

UNPACKING SESAR SOLUTIONS REMOTE TOWER SERVICES

12-13 JUNE 2014, DUBLIN AIRPORT



Regulatory and Standardisation activities

Hosted by:





EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT

Remote Tower Services

Jussi Myllärniemi, EASA

12-13 June 2014, Dublin Airport

Your safety is our mission.



Regulatory needs ?



Remote Tower Services – are there regulatory needs at European level?

- ❑ ICAO AN-Conference/12-WP/42 (by EU)
 - “... need to assess the regulatory and standardisation impact ...”

- ❑ Remote and Virtual Tower - Rules & Regulations Assessment Report (by SJU)
 - “It is recommended that implementation of Remote Provision of ATS shall initially apply stricter rules and procedures and some constraints regarding amount of simultaneous movements compared to current operations ...”

- ❑ ATM Thematic Advisory Group 1-2013, ATM sub-SSCC 1-2013 (at EASA)
 - “ ... to amend the RMP 2014-2017 with the RM Task on remote TWR operations ...”



Regulatory objectives by EASA

EASA



Founded in 2003



Built on experience from the JAA



Located in Cologne, Germany



Staff of more than 700



Headed by Mr Patrick Ky

REGULATORY OBJECTIVES

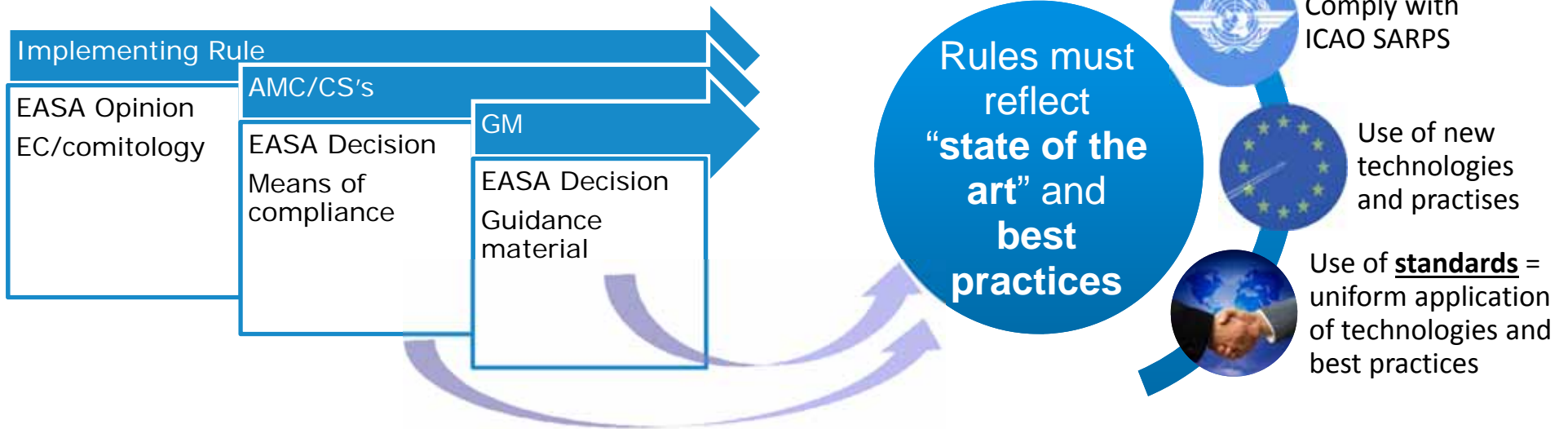
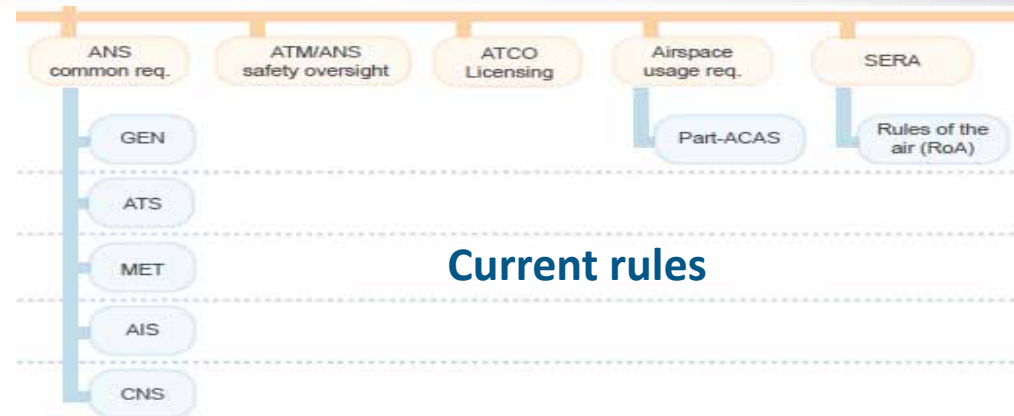
- To establish & maintain high and uniform level of safety
- To facilitate free movement (= recognition)
- To promote cost-efficiency in regulatory processes and avoid duplication
- To assist Member States to fulfil their ICAO obligations
- To promote Community views on safety standards and rules with 3rd countries and international organisations
- To provide a level playing field in internal market (= industry)



