



Contribution of Network Carriers and Low Cost Carriers to the development of (regional) air transport services

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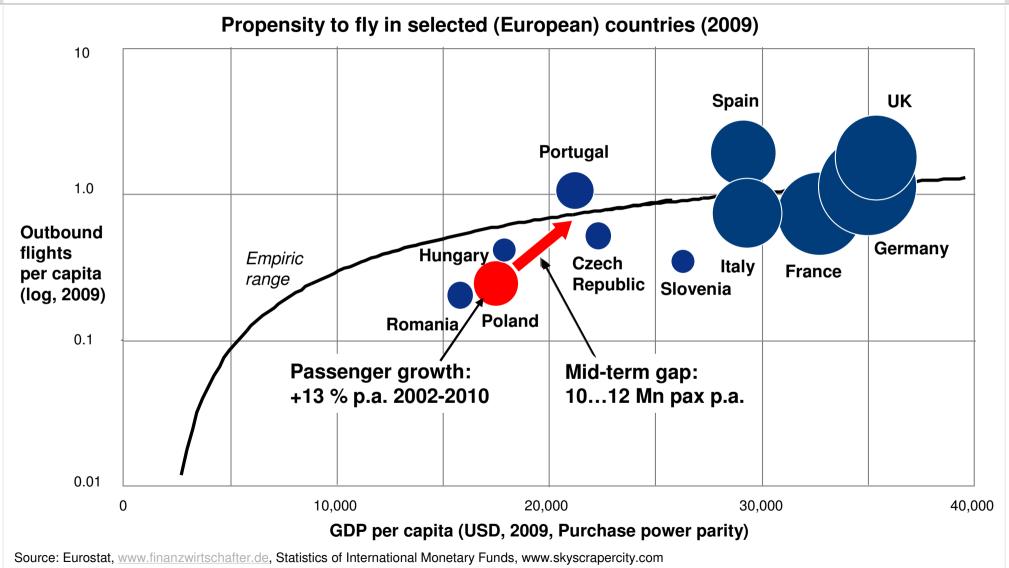


Main topics of today's presentation

- What are the prospects for Poland's aviation sector, and what are the shares of relevant business segments?
- Which are feasible objectives for regional airports, and how will WAW / CAP interfere with them?
- How can Network Carriers and Low Cost Carriers contribute to a sustainable development of Polish regional airports?
- What are critical success factors of Network Carriers and Low Cost Carriers in Poland, and which actions can be taken to foster them?



Poland's air traffic is emerging – however, there is still a gap between overall wealth trajectory and propensity to fly

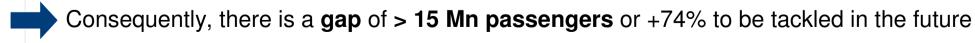




Poland's air traffic is emerging – however, there is still a gap between overall wealth trajectory and propensity to fly

BACKUP

- Poland's economy is continuously growing, even throughout the 2008/2009 financial crisis
 - GDP (2002 2010) + 42 % (+ 18 % price-adjusted)
 - CAGR (GDP 2002 2010) = 4.5 % (+2 % price-adjusted)
 - CAGR (GDP per capity 2002 2010) > 2 % (price-adjusted)
- Air traffic has grown even more
 - CAGR of passenger numbers $(2005 2010) = +13\% (11.3 \text{ Mn} \rightarrow 20.7 \text{ Mn})$
- However, **affinity to fly of Polish citizens** is still **disproportionately low** relative to mature European economies (e.g., Germany):
 - Poland has 47% in terms of inhabitants compared to Germany
 - Poland's GDP per capita is around 46% of the German number (adjusted by purchase power parity)
 - However, Poland's airports reported in 2010 only **12**% of **overall passengers** compared to Germany (20.6 Mn : 167 Mn)
 - With the same travel / buying behaviour like in Germany, Polish citizens would create **36 Mn departures** (wealth-level-adjusted)

