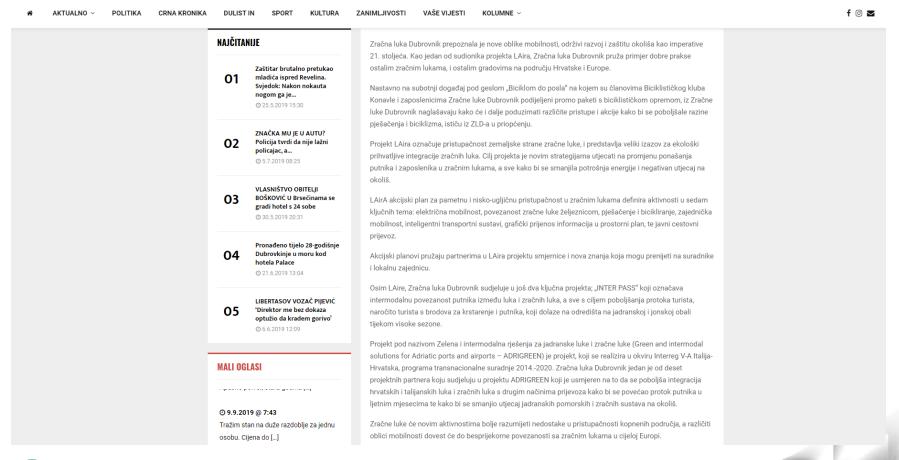
### **DULIST**







#### 1.8. evidence of project monitoring - Digital (internet)







1.9. evidence of project monitoring - Digital (internet)







#### 1.9. evidence of project monitoring - Digital (internet)



Nastavno na subotnji događaj pod geslom "Biciklom do posla" na kojem su članovima Biciklističkog kluba Konavle i zaposlenicima Zračne luke Dubrovnik podijeljeni promo paketi s biciklističkom opremom, iz Zračne luke Dubrovnik naglašavaju kako će i dalje poduzimati različite pristupe i akcije kako bi se poboljšale razine pješačenja i biciklizma.

Projekt LAira označuje pristupačnost zemaljske strane zračne luke, i predstavlja veliki izazov za ekološki prihvatljive integracije zračnih luka. Cilj projekta je novim strategijama utjecati na promjenu ponašanja putnika i zaposlenika u zračnim lukama, a sve kako bi se smanjila potrošnja energije i negativan utjecaj na okoliš.

LAirA akcijski plan za pametnu i nisko-ugljičnu pristupačnost u zračnim lukama definira aktivnosti u sedam ključnih tema: električna mobilnost, povezanost zračne luke željeznicom, pješačenje i bicikliranje, zajednička mobilnost, inteligentni transportni sustavi, grafički prijenos informacija u prostorni plan, te javni cestovni prijevoz.

Akcijski planovi pružaju partnerima u LAira projektu smjernice i nova znanja koja mogu prenijeti na suradnike i lokalnu zajednicu.

Osim LAire, Zračna luka Dubrovnik sudjeluje u još dva ključna projekta; "INTER PASS" koji označava intermodalnu povezanost putnika između luka



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Projekt pod nazivom Zelena i intermodalna rješenja za jadranske luke i zračne luke (Green and intermodal solutions for Adriatic ports and airports - ADRIGREEN) je projekt, koji se realizira u okviru Interreg V-A Italija-Hrvatska, programa transnacionalne suradnje 2014.–2020. Zračna luka Dubrovnik jedan je od deset projektnih partnera koju sudjeluju u projektu ADRIGREEN koji je usmjeren na to da se poboljša integracija hrvatskih i talijanskih luka i zračnih luka s drugim načinima prijevoza kako bi se povećao protok putnika u ljetnim mjesecima te kako bi se smanjio utjecaj jadranskih pomorskih i zračnih sustava na okoliš.

Zračne luke će novim aktivnostima bolje razumijeti nedostake u pristupačnosti kopnenih područja, a različiti oblici mobilnosti dovest će do besprijekorne povezanosti sa zračnim lukama u cijeloj Europi, izvijestili su iz Zračne luke Dubrovnik.







1.10. evidence of project monitoring - Digital (internet)



#### **VIJESTI**

14.08.2019 u 16:08

PRIOPĆENJE

Zračna luka Dubrovnik potiče nove oblike mobilnosti i održivi razvoj







Zračna luka Dubrovnik prepoznala je nove oblike mobilnosti, održivi razvoj i zaštitu okoliša kao imperative 21. stoljeća. Kao jedan od sudionika projekta LAira, Zračna luka Dubrovnik pruža primjer dobre prakse ostalim zračnim lukama, i ostalim gradovima na području Hrvatske i Europe. Nastavno na subotnji događaj pod



Iz teme



Napustio nas je Davor Grbić, veliki čovjek i "mali" hrvatski branitelj



Dr. Pero Kolić ima novo radno mjesto i vrijeme u Konavlima



Dubrovačka profesorica sve je rekla u nekoliko rečenica...



Članovi Spasilačkog kluba "Neptun" ostvarili veslački rezultat karijere

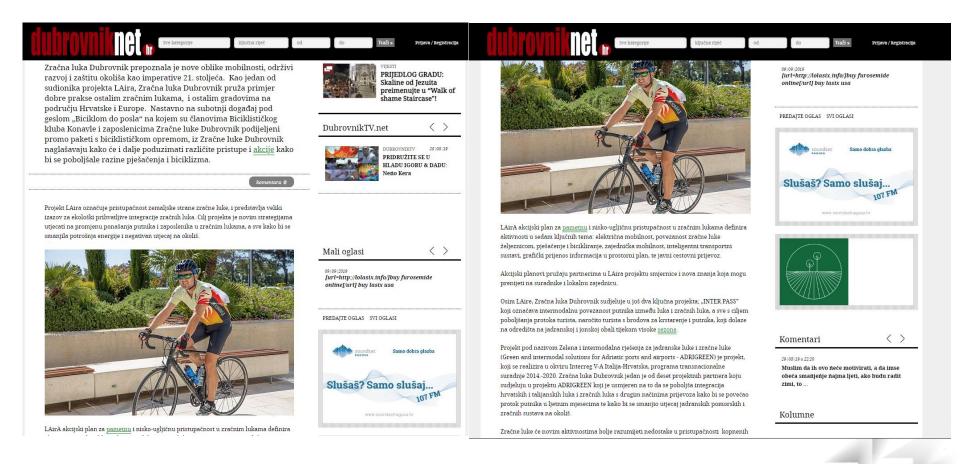


PRIJEDLOG GRADU: Skaline od Jezuita preimenujte u "Walk of shame Staircase"!





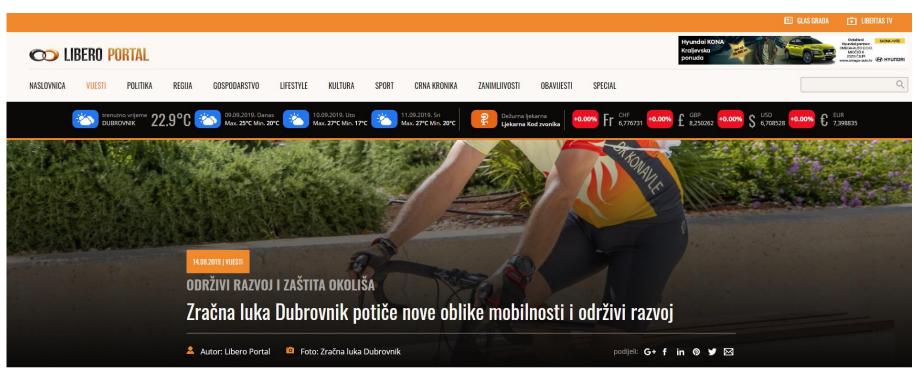
#### 1.10. evidence of project monitoring - Digital (internet)







1.11. evidence of project monitoring - Digital (internet)



Cilj projekta je novim strategijama utjecati na promjenu ponašanja putnika i zaposlenika u zračnim lukama, a sve kako bi se smanjila potrošnja energije i negativan utjecaj na okoliš







#### 1.11. evidence of project monitoring - Digital (internet)

stoljeća. Kao jedan od sudionika projekta LAira, Zračna luka Dubrovnik pruža primjer dobre prakse ostalim zračnim lukama, i ostalim gradovima na području Hrvatske i Europe.

