OVERHEAT
INNOVATIVE STRATEGIES FOR CONTAINERSHIP FIRES PREVENTION AND MANAGEMENT

Deliverable title:	**Risk Management Plan**
Deliverable ID:	**D1.4**
Document version:	**1.0**
Partner responsible:	**IMAT**
Due date:	**31/01/2024**
Status:	**Final**

Funded by

This project has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement Project No: 101076633. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Document Control Sheet

Deliverable number	**D1.4**
Deliverable name	**Risk Management Plan**
Dissemination Level	**PU**
Call	**HORIZON-CL5-2022-D6-01**
Topic	**HORIZON-CL5-2022-D6-01-08-Safer navigation and tackling containership fires**
Consortium Coordinator	**IMAT**
Partner responsible for the deliverable	**IMAT**
Edition	**1.0**

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OVERHEAT is a Horizon Europe project supported by the European Union under grant agreement no. 101076633.

ABSTRACT

The deliverable scope is to address all the risks related to the development of the project. Of course, during the whole project execution particular attention will be paid to possible risks, however it is fundamental to have a predictive approach on them, also identifying mitigation actions. For this reason, the Risk Management Plan allows to address at least the high-level risks and their mitigation actions which are needed to ensure the successful outcomes of the project.

This deliverable corresponds to the task 1.4 “Risk Management”, which aims to maintain the recording of the risks and of the related mitigation actions. The methodology to be followed for risk management consists of four steps: (i) Risk identification: the risks are identified, detailed and described for each Work Package (WP). (ii) Risk quantification: the probability of occurrence of the possible risk event will be determined, and the consequences associated with their occurrence will be examined. (iii) Risk response: methods will be produced to reduce or control the risk. (iv) Risk control and report: lessons learnt will be documented.

Timely awareness of and reaction to potential problems will be crucial to effective risk management. Hence, the coordinator will check that the risk mitigation and contingency measures provided in this plan will be timely applied if needed.

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ACRONYMS

Acronym	Definition
CA	Consortium Agreement
DMP	Data Management Plan
GA	Grant Agreement
RMP	Risk Management Plan
QAP	Quality Assurance Plan
WPs	Work Packages

INTRODUCTION

The main goal of the Risk Management Plan (RMP) is to reduce the probability that unexpected and sudden events compromise the project successful achievement of the objectives, by identifying potential challenging events and envisaging mitigation measures aimed at avoiding or lowering the likelihood of negative occurrence. During a project lifetime possible difficulties to be overcome could be faced. Hence, due to the complexity of the OVERHEAT project, some risks could raise during the implementation phase. As such, the strategy here presented consists in anticipating possible events, identifying well-structured mitigation actions.

To mitigate risks and maintain high quality outputs, the consortium prepared a high-level description of the risks in the project proposal phase. Once the project has been financed, the importance to prepare the RMP has become essential. The RMP lists a number of potential risks and the respective mitigation strategies. Although, the COVID-19 crisis is now in a descendant phase, the risk related to it will be however addressed for completeness. Indeed, the consortium planned to have online meetings and to conduct the Work Packages (WPs) activities remotely.

SECTION 1 - Risks identification

During the proposal phase OVERHEAT already analysed the risks connected with the execution of the research activities that might affect the achievement of the project objectives.

However, the need to identify potential deviations and risks connected with the project activities become of vital importance once the project started, since the goodness of the project outcomes also strictly depends by the effects of possible unexpected events.

As such, all partners were invited by the coordinator to identify potential deviations and risks connected to their activities, by recognising effects on WPs, deliverables, and milestones. Such procedure allowed OVERHEAT to foresee additional risks from those pre-identified in the proposal, covering all the WPs and so better supporting the WPs management and as a consequence, the project governance. The OVERHEAT partners also specified the likelihood and the severity of their occurrence as well as additional information as their relevance to particular activities.

SECTION 2 - Risk Management

Although several risks could arise during the development of a project, many of them can be anticipated and effectively mitigated. However, it will be important to keep traces of all the risks that could impact a project during the execution. The table here below addresses a list of potential risks all along the OVERHEAT project and how the partners anticipate mitigating them.

