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REQUEST FOR INFORMATION ANALYSIS

by

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Abstract:

This document contains the guidelines for the selection process of 3rd Tier Suppliers that are used for the final selection of the new VIVACE project members. It also describes the final structure of the WPO.3 work package.

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	4
2. INTRODUCTION.....	4
3. VIVACE AND THE EUROPEAN AERONAUTICAL SUPPLY CHAIN.....	5
3.1. Representation of the European Aeronautical Supply Chain.....	6
3.2. Supply chain requirements capture.....	6
4. GUIDELINES FOR 3RD TIER SUPPLIERS SELECTION	7
4.1. open call requirements.....	7
4.2. 3 rd Tier Supplier definition	7
4.3. 3 rd Tier Suppliers specificity	8
4.4. Budget envelope:	8
4.5. General constraints.....	8
5. SELECTION PROCESS FLOWCHART	8
5.1. Partners to propose 3 rd tier suppliers	9
5.2. VPO to propose guidelines	9
5.3. Partners to contact third tier suppliers and evaluate their participation according to guidelines and rank them by preference.....	9
5.4. Initial check with European Commission.....	10
5.5. Final selection	10
5.6. Writing of detailed description of work for all selected third tier supplier and prepare contractual documents.....	10
5.7. Validation by VIVACE steering committee.....	10
6. CURRENT SITUATION AND TIMINGS.....	10
7. WP 0.3 ORGANISATION	11
8. FUNCTIONAL REQUIREMENTS OF WP0.3	12
8.1. Coordination of WP and management of tasks.....	12
8.2. Definition of needs and evaluation of results (Task 0.3.2)	12
8.3. Technical developments (Task 0.3.3)	13
8.3.1. Technical subtasks specific to 3 rd tier suppliers.....	13
8.3.2. Activities directly linked to other VIVACE technical WPs.....	13
8.4. Dissemination & training (Task 0.3.4)	14
9. WP0.3 TASK DESCRIPTION	14

This document is classified as VIVACE Public

10. WP0.3 OVERALL BUDGET 14

11. WP 0.3 PROVISIONAL SCHEDULE 16

12. WP0.3 DELIVERABLES 17



1. EXECUTIVE SUMMARY

The overall supply chain needs and views, and in particular the 3rd Tier Suppliers' one, will be taken into account in VIVACE through the dedicated work package WP0.3.

The first active task in WP0.3 is task T0.3.1 related to the selection of a core group of 3rd Tier Suppliers that will join the VIVACE project. This selection leverages well-established channels (such as AeroSME or ENHANCE supply chain database), the companies that expressed their interest during the "expression of interest" phase of the project preparation and the chain of subcontractors of the key stakeholders involved in VIVACE (Airbus group, Rolls-Royce group, Avio, Eurocopter, Snecma, VAC).

The process used to select the groups of suppliers at different stages of the project is described in this document.

Selected 3rd Tier Suppliers of two types will have the responsibility to ensure the adequacy of VIVACE developed Processes, Methods and Tools for the Supply Chain needs and constraints. This will be done through WP0.3 tasks and through direct participation of technical work packages of VIVACE.

Dedicated dissemination and training activities are also planned.

The final WP 0.3 structure that takes into account all 3rd Tier suppliers expected activities is presented in this document and will be included in a future revision of VIVACE Description of Work (DoW).

2. INTRODUCTION

The inclusion in VIVACE of a dedicated 3rd Tier suppliers Work Package with an overall budget of 2 M€ has been requested by the project evaluators and agreed during the hearing of the project, end of May 2003. A draft work package description and a work plan were then added to the VIVACE description of work.

The work plan identified three kinds of task to be performed in order to take account of the overall supply chain needs and views, and in particular those of the 3rd Tier Suppliers:

- To define specific supply chain needs and assess VIVACE results versus these needs plus contribution to the VIVACE System definition, development and deployment preparation
- To carry out the technical development activities, in line with the three planned iterations of the VIVACE project life-cycle
- To communicate WP results during the VIVACE Forums and suitable external events

In order to perform these tasks, new partners must be added to the VIVACE project at different stages:

- Companies that will help to gather the supply chain needs must be included as early as possible in the project. However, only one or two of them are required before the end of 2004.
- Companies carrying out the technical development activities will be included in the project when their technical skills are requested. This depends on the results of the evaluation of needs and on the timing of the existing VIVACE work packages they will work with.

