

# The Capacity Challenge

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## → Warm-Up

Do we need actually additional capacity? How much additional capacity is required?

- Facts for European Airports 2014

- > GDP + 0.1xx%
- > Passengers + 2.8%
- > Movements – 1%

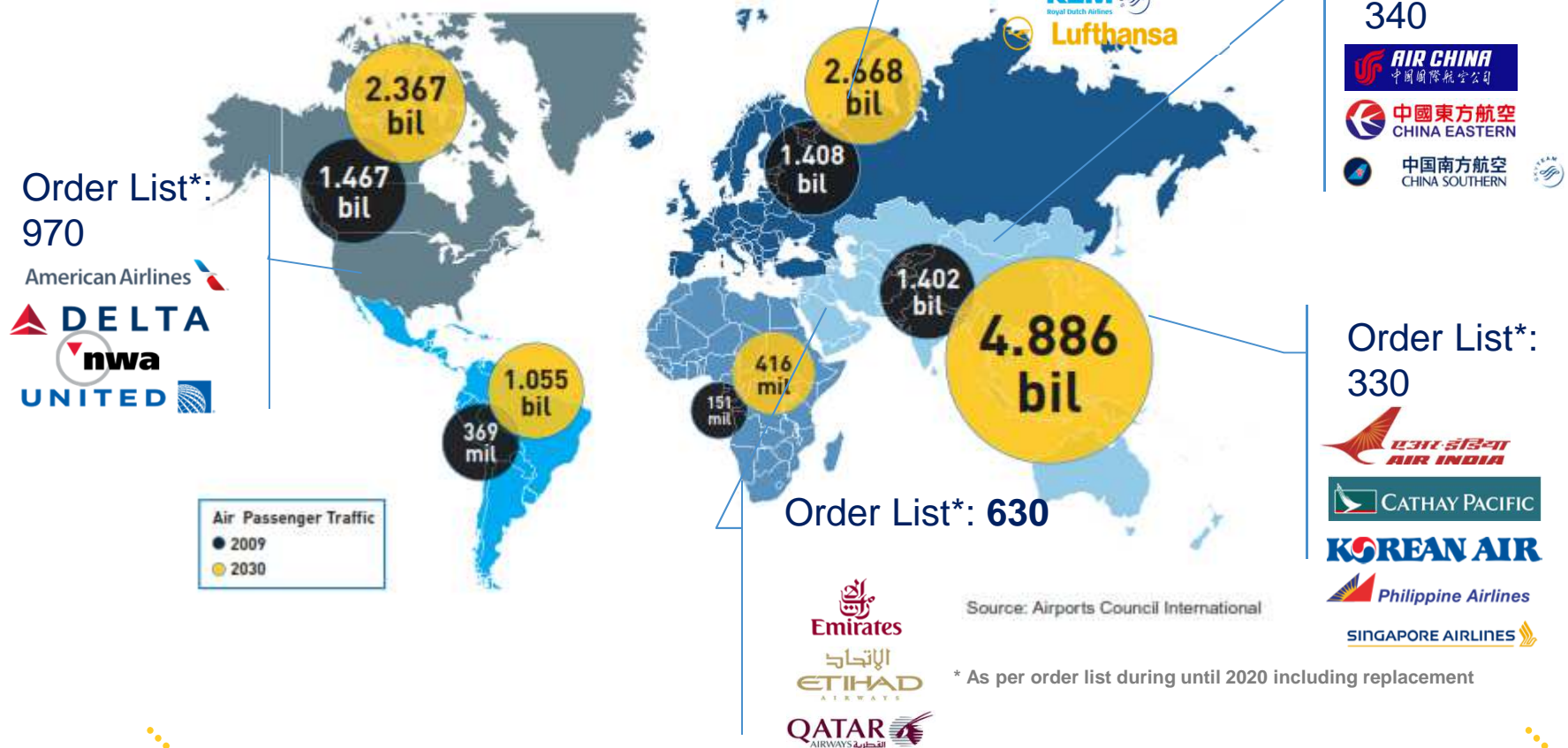
- But even today....

- > Airport Capacity Related Delays + 11%
- > LHR, ZRH, IST, AMS, ATH & Greek Airports



# → The Challenge – Continues Growths and Competition

→ GLOBAL SHIFT IN AVIATION PER CONTINENT





## → The Challenge – Capacity

- Threats

- > Rapidly Increasing Competition outside EU
- > Capacity Constraints (curfew, noise, sites, etc.)
- > Cost Factor

- Opportunities

- > High Tech Infrastructure
- > High Educational Level of Employees
- > Safety
- > Economical Strength



By today forward thinking is still done in western world primarily, how long?

