



# **Falcon**

## **Foreseeing the next generation of Aircraft**

### **D1.1 Quality and Risk Management Plan**

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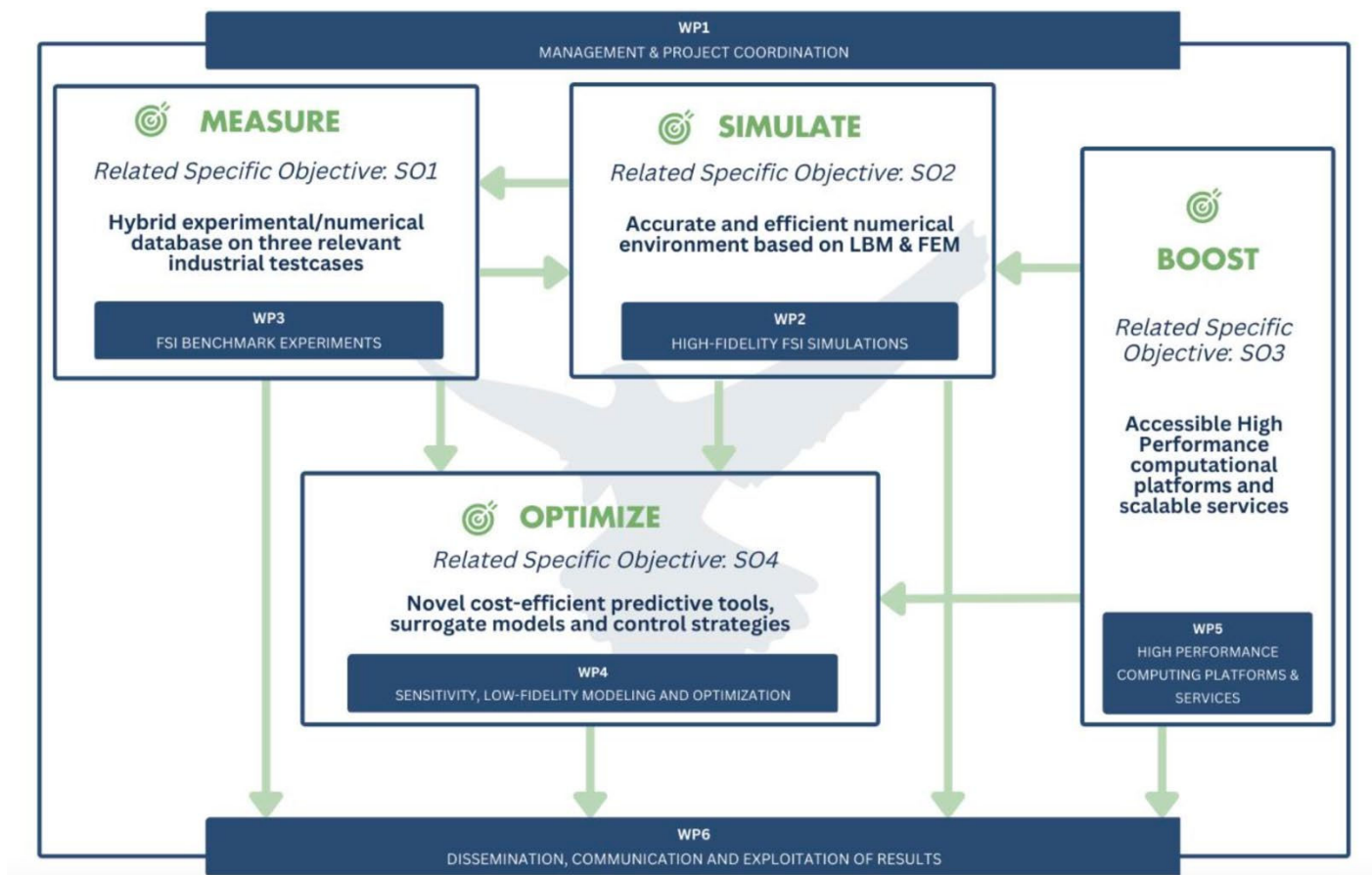
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## Background: about the FALCON project

The FALCON project is a Research and Innovation Action funded by the Horizon Europe – the Framework Programme for Research and Innovation (2021-2027) aiming to develop a hybrid approach combining both cutting-edge numerical and experimental methods to analyze Fluid-Structure Interaction (FSI), better predict and control the aircraft aerodynamic unsteady loads, thus improving the aeroelastic properties and sustainability of aerostructures and reducing the related aerodynamical noise. This will ultimately contribute to upscale the current design capabilities of the European aircraft industry while enhancing the digital transformation of the European supply chain. The project is implemented by a European consortium 8 world-class partners including: i) Internationally recognized research groups in fluid-structure interaction using numerical simulation (AMU, KIT) and experiments (DLR); ii) Major companies developing numerical simulation softwares for fluid dynamics (CS) and solid dynamics. (MSC); iii) An internationally renowned research center for high-performance computing (IT4I@VSB); a leading company in France for the funding obtention, communication and dissemination of EU projects (EURONOVIA) and iv) a major actor in the European aeronautical industry (AIRBUS).

To upscale the actual design capabilities of the aeronautics industry, FALCON addresses open key-problems involving FSI phenomena to reduce noise and improve sustainability, based on a conceptual methodology built on four pillars: MEASURE, SIMULATE, BOOST, OPTIMIZE (Figure below).