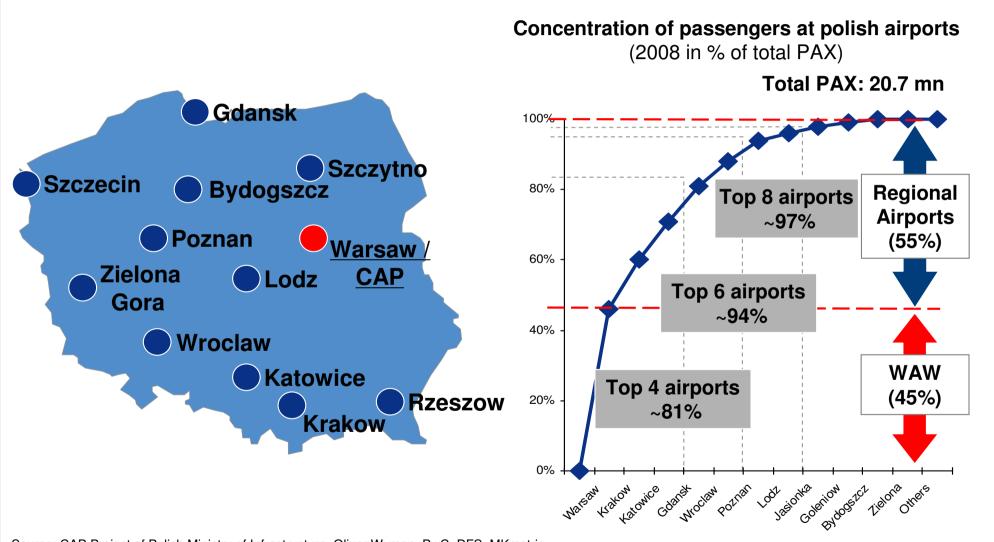


Source: Eurostat, www.finanzwirtschafter.de, Statistics of International Monetary Funds, www.skyscrapercity.com

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Although Polish air traffic sector is highly concentrated on top 8 airports, regional airports account for 55% of total passengers



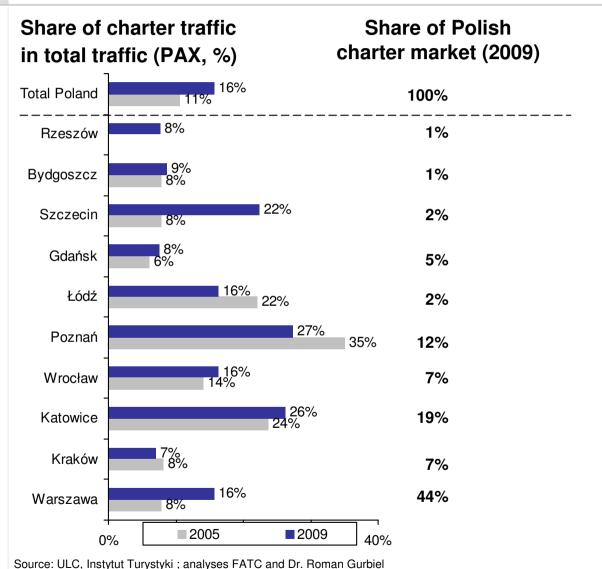
Source: CAP Project of Polish Ministry of Infrastructure, Oliver Wyman, PwC, DFS, MKmetric

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Growth of household incomes has boosted charters, which now generate substantial traffic for most airports



- Regional airports have provided Polish people with easy access to attractive tourism destinations
- Share of Polish charters has grown rapidly from 11% to 16% in 2005-2009
- This trend is expected to continue due to rising incomes and large Poles's appetite to travel
- Warsaw is the largest charter hub (44% share in 2009), leveraging the region's wealth and tour operators preferences
- Katowice has emerged as the second strongest charter hub in Poland

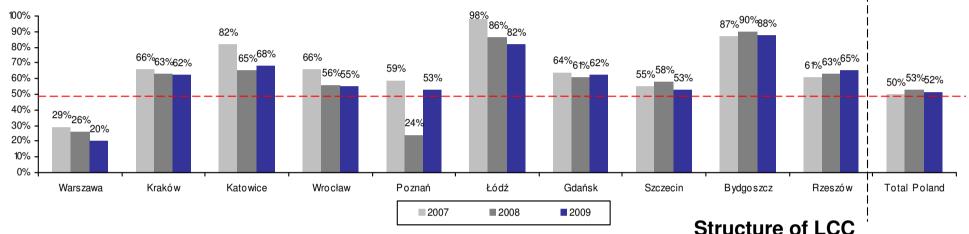
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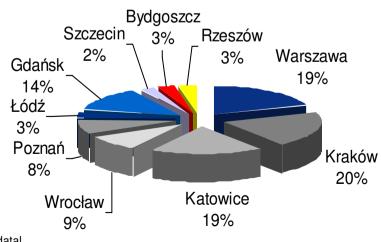
Excluding Warsaw, LCC share has exceeded 50% at most regional airports