Nastavno na subotnji događaj pod geslom "Biciklom do posla" na kojem su članovima Biciklističkog kluba Konavle i zaposlenicima Zračne luke Dubrovnik podijeljeni promo paketi s biciklističkom opremom, iz Zračne luke Dubrovnik naglašavaju kako će i dalje poduzimati različite pristupe i akcije kako bi se poboljšale razine pješačenja i biciklizma. Projekt LAira označuje pristupačnost zemaljske strane zračne luke, i predstavlja veliki izazov za ekološki prihvatljive integracije zračnih luka. Cilj projekta je novim strategijama utjecati na promjenu ponašanja putnika i zaposlenika u zračnim lukama, a sve kako bi se smanjila potrošnja energije i negativan utjecaj na okoliš.

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Akcijski planovi pružaju partnerima u LAira projektu smjernice i nova znanja koja mogu prenijeti na suradnike i lokalnu zajednicu.

Osim LAire, Zračna luka Dubrovnik sudjeluje u još dva ključna projekta; "INTER PASS" koji označava intermodalnu povezanost putnika između luka i zračnih luka, a sve s ciljem poboljšanja protoka turista, naročito turista s brodova za krstarenje i putnika, koji dolaze na odredišta na jadranskoj i jonskoj obali tijekom visoke sezone.

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#Zračna luka Dubrovnik



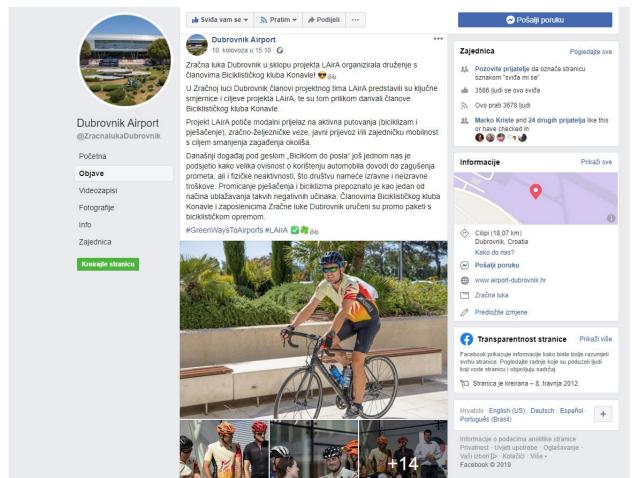




# EVALUATION AND FINAL MEDIA REPORT ON PROJECT IMPLEMENTATION



#### 1.12. evidence of project monitoring - Digital (Social media)



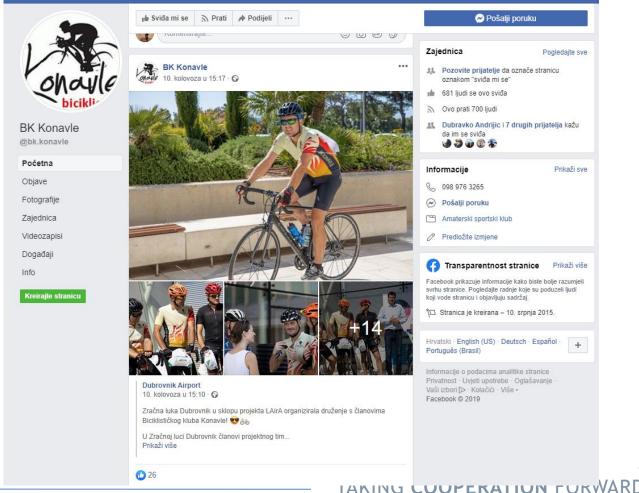


AKING COOPERATION FORWARD

### **EVALUATION AND FINAL MEDIA REPORT ON** PROJECT IMPLEMENTATION



1.13. evidence of project monitoring - Digital (Social media)





26



1.14. evidence of project monitoring - Digital (Social media)







1.15. evidence of project monitoring - Digital (Social media)





Prikaži analitiku

Promoviraj













Sviđa se juka1602 i 23 drugih

libertas\_tv Zračna luka Dubrovnik predstavila projekt LAira uz druženje s Biciklistickim klubom Konavle

#LAira #zld #bkkonavle





Prikaži analitiku











Sviđa se juka1602 i 24 drugih

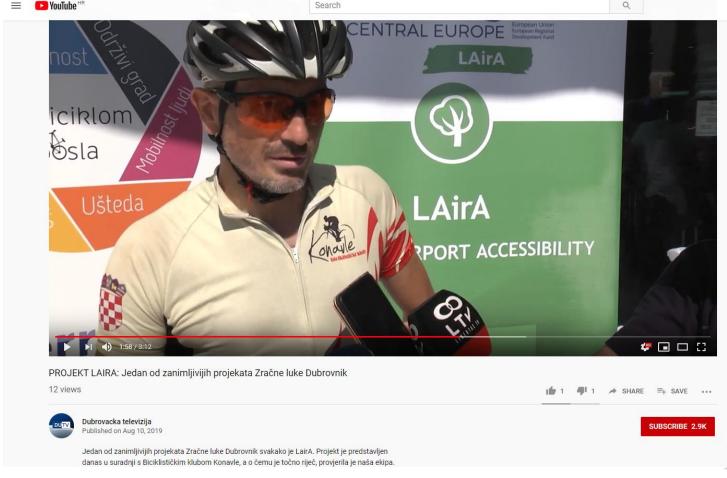
libertas\_tv Zračna luka Dubrovnik predstavila projekt LAira uz druženje s Biciklistickim klubom Konavle

#LAira #zld #bkkonavle





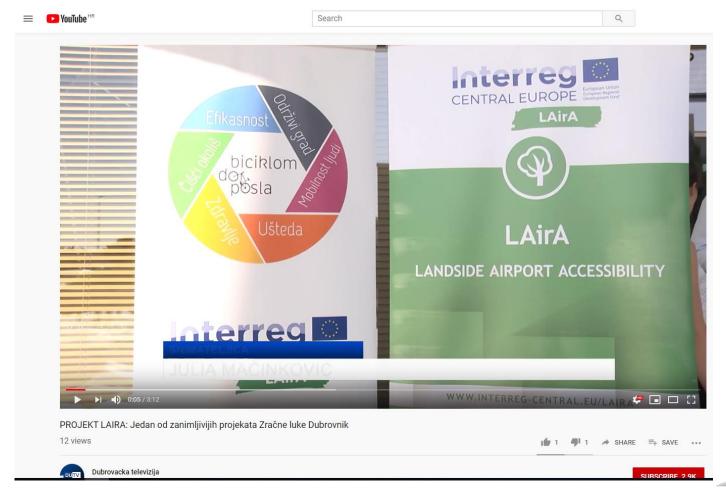
#### 1.16. evidence of project monitoring - TV







1.17. evidence of project monitoring - TV







1.18. evidence of project monitoring - TV

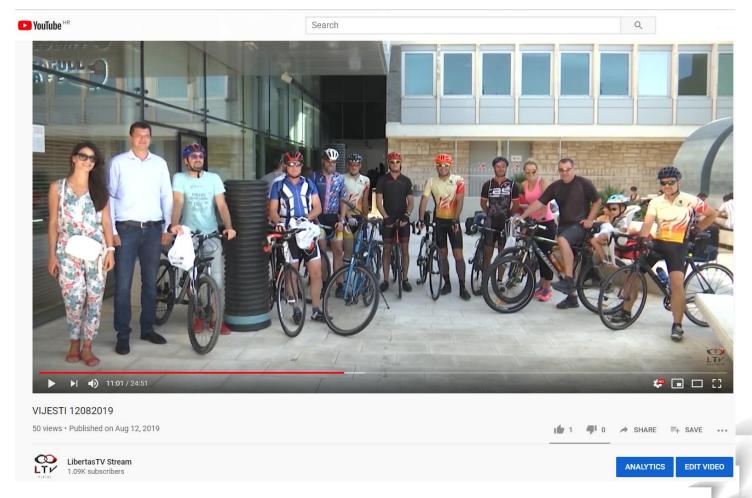




31



1.18. evidence of project monitoring – TV







1.19. evidence of project monitoring - PRINT (newspaper)



#### Zračna luka Dubrovnik u sklopu projekta LAira organizirala druženje s članovima Biciklističkog kluba Konavle

U Zračnoj luci Dubrovnik članovi projektnog tima LAira predstavili su ključne smjernice i ciljeve projekta LAira, te su tom prilikom darivali članove Biciklističkog kluba Konavle.

