Social Mining & Big Data Analytics

SoBigData

RESEARCH INFRASTRUCTURE ++

Deliverable D1.2

Risk Identification and Evaluation

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EXECUTIVE SUMMARY

This deliverable describes and addresses different kinds of risk (external, internal, strategic, operational, other) and which are periodically monitored and updated from the project management board. It outlines the risks defined at proposal time and the mitigation measures expected. Furthermore, it introduces some technical details on how to monitor, manage, and report the risks, also including the Covid-19 emergency.

DISCLAIMER

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SoBigData++ strives to deliver a distributed, Pan-European, multi-disciplinary research infrastructure for big social data analytics, coupled with the consolidation of a cross-disciplinary European research community, aimed at using social mining and big data to understand the complexity of our contemporary, globally-interconnected society. SoBigData++ is set to advance on such ambitious tasks thanks to SoBigData, the predecessor project that started this construction in 2015. Becoming an advanced community, SoBigData++ will strengthen its tools and services to empower researchers and innovators through a platform for the design and execution of large-scale social mining experiments.

This document contains information on SoBigData++ core activities, findings and outcomes and it may also contain contributions from distinguished experts who contribute as SoBigData++ Board members. Any reference to content in this document should clearly indicate the authors, source, organisation and publication date.

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GLOSSARY

EU	European Union
EC	European Commission
H2020	Horizon 2020 EU Framework Programme for Research and Innovation
PSB	Project Steering Board
PMB	Project Management Board
TMB	Transnational Access (TA) Management Board
SyGMa	System for Grant Agreement Management

TABLE OF CONTENTS

1   Relevance to SoBigData++

This deliverable describes and addresses different kinds of risks that are periodically monitored and updated from the project management board. It outlines the risks defined at the proposal (and grant agreement signing) time. It introduces the main mitigation measures expected by the consortium. Furthermore, it introduces some technical details on how to monitor, manage, and report the risks, also including the Covid-19 emergency.

1.1   Purpose of this document

This deliverable aims to provide a comprehensive list of all the risks related to the SoBigData++ activities. Furthermore, it introduces the SyGMa portal as an instrument for checking, monitoring, and reporting the status of the risks during the project duration.

1.2   Relevance to project objectives

This document is relevant for each activity inside the project since it considers the risks for all the activities and objectives related to the SoBigData Research Infrastructure.

1.3   Relation to other work packages

All work packages are involved in risk management, but the core of monitoring and relative actions and reporting is made under WP1 by the central management boards of the project (see deliverable D1.1 - All Relevant Boards established).

1.4   Structure of the document

Section 2 is the core of the document. In particular, Section 2.1 outlines all the risks already expected, while Section 2.2 outlines some considerations about the unexpected pandemic moment. Section 2.3 introduces the main aspects of risk management through SyGMa portal. Finally, Section 3 draws some short conclusions.

2   Risk management

Risk analysis and management are performed by the Project Steering Board (PSB) and Project Management Board (PMB) regularly and taken into account the key decisions of the consortium. SoBigData++ is a highly innovative project, so changes in user requirements, business needs, time schedules, and costs may occur. The PSB and PMB monitor risk continually and make a risk evaluation at each milestone, to determine whether the level of risk is acceptable and appropriate for the project. Appropriate contingency planning will be carried out accordingly.

The consortium conceived the SoBigData++ work plan in the way of preventing the most common risks right from the beginning. This is achieved by proactive risk management based on modular work packages, clear responsibilities, and minimization of critical paths. If one work package is delayed, other packages can continue to achieve their results, and project board members have proven skills and track record in international projects and research organization.

There is a contingency plan defined for significant risks. This plan will be updated in each management reporting deliverable. A comprehensive state-of-the-art risk assessment and management plan will be implemented within the first six months of the project, and it will address different kinds of risk (external, internal, strategic, operational, other). This work belongs to the management activities and it includes:

- Identify risks of any nature that might occur during the project and assess their probability and potential impact on the project;
- Plan concrete actions to prevent risk occurrence;
- If problems do occur, then the associated contingency measure will be swiftly implemented to minimize the impact.

Finally, we exclude the risk of bankruptcy of the coordinator since it is a publicly funded research organization. One person is devoted full-time to financial and other project administration tasks.

The following subsections report a short description of the main risks identified by the consortium and the relative risk mitigation measures.