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Among the companies that will perform technical tasks, two types will be included in VIVACE:

- Type 1: Product-oriented members of the aeronautical supply chain that will assess the adequacy of the VIVACE results as well as contributing to their definition
- Type 2: Solutions providers that already work for the Aeronautical supply chain. They will help to provide supply chain oriented tools and solutions. This will allow a better exploitation of the VIVACE results.

All these companies might not be needed simultaneously.

Because of the uncertainty of requirements at the stage of the project, it is not considered appropriate or cost effective to do in different time frames (e.g. at major milestone points) a series of formal call for tenders corresponding to the different type of activities described above.

We therefore propose a selection process described hereupon that allows us to rapidly add new partners as events and needs unfold. The task 0.3.1 that is planned to select the 3rd Tier suppliers will only appoint 2 or so companies before end of 2004 in order to manage the work package as a whole and to run the capture of requirements task. Another small list of type 1 and 2 partners will be added early 2005 under the control of the VIVACE Management Committee and WP 0.3 leader.

3. VIVACE AND THE EUROPEAN AERONAUTICAL SUPPLY CHAIN

The European Aeronautical Supply Chain organisation can be described as follow:

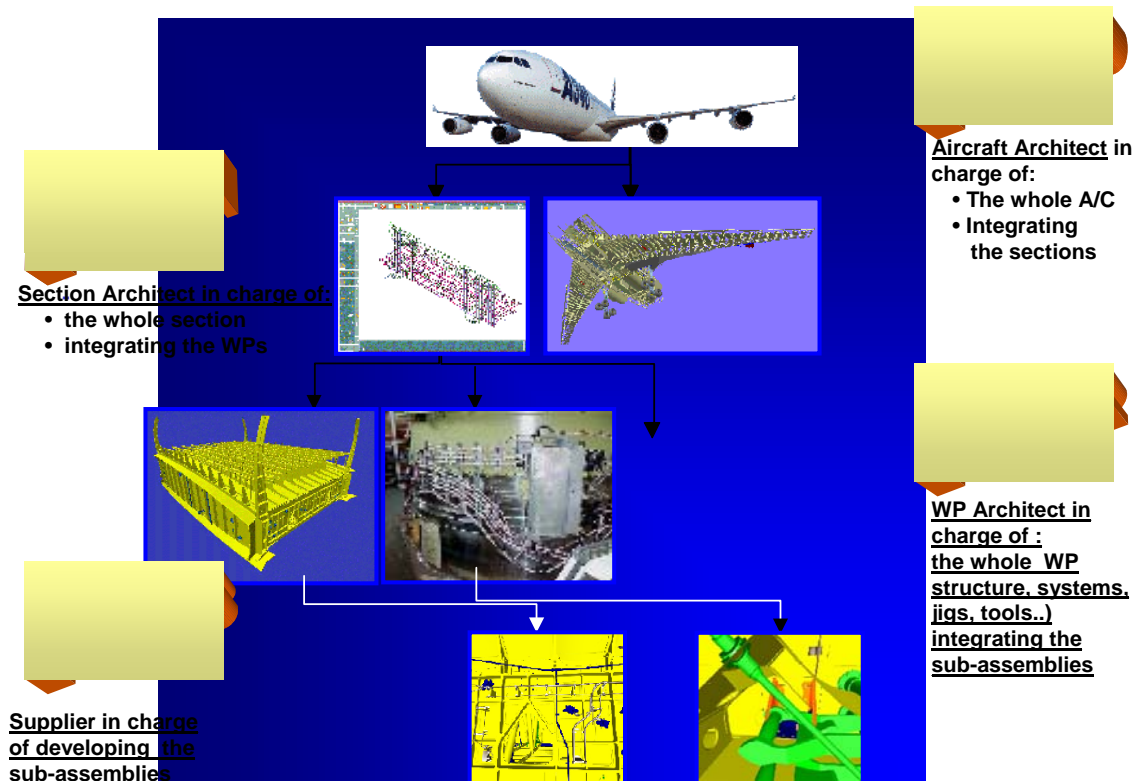


Figure 1: European Aeronautical Supply Chain organisation

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With its 53 partners, mostly from the aeronautical world, the VIVACE consortium can be considered as a good model of the aeronautical supply chain up to level 2.

