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The Economics of the ATM Regulation in EU. The impact of the Single European Sky.

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Contents of the presentation...

- The subject of the study;
- Why is of importance;
- What has been done so far; Literature research
- What is the contribution of this work;
- Conclusions & suggestions for further work.

The subject... (1/2)

- The economics of ATM regulation;
- Cost of regulation vs. benefits: the necessary evil?

“Whenever competition is feasible it is, for all its imperfections, superior to regulation as a means of serving the public interest”.

— *Alfred Kahn, airline economist & Chairman of the Civil Aeronautics Board.*

The subject... (2/2)

- Therefore the economics of ATM regulation should investigate for, and support the following objective:
 - **Objective: “Achieve maximum ATM regulation effectiveness with the minimum possible cost”.**

It's importance...

- The economics of regulation is important
- Therefore, the ATM (ANS) regulation as recently established and defined by the EU SES regulations is important;
- Why:
 - ATS in particular is a “natural” monopoly and now a “designated” one;
 - If performance towards users is to be secured in the absence of competition then we need to study the economics of ANS/ATS regulation and seek ways to optimise it (effectiveness/efficiency).

What has been done so far ...

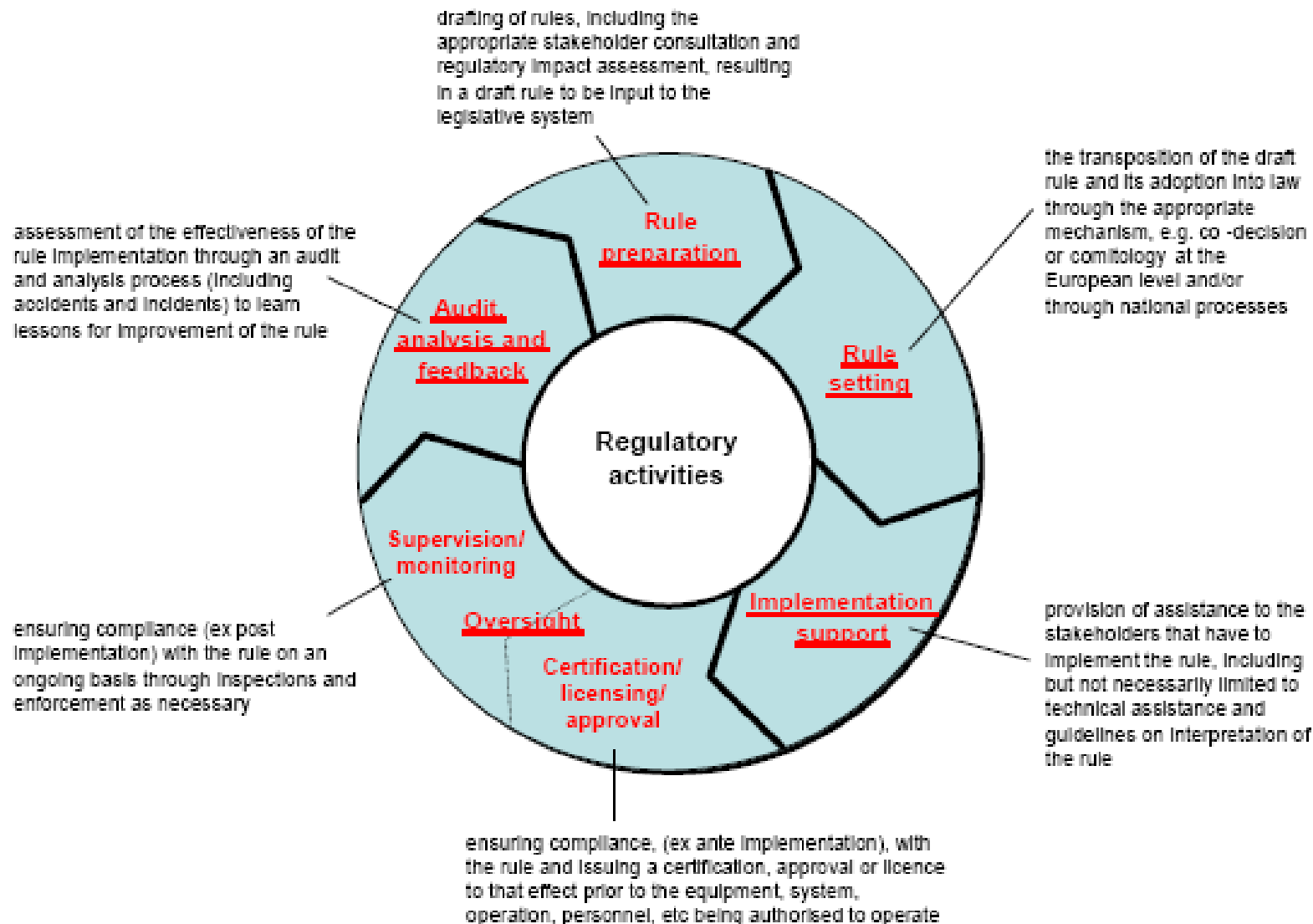
- Literature research:
 - High Level Group Report for the future European Aviation Regulatory Framework;
 - EUROCONTROL SESFARR Report;
 - PRC/PRU Annual Reports and ACE Reports;
 - UK Regulatory Policy Institute work;
 - Paper on Collaboration of NSAs;
 - Kahn, Alfred: "The Economics of Regulation: Principles and Institutions".

