



ROUTE CHARGING POLICY FOR A FUNCTIONAL BLOCK OF AIRSPACE (CEATS)

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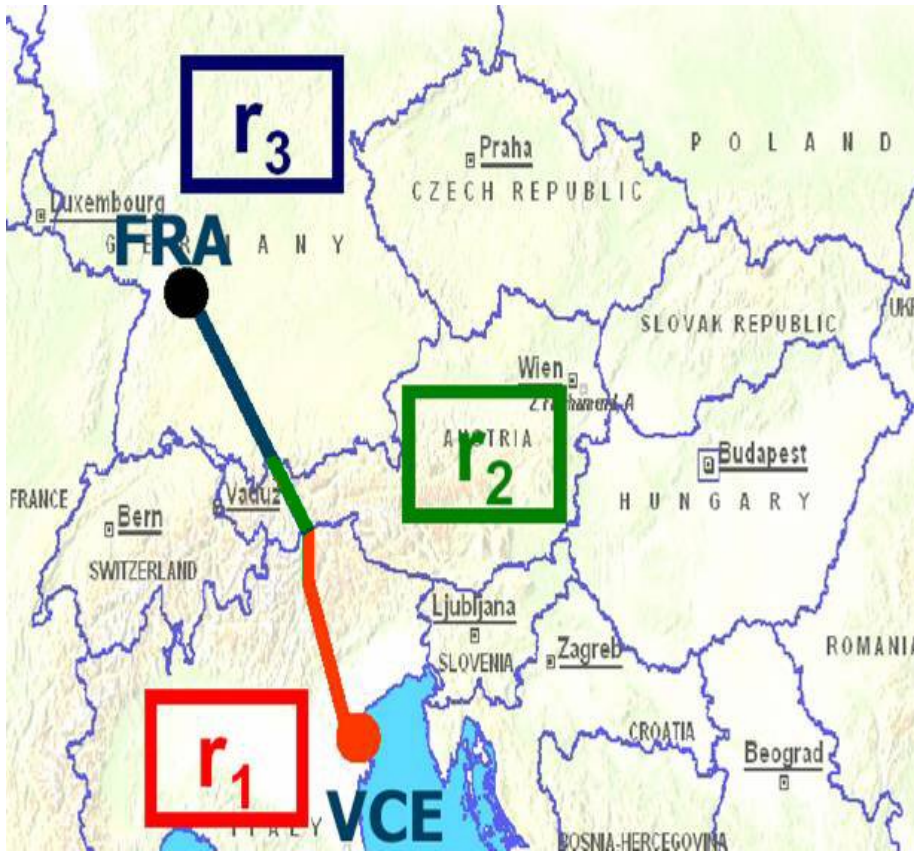
DEEI – University of Trieste

CRDS EUROCONTROL

Aim of the study

- ◆ In Europe, *all airspace users flying wholly or partly under Instrument Flight Rules (IFR) are normally liable to pay **route charges***
- ◆ To describe charging regimes for a European Cross-Border Upper Airspace
- ◆ Impact on Aircraft Operators

Route charges



Total charge per flight	$R = \sum_{i=1}^n r_i$
National charge	$r_i = d_i * p * t_i$ Service Units
Distance factor	d_i
Weight factor	$p = \sqrt{\frac{MTOW}{50}}$
National Unit Rate	t_i

Full Cost Recovery Principle

The current policy for recovering costs for the provision of air navigation services in nearly all the European airspace is that all the costs experienced by the ANSPs have to be sooner or later fully recovered by adequately charging the airspace users.

- ◆ The unit rate of all states (except UK) is such that the **total expected revenues cover the total expected costs** for providing ATM services
- ◆ Compensation is provided for differences between actual and expected revenues

