

The Status Quo in the airLED airports and the challenges for future developments

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University of Bologna



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Airport, cities and regional development: A MUTUAL AND SYNERGIC RELATION

- AIRPORTS BOOST TERRITORIAL AND ECONOMIC DEVELOPMENT (ACCESSIBILITY, INFRASTRUCTURES AND SERVICES)
- AIRPORTS COMPETITVENESS RELIES ON THE TERRITORIAL AND ECONOMIC SYSTEM

THE FORMATION OF AN AIRPORT CITY

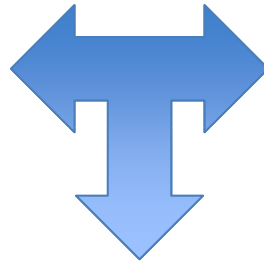
THE FORMATION OF A METROPOLITAN / LOCAL AND REGIONAL SYSTEM

A «GLOCAL» BALANCE: INDUSTRY, POLICIES, TRANSPORT

Creation of an airport city: the sub-merged drivers

LOCAL :

interconnections between logistics,
trade, finance & business services



GLOBAL:

networked business models for just-
in-time value-added services and
production

The overall challenge of cities and regions is to
combine in- and external economies of scale and scope

**(ALSO) THROUGH AN INCREASED ACCESSIBILITY
FOR IMPROVED NETWORKS**



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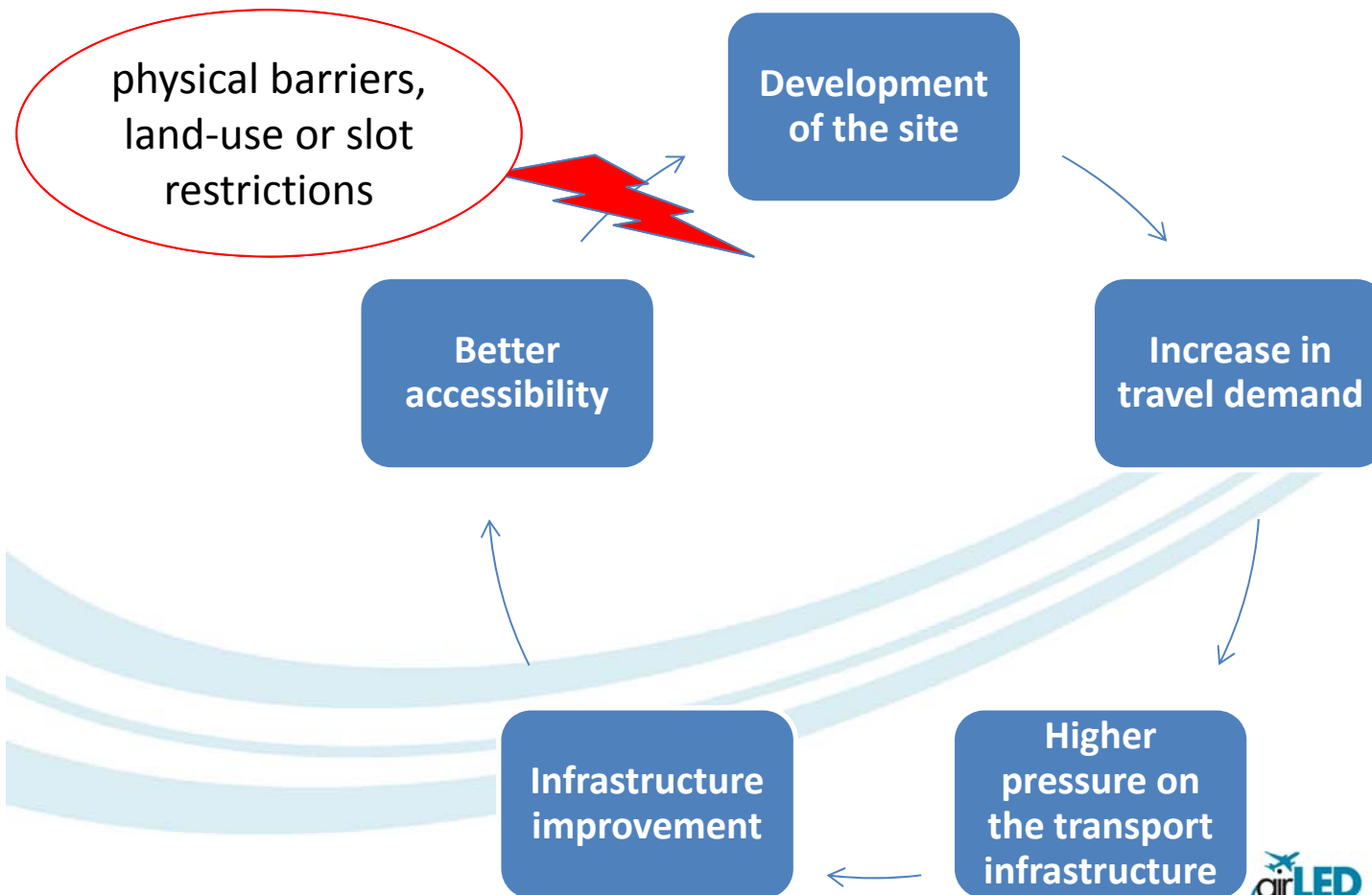


