The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi-wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

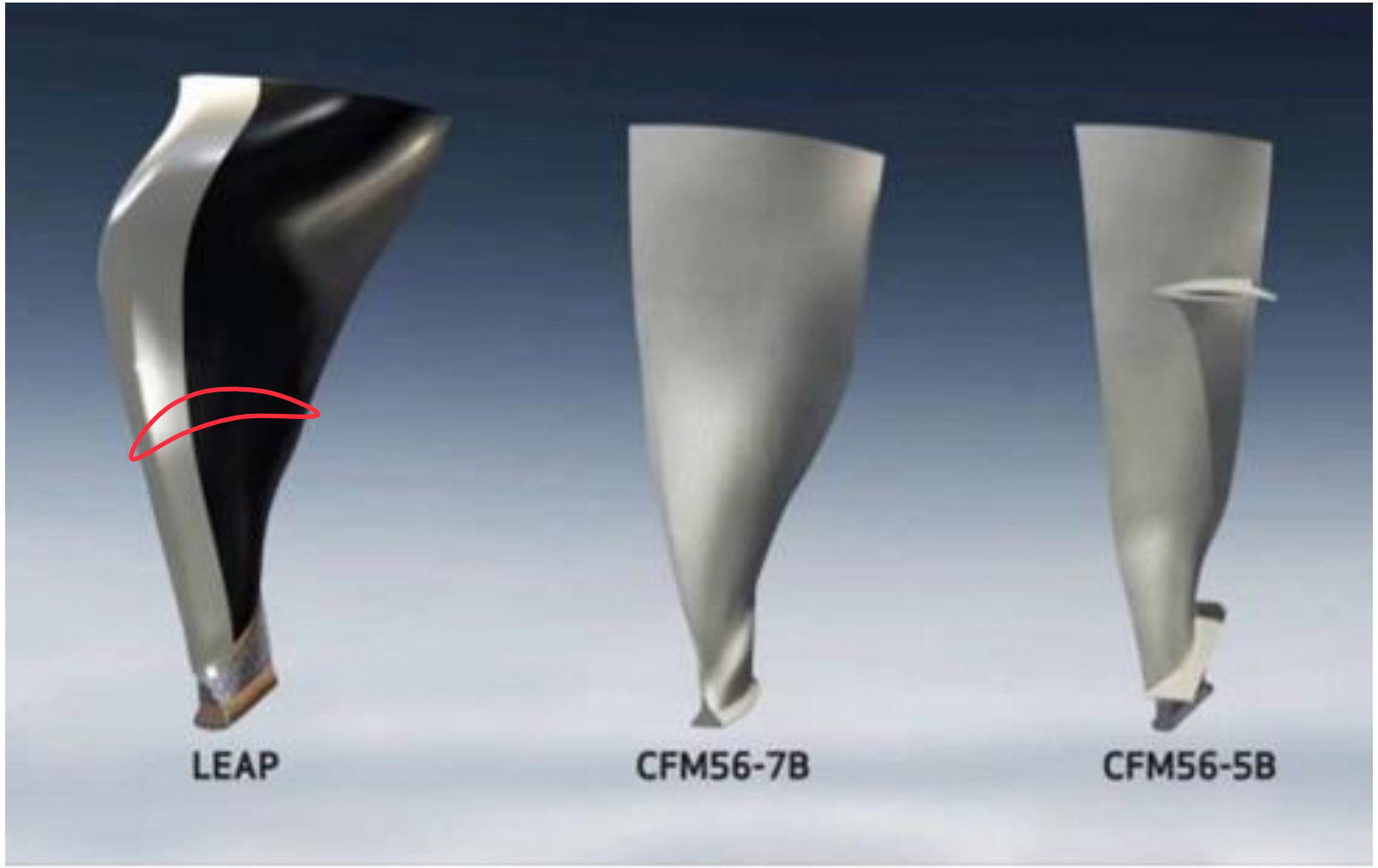
We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

In making this Acknowledgment of Country we commit to respectful and responsible conduct towards all others according to the Traditional lores of this land, particularly at times of formal ceremony.

Pawsey Uptake 2025

M. Rosenzweig[1], M. Reissmann[1], M. Lee[1],
M. Kozul[1], R. D. Sandberg[1]
S. Liu[2], Elahi, P. [2]

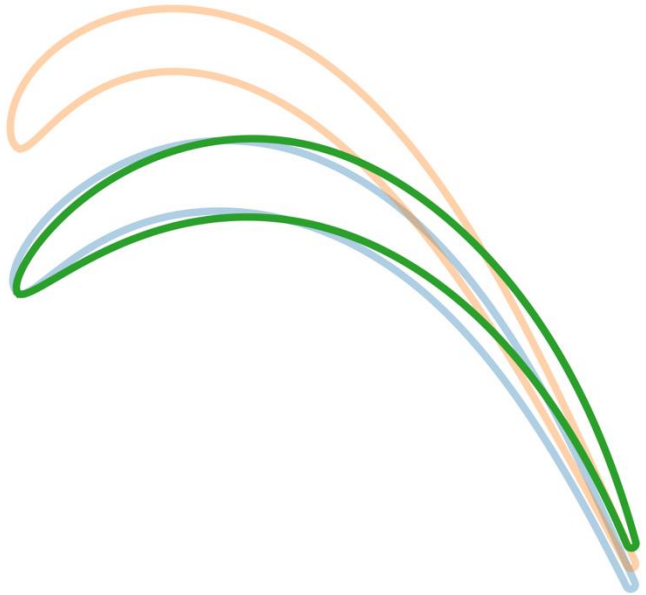
Fan blade design evolution



new design ← old design

Continuous increasing in DOF

Pawsey Uptake Project: Quantum-based blade design



1. **Creation of blade profiles**
2. **Evaluation of blade aerodynamics via computational fluid dynamics across various in-flight conditions**
3. **Training machine-learned surrogate/ reduced-order model (ROM)**
4. **ROM as input parameter for quantum-based optimization**

Proposed timeline and resources

Jul	Aug	Sep	Oct	Nov	Dec
Blade creation and CFD evaluation					
	Surrogate model training				
			Quantum-based optimization		Wrap-up
ML and CUDA-Q familiarization					

Proposed timeline and resources

Jul	Aug	Sep	Oct	Nov	Dec

- **0.2 FTE of Pawsey staff (Pascal and Shusen)**
  → weekly-meetings
- **Access to Pawsey's NVIDIA GH200 nodes? -> OK**
- **monthly meetings with NVIDIA and ORNL for progress report?**

→ Scope: What can we do with QC in the field of jet engines?

→ Iterative loop (further down the line)