

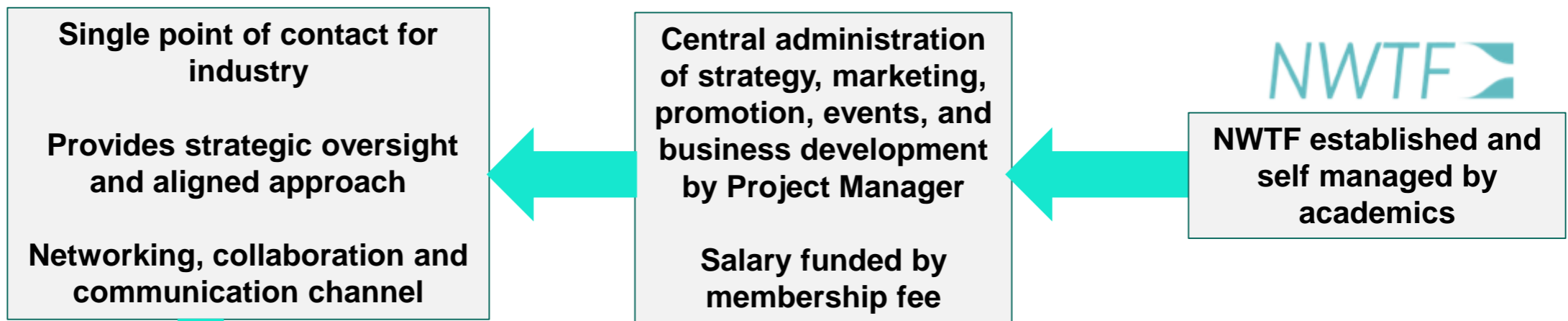
NWTF Overview



Background:



Collective benefit:



Successes:



Current:

1. **Networking and communication channel** between strategically important UK facilities, academics and industry.
2. **Platform for developing collaborations.**
3. **Single point of contact** for industry.
4. **Provision of world class facilities** to all UK based researchers.
5. **Cross pollination of ideas** through forums, collaborations and workshops.
6. **Keeping UK at forefront of experimental fluid mechanics** by developing strategically important facilities, equipment, techniques and expertise for UK research projects and industry.
7. **Strategic oversight of major projects** and to provide facilities and equipment as needed.

Future:

1. **Open days, masterclasses and training workshops** to encourage the utilisation of facilities and knowledge sharing.
2. Development of **software repository** for sharing novel data harnessing techniques with members.
3. Providing a platform for **collaboration with the CFD community** to develop research programs focussed on their needs.
4. Development of a **National Experimental Database** that standardises the collection of test data and makes it available to the research community for free as a national resource.
5. Holding **competitions** e.g. to develop best practices for turbulence.
6. Group applications for access to the **European Transonic Wind Tunnel.**

- Hugely useful to meet with other academics at the **Management Board Meeting** to learn about their work, challenges and facilities.
- **Extraordinary value for money.** For £13.3m investment in 2014, the UK now has a world class wind tunnel facilities available to UK based researchers. It would have cost ten times more to build an equivalent from scratch not to mention overheads to run it.
- **Blown away by the amount of research and industry projects** that have happened as a result of the NWTF as presented at the industry forum. Need to **get better at promoting our successes.**
- Because of the NWTF investment in strategically important high speed facilities in 2014, the **UK is now ahead** in terms of knowledge, facilities and expertise.
- Having the **tunnel usage data** has been massively helpful when university finance teams have needed business data.
- **Other countries** are looking to the NWTF as a more efficient and flexible way of funding wind tunnel research.
- These top class wind tunnel facilities have achieved an **enormous delta** considering the relative **shoestring** budget.
- There is an **altruistic element** to the NWTF, providing free tunnel use to academics and small UK businesses on an adhoc basis.