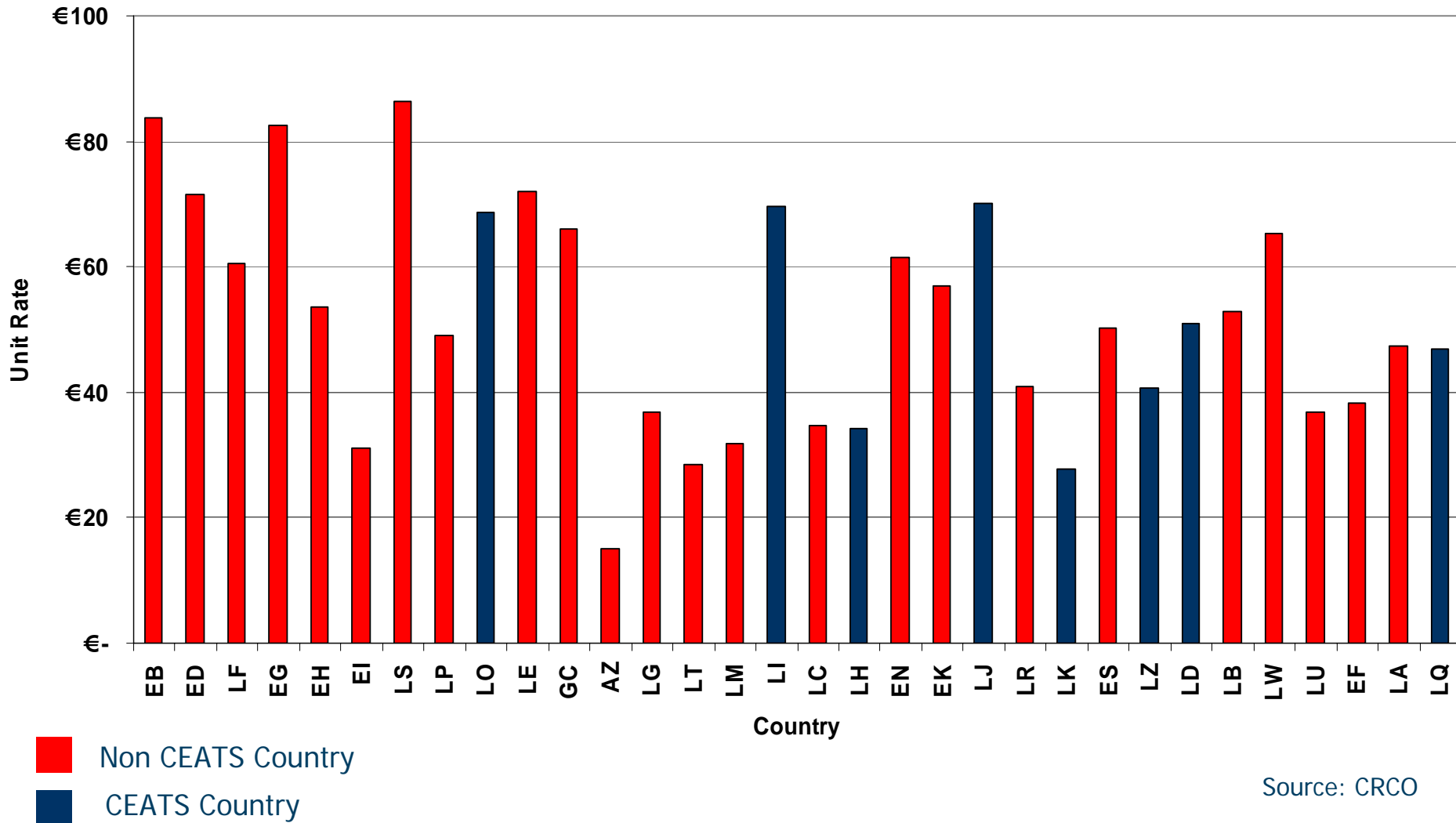
CEATS - Central European Air Traffic Services

The CEATS project, which is coordinated by EUROCONTROL, aims to create a safe and efficient single air traffic control centre for the upper airspace (above 28,500 feet) in 8 countries.