However, in an industry where about 60% of the product value comes from suppliers, the VIVACE project includes a dedicated 3rd tier suppliers work package (WP0.3) aiming at ensuring that:

- VIVACE results include the needs and views of the whole aeronautical supply-chain
- VIVACE results are suitable for exploitation by as many companies as possible.

This WP intends to reuse experience and results gained in other European projects such as ENHANCE (a database of Aeronautical supply chain companies was produced in 2002), ASCENT or AeroSME. It will also liaise with other aeronautical Integrated Projects currently running.

3.1. REPRESENTATION OF THE EUROPEAN AERONAUTICAL SUPPLY CHAIN

In order to be as representative of the European Aeronautical Supply Chain as possible, the task T0.3.1 investigated the following sources:

- Companies that expressed their interest early during the proposal preparation phase and in particular the ones that were recorded during the “Expression of Interest” phase (for projects VIADUCT and VERTIGO, ultimately merged in VIVACE)
- The ENHANCE Supply Chain User Groups database (SCUGs), compiled by WP 8 (Dissemination and exploitation). This database is also available to VIVACE.
- Meeting with the AeroSME project. AeroSME will be also used as a dissemination mean for VIVACE results suitable for SMEs and for general purpose VIVACE information (Forums, Open Days, etc.). VIVACE will also collaborate with AeroSME to organise supply chain oriented dedicated sessions during VIVACE Forums.
- Contact with the ASCENT community
- Chain of subcontractors of the key stakeholders involved in VIVACE (Airbus, Rolls-Royce, Avio, Eurocopter, Snecma, VAC).

However, in order to be selected, a 3rd tier supplier should have a good understanding of the development process currently applied in the aeronautical or engine sector, as well as design competences and a knowledge of IT requirements and tools needed to work in virtual enterprise mode. This drastically reduced the list of possible candidates.

3.2. SUPPLY CHAIN REQUIREMENTS CAPTURE

To take account of the aeronautical supply chain requirements, three levels of investigation were defined:

- Core suppliers – the selected 3rd Tier suppliers who will perform the technical work (either type 1 or type 2 companies)
- Supply chain – those will ensure that the global supply chain needs and views are taken into account. VIVACE members will be associated to this capture process as well as external associations, European projects, etc., that could deliver useful information on the needs and requirements of the supply chain.
- Technical coordination – those core suppliers who will coordinate the work

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The following guidelines focus on the selection process of core 3rd tier suppliers. They have been produced to clarify the current situation in regards to the selection of Core 3rd tier suppliers for the technical work that will be performed in the project.

VIVACE Management Committee partners received a selection process document with:

1. Flowchart of selection process to be applied
2. Guidelines containing:
 - a. 3rd Tier supplier definition
 - b. Budget envelope
 - c. General constraints
 - d. Information to be provided by VMC partners at step 3.
3. Current situation and timings
4. New planned organisation of WP0.3

It is important to remember that in order to capture the requirements of the 3rd tier suppliers, they need to be selected by end of September, even if the technical task starts at M13.

4. GUIDELINES FOR 3RD TIER SUPPLIERS SELECTION

4.1. OPEN CALL REQUIREMENTS

It was mutually agreed between the EC and the VIVACE Coordinator that the open call procedure would not be used for the selection of 3rd Tier suppliers since the VIVACE project schedule requires entry into the project of the first set of 3rd Tier suppliers within the first 12 months. An open call process would cause unacceptable delays to the project schedule.

However, to ensure that the process remained as open and transparent as possible, several sources as mentioned in paragraph 3.1 were explored and the selection process presented to and then agreed by the Project Management Committee.