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Creation of an airport city: Transport & economic development

Airport cities have developed along different paths. A portion of them were planned from the start. Most, however, evolved thanks to:



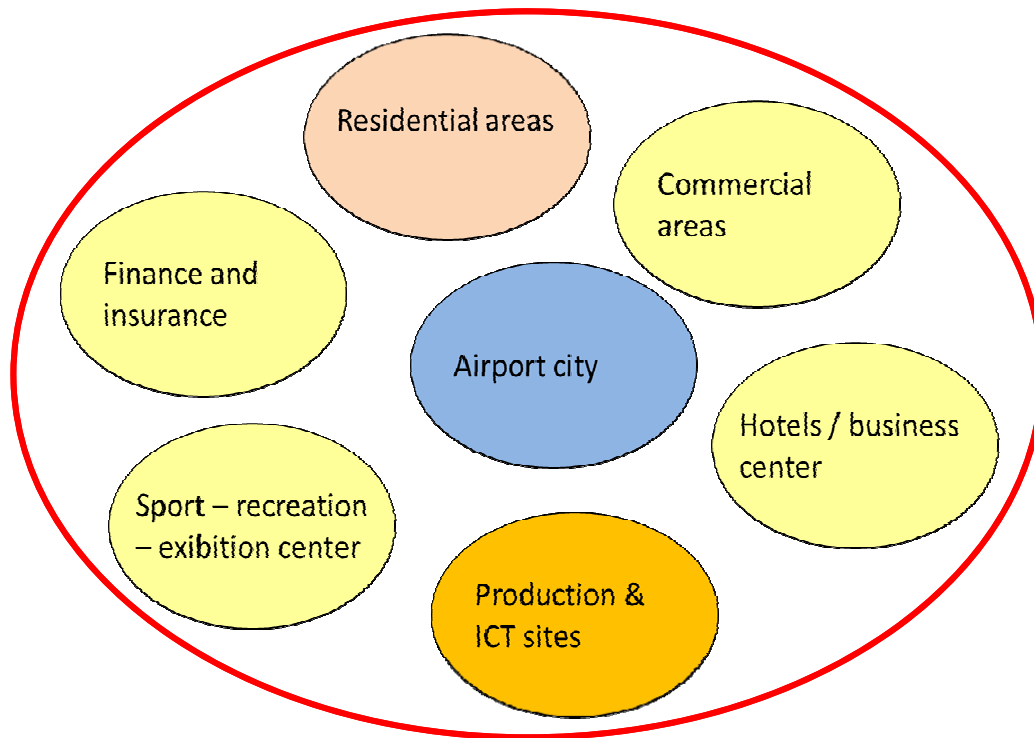
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Creation of an aerotropolis: key concept



Value enhancer:

1. Speedy connectivity to the terminal, to the city and to the region.
2. Aerotropolis stretch up to 25km from major airports, consisting of an airport-centred commercial core (airport city), clusters of aviation-linked businesses and associated residential development.

Stable non-aero revenues, intelligent real estate development and quick accessibility are being turned into a catalyst for regional economy

Aerotropolis: criteria

Prof. Kasarda frequently upgrades the list of airports which have developed or are developing into an airport city or aerotropolis according to basic criteria:

1. Presence of surrounding **aviation-linked business and industry clusters** that correspond to the airport city and aerotropolis models.
2. Demonstrated **commitment to the aerotropolis or airport city model** through the establishment of aerotropolis steering committees, strategic planning and development initiatives.
3. **Government/regulatory support** of the aerotropolis or airport city through aerotropolis legislation, tax incentives or other mechanisms.
4. **Media announcements and substantiated evidence** that an aerotropolis or airport city initiative is moving forward.



