

# The Integration of Professional Training and Commercial Research into a University Portfolio

**University of Glasgow Aerospace Symposium**  
25<sup>th</sup> October 2016

# Contents

- Engineering at UHI
- Centre for Advanced Engineering
- Course Portfolio
- Integrated Professional Training
  - EASA Part 66
  - Air Traffic Control
- Knowledge Transfer
- Commercial Research
- Conclusions

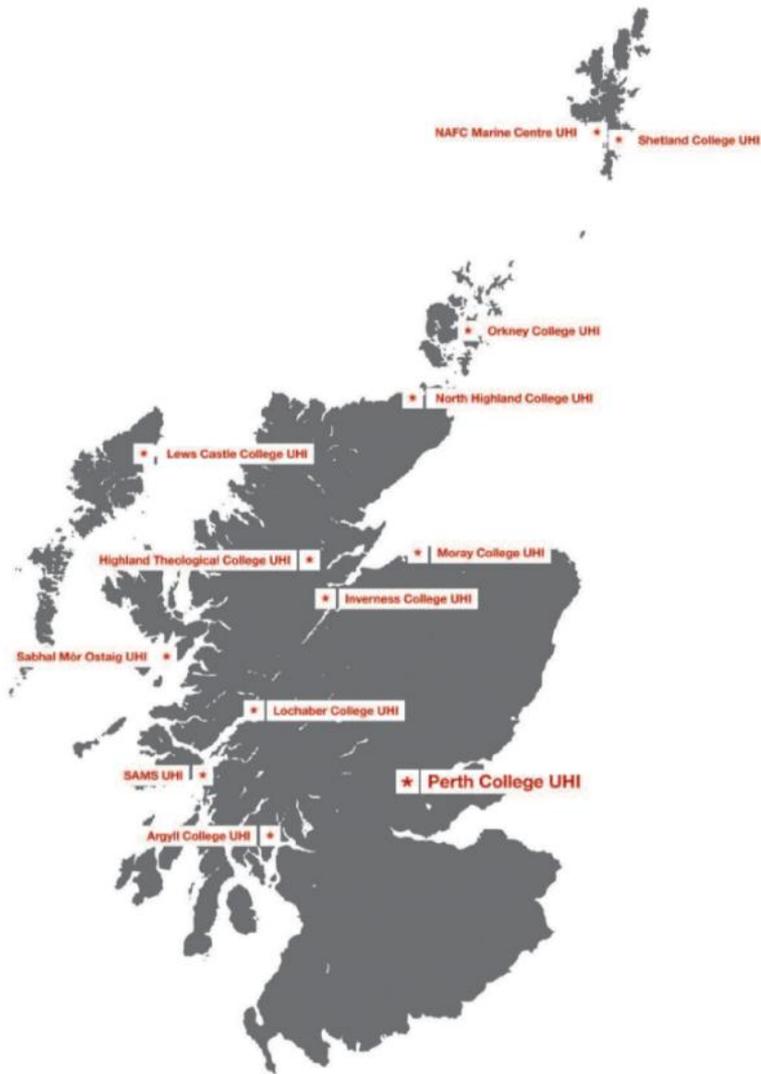


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# Engineering at UHI



## University of the Highlands and Islands (UHI)

- A partnership of 13 colleges and research institutions
  - Including the Scottish Association for Marine Science (SAMS) and the Environmental Research Institute (ERI)
- 8000 students studying on undergraduate and postgraduate courses



# Engineering at UHI

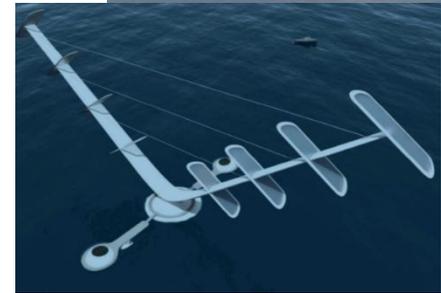
...on land...



...at sea...