Possible regulatory measures (1)

Rulemaking Programme

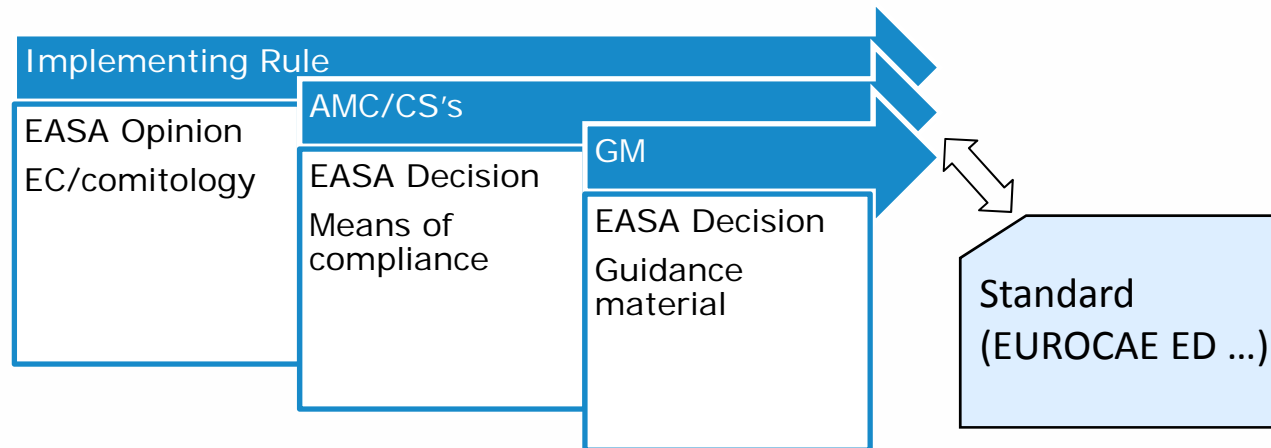
RM task:
Remote TWR





Possible regulatory measures (2)

(Poss.) regulatory material on Remote Tower Services



“High and uniform level of safety through a common action – no need for 28 different transpositions and adaptations of international standards (possibly implemented at different times)”

“Common rules do not replace SARPs nor create an extra layer of regulation – but replace their national transpositions!”



Rulemaking - Programming



Pre-RIA =
is rulemaking
needed, to what
extent and when?

The image shows the cover page of a report from the European Aviation Safety Agency (EASA) Rulemaking Directorate. The title is "Preliminary Regulatory Impact Assessment" for "Technical requirements for remote tower operations" (RMT.0624 - 2.6.2014). The report includes a radar chart titled "B16" showing scores for Safety risks, Environmental issues, Social issues, Economic issues, and Regulatory co-ordination and harmonisation. An executive summary follows, stating that the proposal addresses safety and regulatory coordination issues and that rulemaking is recommended based on the Pre-RIA score of B16.

European Aviation Safety Agency – Rulemaking Directorate
Preliminary Regulatory Impact Assessment

Technical requirements for remote tower operations
RMT.0624 – 2.6.2014

B16

Safety risks
20
15
10
5
0

Regulatory co-ordination and harmonisation
Environmental issues
Social issues
Economic issues

For explanation on the Pre-RIA methodology, see Explanatory Note.

EXECUTIVE SUMMARY

This proposal addresses a safety and regulatory coordination issue related to the development of new technology allowing the provision of air traffic services from a remote location, following the SESAR outcome. The specific objective is to mitigate the safety risks that could appear with the introduction of the new concept of remote tower operations and to define the appropriate regulatory framework to enable its safe implementation and to facilitate economic development.

