



SAAB

Aerospace Technology Congress, FT2019 08-09 Oct. 2019

Flying TeD, a Technology Demonstrator for the
Future

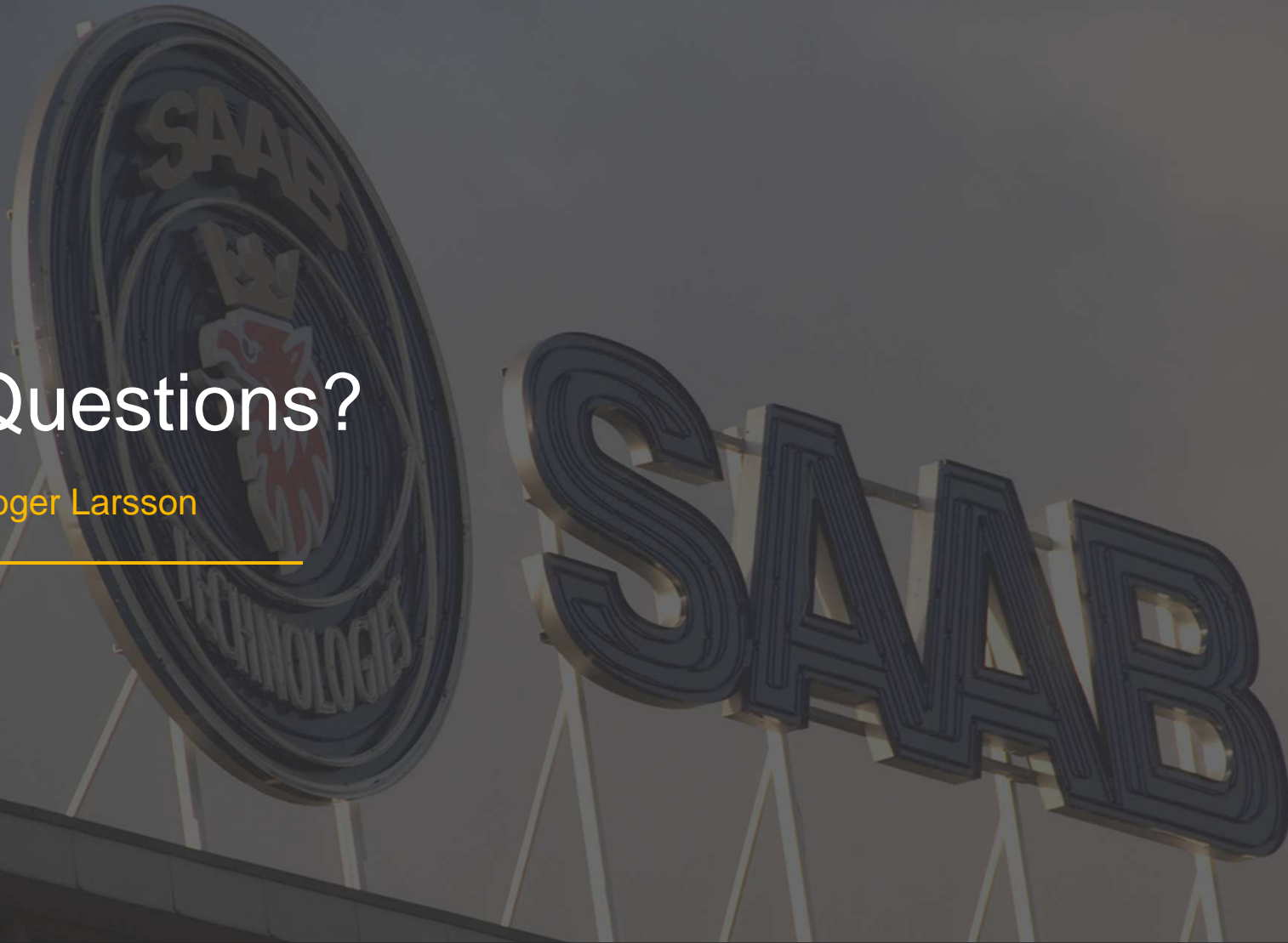
Roger Larsson (Saab), Alejandro Sobron (LIU)

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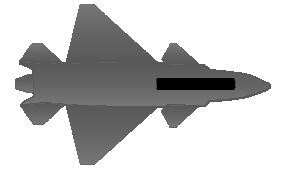


Questions?

