



FORUM 3

“Design Together, Gain Together”



Welcome to this third and final Forum of the VIVACE project, which we are pleased to host at the Diagora Congres Center

As with all events held here, we need to make a few remarks about safety and security.

- Diagora is a no-smoking area, it is customary to smoke outside the building, please abide by this rule.
- The fire/evacuation alarm makes a siren noise, leave by the nearest exit.
- Please do not leave any bags, luggage etc. unattended, there is a luggage store/cloakroom at the reception desk (Accueil). Articles can be stored there at your own risk.
- There are many toilets suitably signposted throughout the building.

Concerning the Forum.

- The Forum office is in the Accueil as you enter the building. It is “manned” by Nicolas Le Brun of the Destrée Organisation and team. They are available for payment and accommodation queries, booking of taxis, travel advice, messages etc.
- Please wear your Forum badge at all times whilst in Diagora, it will act as your passport for meals etc.
- There is a review sheet for you to tell us about what lessons you learnt from VIVACE at the Forum, please fill it out and leave at the forum office before you depart.
- The Forum starts with a plenary session in the Amphitheatre room on day 1 at 1000 and then after 1500 splits into parallel sessions. One of these is being held in the Amphitheatre, the others are being held in rooms on the ground and first floors. The stands are in the central Atrium area (la Place) on the ground floor. Days 2 and 3 have plenary and parallel sessions as shown in the detailed timetable later in this document.
- Salle A and the Hemicycle are on the ground floor, Salle B and the Ellipse are on the first floor. The Amphitheatre spans both.



- If you wish to use wi-fi, please do so on the various landing areas by connecting through the service offered by Orange, you can purchase a card at the Diagora desk.
- Coffee will be served in the Atrium area (la Place) and lunches will be served in the Les Colonnes basement. In this area there will be some posters and display stands depicting VIVACE work.
- Photography by delegates during the Forum sessions is not allowed; the proceedings are being filmed by Ajilon, one of the VIVACE partners, in order to prepare training material for the VIVACE consortium
- Please switch off your mobile phones whilst attending any Forum sessions.

The Timetable

The forum will run over 3 days starting at 1000 on Wednesday 17th October and ending at 1500 on Friday 19th October.

The first morning starts with keynotes that set out the current and future challenges that the European Aeronautical Industry faces. This is followed by the VIVACE response to these challenges in terms of exploitable results and business benefits achieved by the project.

The rest of the forum comprises plenary (main) sessions interspersed by related parallel sessions that add more detail plus an exhibition where many of the VIVACE results will be demonstrated even deeper in an ad-hoc manner by members of the VIVACE project teams and by some partner “vendor” companies who were also part of these teams. The exhibition stands can be visited either at the dedicated time slots noted on the detailed timetable or at any other convenient time for delegates/stand owners. You can find a stand contents table and layout on pages 11, 12 and 13 of this document.

Social Event

There will be a gala dinner at a nearby restaurant Mas des Canelles in Castanet Tolosan on day 2, Thursday 18th October. Buses will be available from Diagora to transport delegates to the restaurant at 1915 and then return at 2300 to either Diagora or Toulouse city centre.

Airport Transport

Buses will leave Diagora for the airport at 1530 on day 3, Friday 19th October.



Detailed Timetable

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Day	Session Ref.	Timings	Session Type	Room	Related stands	Session Titles and Presenters
DAY 1 am		0830-1000				Registration in Diagona Foyer
	1.1	1000 - 1015	MAIN	Amphitheatre	-	Welcome and Introduction to VIVACE Forum 3 by Philippe Homs, Airbus
	1.2	1015 - 1115	MAIN	Amphitheatre	-	Challenges for the European Aeronautical Industry: Keynote 1 by Liam Breslin, DG Transport, European Commission Keynote 2 by Alain Ramier, Airbus Keynote 3 by Ric Parker, Director of Research and Technology, Rolls-Royce plc Keynote 4 by P. Fossier, Deputy VP DAE - Research Technology & Engineering, Thales
	1.3	1115 - 1200	MAIN	Amphitheatre	-	The VIVACE Response: Introduction to the services and results developed by VIVACE Overview of the business benefits to be gained by Philippe Homs, Airbus
		1215 - 1400				



