



**aerodays2015**

Aviation in Europe – Innovating for Growth

The 7<sup>th</sup> European Aeronautics Days



# SJU SAFETY ACTIVITIES

20<sup>th</sup> October 2015

Olivia Nunez (SJU)

Definition phase  
Create European  
ATM Master Plan

Development Phase  
Develop new  
standards, operational  
procedures and  
technologies

Deployment Phase  
Implement results of  
development to meet  
performance targets

2005-2008



Agreements  
Signature  
MAY 2009

06/2009  
Launch

07/2009  
400  
contributors  
20  
projects

09/2009  
Airlines  
on  
board

03/2010  
1,500  
contributors  
300  
projects

06/2011  
GA&R in the  
ConOps  
at a Glance

10/2012  
Rotorcraft  
Operators  
(EHA)  
full involvement

2008

Today  
3000+  
contributors

35+  
validation  
exercises

17  
SESAR  
Solutions

2015.....



# SESAR Projects



2 Demo projects  
1 ER project  
1 PCP project



3 Solutions  
2 ER projects  
16 Demo projects



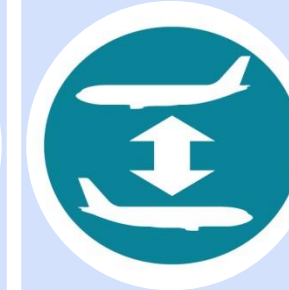
3 solutions  
3 ER projects  
2 PCP projects



2 solutions  
9 ER projects  
3 demo projects  
2 PCP projects



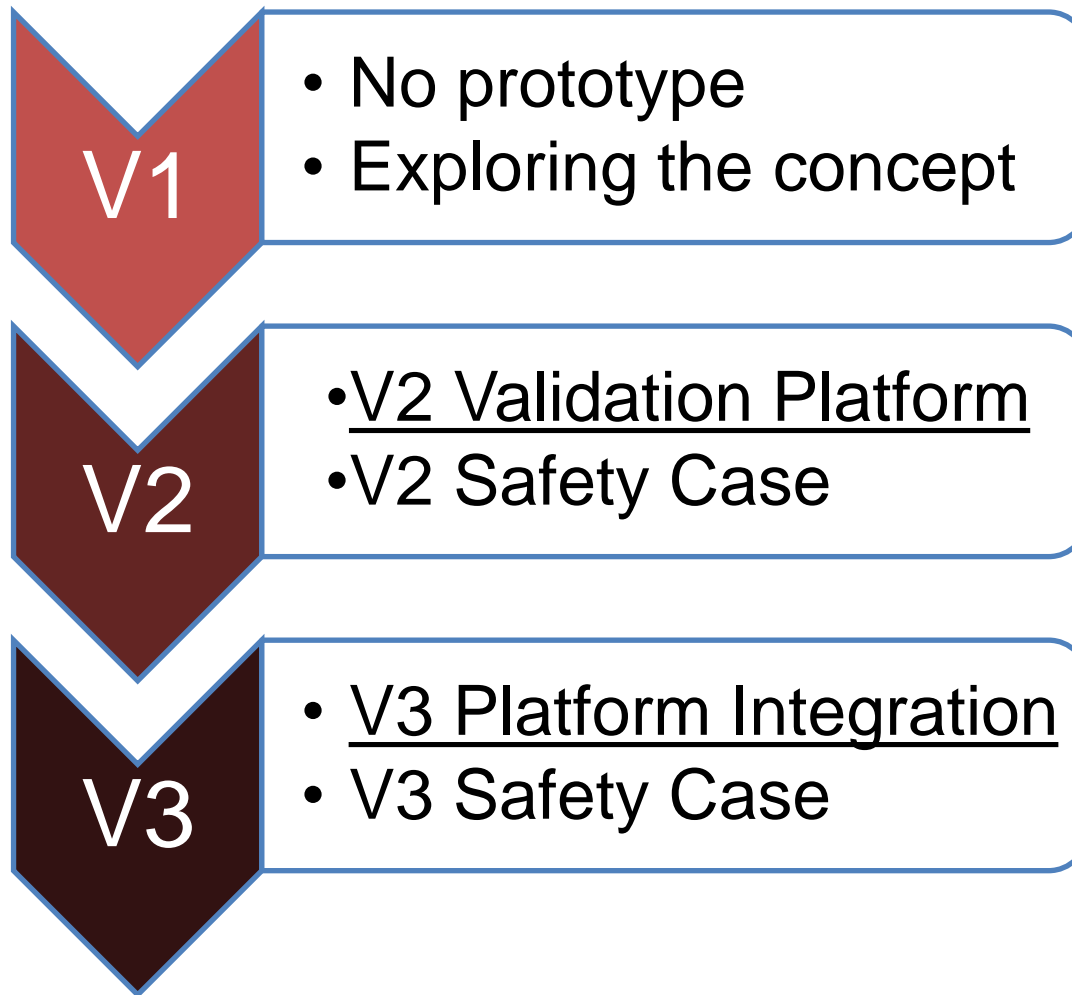
1 solution  
8 ER projects  
3 Demos  
2 PCP projects