## List of acronyms and abbreviations

Acronym / Abbreviation	Meaning / Full tex
AGA	Annotated Grant Agreement
CA	Consortium Agreement
DC	Deputy Coordinator
DX.Y	Deliverable X.Y
EC	European Commission
EB	Executive Board
GA	Grant Agreement
IP	Intellectual Property
IPR	Intellectual Property Rights
KPI	Key Performance Indicator
PC	Project Coordinator
PM	Project Manager
PMT	Project Management Team
SC	Steering Committee
SIAB	Scientific and Innovation Advisory Board
TX.Y	Task X.Y
WPL	Work Package Leader
WPX	Work Package X

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## **EXECUTIVE SUMMARY**

This document is a deliverable of the FALCON project, funded under Horizon Europe – the Framework Programme for Research and Innovation (2021-2027) under grant agreement No 101138305.

The aim of this deliverable (Quality and Risk Management Plan, D1.1) is to define risks, mitigation procedures, and quality assurance processes for all deliverables and published materials. It will establish common management standards for the whole consortium. This will guarantee that the scientific and technical results of the project will be produced based on high quality standards. This includes reports, papers, deliverables and milestones that will be generated during FALCON. The Quality and Risk Management Plan also defines the project governance structure, the decision-making process and the quality management tools that will ensure that the work related to FALCON matches the sought standards, and according to the Consortium Agreement (CA).

The document is organized as follows. In a first part, the risks are exposed with proposed mitigation procedures for each of them. Then, the organizational framework of the project is outlined in Part 2 and the Project Quality Plan is detailed.

## **Part 1 - Detailed risks**

### **1 Introduction**

Risk management is a continuous process throughout the lifetime of a project and addresses the planning of risk management, identification, analysis, monitoring and control. This document outlines policies and procedures for identifying and handling uncommon causes of project deviations that may compromise objectives, i.e. risks. Risk assessment will be updated throughout the project lifecycle as unexpected sources of risk can be identified at any time. It is the objective of the risk management plan to decrease the probability and impact of events adverse to the project. In contrast, any event that could have a positive impact should be exploited.

Transparency and a good communication between the Project Management Team (PMT), Work Package leaders (WPL) and the project members are key to avoid problems and conflicts before they arise. A good communication strategy will favour the cohesion among the participants, while giving a positive image of the project to the outside.

Some of the major perceived risks related to the project work plan are listed in table 1, including a classification of their probability and a description of contingency measures envisaged by the consortium.

The goal of this document is to allow the PMT to accurately and timely try to avoid unwanted risks and, as necessary, take action in mitigating or applying corrective measures to control potential negative effects to the project.

### **2 FALCON risk management action plan**

#### **2.1 Risk identification and assessment**

Risk identification is analyzed throughout the life-cycle of the FALCON project. The following issues shall be considered as tools and techniques for risk identification:

- Analysis of deliverable status- Analysis of WP schedules and scopes
- Regular communication of the Management team with the WP leaders

In Figure 1 a schematic representation of the FALCON risk management process is shown.



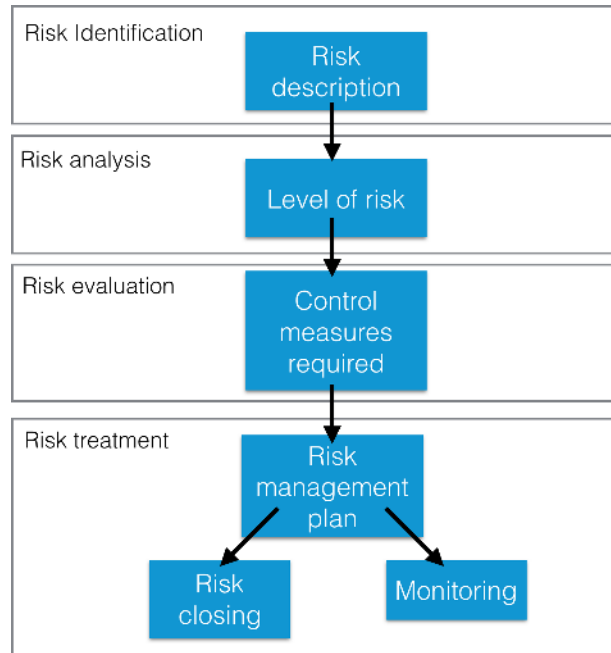


Figure 1 – FALCON risk management process

The risks will be written down in a risk management register by the Project Manager. This register will be accessible to all members through the Basecamp of each WP. The risk management register contains the following information: Risk Number, Description, concerned WP and Proposed risk-mitigation measures.

The exposure to a given risk is estimated using the risk matrix in figure 2. Concerning each of the risks, the Project Manager, in collaboration with the WP leaders, will estimate the probability they could become problems (Low/Medium/High).

