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IOANNA

Integration Of All stores Network & Navigation Assistant

D1.2 Risk management plan

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¹ PR = Prototype, R = Report, U = User scenario, O = Other

² PU = Public, PP = Restricted to other programme participants (including the Commission Services), RE = Restricted to a group specified by the consortium (including the Commission Services), CO = Confidential, only for members of the consortium (including the Commission Services)



Keywords	Risk; management; plan; evaluation; quality; contingency; guidelines
Abstract (for dissemination)	The risk management plan aims to discover the potential risks that may arise throughout the project and successfully tackle them. A study of the likelihood of each risk is explained as well as solutions to decrease their impacts. Therefore, the challenge is to identify them beforehand, providing strategies that will result in the amelioration of the final IOANNA product

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Table of Content

1. Introduction	4
1.1. Context	4
1.2. Scope of this deliverable	4
1.3. Description format	4
2. Technical risks	5
2.1. Implementation and integration risks	5
3. Organisational risks	7
3.1 Project management risks	7
3.2 End-user involvement risks	11
4. Conclusion	12

1. Introduction

This is the Risk Management Plan for the **IOANNA** project. An extensive and exhaustive list is unfolded to describe possible risks that may arise throughout the project, proposing different ways to overcome them or, at least, mitigate their effects on the expected course of the project.

1.1. Context

Large projects are composed of partners, tasks, and dependencies. The smooth correlation between all of them is essential for the project to become successful. Any problem that shows-up in any of these three levels can result in delays or shortcomings that may make the project hard to finish on time, or impossible to finish at all. One way of minimizing risks is to identify potential risks that may arise during the project and propose ways either to avoid these risks or to have a back-up plan in case the risk does occur. This document intends to predict and propose solutions to these risks.

1.2. Scope of this deliverable

This document lists all the discovered risks in the **IOANNA** project and the means of confronting them. This is a dynamic document, so risks that may be identified in a later stage will be considered accordingly.

1.3. Description format

This deliverable uses a description format which highly facilitates risks' identifications and how to deal with them. This format has turned out to be quite understandable and it is presented below:

Title:	One-line title of risk
Summary:	Description of the risk at a glance
Description	Exhaustive description of the risk
Contingency plan:	Describes how to handle the risk (risk management strategies)
Probability of occurrence:	Describes how likely the risk is to occur. There are five levels: <ul style="list-style-type: none"> • Almost certain • Likely • Possibly • Unlikely • Rare
Severity of the risk	Describes how severe/mild the consequences are if the risk arises. There are five levels: <ul style="list-style-type: none"> • Critical • Major • Moderate

	<ul style="list-style-type: none"> • Minor • Low
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2. Technical risks

2.1. Implementation and integration risks

Title:	Requirements do not match the reality.
Summary:	The user requirements phase of the project does not conclude to results in the desired quality level or completeness.
Description:	The WP2 does not address the user requirements in a proper way. This prevents the development process from fulfilling the expectations.
Contingency Plan:	WP2 responsible partners will reassess the situation and work on new questionnaires concerning the user requirements. Increase opportunities for (user) feedback, validation and evaluation cycles in order to compensate for the time loss of the improper addressing the user requirements
Probability of occurrence:	Unlikely.
Severity of the risk:	Moderate.

Title:	Developed technologies are out of date.
Summary:	The development of the proposed system does not achieve the requested maturity to be integrated timely into the real-world ICT market.
Description:	The integration among the different development projects and tasks within IOANNA project presents several problems that result in delays which decreases the probability of reaching the market
Contingency Plan:	The technical team of the consortium will reassess the technologies used and review the most updated ones of the recent literature.
Probability of occurrence:	Rare.
Severity of the risk:	Major.