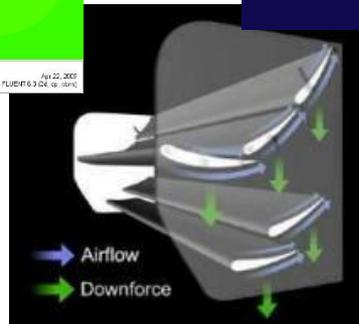
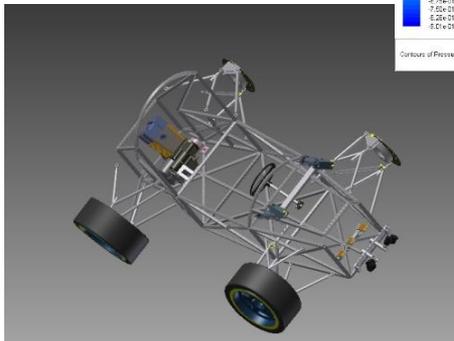
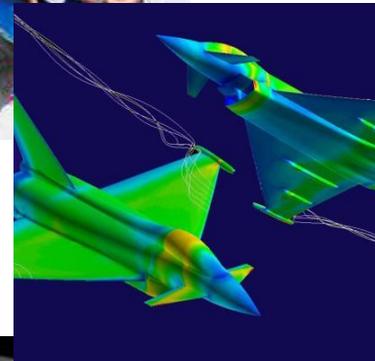
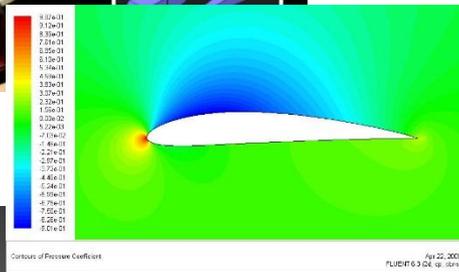


...and in the air



# Engineering at UHI

...from technician...



..to postgraduate



# Engineering at UHI



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# Centre for Advanced Engineering

A portal for Research, Knowledge Transfer and Consultancy

The culmination of a four-year journey to engage in international-standard scholarly activity

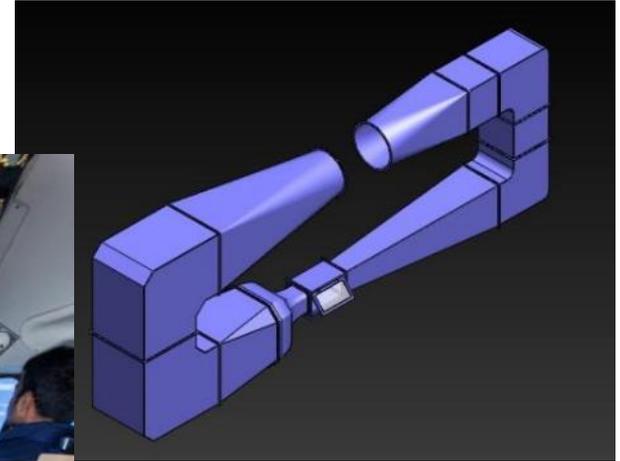
Incorporating:

- Research Staff
- Computational Facilities
- Experimental Facilities



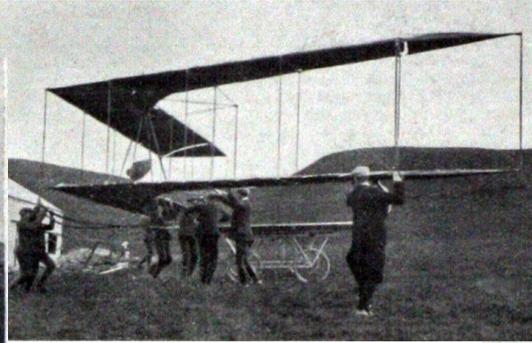
# Centre for Advanced Engineering

Encompassing the Dunne  
Aeronautical Laboratory

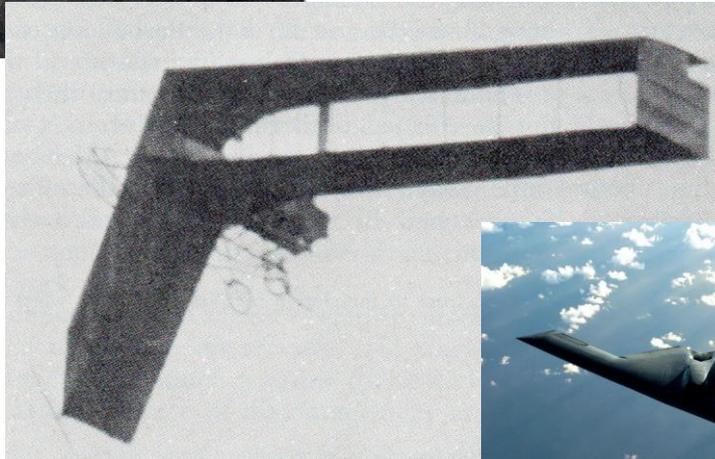
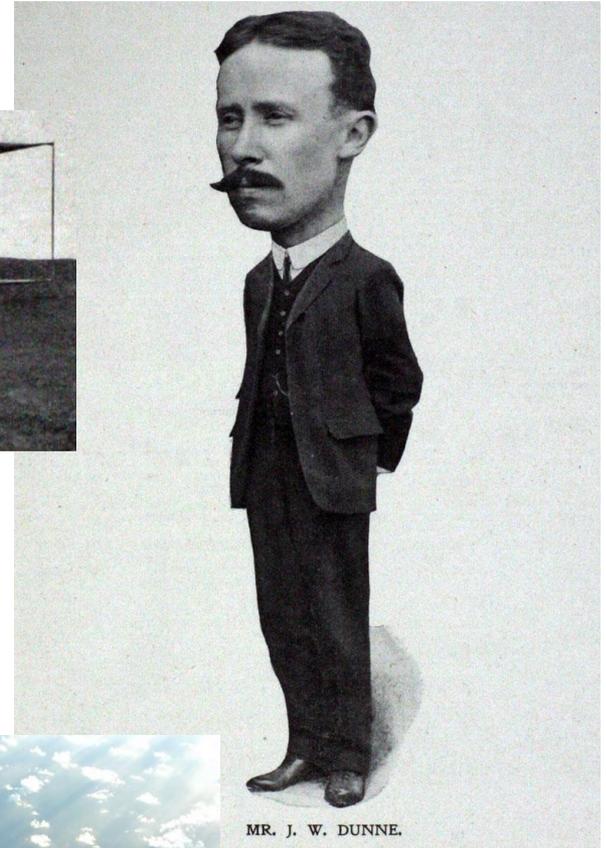


# Centre for Advanced Engineering

Encompassing the Dunne  
Aeronautical Laboratory



Blair Atholl, 1907



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# Course Portfolio

- From NQ Level 5 in Basic Engineering Skills, to:
- MEng Aircraft Engineering
- MSc Air Transport Operations and Management
- MBA Aviation
- BSc Air Traffic Management
- MEng Engineering Design
- *BEng Aircraft Maintenance*
- *BSc Pilot Studies*



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# Integrated Professional Training

## Air Traffic Control

Full EASA Air Traffic Control Officers License (240 Credit Points)	BSc Air Traffic Management	BSc (Hon) Air Traffic Management
<p><b>Successful completion of the Full EASA Air Traffic Control Officers License.</b></p> <p>This maps to an equivalent Dip HE of 240 SCQF credit points at Level 8 with some aspects at level 9.</p>	Aviation Regulation & Human Factors Management	Air Transport Operation & Management
	Aviation Business & Society	Sustainable Management of Air Traffic
	Project Management	Management of Risk
	Quality & Safety Management Systems for Aviation	Critical Incident Management & Emergency Planning
	Aerodrome Operations & Management	Research Project/Dissertation
	Quality & Safety Management Systems for Aviation	
	Operational Management	



# Integrated Professional Training

## Air Traffic Control

- 2 + 2 arrangement
- Entry to Year 3 of the BSc is represented by the EUROCONTROL license for Air Traffic Control Officers (ATCOs) delivered through a European Aviation Safety Agency (EASA) approved academy
- Full ATCO license, including the practical elements to be undertaken within an approved Air Navigation Service Provider (ANSP)



# Integrated Professional Training

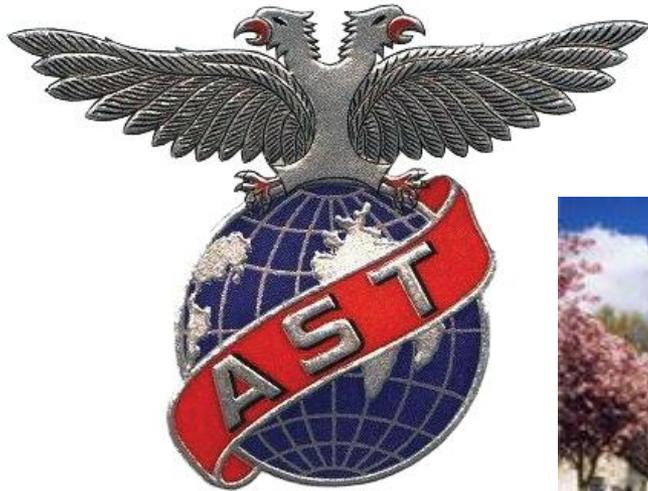
## Air Traffic Control

- Work-based learning
- Work-based assessment
- Crisis Management
- Demonstrable Responsibility