Roger Larsson



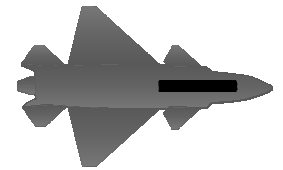
Introduction



To invent an airplane is nothing.
To build one is something.
But to fly is everything.

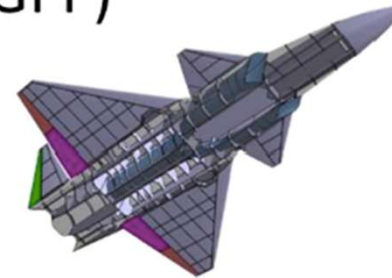
Otto Lilienthal (1848 - 1896)

History 2006-2009, The Beginning



The Generic Future Fighter (GFF)

MSDEMO's main research platform



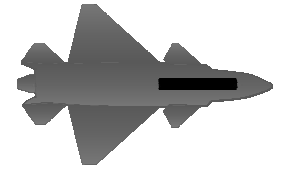
- Research study ordered by the Swedish Defence Materiel Administration (FMV), ending in 2009
- Parties: SAAB, Swedish Defense Research Agency (FOI), Volvo Aero, Linköping University (LiU), Royal Institute of Technology (KTH)
- LiU/FluMeS designed and flew a subscale demonstrator

Subscale GFF model

Scale	13 %
Length	2,4 m
Wingspan	1,5 m
TOW	18,5 kg
Propulsion	Jet, 160 N



History 2015-2018, A new life begins



Saab/LIU



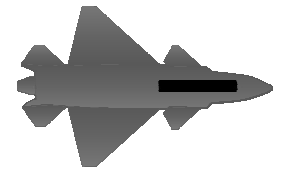
ITA/USP



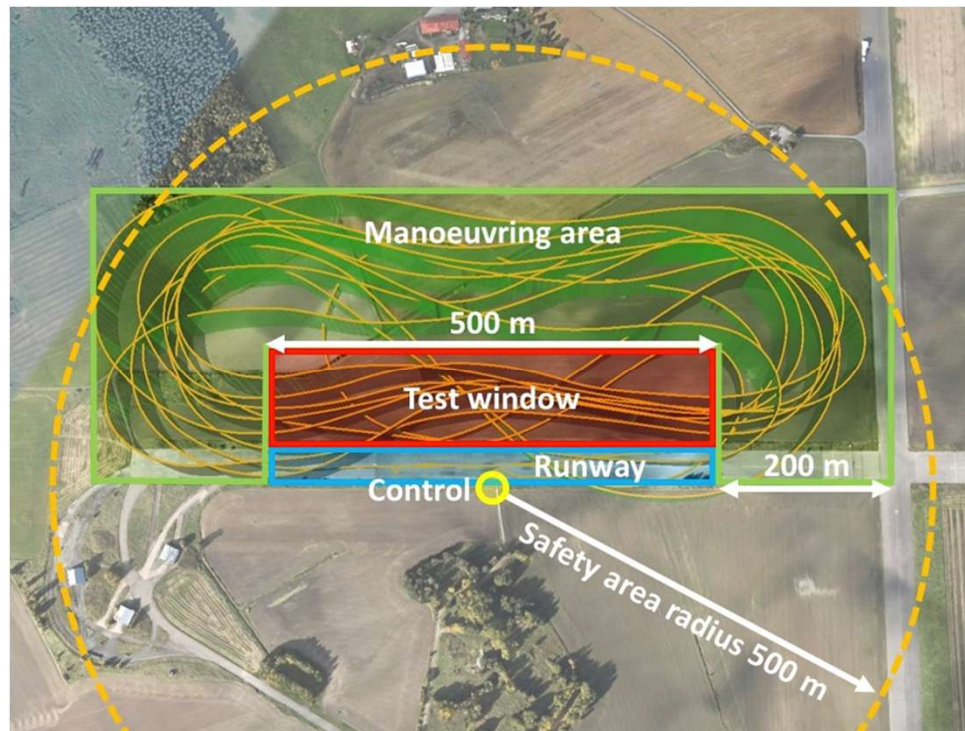
MSDEMO (NFFP-2015-02988): **Methods for Sub-scale Demonstrator and Control Law Testing**

