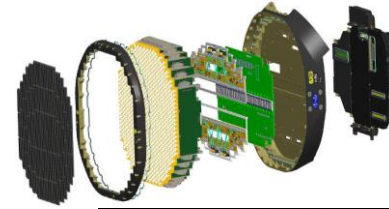


Leonardo in the UK

- Leonardo is a global high-tech company and one of the key players in Aerospace, Defence and Security.
- Our UK business is newly formed, based largely on the merger of Selex ES (Electronic Systems) and Agusta-Westland (Helicopters).
- In the UK we have >£2bn annual revenues and employ circa 7000 staff at six main sites.
- For more details see www.uk.leonardocompany.com and follow us at @Leonardo_UK
- RF Technology sits at the heart of many of our UK designed products.
- In RF we are probably best known for our airborne radars, electronic warfare systems, military radios and communications systems, IFF systems and counter-IED products.
- We have significant antenna groups at Edinburgh, Luton and Filton and RF technology groups at these sites and Basildon and Southampton.
- RF also plays an important role at our Helicopter business in Yeovil with platform and system integration.



Challenges

General

- Installation and system verification
- System proving and qualification against Environmental and User needs
- Longevity and maintenance of in-service equipment
- Impact of EM spectrum deregulation and civil expansion
- Use of COTS components and materials in military environments
- Design tools, skills and Training

Some Specifics

- Increasing bandwidth, both instantaneous and tuned
- System sensitivity and control of noise
- Controlling antenna interactions from increasingly cluttered platforms
- Agile, low loss, high Q filtering
- Continued focus on efficiency and losses
- Low observability of some military systems

Research Opportunities

- Materials and manufacturing technology, e.g. additive manufacture
- Embedding “meta-” materials/surfaces in mainstream antenna design.
- Multi-physics, multi-scale modelling
- Design optimisation methods, use of AI?
- Breakthroughs in RF power and digitisation?
- The next RF breakthrough: Quantum, nano-scale engineering, 2D materials?

- And dare I say RF photonics?

THANK YOU FOR YOUR ATTENTION