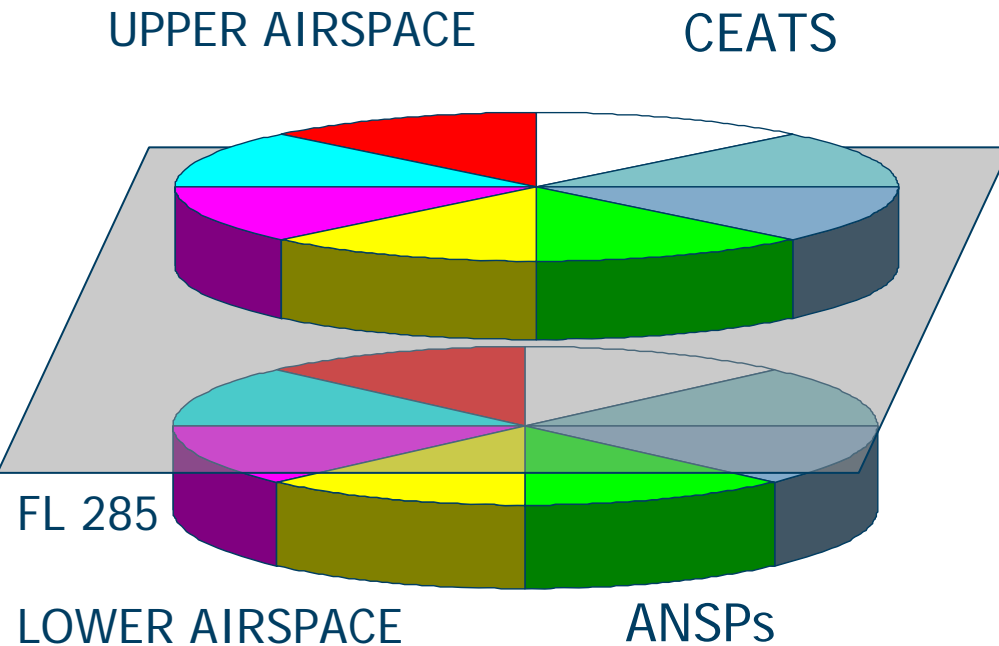
With air traffic in the CEATS countries predicted to nearly double by 2015, CEATS provides a cost-effective solution to the capacity limitations posed by fragmented air traffic services in a limited geographical area.



National Unit Rates – June 2005



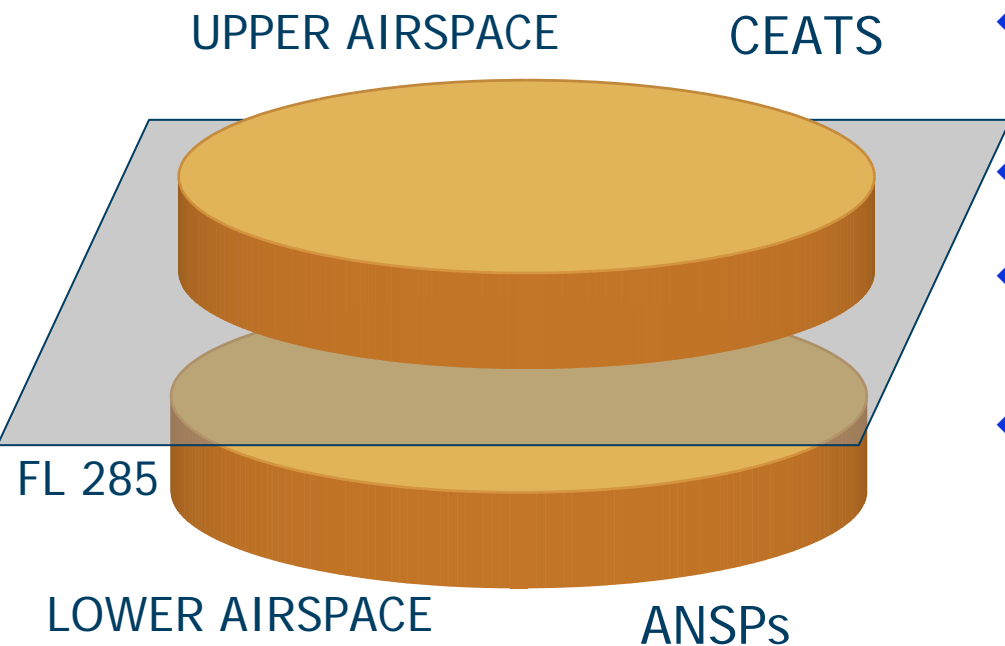
National Cost Base (Today)



CEATS makes no direct charge for its services and its costs are met by the eight national ANSPs which recover their costs within their own national Unit Rate.

- ◆ It does not introduce drastic changes.
- ◆ It is already in operational use at Maastricht: well understood by airlines and easily implemented.
- ◆ Not in harmony with the principles of the Single European Sky Policy.