Next Phase of NWTF:

- Overcome Challenges
- Build on Success

Next Steps: continue to provide a national resource for wind tunnel community



	Challenges*	Solution	Output	Progress	Funding
1.	Lack of awareness of NWTF availability and successes & closer links with industry are required	Marketing and promotion activities	<ul style="list-style-type: none"> • New website with SEO, CMS and news page • NWTF stand at industry conferences ** • Host business engagement forums** • Meet with industry partners to understand needs 	<ul style="list-style-type: none"> • Application to Impact Acceleration Fund at Imperial, Glasgow and Manchester has been successful 	£85K grant approved
2.	Encourage external researchers to use NWTF & industry find it difficult to hire/find tunnel operators	Training workshops	<ul style="list-style-type: none"> • Researchers trained to operate wind tunnels and collect data to best practices • External researchers become familiar with NWTF and are encouraged to use facilities 	<ul style="list-style-type: none"> • Develop market research survey to understand industry and academic needs • Developing proposition 	Self-funded Attendance fee to cover costs
3.	Improved data sharing & better connectivity with CFD community	National Experimental Database	<ul style="list-style-type: none"> • Develop catalogue of validated test data on NWTF website for the research community • Develop forums for better connectivity with CFD community to understand their test needs and host competitions 	<ul style="list-style-type: none"> • Developing proposition, running costs, funding availability 	Possibly: EPSRC ATI or BEIS

*As outlined in the Industry/Academia meeting in December 2019 and various stakeholder meetings in 2020

**On hold due to CV-19

Next Steps: continue to provide a national resource for wind tunnel community



	Challenge	Solution	Output	Progress	Likely source of funding
4.	Keep UK at forefront worldwide	Build new facilities and purchase latest equipment	<ul style="list-style-type: none"> • New equipment • New strategically important unique facilities 	<ul style="list-style-type: none"> • Developing business case 	EPSRC/ATI/BEIS
5.	Overcome polarity of community & sustainability of the NWTF hub	Develop tiered membership proposal to improve inclusivity & develop revenue streams to fund future NWTF marketing and events	<ul style="list-style-type: none"> • Develop membership proposition, levels and fees • Attendance fee for business engagement forums • Industry sponsorship • Incorporate PM costs into joint project proposals 	<ul style="list-style-type: none"> • Begin developing proposition 	Self-funded
6.	Researcher mobility	Make tunnels free at point of use for academic users	<ul style="list-style-type: none"> • Increase in cross pollination of ideas 	<ul style="list-style-type: none"> • Determine funding stream 	?

Tiered membership proposal to promote inclusivity and to fund NWTF hub



	Core University Tunnel Membership	University Tunnel Membership	Researcher Membership	Industry Membership
Terms	<p>Invite only</p> <ul style="list-style-type: none"> • Strategically important • Unique • Willing to make available 25% of time to outside users (academic and industry) 	<p>Open</p> <ul style="list-style-type: none"> • Actively involved in the wind tunnel or CFD community • Open to using facilities outside of their host university • Willing to make available 25% of time to outside users (academic and industry) 	<p>Open</p> <ul style="list-style-type: none"> • Actively involved in the wind tunnel or CFD community • Open to using facilities outside of their host university 	<p>Open</p> <ul style="list-style-type: none"> • Actively involved in the wind tunnel or CFD community
Membership benefits	<ul style="list-style-type: none"> • Marketing and promotion of facilities, expertise, research outputs • One management board representative • Industry/academia forums • Business development activities • Funding applications and administration • Group lobbying to ensure non-closure • Ability to apply for use of ETW through NWTF group applications 	<ul style="list-style-type: none"> • Promotion of facilities and expertise on NWTF website • Invite to networking and industry/academia forums with guest speakers from Advisory Board? • Ability to apply for use of ETW through NWTF group applications 	<ul style="list-style-type: none"> • Industry/Academia forums • Networking • First dibs on workshops • Ability to apply for use of ETW through NWTF group applications 	<ul style="list-style-type: none"> • Industry/Academia forums • Networking • First dibs on workshops • Ability to apply for use of ETW through NWTF group applications