MESTA (NFFP-2017-01505): **Methods for Subscale Flight Testing and Analytics**

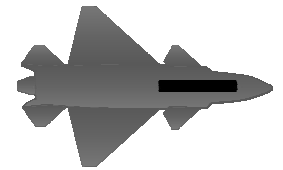
History 2016-2017, A new life begins



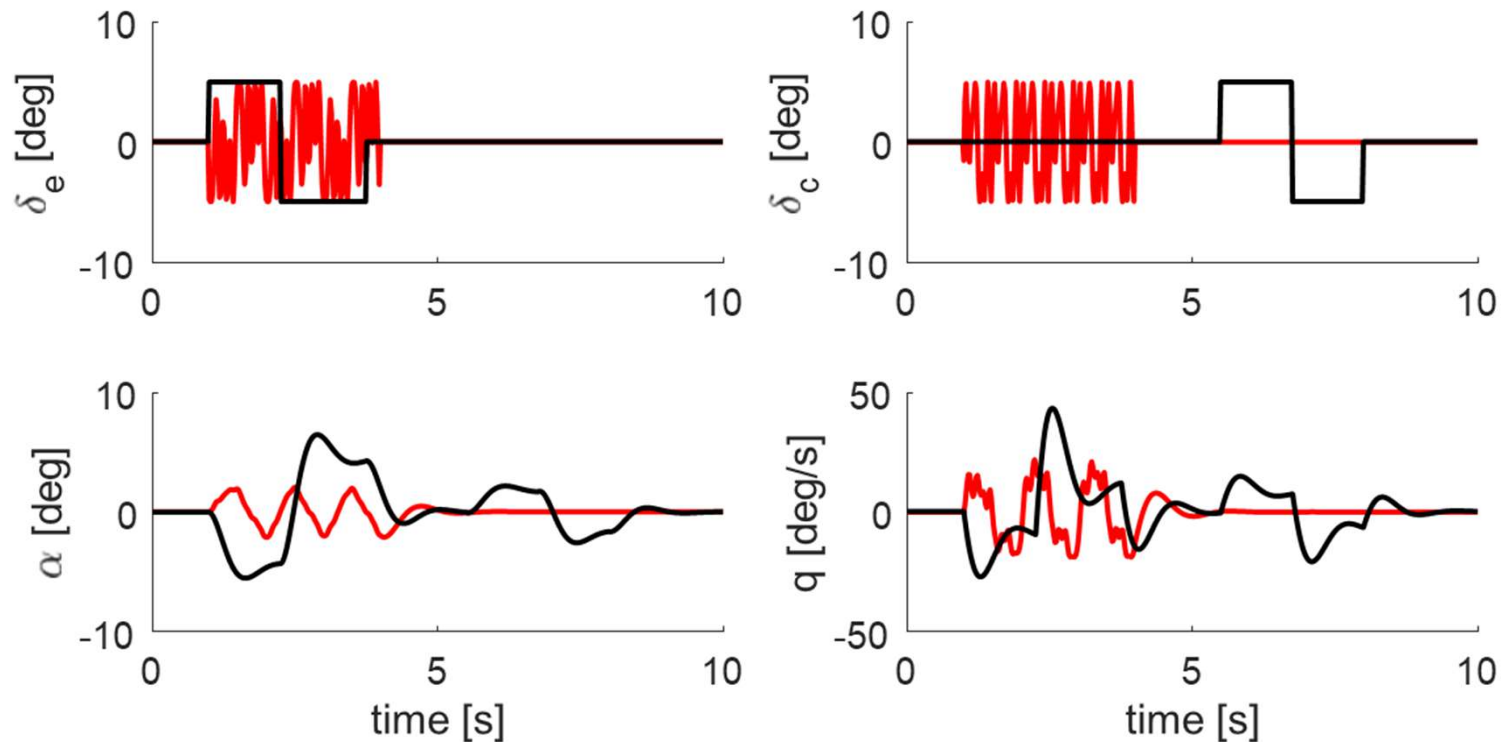
LINK-SIC: Linköping Center for Sensor Informatics and Control



