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Greening Relevance in Operations in Western-Balkans Tertiary-Education Habitats

Risk Management Plan

Work package	Title
1	Project preparation
Activity	Title
T1.1	Creation of implementation documents

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Introduction

Risk is defined as the possibility of the occurrence of an event associated with a damaging impact on the project.

The risk is measured by two factors: the probability of the event to occur and the intensity of the damage to the project in case the event actually occur.

The process of risk management starts at the planning stage and follows the project throughout its lifecycle.

Three tasks are included in the planning process: the identification, the assessment and the response planning. Risk control is a process that follows the project until its completion.

The project coordinator, together with work package leaders, is responsible to monitor and manage the risk management.

In the Erasmus+ GROWTH project, the risk management is performed as part of work package 1 - Project preparation and it is under the responsibility of University Bijeljina.

Risk Management Methodology

The risk management methodology as presented by the PMBOK (Project management Body of Knowledge¹) includes four main phases:

- Identification - detect the events that may impair the success of the project. The occurrence of these events might be estimated and identified by brainstorming, questionnaires, professional checklists, and analysis of related literature and articles or by evaluating the experience of the project coordinator and other members of the team.
- Assessment - evaluation should be performed using quantitative procedures and qualitative methods in order to define a scale for the magnitude of the risk. Every risk event is assessed by two parameters: its probability to happen and the impact of its occurrence to the project. The risk scale is based on a weighted procedure of these two parameters.
- Response Plan - the risk management team, in cooperation with the relevant parties, initiates a program for response that includes responsibility assignment, strategy of response and the time for implementation.
- Control - during the lifecycle of the project, a predefined monitoring system must be implemented, in order to maintain full control over the development of the risk events. Since there might be risk events that were not identified during the planning process, the procedures of identification and assessment should be re-initiated.

Exhibit 1 (on the next page) displays the process of the risk management in the project.

¹ PMI (2013) PMBOK Project Management Body Of Knowledge 5th ed., PMI

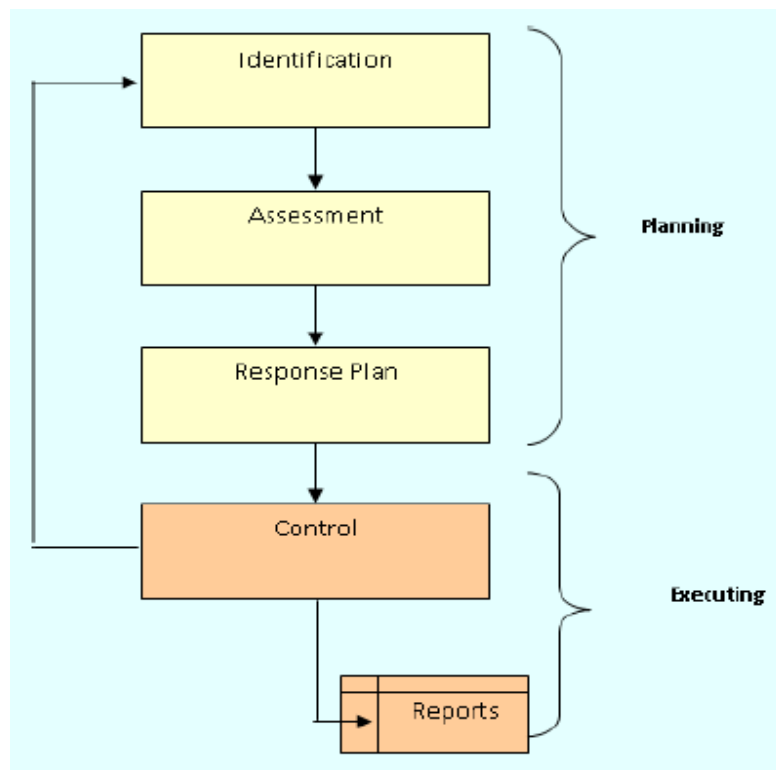


Exhibit 1. Risk Management Process' Chart (PMBOK, PMI)

The risk management methodology recommends ongoing control (work package 6) and reports to monitor new risks and to update the partners regarding the status of identified risks.