2.1   Identified risks and mitigation actions

Table 2.1.1 reports the complete list defined by the consortium at the proposal time and revised for the grant agreement preparation, and recalls Table 1.3.5 in the Grant Agreement. The consortium identified 6 different major risks that involve all the work packages.

	Risk Description	Consortium response	WP involved	Risk-mitigation measures
1	Problems on people recruitment - *low risk*	SoBigData++ has world-leading partners in all areas of expertise needed in the project	WP1	Many of the partners have an established history of previous collaborations
2	Organization of the project - *low risk*	The management structures are designed to be appropriate for the consortium's size and project's type	WP1, WP9	The coordinator together with the EC monitor how well the management structure works and changes will be introduced quickly
3	Architecture and Tools used - *medium risk*	SoBigData++ is built on state-of-the-art national infrastructures, standards and tools, which are developed successfully in national and international initiatives	WP5, WP8, WP9	The partners who will be developing the novel SoBigData++ RI has a strong track record in building successful innovative solutions and in implementing big data analytical projects
4	Technology, e-Infrastructures, and Standards - *medium risk*	SoBigData++ partners are involved in relevant standardisation bodies and are at the leading edge of technology in their areas	WP5, WP8, WP9, WP10	Many partners are heavily involved in other e-Infrastructure projects and have experience in infrastructure building, deployment, and integration. Moreover, within the project, there is a dedicated person to support the partners in the integration of their algorithms into the e-infrastructure
5	Requirements on RI development - *risk low*	The RI's requirements will be chosen carefully to correspond to the needs of users, including not only researchers, but also SMEs, larger companies, and other stakeholders	WP3, WP5, WP6, WP7	There will be dedicated events during the project inception stage. One of the aims of these events is to create an initial set of requirements and usage scenarios. These requirements then evolve continuously, through networking, transnational and virtual access activities
6	Budget planning & Effort - *risk low*	The PMT monitors resources spent on each task and work-package regularly	WP1	The plan is monitored and reviewed every six months. Any required adjustments will be made promptly

Table 2.1.1 Identified risks and mitigation actions

2.2 COVID-19 situation

The consortium is evaluating several measures to minimize the risk and problems which may occur in the next months. Clearly, this situation impacts the organization of workshops, datathon, summer schools, conferences, and meetings. Furthermore, all the activities related to transnational access are suspended.

The PMB is monitoring the evolution of the pandemic, and it is ready to find alternative solutions to the classical meeting and other events using communication tools available on the market. For transnational access (WP6), the consortium and TA management board (TMB) are evaluating different scenarios to manage and schedule the next steps. The next TNA call could be opened in September 2020, and the visiting period will start Jan 2021 or TNA call can be launched in June 2020 in order to be ready to start the visits in Nov/Dec 2020. In this context, we are surveying to the consortium if there are already people interested. From the administrative point of view, the TMB is also evaluating if all the budget expected for TNA in the project could be spent during the project considering COVID emergency.

Due to the impact of the COVID-19 pandemic, we have to reschedule several activities and deadlines for deliverables. Furthermore, the project is deeply conditioned by the COVID-19 in almost all activities. In particular, tasks related to WP3 - Dissemination, WP4 - Training, and WP6 compromised by pandemic restrictions in EU Countries. At the current state, we cannot provide all the performance foreseen in the GA. We will formally ask for an extension of 12 months to overcome the present pandemic moment with less impact on the project results (Especially for all the tasks involving events, travels, and networking). This extension does not require any budget changes since many actions have not been performed yet. The mitigation measures for this situation include an amendment request in autumn. Table 2.2.1 reports the main mitigation measures for each work packages.

Work Package	Mitigation Measure
WP3 NA2 - Dissemination, Impact, and Sustainability	All the WP tasks will continue the dissemination of the project during the extension. In particular, T3.4 for the community building with the conferences (delayed) will use the extra year to cover the expected activities. Consequently, task T3.5 for the SoBigData Association and SoBigData Foundation construction will be moved by a year to reach the sustainability target expected.
WP4 NA3 - Training	The training activities in tasks T4.1 and T4.4 will be extended to cover the extension of the project and to maintain/update the material with all the activities of the project, as well as giving support for the female and minority groups researchers.
WP5 NA4 - Accelerating Innovation	Even if task T5.2 with the Challenge us Programme will be on the original schedule transforming them into virtual meetings, tasks T5.1, and T5.3 need the extension to establish relations with industries and create moments of brainstorming with students and researchers to evaluate their possibilities in the market. Due to the influence of the pandemic situation on the market, there are difficulties (for now) in creating clear plans for the future with them.
WP6 TA1 - Transnational Access	This WP completely stopped its activities since the beginning of the pandemic situation. No TNA calls are produced due to the impossibility of international travel and the host institutions' strict policies in accepting foreigners for the entire period. The extra year is needed to reach the objectives of the project.