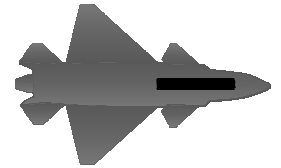
History 2016-2017, A new life begins



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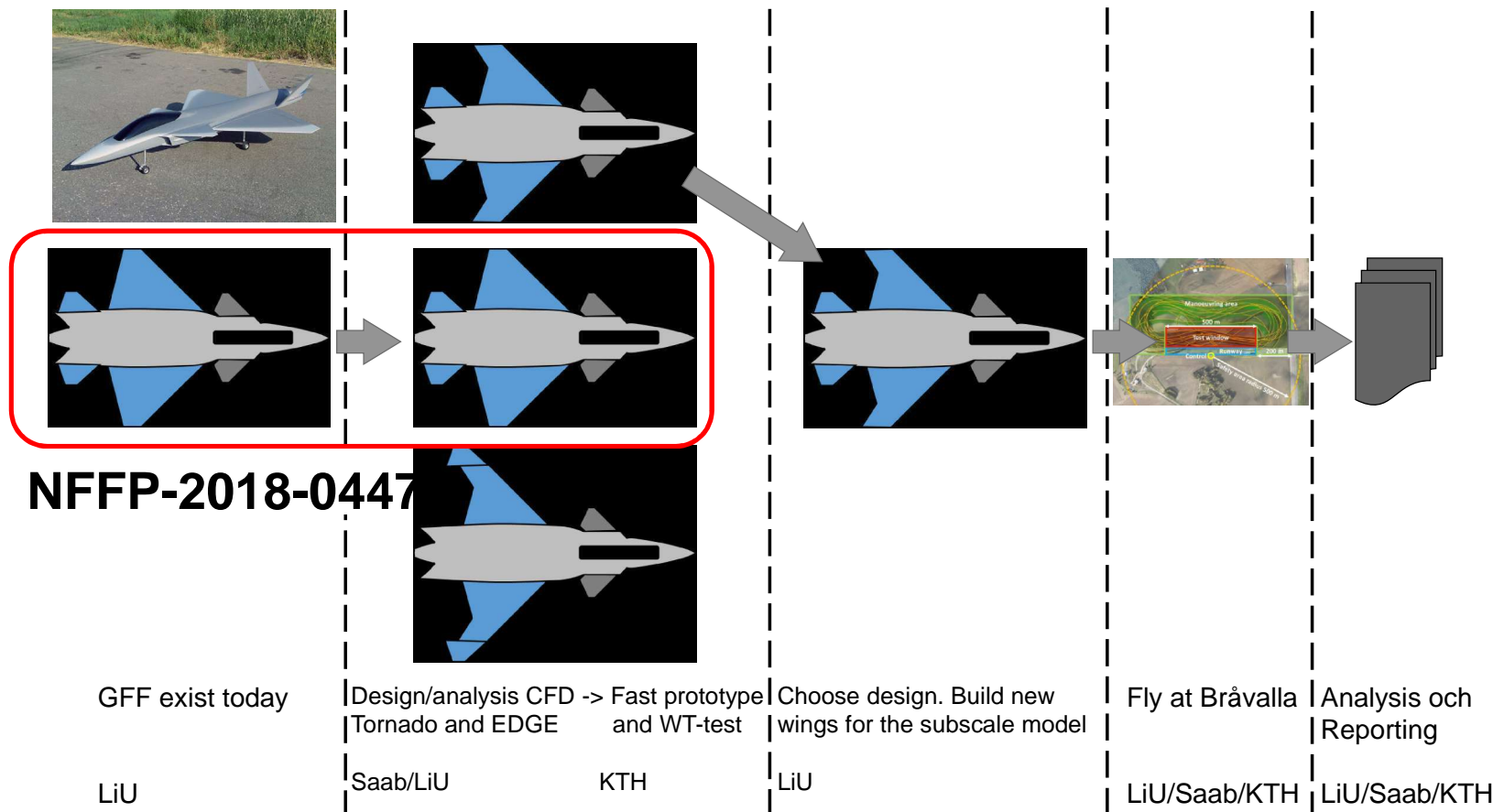
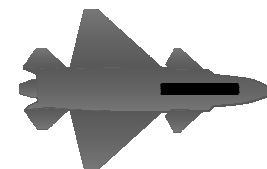
History 2017, A new life begins