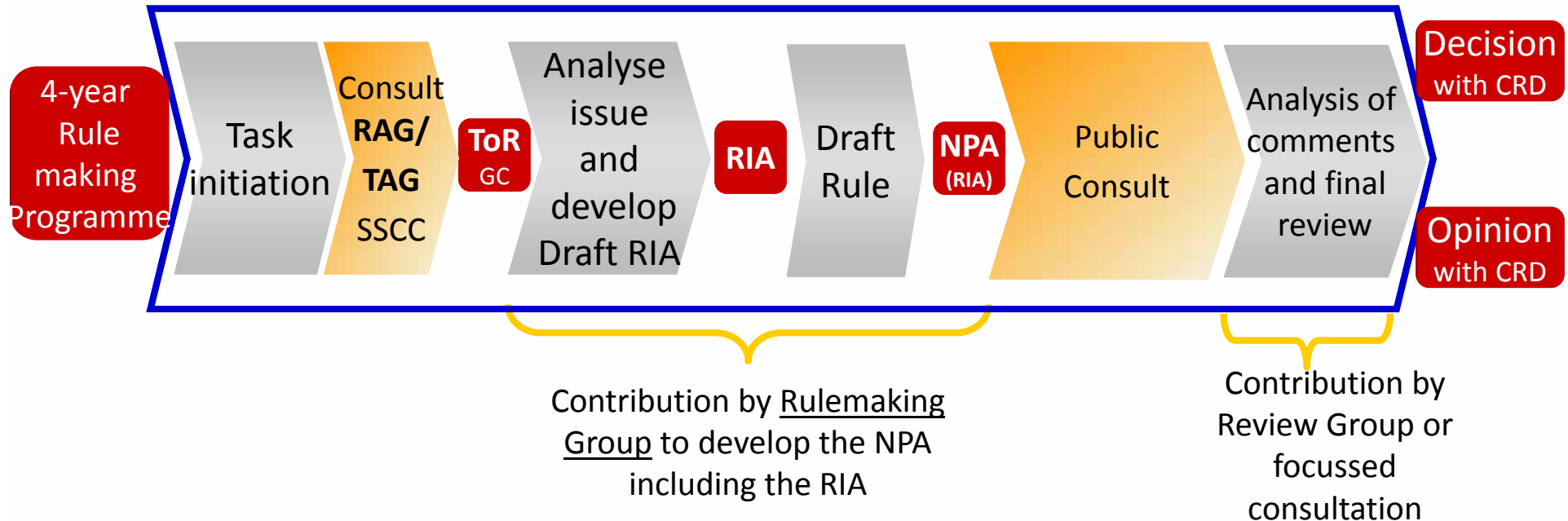
The current safety risk level is considered to be unaffected if the identified safety risks are appropriately mitigated and an appropriate set of European safety regulations is developed.

The resulting Pre-RIA score is B16. See radar chart and Chapter 3 for the driving factors.

Based on this Pre-RIA, rulemaking is recommended.



Rulemaking – rule development



Rulemaking Group:

- Members based on expertise
- Nominees by EASA advisory committees
 - RAG (ATM TAG) by States
 - SSCC (ATM sub-SSCC) by Industry
- The Chair (selected); meetings, agendas, reports, etc.
- EASA provides secretariat and drafts the deliverables





Preliminary RIA issued

- ▶ Pre-RIA in consultation (advisory bodies, 2.6. – 1.7. 2014)
 - ▶ RMT.0624 on Remote tower operations
 - ▶ Pre-RIA → is rulemaking necessary? If yes, to what extent and priority?
 - ▶ EASA advisory bodies (States, industry) supported establishing RMT
 - ▶ Options; 1 - do nothing, 2 - flexible requirements, 3 - comprehensive req.
 - ▶ Scope (focus); single small/low-density aerodromes

- ▶ Regulatory aspects addressed
 - ▶ Local safety assessment; common/minimum criteria, non-ATS tasks, status of generic SESAR Safety Assessment Report
 - ▶ Approval of new technology; minimum functional/performance requirements
 - ▶ ATS and operational requirements
 - ▶ ATCO & AFISO HF and competence aspects, training requirements
 - ▶ “Interface” aspects; oversight authority, airspace users, aerodrome operator
 - ▶ Other aspects exist; e.g. societal

- ▶ EASA proposal
 - ▶ Rulemaking recommended; task complex, not controversial



CONCLUSIONS by EASA

- **Remote Tower Services;**
 - Potential safety risks to be mitigated – common action (appropriate regulatory framework) & local safety risk management
 - Other regulatory benefits exist (e.g. industrial)

- **EASA Pre-RIA has been issued for consultation**
 - Proposes common action with option 1 – “flexible” requirements
 - RM task in RM Programme and can be swiftly progressed

- **EASA prepared to lead the regulatory work**
 - Rulemaking group to be established
 - Work to be based on high level expertise from States, industry and staff organisations
 - Use of industry standards, (EASA nominee in EUROCAE WG-100)
 - Prepared to support also on global forum



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**Thank you for your
attention!**

Your safety is our mission.