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Existing airport cities / aerotropolis

- Operational Aerotropolis
- Developing Aerotropolis
- Operational Airport City
- Developing Airport City



- Europe**
- | | |
|---|---------------------------------|
| Amsterdam Schiphol | London Heathrow Airport |
| Athens International Airport | Manchester Airport |
| Eleftherios Venizelos | Moscow Domodedovo Airport |
| Barcelona El Prat Airport | Munich Airport |
| Bremen Airport | Oslo Airport, Gardermoen |
| Budapest Ferenc Liszt International Airport | Paris Charles de Gaulle Airport |
| Dublin Airport | Paris Vatry Airport |
| Frankfurt Airport | Stockholm Arlanda Airport |
| Frankfurt-Hahn Airport | Vienna International Airport |
| Helsinki-Vantaa Airport | Warsaw Chopin Airport |
| | Zurich Airport |

Source: Kasarda

Existing airport cities / aerotropolis

Airport	Type	Passenger stat	Freight stat [t]
Munich airport	Airport city operation	38,4 mil	290 k
Moscow domodenovo	Aerotropolis developing	30,8 mil	No info
Zurich international	Airport city operation	24,8 mil	418 k

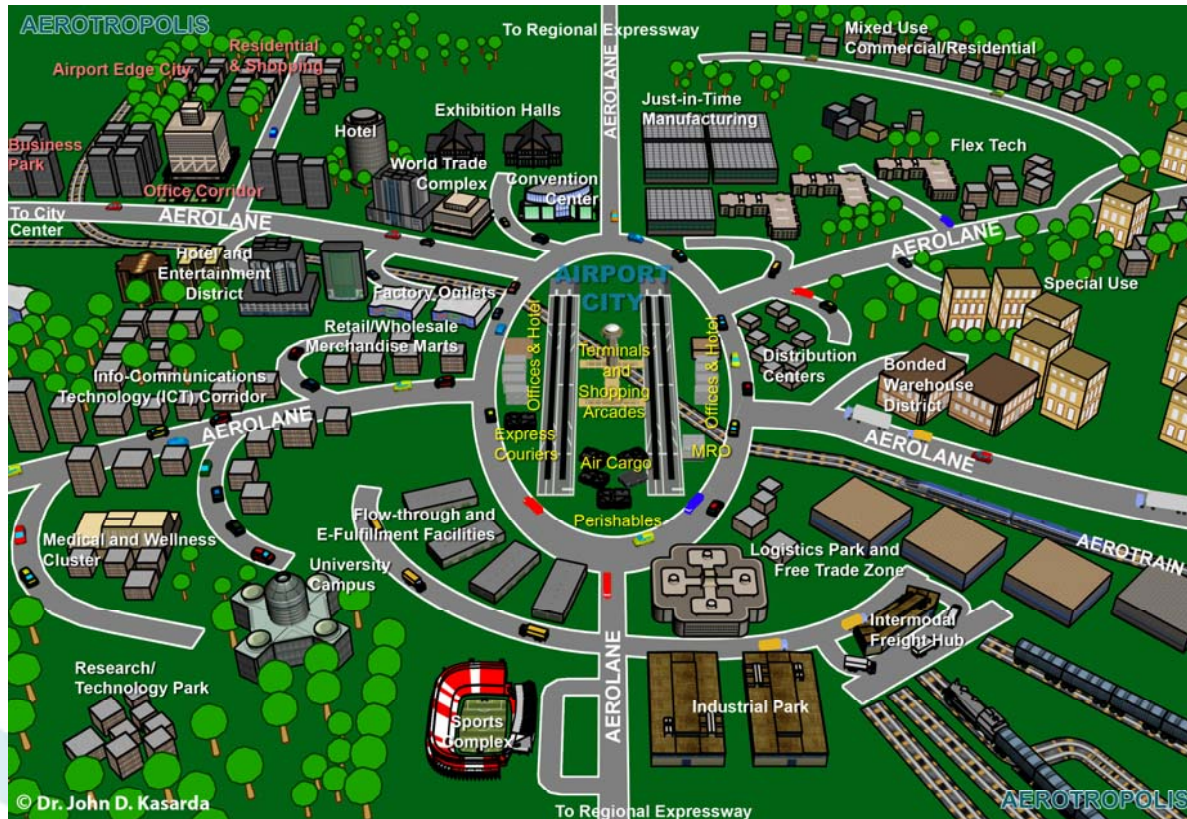
ARE REGIONAL AIRPORTS “ENOUGH” TO BE THE ENGINES OF AN AEROTROPOLIS?