4.2. 3RD TIER SUPPLIER DEFINITION

A 3rd Tier Supplier is a company of any size working for the aeronautical industry and:

- Working on a day-to-day basis, in direct relation with the product or with engineering deliverables
- Not part of the set of “risk sharing partners” of 1st Tier companies
- Works mainly in a “donor→acceptor” mode with little or no influence on the global product design
- Not using the same level of design and simulation tools, including networks and CAD/CAM systems

The ultimate goal of VIVACE WP0.3 is that the entire aeronautical supply chain requirements are taken into account in the project.

This document is classified as VIVACE Public**4.3. 3RD TIER SUPPLIERS SPECIFICITY**

- Often small companies with little research activities
- Return on Investment as short as possible (3 years participation questionable)

4.4. BUDGET ENVELOPE:

Each 3rd tier supplier candidate is supposed to work at least halftime during the considered task.

For example, for a 3-year task, the participation of a candidate should be at least 18 person-months. Tasks duration should be minimum 18 months and maximum 3 years.

This leads to a budget for a partner between 120 K€ and 180 K€ (roughly) financed at 50% by the EC.

Due to budget constraints, a maximum of 10 partners is expected to be selected at the end of the process. Some 3rd Tier suppliers might join the project later on, for example at T0+24, depending on the technical activities they will be associated with.

4.5. GENERAL CONSTRAINTS

- The 3rd tier supplier participation must be centred on its supplier role. This must be illustrated by at least one use case
- Technical work should be oriented towards the supply chain requirements and needs (and not directly towards VIVACE partner interest for example)
- Description of the technical work must show links with VIVACE technical work packages. It should also show the interest for the candidate supplier in term of future exploitation & better integration in the aeronautical supply chain.
- The proposal should mention the resources that the 3rd tier supplier would like (and should be able) to provide (possible start date, end date, resources associated to its participation) (no subcontracting)

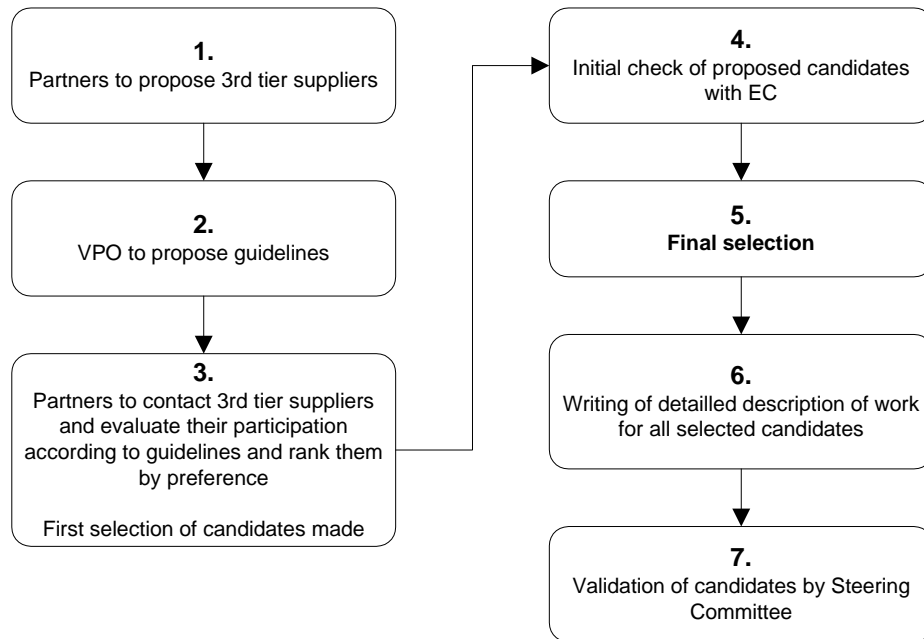
NOTE: If the 3rd tier supplier participates to other European projects, it is important to mention it.

VIVACE partners also have two general constraints associated with the selected 3rd Tier Suppliers:

- No conflict of interest (candidates agreed by Steering Committee)
- IPR and Pre Existing Know How to be managed according to existing documents (Consortium Agreement, PEKH database, etc.)

5. SELECTION PROCESS FLOWCHART

The process presented here under is used for the selection of the VIVACE core 3rd tier suppliers.