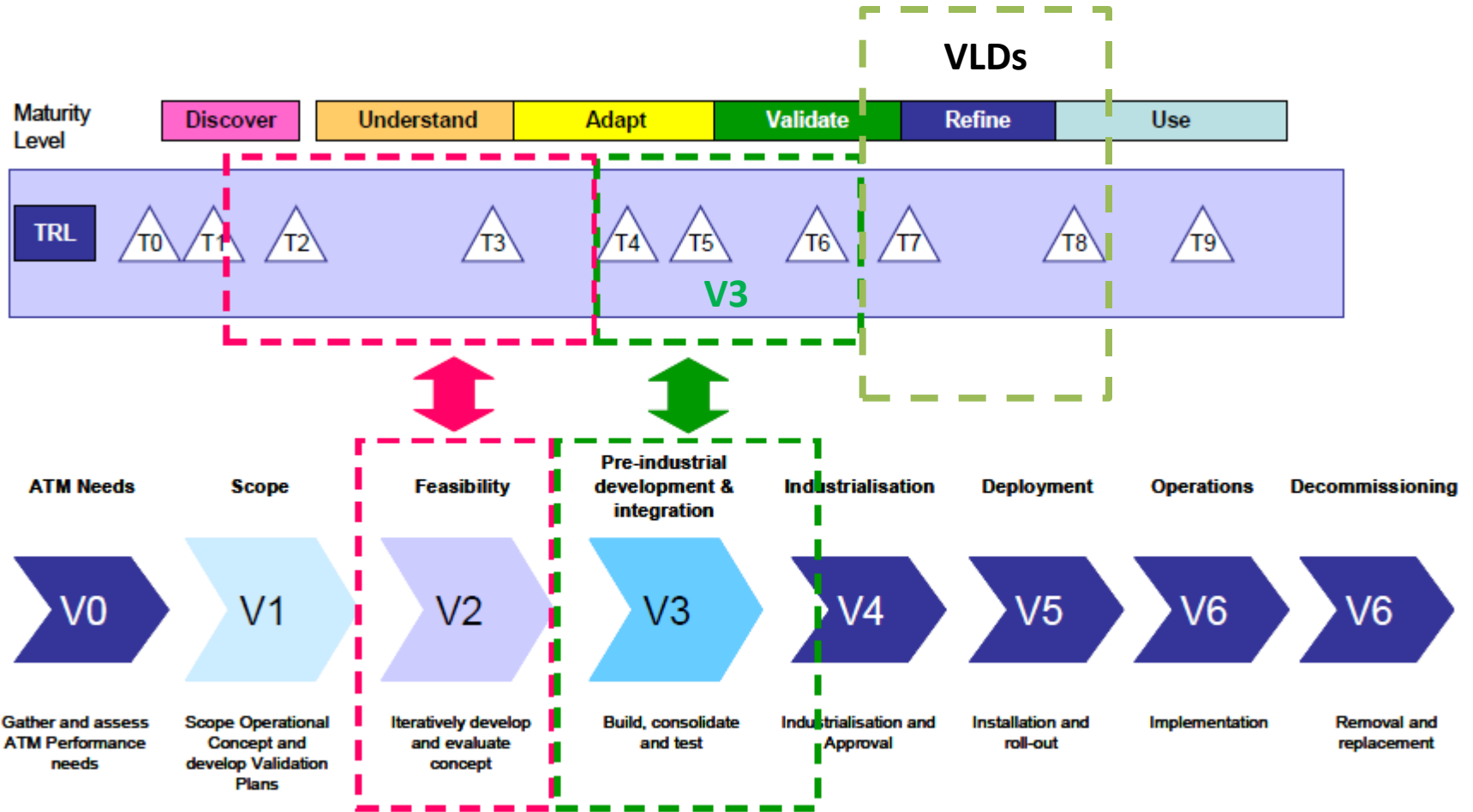
1 solution  
2 ER projects  
1 PCP project