# → The Challenge – Continues Growths and Competition

## ■ Impact of increasing Competition

- > High (market) pressure on Airports by European/Alliance Airlines/Community
- > Operation close to or at capacity limit: Impact on Safety

## ■ Mitigation

- > High level of Service & Quality
- > High Level of Safety
- > Efficient Operation through procedures & technology:  
A-CDM, Network Manager and ...



### *Ground Coordinator*

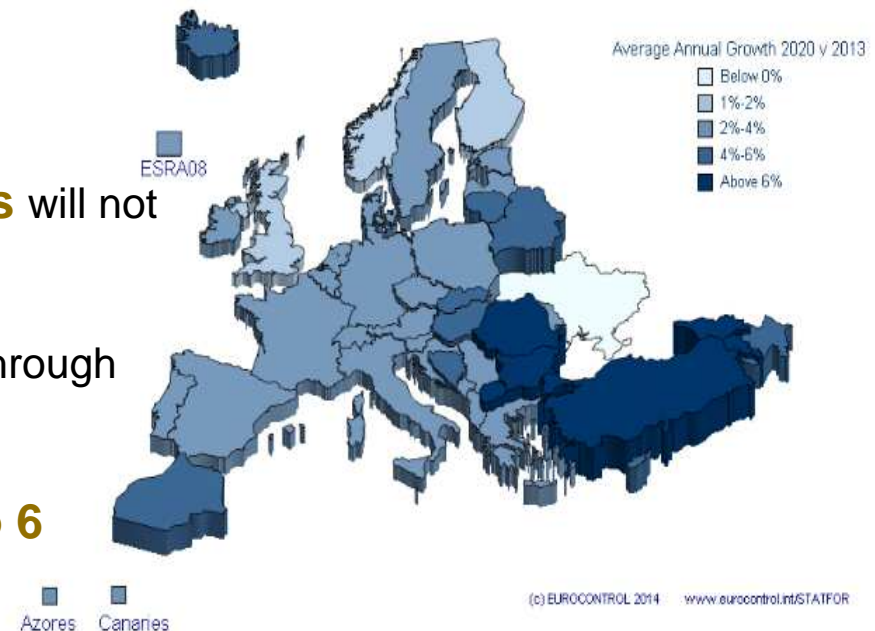
**Strategy: To keep technological leadership by implementing „Operational Excellence“ – Measures (high efficiency, service and cost effective operation).**

# → The Challenge – Continues Growths and Competition

Focus on Europe – Average Annual Growth of Flights per State, 2020 vs. 2013

- Time to Relax?

