

Co-funded by the  
Erasmus+ Programme  
of the European Union



# Advancing Higher Education in Maldives Through E-learning Development



## 7.4 Risk Mitigation Plan

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# Executive Summary

Risk<sup>1</sup> is defined as the possibility of the occurrence of an event associated with a damaging impact on the project.<sup>2</sup> 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+ AMED project, the risk management is performed as part of Work package 7 – Management of project activities and it is under the responsibility of Faculty of Organization and Informatics.

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<sup>1</sup> <https://www.merriam-webster.com/dictionary/risk>

<sup>2</sup> [https://www.mindtools.com/pages/article/newPPM\\_78.htm](https://www.mindtools.com/pages/article/newPPM_78.htm)



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# 1. Risk Management Approach

The Project Coordinator (FOI) will ensure the communication of risks to the project teams and develop project staff awareness of risk management. Risks and risk strategy plans along all types of project risks will be continuously reported in the Periodic Activity Reports.

## 1.1 Consortium Risk Management

The CRISS consortium has considered consortium related risks that deal with (1) underestimation of some tasks, (2) low productivity and (3) low quality of work.

These risks are already minimized during the selection of partners.

Most of them have been selected following specific criteria:

- They are leaders in their areas of expertise
- They are selected after previous successful cooperation, with coordinator or with other trusted members of the consortium
- They all have evidence of a history of successful completion of research projects.

However, these risks will be minimized and managed by using established methodologies for hardware/software cost estimation, continuous project planning, monitoring and control. Such methodologies are standard practice in the professional work of the consortium partners.

Timely detection and reaction to potential problems will be crucial to effective risk management.

The risk management methodology as presented by the PMBOK (Project management Body of Knowledge<sup>3</sup>) 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

<sup>3</sup> PMI (2013) PMBOK Project Management Body Of Knowledge 5th ed., PMI



that were not identified during the planning process, the procedures of identification and assessment should be re-initiated.

The risk management methodology recommends ongoing control (Work package 7) and reports to monitor new risks and to update the partners regarding the status of identified risks.

## 1.2 Risk Identification

This section presents key identified risks in the Erasmus+ AMED 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 AMED project risk events, derived from the analysis of the project plan:

Table 1. Key risk events

NO	RISK EVENT	DETAILS
1	Project budget transfer	Project budget shall be transferred to partners on-time, otherwise, the realization of project activities will be difficulty.
2	Insufficient infrastructure at AMED partners	Insufficient infrastructure within project management offices at partner institutions
3	Organizational changes in AMED 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.
4	Poor cooperation between the EU Institutions and MNU	The interaction between the EU professionals and the academic, administrative staff and students at the MNU is a cornerstone in this project. The different cultural background, priorities, and points of view might cause ineffective implementation of advices.

5	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.
6	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.
7	Poor cooperation and information exchange between partners.	The project partners, EU and MNU 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.
8	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

### 1.3 Risks identified by work packages



WP	DELIVERABLE NO	DELIVERABLE TITLE	RESPONSIBLE PARTNER	DESCRIPTION OF RISK	RISK LEVEL A-D*	EARLY WARNING INDICATORS	PREVENTIVE STEPS/MITIGATION STRATEGY
1	1.1	Desk analysis report published	FOI	Unclear responsibilities, Lack of understanding among partners, missing data from partners, late duty, deficient information	C	/	clear structure, clear task assignment, sound and regular communication
	1.2	Report on success stories - report published	FOI	Unclear responsibilities, Lack of understanding among partners, missing data from partners, late duty, deficient information	C	/	clear structure, clear task assignment, sound and regular communication
	1.3	Report on need's analysis input - report published	FOI	Unclear responsibilities, Lack of understanding among partners, missing data from partners, late duty, deficient information	C	Deliverables 1.1 and 1.2 delayed	clear structure, clear task assignment, sound and regular communication
2	2.1	Draft study structure and course syllabuses developed - draft document approved	UOC	Unclear responsibilities, Lack of understanding among partners, missing data from partners, Lack of existing materials for new syllabus or extraordinary efforts for creation	C	Deliverables 1.1, 1.2 and 1.3 delayed	clear structure, clear task assignment, sound and regular communication
	2.2	Study materials prepared - study programme accredited and study	UOC	Unclear responsibilities, Lack of understanding among partners, missing data from partners, Lack of existing materials for new study programme or extraordinary efforts	C	Deliverable 2.1 delayed	clear structure, clear task assignment, sound and regular communication, plan and communicate