Share of LCC traffic in total traffic (%), regular flights



- Already more than 50% of the Poland's aviation market is generated by LCC, with further growing tendency
- Some smaller airports are almost fully dependent on LCCs (usually just one)
- In 2009, three airports Warsaw, Kraków and Katowice had the largest similar share in LCC market
- Warsaw has in recent years decreased its share in LCC market from 41% in 2005 to 20% in 2009

Structure of LC0 market (2009)

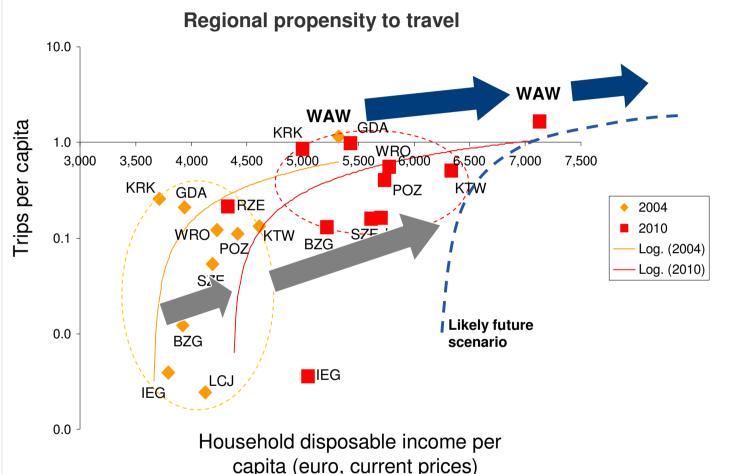


Source: ULC Aviation Market Analyses / Statistics by Carrier; analyses FATC and Dr. Roman Gurbiel based on ULC datal

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Regional airports have passed Warsaw in terms of growth dynamics, developing independent network structures



ROUGH ESTIMATE

- Warsaw is still
 Poland's major hub –
 however, its growth
 (6.4% p.a. 2004-2010)
 has been far behind
 that of regional airports
 (on average 27% p.a.
 in 2004-2010)
- The growing household incomes have proven to be one of the major drivers of demand
- Kraków, Katowice and Gdańsk emerged as major regional airports, fuelled by attractive catchment areas

Note: Airport catchment area = relevant voivodship

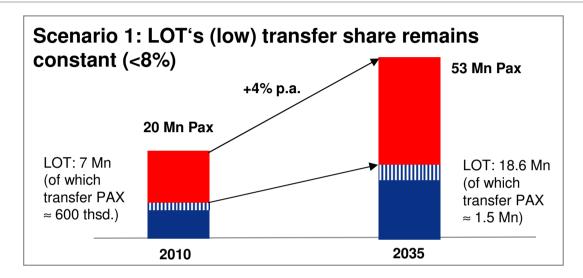
Source: GUS; analyses FATC and Dr. Roman Gurbiel (2010 disp income - own estimate based 2004-2008 available data trend and crisis factor)

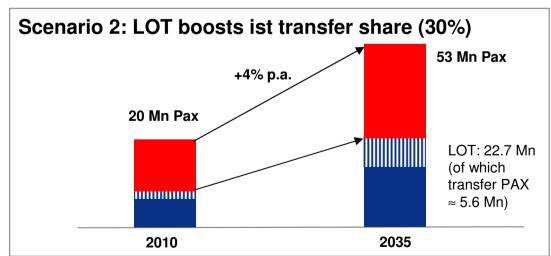
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Even if LOT boosts its transfer share in WAW / CAP, the growth dynamics of regional airports will be untapped





Source: CAP Project of Polish Ministry of Infrastructure, Oliver Wyman, PwC, DFS, MKmetric

- Regional airports had 11...12
 Mn passengers in 2010
- LOT is very focused on WAW and contributes only a minor share to regional airports' pax number
- At 4% annual growth and a constant transfer share of LOT, regional airports would see additional 20 Mn pax in 2035
- Assuming that LOT could win additional passengers through boosting its transfer share in WAW / CAP to 30%, some passengers could be lost for regional airports
- Even if they would lose all transfer passengers, they would still see additional 16
 Mn pax in 2035 (+ 3.4% p.a.)