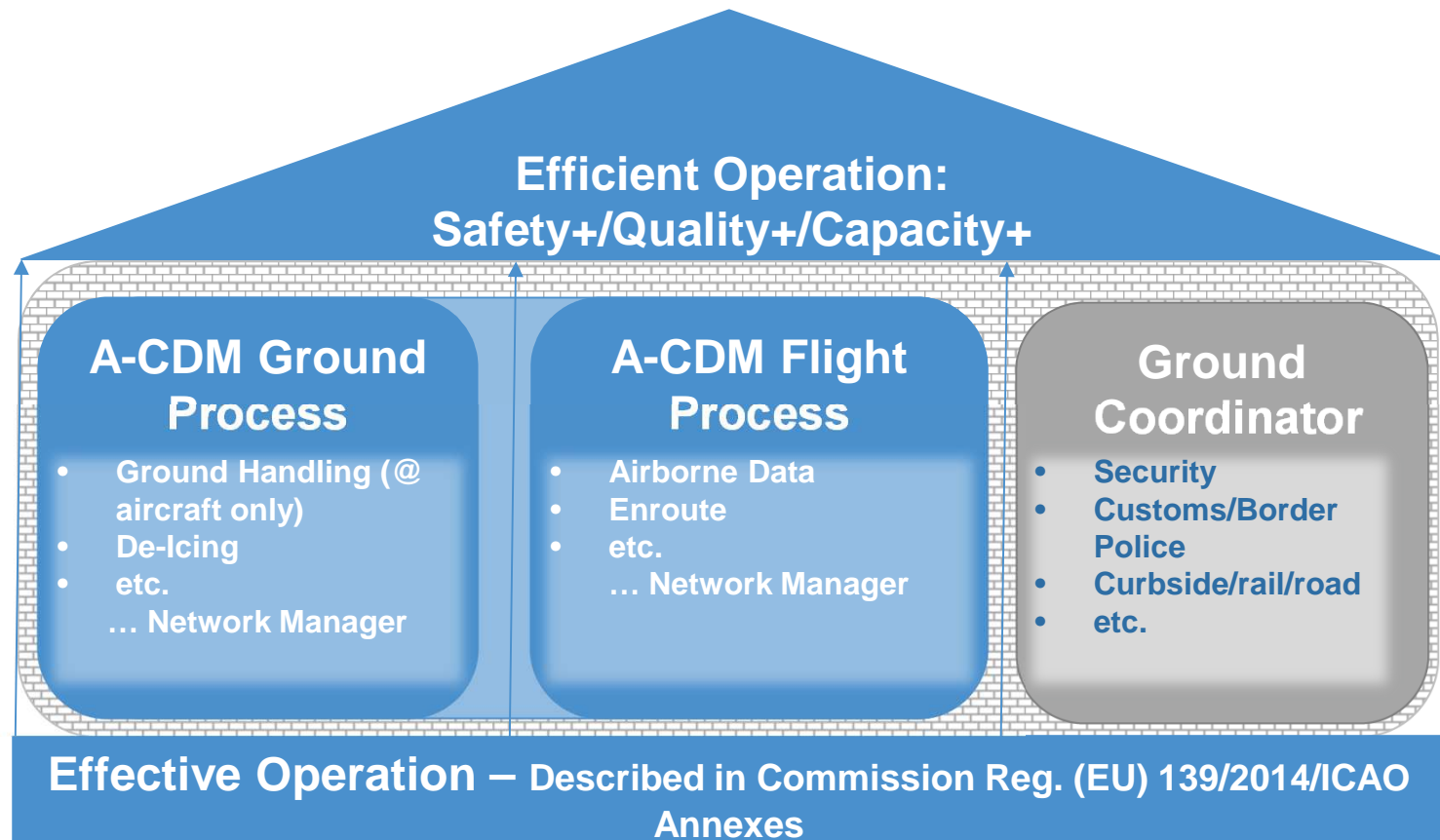
- > In 2035, **12%** of demand remain unaccommodated.
- > In the same year **1.9 million flights** will not be operated.
- > **237 million** passengers will move through other hubs
- > Average delay will increase from **1 to 6 minutes**



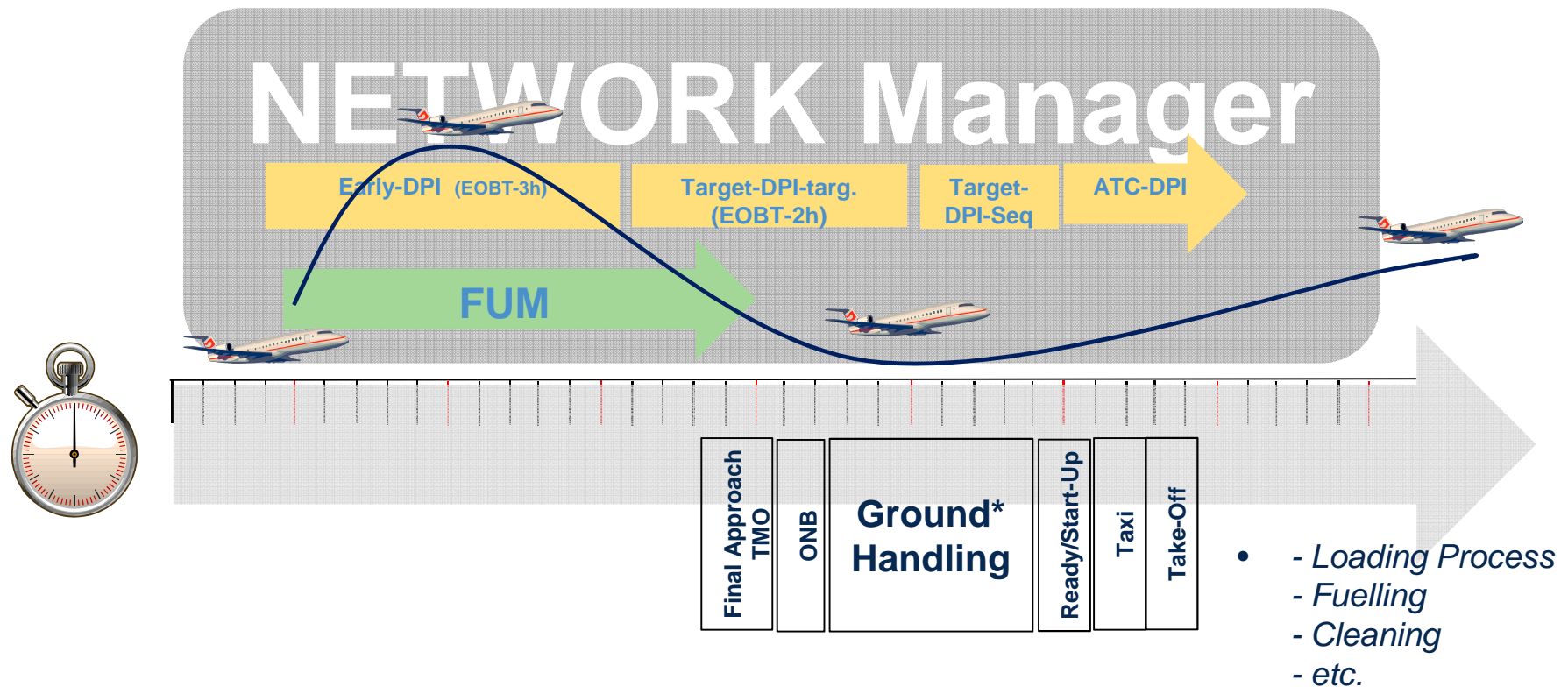
- > Airlines and airports will loose **€40bn** revenues