Manchester	Airport city developing	16,8 mil	74 k
Helsinki vantaa	Aerotropolis operation	15,2 mil	192 k
Athens	Airport city operation	12,5 mil	74 k
Budapest	Airport city candidate	8,2 mil	65,5 k
Bologna	Airport city candidate	6,2 mil	40 k
Frankfurt hahn	Airport city operation	2,7 mil	152 k
Bremen	Airport city operation	2,6 mil	21,7 k
Ljubljana	Airport city candidate	1,2 mil	17 k
Modlin	Airport city candidate	0,8 mil	0 k
Paris Vatry	Airport city developing	0,1 mil	8k

Source: UNIBO elaborations on Kasarda, airports web sites data, airLED project data

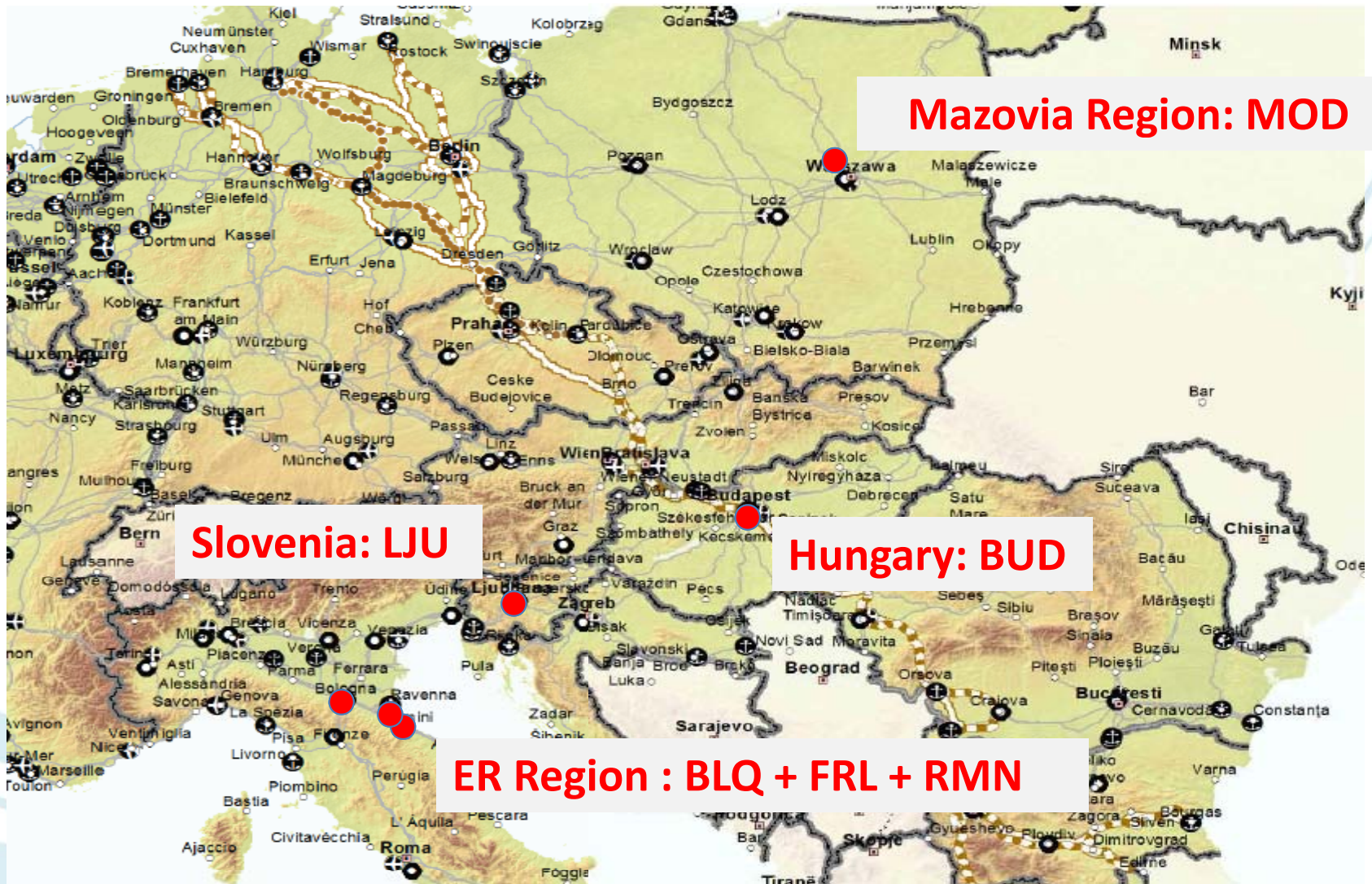
«Candidates» airports have a low level of passenger traffics compared to existing /developing airport cities and aerotropolis in the EU