Title:	Too complicated interface
Summary:	User interface could be too difficult to utilize
Description:	Since IOANNA combines several other projects and various utilities, there is a chance that if all those assets get integrated and featured in the platform, it could be too complicated for most users. Too many buttons, menus with submenus, options and settings that hinder IOANNA's use and frustrate especially the less familiar with technology users

Contingency Plan:	An intercalary questionnaire to IOANNA volunteers should be developed, in order to find out the most complicated functionalities. According to the results, the technical team should reduce or integrate certain features, set more default settings and in general make the user interface more intuitive
Probability of occurrence:	Possibly
Severity of the risk:	Moderate

Title:	System is incompatible with user devices.
Summary:	Incompatibility between software modules and other similar hardware platforms that are likely to be used by end users.
Description:	The platform is initially intended to be used as a mobile phone application and later on as a web application. It is important to make sure that all kinds of the respective devices (phones, tablets, etc) are able to install and run IOANNA . Therefore, the platform needs to be light for most devices and tested in order to ensure proper functionality
Contingency Plan:	If it is discovered that there are certain devices that cannot run IOANNA properly, there should be a technical assessment of the situation. If it due to programming reasons, they have to be tracked and altered accordingly
Probability of occurrence:	Unlikely.
Severity of the risk:	Major.

Title:	Cannot achieve a project's target
Summary:	Project's aspirations prove to be unreachable
Description:	While planning the project, we visioned a platform with certain features, using recent or new technologies. It may happen to have set too high standards and while implementing the platform, find out that some utilities may not be plausible to implement in the predefined schedule.
Contingency Plan:	If it is a matter of short-term prolongation of the duration of the project, the consortium will ask for a small extension. Otherwise, the technical team will find a close enough alternative to propose to the CMU, explaining the difficulties that were faced
Probability of occurrence:	Rare.
Severity of the risk:	Moderate.

3. Organisational risks

3.1 Project management risks

Title:	Illness of Workforce.
Summary:	The workforce of the project may fall ill so that the project cannot be completed in due time.
Description:	IOANNA requires specific competences to accomplish the tasks planned. This means that work must be done by skilled people familiar with the project and that they cannot be easily replaced by unskilled labour. Hence, if someone falls ill the project may be delayed (at worst) or some of the tasks would have to be postponed (at best), thus causing a de-synchronization in the scheduling approved.
Contingency Plan:	Each partner is responsible for his own contingency plans in order to envisage and handle illnesses in their own teams. If a severe illness is suffered from any of the participants, the project coordinator should be informed to review the project scheduling and proceed accordingly.
Probability of occurrence:	Rare.
Severity of the risk:	Moderate.

Title:	Missing deadline for a milestone.
Summary:	Project milestones are handed in too late.
Description:	Project partners are not able to deliver a milestone on time and this, in turn, results in a delay on the overall process (peer-review, depending tasks, etc.).
Contingency Plan:	Delays in milestone deliveries may have a large impact on work that depends on that milestone. Project management will follow progress closely to ensure that milestones are delivered on time according to management guideline (D1.1 in WP1). Each WP leader will be required to regularly present an overview of work progress and any arising issues. If necessary, ad-hoc online meetings will be fixed and corrective actions will be taken.
Probability of occurrence:	Unlikely.
Severity of the risk:	Major.

Title:	Delayed hand-in of a deliverable.
Summary:	The consortium cannot meet deadline for a deliverable.
Description:	Given that many deliverables will require input from several consortium members, the consortium may fail to meet the deadline because the task leader could not collect all the inputs in time.
Contingency Plan:	Project management will ensure deadlines are met; possible delays will be recognized at earlier stages and communicated beforehand. Extra work will be done to make sure that issues will not influence other events such as deliverables or milestones.

Probability of occurrence:	Possibly.
Severity of the risk:	Moderate.

Title:	Overspending
Summary:	Partners or the entire consortium are over budget.
Description:	Overspending leads to exceeding the project budget. Project may be stopped due to the lack of revenues.
Contingency Plan:	Financial control is central to ensure project stability. Management will carefully check on spending and ensure financial stability. As a result, financial reports are submitted periodically to the NCPs (National Contact Point) of the participation countries.
Probability of occurrence:	Unlikely.
Severity of the risk:	Critical.