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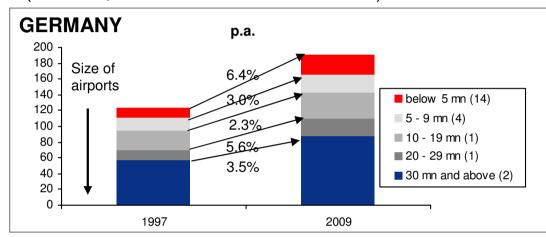


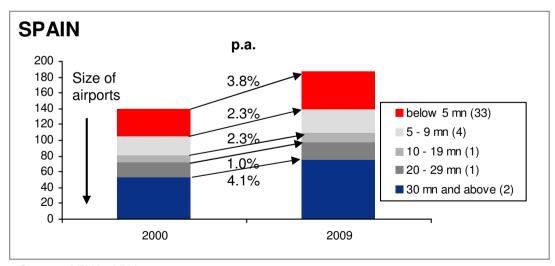


This is underlined by the experience in other European countries where regional airports outgrew national hubs

Growth by Airport Size Clusters

(mn PAX, size selection based on 2009)





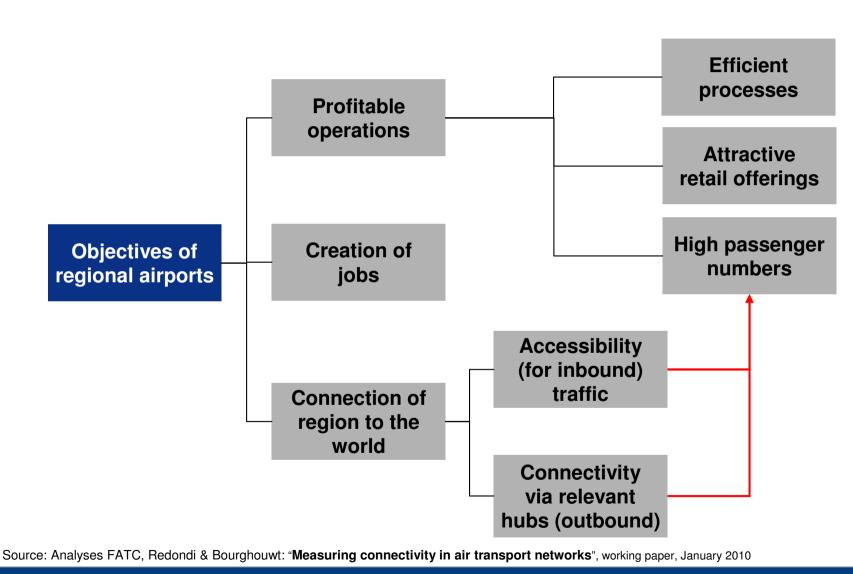
Source: AENA, ADV; analyses FATC and Dr. Roman Gurbiel; (x) no. of airports in the size cluster

BACKUP

- The Polish market structure may to some extend follow those of Germany, Spain or UK with one (or more) major central hub(s), several mid-sized regional hubs, and local airports
- Despite dynamic growth of major hubs in Europe, smaller regional airports have defended and even expanded their market position
- The key role was often played by LCCs, establishing their operations at secondary airports
- In Germany, LCC market share has grown dynamically from 5% in 2002 to 30% in 2010



Regional airports pursue diverse objectives – a good connection to the world drives both passenger numbers and profit



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Accessibility and connectivity of Polish regional airports still depends to a high degree on foreign hubs – p2p traffic growing

Potential connection of Polish regional airports to the world – Example: Poznan

Illustrative



- Most Polish regional airports are located West of Warsaw
- Thus, connections to South / West / Northern Europe are available via WAW, but not always convenient
- P2P services are often offered by Low cost carriers
- Intercontinental p2p services are only available in Krakow and Kattowice
- Apart from that, intercontinental destinations can be reached via adjacent hubs (WAW, FRA, MUC, LHR, CDG, ...)