Podsjetimo, LAira se bavi specifičnim i značajnim izazovima multimodalne i nisko-uglijčne mobilne integracije zračnih luka. Cilj projekta je smanjenje upotrebe energije i ekoloških utjecaja transportnih aktivnosti u zračnim lukama i njihovom okruženju, i to promjenom obrazaca ponašanja mobilnosti putnika i zaposlenika zračnih luka.

Događaj pod geslom "Biciklom do posla" još jednom nas je podsjetio kako velika ovisnost o korištenju automobila dovodi do zagušenja prometa, ali i fizičke neaktivnosti, što društvu nie piešaćenia i biciklizma prepoznato je kao edan od načina ublažavanja takvih negativnih učinaka. Članovima Biciklističkog kluba Ko-



20 GlasGrada - 752 - petak 16.8.2019.





uručení su promo paketí s biciklističkom opre

putovanja (biciklizam i pješačenje), zračno-že-ljezničke veze, javni prijevoz i / ili zajedničku mobilnost s ciljem smanjenja zagađenja oko-

Iz Zračne luke Dubrovnik naglašavaju kako će dalje poduzimati različite pristupe i akcije kako bi se poboljšale razine pješačenja i biciklizma te smanjilo korištenje automobila u / iz Zračne luke. Voditelj projekta Josip Paljetak ističe kako se nada sve većem broju zaposlenika koje će ova i slične akcije motivirati na mijenjanje navika i korištenje drugih prijevoznih sredstava. I za kraj valja podsjetiti kako je bicikliranje dobro za zdravlje, okoliš i novčanik :)

Izvor: Zračna luka Dubrovnik Photo: Zračna luka Dubrovnik

#### Preko Čilipa u mjesecu srpnju prošlo 514.723 putnika



#### Croatia Airlines proslavila 30. rođendan

U protekla tri desetljeća, pruža- i kvaliteti usluge. Od prvog leta jući uslugu prijevoza putnika i do danas kompanija je obavila robe u redovitom i charter prometu, Croatia Airlines izrastao je u europskog avioprijevoznika prepoznatljivog po sigurnosti letenja, profesionalnom osoblju I kvaliteti usluge.

Točno prije tri desetljeća, na 7. kolovoza 1989., u Zagrebu je re-gistriran Zagreb Airlines d.d. (Zagal), poduzeće za zračni prijevoz, koji je s radom počeo u prosincu iste godine, pružajući uslugu prijevoza poštanskih pošiljaka, orilike godinu dana poslije, 23. srpnia 1990, godine. Zggglie promijenio ime u Croatia Airlines d.d., nacionalna aviokom-panija za prijevoz putnika, robe i

U protekla tri desetljeća, pružajući uslugu prijevoza putnika i robe u redovitom i charterprometu, Croatia Airlines izrastao je u europskog avioprijevoznika prepoznatljivog po sigurnosti

ukupno 603,000 letova i u zrakoplovima prevezla ukupno 39,240,000 putnika. Pritom je tvrtka postala članica najvažnijih zrakoplovnih udruženja -Međunarodne udruge za zračni promet (IATA) i Star Alliancea, vodeće svjetske udruge aviopri-

Flota Croatia Airlinesa danas se sastoji od dvanaest zrakoplova: četiri Airbusa A319, dva Airbusa 320 i šest turboprop zrakoplova Dash 8-Q400. Zrakoplovi tipa Airbus nose imena hrvatskih gradova (Zagreb, Split, Zadar, Pula, Vukovar i Dubrovnik), a zrakoplovi tipa Q400 imena hrvatskih regija (Slavonija, Lika, Dalmacija, Istra, Zagorje i Primorje). Tijekom ove sezone zrakoplovi lete u 8 domaćih i 30 međunarodnih odredišta u redovitom prometu te izravno povezuju Hrvatsku s

24 države. U ovoj slavljeničkoj godini tvrtna, koji su, kao i prigodni rođen-danski vizual, izabrali i kreirali zaposlenici tyrtke. Osim toga, provode se i mnoge aktivnosti u vezi s dodatnim unapređenjem noslovnih procesa i kvalitetom

Kako bi korisnicima usluga zahvalila na tridesetogodišnjoj viernosti i s niima zajednički proslavila 30 godina kontinuiranog povezivanja hrvatskih odredišta i Hrvatske sa svijetom. provodi više nagradnih natiečaja u kojima putnike i građane U želii da zajedno s putnicima desetlieća. Croatia Airlines iskreno zahvaljuje svim korisnicima usluga na ukazanom povjerenju u proteklih 30 godina i veseli se svim novim zajedničkim letovi-

#### **RED LETENJA** CROATIA **AIRLINES**

DUBROVNIK - ZAGREB PETAK, 16.08. 2019.

SUBOTA, 17.08. 2019.

NEDJELJA, 18.08. 2019.

PONEDJELJAK, 19.08. 2019

UTORAK, 20.08. 2019.

SRUEDA, 21.08. 2019. 06:15 - 07:10 12:55 - 13:50 13:15 - 14:20 20:30 - 21:35

ČETVRTAK, 22.08. 2019.

#### PETAK, 16,08, 2019.

SUBOTA, 17.08. 2019.

NEDJELJA, 18.08. 2019.

PONEDJELJAK, 19.08, 2019

UTORAK, 20.08, 2019.

SRUEDA, 21,08, 2019.

07:25 = 08:30 14:00 = 14:55 22:05 = 23:00 ČETVRTAK, 22.08. 2019.

Informacije o ostalim polascima 773 377, 773 100 ili na: www.airport-dubrovnik.hr

Novosti iz Zračne luke Dubrovnik Prijedloge i sugestije šaljite na e-mail: glasgrada@gmail.com, s naznakom 'za dbv info'

GlasGrada - 752 - petak 16.8.2019. 37





#### 1.20. evidence of project monitoring - PRINT (newspaper)

#### ZRAČNA LUKA DUBROVNIK POTIČE NOVE OBLIKE MOBILNOSTI I ODRŽIVI RAZVOJ



Zračna luka Dubrovnik prepoznala je nove oblike mobilnosti, održivi razvoj i zaštitu okoliša kao imperativa 21. stoljeća. Kao jedan od sudionika projekta LAira, Zračna luka Dubrovnik pruža primjer dobre prakse ostalim zračnim lukama, i ostalim gradovima na području Hrvaštki Europe.

Nastavno na subotnji događaj pod geslom "Biciklom do posla" na kojem su članovima Biciklističkog kluba Konavle i zaposlenicima Ziračne luke Dubrovnik podljeljeni promo paketi s biciklističkom opremom, iz Zračne luke Dubrovnik naglašavaju kako če i dalje poduzimati različite pristupe i akcije kako bi se poboljsle razine pješačenja i biciklizma.

Projekt LAira označuje pristupačnost zemaljske strane zračne luke, i predstavlja veliki izazov za ekološki prihvatljive integracije zračnih luka. Cili projekta je novim strategijama utjecati na promjenu ponašanja putnika i zaposlenika u zračnim lukama, a sve kako bi se smanjila potrošnja energije i negativan utjecaj na okoliš.