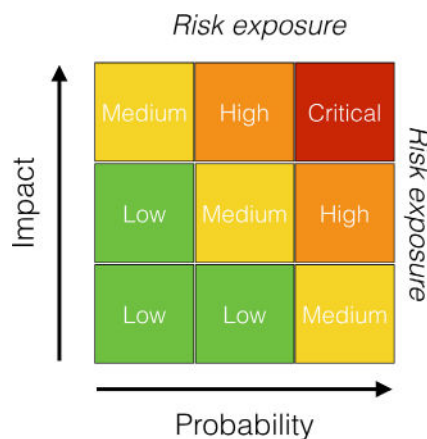


Figure 2 – Risk matrix

## 2.2 Risk monitoring

It is the responsibility of all FALCON partners to communicate the Project Manager about the status and effectiveness of each risk and mitigation plan in order to update the risk management register

and assess the relevance of the tools. Risk exposure will be continuously reevaluated and modified accordingly.

If any new risks are identified by a partner, they will be analyzed as those on the original risk list and then added in the register.

## **2.3 Risk-mitigation measures**

Each partner is responsible for executing the risk mitigation activities which relate to the WP they lead. If a mitigation action cannot be effectively carried out or does not solve the risk, the risk exposure is likely become more important. In this case, visibility of the risk has to be highlighted by the Project Manager and the mitigation measure modified in an efficient way.

An item can be considered closed when the following criteria are brought together: the risk-mitigation measures have been implemented and a new exposure risk is estimated as low using the risk Matrix.

### 3 The Risk table

FALCON risks are registered within the risk management table register presented below, which will be available in the FALCON internal platform and updated at least at the end of each reporting period by all partners.

	Description of risk	Work Package Concerned	Proposed risk-mitigation measures
R1	Loss of a partner	WP1	The project coordinator will enquire if an alternative partner is willing to take over the responsibilities of the partner leaving. If no, the coordinator will look for another partner
R2	<i>Severe delays in scheduled plans</i>	<i>WP1</i>	<i>The regular progress monitoring of the WP and project will anticipate any severe delays and find options to mitigate these.</i>
R3	Limited resources for a partner/underestimation of a task	WP1	A potential amendment will be requested to restructure activities to transfer budget items from one partner to another if this does not have additional consequences on the activity of the partner transferring the money.
R4	Insufficient precision to capture aeroelastic and aeroacoustics properties for challenging FSI configurations in compressible conditions	WP2	1. Focus on the aerodynamical forces to ensure the sustainability of flexible seals; 2. Identify the root-causes of insufficient accuracy that will be fixed in side-running projects (such as ANR LIBERTY or DGAC)
R5	Experiments not ready or insufficient to validate the developed computational models	WP2	Use simplified models for the structure if the frequencies are too high (based on the frequential space), target lower Mach numbers and Reynolds numbers, splitting of the simulation into small parts to reduce complexity.

R6	Prohibitive CPU times to reach solutions in the case of strongly coupled dynamics in compressible conditions.	WP2	Use simplified models for the structure if the frequencies are too high (based on the frequential space), target lower Mach numbers and Reynolds numbers, splitting of the simulation into small parts to reduce complexity.
R7	Stiff dynamics of strongly coupled FSI dynamics (in particular high frequencies for test case TC3) yielding numerical instabilities at the fluid-solid interface	WP2	Develop fully explicit and semi-implicit coupling to reduce time lag between fluid and solid domains and use dissipation in the algorithms to reduce numerical instabilities.
R8	<i>Severe delays in scheduled plans</i>	WP3	<i>Definition of the experiment as a two-step test campaign will lower the risk that crucial problems can be resolved before the final optical measurement campaign and as such will maximally reduce the potential of severe delays due to unexpected problems during the test campaigns.</i>
R9	Measurements can't reach the expected data quality due to technical problems (pure optical access, etc.)	WP3	Experimental team highly experienced with broad know-how for similar test problems will keep likelihood low. The spread into three distinct test cases based on existing and new data sets will spread the risk and reduces severity of occurrence.
R10	Algorithmic differentiation backward mode implementation effort too high to ensure smoothness	WP4	Usage of more classical methods instead such as forward mode and finite differences.
R11	Surrogate models insufficiently inaccurate	WP4	Usage of sensitivity approaches and grey box models with physics-informed models instead on the configurations or space parameters where it is needed.
R12	Simulation time too long for sensitivity-based approaches to solve optimization problems	WP4	Reduce number of control variables for finite differences approach, usage of surrogate models to reduce the space of parameters.

R13	Securing sufficient amount of computational resources for the entire consortium	WP5	We will use several mechanisms to secure computational resources on EuroHPC systems (IT4I, CINECA, ...). There is a low risk to get access for development and benchmarking, but there is medium risk to secure the large amount of computational resources as such resource allocation projects are competitive. We will also use national access mechanism to mitigate this risk.
R14	Malfunction of one of the used HPC clusters	WP5	We will maintain benchmark and development access to at least two different sites so that developers have always two options of working systems.
R15	Limited acceptance/interest of the general public/stakeholders.	WP6	The dissemination plan and its constant updates will provide a control using key performance indicators to monitor the sensitivity of the target audiences and consequently update the communication activities depending on the situation.
R16	Lack of overall coordination	WP1	To mitigate such risks, effective management is ensured by the coordinator and the Project Manager (PM), and throughout the project work plan. The PM will have his/her office in the same lab as the coordinator and they will meet very frequently. The coordinator has an extensive experience in coordinating EU and national projects.
R17	Ineffective overall management	All the WPs	To increase the efficiency of the management, a timely recruitment of PM will be performed. The PM is expected to have excellent skills and know-how for the management of such a EU project. He/her will be given the resources and support needed to perform all his tasks effectively. Tasks of the PM and the coordinator will be carefully delineated to ensure harmonious collaboration. In case of remaining problems, the coordinator is a resolute problem solver.
R18	Delays in deliverables	All the WPs	The PM keeps track of deadlines and sends reminders to partners through regular communication. If a partner does not meet a deadline, the coordinator will inform the PO in advance to explain the reasons for the delay and ask for an extension if needed. The PM will send a reminder to the partners and wait up to two weeks. If the partner does not react, the coordinator will convene the Steering Committee in a video conference, where the case will be discussed and decided upon.