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Day	Session Ref	Timings	Session Type	Room	Related stands	Session Titles and Presenters
DAY 1 pm	2.0	1400 - 1500	MAIN	Amphitheatre	1, 9	<p>VIVACE Solutions for "Collaboration in the Virtual Enterprise" by Philippe Homsy, Airbus <i>Presentation of the solutions and associated benefits for a flexible and secured collaboration within the virtual enterprise</i></p>
	2.1	1515 - 1615	Parallel	Hemicycle	9	<p>"The Engineering Data Management framework for controlled collaboration" by Frédéric Féru, EADS <i>The EDM Framework –demonstrated through an Aircraft based scenario- is the solution to effectively share multi-disciplinary product and process information</i></p>
	2.2	1515 - 1615	Parallel	Amphitheatre	1, 11, 12	<p>"The Flexible Virtual Enterprise Collaboration Hub Framework" by Mats Lindeblad et al, Volvo Aero <i>The VEC-Hub solution is explained and demonstrated by an airline operator triggered proposal and development scenario as the common information sharing solution for a heterogeneous partner network</i></p>
		1615 - 1645				Break for coffee and stand visits
	2.3	1645 - 1745	Parallel	Hemicycle	7, 9	<p>"Request and decision driven process management and information share" by Manfred Harms, Airbus and Frédéric Féru, EADS <i>Application and benefits of a controlled information share between dynamically and hierarchically nested processes based on Product Context Management</i></p>
	2.4	1645 - 1715	Parallel	Amphitheatre	1	<p>"The VIVACE contribution to International Standards development" by Philip Spiby, Eurostep <i>Demonstration of the importance of international standards to the Aeronautics sector showing developments in ISO and OASIS standards as influenced and driven by VIVACE requirements</i></p>
	2.5	1715 - 1745	Parallel	Amphitheatre	-	<p>"Security Solutions for Multi-organisation Collaboration" by Abdelmalek Benzekri (IRIT), Rene Wieggers (NLR) and Jean-Paul Buu Sao (TSCP) <i>Demonstration of TSCP security concepts on a typical industrial use case, consisting of a security infrastructure protecting multi-partner assets in a virtual organisation</i></p>
		1745 - 1830	stands	La Place		Dedicated time for visiting STANDS
	End of day 1	1830				



Detailed Timetable

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Day	Session Ref	Timings	Session Type	Room	Related stands	Session Titles and Presenters
DAY 2 am		0830 - 0900				Registration in Diadora Foyer
	3.0	0900 - 0945	MAIN	Amphitheatre	6	VIVACE solutions for "Business and Supply Chain Modelling" by Lotta Olofsson, Volvo Aero, Richard Farr and James Tannock, University of Nottingham <i>Virtual and extended enterprise formation through business environment analysis, value and supply chain modelling, logistic simulation and rapid proposal generation</i>
	3.1	1000 - 1100	Parallel	Amphitheatre	6	"Agent-based simulation of the value chain" by David Buxton, University of Nottingham <i>Modelling cash flows throughout the life of an engine programme, addressing business environments, scenarios and the actions of major players</i>
	3.2	1000 - 1100	Parallel	Hemicycle	6	"Supply Chain Modelling and Simulation" by James Tannock and Bing Cao, University of Nottingham <i>Improved supply chain design and performance improvement using simulation models generated directly from company ERP data</i>
	3.3	1000 - 1030	Parallel	A	6	"Life Cycle Cost modelling for Engine Manufacturers" by Werner Weigert, MTU <i>Quick and reliable cost feedback during collaborative engine design, achieving increased product quality</i>
	3.4	1030 - 1100	Parallel	A	6	"Internal Logistics Simulation" by Richard Farr, University of Nottingham <i>Use of simulation to reduce lead time, achieve better customer service levels and reduce tied-up capital</i>
		1100 - 1130				Break for coffee and stand visits
	4.0	1130 - 1230	MAIN	Amphitheatre	7	VIVACE solutions to "Leverage Knowledge and Support the Decision Process" by Daniele Gulmini (Avio) and Axel Mauritz (EADS) <i>Application of decision support and knowledge engineering solutions to improve engineering process, providing right knowledge at the right time, thus leveraging past experience</i>
		1230 - 1400				LUNCH

Day	Session Ref	Timings	Session Type	Room	Related stands	Session Titles and Presenters
DAY 2 pm	4.1	1400 - 1500	Parallel	Amphitheatre	7	<p>"Knowledge Enabled Engineering to support Robust Design" by Romaric Redon, EADS and Massimiliano Mattone, Politecnico di Torino <i>Demonstration of the context-based search platform ("KESP") to leverage the Robust Design techniques applied to the Turbine Rotor Design</i></p>
	4.2	1400 - 1500	Parallel	Hemicycle	7	<p>"Tailoring the Decision Process Support Framework to your needs" by Tobias Schmidt-Schaeffer and Tim Lochow, EADS <i>Capabilities of the decision process support framework illustrated by 2 use case examples. (Generic process, tailored workflow and decision services)</i></p>
	4.3	1400 - 1500	Parallel	A	2	<p>"Change Impact Analysis" by André Rutka and Peter Coleman, Airbus <i>Presentation and demonstration of Change Impact Analysis (CIA) results to support Decision Making in the engineering change process and evaluation of architecture robustness throughout the product development lifecycle</i></p>
	4.4	1400 - 1430	Parallel	B	2	<p>"Managing uncertain information in the Helicopter pre-design process" by Ralf Mauersberger and Tobias Schmidt-Shaeffer, EADS & Marc Greiller, Eurocopter <i>Relaxed demand on data accuracy by applying means for handling uncertainties in the design process, especially in the early phases</i></p>
	4.5	1430 - 1500	Parallel	B	2	<p>"Design to Cost for Helicopter Pre-design" by Jan-Floris Boer, NLR and Cyrille Sevin, Eurocopter <i>A methodology to optimise the helicopter preliminary design to lowest Life Cycle Cost (LCC) for multiple missions of multiple customers</i></p>
			1500 - 1600	stands	La Place	