Limits and Threats

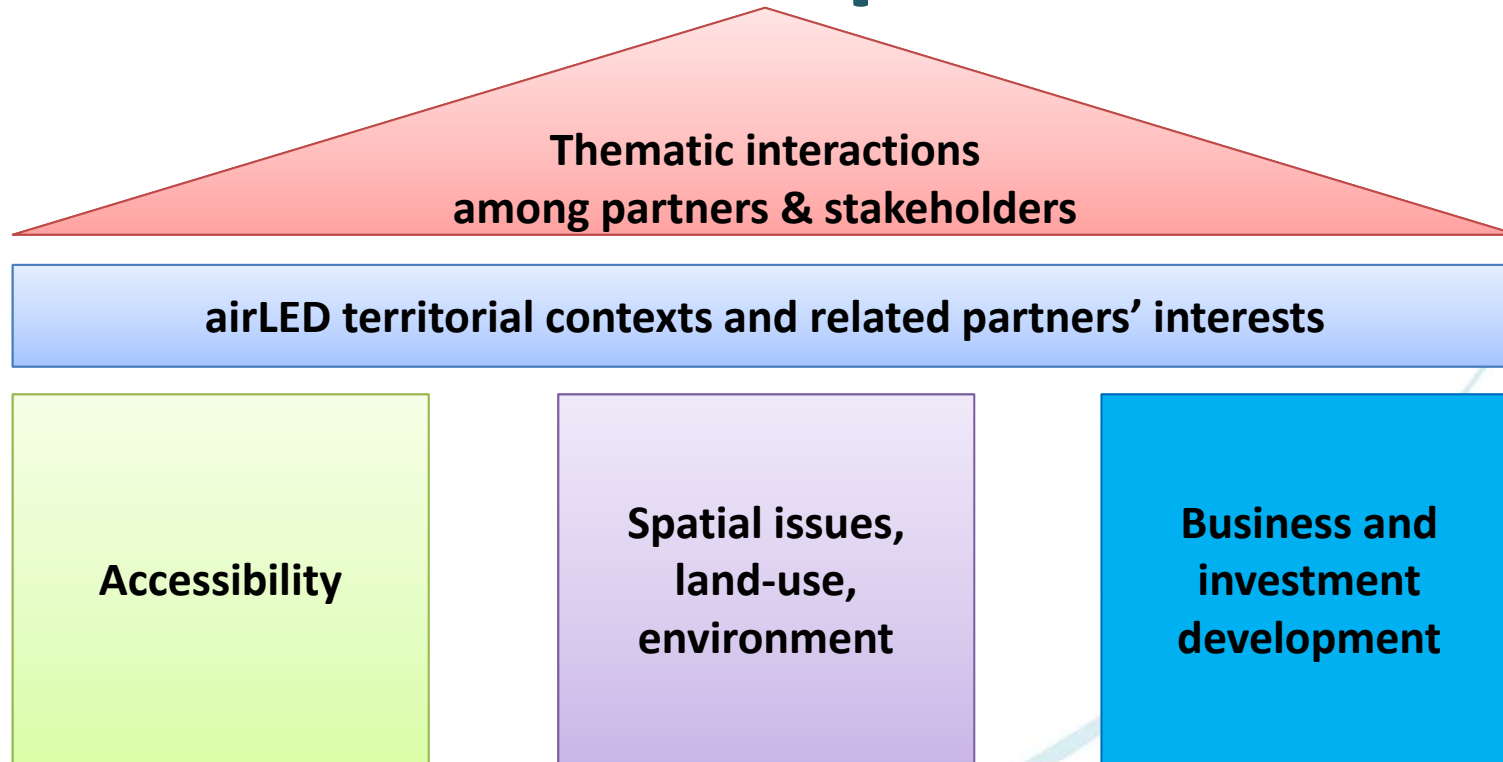


1. Environmental constraints due to higher levels of airport traffics
2. Lack of spatial / economic resources to pursue a fast development
3. Not necessarily converging objectives of different public and private stakeholders (Pub-Pub; Pub-Pri; Pri-Pri)

The Airdled Project – contexts involved



Pillars and process



The status quo prepared by each partner have been analysed by ITL/UNIBO* and put in **comparison** according to the three pillars and OLL methodology in order to assess **strengths and issues** where further **interventions and planning** is needed, also with ref. to the airport city concept. Then conclusions are drawn and similarities to existing airport cities in Europe are proposed.

