



Workshop on
New Propulsion and Aircraft Concepts for
Green Aviation (2020-2050 Horizon)

1 July 2009

Location: Manchester Metropolitan University (MMU), Manchester, UK
Address: MMU, Department of Environmental and Geographical Sciences,
Chester Street, Manchester M1 5GD, UK [Internet: <http://www.cate.mmu.ac.uk/>]

Workshop: Conference room E 0.05 (Plenary) and Class room E 0.07 (Break-out sessions)

Contacts: Alf Junior, DLR, DE; Email alf.junior@dlr.de; Tel.: +49 2203 601 3029
Prof. David W. Raper, MMU, UK; Email D.W.Raper@mmu.ac.uk; Tel.: +44 161 247 6213
Natassja Campbell, MMU CATE, UK, Email N.Campbell@mmu.ac.uk; Tel.: +44 161 247 6244
Irena Champion, DLR, DE; Email irena.champion@dlr.de; Tel.: +49 2203 601 2676.

Agenda

(Version 29 June 2009_corr)

Important: We will start with a joint dinner on 30 June 2009 at 7:30 p.m. (attachment)

July 1, 2009

8:45 a.m. Registration and Coffee - room E 0.05 ground floor
9:00 a.m. Welcome / Introduction and start of the Workshop

➤ **SESSION 1: Review of current activities (horizon 2020)**

Innovative aero engine concepts:

9:15 a.m. Innovative engine concepts:
Projects DREAM and SAGE Paul Madden, RR plc, UK

Innovative airframe related activities:

9:45 a.m. DLR fuel cell experimental flight activities and results with ATRA, the Advanced Testing Research Aircraft Josef Kallo, DLR, DE

10:15 a.m. Integrated Technology Demonstrator SFWA, Smart Fixed Wing Aircraft Glenn Watson, AIRBUS, UK

10:45 a.m. Coffee break 15 minutes

➤ **SESSION 2: Technology roadmaps for next generation green air vehicle (horizon 2050)**

Revolutionary aircraft concepts / technologies:

11:00 a.m. 'Out of the Box' - Study on ideas about the future of air transport Adrian de Graaff, NL

11:30 a.m. VORTEXCELL 2050 Fundamentals of actively controlled Sergei Chernyshenko, Imperial College, London, UK



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flows with trapped vortices

12:00 a.m.	NACRE New Aircraft Concept Research	tbc
12:30 a.m.	Possible personalised ATS of the Future: Project ANTARES, fuel cell powered small aircraft	Josef Kallo, DLR, DE
1:00 p.m.	Lunch break 60 minutes	

➤ **SESSION 3: Aviation and energy issues (2020 and 2050 horizon)**

New fuels

2:00 p.m.	Alternative fuels for aviation Projects ALFA-BIRD and SWAFEA	Patrick Le Clercq, DLR, DE
2:30 p.m.	Alternative fuels, security of supply for Green Aviation?	Chris Wilson, USFD, UK
3:00 p.m.	Shell presentation on alternative Fuels, long term perspective	Robert Midgley, Shell Aviat.,UK
3:30 p.m.	Coffee break	

3:30 p.m. Breakout Session 45 minutes - Discussion in 2 groups

Topic: Next generation environmentally sustainable air vehicle (time horizon 2050): What will or could it be? Two teams will break out and think about a concept. Afterwards both concepts will be discussed in the plenary session.

4:15 p.m. Plenary meeting and discussion

4:45 p.m. END OF THE WORKSHOP