Standardisation activities

Unpacking SESAR Solutions
Remote Tower Services

12 – 13 June 2014, Dublin

Anna von Groote, EUROCAE



- **About EUROCAE**
- Research and Standardisation
- EUROCAE WG-100



What is EUROCAE ?

EUROCAE

- is the only European organisation exclusively dedicated to the development of technical standards in support of the aviation community
- produces since over 50 years standards used in the certification of avionics and approval of CNS and ATM equipment and applications
- provides all aviation stakeholders with a forum to work together to achieve an effective standardisation framework in Europe
- offers for many years a proven mechanism for the development of required aviation technical standards and other associated documents
- has over 160 members from 30+ countries in Europe and beyond representing all main stakeholder categories



EUROCAE is recognised by

- the **European Commission** as the competent body to collaborate with the European Standardisation Organisations (ESOs) in the preparation of European Standards (ENs) / Community Specifications (CS)
 - *Article 4.1.a) of the Interoperability Regulation (EC) 552/2004.*
- the **European Aviation Safety Agency (EASA)** as a major European stakeholder in the development of Technical documents concerning Aviation safety (i.e. ETSO “European Technical Standard Order”)
- the **FAA** as having the right expertise to collaborate, when appropriate, with US organizations (RTCA, SAE, ARINC) in the development of specific standards related to Aviation
- **ICAO**
 - references EUROCAE Documents (EDs)
 - invites EUROCAE to participate in number of its Study Groups
 - involves EUROCAE in Aviation System Block Upgrade as the main standardisation body for Europe



EUROCAE Activities

- **EUROCAE Technical Work Programme**

strategic vision of the activities in the context of the current environment
→ ICAO, EASA, SES and SESAR, FAA and NextGen, Industry, ...

- **Work programme (June 2014)**

Published EDs 180

EDs under development 58

Active WG 31

- **About 50% carried out jointly with RTCA, 10% with SAE**



- About EUROCAE
- **Research and Standardisation**
- EUROCAE WG-100



Why standardise?

Regulators

Standards to support approval & certification to ensure safety, performance & interoperability

Users

Standards to enable benefits & facilitate procurement and approval

Manufacturers

Standards to support system specification, allow calculation of costs & facilitate marketing and market access

A (single) standard describing minimum performance requirements to meet different needs and facilitate implementation of new concepts and technologies



Standardisation and Research

Standards are essential for economic growth and social progress and support effective innovation

- facilitate the introduction of new products to markets,
- enable interoperability between new and existing products, services and processes,
- give customers confidence in innovations and
- codify the state of the art and
- disseminate research results.