R19	Small financial deviations from initially planned budgets may be requested by partners during the project, which do not imply a change in the overall budget amount	All the WPs	The project proposal was thoroughly thought to provide appropriate budget to each task and partner to achieve the project plan. Partners send interim financial reports every six months to the PM for supervising the appropriate development of the project. The coordinator keeps regular communication with partners to discuss any potential barrier and tackle it as soon as possible.
R20	Consortium disruption	All the WPs	All partners have experience and proven track records in large collaborative R&D and infrastructure projects. All are motivated to reach the project objectives, which have been defined in the common interest of all partners. If a partner is not adhering to this common interest, discussions to identify the issues (which can be financial, related to resources, or related to dissemination and exploitation of results) will be performed with coordinator, and with the whole consortium. The objective will be to find compromises and the help of each partner will be sought to solve the issues and avoid the ultimate option of excluding a partner from the project.
R21	Conflicts between partners may arise during the project execution	All the WPs	To tackle conflicts at early stages, partners are aware that the coordinator and the PM are available at any time for any complaint or dissatisfaction with the working plan in order to find solutions that can be discussed in extraordinary meetings (visio conference). Partners can also express and discuss their concerns to find appropriate solutions in General Assembly meetings.
R22	Changes in the project team cause discontinuity in the works	All the WPs	A thorough system of knowledge sharing has been deployed to ensure complete access to every discussion or decision process made inside the consortium during the entire project life-cycle. All the documents will be available in the digital collaboration tools chosen by the consortium

## Part 2 – Quality management Plan

### 1. Objectives

The Quality Management Plan will be an important management instrument during this project. In FALCON, nine different organizations play a key role in order to successfully complete the project. Additionally, one Scientific and Innovation Advisory Board (SIAB) members support the consortium by providing an outside perspective.

The objective of this Quality Management Plan is to ensure a certain level of quality of all the numerous deliverables, technical reports and papers that will be generated during the project. Therefore, a quality standard that can be fulfilled consistently by all participating organizations is defined and procedures, which ensure that the defined quality has been achieved, are detailed.

This plan defines the quality management by three parameters:

- Quality management planning: Definition of guidelines that define the project environment, such as guidelines for meetings, publications, etc.
- Quality management assurance: Definition of actions and project processes to ensure that deliverables fulfil the desired quality standards.
- Quality management control: Definition of an internal review process that verifies that a document matches the necessary quality.

### 2. Governance structure

This section defines the governance structure within FALCON. Every partner is included within the structure and may inhere one or more roles. Furthermore, the decision-making procedures and every partner's responsibilities are detailed.

The management of FALCON is aimed at ensuring the support, coordination and facilitation of the activities of the consortium in the project as a whole. The management structure is aimed to work towards efficiency so the project's objectives can be achieved within the defined budget limits. Figure 1 shows the governance structure of FALCON. All project partners are represented in the Steering Committee (SC) to allow a collegial and inclusive participation. As displayed, four levels of governance are defined:

- Level 1 – Decision making level: The SC acts as the ultimate decision-making body of the consortium and comprises one representative of each partner organization.
- Level 2 – Operational management level: The PM supervises the operational management of the project. It shall assist and facilitate the work of the Executive Board (EB) and of the Project Coordinator (PC) for executing the decisions of the SC as well as the day-to-day management of the project.
- Level 3 – Implementation level: The Executive Board is in charge of the execution of the project and shall report to and be accountable to the SC.
- Level 4 – Strategic advice level: The Scientific and Innovation Advisory Board (SIAB) is a consultive body which will consult the SC and the EB members on the scientific strategy and results exploitation issues. The SIAB is composed of 5 members: i) two renowned academics (Prof. Nicolas R. Gauger, Chairholder for Scientific Computing and Director of Computing Centre at the University of Kaiserslautern-Landau and Dr. Stéphanie Péron, Research Scientist and Head of Research Team at the 'Aerodynamics, Aeroelasticity, Acoustics Department' of ONERA, The French Aerospace Lab); ii) two key actors from the aeronautics industry (Vincent Brunet, Head of Fluid & Mechanical Simulation Methods at Safran Tech and Florian Kroemer, Flight physics acoustics specialist at AIRBUS Defence and Space GmbH) and iii) one member of the Clean Aviation Partnership Technical Committee (Jens Koenig, Clean Aviation Technical Committee member).

## 2.1. Project management team

The overall Project Coordinator (PC), who is responsible for the coordination of the project as a whole, is Julien FAVIER, professor at Aix Marseille Université, France. The PC is supported by the Project Manager (PM) (recruitment in progress). The PM supervises the operational management and is responsible for the internal organization. It acts as the intermediary between the EC and the consortium members. Within its tasks, it will support the EB and the coordinator in putting the decisions of the SC into practice, as well as in the day-to-day management of the project.