Lkirk akcijski plan za pametnu i nisko-ugljičnu pristupačnost u zračnim lukama definira aktivnosti u sedam ključnih tema: električna mobilnost, povezanost zračne luke željeznicom, pješačenje i bickličnanje, zajednićka mobilnost, inteligentni transportni sustava, grafički prijenos informacija u prostorni plan, te javni cestovni orijenoz.

Akcijski planovi pružaju partnerima u LAira projektu smjernice i nova znanja koja mogu prenijeti na suradnike i lokalnu zajednicu.

Osim LAire, Zračna luka Dubrovník sudjeluje u još dva

ključna projekta; "INTER PASS" koji označava intermodalnu povezanost putnika između luka i zračnih luka, a sve s ciljem poboljšanja protoka turista, naročito turista s brodova za krstarenje i putnika, koji dolaze na odredišta na jadranskoj i jonskoj obali tijekom visoke

Projekt pod nazívom Zelena i intermodalna rješenja za jadranske luke i zražne luke (foren and intermodalna projekt, foji se realizira u okviru interneg V.A. falizira projekt, foji se realizira u okviru interneg V.A. falizira vzdoza, programa transnacionalne suradnje 2014vo200, Zražna luka Dubrovnik jedan je od deset pojektnih partnera koju sudjeluju u projektu ADRIGEREN, koji je usnijenena to da se poboljsi integracija hrvatskih i talijanskih luka i zražnih luka s drugim načinima prijevoza kako bi se povećao protok putrika u litenim mjesecima te kako bi se smanijo utjeca jadranskih pomorskih i zražnih sustava na okoliš, jadranskih pomorskih i zražnih sustava na okoliš, jadranskih pomorskih i zražnih sustava na okoliš, jadranskih po-

Zračne luke će novim aktivnostima bolje razumijeti nedostake u pristupačnosti kopnenih područja, a različiti oblici mobilnosti dovest će do besprijekorne povezanosti sa zračnim lukama u cijeloj Europi.

povezaniosta si zaranim takalina o vjetoj čuropa. Ovo priopčenje izražava isključivo stajalište autora, te nadležna tijela Programa transnacionalne suradnje Središnje Europe nisu odgovoma za upotrebu informacija sadržanima u navedenom priopčenju. Projekt je sufinancirala Europska unija putem Programa transnacionalne suradnje Središnje Europe iz Europskog fonda za recinosali razvoji.

> izvor: Zračna luka Dubrovnik photo: Zračna luka Dubrovnik



RED LETENJA CROATIA

AIRLINES

DUBROVNIK-ZAGREB



Glas Grada - 754 - petak 30.8.2019. 37





1.21. evidence of project monitoring - PRINT (newspaper)





Predstavljen spot koji poziva na korištenje drugih prijevoznih sredstava do zračnih luka

U sklopu Lkira projektnih aktivnosti objavljen je spot koj promito pježočnje, bič kliranje i javil prijavoz tr / u Zischo lika. Cij projekta je novih srizeoglama ujecati na promjanu ponažanje primita i zaposlanika u zračnih klikama, a sve kalo biše smanjita potrožnja energije i negativan utjecaj na oledit. Ovo je jež jedna od aktivnosti čoje prov ddi Ziračna lika Dubrovnik, a sve kalo bi dda ob promjenos oberzaca ponažanja možil nosti putnika i zaposlanika zračnih lula. Više na Facobook stranici Dubrovnik Algrosi.

tzvor: Zračna luka Dubrovník photo: screenshot Zračna luka Dubrovník

Glas Grada - 754 - petak 30.8.2019. 19





## Promo materials of the project:









Promo materials of the project:







Električna mobilnost
Povezanost zračne luke željeznicom
Pješačenje i bicikliranje
Zajednička mobilnost
Inteligentni transportni sustavi
Wayfinding
Javni cestovni prijevoz





Video production and broadcasting in Croatian and English





## RECOMENDATIONS AND CONCLUSIONS



- We have achieved the expected results of the project
- All project participants are satisfied with the results
- Bicycle club members and employees have expressed their desire for additional projects and similar activities
- o Giving direct benefits to participants from attending a particular event, such as reimbursement of travel expenses, an attractive venue, or listing important persons as participants in an event, can often help to attract more participants
- We recommend checking analytics websites as well as media analytics, which is a very useful tool for measuring visits and other metrics that show successful project results





- LAirA Conference and Workshop on Improving Landside Accessibility of Airports in Central Europe Vienna, 30 September 2019
- Employee pilot action in Mazovia
- LAirA | Mazovian Office of Regional Planning

# CONTENT



Pilot Action -Employees Employee survey

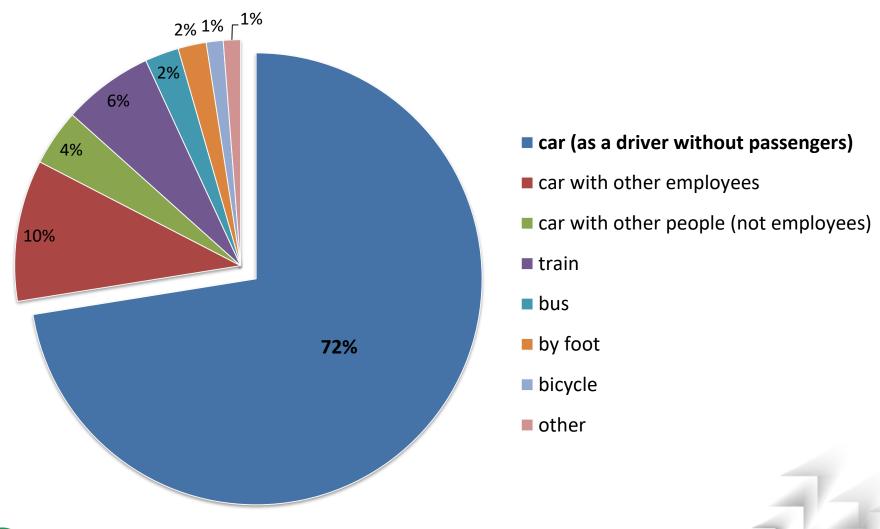
Platform and campaign

Results and lessons learnt



# **EMPLOYEE SURVEY**



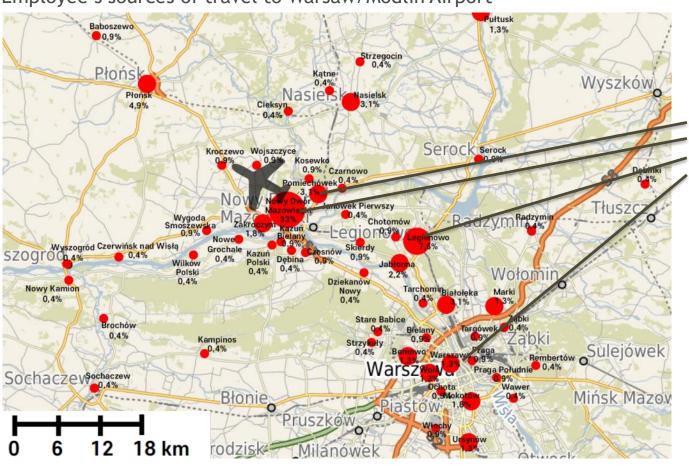




# **EMPLOYEE SURVEY**



#### Employee's sources of travel to Warsaw/Modlin Airport



Car (without passengers):

Pomiechówek - 70%
Nowy Dwór Mazowiecki - 64%
Legionowo - 71%
Warsaw - 62%

43% consider GHG emission generated by the airport as important

72% are not willing to stop commuting by car



## **OBJECTIVE**



#### Objective: to test the car-pooling platform at the specific airport

#### **Expected impact:**

- decrease of the number of employees' car
- increase of free parking spaces at employee parking lot
- better integration of employees
- raising environmental awareness among employees
- building positive employer brand

#### Quantitative KPIs:

- number of registered users
- number of active/passive users
- number of matched rides to/from the airport
- vehicle occupancy rate (persons per vehicle per ride)
- CO<sub>2</sub> emissions reduction
- number of freed parking spaces

#### Qualitative KPIs



# **PLATFORM**







# **PLATFORM**



#### Dane do logowania

Adres e-mail:	Wpisz swój email		
Hasło:	Wpisz hasło		
Powtórz hasło:	Powtórz wpisane hasło		

#### Informacja o pracodawcy

Nazwa: (company name)
Wpisz nazwę swojego pracodawcę

#### Dotychczasowy środek transportu

Jak zazwyczaj dojeżdza Pan/Pani do pracy? (how usually do you commute to work?)