Source: Analyses FATC, Redondi & Bourghouwt: "Measuring connectivity in air transport networks", working paper, January 2010

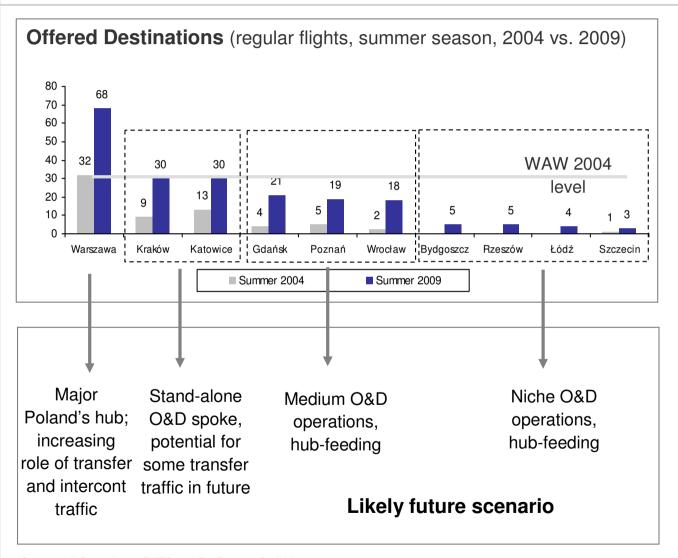
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Further growth of wealth level and air traffic demand in Poland will in any case foster expansion of regional airports





- Total number of offered destinations from regional airports has increased from 34 to 135 (2004-2009) (summer season; winter season: from 12 to 132)
- Connection to the world and growth of passenger numbers go hand in hand

- Even an increase of transfer traffic via adjacent hubs (WAW / CAP, BBI, FRA, ...) should not harm O&D demand
- O&D network development will however strongly depend on the local demand

Source: ULC; analyses FATC and Dr. Roman Gurbiel

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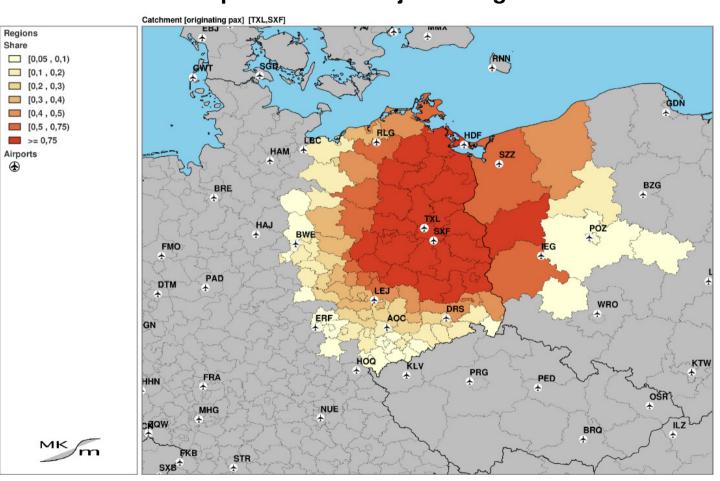




New Berlin capital airport BBI opens as of summer 2012 – however, only SZZ and IEG seem to be directly impacted

