



Current Trends

Prof. Amedeo Odoni

Istanbul Technical University

Air Transportation Management

M.Sc. Program

Air Transportation Systems Infrastructure

Module 26

My 30, 2015

Capacity Expansion

- ❑ Very few new primary airports in North America and Western Europe; several in Asia (India, China, Middle East)
- ❑ New runways at major existing airports when opportunities arise (very few in Europe and US, many in Asia)
- ❑ Global emphasis on increasing capacity through improvements in Air Traffic Management systems (NextGen, SESAR, etc.); but will result in only limited changes in *runway* capacity at the busiest airports North America and Western Europe [+10% – 20%(??) over 20 years]
- ❑ Growing role for Air Traffic Flow Management Centers to co-ordinate traffic flows in major world regions

Demand Management

- ❑ Innovative slot allocation schemes with emphasis on more efficient use of slots (e.g., incentives for use of large aircraft, “specialized” airports with respect to traffic)
and/or
- ❑ Slot allocation schemes that include economic criteria and approaches:
 - Congestion pricing
 - Slot auctions
 - (“Secondary) slot trading

Airport Privatization/Corporatization

- ❑ Growing private and foreign participation in ownership; 250+ airports worldwide, including many of the busiest, are majority- or minority-owned by private interests or other airports
- ❑ As important, private-sector management practices are becoming the norm to comply with requirement of **economic self-sufficiency** and expectation of **profitability**
- ❑ Trend toward “outsourcing” of airport activities, lean airport organizations (“US model”)
- ❑ *Accompanied by improved understanding of need for regulatory safeguards to protect public interest and prevent monopolistic practices*

The Influence of Low-Cost Carriers

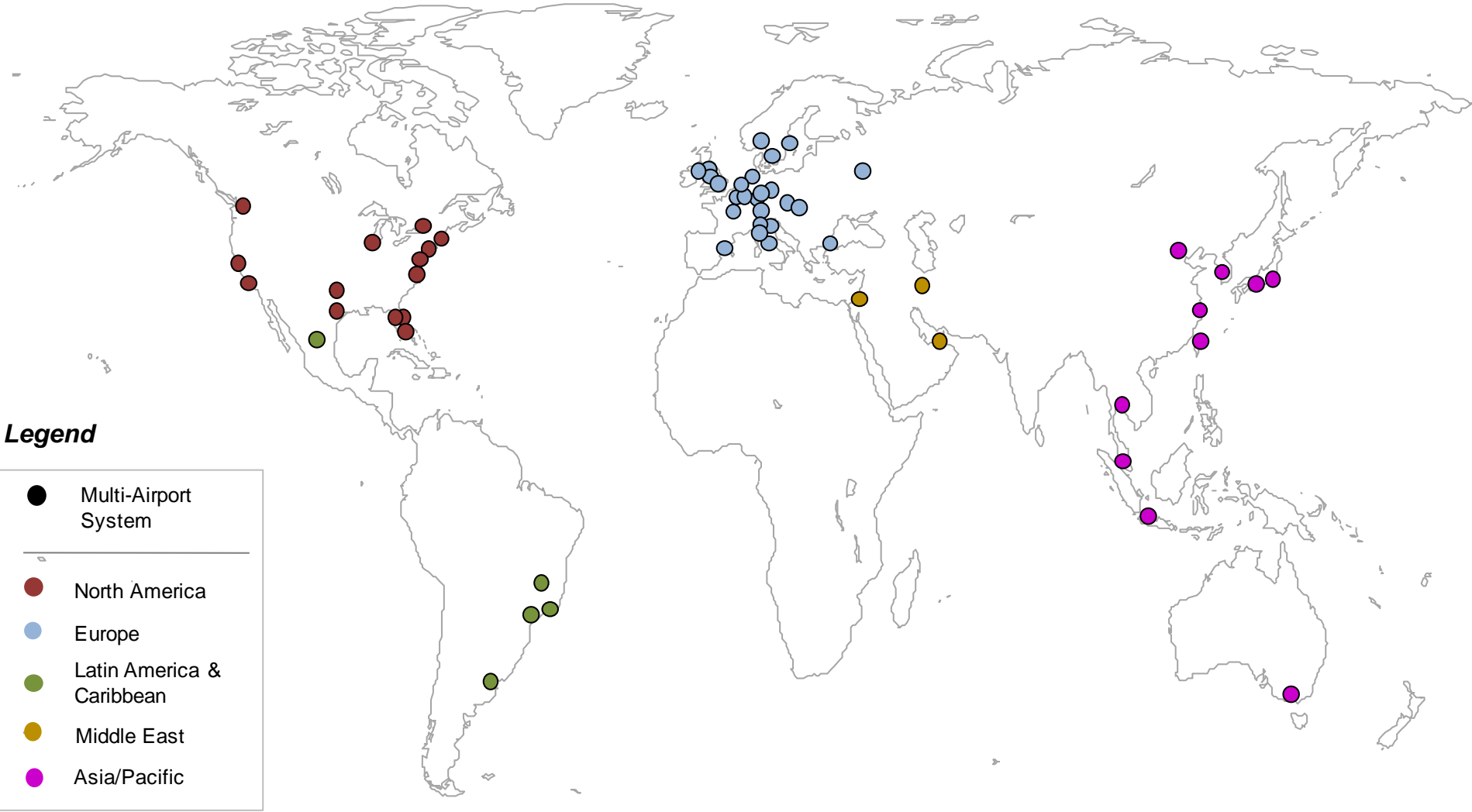
- ❑ Low-cost (or “budget”) carriers are a product of airline deregulation
- ❑ Growing rapidly, especially over last decade
 - Now a global phenomenon
 - More than 20% of global traffic and still rising
 - Catalytic effect on airline industry
- ❑ Requirements of LCCs put additional pressures on airport operators and create difficult dilemmas
 - Spartan, low-cost facilities
 - O-D traffic, few or no connecting passengers
 - Demanding heavy discounts on airport fees
 - Very fast aircraft turn-around times
 - Limited “loyalty” to airports and markets