Samochód (car)	○ Komunikacja publiczna
Marka samochodu:	Fiat
Model samochodu:	Panda
Rodzaj paliwa: (fuel type)	benzyna
Rok produkcji: (year of manufacture)	2019

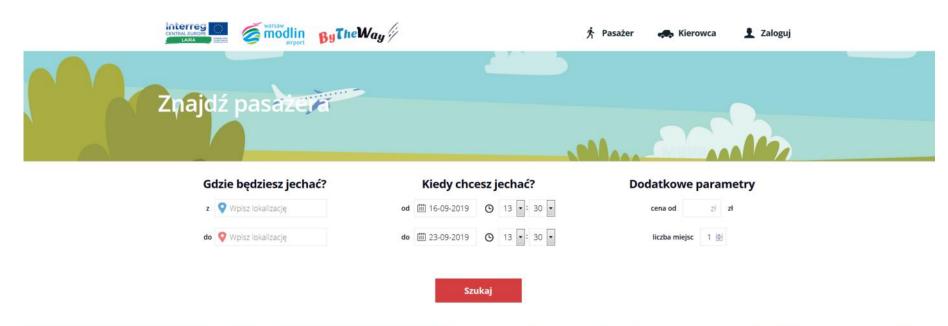
Year of manufacture	Average CO2 emissions from new <u>petrol</u> passenger cars	Average CO2 emissions from new diesel passenger cars	Average CO2 emissions from new passenger cars (other)
2000 and older	177,4	160,3	172,1
2001	175,3	159,7	169,7
2002	173,5	158,1	167,2
2003	171,7	157,7	165,5
2004	170	156,2	163,4
2005	168,1	156,5	162,4
2006	164,9	157,9	161,3
2007	161,6	156,3	158,7
2008	156,6	151,2	153,5
2009	147,6	145,3	145,7
2010	142,5	139,3	140,3
2011	137,6	134,5	135,7
2012	133,7	131,5	132,2
2013	128,5	126,9	126,7
2014	125,6	123,2	123,4
2015	122,5	119,2	119,5
2016	121,7	116,8	118,1
2017	121,6	117,9	118,5
2018	121,6	117,9	118,5
2019	121,6	117,9	118,5

petrol diesel LPG electric other



# **PLATFORM**





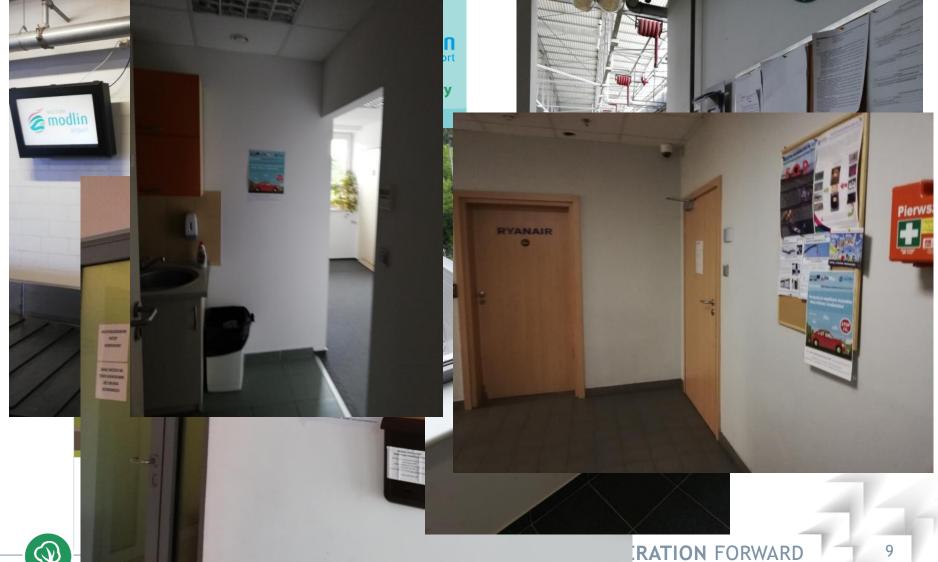




# **CAMPAIGN - POSTERS AND LEAFLETS**

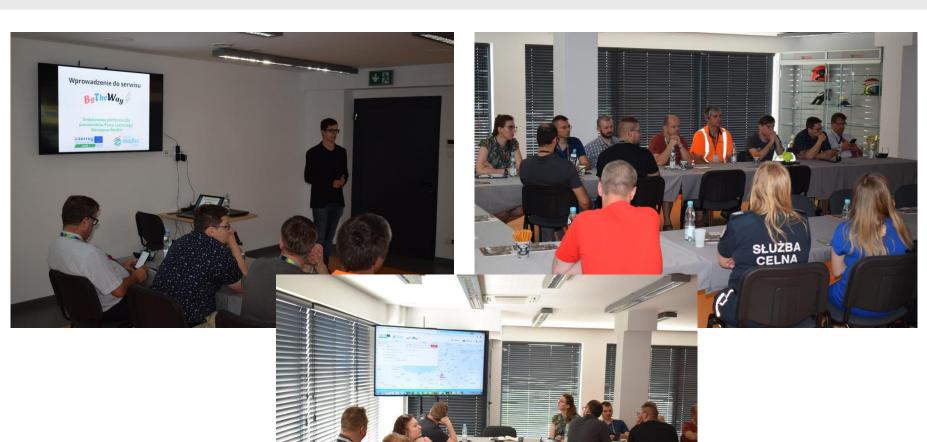






# **CAMPAIGN - TRAINING**







## **RESULTS AND CRITICAL FACTORS**



### Results after 3 months:

- 11 passive users (5 drivers)
- 10 added routes
- 0 shared rides

### **Critical factors:**

- moderate support of the airport authorities
- lack of incentives plan
- not enough training for employees
- strong car-oriented habits
- not enough potenctial users







- LAirA Conference and Workshop on Improving Landside Accessibility of Airports in Central Europe Vienna, 30 September 2019
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- LAirA | Mazovian Office of Regional Planning



# **Welcome to Vienna International Airport**









## TABLE OF CONTENTS

- Evolution of the transportation system of Vienna International Airport
- Infrastructural development up to the current status
- Current practice to access the airport (travellers and employees)
- Future plans for increasing the accessibility of the airport (focus on lowering the environmental impact)