Risk Identification

This section presents key identified risks in the Erasmus+ GROWTH project, regarded project work packages. All identified risks within work packages are revised and some new risks (much more important) are identified, so the version of the project risk plan is updated/ innovated.

The following table displays the GROWTH project risk events defined in the project application.

Table 1. Identified risks from the project proposal

Risk No°	Description	WP No°	Proposed risk-mitigation measures
1	Limited participation of persons with fewer opportunities in project activities (women, persons with disabilities, persons in remote areas) LOW LIKELIHOOD/ MEDIUM IMPACT	WP1 - WP6	At the kick-off meeting the consortium will adopt Rules of procedures which will contain mandatory quotas (at least 30% participants with fewer opportunities) to ensure equal participation of the mentioned target groups.
2	Due to a very diverse ethnic/ religious/ social structure of Western Balkans countries one should foresee potential disagreements, misconceptions or misunderstanding with respect to the manner in which project bodies and committees are structured, the language being used, unequal representation of different groups, etc. LOW LIKELIHOOD/ MEDIUM IMPACT	WP1 - WP6	The project proposal plans for multilateral agreements between project partners and the project coordinator, as well as Rules of Procedure. These key documents will contain stipulations securing equal representation and balanced engagement of all specific groups in project steering bodies and teams, as well as in the decision making process.
3	Possible delays in the process of equipment procurement due to complex tendering procedures or a lack of specific equipment items on the markets of partner countries. LOW LIKELIHOOD / MEDIUM IMPACT	WP2	The risk will be addressed by setting this activity in motion as soon as the conditions have been met (after the project participants have been thoroughly introduced to financial and tendering procedures) - (M10). This will be a joint endeavor of the partnership, who will keep close communication, good coordination and closely monitor the market (costs, availability of items, etc.).
4	Institutional impediments (delay caused by established low frequency of Senate meetings; Senate does not have quorum; the Senate is not sufficiently informed on the strategy) which may prevent strategies to be adopted within the stipulated time. LOW LIKELIHOOD / HIGH IMPACT	WP5	The consortium Steering Committee, each member in their own HEI, will make sure that respective Senates are introduced to the project topic, its importance and scope, and the significance of the Senates' roles. Senate members will receive strategy drafts on mail in a timely fashion, and they will be thoroughly informed about deadlines.
5	General epidemiological situation not very favorable to allow for planned study visits.	WP1 - WP6	Although study visits have been planned to take place in the physical environment, in case that situation

	LOW LIKELIHOOD / HIGH IMPACT		does not allow for it to be implemented as planned, study visits will be redefined into virtual events, whereby host will have the responsibility to prepare alternative meeting agendas (and materials) with the ambition to reach all initially devised outcomes.
6	<p>Political situation in Western Balkans countries can be unpredictable, due to socioeconomic instability and longstanding transitional character of the region. Consequently, more often than not Western Balkans countries tend to organize snap election. In that event, project implementation could suffer certain delays.</p> <p>LOW LIKELIHOOD / HIGH IMPACT</p>	WP1 - WP6	In the event of snap election, the project consortium will try to adapt by implementing all those activities which do not directly depend on structures in power and their institutional impact. In such situations, the consortium will show flexibility in approaching project implementation with the sole ambition of completing the set tasks and achieving the objectives within the project temporal framework.
7	<p>Limited understanding of the benefits of environmentally friendly behavior and practices among the target groups at four HEIs in B&H and Montenegro.</p> <p>LOW LIKELIHOOD / MEDIUM IMPACT</p>	WP1 - WP4	More fervent communication and dissemination campaign which will include equally believers and nonbelievers among the staff, students, managers, etc., so to speak. Special focus on communication and dissemination of multiplier events (large media coverage, strong visual impression, smart and striking campaign mottos, etc.) such as hackathons and promotion of open classrooms and green campuses.