Multi-Airport Systems

- ❑ Growing reliance on multi-airport systems around the globe, through the utilization of existing (and some new) secondary airports near major hubs of air transport activity
- ❑ Occasionally decreasing traffic share of primary airports in multi-airport systems

Already in full swing!

Multi-Airport Systems (2007)



Source: Bonnefoy (2008)

Bypassing Large Hubs?

- ❑ Increasing number of point-to-point connections between “first- and second-tier” cities/airports (and even between pairs of “second-tiers”) on both long-haul and short-haul routes
- ❑ Supporting developments:
 - Rapid growth of low-cost carriers
 - Expansion and construction of airports near second-tier cities
 - Increased utilization of secondary airports within multi-airport systems
 - Open skies agreements
 - Boeing 787, Airbus A350,... vs. Airbus 380

Emerging Carriers and Hubs

❑ Emirates, Turkish, Etihad, Qatar

❑ Annual airport passengers in millions:

	2007	2014	% Δ	% Δ per yr
Dubai (DXB)	35	71	103	10.5
Istanbul (IST)	23	57	148	14
Doha (DOH)	9	21*	133	18
Abu Dhabi (AUH)	7	20	186	16

* 2012 traffic

❑ Advantages: geographical position, aggressive carrier expansion, cost structure

❑ Fast growing share of traffic from Europe and America to/from Asia and Africa; Dubai now 2nd most most popular destination from LHR (after New York)!

New Airport-Related Technologies

- ❑ Security processing and immigration processing have become the main bottlenecks on landside
- ❑ Technology MAY relieve these bottlenecks in the future
- ❑ Technology may also simplify or greatly accelerate flight check-in, baggage check-in, airline-passenger interactions, etc.
- ❑ Automated people movers will permit vastly expanded terminal buildings with large capacities
- ❑ Growing automation of baggage handling systems
- ❑ It is far from certain that all of the above will actually happen

Questions? Comments?