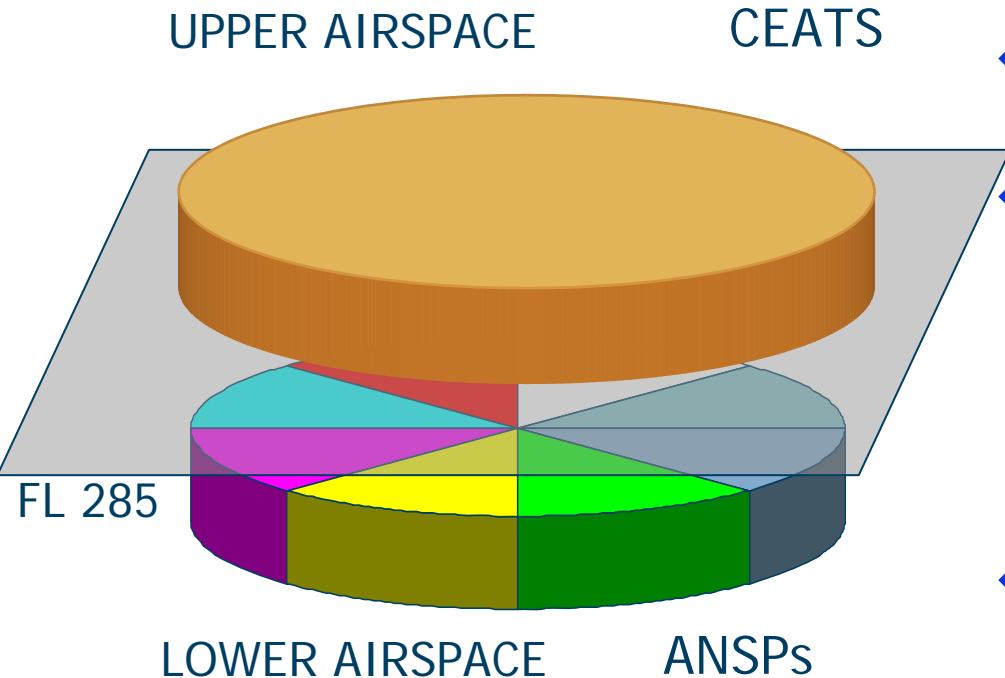
Single Unit Rate in All Airspace



CEATS and the eight national ANSPs charge aircraft flying in the airspace they control, but at the same rate.

- ◆ Simple to operate as eight national rates would be replaced by one regional rate.
- ◆ It is supportive of Single European Sky Policy
- ◆ Optimum use of airspace: flight plans or rerouting would not depend on route charges
- ◆ CEATS and national ANSPs cannot all have the same levels of costs and traffic, thus they cannot all have the same Unit Rate (calculated in accordance with the cost-recovery mechanism). For this reason all parties in the region would have to agree on the level of the rate and on measures of compensating payments between each others.

Single Unit Rate in Upper Airspace



CEATS compiles its own Unit Rate for charging aircraft flying in the airspace it controls, while the eight national ANSPs separately compile Unit Rates for their lower airspace.

- ◆ A simple but new system involving new procedures.
- ◆ It is supportive of the Single European Sky Policy, because costs and charges are related to an operational unit (CEATS Upper Area) and not to a national system.
- ◆ High Unit Rate in the lower airspace may harm regional airlines flying mainly in the lower airspace.

Testing week (14 – 20 April 2003)