Detailed Timetable

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Day	Session Ref	Timings	Session Type	Room	Related stands	Session Titles and Presenters
DAY 2 pm cont'd	5.0	1600 - 1700	MAIN	Amphitheatre	2, 5, 3	VIVACE solutions for "Design and Virtual Testing" by Paul Webster, Rolls-Royce plc <i>Timely high quality simulations during design to achieve confidence well ahead of manufacture. This enhances opportunities for optimisation and reduces costs, time and surprises later on.</i>
	5.1	1715 - 1815	Parallel	B	2, 13	"Affordable aircraft Complex Systems Simulation for design efficiency" by Antoine Casta and Delphine Hertens, Airbus <i>Complex system simulation: demonstrate production of simulation in extended enterprise applied to aircraft hydraulic design and fuel system testing</i>
	5.2	1715 - 1815	Parallel	A	3, 10	"Preliminary robust mechanical design of Whole Engine" by Arnaud Quenardel, Snecma and Mike Benison, Rolls-Royce plc <i>Advanced modelling methods links to geometry for rapid multi variable engine design assessment</i>
	5.3	1715 - 1815	Parallel	Amphitheatre	5, 4, 14	"PROOSIS: Improving Engine Performance Design and Simulation" by Marc Doussinault, Snecma <i>PROOSIS enables Collaborative modelling of Engine Performance for Design and Simulation and improves integration efficiency and simulation quality</i>
	5.4	1715 - 1815	Parallel	Ellipse	2	"From simulation based design towards virtual certification for aircraft" by Pierre Michel, ONERA, Martin Kuhn, DLR, Thomas Krueger and Rainer Sonder, Airbus and Hauke Guelzau, Technical University of Hamburg-Harburg <i>Intensive use of simulation for aircraft systems design focused towards a virtual certification strategy</i>
	5.5	1715 - 1815	Parallel	Hemicycle	3	"Timely Whole Engine Model Validation" by Graham Harlin and José Garcia, Rolls-Royce plc <i>The application of high quality mechanical simulation to achieve fit for purpose engine modelling and testing</i>
	End of day 2	1830				
		1930-2300				



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Day	Session Ref	Timings	Session Type	Room	Related stands	Session Titles and Presenters
DAY 3 am		0830-0900				Registration in Diagora Foyer
	6.0	0900 - 0945	MAIN	Amphitheatre	1, 2, 3, 12, 15	VIVACE solutions for "Design Optimisation" by Ernst. Kesseler, NLR <i>VIVACE achieved MDO results allow reduction of effort and time to create specific aeronautic MDO environments</i>
	6.1	1000 - 1100	Parallel	B	2	"PRELUDE - PREliminary and Unconventional DEsign for Global Aircraft" by Marin Guenov, Cranfield Univ. and Wolf Krueger, DLR <i>Presentation of an enhanced aircraft preliminary design environment based on a multi-disciplinary design optimisation (MDO) integration platform</i>
	6.2	1000 - 1100	Parallel	Hemicycle	-	"Multidisciplinary Optimisation of Wing Design in the Extended Enterprise" by Jos Vankan, NLR and Joerg Weser, Airbus <i>Presentation of an advanced multidisciplinary wing analysis capability integrated with a standard COTS-based product life cycle management system</i>
	6.3	1000 - 1100	Parallel	A	15	"Stress and loads optimisation of a wing and pylon based on manoeuvre loads" by Stéphane Grihon, Airbus <i>Presents validation of an aeroelastic tailoring scenario to demonstrate benefit in terms of weight savings compared to a standard approach</i>
	6.4	1000 - 1100	Parallel	Amphitheatre	1, 3, 12	"Engine MDO and Robust Design in the Virtual Enterprise" by Roland Parchem, Rolls-Royce Deutschland, Paul Arendsen, NLR, Marc Nagel, MTU, Gian Paolo DePoli, Avio, Holger Wenzel, Engineous and Staffan Söderborg, Eurostep <i>Online mechanical, thermal and aerodynamic optimisation including robustness analysis of engine component designs between collaborating partners</i>