Calculation of BBI pull effect on adjacent regions





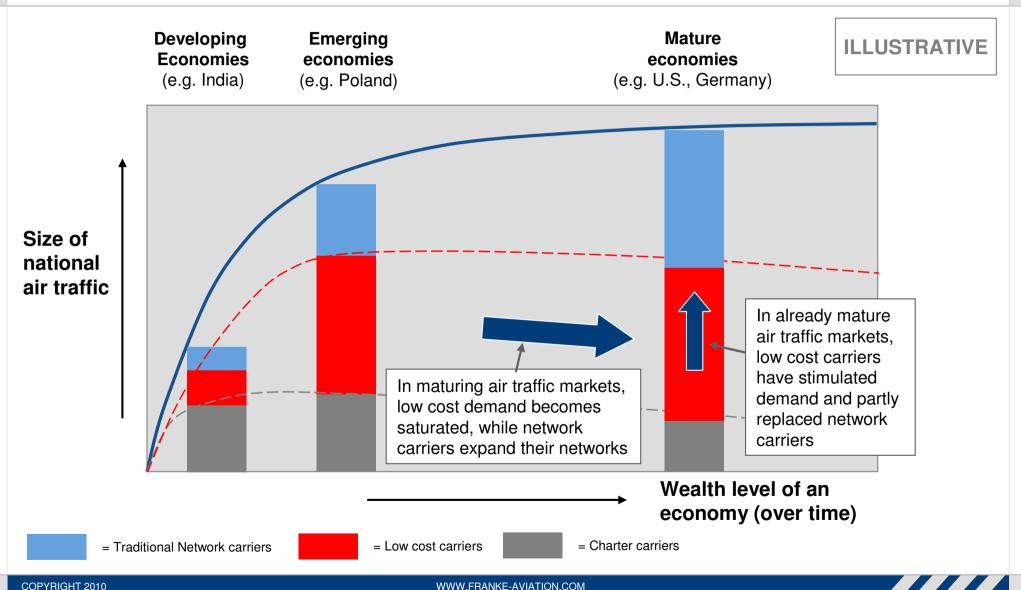
- Due to good connectivity by rail and motorway, BBI would be easily accessible for Polish passengers
- BBI may attract passengers from regions with poor destination choice
- SZZ, POZ, IEG and WRO could benefit as BBI feeders; however, this will depend on the shortdistance travel time&cost alternatives
- Ryanair as major operator at Polish airports has not yet confirmed its dedication to the new Berlin airport (BBI)

Source: xvia-Tool, MKmetric; analyses FATC and Dr. Roman Gurbiel

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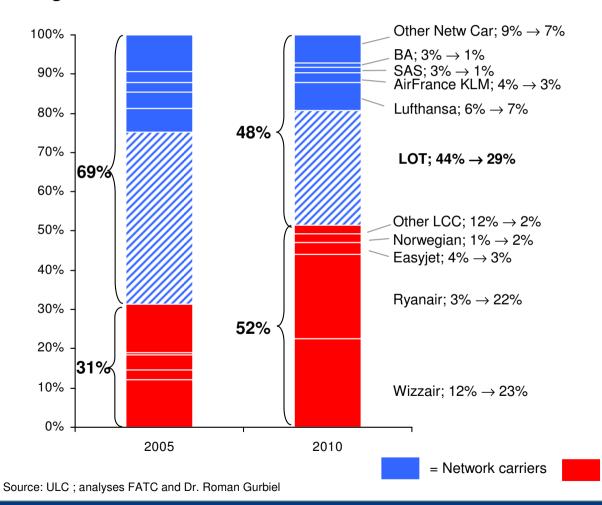
Like in other emerging economies, Poland's air traffic growth has been boosted by charter and low cost carriers...





...LCCs have played major role in market stimulation, growing by > 25 % p.a. over the past 5 years...





LCC characteristics in Poland

- LCC provide the major stream of traffic for mid-sized airports and critical stream for the smallest ones
- Dynamic growth of Wrocław, Gdańsk, Poznań was possible primarily due to LCC traffic increases
- If excluding LOT from the picture, the dependence on LCCs increases to 70-80% on average

= Low cost carriers

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...however, Poland's flag carrier LOT has still considerable growth prospects

Growth prospects for LOT (and other network carriers)

- LOT's national market share has steadily decreased
- Up to now, Polish people are still reluctant despite increasing wealth level
 to pay premium fares for air travel → they love Low cost carriers
- Thus, LOT focuses on few international markets with limited intercontinental uplift, supported by domestic network
- With an expected further growth of wealth level, Polish citizens are likely to demand more air travel capacities, both nationally and internationally
- Network carriers like LOT are suited to satisfy this growing demand, particularly in the premium and intercontinental segment