Main contributions of this work; ...

- Introduced the 3-dimensional model;
- Estimated total ANS regulation cost vs. ANS cost;
- Proposed optimised organisational models for ANS Regulators; introduction of matrix schemes;
- Collaboration of NSAs plus Organisational Isomorphism in ANSPs.

A model for ANS Regulation:

- Optimising Organisations and their Cost Structure.



The 3-dimensional model ...

- The Functions in their interrelated levels
- The Domains of regulation
- The Addressees of regulation

(All) Functions ...

- Rule preparation
- Rule setting: i.e. the promulgation
- Implementation support
- Certification/licensing/approval (authorise *ex ante*)
- Supervising/monitoring/oversighting/inspecting (*ex post* assessment)
- Enforcing (“...imposition of dissuasive and proportionate sanctions...”)

Domains of regulation ...

In ANS/ATS:

- Safety;
- Security;
- Quality of service (i.e. optimised capacity/minimum delays);
- Protection of the environment;
- Fairness to access the service and
- Economic regulation or cost efficiency

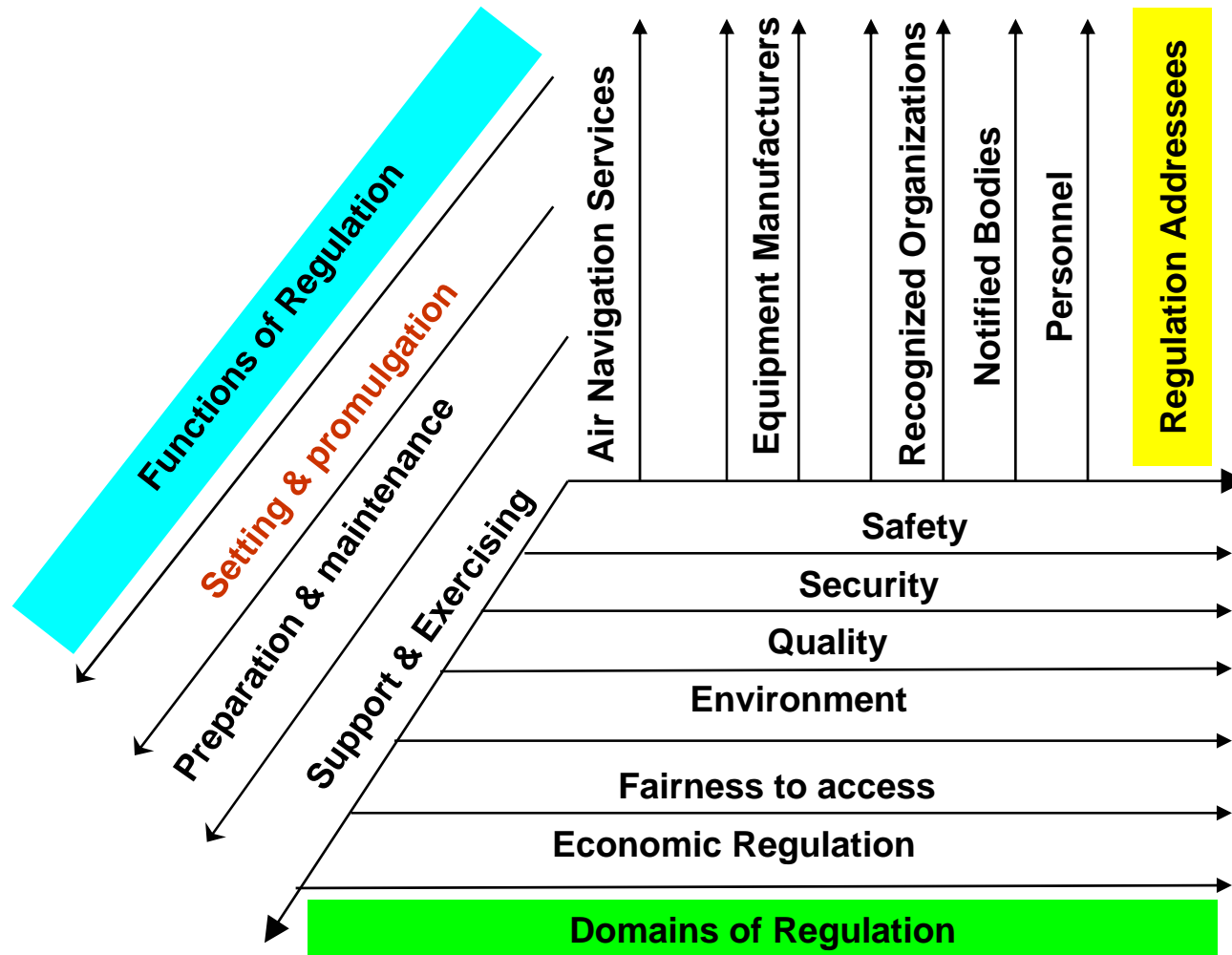
Also secure:

- interoperability of systems
- sustainability and continuity of service

ANS Addressees of regulation ...

- Air Navigation Service Providers of all type (i.e. ATS, CNS, AIS and MET);
- Recognised organisations;
- Notified bodies;
- The staff of all these organisations and
- ATM manufacturers.
- The special case of military