Table 2. Identified risks from the project proposal in short

Nº	Risk Event	Details
1	Disagreements between Western Balkan partners	Due to a very diverse ethnic/religious/social structure of Western Balkans countries one should foresee potential disagreements, misconceptions or misunderstanding with respect to the manner in which project bodies and committees are structured, the language being used, unequal representation of different groups, etc.
2	Limited participation	Limited participation of persons with fewer opportunities in project activities (women, persons with disabilities, persons in remote areas).
3	Delays in the procurement of equipment	Possible delays in the process of equipment procurement due to complex tendering procedures or a lack of specific equipment items on the markets of partner countries.
4	Institutional impediments	Institutional impediments (delay caused by established low frequency of Senate meetings; Senate does not have quorum; the Senate is not sufficiently informed on the strategy) which may prevent

		strategies to be adopted within the stipulated time.
5	Epidemiological situation	General epidemiological situation not very favorable to allow for planned study visits.
6	Political situation	Political situation in Western Balkans countries can be unpredictable, due to socioeconomic instability and longstanding transitional character of the region. Consequently, more often than not Western Balkans countries tend to organize snap election. In that event, project implementation could suffer certain delays.
7	Limited understanding of the project benefits	Limited understanding of the benefits of environmentally friendly behavior and practices among the target groups at four HEIs in B&H and Montenegro.

Table 3. Additionally identified risks

Nº	Risk Event	Details
1	Project cash flow	Project cash flow, especially travel costs and costs of stay before project meetings, staff costs, subcontracts, has to be on-time, otherwise, the realization of project activities will be difficulty.
2	Financial difficulties in European Partners' institutions.	The current financial situation in the world, and especially in Europe, might create complications for one of the European partners and make them leave the project or not to be able to participate in the planned tasks.
3	Insufficient infrastructure for the implementation of green transition	Some or all of the partner colleges might not have sufficient infrastructure.
4	Organizational changes in partner institutions.	Organizational changes in partner institutions might change the willingness to take part in this project, the priority of the project in the institution portfolio, and the people involved in the project.
5	Poor cooperation between the EU professionals and the B&H university staff.	The interaction between the EU professionals and the academic, administrative staff and students at the universities is a cornerstone in this project. The different cultural background, priorities, and points of view might cause ineffective implementation of advices.
6	Conflict between the different managers of the work packages.	Managers of various tasks, with different interests and points of view, might be reluctant to exchange relevant information.
7	Erroneous managerial decisions.	Improper managerial decisions might have delayed impact on the project. A wrong decision taken by management at a certain point of the process might not be detected before creating accumulative serious damage. Thus, creating budget overruns and time delays.
8	Poor cooperation and information exchange between partners.	The project partners, EU and B&H are part of one network that should work together to achieve the project goals and objectives. A collaborating

		atmosphere should be applied throughout the project to enable deliveries on time and in budget.
9	Change in the partners' preferences for implementation.	Changes in the partners' preferences, during the project lifecycle, might require alternative developments in the project scope. These might cause disagreements and slow down the implementation improvements proposed by the project.

Risk Assessment

Tools to Assess Risks

Risk assessment is normally performed by the use of tools such as: team brainstorming, distribution of questionnaires, analysis of historical data and professional consulting services. In the current project we used for the preliminary assessment phase several tools.

Brainstorming - during the kick-off meeting all project partners will estimate the project risk events in brainstorming session. Results will be entered into this document.

Historical data - The project management team evaluated the experience of historical data information gathered from another Tempus projects that took place in B&H and in the EU.

Risk Assessment Method

Qualitative risk method is applied in order to present the Risk Index (RI) values that can be calculated and arranged in a prioritized list.

The value of the risk index is calculated by multiplying the probability (P) value by the Impact (I) value:

$$Risk\ Index = Probability * Impact$$

Probability (P). The possibility of an event occurrence is defined by an ordinal scale method, ranging from very low (1) to very high (5).

Table 4. Estimate of Risk Event Probability

Value	Probability	Details
1	Very Low	The event may occur, but never actually occurred.
2	Low	The event actually occurred in the past, but it never happened in a Tempus project.
3	Medium	The event seldom occurs in Tempus projects.
4	High	The event occurs frequently and actually happened several times in Tempus projects.

5	Very High	Very common event that actually happened in most projects.
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Impact (I). The impact value is based on three parameters: performance, cost and time. It is defined by an ordinal scale method, ranging from very light (1) to extreme (5).