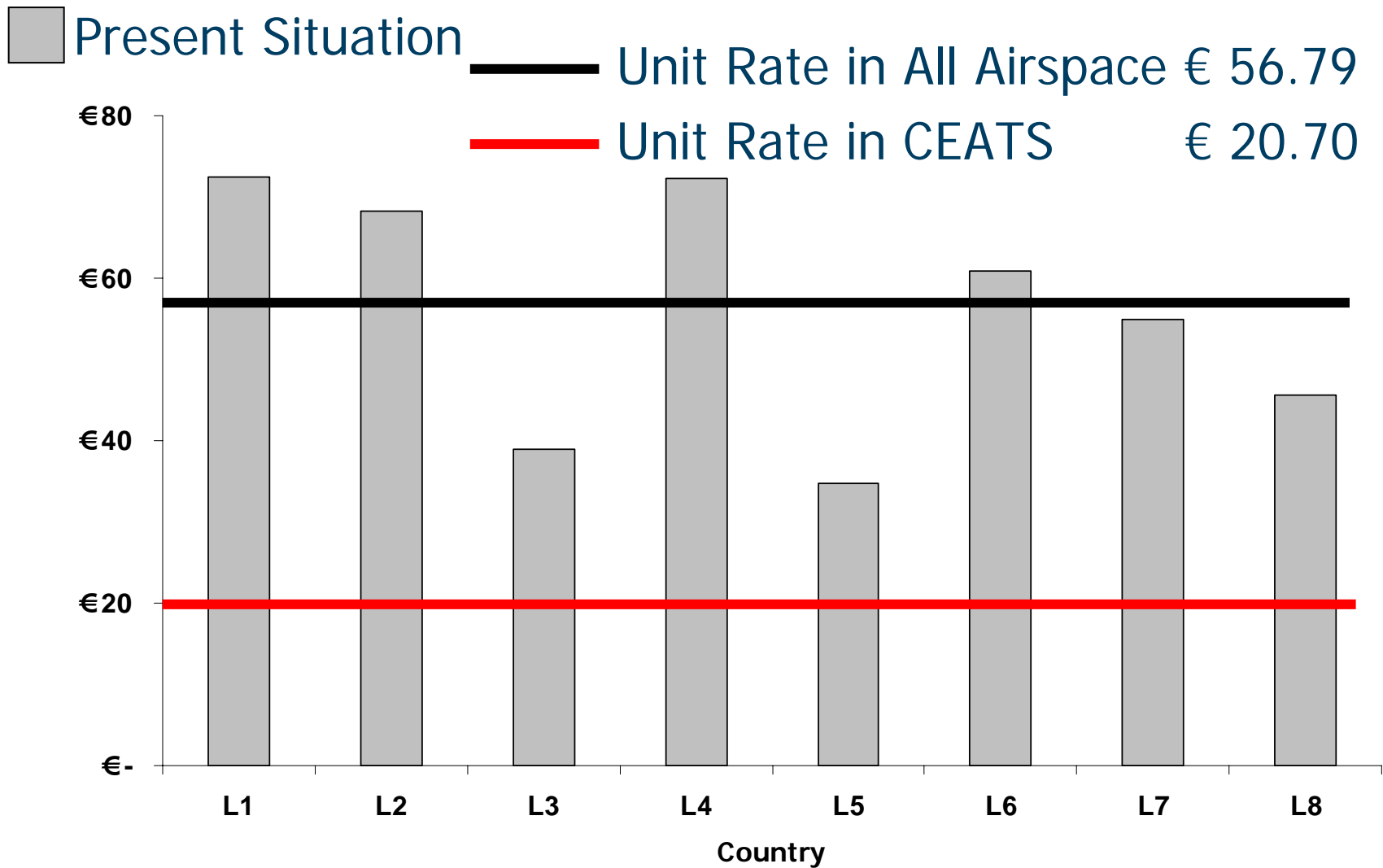
DATA

- ◆ 25 594 Flights flying in the CEATS region
- ◆ 132 021 Service Units in the CEATS region
- ◆ 684 Aircraft Operators
- ◆ Flight Plans from CFMU, Service Units from CRCO