**Investments in infrastructure will solve long term capacity constraints, nevertheless also immediate measures will be required.**

# → Using The Opportunities: Integration of the Ground Coordinator



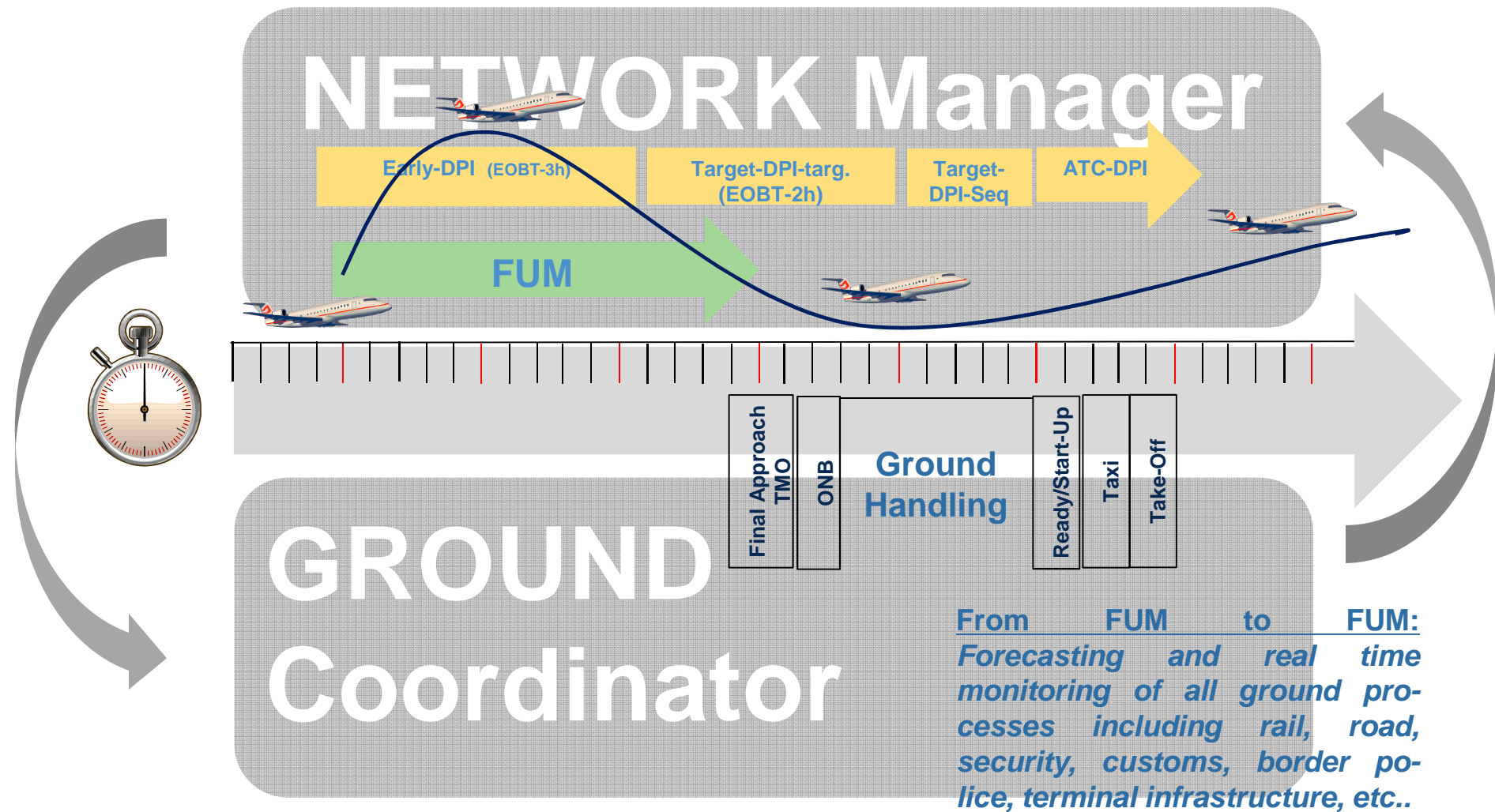
## ➔ Using The Opportunities: Integration of the Ground Coordinator – *Existing Set-Up*