Title:	Failure to meet objectives.
Summary:	The consortium is not able to reach one or more goals one way or another.
Description:	Several circumstances (e.g., technical problems, a lack of communication between members of the consortium) may result in failing to meet objectives in the project.
Contingency Plan:	To mitigate this risk, all deliverables, prototypes, demonstrators, etc. will undergo an internal review process which has already been set up in the kick off meeting. This process should prevent failures to meet the objectives. In addition, NCPs will play an important role by giving feedback, thus ensuring that goals are likely to be met.
Probability of occurrence:	Unlikely.
Severity of the risk:	Moderate.

Title:	Loss of partners.
Summary:	Project partners drop out of the project.
Description:	Bankruptcy, health issues, organizational problems etc. may lead to the loss of a partner that is critical to the project progress.
Contingency Plan:	The consortium is built with some redundancy and overlap concerning the skills of core partners which permits to reallocate the resources in such a way that new needs for the project are fitted. In case of a critical skill loss, project management will maintain a list of replacement partners from the consortium's network that can be called in to the project by means of emergency subcontracting or by joining the project.
Probability of occurrence:	Rare.

Severity of the risk:	Moderate.
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Title:	Disagreement in underlying matters.
Summary:	The consortium is not able to meet halfway.
Description:	There is a risk that consensus cannot be reached on major matters.
Contingency Plan:	The consortium should strictly follow the decision-making procedures defined in the consortium agreement and in D1.1—Project Management Handbook
Probability of occurrence:	Unlikely.
Severity of the risk:	Critical.

Title:	Quality of results is poor.
Summary:	The quality of results from IOANNA is poor.
Description:	Consortium members provide results of poor quality. Such results are not usable for other partners and are not acceptable for deliverables and publications.
Contingency Plan:	Project management will execute an internal review procedure for deliverables, publications, and prototypes. Any publication shall undergo this procedure. In addition, the scientific publications targeting well-established scientific journals and proceedings will undergo academic peer review before publication. If partners are not able to deliver better results, an evaluation will be run to determine why this is not possible and, if necessary, the responsibilities of these partners will be reduced and redistributed to the other partners.
Probability of occurrence:	Rare.
Severity of the risk:	Major.

Title:	Poor communication.
Summary:	Lack of effective and efficient communication within the consortium results in deterioration of the quality or procedures.
Description:	If the partners fail to communicate the needs and requirements between each other, it may lead to misunderstandings that can delay the deliverables or force the project to re-arrange the scheduling.
Contingency Plan:	The project will have regular meetings with all partners to discuss the sensitive issues and ensure that things work as expected. Project partners have agreed to what they are responsible for, which it is written down in the DoW.
Probability of occurrence:	Unlikely.
Severity of the risk:	Moderate.

Title:	Missing potential risks.
Summary:	The project fails to identify risks that may occur throughout the project and cause overspending, delays, and the like.
Description:	It's possible that some risks might not be identified, so there is always a chance that some sort of unexpected setback occurs.
Contingency Plan:	This document has been intended to be periodically checked, reviewed and modified accordingly. It is an active document so if a new risk is identified as the project is running the partner should warn the project coordinator and ask for its editing immediately.
Probability of occurrence:	Unlikely.
Severity of the risk:	Anywhere from Critical to Rare.

Title:	Poor dissemination
Summary:	The number of dissemination activities could not leverage sufficiently the impact of IOANNA project among the different target groups.
Description:	If the responsibilities to produce dissemination materials, attend conferences etc are not clear, propelled or focused on a specific technology domain, the project impact may be rather low. If a high number of activities is performed at the end of the project and not from the beginning, again results in low impact. That said, partners are likely not to understand how dissemination must be accomplished in several industry and social domains.
Contingency Plan:	The dissemination plan is specified in WP5 with the responsibility of ESKILARA. The dissemination activities should be studied seamlessly. These activities should be planned and checked cyclically defining responsibilities. Periodic Skype conferences will be held to manage dissemination activities and to unblock the situation if necessary.
Probability of occurrence:	Possibly.
Severity of the risk:	Moderate.