The main management activities of the PM are:

- Acting as a connection with the European Commission (EC)
- Monitoring contractual obligations, reporting duties
- Compiling legal documents, the contract and annexes, consortium agreement etc.
- Submitting deliverables and project reports
- Performing budget control and financial management
- Controlling progress control (deadlines, deliverables etc.)
- Co-organizing project meetings (together with the host partner)
- Organizing compliance with ethics issues requirements and promote gender equality in the project.

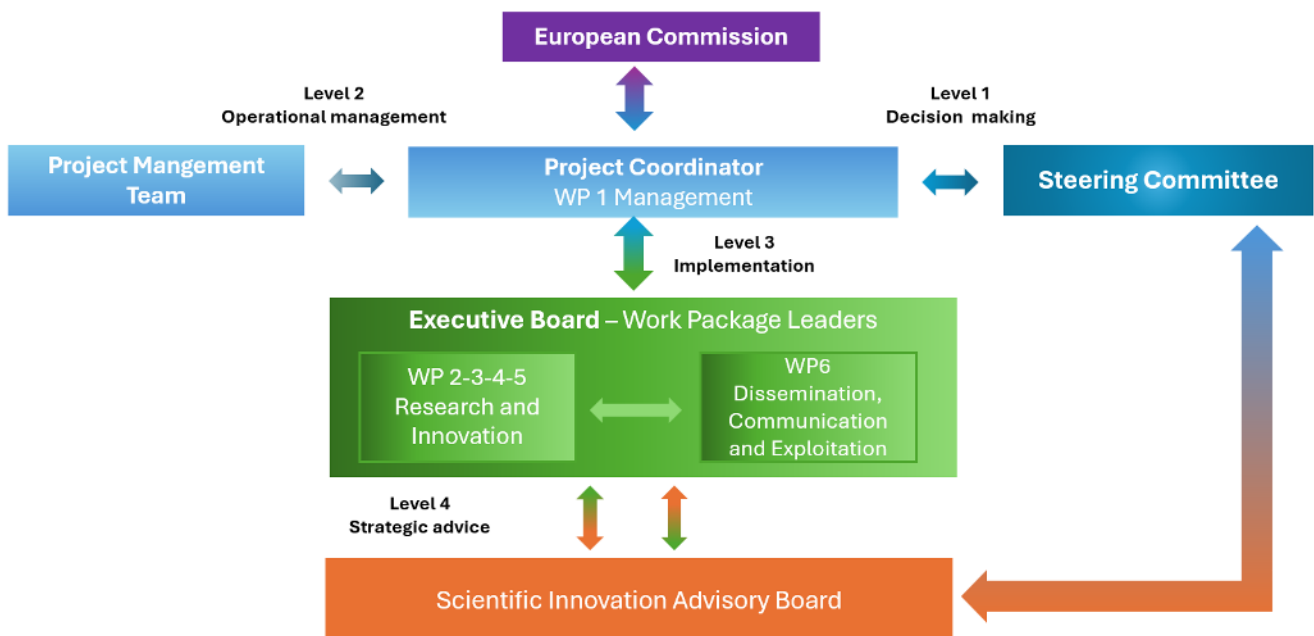


Figure 1 – Governance Structure

## 2.2. Steering committee

The SC acts as the ultimate decision-making body of FALCON. It will be composed by one representative of every partner in the project, each one with a voting right. The representatives should be authorized by their respective organization to deliberate, negotiate, and decide on behalf of their organization. Each representative should additionally name a deputy with equal authorization to replace him/her in case of he/she could not attend the SC meeting. The SC will deliberate over:

- the reporting to the European Commission
- any changes in the overall project plan including the re-allocation of tasks and budget
- the organization of the project events
- any strategic decision at specific milestones



- the assessment of the activities of the consortium (including the accuracy of the technical progress and of the deliverables)
- any strategic decision over IPR protection
- any ethical issue
- the resolution of conflicts, which could not be settled after a WP meeting
- the entry of a new partner and/or the exit of a defaulting partner
- actions with regards to a defaulting partner

## 2.3. Executive board

The members of the EB are the core partner institutions, which have substantial experience in research projects. The EB is composed by all the Work Package Leaders (WPL), + a representative from AIRBUS and a representative from CS. It is headed by the PC. In particular, a WPL is responsible for the planning, progress, achievement and control of the results within the WP, acting as a sub-project coordinator. More precisely, each WPL will be responsible for:

- Ensuring that the work carried out by each WP Team meets the defined requirements of the work plan and the timely completion of deliverables and milestones
- Assisting in preparing and approving the progress reports prior to the submission to the EC
- Organizing WP meetings (either audio/videoconferences or meetings)
- Reporting on a regular basis to the PMT about the WP progress by providing it with a follow-up form every 2 months
- Proposing changes in work sharing and participants; budget transfers or changes in accordance with the Grant Agreement; if necessary, proposing corrective actions and authorization of appropriate amendments to the work plan to meet the objectives in agreement with the EC
- Recommending any significant developments for dissemination and exploitation of the results