WP7 VA1 - Virtual Access	The pandemic situation did not directly influence this WP, but its activities will be extended to provide support in the management/update of the e-infra access for the entire project lifespan.
WP8 JRA1 - Social Mining and Big Data Resource Integration	The WP activities are substantially in line with the project; some delay is due to some partners' impossibility to hire new researchers working on their libraries. For this reason, the activities will be extended by 6 months to give extra time for the delivery and update of the expected results.
WP9 JRA2 - E-Infrastructure and Supercomputing Network	All the tasks are in line with the original plan; anyway, their activities include implementing new features and their technological support/update. For this reason, their actions are extended for the project lifespan even if the services delivery timeline is substantially the same.
WP10 JRA3 - Exploratories	The WP activities are not slowed down directly by the pandemic situation, but the impossibility of some partners to hire new researchers and to have feedback from the TNA projects resulted in impediments for the correct development of the exploratories. For this reason, the extension requested for 9 months will give the possibility of exploiting the full potential of the WP.

Table 2.2.1 Identified risks and mitigation actions

2.3 The monitor of risk

The monitoring and reporting of risk are already expected by a specific tab into EC SyGMa portal (Figure 2.3.1). In particular, the tab reports two main areas:

1. Foreseen Risks (Annex-I): this area reports all the risks defined the consortium at proposal time and reviewed for the grant agreement signature. In this area, for each risk several info are available on the status of the risk, included a description of the actions (in any) related to the selected risk.
2. Unforeseen Risks: this area includes all the risk not expected by the consortium at proposal time but raised during the project activities.

The consortium will use this portal to communicate and check the status of the risks inside the project.
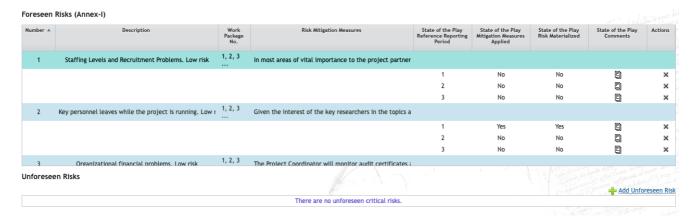

Foreseen Risks (Annex-I)

Number ▲	Description	Work Package No.	Risk Mitigation Measures	State of the Play Reference Reporting Period	State of the Play Mitigation Measures Applied	State of the Play Risk Materialized	State of the Play Comments	Actions
1	Staffing Levels and Recruitment Problems. Low risk	1, 2, 3 ...	In most areas of vital importance to the project partner					
				1	No	No	📄	✖
				2	No	No	📄	✖
				3	No	No	📄	✖
2	Key personnel leaves while the project is running. Low r	1, 2, 3 ...	Given the interest of the key researchers in the topics a					
				1	Yes	Yes	📄	✖
				2	No	No	📄	✖
				3	No	No	📄	✖
3	Organizational financial problems. Low risk	1, 2, 3	The Project Coordinator will monitor audit certificates ;					

Unforeseen Risks

➕ Add Unforeseen Risk

There are no unforeseen critical risks.

Figure 2.3.1. Critical Risks tab in SyGMa portal

3   Conclusions

This deliverable outlined all the defined risks inside the SoBigData++ project. It has introduced the level of risk, and the measure expected for monitoring and mitigating risks.

Concerning the risks defined at the proposal and grant agreement signing time, the project is managing the Covid-19 emergency. This emergency has an impact on several activities of the project since a relevant part of the project related to dissemination, community, and training events. Furthermore, activities such as transnational access cannot be done at the moment. The consortium is continuously monitoring the evolution of the emergency and its impact on the project. At the moment (April 2020), we are trying to reschedule dissemination and training events, also considering the use of on-line tools. Transnational accesses are suspended until and rescheduled to start in autumn, if possible.