This document is classified as VIVACE PublicFigure 2: Selection Process Flowchart**5.1. PARTNERS TO PROPOSE 3RD TIER SUPPLIERS**

Deliverable: Each partner from VMC to deliver a set of third tier suppliers that could participate in VIVACE and that were included in the preliminary list of candidates. For each potential third tier supplier we need to have a contact name and a description of the candidate based on template provided by VIVACE Project Office (VPO).

Note: at that level, many suppliers were contacted but turned down the offer.

5.2. VPO TO PROPOSE GUIDELINES

Deliverable: a set of guidelines has been issued in June 2004. This document can be considered as version V1.1 of these guidelines.

5.3. PARTNERS TO CONTACT THIRD TIER SUPPLIERS AND EVALUATE THEIR PARTICIPATION ACCORDING TO GUIDELINES AND RANK THEM BY PREFERENCE**5.3.1.1. FIRST LIST OF CANDIDATES**

Deliverable: for each proposed third tier supplier one document is expected. This document should give:

- A description of why the candidate is to be considered as 3rd Tier supplier
- A use Case description
- Which WP of VIVACE are impacted
- A definition of technical task in broad details

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- A ranking in order of preference if several candidates are proposed

5.3.1.2. SELECTION AMONGST ALL PROPOSED CANDIDATES

Deliverable: a first set of third tier suppliers selected taking into account:

- o Partners preference
- o Budget aspects
- o Load balancing between airplane, helicopter, engine and equipment manufacturers
- o Contractual aspect

5.4. INITIAL CHECK WITH EUROPEAN COMMISSION

Deliverable: Go ahead with recommendations

Depending on recommendation, go to phase 1, 2, 3 or 5

The guidelines, WP0.3 organisation and overall 3rd Tier suppliers strategy were presented to the European Commission the 23rd of June. This document takes into account the remarks and comments that were expressed during this presentation.

5.5. FINAL SELECTION

3rd tier suppliers are carefully evaluated and selected. The final list is send to all Steering Committee members for approval.

5.6. WRITING OF DETAILED DESCRIPTION OF WORK FOR ALL SELECTED THIRD TIER SUPPLIER AND PREPARE CONTRACTUAL DOCUMENTS

Deliverable: Statement of work at task level to be included in the DOW

Consortium agreement signed

EU document signed

5.7. VALIDATION BY VIVACE STEERING COMMITTEE

Deliverable: Vote of the steering committee.

6. CURRENT SITUATION AND TIMINGS

In regards to the process described above, most VMC partners are entering the step 5.

A reasonable timetable is given below:

Steps	Status	Action with	Target completion date	Comments
1. Proposing of candidates	Completed	VMC partners	15 May 2004	Closed
2. VPO to propose guidelines	Completed	VPO	7 June 2004	Closed - To be updated if

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	(after issue of this document)			required
3. Evaluation of candidates	In progress	VMC partners + candidates	22/06/2004	Closed
4. Initial check with EC	To be obtained	Coordinator	23/06/2004	Closed
5. Selection	To be started	Coordinator + VMC	15/08/2004	
6. Detailed DoW	To be started	VMC partners + candidates + VPO	30/08/2004	
7. Acceptance by SC	To be obtained	Coordinator	30/09/2004	

7. WP 0.3 ORGANISATION

In the DoW version 1.6, 4 tasks were defined in the WP0.3. In particular the task 0.3.1 SELECTION OF 3RD TIER SUPPLIERS should be completed in September 2004. It will provide:

- A list of selected core 3rd Tier suppliers to be included in VIVACE, with a short description and a justification of their selection
- A detailed description of new tasks — particularly technical tasks connected to existing WPs
- An overall budget (2 Meuros) split between partners/tasks

A first draft of the possible organisation of the WP 0.3 is given here under. It is based on general discussions with WP leaders and a first incomplete selection of candidates.

