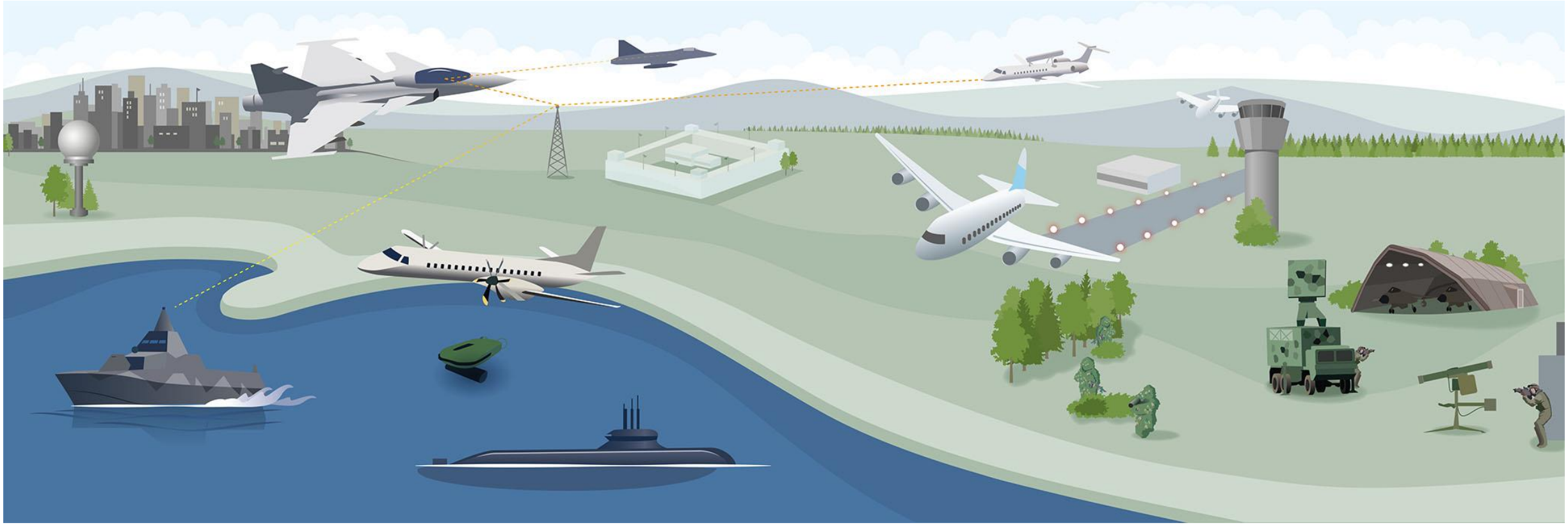
INDUSTRY ORIENTED RESEARCH

Opportunities, Challenges and Experiences

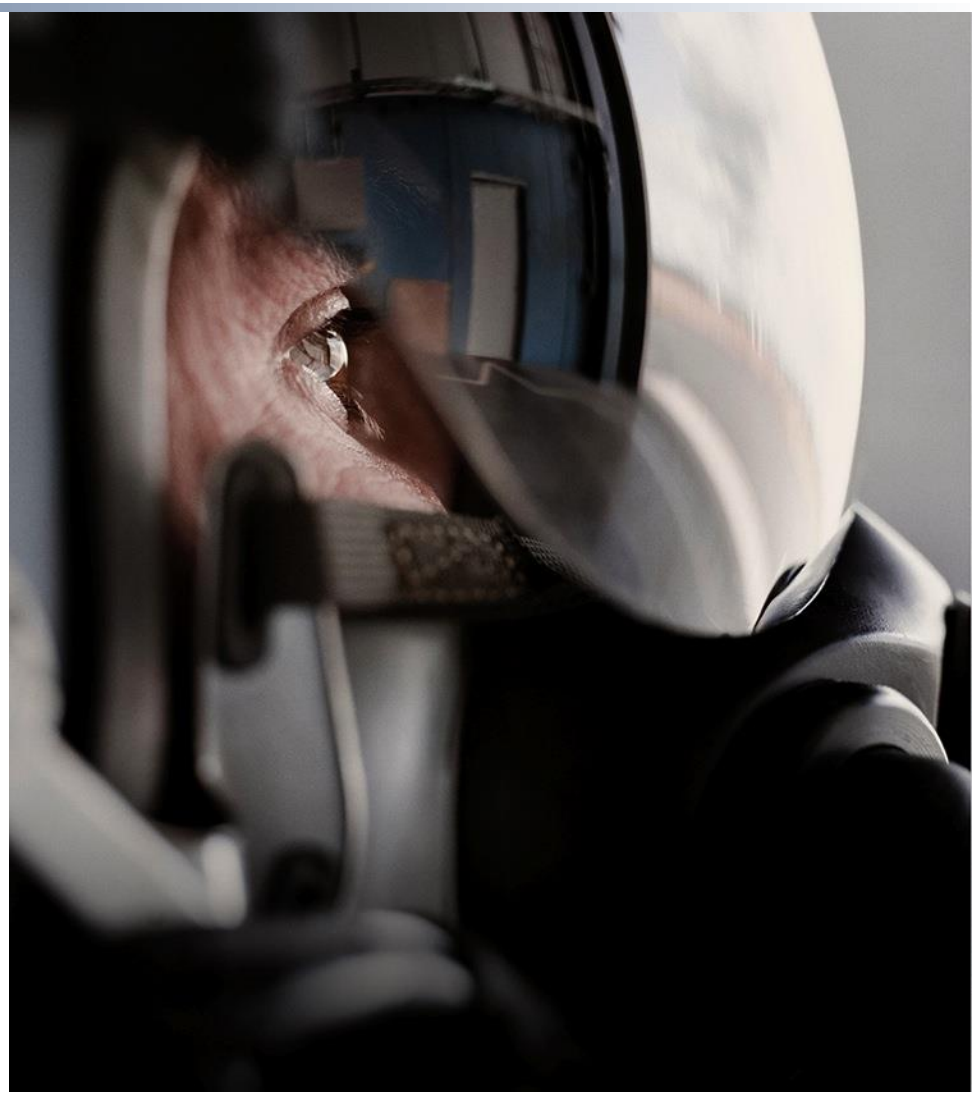
2017-11-06 LINK-SIC workshop
Gunnar Holmberg
Saab