Model fit validation

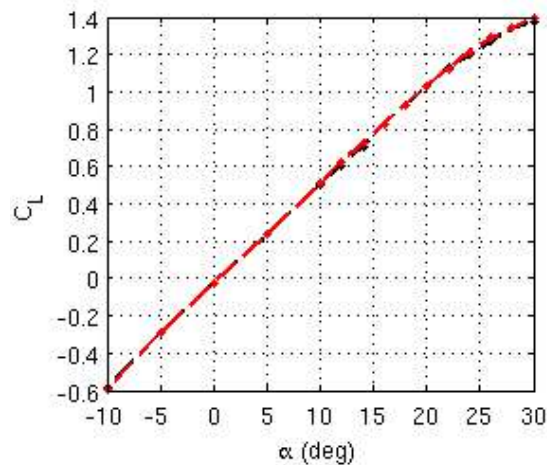
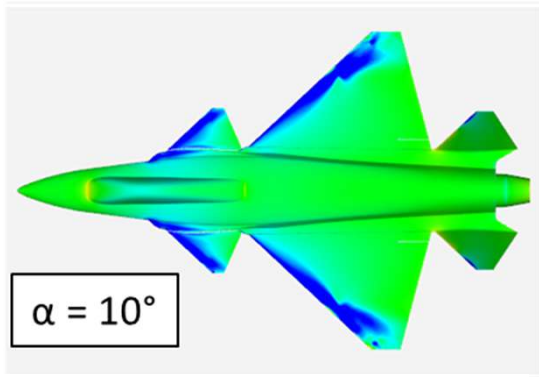
	Double-pulse	Multisine
Separate	69.9%	68.1%
Parallel	26.1%	68.9%