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	Session Ref	Timings	Session Type	Room	Related stands	Session Titles and Presenters
		1100 - 1130				Break for coffee and stand visits
DAY 3 am cont'd	7.1	1130 - 1230	MAIN	Amphitheatre	8	VIVACE - Solutions for the supply chain and deployment by P. Williams, Assystem UK, Bruno Lisanti, ESOCE and Mats Lindeblad, Volvo Aero <i>Business considerations and guidelines to support the application of VIVACE methods in virtual enterprises, aerospace supply chains and with smaller suppliers</i>
		1230 - 1400				LUNCH
DAY 3 pm	7.2	1400 - 1430	MAIN	Amphitheatre	-	Roadmap for Future Research by Philippe Homsy, Airbus
	7.3	1430 - 1450	MAIN	Amphitheatre	-	Overview of opportunities for Framework 7 by José Martin-Hernandez, European Commission
	7.4	1450 - 1500	MAIN	Amphitheatre	-	Concluding Remarks and Close of VIVACE Forum 3



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Stand Number	Stand Name	Content
1	The Flexible VEC-Hub Framework	Demonstrations of the VEC-Hub approach that in a heterogeneous business network environment allows accessibility to a common collaboration context, enabling a flexible networking arrangement for partners where requirements on traceability, storability, ownership of data, methods and knowledge, security, trust and legal aspects are met.
2	Virtual Development Centre for Systems	Demonstrations and ad hoc presentations of complex design simulation and virtual testing methods for aircraft.
	Helicopter Design	Free space for additional Aircraft development related results presentations and discussion. Further detail on applications like PRELUDE - PREliminary and Unconventional DEsign for Global Aircraft Demonstrations and presentations on demand for the helicopter integrated design toolbox and pre-design process improvement including "Helicopter Multi-missions Optimisation" and "Mastering Uncertainty"
3	Whole Engine Development	Knowledge based complex component design and analysis linked to whole engine response, Vibration response test planning measurement and correlation, Rapid modelling and analysis.
4	CENAERO	Involvement of company as a partner in the PROOSIS team focused on prototype development and testing with emphasis on aero-mechanical zooming for compressor blades and optimisation including performance map re-mapping.
5	PROOSIS for Engine Performance	Demonstration and discussion of complete PROOSIS (PR opulsion O bject O riented S imulation S oftware) modelling and simulation suite.
6	Business modelling and simulation	Rolling presentation of business modelling and simulation work plus ad hoc demonstrations and explanations of business environment analysis, value and supply chain modelling, logistic simulation and rapid proposal generation.
7	Knowledge enabled engineering and decision support	Demonstration and discussion of Knowledge Engineering and Decision Support solutions including introduction to the VIVACE KEE dissemination portal
8	Supply chain and 3rd tier suppliers	In-depth presentation of results of the assessment of the characteristics of 3rd tier suppliers, their requirements and needs; the VEC-Hub - geared to smaller suppliers and the wider supply chain covering; requirements and issues for 3 rd tier and smaller suppliers, security methods supporting Virtual Operations for smaller suppliers and VIVACE methods that may be applied in the supply chain, against a range of types of supplier, plus guidelines covering issues both suppliers and procurement functions should consider in the virtual collaboration environment.



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9	Enterprise Engineering Data Management	Demonstrations of tools, models and processes used for a “Collaborative Platform” approach. These are operational tools such as CAx and Data Management Systems, Information and Domain Models, Consolidated Repository, Product Context Management and Workflow Systems
10	MSC Software	Involvement of company as a partner in the Engineering Data Management team focusing on interdisciplinary data exchange and technical architecture aspects.
11	Eurostep	Involvement of company as a partner in the VEC-Hub and Robust Engine Design teams specialising in the application and adaptation of ISO and OASIS standards in the teams’ work
12	Engineous	Involvement of company as a partner in several VIVACE teams using their FIPER software.
13	Intespace	Involvement of company as a partner in the Engineering Data Management and Systems Simulations teams focusing upon a TVDSS (Test and Validation Data Sharing System) that ensures IPR protection for collaborating partners in a simulation environment.
14	Teuchos	Involvement of company as a partner in the PROOSIS team focused upon tool validation at different development steps. Contribution to test reports. A particular activity being the customer deck generation step.
15	Samtech	Involvement of company as a partner in the VIVACE Design Optimisation results using applications of their BOSS Quattro software plus use of their SAMCEF software in the mixed dimensional modelling of the whole engine.
16	Dassault Systèmes	Involvement of company as a partner in the Flight Physics team where parts of their ENOVIA V5 – PSL software suite were exercised, tested and subsequently modified to meet the requirements of various use cases specified by this airframe team. (e.g. complex and representative CFD process, structural internal loads computations, IT Software solution integration, administration and exploitation....)
17	EPM Technology	Involvement of company in the Engineering Data Management and Distributed Information Systems Infrastructure for Large Enterprise teams.



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