Source: ULC; analyses FATC and Dr. Roman Gurbiel





There are no "good" or "bad" airlines – both Low cost and Network carriers can contribute to the development of regional airports

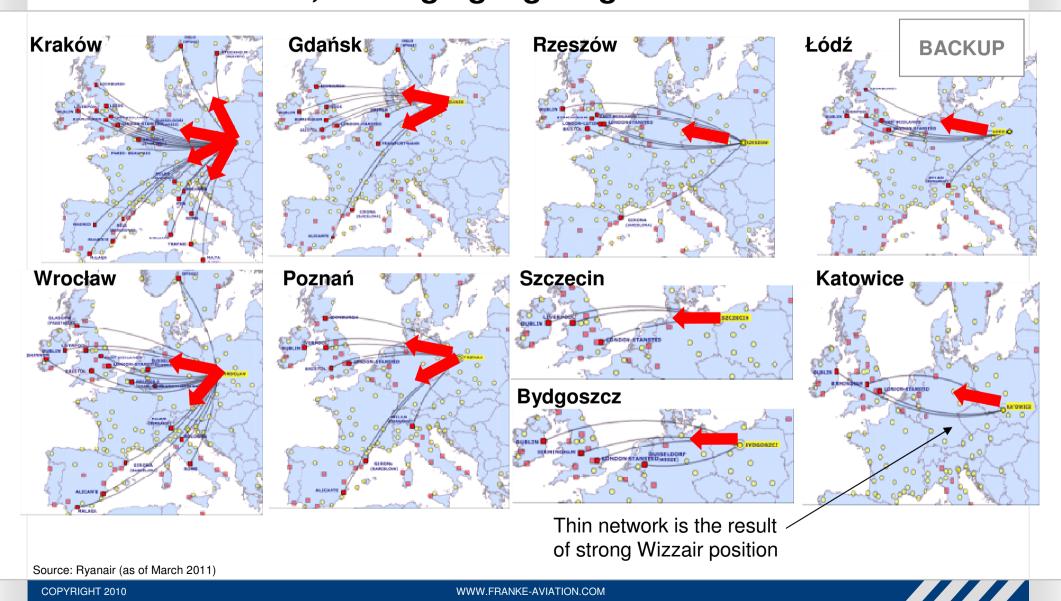
Characteristics of Low cost & Network carriers from the perspective of regional airports

	Low cost carriers	Network carriers
Examples in Poland	Wizz Air, easyJet, Ryanair, Germanwings,	LOT, Lufthansa, Air France / KLM, British Airways,
Presence in / commitment to regional airports (local station → jobs)	 Presence: strong (> 60% market share) Commitment: mediocre (most stations – except Wizz Air) are abroad 	 Presence: poor (some hub feed; international flights only in KRK + KTW) Commitment: medium (some local planes and jobs)
Destination portfolio (connection to the world)	 Domestic: most major city pairs Continental: numerous routes Intercontinental: None 	 Domestic: some city pairs + feeder traffic to WAW Continental: some routes P2P, more via WAW, FRA, MUC, CDG Intercontinental: a few routes via WAW, FRA, MUC, CDG,
Passenger potential (growth options)	 Medium (additional bases in Poland + European city pairs) 	 High (stimulation of additional – premium – demand for P2P and transfer traffic, esp. Internationally)
Economic potential (fees and revenues)	 Airport fees: poor (LCCs are very tough bargainers) Retail: limited (bargainer passengers) 	 Airport fees: good Retail: good (→ esp. International passengers, inbound)

