

# Internationell samverkan

- Björn Jonsson    Innovair

# Regeringsbeslut att stärka svensk flygteknisk FoU

 Regeringen

Näringsdepartementet

VERKET FÖR INNOVATIONSSYSTEM  
Ark: 2017-07-03  
D:Dir 2017-03387/1

Regeringsbeslut 14  
2017-06-15  
N2017/04195/FÖF

Verket för innovationssystem  
101 58 Stockholm

Uppdrag att stärka svensk flygteknisk forskning och utveckling

**Regeringens beslut**  
Regeringen uppdrar åt Verket för innovationssystem (Vinnova) att stärka svensk flygteknisk forskning och utveckling i huvudsak genom det strategiska innovationsområdet Innovair.

För ändamålet får Vinnova använda högst 25 000 000 kronor under 2017.

För åren 2018–2022 beräknas Vinnova använda:

högst 55 000 000 kronor under 2018,  
högst 55 000 000 kronor under 2019,  
högst 55 000 000 kronor under 2020,  
högst 55 000 000 kronor under 2021, och  
högst 55 000 000 kronor under 2022.

Utgifterna ska belasta det under utgiftsområde 24 Näringsliv uppförda anslaget 1:5 Näringsutveckling m.m., anslagsposten 1 Näringsutveckl - del till Kammarkollegiet.

Uppdragets huvudsakliga syfte är att ge bättre förutsättningar för en stark flygindustri i Sverige och att stärka flygteknikområdets genom ökad samverkan, forskning och informationspridning.

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Webb: www.regeringen.se

Postadress: 103 33 Stockholm  
Besöksadress: Meteor Samsövegatan 70  
E-post: n.registrator@regeringkansliet.se


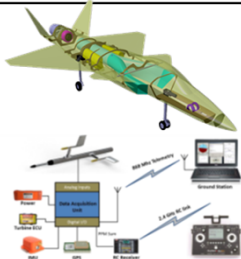
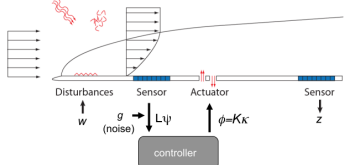
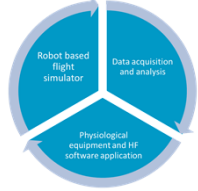
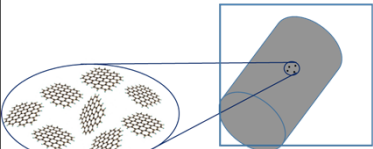
- 55 MSEK/år 2018-22
- Stärka företagens förmåga till omställning och konkurrenskraft
- Stärka Sveriges roll som betydelsefull flygnation
- Stärka Sveriges förmåga att aktivt delta i och dra nytta av internationellt FoT-samarbete
- Vidareutveckla forskningsresurserna inom landet
- Adressera flygets miljö och klimatpåverkan



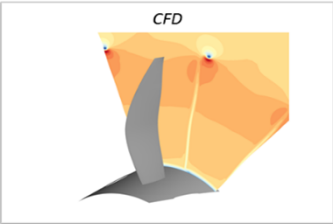

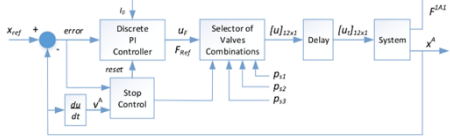
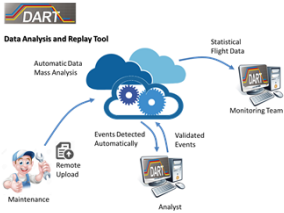
# Prioriterade samarbetspartners



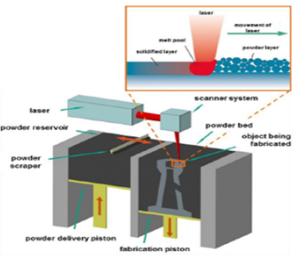
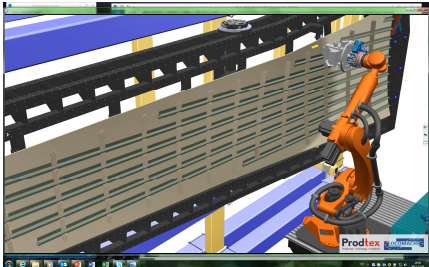
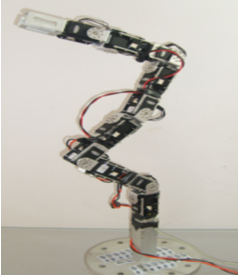
- Brasilien
- Tyskland
- Storbritannien

# Brasilien

- NFFP 6 "twistning" av pågående projekt
- Pilot-projekt
- Gästprofessorer
- VINNOVA/ FINEP/ SENAI utlysningar
- Strategiska projekt
- (FMV/ FM/ DCTA HMI HUFLAB)

<b>Pilot Projects Financed by</b>   <div style="border: 1px solid black; padding: 2px; display: inline-block;">Brazilian funding by own academic means</div>	<b>Illustration</b>	<b>Participants (SE)</b>	<b>Participants (BR)</b>	<b>Status</b>
Methods for sub-scaled demonstrator and control law testing (MSDEMO)  <i>Under NFFP6 financing</i>		Saab LiU	ITA USP	<ul style="list-style-type: none"> <li>• Project finished 2018</li> <li>• MESTA continuation project (Vinnova – Finep)</li> </ul>
Pre Laminar Flow Design (preLaFloDes)  <i>Under NFFP6 financing</i>	<b>Active Flow Control</b>  	Saab KTH LiU	ITA USP	<ul style="list-style-type: none"> <li>• Project finished 2018</li> <li>• preLaFloDes II activities in SE (KTH – Saab) 2019</li> </ul>
Human Factors lab for Future Air Systems (HFlabFAS)  <i>Under NFFP6 financing</i>		Saab LiU	ITA	<ul style="list-style-type: none"> <li>• Project finished 2017</li> <li>• HFA part of IVHM/HFA (Vinnova – Finep) project continuation</li> </ul>
MultiGraph  <i>Under SIO Graphene financing</i> UFABC financing by Fapesp		Saab Chalmers Blackwing 2DFab	UFABC	<ul style="list-style-type: none"> <li>• Project Finished Q2 - 2019</li> <li>• New project "Graphene enhanced thermoplastics" started (same parties but LiU added and Blackwing (not participating – different technology – not CFRP)</li> </ul>