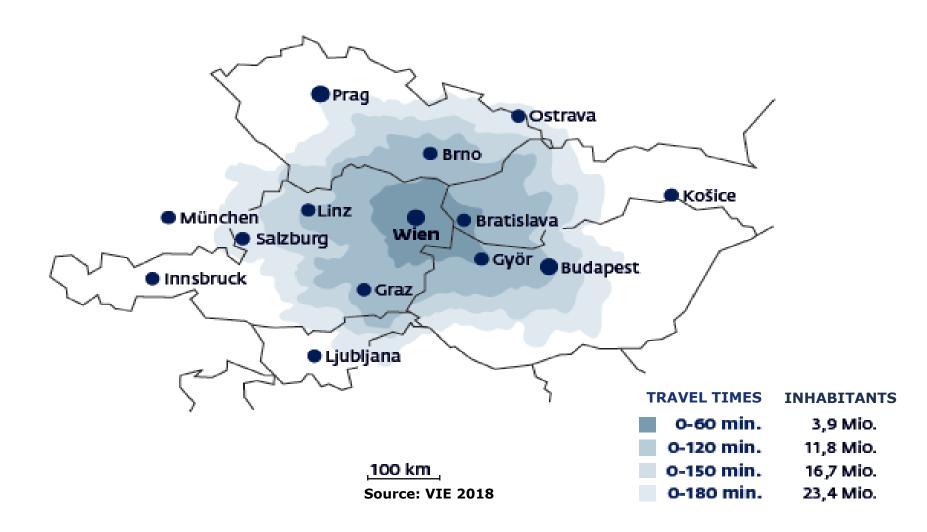


# EVOLUTION OF THE TRANSPORTATION SYSTEM OF VIENNA INTERNATIONAL AIRPORT





## **CATCHMENT AREA**





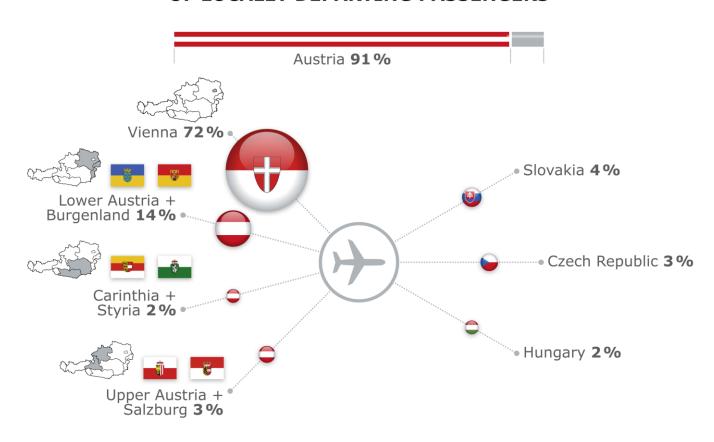
# INFRASTRUCTURAL DEVELOPMENT UP TO THE CURRENT STATUS





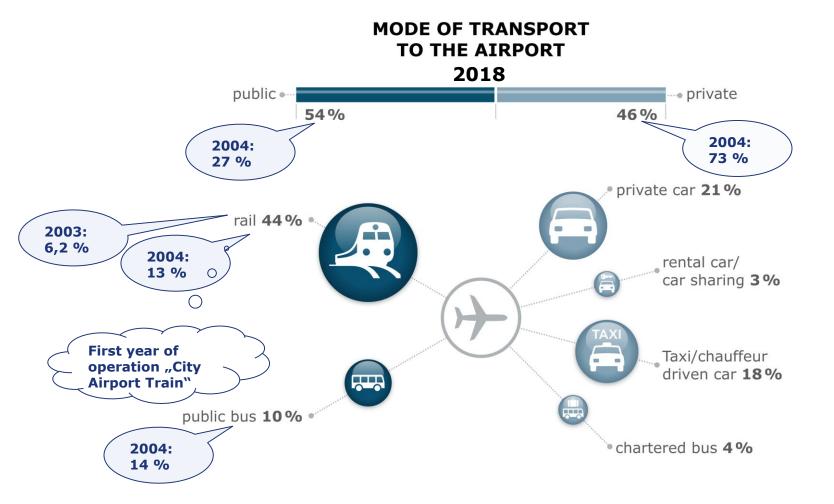
## **CATCHMENT AREA**

# CATCHMENT AREA OF LOCALLY DEPARTING PASSENGERS





## **MODAL SPLIT 2018**





# HIGHWAY A4, TRAIN AND BUSSES TO THE VIENNA INTL. AIRPORT

OPENING	ROAD SECTION	LENGTH
24.05.1978	Intersection Wien-Prater - connect to Simmeringer Haide (linke RFB)	4,055 km
17.12.1982	Intersection Wien-Prater - connect to Simmeringer Haide (rechte RFB)	4,055 km
17.12.1982	Simmeringer Haide - Fischamend west	11,123 km
28.07.1986	Fischamend west - connect to Fischamend east	3,662 km
19.10.1990	Fischamend - connect to Bruck/Leitha west	12,911 km
31.10.1991	Bruck/Leitha west - connect to Neusiedl/See	12,015 km
01.12.1993	Nickelsdorf – connect to the national border Nickelsdorf	1,398 km
28.10.1994	Neusiedl - connect to Nickelsdorf	20,609 km
2000	Intersection Wien-Prater - Stadionbrücke	0,588 km



Pressburgerbahn 1914 - 1918



Regiotrain since 1959



City Airport Train since 2004



electrified train with fixed intervals since 1962 Inter City Express Trains since 2015



# CURRENT PRACTICE TO ACCESS THE AIRPORT (TRAVELLERS AND EMPLOYEES)

#### **Only for employees:**

Service by minibuses and vans for free near public stations from Schwadorf, Enzersdorf/Fischa, Kleinneusiedl and Fischamend

#### Free factory transport system for employees:

- → from /to Vienna City Center <> Airport : "City Airport Train"
- → Bus "Vienna Airport Lines" to Schwedenplatz/Morzinplatz

#### **For travellers:**

- → from Vienna:
   "from /to Vienna City Center <> Airport: "City Airport Train"
   € 21,- return € 12,- single ticket
- → Bus "Vienna Airport Lines" to Schwedenplatz/Morzinplatz
   € 16,- single ticket

All these lines can be used by travellers and employees



# FUTURE PLANS FOR INCREASING THE ACCESSIBILITY OF THE AIRPORT (FOCUS ON LOWERING THE ENVIRONMENTAL IMPACT)

## **Main objectives:**



- → to develop and present the region as a sustainable business- and residential location > (airport and communities)
  - To invest in regional and international location marketing
  - To use the airport for international advertisement
  - 1. to improve reachability and mobility
  - 2. to involve nature and ecological aspects



# to improve reachability and mobility

# STRENGTHENING OF THE EXISTING INFRASTUCTURAL NETWORK IN THE "AIRPORT REGION"







# To improve reachability and mobility

# STRENGTHENING OF THE EXISTING INFRASTRUCTURAL NETWORK IN THE "AIRPORT REGION"

## Measures and detailed listing:

- 1. New (2<sup>nd</sup>) highway exit in the western part of the airport
- 2. Attended parking lot for trucks near the airport (west)
- 3. Development / sustainable increased performance of the road S1 in the area between Vösendorf to Schwechat esp. motorway intersection S1 / A4
- 4. Building new bypass roads around the airport
- 5. "Flughafenspange" = upgrading of the mainline rail from the airport in direction to the east
  - **S** Bratislava
  - Györ
  - **Budapest**
- 6. Strengthening & developing the rail network between City of Vienna and the airport



# Measures: Preservation of existing green areas and landscape corridors To involve nature and ecology LIFE - Project for the rivers Fischa and Schwechat (ecologising river landscape) Reforestation and maintenance shelter belts/wind breaks 4. Development of local ecological concepts in in partnership with the communities



## OVERALL CONCLUSION

- 1. We are developing sustainably a region directly adjacent to Vienna as a residential and business location
- 2. We want to improve the quality of life of the population by implementing specific projects e.g.
  - bypass roads
  - upgrading railway in the east
  - safeguarding key green areas and landscape corridors
  - generating of renewable energy
  - upgrading of recreational areas and increase of biodiversity
- 3. We have to be a fair partner in / for the region and to develop a win-win situation for Airport, communities and the residents to stabilize the social peace in the "Airport Region"









- LAirA conference & workshop Vienna International Airport, 30 September - 1 October
- Employee Behaviour Change Campaign at Stuttgart Airport
- Jana Janson | Project Coordinator, Mobility and Transport | Stuttgart Region Economic Development Corporation



Stuttgart Airport -Facts & Figures Pilot - Employee Mobility Management



#### STUTTGART AIRPORT (FSG)



#### Facts & Figures

- FUA Stuttgart: 2.8 millions inhabitants
- International airport with 11.8 million passengers in 2018
- Airport locations is 13 km south of the city of Stuttgart
- About 2,000 employees at FSG, airport campus consist of 11,000 employees
- Evolves to a mobility and transport hub → since S21 project increased meaning
- Stuttgart Trade Fair is directly next to the airport