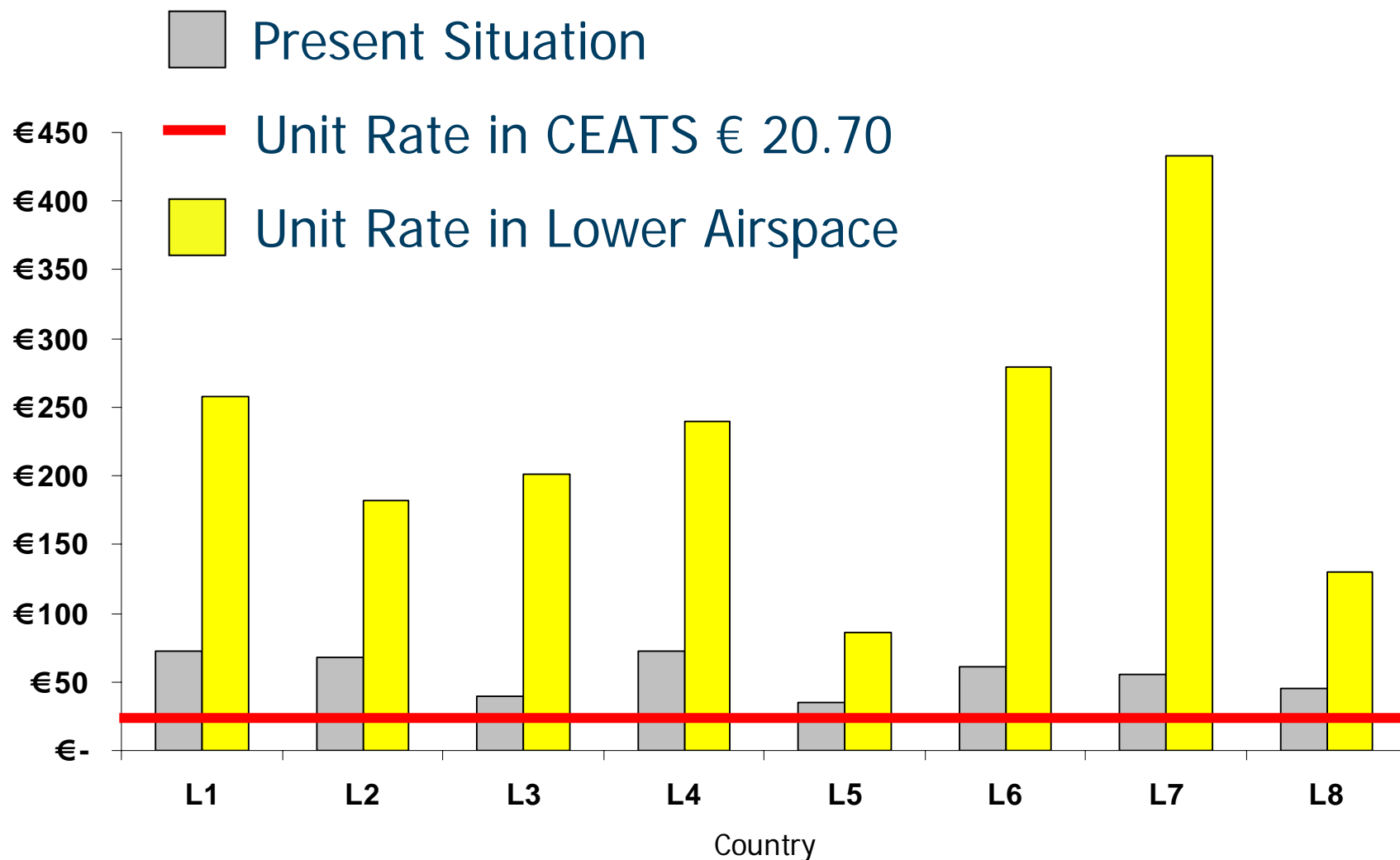
ASSUMPTION

- ◆ Full Cost Recovery holds: Revenues (€ 7 380 600) collected through Route Charges equal ANSP Costs

Numerical Results (1)