The 3-dimensional model of ATM regulation



The 3-dimensional model for ATM Regulation; Applicability

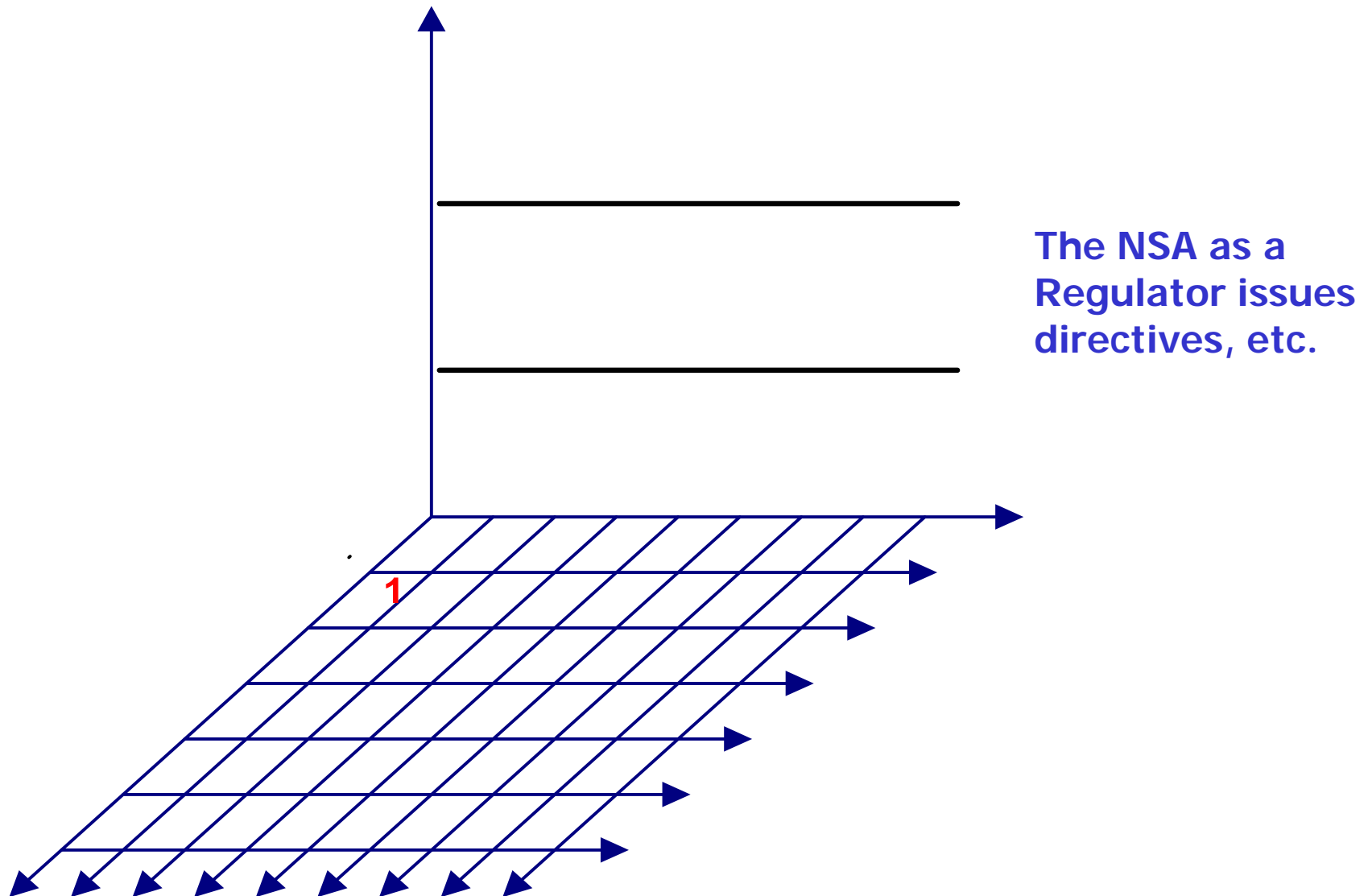


Fig. 2: The three dimensional model of ANS regulation. Not all elements are shown. As an example square numbered 1, shows the case of exercising regulation to ANS for security purposes.

Estimating cost:

- Extrapolating linearly the data of the SESFARR survey:
 - Total budget for NSAs = approx. 2,5m€ per state by the end of 2008,
 - Sum of all NSA cost = ~75m€ yearly for all SES participating States.
- The total cost of ANS in Europe was ~7,5b€ (1),
- Therefore the cost of the ANS regulation adds only ~1% to the total actual cost of the service.

(1) Excluding flight inefficiencies.

Optimising organisations; matrix based & collaborative schemes.