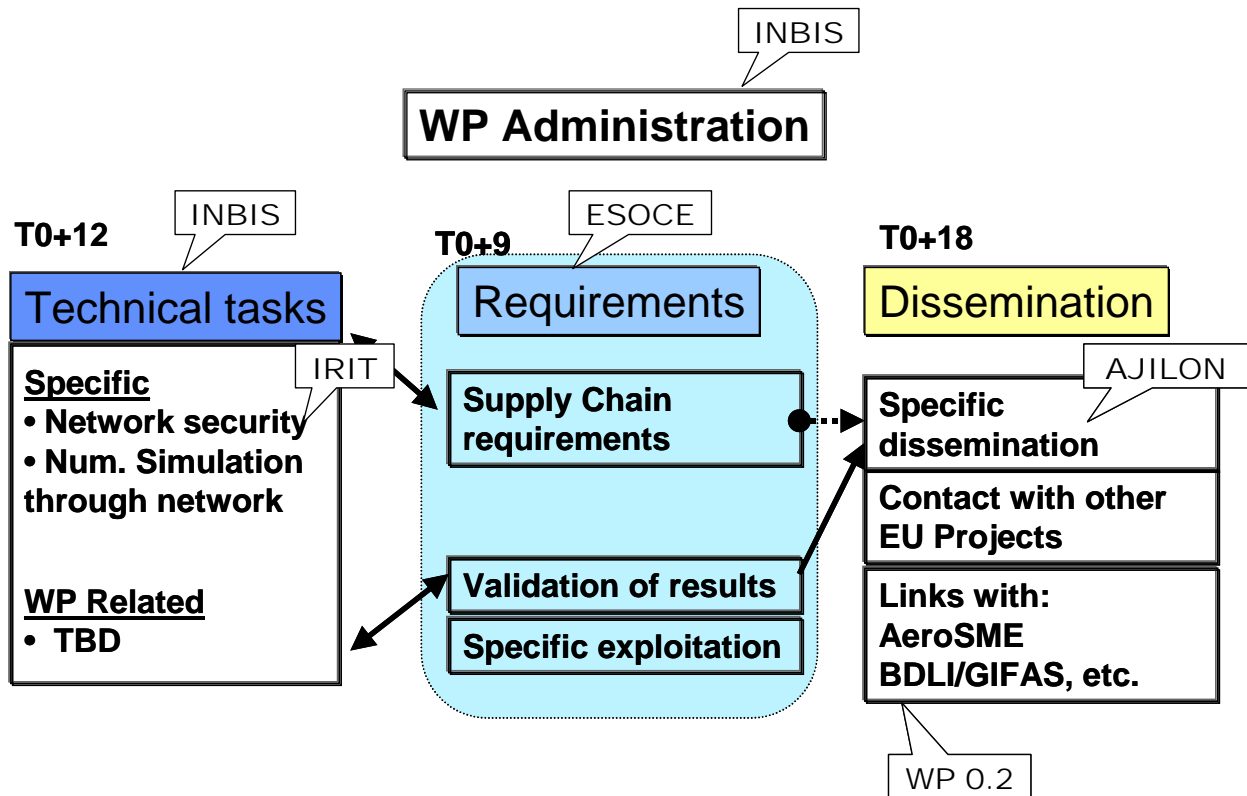


Figure 3: New WP0.3 organisation

8. FUNCTIONAL REQUIREMENTS OF WP0.3

8.1. COORDINATION OF WP AND MANAGEMENT OF TASKS

This task is mandatory. However it is not as easy as it seems to find the proper candidate because administrative tasks have little or no value for 3rd Tier suppliers.

The task budget should be 3.5% of the overall WP budget, i.e. 70 Keuros.

It is suggested to nominate INBIS as WP 0.3 leader and manager of the technical task. The INBIS Group is a comprehensive engineering design and management consultancy which is one of the largest providers of independent design and engineering support services in Europe. It has the advantage of working as a supplier for both Airbus UK and Rolls-Royce, among others.

INBIS management consultancy activities are also well suited to collaboration with task 0.3.2.

8.2. DEFINITION OF NEEDS AND EVALUATION OF RESULTS (TASK 0.3.2)

This task should start as early as possible to contribute to the requirements of VIVACE technical Work Packages.