Title:	Prototype problems during the field trials
Summary:	Prototypes to be tested under the end user participation cannot be delivered in time or cannot fulfil the given functional or quality and reliability requirements.
Description:	Project partners are not able to deliver the prototypes on time and this, in turn, results in widening the study duration.
Contingency Plan:	User tests can be conducted on the basis of prototypes with reduced functionality or simulations, video prototypes, or concept descriptions.
Probability of occurrence:	Unlikely.
Severity of the risk:	Minor.

Title:	Failing on fulfilling markets needs
Summary:	The project outcomes cannot persuade the market to use the proposed system.
Description:	The Market analysis done on Task 5.1 (WP5) should be accurate to identify market needs and expectations and also to analyse the strengths and weaknesses of competitors.
Contingency Plan:	The consortium will provide success stories of the developed system; running under real conditions.
Probability of occurrence:	Rare.
Severity of the risk:	Moderate.

3.2 End-user involvement risks

Title:	Difficulties to recruit enough users for a study.
Summary:	There are not enough participants for a pilot study.
Description:	Depending on the time of the year, recruiting participants may be a challenging task. For example, finding available volunteers may be harder during vacation
Contingency Plan:	Widen the study duration when not enough participants have been found, since a longer study duration will permit more user test sessions.
Probability of occurrence:	Likely.
Severity of the risk:	Low.

Title:	Participant misses a study session.
Summary:	Participant does not attend a session.
Description:	Sometimes participants cancel an appointment for a session or simply do not show up. This may pose a problem because a session may take place at a specified location and time slot, thus influencing the results of the study.
Contingency Plan:	Recruit plenty of participants. Having one or two extra participants is very helpful, since extra samples would not hurt. In addition, the consortium has three different geographical points, which provides slight redundancy in recruitment.
Probability of occurrence:	Likely.
Severity of the risk:	Low.

Title:	End-user rejects or misunderstands the study.
Summary:	End-users do not accept or understand the technology
Description:	IOANNA project introduces some novel uses of technology. However, it may occur that users will not understand the technology and eventually reject it.

Contingency Plan:	Research should take into account end-users perspective throughout the project in order to always keep in mind their needs and the way they interact with the technology. Nevertheless, an End-user Training Protocol will be performed beforehand to avoid rejections. Moreover, a person from IOANNA will always be available during the user study in order to assist
Probability of occurrence:	Likely.
Severity of the risk:	Major.

Title:	Intrusion of users' data privacy.
Summary:	Information or raw data about participants is leaked, breaching users' privacy.
Description:	Profiles, log files, and laboratory data containing user IDs, names or other sensible material leaks out of the databases to unauthorized people.
Contingency Plan:	Tailored instruction of laboratory staff; data encryption and storage in a restricted repository exclusively accessed for authorized partners. Anonymization or pseudo-anonymization of all data before transferred to the main project storage (or to another partner); Maintenance of the network and data security infrastructure in the labs. Notification according to law of how data is used. Also make sure that only user data that is really needed is included in the documentation. Work will be done according to the regulations laid out by each country where data collection will take place.
Probability of occurrence:	Unlikely.
Severity of the risk:	Minor to Major depending on the degree of leakage.

4. Conclusion

This document has listed the identified risks to date that could lead to various setbacks throughout the project. The participation of all partners is necessary to accomplish this task which, in turn, fosters their involvement in every single perspective of the project ranging from technical issues to end user experience.

Nevertheless, it is clear that risks that have not been discovered yet may bring themselves to light in the near future. This is the reason why this document is conceived as a living document, which partners should often check it up in order to find new dangers still to come and edit it accordingly.

For this purpose, this document together with the Project Management Handbook will ensure the proper and in-time identification, description and creation of contingency plans. In addition, to avoid forgetting the utmost importance of this document, a review of the Risk Management Plan will take place whenever the consortium gets together in



the scheduled meetings. Suggestions, discussions and modification will be deeply studied and consequently added to the Risk Management Plan.