## 2.4. Scientific and innovation advisory board

FALCON is accompanied and supported during the project lifetime by the Scientific Innovation Advisory Board. The SIAB is constituted by 5 members reviewing the technical and strategic aspects of the project and facilitating the interface with both the consortium and a wider group of targeted stakeholders. The SIAB will meet three times along the project: M12, M36 and M48. Actions of the SIAB will include:

- Analysis of the technical project and suggestion of a list of exploitable results
- Analysis and review of the successive plans for exploitation and dissemination of the project results to provide further guidance steps for better actions
- Strategic recommendations for the quality improvement of the project regarding the content and the execution of the work plan

SIAB Board Members	
1	Prof. Nicolas R. Gauger, Chairholder for Scientific Computing and Director of Computing Centre at the University of Kaiserslautern-Landau
2	Dr. Stéphanie Péron, Research Scientist and Head of Research Team at the 'Aerodynamics, Aeroelasticity, Acoustics Department' of ONERA.

3	Vincent Brunet, Head of Fluid & Mechanical Simulation Methods at Safran Tech
4	Florian Kroemer, Flight physics acoustics specialist at AIRBUS Defence and Space GmbH
5	Jens Koenig, Clean Aviation Technical Committee member

### 3. Quality management plan

This section defines the Quality Management Plan that will serve as a handbook during this project. Its purpose is to define a framework that allows a successful implementation of the project activities in time and with a high level of quality. The set of procedures that are laid out aim to secure the following points:

- The FALCON Consortium adheres to the Grant Agreement (GA)
- The FALCON project matches the EC requirements for communication and dissemination
- All Consortium members follow their obligations within the CA

#### 3.1. Communication procedures

It is readily arguable that a successful cooperation does rely on a good communication between the partners. Despite the development of remote communications systems and the extensive use of them among the research entities, face-to-face meetings remain essential to facilitate the synergy between partners and to solve upcoming problems. However, phone, teleconferences and email contacts will be used for day-to-day work discussions among consortium partners involved in the same activity, where specific web meetings on activities can be organized when the need arises.

There are three types of regular reoccurring meetings:

1. Steering Committee Meetings: At least one designated representative of each partner organization should attend. **Frequency: every 4 months**
2. Executive Board Meetings: Coordination among WP. **Frequency: every 2 months + every month when necessary**
3. Technical Meetings: Organized at WP/Task levels. **Frequency: whenever needed**

The objectives and the organizational aspects of the official meetings are detailed in the following section.

#### 3.2. Progress monitoring

For the sake of monitoring the progress, the consortium has a number of instruments at its disposal.

### 3.2.1. Progress Meetings

The regular meetings within FALCON should at least be scheduled as defined in the following:

- Kick-off meeting (M1)
- EB meetings (WPLs): **every 2 months** (every 2nd meeting together with the SC)
- SC meetings: **every 4 months**. To plan further discussions on specific aspects to the EB. To discuss purely managerial aspects, the SC may organize a separate meeting.
- Technical meetings: individual WP meetings, **whenever necessary between the WP partners (advising all partners to include other members interested in participating)**
- For EB, SC and Technical meetings: Audio/videoconferences will be preferred
- SIAB meetings: at least once a year by videoconference (or physical if necessary)
- General assembly meetings (GA): every 6 months. All individual members of the consortium are expected to be represented, at least by their primary responsible. The meetings will typically cover one-and-a-half to two days, to allow for sufficient time for presentation of results and discussion of progress. The WPL will present the progress within their WP during the past six months. The meetings will be hosted by the project partners on a rotational basis in order to optimize the culture of cooperation and to allow the partners to discover the work environment of their colleagues. One over 2 of the GA meetings will be organized by videoconferences.
- Final meeting (M48)
- Review meetings will be scheduled based on EC requirements after each reporting period.

### 3.2.2. 2-Months WPL Monitoring Form

The WPL should provide to the PMT **every 2 months** an **updated monitoring form** (page 19), **short and synthetic**, indicating: the status of the activities to be carried out (on the WP and Tasks basis), the resources spent, the potential modifications to the original work plan and the chosen solutions, the status of deliverables and milestones and the dissemination and innovation activities. The progress status of the WP, deliverables and milestones should be reported in terms of Key Performance Indicators (KPI). In case of a mismatch between activities progress and the original project schedule, the reasons for this should be addressed, as well as the proposed contingency plans. These follow-up forms will be the basis for the PMT whilst providing the EC with the scientific and financial periodic reports.