**Problem:** Not all aspects and variables of the *Ground Handling Process* are covered, accuracy and prediction is still limited.



# → Using The Opportunities: Integration of the Ground Coordinator – *Future Set-Up*



# The Ground Coordinator: Main Objectives & Implementation

## ▪ Objectives

- **Transparent Ground Handling processes and forecasting capabilities**  
*...through improved data flow and processing of data...*
- **Increase of CAPACITY and SAFETY**  
*... through permanent and in time monitoring, identification of bottlenecks, mitigation measures...*
- **Increase of SERVICE QUALITY**  
*... through pro-active and smooth operation – act, before results impact ops  
...*
- **Easy evaluation of disruptions and implementation of solutions**  
*... evaluation of historical data indicate bottlenecks for sustainable improvement...*

## The Ground Coordinator: The Function

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- Main Features

- **Collaboration**

- **Coordination**

- **Communication**



**The Ground Coordinator is the only realistic and comprehensive operational mitigation measure allowing to address efficiency and capacity at airports.**



# → Implementation

- Framework (technical)

- **Identification of** common (minimum) **characteristics** for airport integration.
- **System requirements** and interoperability (interfacing).
- **Development of Standards & Procedures.**
- **Escalation** and enforcement **procedures.**
- **Reporting system** (operational, performance, regulation).
- **Data and information sharing system** for operational efficiency.
- **Risk register and management of conflicts of interest.**
- **Governance system.**





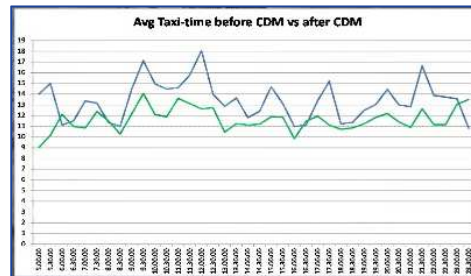
## Implementation

- Framework (political)
  - > **ACI Europe Position Paper** published in 2012.
  - > **EU is called to align its airspace capacity objectives with ground capacity objectives** - The central role played by airport capacity in achieving the objectives of the Single European Sky should be recognised and incorporated accordingly.
  - > **Regulation Proposal 2011/0397:** ...The managing body of the airport shall be in charge of the proper coordination of ground handling activities at its airport. As ground coordinator, the managing body of the airport shall in particular ensure that the operations of suppliers of ground handling services and self-handling airport users comply with the airport rules of conduct as defined in Article 31...
  - > **SES - Network Management and Ground Coordinator Performance Framework:** Integration of ground operations performance, in particular (detailed) turnaround process.



## → Excursus: Benefit

- Can we quantify the benefit?
  - The benefit will differ from airport to airport, depending on grade of implementation, size and saturation.
  - Example Rome Fiumicino (ACDM 2013):



### Benefits at Fiumicino Airport

Airlines save on average a total of 800 minutes' Taxi Time every day:  
it means nearly  
**10 tons of jet fuel/day less**

Since the start of the trials, November 2012, airlines have saved around  
**1,800 tons of jet-fuel and  
€ 1.2 million on fuel costs**



**A-CDM and the Environment at Fiumicino Airport**

9.6 tons per day of jet fuel saved mean a decrease in CO<sub>2</sub> emissions by 30 tons every day