SAAB'S **BROAD OFFERING**



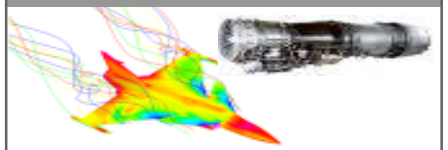
WE LIVE IN AN **EVER CHANGING WORLD**, BUT OUR AIM REMAINS **CONSTANT**

- To keep people and societies safe, we push intellectual and technological boundaries
- Saab has been pioneering new technology, enhancing our customer's capabilities for 80 years
- We're breaking new ground, both technologically and from a cost perspective – Gripen is just one example
- Roughly 25% of our turnover is invested in R&D



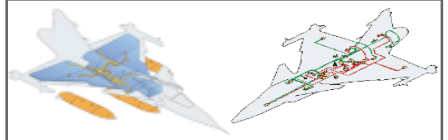
AERONAUTICS **KEY TECHNOLOGIES**

Aeronautical Engineering



Software Engineering

Vehicle Systems



Human-Machine Interaction

Autonomy

Maintenance Systems

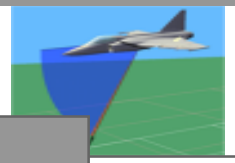
Systems Integration

- Systems of Systems Integration
- Decision support
- Operational Analysis
- Concept Design
- Overall Design and Architecture
- Survivability
- Safety & Reliability
- ILS, Availability and Maintainability

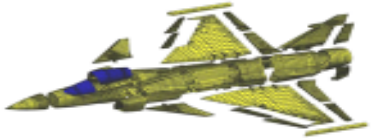
Tactical System

Weapons Integration

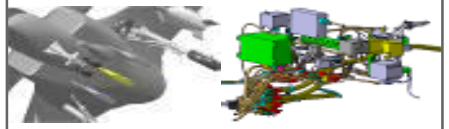
Flight Test and Verification



Material Technology

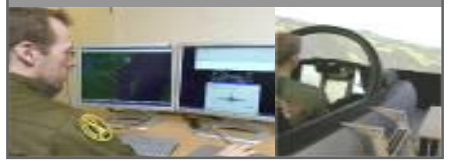


Airframe Design



Production Systems

Support Systems and Simulators



Engineering Methods & Tools

SAAB GLOBAL INNOVATION PROGRAM

- Building joint Innovation Arenas with customer nations supporting long term partnerships
- Enable to meet new capability needs in customer nations
- Enable the full customer base to contribute innovation in Saab products

SAAB AND LIU **STRATEGIC PARTNERSHIP** 2014

Policy

Competence development

Competence provisioning

Research

International collaboration activities

Access to physical environment, infrastructure and innovation system

Foto: *Ulrik Svedin*
Håkan Buskhe, vd för försvars- och säkerhetskoncernen Saab och LiU-rektorn Helen Dannetun tecknade ett tioårigt samarbetsavtal.

SAAB **UNIVERSITY DAY**

LINK-SIC Organization

Strong Industry Involvement

Independent International QA

Seniority and Succession inherent parts of organisation

Industry Academia Twinning

RATING OF KNOWLEDGE INTERACTION

- Industry PhD
- Common Projects
- MSc Thesis
- Demonstrators
- Researchers on site
- Sponsorships
- Seminars
- Board partcipation

Based on analysis in Saab Aeronautics Technology Organisation 2009

INTERACTION BETWEEN TWO **DIFFERENT VALUE STREAMS**

- **Long term competence supply and innovation is key to high tech industry**
- Industry to generate ROI, University to build and spread knowledge, degree of commonality?
- Funding is important to gain interest from Universities- but not sufficient
- Universities are driven more by motivation than by contracts- not a normal supplier relation
- Industrial relevance is key for Universities to gain Industry Interest
- **Knowledge Interaction strengthen prospects of long term success for both parties**