

NEWAC - Research Project Fact Sheet

Title of Project	"NEW Aero engine core Concepts" - completed	
Project Acronym	NEWAC	
Funding Program	FP6 Integrated Project	
Project Identifier	AIP5-CT-2006-030876 (FP6)	
Total Budget	71 M€	
Starting – Ending Date	01/2007 -12/2010	
Consortium	1. MTU Aero Engines (DE) (coordinator) 2. Snecma (FR) 3. Volvo Aero Corporation (SW) 4. Rolls Royce Deutschland Ltd & Co KG (DE) 5. Wytwonia Sprzetu Komunikacyjnego (PL) 6. První Brněnská Strojirna (CZ) 7. Aristotle University of Thessaloniki (GR) 8. Centre de Recherche en Aéronautique (BE) 9. Cranfield University (UK) 10. DLR (DE) 11. Ecole Centrale de Lyon (FR) 12. EnginSoft (IT) 13. Office National d'Etudes et de Recherches Aérospatiales (FR) 14. University of Oxford (UK) 15. University of Technology – Aachen (DE) 16. Université Belfort-Montbéliard (FR) 17. Steigerwald Strahltechnik GmbH (DE) 18. University of Technology – Graz (AU) 19. Université de Liège (BE) 20. University of Stuttgart (DE) 21. Rolls Royce Plc (UK) 22. AVIO S.p.A (IT) 23. Turbomeca (FR) 24. Techspace Aero (BE) 25. ARTTIC S.A.S. (FR) 26. Airbus France S.A.S (FR) 27. University of Cambridge (UK) 28. CEP(FR) 29. Chalmers University of Technology (SW) 30. Ecole Polytechnique de Lausanne (CH) 31. Loughborough University (UK) 32. National Technical University of Athens (GR) 33. PCA Engineers Limited (UK) 34. Scitek Consultants Ltd (UK) 35. Société des Nouvelles Applications des Techniques de Surface (FR) 36. Sulzer Metco AG (CH) 37. Università degli Studi di Firenze (IT) 38. University of Karlsruhe (DE) 39. University of Sussex (UK) 40. Vibro-Meter S.A. (CH)	
Project Objectives	NEWAC was a European-level programme, under the leadership of MTU Aero Engines, in which major European engine manufacturers, assisted by universities, research institutes and enterprises – 40 partners in all - focus on new core engine concepts. NEWAC will develop and validate novel core engine technologies to further close the gap between the current emissions and the ACARE targets. NEWAC is a 71 million Euro programme of which 40 million Euro is funded by the EC. Four core concepts were investigated: ▪ Intercooled Recuperative Core (SP 2) for the intercooled recuperative aero engine concept (IRA) operated at low OPR and using a LP(P) combustor concept (SP 6) ▪ Intercooled Core (SP 3) for a high OPR engine concept based on a 3 shaft direct drive turbo fan (DDTF) with a LDI combustor (SP 6) ▪ Active Core (SP 4) with active systems applicable for a geared turbo fan (GTF) using a PERM combustor (SP 6) ▪ Flow Controlled Core (SP 5) for the counter rotating turbo fan (CRTF) using a PERM or a LDI combustor (SP 6) The main NEWAC result will be fully validated novel technologies enabling a 6% reduction in CO₂ emissions and a further 16% reduction in NO_x.	
External Reference	https://cordis.europa.eu/project/id/30876	
Role in the Project	Principal Investigator	