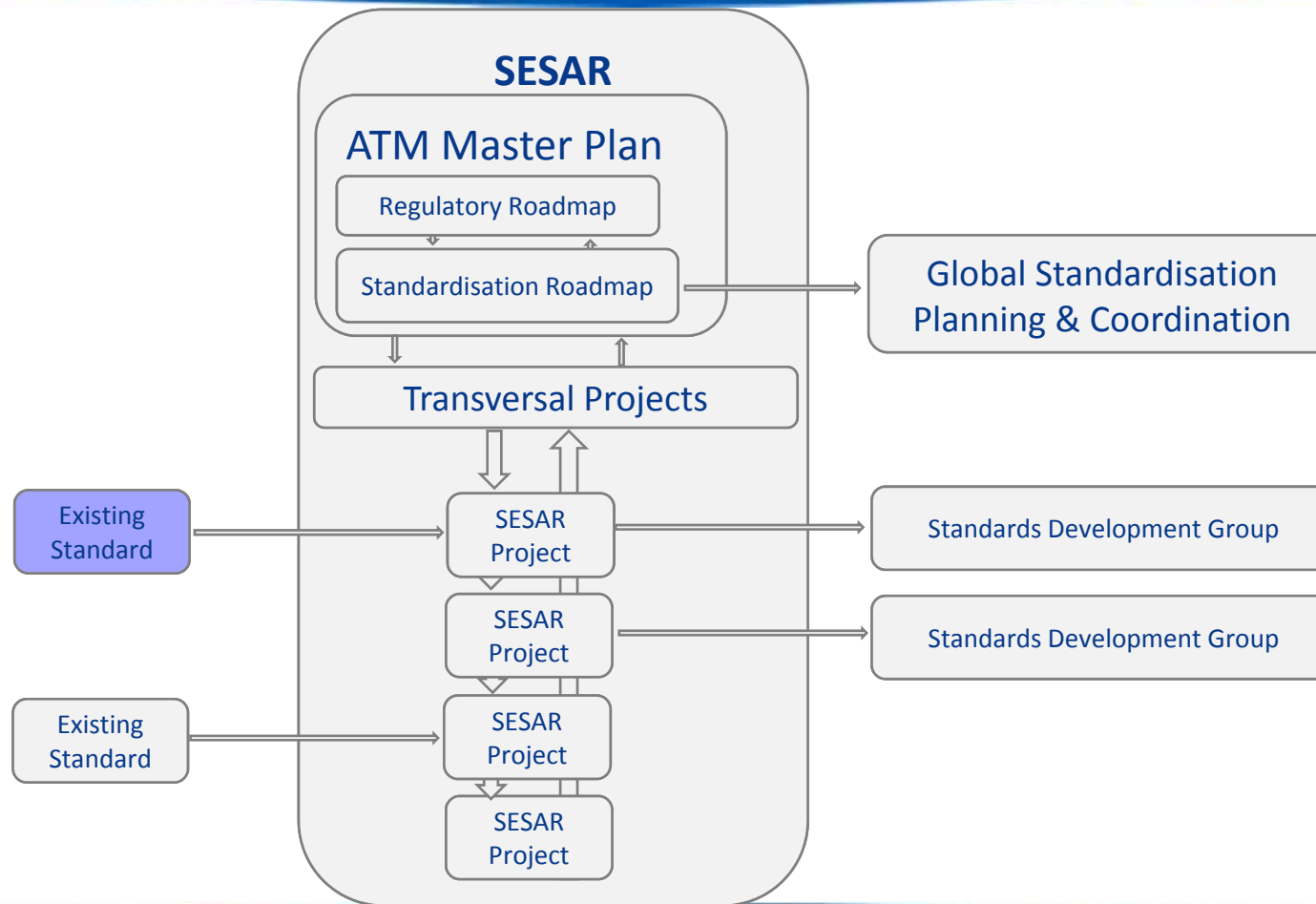


EUROCAE and SESAR

- Standards building on SESAR mature R&D results will support harmonised implementation and regulation
- Standards developments themselves are out of the scope of SESAR, but the importance of the link is recognised
- Signature of **Memorandum of Cooperation between EUROCAE and SJU** in 2012 to facilitate
 - standardisation of SESAR results
 - validation of standards by SESAR projects
- SESAR Projects take existing standards as inputs as well as identify their contribution to standards, which will be needed to support implementation.
- EUROCAE WGs take outputs from SESAR Projects as inputs to their standardisation work.



EUROCAE and SESAR





- About EUROCAE
- Research and Standardisation
- **EUROCAE WG-100**



EUROCAE activities: *WG-100 Remote & Virtual Tower (RVT)*

- Initial work in SESAR, the reference in the ICAO ASBUs and individual work by ANSPs and airports has resulted in stakeholders' interest to initiate standardisation of RVT aspects
 - Proposal for a new WG on remote and virtual tower
- Approval by EUROCAE Council on 2 April 2014, creating WG-100
- Call for Participation in April – May 2014
 - Registration is still possible at eurocae@eurocae.net
- Kick off meeting: 10 & 11 July 2014



EUROCAE WG-100

Remote & Virtual Tower (RVT)

Objective of WG-100:

Development of EUROCAE documents for Remote and Virtual Towers

- MASPS for Visual Surveillance for use in Remote and Virtual Towers
 - $T_0 + 24$ months
 - Could be used as input to potential future EASA rulemaking activity
- Report regarding the possibility of extending the scope of work (beyond visual surveillance) and possible future areas of work
 - $T_0 + 12$ months



EUROCAE WG-100

Remote & Virtual Tower (RVT)

The work shall take into account

- **Experience** of airports and ANSPs and
- Relevant **ICAO documents**
- Results from **SESAR Projects** (OSED, SPR, Interop) and validation documentation → basic input for standardisation activity
 - 06.08.04, 06.09.03, 12.04.06, 12.04.07 and 12.04.08
- **Results from other projects regarding RVT implementation and future functions** if relevant information is available.



Thank you for your attention!

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