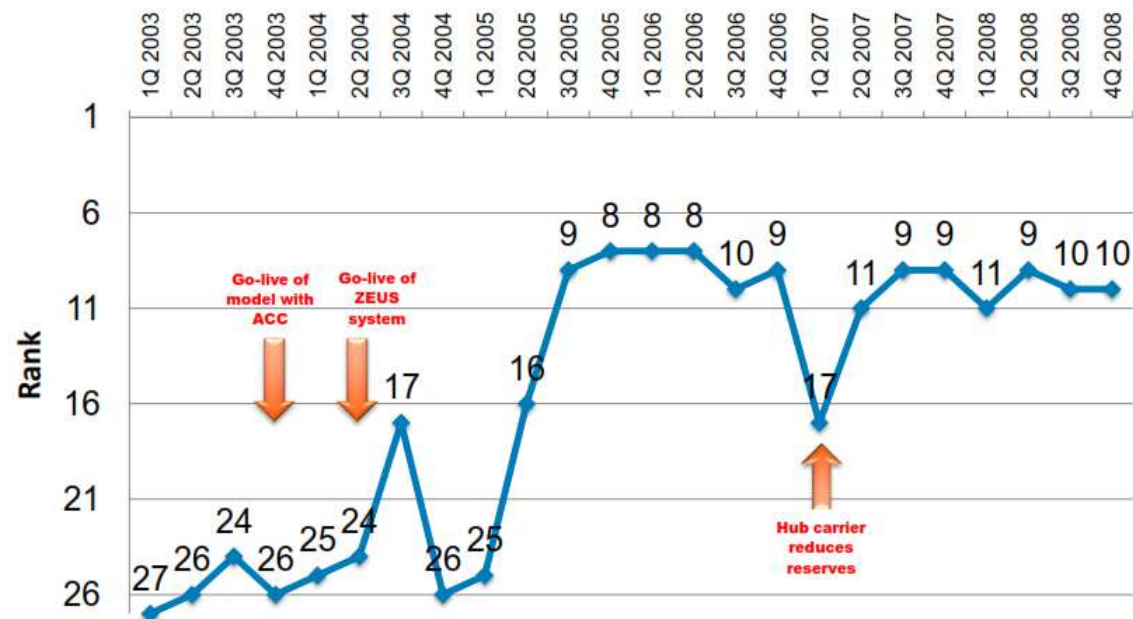
Since the start of the trials, there's been a reduction in CO<sub>2</sub> emissions of 5,400 tons

**Success depends on quality of data – Here the Ground Coordinator will guarantee required accuracy in present and future.**



## ➔ Excursus: Benefit

- Can we quantify the benefit?
  - The benefit will differ from airport to airport, depending on grade of implementation, size and saturation.
  - Example ZRH:



Source: NeuroPie Solutions AG, ZRH Case Study/Association of European Airlines (AEA) Statistics, European Ranking

## → Excursus: Benefit

- Example ZRH – Different Areas of Improvement

Metric	Benefit	Results
On-time departures	Departure punctuality 15" (IATA standard)	Improved rank compared to year 2004 from worst European airport to top 10. Within a year.
Delay cost	Reduced delay cost per departing pax by 30%	Avoided > <b>CHF 50m delay cost to airport</b> community in the past 5 years
Airport capacity	Inbound acceptance rate	Increased bad weather capacity from 18 to 23 movements; good weather from 36 to 39
Airline capacity	Minimum ground time	Reduce <b>MGT for A320 from 40 to 30 minutes</b> (Swiss: 1 aircraft not purchased)
Provider capacity	Reserves with staff, agents equipment, etc.	Staff <b>reductions</b> of handling
Baggage processing	Less baggage left behind	<b>Best baggage performance</b> in Europe
Transfer passengers	Less broken connections	Less broken connections
Retail turnover	Increased passenger with spend rate	<b>Improved passenger spend rate by &gt; 20%</b> dynamic gate announcement



## **Ground Coordinator – Closing the Loop**

- Final Statements in/for this presentation...
  - > **Long Term:** The introduction of the Ground Coordinator concept is key to optimise existing capacity, which is a must in the current situation, the only solution to mitigate the looming airport capacity crunch fully is the expansion of physical capacity.
  - > **The Ground Coordinator Concept** requires close collaboration and exchange of information between all involved parties. The success depends on the level of cooperation.
  - > **The Ground Coordinator** cannot be held responsible for underperformance of individual stakeholders, GC will be responsible for proper and in time information exchange and supervising optimization. The implementation of solutions will remain with 3<sup>rd</sup> parties.





# THANK YOU

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