		materials published		for creation, long and complicated accreditation procedures			study accreditation
		Study programme accreditation					
3	3.1	MNU E-learning Roadmap - approved	CAR NET	Unclear responsibilities, Lack of understanding among partners, missing data from partners, late duty, deficient information	C		clear structure, clear task assignment, sound and regular communication
	3.2	Equipment purchased and put into operation	CAR NET	National/ institutional regulations on equipment purchase	B		Plan ahead and in coordination with other partners and national/institutional decision-makers and equipment purchase officers
	3.3	Staff trained - 50 teachers trained, 40 teachers awarded certificate	CAR NET	not enough participants (according to the number of trainees planned)		Deliverable 3.2 delayed	clear structure, clear task assignment, sound and regular communication and dissemination activities
4	4.1	Quality plan developed and published	FOI	Unclear responsibilities, Lack of understanding	C	/	Clear structure, clear task assignment
	4.2	Project coordination and communication evaluated - reports published	FOI	Missing data from partners, late duty, deficient information	B	/	Reminders about the dates and necessary information





	4.3	Study pilot implementation evaluated - report published	FOI	missing data from partners, not enough participants (according to the number of trainees planned)		/	Clear structure, clear task assignment
5	5.1	Study programme pilot tested - 4 training modules delivered	MNU	Clear structure, clear task assignment, lack of participation		Deliverables 2.2, 3.2. and/or 3.3 delayed	Clear structure, clear task assignment, clear dissemination of the event
	5.2	Sustainability plan developed and approved	MNU	Clear structure, clear task assignment		/	Clear structure, clear task assignment
6	6.1	Dissemination plan developed and published	MNU	Unclear responsibilities, Lack of understanding	C	/	Clear structure, awareness of responsibilities among project partners
	6.2	Web page developed	MNU	No significant risk	C	/	/
	6.3	Policy dialog events (4 consultations held)	MNU	Clear structure, clear task assignment, lack of participation	C	Deliverable 3.1 delayed	Establishing sound communication with decision makers and dissemination consultation events on time
	6.4	Project developments disseminated ( project flyer/project newsletter/booklet/banner/ press releases)	MNU	Lack of relevant material, missed opportunity to document relevant information, Not use of marketing tools and methods in order to reach target audience; Material not distributed to relevant target groups; Material not displayed on appropriate places at the partners premises	C	/	Notes and photos taken at the events, Defining the place and time to distribute promotional materials, materials developed centrally by WP leader

			MNU	Media do not publish information and cover events and achievements in the scope of project			Within dissemination plan will be defined different dissemination channels to widen the project outreach. Press releases will be derived from the project partners and delivered to institutional mass media contacts regularly.
7	7.1	Project meetings held (minutes, participation list)	FOI	Lack of participation, Uncertainty about goals, bad communication, technical problems during the online-meetings, travel-related risks	C	/	Clear structure, clear task assignment, follow-up communication, ensuring technical support
	7.2	Project collaboration online platform established	FOI	Technical problems, Lack of participation, inefficient workflow	C	/	Clarify workflow, use notification tools efficiently
	7.3	Project progress monitored, controlled and reported	FOI	Unclear responsibilities, Lack of understanding	C	/	Clear structure, clear task assignment
	7.4	Risk mitigation plan developed	FOI	No significant risk		/	/
		The time-frame of the project implementation deviates					Continuous monitoring of project progress and timely



		from initial plan					response. Continuous revision of risk management plan.
		Failure of deliverables because of unplanned obligations and teaching overload of the project team members beyond project.					Defined substitute members and delivery teams.