Table 1 - Risks and Management strategies

Risk Number	Description	Work Package No(s)	Proposed Mitigation Measures
1	Partners withdrawing during the project's lifetime or unable to contribute as necessary (**Likelihood: Low Severity: High**)	WP1	The project Consortium Agreement clearly defines the partner roles and responsibilities avoiding misunderstanding and dissatisfaction; the Project Management Plan (PMP) will tightly monitor the progress of each partner by means of monthly progress reports and promptly react where required.
2	Failing agreement between the partners on the technical and management aspects of the project.	WP1	A well-defined decision-making mechanism will allow solving such dispute in a timely manner.

	(**Likelihood: Low Severity: Medium**)		
3	Loss of critical competencies or of key persons. (**Likelihood: Low Severity: Medium**)	WP1	The OVERHEAT consortium consists of established organisations and companies that will be able to replace personnel with equivalent skill staff.
4	Incomplete identification of hazards due to the natural rarity of accidental events (**Likelihood: Low Severity: Medium**)	WP3	The consortium will combine experience of operational partners with literature studies and prospective vision of scientists to create a crosscheck net capable to minimize the probability of undetected hazards.
5	Underestimation of severity of consequences due to the natural rarity of accidental events (**Likelihood: Low Severity: Medium**)	WP3	The consortium will combine experience of operational partners with literature studies and prospective vision of scientists to apply corrective parameters proportional to uncertainties to reduce the probability of underestimate consequences.
6	Impossibility to perform validation activities according to the GANTT schedule due to the platform unavailability (**Likelihood: Low Severity: Medium**)	WP7	The consortium will work at a very early stage with exercise leader to ensure the timely execution of the validation activity.
7	A conflict on ownership of IP could arises among partners if a leak of IP sensitive data in communication activities occurs. (**Likelihood: Low Severity: Low**)	All	The project Consortium Agreement clearly defines how to manage IP issues.
8	Stakeholders not available to participate in the project activities (**Likelihood: Medium Severity: Medium**)	All	Identified stakeholders unavailability could be solved thanks to the partners' networks. Some partners have experience in the involvement of relevant

			stakeholders in the EU project activities (i.e. ISSNOVA, Topview)
9	Poor communication among partners (**Likelihood: Low Severity: High**)	All	The PMP will address clearly communication protocols and channels to assure continuous information sharing. Monitoring progress and bi-monthly meetings. Schedule and allocation enforcing the collaboration
10	Covid Impact on meetings and validation (**Likelihood: Medium Severity: Low**)	All	Reorganize the project and reschedule WPs and activation when possible of remote collaboration
11	Delay in project activities (**Likelihood: Medium Severity: Medium**)	All	Conservative scheduling of the activities; Continuously monitor the information flow among the WPs and generate alerts to start up recovery actions as delay is foreseen.
12	Deliverables may not achieve the expected quality. (**Likelihood: Low Severity: Medium**)	All	The quality of deliverables is ensured by an internal review system. The quality assurance plan has been prepared to address this kind of issue. However, the coordinator, in accordance with the Project Coordination Committee (PCC) performs the last quality check review addressing the quality of the deliverable.
13	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 (**Likelihood: Low Severity: Low**).	WP1	The coordinator keeps regular communication with partners to discuss any potential financial barrier and tackle it as soon as possible. The coordinator asks for financial reports every year.
14	Complete fulfilment of requirements deriving from other WPs exceeds the time and budget allocated for their implementation.	WP4	The likelihood can be reduced by ensuring that WP4 is represented in the other WPs so that requirements are possibly adjusted beforehand. The severity can be reduced by identifying a

	(**Likelihood: Medium Severity: High**).		subset of functions/equipment/services that is most significant for the project objectives while still remaining within the allocated time and budget.
15	best practice analysis can detect vulnerability of infrastructure. (**Likelihood: Medium Severity: High**).	WP2	Deliverables in WP2 change the level of dissemination from public to internal.

CONCLUSIONS

This document describes general and specific risks related to all the activities of the OVERHEAT project. No risk identified here has a high probability of occurrence and the likelihood of most risks is low, which facilitates their management. The corresponding mitigation actions as mechanisms to partially or completely prevent these risks, as well as mitigation measures to solve them in case of their occurrence have been carefully elaborated and are detailed in the document. Together with the Quality Assurance Plan D1.5, these two deliverables will ensure that the high quality of the project will be maintained.

REFERENCES

1. OVERHEAT Grant Agreement GAP-10107663
2. OVERHEAT Consortium Agreement Version 1.0
3. OVERHEAT D1.1 Project Management Plan Version 1.0
4. OVERHEAT D1.5 Quality Assurance Plan Version 1.0

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