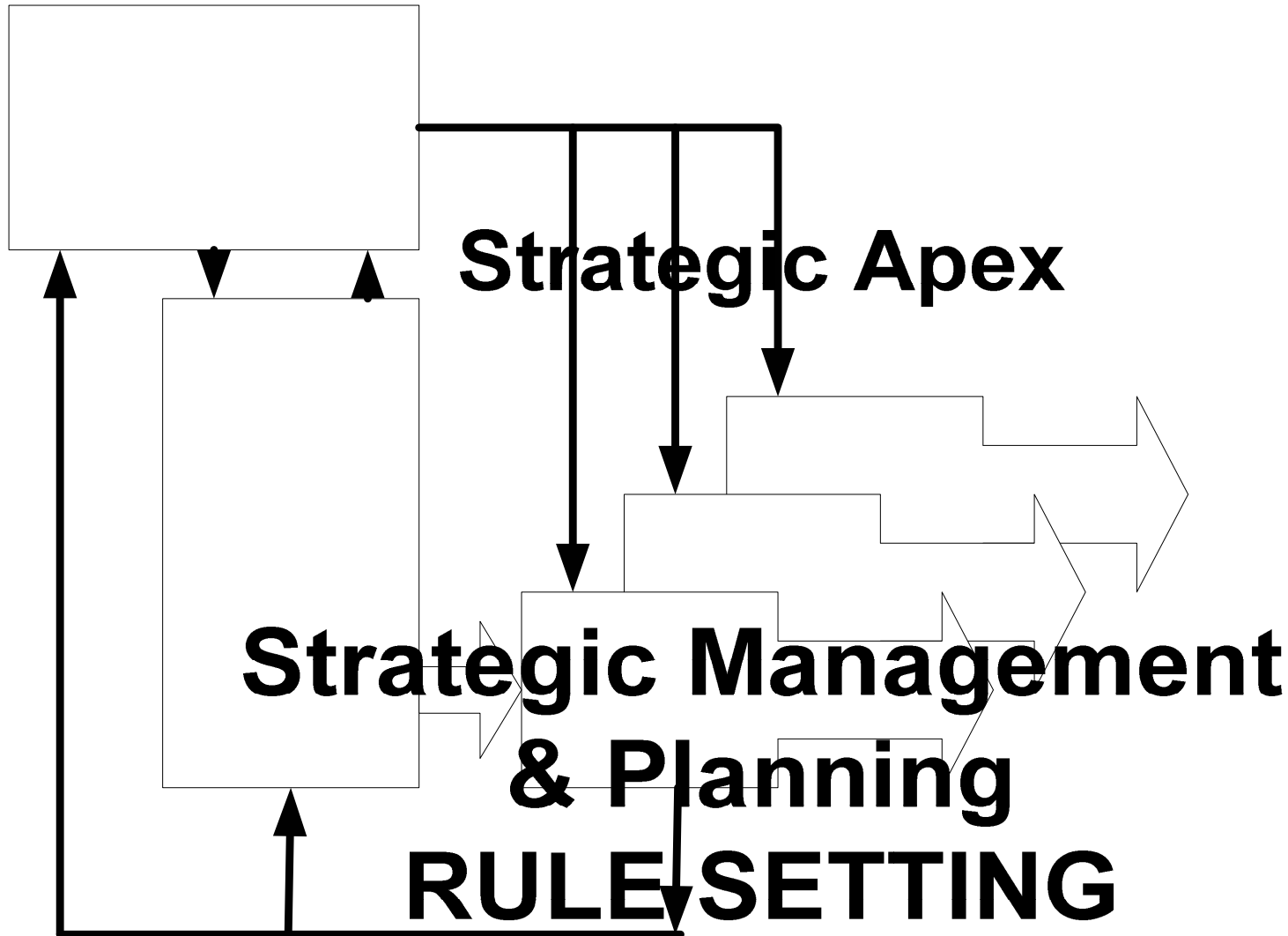


Fig. 3: A business model for an integrated efficient regulation of aviation business[11]. The regulation of ANS (NSA) appears at the application level since the other important levels are shared with other departments (regulation of airports, airlines, etc.), thus creating efficiencies and economies of scale.

Collaboration of NSAs & Organisational Isomorphism in ANSPs.

- NSAs' platform for collaboration; economies of scale; issues
- Organisational Isomorphism in ANSPs:
 - Developing common organisational characteristics:
 - increases regulation efficiency;
 - Caters for ANSP legitimacy;
 - Facilitates standardised regulation by collaborating entities.

Conclusions... Suggestions for further work

- Importance of the economics of regulation;
- Three-dimensional model and optimised matrix schemes;
- So far important achievements with a minimum cost (~1% of total service cost)
- Suggestions for further work:
 - Develop means for self-controlling cost and its allotment
 - Explore the collaboration of NSAs in particular legal/international issues

Thank you for listening!