## PILOT - EMPLOYEE BEHAVIOUR CHANGE CAMPAIGN







- Organization of a behaviour change campaign for employees of Stuttgart airport in cooperation with their management and administration staff
- Workshop series to establish grounded and accepted sustainable mobility management measures in cooperation with employees in interdisciplinary groups
- Aim: to plan and communicate a corresponding systematic mobility incentive concept for employees of Stuttgart Airport to use low-emission transport in the future
- > Target group: now 2,000 employees, in the future 11,000 employees



#### **KICK-OFF WORKSHOP**



#### On 17th of September, 2019 at Stuttgart Airport

- 25 participants from HR, ground-handling, technicians, vehicle fleet management, management, works council, environment department, parking facility management etc.
- Lessons learned:
  - Need of responsible "person in charge"
  - Mobility is in the interest of every employee
  - Public transport is unattractive → free parking spot offered to employees, operating hours don't fit for shift workers
  - Car-pooling platform "Fairport TwoGo" doesn twork (large catchment area, three different shifts, not enough employees)







#### THANK YOU FOR THE ATTENTION



#### Jana Janson

Project Coordinator, Mobility and Transport Stuttgart Region Economic Development Corporation



www.interreg-central.eu/laira



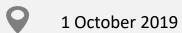
Jana.Janson@region-stuttgart.de



+49 711 228 3564











Marius Nicolescu, Secretary General, Airport Regions COnference

# AIRPORT REGIONS CONFERENCE

Who are

33 member regions

+ 70 million residents

+ 600 million pax



#### **Austria**

Vienna City Council

#### **Belgium**

Province of Vlaams-Brabant The Walloon Company of Airports (SOWAER)

#### Czech Republic

Prague Airport Region

#### **Finland**

Oulu Town Council Uusimaa Regional Council Vantaa City Council

#### France

Paris Region Planning and Development Agency (IAU Ile-de-France) Val d'Oise Department

#### Germany

Bavarian Ministry of Economic Affairs Metropolitan Region Rhein-Neckar Regional Authority FrankfurtRheinMain State of Berlin and State of Brandenburg

#### Hungary

**Budapest District XVIII** 

#### Ireland

Fingal City Council

#### Malta

Transport Malta

#### **Netherlands**

Beek Town Council Province of Drenthe Rotterdam City Council

#### Norway

Akershus County Council Ovre Romerike Development

#### **Poland**

Mazovia Region

#### Romania

Iasi County Council

#### Spain

Barcelona Municipal Council El Prat de Llobregat Town Council Gavà Town Council Government of Catalonia Government of the Canary Islands Madrid City Council

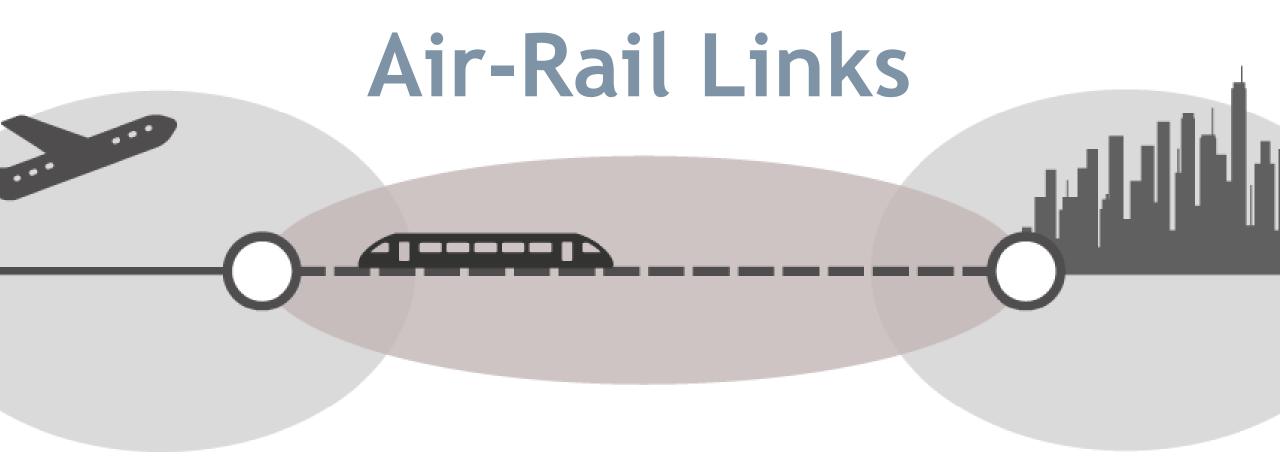
#### Sweden

Gothenburg Region Stockholm County Council & Sigtuna Municipality Härryda Municipality

#### **United Kingdom**

London Borough of Hounslow

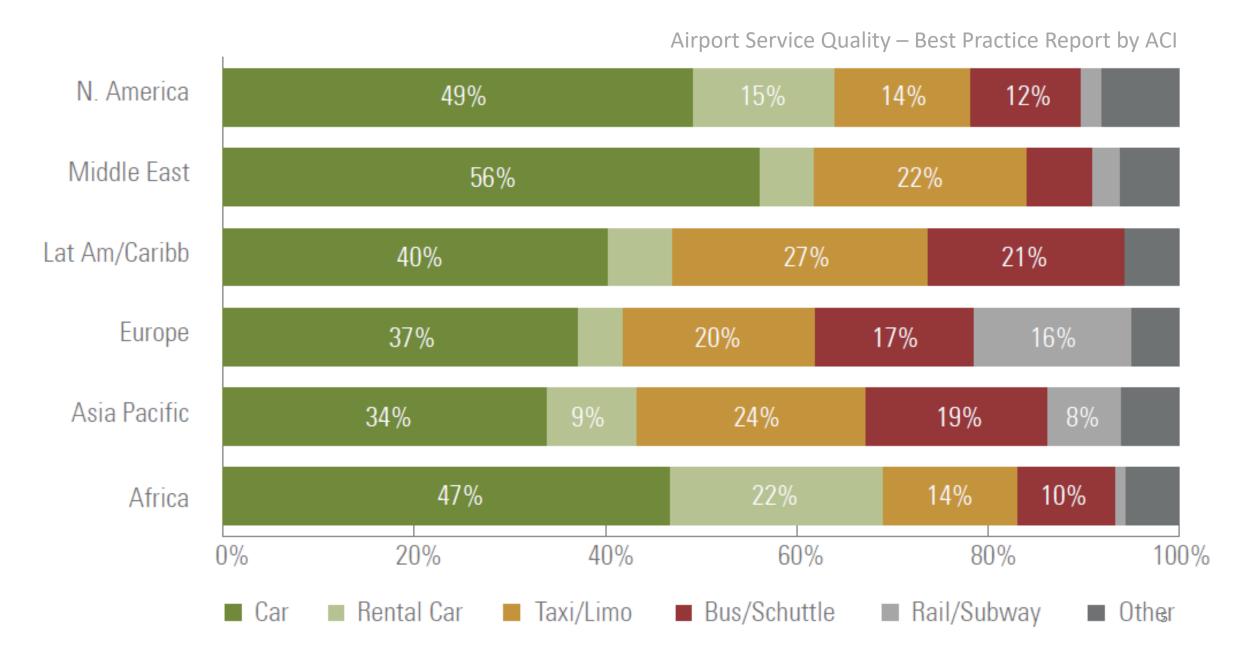




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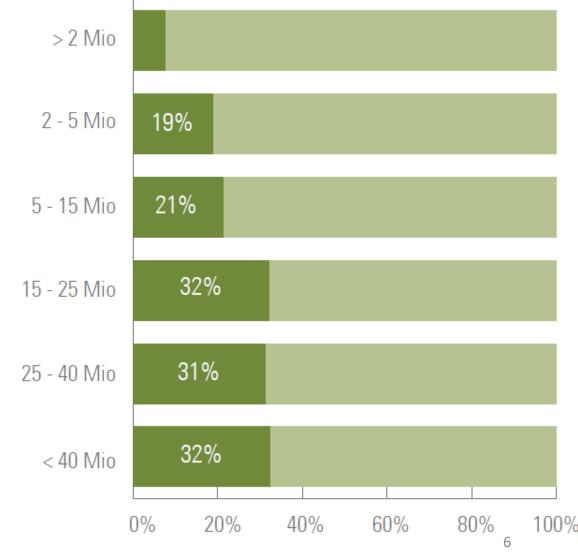