# SESAR VALIDATION LIFECYCLE



# EOCVM (SESAR 1) → TRL (SESAR 2020)



# Safety in SESAR Projects

Projects with a Safety Focus



Impact on other KPAs



Projects that target KPAs other than safety



Need to consider impact on safety

Mitigation for negative impacts may require new safety developments

# Case Study: Time-Based Separation (TBS)



Aircraft land against the wind

Wind dissipates wake vortex faster

Ground speed (GS) = TAS – Headwind

Higher headwind (HW) = Lower GS

2.5NM  
wake vortex  
separation LM-LM

=

60 seconds  
150 KT no HW  
(GS = 150 KT)

=

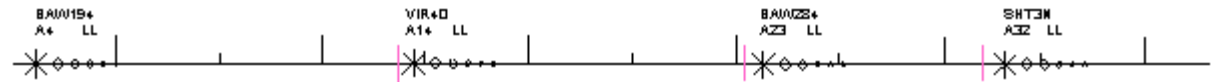
70 seconds  
150 KT and 20 KT  
HW  
(GS = 130 KT)

**With HW, less wake vortex danger, but we separate more!**

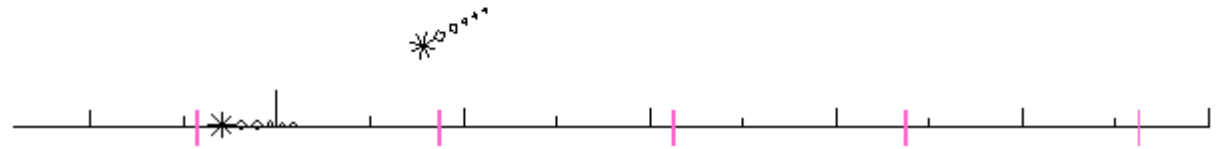


# TBS: Controller Support Tools

Extended Runway  
Centre-Line  
Distance Markings



Requires updated  
AMAN sequence






# SESAR Safety Approach

European ATM Operations	SESAR R&D Programme
SMS as per EC IR (EU) No 1035/2011	SMS not applicable
Safety Assessment Methodology (SAM)	SESAR-specific Safety Reference Material ( <b>SRM</b> )
Local safety case → National Supervisory Authority	Generic safety case
According to existing regulations	May challenge existing regulations



# SAM and SRM training

RSS IANS Get an Account (Self-Registration)



## Training Zone

- Home
- Training Catalogue
- Request a course
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- Direct Access Modules
- Help
- About

