


# ASAS

Supporting the airborne side of ATM by means of Aircraft Surveillance Applications Systems

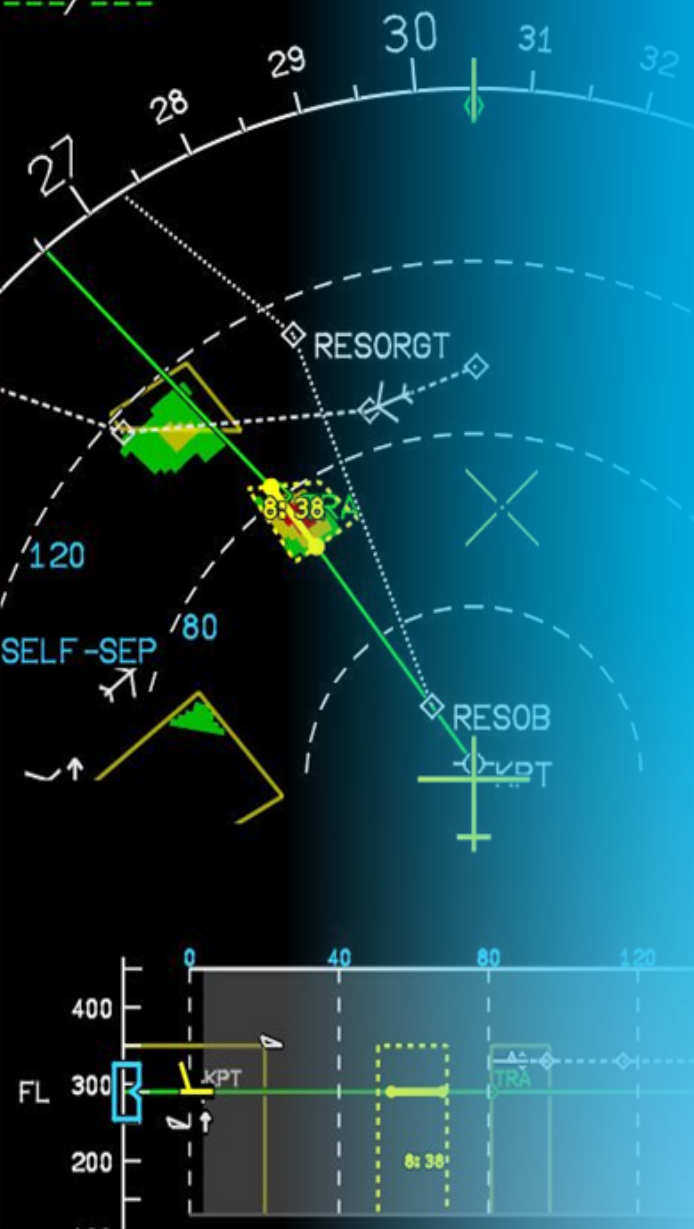


 Air Transport Division  
Cockpit Operations

 cockpit@nlr.nl

 +31 88 511 35 95

GS 462 TAS 462



Research on ASAS applications have shown the potential of ASAS to save fuel, reduce emissions and noise and increase overall capacity of the air transport system, while maintaining or improving safety. NLR has the ASAS knowledge, capabilities and expertise to help you achieve your goals.

ASAS: Aircraft Surveillance Applications System, an umbrella term for a range of aircraft applications designed to enhance the Air Traffic Services (ATS) through greater involvement of flight crews and the use of new flight deck based capabilities. Using advanced surveillance based on ADS-B technology, ASAS equipped aircraft can receive, process and present the pilots a comprehensive and accurate picture of the surrounding traffic. This capability gives rise to a set of new applications that help achieve overall ATM system goals.

NLR lets you discover the benefits of ASAS and how to realize them.

History: for many decades NLR acquired experience with aircraft surveillance applications. Areas of expertise include the use of Cockpit Display of Traffic Information (CDTI), short-to-medium term CD&R (Conflict Detection & Resolution) algorithms for both traffic and weather; ITP (In-trail Procedure), IM (Interval Management), and other Airborne Separation concepts.



“ASAS APPLICATIONS HELP TO ACHIEVE OVERALL ATM SYSTEM GOALS”

**New technology never stands alone. It is introduced in an aviation world in which seamless integration of new equipment, both airborne and ground-based, is of key importance. As a development partner in NextGen, CleanSky and SESAR, NLR is able to ensure commonality with future concepts of operations.**

## CAPABILITIES

NLR's capabilities and expertise range from theoretical knowledge to practical experience with respect to many ATM and ASAS related systems. This includes:

- Knowledge about the concept of operations including:
  - Requirements capture;
  - System design;
  - Technology development;
  - Procedure design;
  - Regulation compliance.
- Feasibility studies regarding aspects like:
  - Costs & Benefits;
  - Safety;
  - System performance;
  - Human operator performance;
  - Transitional aspects.
- Verification and Validation of new technology and procedures in real-time simulations and flight trials.

## TRACK RECORD

NLR has served many customers in the field of ASAS and ATM. Some examples:

- Knowledge and Development Center Mainport Schiphol:
  - Investigation of ASAS applications and their potential benefits.
  - ASAS IM – feasibility demonstration to enable Continuous Descent Operations (i.e., noise reduction) in dense traffic.
- EUROCONTROL:
  - Data link communication testing.
  - Support in standardization of ASAS IM.
- ASAS projects, amongst others:
  - ITP (in cooperation with NASA)
  - PTM (in cooperation with NASA)
  - 3FMS
  - MA-AFAS
  - Intent
  - iFly
  - ALICIA
  - MFF
  - Within the SESAR collaborative project: ASAS IM requirements capture, safety, validation.

The introduction of ASAS will enable the necessary evolution of the ATM system and will lead to more efficient use of airspace, more efficient and more eco-friendly flight operations, reduce controller workload and facilitate future growth. As a reliable and capable partner, NLR can help you achieve your goals.