

## Sensors – system and functions

Aircraft are increasingly dependent on radio-frequency (RF) systems to provide support for new capabilities regarding communication, surveillance, and safety. In particular, the trends towards autonomously operating platforms increase the need for improved RF system functions.

Future challenges are:

- Hardware architectures supporting continuous development and adaptation to different users and platforms.
- To reduce weight and volume, power consumption and cooling needs
- New sensor functions
- Sensors on support systems

Topics:

- New sensor functions
  - Silent & directive data links, incl robust connectivity
  - Passive sensing
  - Co-operative passive sensing between platforms
  - New EW and radar functions
- Sensor function scheduling and execution
- Structure-integrated antennas
  - VHF to L-band
  - Sub-VHF excitation of aircraft structures for antenna purposes
  - Sensors on unmanned air vehicles, incl.
    - structural issues
    - co-operative utility and swarming
- Solving conflicts between wideband systems and immunity
- Laser and electro-optical sensors
- Sensor system testbed and demonstrator
  - Development platform concept for new sensor functions
  - Resource optimization and resource management