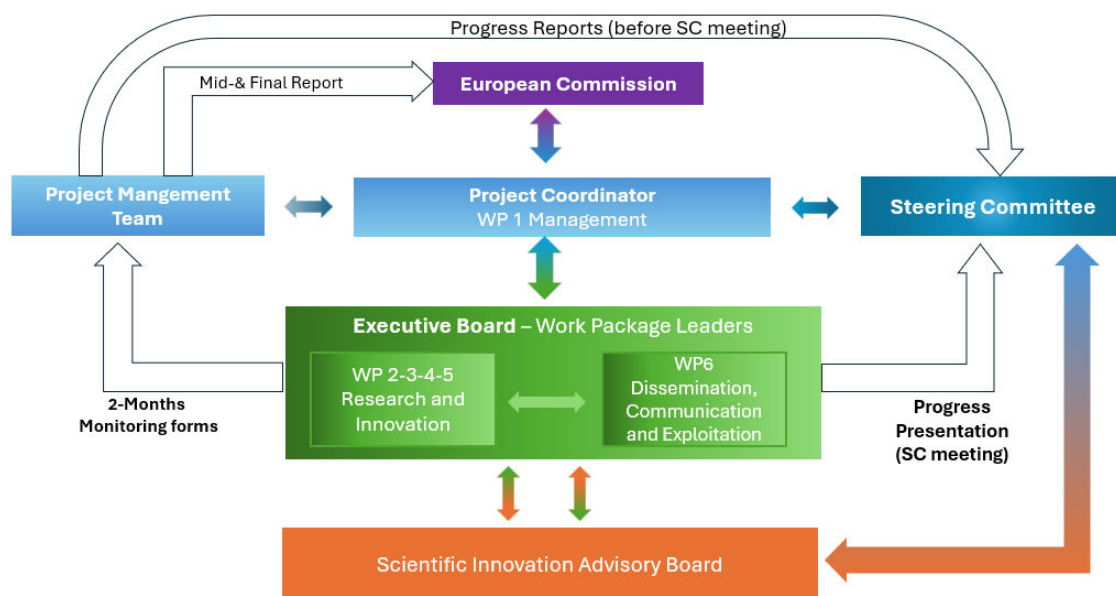


Figure 2 – Reporting Structure

The EB should report every 2 months their actual progress (via monitoring form), and before the SC meetings each 4 months. The PMT will compile these reports before the meetings and will inform the SC if any decision has to be made related to delays or mismatches between the EB reports and the work plan.

#### *Action List*

The PMT will maintain an overall action list, i.e. a list of criticalities and proper actions needed to solve them, which will be updated after every meeting of the EB. The list will be available to everyone on the FALCON repository.

#### *EC reviews*

The PM will deliver reports to the EC that are based upon the follow-up forms provided by the WPL and of the financial statements provided by each partner organization.

## 3.3. Quality standards for deliverables

This section outlines the procedures that ensure a high quality of the results that will emerge during FALCON. Since part of the results are generated in a collaborative manner, a standard that all organizations can refer to become an important instrument of quality assurance.

### 3.3.1. Deliverable Template

This template will be provided on the shared repository and is available to every partner institution for future use. All deliverables must include:

- FALCON logo
- EU flag
- Reference to the GA number
- Reference to the Work Package and Deliverable number
- Disclaimer

### 3.3.2. Quality Assurance

The following guidelines should be completed for all kinds of results that emerge during FALCON. The due date of every deliverable is defined in the list of deliverables (Section 6.1-Table of Deliverables) that is kept up to date in the shared repository by the PM. The internal deadline for each deliverable draft is set to **4 weeks before the deliverable due date**.

#### *Revision*

The document should be sent to the EB in order to ensure the overall quality of the results and that the presentation corresponds to a high standard. As defined above, the responsible of the deliverable should send the draft 4 weeks before the deliverable due date. The EB will review the document upon **2 weeks before deliverable due date**. This allows the responsible person to have enough time to address the reviewers' comments. The "document history and validation table" on page two of the deliverable template shall be used to document the proposed changes.

#### *Approval*

After the revision, all partners that were involved in the deliverable should approve the final version of the deliverable and document the final version in the "document history and validation table" on page two. After

the approval, the final .pdf version is to be placed in the appropriate folder of the shared cloud repository and the PMT shall be informed.

*Document management in the repository*

For the management of the documents the PMT provides a repository that can be accessed via the following link:

<https://teams.microsoft.com/l/channel/19%3a714ef1b01566476abd8ea6634a6a5ba2%40thread.tacv2/Running%2520project%2520stage?groupId=ac510fc6-401f-4f37-a704-b97ca9f4f422&tenantId=8a54b97a-a199-4790-affe-a9f00f5cd942>

Separate folders will be enabled for each WP. Content management will be carried out by the project coordinator and each WPL. The names of the documents will be set as follows:

WPX\_date\_document type\_version\_description.extension

(e.g. WP1\_20240306\_D1\_v1\_Quality and Risk Management Plan.docx).

The final versions of the deliverables will be collected in the same folder once the appropriate reviews have been made prior to the document upload to the EC platform.

### 3.3.3. List of Deliverables

Nb	Deliverable name/ Short description	WP	Lead	Type	Diss. level	Due date
D1.1	Quality and Risk Management Plan	1	AMU	R	PU	M3
D1.2	Data Management Plan	1	AMU	DMP	PU	M6
D2.1	Report on the validation of the structure solvers	2	MSC	R	SEN	M24
D2.2	Report on the validation of the fluid solvers	2	AMU	R	SEN	M24
D2.3	Report on the validation of FSI solvers on academic and industrial test cases focusing on stability, efficiency and accuracy	2	CS	R	SEN	M24 M36
D3.1	Report on existing database exploitation	3	AIRBUS	R	PU	M12
D3.2	Report on first experimental test of high-lift wing with flap-cove seal in AWB	3	DLR	R	PU	M21
D3.3	Report on second experimental test with optical measurement in AWB	3	DLR	R	PU	M27
D4.1	Hybrid database on FSI experimental and numerical data	4	IT4I	DATA	SEN	M12 M24 M36
D4.2	Report on sensitivity analysis model	4	KIT	R	PU	M36
D4.3	Report on surrogate model	4	AMU	R	PU	M36
D4.4	Report of optimization outcomes and optimal solutions	4	KIT	R	PU	M48
D5.1	Report on selection of development platforms and computational resources	5	IT4I	R	PU	M12
D5.2	Report on algorithm design, code porting and optimization	5	KIT	R	PU	M24
D5.3	Report on codes deployment on large-scale HPC machines and visualization	5	CS	R	PU	M36 M48
D6.1	Plan for exploitation and dissemination of the project results (PEDR)	6	EURO	R	SEN	M6
D6.2	Mid-term report on communication, dissemination & exploitation activities	6	EURO	R	PU	M24
D6.3	Final report on communication, dissemination & exploitation activities	6	AIRBUS	R	PU	M48