(* Own opinion)



State of the art – case studies

A FIRST SNAPSHOT ON PLANS AND SOA

Budapest

- Project to develop into an airport city
- Development plans for Accessibility, Terminal2, commercial areas
- Need for stakeholders cooperation

Modlin

- Recently opened to civil traffic
- Two-stage enhancement project
- Regional airport complementary to Warsaw Chopin Airport

Emilia-Romagna - BLQ

- Masterplan to enhance infrastructures
- Accessibility, new terminal, aircraft bays, new cargo area
- Positive stakeholders cooperation

Ljubljana

- Project to develop into an airport city
- Airside overcapacity, landside operating at full capacity
- New terminal & cargo facilities
- Need for stakeholders cooperation

State of the art – case studies

LAND USE ENVIRONMENT

Budapest

- 2k inhabitants living in noise restriction zone
- No negative influence on water, air and soil
- **Small influence of noise around airport**

Modlin

- Less than 1k inhabitants living in noise restriction zone
- **50% of the area in a 10km radius has some form of protection**
- **Many protected areas in the vicinities**

Emilia-Romagna - BLQ

- **12k inhabitants** living in noise restriction zone
- Small noise issues and physical barriers to airside extension (change in landing & takeoff procedures to avoid flyovers)

Ljubljana

- No negative influence in terms of noise, water, soil and air pollution
- No land-use issues

- **Noise issue** - externalities related to traffics increase
- **Protected areas**
- **Land property fragmentation**



State of the art – case studies

ACCESSIBILITY (LAND – AIR)

Budapest

- **Road accessibility** needs enhancement
- Yes coach, **no rail**
- 66 EU destination + 16 international
- **Weak NC**

Modlin

- **Road accessibility** needs enhancement
- **Seldom rail** connection
- 38 EU destination and 2 national
- **Only LCC**

Emilia-Romagna - BLQ

- Road accessibility can be enhanced
- Yes coach, **no rail**
- 104 destinations
- **Weak NC**

Ljubljana

- **Road accessibility** needs enhancement
- Yes coach, **no rail**
- 19 destinations
- **Weak NC**

- **Accessibility as crucial issue for an airport city:** all airports are suitable of upgrades or in some cases need strong improvements.
- Relying only on **weak national carriers** or only the on **extremely volatile LCC market** segment could be risky. For the same reason, regional airports are not likely to develop into airport cities very soon.

State of the art – case studies

BUSINESS AND INVESTMENT DEVELOPMENT

Budapest

- Presence of ICT, financial activities and logistics
- Air cargo facilities need improvement

Modlin

- Presence of mechanic industry and logistics
- Air cargo facilities need improvement

Emilia-Romagna - BLQ

- Presence of mechanic industry, logistics and ICT
- Air cargo facilities is suitable of improvements

Ljubljana

- Presence of manufacturing clusters and ICT
- Air cargo facilities need improvement
- **Scarce cargo traffic**

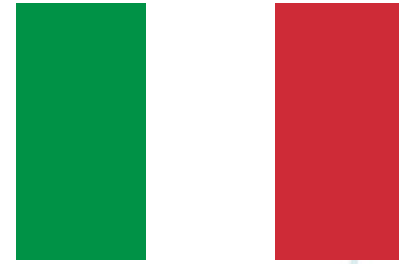
- **Proximity** of business and industrial activities plays a key role
- **Logistics and cargo facilities rely on night flights** (noise requirements) + scale issue

State of the art – summary

	Budapest	Modlin	Emilia-Romagna - BLQ	Ljubljana
Infrastruct.				
Traffic				
National rank	1	10	7	1
Closeness to city	<15	40	<10	25
TEN-T network				
Demograph. trend				
Land ownership	no	no	no	yes
Potential apt city				

Conclusions

- **Differences among the «candidates airport cities»**
- Common need to take into account private stakeholder and public interests – **cooperation objective**
- A **clear awareness of the need to match the enhancement of airports and territory enhancement**
- Based on an **awareness of the airports impacts on the territory**:
 - **direct** (mainly on site and related to airlines, managing companies, handling operators, commercial activities, ...)
 - **indirect and induced** («off site» serving the airport, linked to sectorial interdependencies, multiplying effects)
 - **dynamic** (localisation choices, attraction pole)
 - **GLOBAL**



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