Search term

Safety Management

- Introduction to Safety Management [SAF-SM1]  
e-Learning Course  
04-Feb-2009 12:00 - 04-Feb-2109 08:00
- Safety Management System in ATM (From Theory to Practice) [SAF-SMS]  
Classroom Course
- Introduction to Safety Assessment [SAF-SA1]  
Classroom Course
- Practical Safety Assessment [SAF-SA2]  
Classroom Course
- ATM Software Safety Assessment [SAF-SW]  
Classroom Course
- Human Factors for ATM Safety Actors [SAF-HFA]  
Classroom Course
- ATM Occurrence Investigation and Analysis [SAF-INV]  
Classroom Course
- ATM Occurrence Reporting and Investigation Tools [SAF-TOOLS]  
Classroom Course
- Safety Management Survey - Stage 1 [SAF-SAS-1]  
Classroom Course
- Safety Nets [SAF-NETS]  
e-Learning Course  
02-Apr-2009 08:00 - 02-Apr-2999 08:00
- Aircraft Accident Investigation [SAF-ACINV]  
Classroom Course
- Fatigue Risk Management [SAF-FAT] (Restricted)  
e-Learning Course  
01-Jul-2013 08:00 - 01-Jul-2113 08:00
- Safety Assessment and Assurance in SESAR [SAF-SRM]**  
Classroom Course  
11-Apr-2016 09:30 - 15-Apr-2016 12:00

### Safety Assessment and Assurance in SESAR [SAF-SRM]

Print

**Recommended pre-requisites:** Understanding of safety assessment principles, System development lifecycle (e.g. attendance of SAF-SA1).

**Related Training:** SAF-SA1, SAF-SA2

**More information:** [Additional Course Information](#)

**Price:** No fee applies for course participants from Member States' competent authorities and certified organisation. The training cost is sponsored by the EUROCONTROL Work Programme. The price per course participant from other organisations or individuals is 1500 EUR.

**Member States' competent authorities and certified organisation:** Competent authorities are the regulators, supervisory authorities and ministries of the EUROCONTROL Member States. Certified organisations are the EUROCONTROL Member States': - ANS/ATM providers that have been recognised by the competent authority, including both civil and military providers; and - Certified civil and military CNS/ATM training providers; and - Airports and airport authorities with a license to provide ATS services.

**Terms and Conditions:** [Please see our price list.](#)

**Start date:** 11-Apr-2016 09:30

**End date:** 15-Apr-2016 12:00


**Registration Procedure:** [Course Registration Request](#)

**Course Workbook:** The course workbook will be accessible to all participants in electronic format (i.e. file to download).

**Certificate awarded:** Candidates passing the examination will receive a certificate of accomplishment. All candidates will receive a certificate of attendance.