<b>Projects Financed by</b>  	<b>Illustration</b>	<b>Participants (SE)</b>	<b>Participants (BR)</b>	<b>Status</b>
Inflow Prop		Chalmers GKN	Embraer ITA	<ul style="list-style-type: none"> <li>Project finalized mid 2019               <ul style="list-style-type: none"> <li>Conference papers in pipe-line</li> </ul> </li> <li>Planning for next project made, but uncertainties on prerequisites</li> </ul>
Methods for Subscale Flight Testing and Analytics (MESTA)		Saab LiU	ITA FT Sistemas	<ul style="list-style-type: none"> <li>Project close to completion               <ul style="list-style-type: none"> <li>Methods for implementing modular subscale demo, flight test planning and execution, methods for flight test analytics etc completed (SE)</li> <li>Computational aerodynamic analysis of a subscale fighter aircraft thesis completed (BR)</li> <li>FT Sistemas project focal resigned and situation also impacting ITA funding (BR). Funding released and work on-going.</li> </ul> </li> </ul>
Digital Hydraulic Actuator (DHA) in Aeronautics for flight control  <i>Brazilian financing by Fapesp</i>		Saab LiU	UFSC Certi	<ul style="list-style-type: none"> <li>Project on-going               <ul style="list-style-type: none"> <li>Integration work sensors / valves in test rig (BR)</li> <li>Design study to increase performance (SE)</li> </ul> </li> <li>End expected Q1-2020</li> </ul>
Integrated health management and pilot performance analysis for future aircraft systems (IVHM-HFA)		Saab LiU	ITA Konatus UFMG	<ul style="list-style-type: none"> <li>Project on-going               <ul style="list-style-type: none"> <li>Test data accessibility challenges (SE for IVHM)</li> <li>Sensor technologies for operator assessment (SE for HFA)</li> <li>Final reporting on-going</li> </ul> </li> <li>End expected Q4-2019</li> <li>Pre-requisites for continuation unclear</li> </ul>

<b>Projects Financed by</b>   	<b>Illustration</b>	<b>Participants (SE)</b>	<b>Participants (BR)</b>	<b>Status</b>
Tools and Methods for certification of Additive Manufacturing fabricated parts for aerospace applications (NDT-AM)		Swerea KIMAB Saab Cobolt	Senai Akaer ITA	<ul style="list-style-type: none"> <li>• Project finished</li> </ul>
Flexible automation for cost effective aircraft manufacturing (FlexAM)		Swerea Sicomp Saab Prodtex X-Laser	Senai Akaer ITA	<ul style="list-style-type: none"> <li>• Project finished</li> <li>• Project actors for continuation started discussions on funding need and resource availability both in BR and SE.</li> </ul>
Airframe Sealing Automation Using Snake Robot (ASASR)		Saab LiU	Senai EngeMovi ITA	<ul style="list-style-type: none"> <li>• Project finished</li> <li>• Continuation less likely, due to Engemovi parent company interest in pursuing this effort</li> </ul>

# Tyskland

- LuFo bottom-up koordinering, BMWi/Innovair
- Informell utlysning inom Innovair
- Finansieringsmodell:
  - 50% Stora företag
  - 65% SMF
  - 100% Akademi & institut



- Två av fyra projektidéer för genomförande:
  - SESAM-ATOS A 205 ARCONIC/ GKN/ RISE/Jönköpings Univ.
  - ElektRail-SoSim Electra Solar/ Linköpings Univ/ SFTIAB/ MSB/ FFS



# Storbritannien



- Koordineringsmöten ATI/ Innovair
- Eureka-utlysning
- Finansieringsmodell:
  - 50% av projektet
- Projekt under genomförande
  - LaserTau-Large area Laser processing of Aerospace Structures using the Tau Robot Platform TWI, CAV Adv, Cognibotics, Corebon
  - EMSCAT-ElectroMagnetic analysis of Smart and Connected Aircraft Int. TechneGroup, ESI Nordics
  - C-HUD Compact and lightweight Head Up Display Saab, Qiotiq
  - SiCTAA-Silicon Carbide Technologies for Aerospace Applications RR, Compound Semiconductor Catapult, Semelab, Durham Univ, Ascatron

# Storbritannien

## Announcement

- SE and UK signed a MOU on 18 July 2019. Its main purpose is to start joint studies in order to meet the future operational needs of both countries within the field of Combat Air as well as strengthening our national industries.
- Both countries need to upgrade current and coming future systems for the coming decades, including JAS 39 Gripen C-E and Eurofighter Typhoon.
- SE and UK have in several areas complementary high tech industry regarding Combat Air Systems and the cooperation is based on equal partnership.
- SE and UK will by the end of 2020 decide on how to take the next step, including joint development.
- This also means that SE for the next coming years has prioritized the SE/UK FCASC before other similar initiatives.
- According to the SE/UK agreement both countries acknowledge and welcome other participating countries to take part in discussions covering Future Combat Air. SE is of course also open for discussions with other nations regarding operational needs, exercises etc.