FALCON has three reporting periods going from M1 to M18, from M19 to M36 and from M37 to M48. The PC is obliged to submit the reports within 60 days following the end of this period.

To fulfil the necessary quality and in order to stay within the required timeframe, the PC will follow the procedure detailed in the following:

- Two weeks before the end of the reporting period, all beneficiaries should start preparing the technical and financial reports.
- Deadline for the technical reports is two weeks after the end of the reporting period.
- The PC will review the technical contributions and send feedback within two weeks.
- The beneficiaries must submit their revised technical and financial statements at least two weeks before the deadline.
- The PC submits the financial statements and final revisions of the technical reports to the EC platform on time, within 60 days following the end of this period.

Risk and Quality Management Plan – FALCON – Deliverable D1.1

### **3.3.4. Dissemination of Results**

During the project and for a period of one year after the end of the project, the dissemination of own results by one or several parties including but not restricted to publications and presentations, shall be governed by the procedure of Article 17 of the Grant Agreement.

Prior notice of any planned publication shall be given to the other parties at least 15 calendar days before the publication. Any objection to the planned publication shall be made in accordance with the Grant Agreement in writing to the PC and to the party or parties proposing the dissemination within 15 calendar days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

Besides the intended publication, the paper/article, or the link to it will be published on the FALCON project official website and Social Networks available (at least Twitter), as soon as a link or document in .pdf format is available. Preferably, all publications should be open access.

All publications or any other dissemination relating to foreground that was generated with the assistance of financial support from the EC will include the statements that can be found in this document in Section 5-Disclaimer.

## **4. Important notice**

This project seeks to obtain a high degree of quality for all documents and results that emerge during its duration. This Quality Management Plan aims to provide guidelines and procedures that allow an efficient, whilst accurate, adherence to the proposed quality standard. Furthermore, it allocates responsibilities to ensure that the procedures and guidelines are followed by the consortium partners.

The Project Management Team monitors that the processes within the FALCON consortium proceed in accordance with this plan.

In conclusion, this Quality Management Plan is supposed to be valid throughout the project lifetime but is open to revision if necessary.

## **5. Disclaimer**

“Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Commission. Neither the European Union nor the granting authority can be held responsible for them.”

## **6. Appendices**

## 6.1. Table of deliverables

Nb	Deliverable name/ Short description	WP	Lead	Type	Diss. level	Due date
D1.1	Quality and Risk Management Plan	1	AMU	R	PU	M3
D1.2	Data Management Plan	1	AMU	DMP	PU	M6
D2.1	Report on the validation of the structure solvers	2	MSC	R	SEN	M24
D2.2	Report on the validation of the fluid solvers	2	AMU	R	SEN	M24
D2.3	Report on the validation of FSI solvers on academic and industrial test cases focusing on stability, efficiency and accuracy	2	CS	R	SEN	M24, M36
D3.1	Report on existing database exploitation	3	AIRBUS	R	PU	M12
D3.2	Report on first experimental test of high-lift wing with flap-cove seal in AWB	3	DLR	R	PU	M21
D3.3	Report on second experimental test with optical measurement in AWB	3	DLR	R	PU	M27
D4.1	Hybrid database on FSI experimental and numerical data	4	IT4I	DATA	SEN	M12 M24 M36
D4.2	Report on sensitivity analysis model	4	KIT	R	PU	M36
D4.3	Report on surrogate model	4	AMU	R	PU	M36
D4.4	Report of optimization outcomes and optimal solutions	4	KIT	R	PU	M48
D5.1	Report on selection of development platforms and computational resources	5	IT4I	R	PU	M12
D5.2	Report on algorithm design, code porting and optimization	5	KIT	R	PU	M24
D5.3	Report on codes deployment on large-scale HPC machines and visualization	5	CS	R	PU	M36, M48
D6.1	Plan for exploitation and dissemination of the project results (PEDR)	6	EURO	R	SEN	M6
D6.2	Mid-term report on communication, dissemination & exploitation activities	6	EURO	R	PU	M24
D6.3	Final report on communication, dissemination & exploitation activities	6	AIRBUS	R	PU	M48



## 6.2. Monitoring form

### FALCON - Monitoring Form



Work Package: \_\_\_\_\_

Work Package Leader:

Reporting Period from: to:

Task / Deliverable / Milestone	Percentage of Completion [%]	Time to Completion [Months]	Person-Hours Spent	Person-Hours Needed for Completion	Mismatch Between Progress and Original Schedule. If yes Reasons	Contingency Plan

To be filed every 2 Months by the WPL to the PM (and then sent to the SC before the SC Meetings)