# Integrated Professional Training

EASA Pt.66 Category B  
Licence



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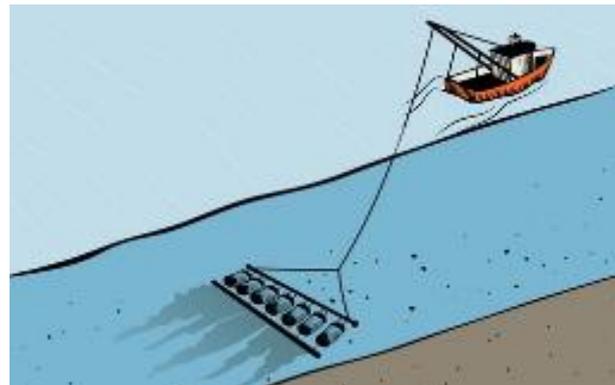
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# Knowledge Transfer

Dissemination of expertise into the community

Supporting business



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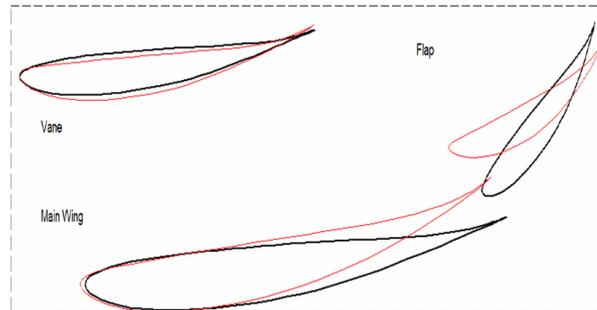
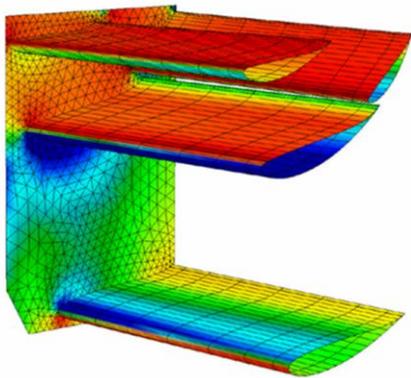


# Commercial Research

For example, Formula 1

Advantages:

- High profile
- State-of-the-art
- Capacity building

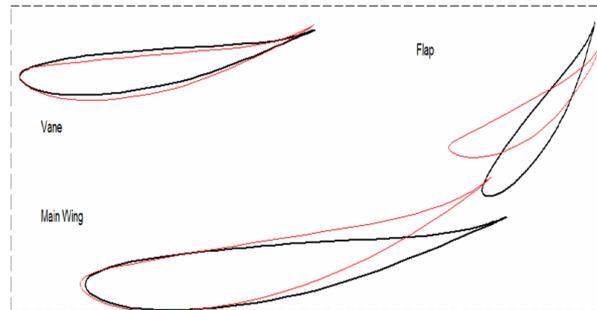
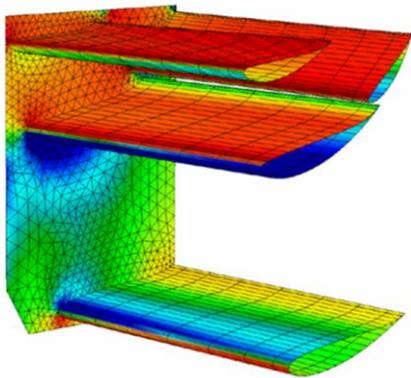


# Commercial Research

For example, Formula 1

Disadvantages:

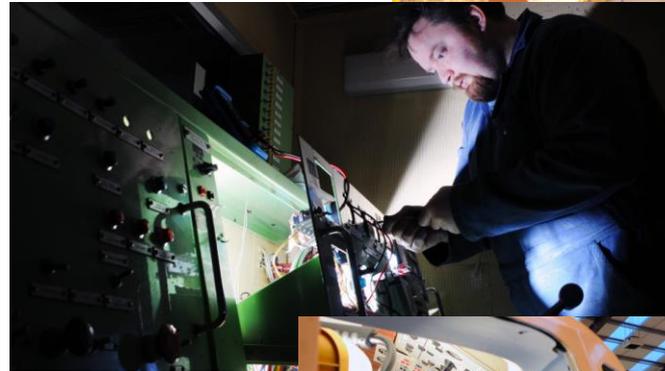
- Demanding
- You cannot tell anyone about it



# Commercial Research

## Capacity Building

- Sequential Planning
- Targeted Research
- Playing to our Strengths



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# Conclusions

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- There is a demand from industry for the incorporation of Professional Training in approved academic courses
- Integration of UKSPEC
- The range of student ability is larger than with school leavers
- Knowledge transfer provides a community benefit, especially to SMEs
- Commercial research is rewarding, beneficial, but is rarely published





*"That's all Folks!"*