Table 5. Estimate of Risk Event Impact Table

Value	Impact	Details
1	Very Light	The event will have no direct impact.
2	Light	The event might cause minor changes in the project plan.
3	Moderate	The event will probably cause changes in the project plan that will require some changes in the project schedule and budget plans.
4	Severe	The event will cause substantial changes in the project scope and ability to deliver the planned deliverables. It will require major changes in the project schedule and budget plans.
5	Extreme	The event will cause fatal damage to the project and might cause its termination ahead of time.

Performance is of extreme importance in the Erasmus+ GROWTH project, since it indicates the level of compatibility between the project goals and specific objectives as defined in the formal application and the actual deliverables.

Cost is important in this project because the budget allocated for the project represents a meaningful investment of the EU aimed to promote higher education in B&H. In the current project there is no option for budget overruns, thus the tasks must be performed in accordance with the budget.

Time is defined as a solid framework, which requires that all the project activities will be executed during the 36 months between October 2015 and October 2018.

Risk Assessment Evaluation

The method of evaluation is based on three steps: an evaluation of the probability of the event to occur, an assessment of the impact, and an arithmetical calculation of the risk index values.

The following table presents the assessment values for the risk events.

Table 5. Probability & Impact Assessment table after project partners' evaluation

Nº	Risk Event	Probability	Impact	Risk Index
1	Project cash flow	2	5	10
2	Financial difficulties in European Partners' institutions	2	2	4
3	Insufficient infrastructure at WB universities	4	5	20
4	Organizational changes in partner institutions	4	4	16
5	Poor cooperation between the EU professionals and the WB university staff	3	3	9
6	Conflict between the different managers of the work packages	3	4	12
7	Erroneous managerial decisions	5	5	25
8	Poor cooperation and information exchange between partners.	4	5	20
9	Change in the partners' preferences for implementation.	4	4	16
10	Disagreements between Western Balkan partners	2	5	10
11	Limited participation in the project	5	5	25
12	Delays in the procurement of equipment	2	5	10
13	Institutional impediments	4	5	20
14	Epidemiological situation	3	5	15
15	Political situation	1	5	5
16	Limited understanding of the project benefits	4	5	20

This table 5. is filled out at the Kick-off meeting in Bijeljina by all project partners and calculated into average marks. In accordance with calculated risk index, the table 6. is filled out with numeric values of risk index for each risk event.

Risk Map

Following is a risk map presents the values of the risk events.

The X-axis presents the Probability and the Y-axis presents the Impact.

The chart is constructed of three areas, based on experience and professional literature.

The first area (green) represents the low end of the response requirements, which includes low values of probability and impact. This area contains most of the risk events.

The second area (yellow) represents medium risks and is defined by average levels of probability and impact.

The third area (red) represents high-risk index, this area is the smallest and contains very few events. Nevertheless, these events are fatal.

Table 6. Risk Map

Impact	5	15	1, 10, 12	14	3, 8, 13, 16	7,11
	4			6	4, 9	
	3			5		
	2		2			
	1					
		1	2	3	4	5
		Probability				

Priority of Risk Events Responses

The response priority plan is divided into three level indicators that are defined by the risk index of the event.

High-Risk Index (red) - High-risk index is a combination of extreme impact and high or very high probability. An occurrence with a high-risk index requires immediate response, since it might endanger the success of the entire project.

Medium-Risk Index (yellow) - Medium-risk index is a combination of one parameter with a high value and the other with a low value. Although these are not events with fatal implication on the project, they must be closely monitored and adjusted throughout the project.

Low-Risk Index (green) - Low-risk index is a combination of two low value parameters. Events of this nature create only a local impact on the project and can be corrected by the working teams, closed to the occurrence.

Risk Response

The Project Consortium Board prepares a plan to avoid significant project performance deficiencies due to risk occurrences in accordance with evaluated key risk events in table 5. The Project Consortium Board monitors each of the high-risk index events and the medium-risk index events.

During internal and external controls special attention will be dedicated to impact of risks and their avoidance for all project activities.

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