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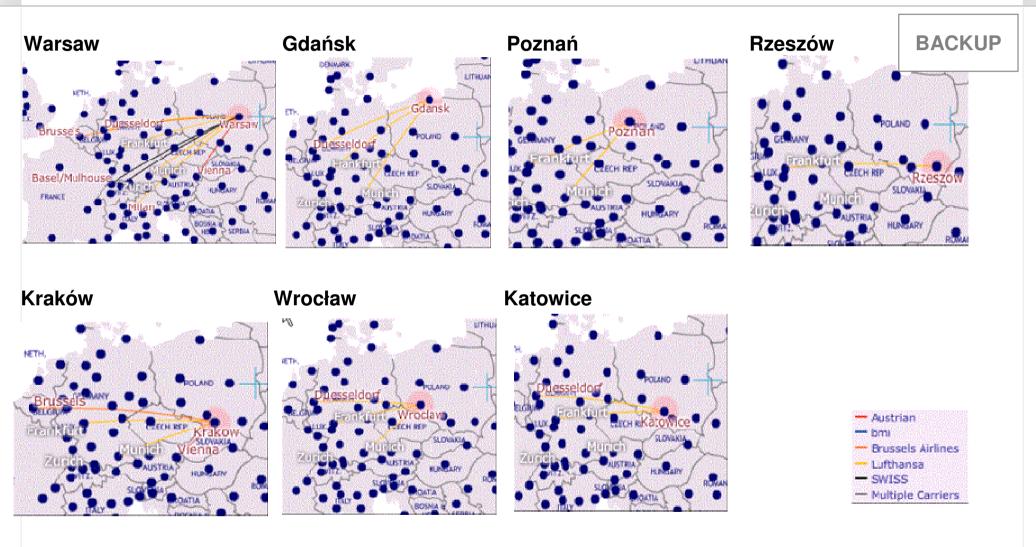


Example LCC: Ryanair uses a uniform approach to develop its network in Poland, leveraging e.g. large commuter flows





Example NC: LH group focuses on feeding its German hubs, benefiting also from very strong Polish-German economic ties



Source: Lufthansa (as of March 2011), excluding codeshares

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Various airports across Europe have developed a balanced approach for sustainable co-existence between LCCs and NCs

LCC and NC Co-existence (Case examples)

	Airport Examples
Major national hubs	 Madrid (e.g. Iberia, EasyJet, Ryanair) Munich (e.g. LH, EasyJet) Warsaw (e.g. LOT, Wizzair)
Medium sized regional airports	 Lyon (e.g. AF, EasyJet) Stuttgart (e.g. LH, Germanwings, Air Berlin) Kraków (e.g. LH, LOT, EasyJet, Ryanair) Katowice (e.g. LH, Wizzair)
Small regional airports	 Dresden (e.g. LH, Germanwings, Air Berlin) Strassbourg (e.g. AF, EasyJet) Rzeszów (e.g. LH, Ryanair)

Key Drivers

- Balanced airport charges at acceptable level for LCCs and NCs
- Catchment area attractiveness, offering opportunities for LCCs and NCs development
- Airport infrastructure enabling to provide appropriate level of service at acceptable cost
- Alternative carriers' strategies with limited city-pair direct competition





Assuming that both LCCs and NCs will further prosper in Poland, regional airports should pursue a phased approach

Four steps towards further growth		vards further growth	Contribution of
			LCCs Network carriers
Step 1		sion of domestic ean P2P traffic	 Strong
Step 2	den	elopment of high-yield mand and respective service offerings	 Poor (outside traditional LCC contribution strike zone) Considerable contribution
Step 3	C	Build-up of intercontinental connections (via WAW / CAP or other hubs)	 Feed to network - Considerable carriers with contribution (in the course of services?
Step 4		Build-up of intercontinenta p2p services	• Today: none • Opportunistic (future: long-haul development LCC models?) (depends on O&D demand)

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Conclusion and outlook: What regional airports and airlines can do to realise the vision of sustainable growth

What regional airports can do...

 Leverage characteristics and strengths of different business models:

Low cost carriers:

- + helpful to quickly stimulate (low yield) demand and create decent domestic / European connections
- limited commitment, poor commercial potential

Network carriers:

- + helpful to accommodate growing high-yield demand, boost international (esp. intercontinental) connections through hub & spoke approach
- Support carriers according to these characteristics, foster phased approach (see airlines)

...and what airlines can do

 Prepare to capture future growth potentials in Poland (high-yield, international routes)

Low cost carriers: further expand destination portfolio and frequency patterns, build stations where appropriate

Network carriers: create better coverage / connectivity for regional airports, build up network in a phased approach

- 1) Further expansion of domestic (LOT) and European P2P traffic
- 2) Coverage of high-yield demand
- 3) Build up of intercontinental connections via WAW / CAP, other hubs
- 4) Build up intercontinental P2P services

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