RISK LEVEL*	CRITERIA	ACTION REQUIRED
A	Unacceptable under existing circumstances requires immediate action	Risk mitigation mandatory
B	Manageable under risk control & mitigation	Risk mitigation required
C	Acceptable after review of the operation. Requires continued tracking and recorded action plans	Risk mitigation is optional
D	Acceptable with continued data collection and trending for continuous improvement	No further risk mitigation required

## 2 Risk Assessment

### 2.1 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 projects that took place at AMED institutions.



## 2.2 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:

$$\text{Risk Index} = \text{Probability} * \text{Impact}$$

### 2.2.1 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 3. 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 an Erasmus+ project.
3	Medium	The event seldom occurs in Erasmus+ projects.
4	High	The event occurs frequently and actually happened several times in similar projects.
5	Very High	Very common event that actually happened in most projects.

### 2.2.2 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 4. 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.
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**Performance** is of extreme importance in the Erasmus+ AMED 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 Maldives. 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 January 2019 and January 2022.

### 3 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

N O	RISK EVENT	PROBABILITY	IMPACT	RISK INDEX
1	PROJECT BUDGET TRANSFER	MEDIUM (3)	MODERATE (3)	$3 * 3 = 9$
2	INSUFFICIENT INFRASTRUCTURE AT AMED PARTNERS	MEDIUM (3)	MODERATE (3)	$3 * 3 = 9$
3	ORGANIZATIONAL CHANGES IN AMED INSTITUTIONS	HIGH (4)	MODERATE (3)	$4 * 3 = 12$
4	POOR COOPERATION BETWEEN THE EU INSTITUTIONS AND MNU	LOW (2)	LIGHT (2)	$2 * 2 = 4$
5	CONFLICT BETWEEN THE DIFFERENT MANAGERS OF THE WORK PACKAGES	LOW (2)	LIGHT (2)	$2 * 2 = 4$
6	ERRONEOUS MANAGERIAL DECISIONS.	LOW (2)	MODERATE (3)	$2 * 3 = 6$
7	POOR COOPERATION AND INFORMATION	LOW (2)	MODERATE (3)	$2 * 3 = 6$

	EXCHANGE BETWEEN PARTNERS.			
8	CHANGE IN THE PARTNERS' PREFERENCES FOR IMPLEMENTATION	LOW (2)	LIGHT (2)	2* 2 = 4

Table 5 is filled out at the Kick-off meeting at MNU 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.

### 3.1 Risk Map

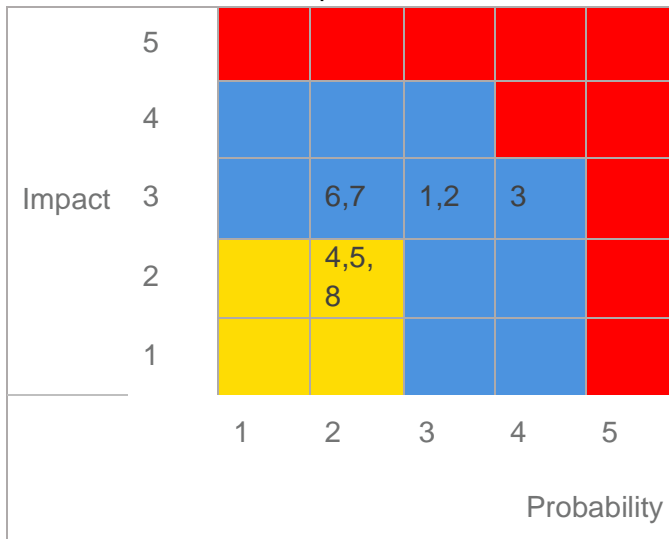
Following is a risk map presents the values of the risk events. The X-axis presents the Probability and the Y-axis presents the Impact. The chart is constructed of three areas, based on experience and professional literature.

The first area (yellow) 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 (blue) 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 no events. Nevertheless, these events would be fatal for AMED.

Table 6: AMED Risk Map



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## 3.2 Priority of Risk Events Responses

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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 (blue)** – 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 (yellow)** – 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.

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## 3.3 Risk Response

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The risk management team prepares a plan to avoid significant project performance deficiencies due to risk occurrences in accordance with evaluated key risk events in table 5. The team 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.