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The companies in charge of this task should be able to liaise with a large community of 3rd tier suppliers and SMEs in as many European Countries as possible. It will have to:

- Complete the set of VIVACE WP requirements with specific needs from VIVACE 3rd tier suppliers partners
- Circulate such requirements in a larger community of suppliers in order to complete and validate them

The CE Consulting Company was originally selected by us to manage this task. They, however, suggested that the European association ESOCE would be better suited to fulfil our needs. The ESoCE-NET, European Society of Concurrent Enterprising Network, is a non-profit Organisation bringing together academics, researchers and industry practitioners to stimulate the exchange of ideas, views, practices and latest research and developments in the field of Concurrent Enterprising.

ESOCE has the legal structure mandatory to become a European project partner.

8.3. TECHNICAL DEVELOPMENTS (TASK 0.3.3)

This is where most of the budget will be spent. It is suggested to have INBIS managing this task (as well as being a technical contributor).

There are two kinds of technical activities involving 3rd Tier suppliers.

8.3.1. Technical subtasks specific to 3rd tier suppliers

As described in the DoW, these are the two subtasks related to:

- Network security (IRIT — 100% funded — is candidate to manage this subtask)
- Specific means and procedures for control, visualisation and use of numerical simulation results through network

Their budget will be defined in accordance with SP3.

The technical definition of these two tasks comes from previous studies done within the ENHANCE and CASH projects.

If new studies are available, they will be taken into consideration and new specific tasks might be included as necessary in future releases of the VIVACE DoW.

8.3.2. Activities directly linked to other VIVACE technical WPs

Concerned VIVACE WP leaders will manage such activities and take care of the associated use-cases. The participating 3rd Tier suppliers will become members of the WP.

VIVACE technical Work Packages potentially impacted are:

SP1 Aircraft

- 1.1 System Simulation
- 1.2 Components
- 1.5 Complex subsystems (rotor definition)

SP2 Engine

- 2.3 Whole Engine Development

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- 2.4 European Cycle programme
- SP3 Advanced Capabilities
 - 3.2 Multidisciplinary design and optimisation
 - 3.4 Engineering Data Management
 - 3.5 Distributed Information System Infrastructure (DISI)
 - 3.6 Collaboration Hub for Heterogeneous enterprise

8.4. DISSEMINATION & TRAINING (TASK 0.3.4)

This task will benefit from support from WP0.2 and should have a limited budget. However, it is requested by the European Commission to organise specific 3rd Tier suppliers oriented dissemination events such as specific Forum sessions or Open Days.

Since training is an important issue for the Supply Chain, it has been suggested to mirror the 0.2.3 task on training activities. Ajilon would lead that “WP0.3.4.X subtask” with a 40 Keuros budget.

9. WP0.3 TASK DESCRIPTION

Here is a draft description of WP0.3 tasks based on the organization described above:

Task	Subtask	Task or subtask name	Proposed leader	Start	End
0.3.0		Management	TBD	T0+8	T0+48
0.3.1		Selection of 3rd Tier suppliers	Airbus CE	T0	T0+12
0.3.2		Requirements & Validation			
	0.3.2.1	Requirements	ESOCE	T0+8	T0+15
	0.3.2.2	Validation of results	ESOCE	T0+30	T0+48
	0.3.2.3	Specific exploitation	TBD	T0+30	T0+48
0.3.3		3rd Tier suppliers customised solutions	INBIS	T0+12	T0+48
	0.3.3.1	Network security	IRIT	T0+12	T0+48
	0.3.3.2	Numerical simulation through network	TBD	T0+12	T0+48
0.3.4		Dissemination & training	TBD	T0+22	T0+48
	0.3.4.1	Specific dissemination events	TBD	T0+22	T0+48
	0.3.4.2	Training material from 0.3.4.1	AJILON	T0+22	T0+48

Note: technical tasks 0.3.3.1 and 0.3.3.2 are strongly related to tasks 3.5 and 3.6

10. WP0.3 OVERALL BUDGET

The 2M€ overall budget has been split according to the following table:

	Core Suppliers	Supply Chain	Technical Coordination	Total
Requirements				300

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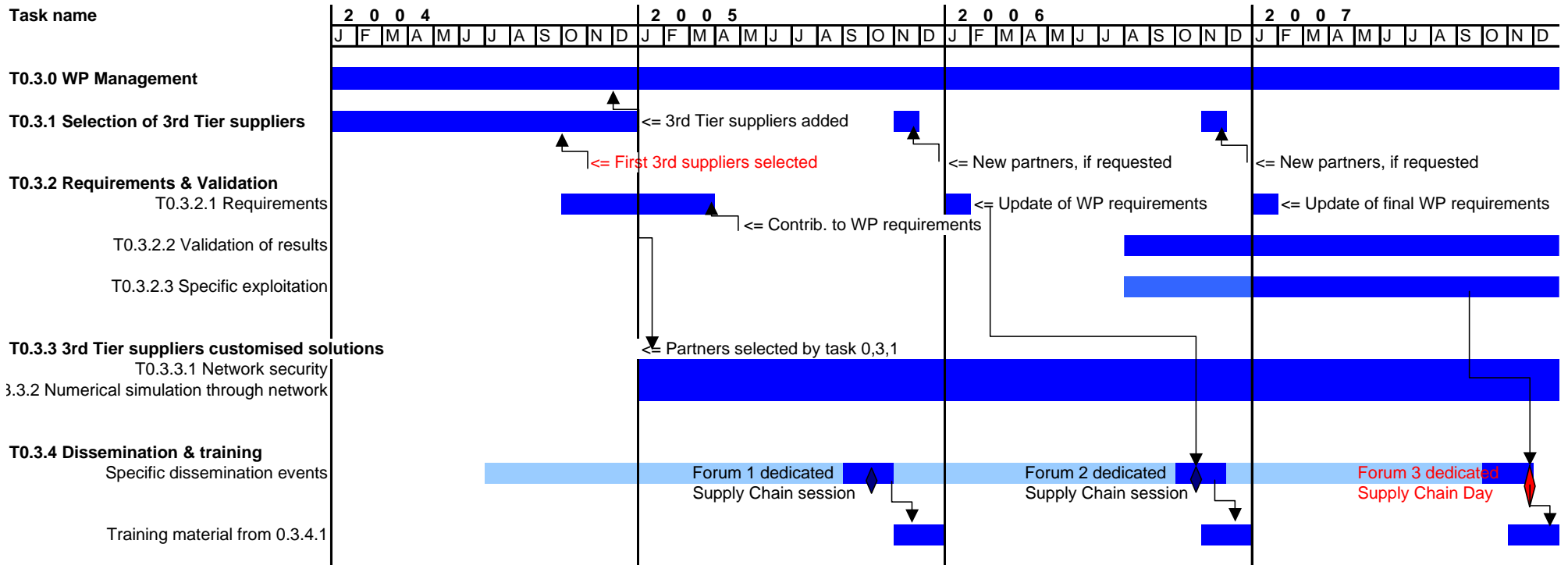
Developments				1050
Validation				400
Dissemination/ Exploitation				250
Total	1500	430	70	2000

The Core suppliers are the 3rd Tier suppliers (Types 1 and 2) that will become members of the VIVACE project as it progresses.

The "Supply chain" column represents the budget that might be spent outside the VIVACE project for capture of information from the entire aeronautical supply chain (requirements and validation).

11. WP 0.3 PROVISIONAL SCHEDULE

The overall WP 0.3 provisional schedule is given here:



Note: Task T0.3.4 schedule is based on the WP 0.2 Dissemination, training and exploitation main planned events.

12. WP0.3 DELIVERABLES

WP 0.3 deliverables have to be:

- Specific to 3rd Tier suppliers' needs. They can be additional documents to another WP deliverable but will have to be numbered and identified accordingly
- Corresponding to the 3rd Tier suppliers' point of view. We have to demonstrate that their technical work has produced results beneficial to them.
- As public as possible, in order to benefit the entire European aeronautical supply chain.

Among such deliverables, we can list:

- The expression of specific 3rd Tier suppliers needs, provided as appendices to existing WP expression of needs and state of the art.
- Results from the technical subtasks specific to 3rd tier suppliers
- Specific dissemination events
- Specific training courses

The deliverables will be defined in the next revisions of the DoW.

In addition to specific WP0.3 deliverables, 3rd Tier suppliers participating to VIVACE technical WPs will contribute to their deliverables.