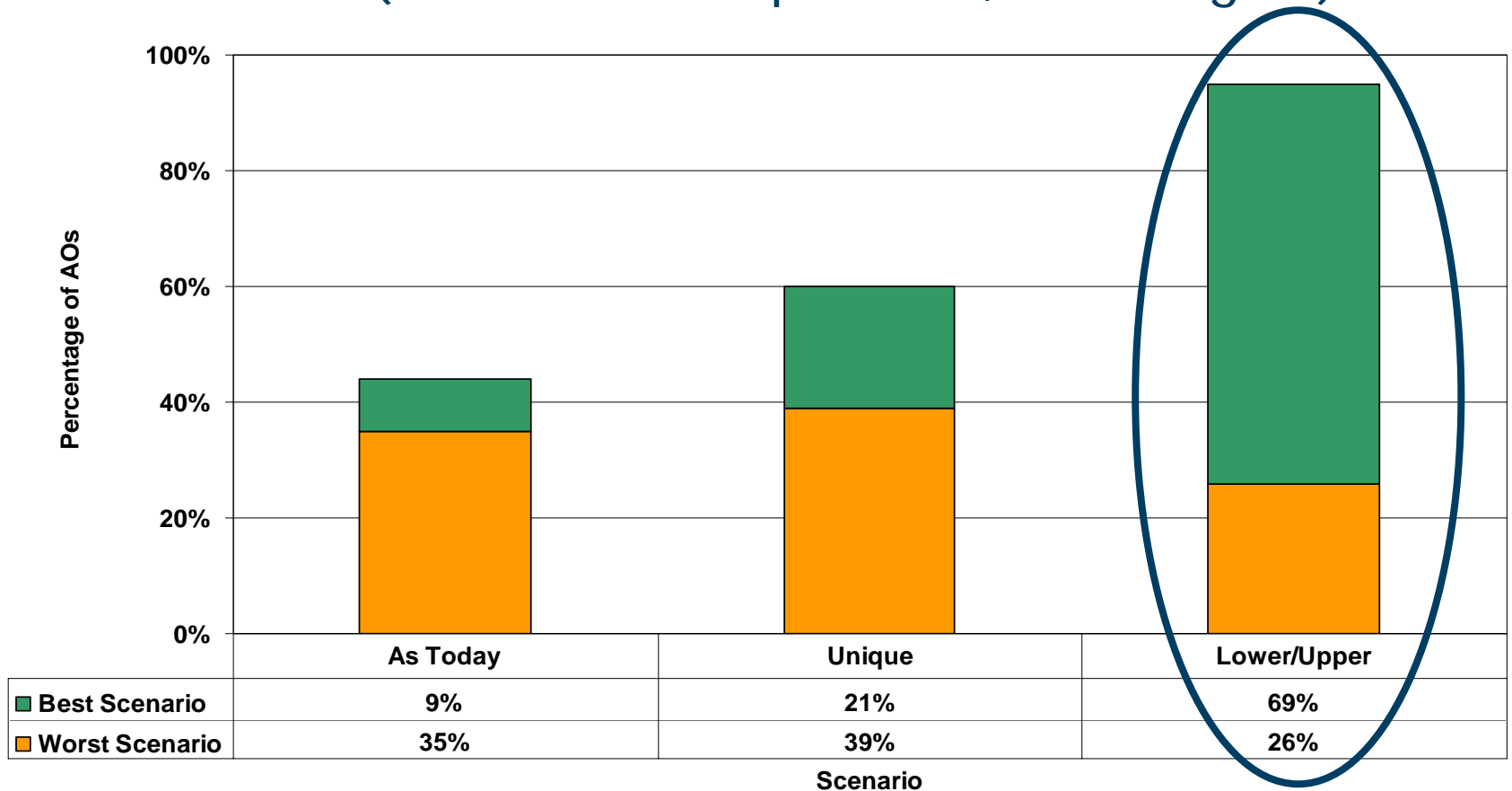


Numerical Results (2)



Impact on Aircraft Operators

At least 100 SUs (22% Aircraft Operators, 86% Flights)



SU Upper / SU Total: If $< 70\%$ \Rightarrow WORST, If $> 85\%$ \Rightarrow BEST

Aircraft Operators – by type and by region

CATEGORY	% SU UP/TOT
Extra-Europe	99%
Cargo	94%
Major	85%
Charter	79%
National	71%
Low-Cost	71%
Regional	24%

CEATS – Based Airlines

Adria Airways, Air Bosna, Air Dolomiti, Air Slovakia, Alpi Eagles, Austrian Airlines, Croatia Airlines, Czech Airlines, Malev, Skyeurope, Slovak Airlines, Tyrolean Airlines, Volare Airlines

Holding lower/upper charges, airlines heavily involved (due to geographical constraints) in the utilization of CEATS-area ANSPs are worse off than those airlines just (sporadically) passing through, e.g., Extra-European airlines.

Conclusions

- ◆ ANSPs
 - ◆ Holding the Full Cost Recovery principle, each ANSP will eventually be repaid for all the expenses it has in providing ANSs regardless the way the Unit Rate is calculated (the reimbursement phase can be more or less complex according to the used scenario).
 - ◆ Accordance with Single European Sky Policy.
- ◆ Aircraft Operators
 - ◆ Lower/Upper charges have strong impact.
 - ◆ Actual system and unique charge are equivalent.