History 2018-2019, Flying TeD



History 2018-2019, Flying TeD

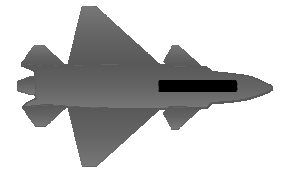
Saab



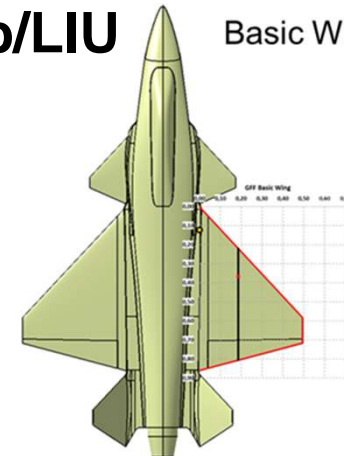
KTH



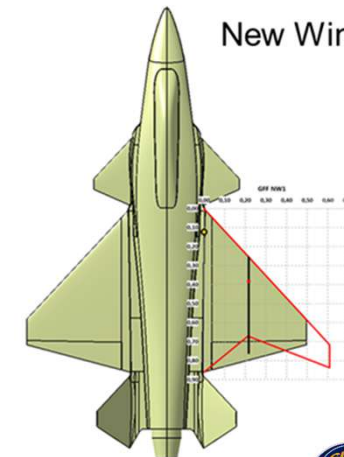
Saab/LIU



Basic Wing

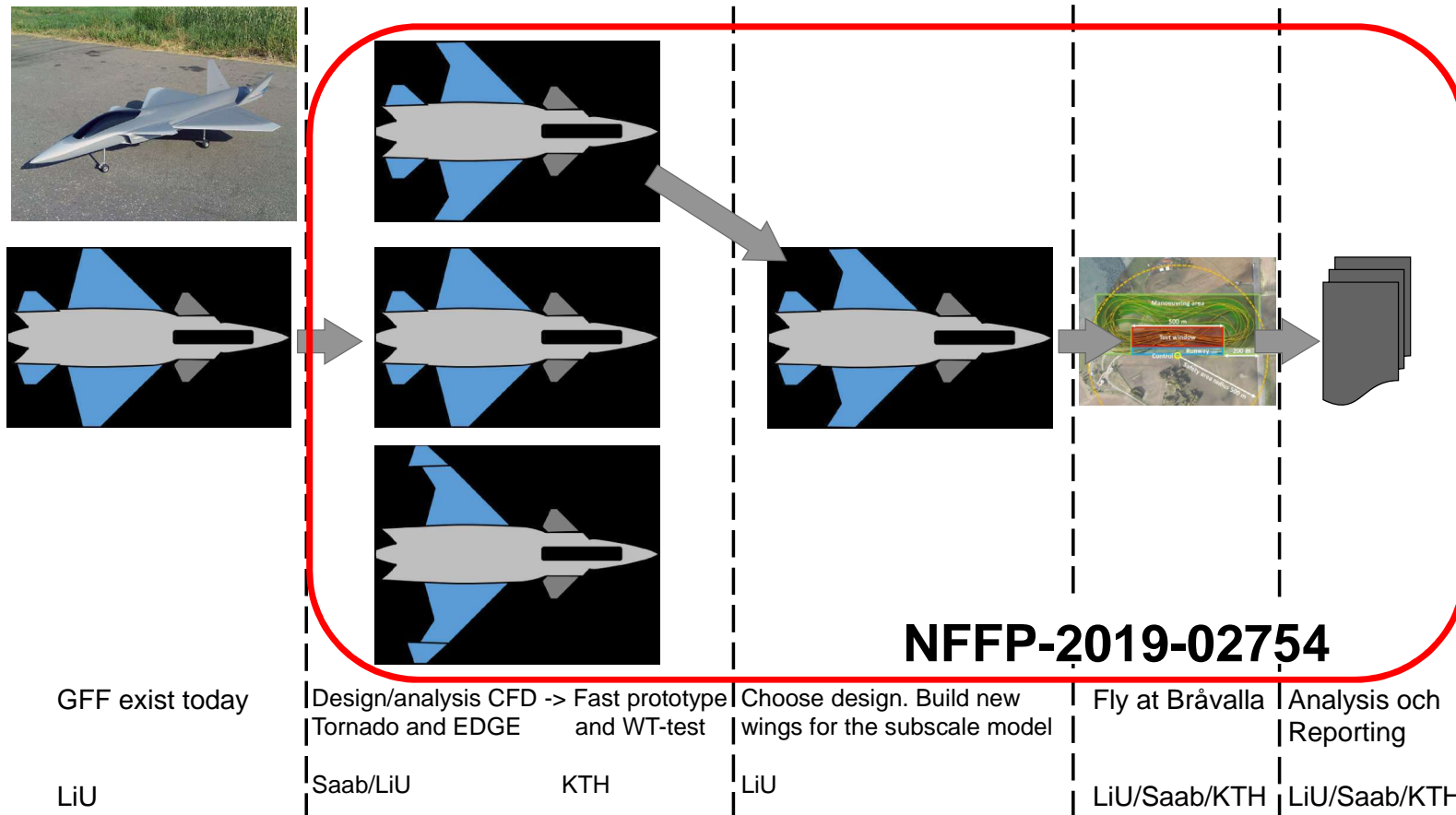
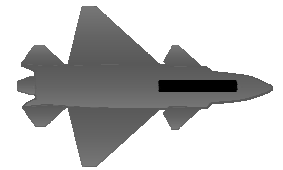


New Wing 1

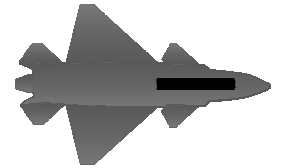


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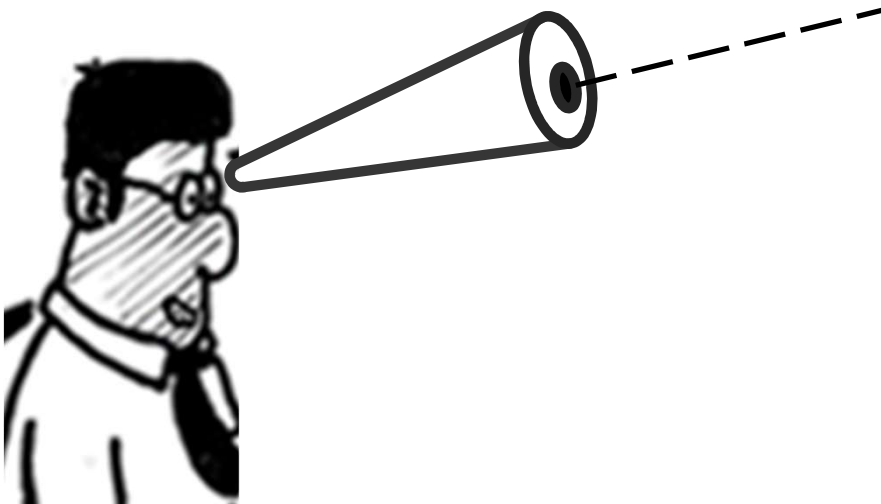
Today 2019-2022, Flying TeD 2



Vision for the future 2021-



The Future



- Possibilities to integrate other technologies
- Possibilities to use data for research
- Possibilities to use data for education
- .
- .
- .