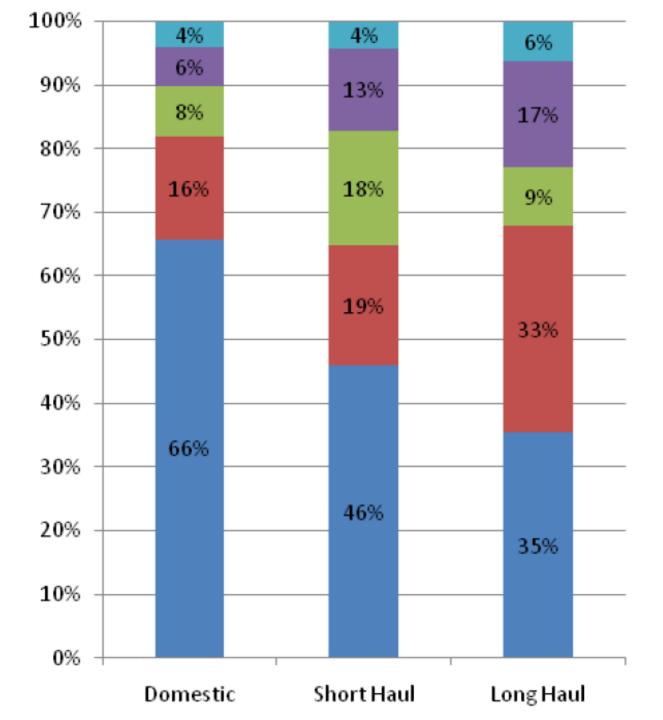
#### Modal split by region





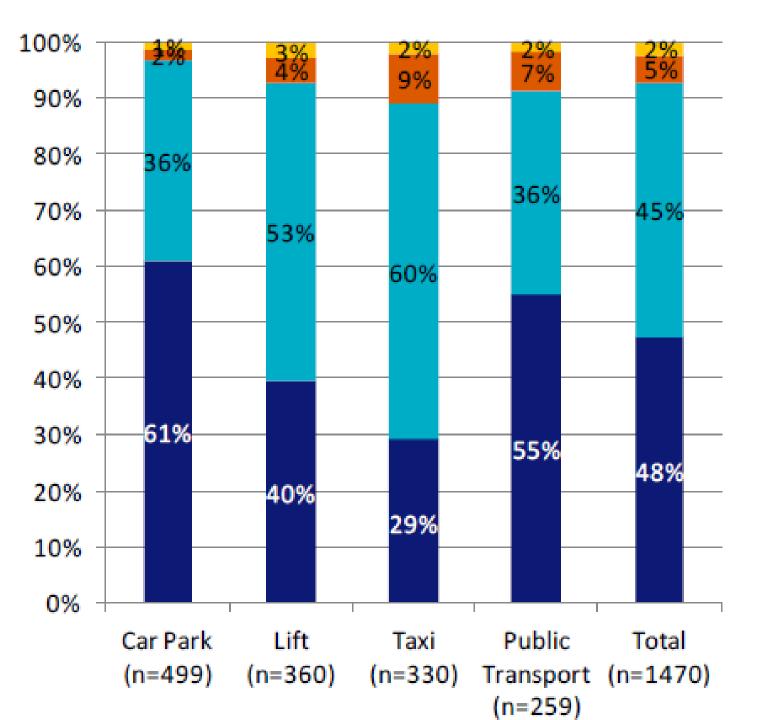
## More passengers use public transport at bigger airports





Reasons why pax chose their departure airport.

- Other
- Third party decision
- Cost
- Routes/Frequency
- Location and Surface Access



decision on which transport mode to take to travel to/from airport

- Not applicable/someone else made the decision on transport
- On the day of the flight

- After the time of booking but before the day of the flight
- At the time of booking the flights

Consultation on Issues Affecting
Passengers' Access to UK Airports: A
Review of Surface Access

8



### Reduce CO2 emissions



Increase catchment area





# Why Air-Rail?

#### Key elements of success of air-rail

- ✓ Size of the airport —bigger hub airports have higher percentage of public transport use than small.
- ✓ What is the passenger passenger profile? If the airport serves millions of passengers each year, but most of them are transfer, a rail link might not be on a list of priorities.
- ✓ What other transport options are available? —Is the airport served by
  multiple road transport operators that offer different level of services (limo,
  taxi, rental, buss, shuttle)? How much it costs to travel on other transport
  modes? How long does it take?



# Best Practice



















Project Partner	Action Plan
Municipality of 18th District of Budapest Budapest Airport Ltd	Air-Rail link between Budapest Airport and East/West Hungary
Austriatech Ltd - Federal Agency for Technological Measures Vienna International Airport	Rail connection to the East from Vienna International Airport
SEA Milan Airports	Improve rail connections to Milan Malpensa Airport Develop new rail links to Milan Linate Airport
Regional Government of the Mazowieckie Voivodeship MPL Warszawa – Modlin Sp.z.o.o. PKP PLK SA Koleje Mazowieckie	Improving public transport connections to Modlin Airport
City of Poznań Marshal's Office the Wielkopolskie Voivodship in Poznań Metropolitan association of Poznań Polish Railways	Identifying potential future public transport connections to Ławica Airport
Deutsche Bahn	High speed rail link to Stuttgart Airport



## Principles of Wayfinding

@TransportingCty
@liamphenderson

Transporting

4444 Cities

# Transporting Cities



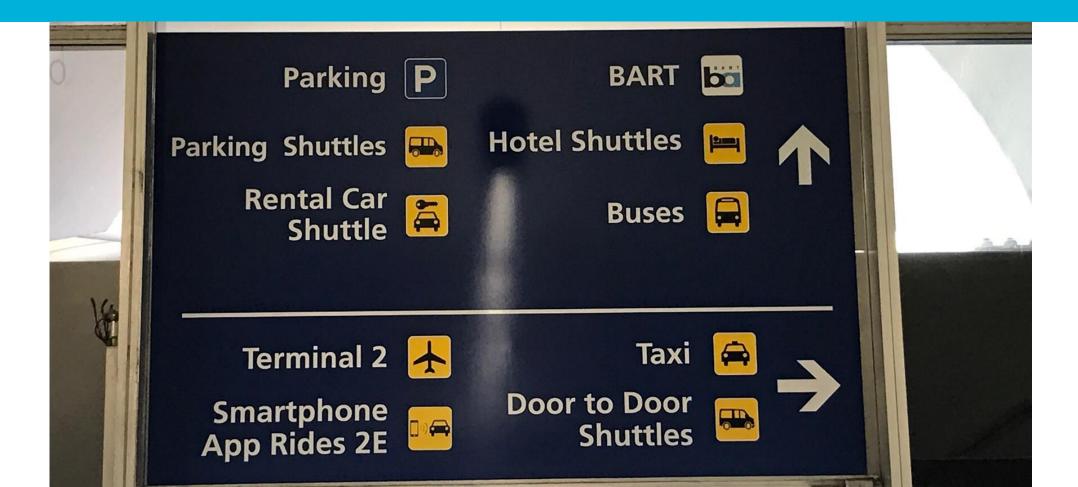
Begin the wayfinding where the passenger relies on airport information, before they leave the Arrivals area.



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.



## Recommendations

- Establish airport-wide coordination to develop Wayfinding Strategies
- Develop of standardised icons for each service available at an airport, to be adopted by all LAirA airports