**Course mode:** Classroom Course

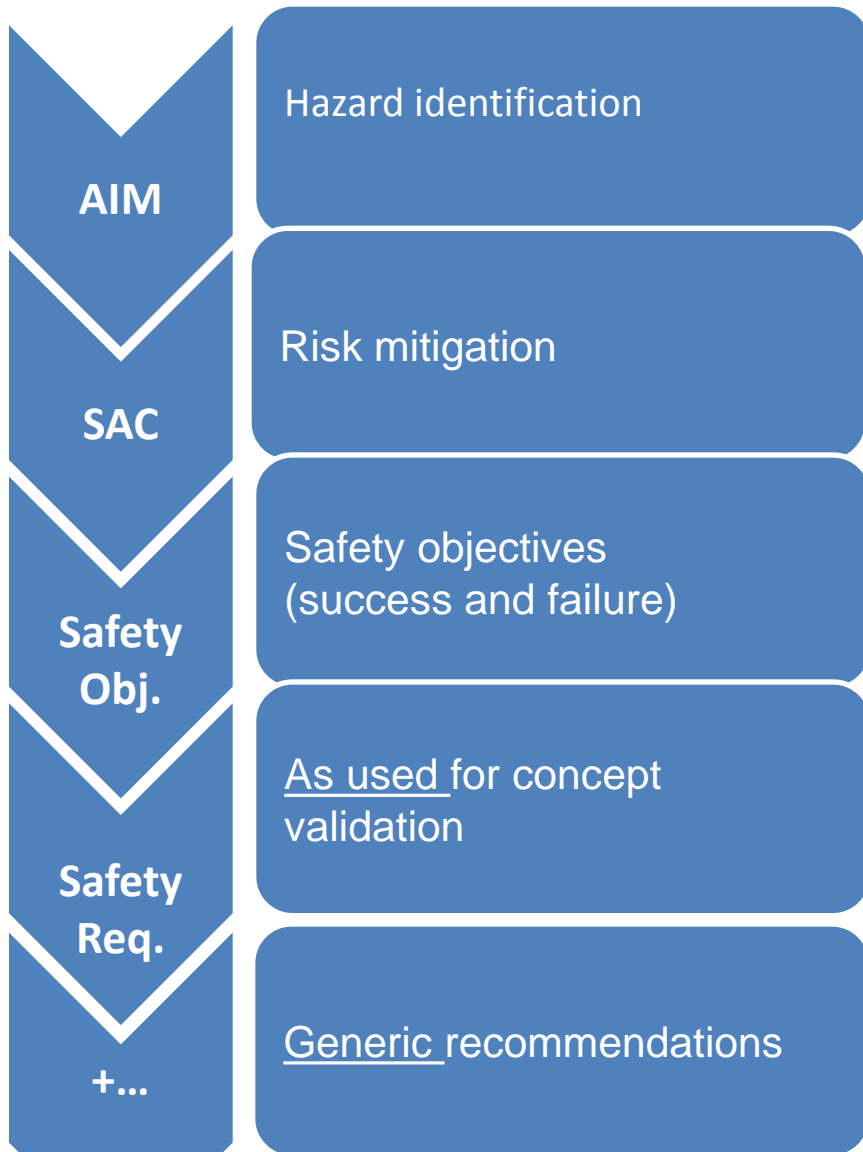
**TUTORS**

 Jean-Francois PIRIOU (Course Manager)

Forgot your password?  
Forgot your login?



# TBS GENERIC SAR (2/2)



## Time Based Separation for Arrivals (TBS) - Safety Assessment Report (SAR)

Document information	
Project title	Flexible and Dynamic Use of Wake Turbulence Separations
Project N°	06.08.01
Project Manager	EUROCONTROL
Deliverable Name	Time Based Separation for Arrivals (TBS) - Safety Assessment Report (SAR)
Deliverable ID	D11
Edition	00.01.01
Task contributors	
EUROCONTROL, NATS	

**Abstract**

This document presents the Safety Assessment of the OFA 01.03.01 / Project 06.08.01 Arrival Time-Based Separations (TBS) concept specification for SESAR Step 1 operations. The report presents the validation of the V3 maturity-level concept against defined safety criteria, and a list of safety requirements and recommendations for a typical application, in view of the concept industrialisation and deployment.



# Life trials and Demonstrations



R&D becomes live!

Life trials may be part of the V3 validation roadmap

Demonstrations showcase a V3 mature concept

Safety case needs to be approved by NSA



# SJU PUBLIC WEBSITE

The screenshot shows a web browser window displaying the SESAR website. The browser's address bar shows the URL <http://www.sesarju.eu/>. The website header features the SESAR logo (a stylized yellow and white shape) and the text "SESAR JOINT UNDERTAKING" next to a graphic of yellow stars. To the right of the logo, the text "HIGH PERFORMING AVIATION FOR EUROPE" is displayed. The navigation menu includes links for "DISCOVER SESAR", "SESAR BENEFITS", "FROM INNOVATION TO SOLUTION", "SESAR SOLUTIONS", "R&D LIBRARY", and "SESAR NEWSROOM". A search bar is located in the top right corner. The main content area features a large banner for "aerodays2015" with the subtitle "Aviation in Europe – Innovating for Growth" and "The 7th European Aeronautics Days". To the right of the banner, there are several news snippets: "Applications now open for 2015 SESAR Young Scientist...", "SESAR project keeps runways safe", "Aerodays 2015", "5th SESAR Innovation Days: Call for Contributions", and "SESAR cooperation agreement signed, sealed and...". On the far right, there are two more sections: "SESAR SOLUTIONS EXPLAINED" and "SESAR IN THE SPOTLIGHT" with a photo of a man in a suit.

