PROJECT MANAGEMENT HANDBOOK – QUALITY & EVALUATION PLAN

BUSINESS ANALYTICS SKILLS FOR THE FUTURE-PROOF SUPPLY CHAINS

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Content

1. ABOUT BAS4SC

BAS4SC project is focused on modifying and improving the higher education curriculum of supply chain management professionals at universities, resulting in improved processes of recognition competencies regarding business analytics. The project consortium envisages five universities that offer study programs including courses in supply chain management. So, the project partners are linked by the usage of studies and practical experience in the field that's very important for the functioning of the global economy as well as for the operational functioning of single companies. Some of the facts that prove the importance of the logistics industry are the European logistics market, contributing around 10% to European GDP, employing more than 10 million people, and amounting to more than 1150 billion EUR in 2021. The European logistics market is rapidly progressing to digital, intelligent, and sustainable solutions. However, the skills gap in this sector is expected to be significant in the coming years. One of the skills that the European logistics sector will need is business intelligence, which is expected to boost the logistics competitiveness. There are several paths to develop business intelligence knowledge, which vary in time commitment, cost, and rigor. One of the best ways for the future supply chain professionals to boost their skills is by taking appropriate university courses. BAS4SC project aims to develop such courses that will be accompanied with innovative learning and teaching methods and materials, enabling learners to develop their analytical skills, and put them into practice. On that way, the final project goal is ensuring that supply chain management professionals possess key digital and soft management skills for the rapidly changing logistics labour market. The project will seek to not only produce a business analytics skills strategy for logistics professionals, but also to increase the number of these professionals - enhancing the efficiency of the whole logistics industry. At the end, advanced analytical and business intelligence capabilities can create overall sustainable competitive advantage.

The BAS4SC has the following goals:

- The first goal relates to the examination of the needs in terms of skills, as well as competences in the field of using analytics for the implementation of logistics processes.

- Another goal is to develop a training program in the scope of Business Analytics in logistics.

- Next goal is to conduct four separate pilots dedicated for students and academic teachers.

- The last project goal is to organize a competition among students from the Project Partner countries.

2. BAS4SC PARTNERS

POLITECHNIKA POZNANSKA (E10208306 – PL)

SVEUCILISTE JOSIPA JURJA STROSSMAYERA U OSIJEKU (E10167599 – HR)

UNIVERZA V MARIBORU (E10209163 – SI)

WYZSZA SZKOLA LOGISTYKI Z SIEDZIBA W POZNANIU (E10188777 – PL)

UNIVERZITET U NOVOM SADU (E10206084 – RS).

3. PURPOSE OF THE QUAITY AND EVALUATION PLAN

The purpose of this document is to define the approach to quality control and process evaluation in BAS4SC, describing policies, procedures, and criteria, as well as roles and responsibilities. As stated in the application form and as agreed and expected from the National Agency (NA), responsible for the Erasmus+, quality and evaluation processes will be carried out, covering:

- project quality and evaluation plan,

- monitoring of evaluation and quality plan & project activities validation process.

We will mainly focus on:

- quality and evaluation of the management within the project activities and their implementation,

- quality and evaluation of general project management, including finances and quarterly reports,

- quality and evaluation of the project partnership,

- quality and evaluation of the main project activities' results.

The purpose of the internal quality processes in BAS4SC is to ensure that the project outputs are completed with an acceptable level of quality. While project outputs will be subject to an internal quality control process using predefined criteria, the processes of the project, including internal aspects such as management, communication and collaboration, participation and reporting as well as the research cycle of the activities, will also be evaluated. All evaluation and quality monitoring activities will be approved by a certified project evaluator with ECQA certificate – Chair of the Project executive board. Evaluation from the NA is also expected in form of interim reports and final report.

4. QUALITY AND EVALUATION CONTROL

An effective collaboration requires project coordination and clear rules for communication and decision-making. While all the project partners have a responsibility to deliver high quality deliverables and results, the key roles in this area are described below.

Project coordinator: The main task of the project coordinator (PC) will be to ensure coordination between all partners as well as organizing, planning, and controlling the project. This work involves ultimate responsibility for the quality of the work as set out in this document. The coordinator will also serve as the representative of the project to the NA and will communicate and report technical, financial, and other information related to the project work.

Project executive board: The project executive board is the supervisory body for the project execution and is the ultimate decision-making body of the consortium. It is responsible for monitoring the achievement of the objectives of the project, taking decisions regarding significant modifications of the project work plan and any unforeseen matters that may come up that affect the project or the consortium. The members of this board will be the leaders of teams from individual partners: Piotr Cyplik (Poznan University of Technology), Michał Adamczak (Poznan School of Logistics), Rebeka Kovačič Lukman (University of Maribor), Dejan Mirčetić (University of Novi Sad) and Davor Dujak (University of Osijek). The Chair of the Project executive board will be Prof. dr. Rebeka Kovačič Lukman – a certified project evaluator with ECQA certificate.

Project work package leaders: The focus of project work package leaders is the coordination, implementation, monitoring and evaluation of the project result activities within the work package. Each project work package leader is responsible for the technical and scientific aspects and specific work related to the project result activity. The work package leaders are responsible for achieving all the plan deliverables within the schedule, using the financial and human resources planned in the proposal. The project work package leader works in close collaboration with all participants in the project result activities and with other related project result activities. The work package leaders must also identify risks as early as possible, identify and implement solutions to emergent problems and carry out follow-ups to make sure the remedies proposed are effective. The project work package leader reports to the project coordinator and the project executive board.

In the project work, all partners will pursue the assigned quality indicators.

Quality indicators

The project will use qualitative and quantitative indicators to measure the quality of the project's results. Both types of indicators will be seen as complementary measures of different aspects of the same activity. Qualitative indicators will measure perceptions regarding materials developed and changes in skills, competencies, satisfaction, understanding of topics educated and trained. This information will be gathered through participant responses and thoroughly examined due to their subjective nature, explaining possible discrepancies. Quantitative indicators will be measured objectively.

- short-term impact on participants (knowledge, skills, competencies) and on participating organizations (changes in organizational capacity, e.g., increased competencies in digitalization and didactics),

- the potential impact on individuals and organizations in the medium- and long-term,

- added value of project results,

- participant satisfaction at trainings (teaching and learning content, e-course, user materials),

- relevance and overall usability of learning materials (case studies, learning materials),

- information exchange between lecturers and trainees.

Quantitative indicators

- 1 website in EN language
- 1 virtual environment for uploading materials in 5 languages (EN, HR, PL, SR, SI)
- minimum 4 project's social media profiles
- minimum 10 Multiplier Events in 4 countries (> 20 participants/event),
- 1 final international conference (> 50 participants),
- minimum 1 presentation at the conference,
- minimum 6 e-newsletters in 5 partner languages (> 50 recipients),
- minimum 4 letters of intent from universities outside of project consortium
- minimum 1 dissemination strategy developed
- minimum 2 scientific publications produced
- minimum 10 business representatives participating in the conference
- minimum 60 pilot participants - students
- minimum 15 pilot participants - academic teachers
- minimum 25 students taking part in an international competition
- minimum 300 downloads of teaching materials from the project's virtual environment (Moodle platform)
- minimum 150 students who participated in the classes with the use of the developed materials
- minimum 175 respondents participating in the competency survey - from the group of students
- minimum 50 respondents participating in the competency survey - from the group of academic teachers
- minimum 90 respondents participating in the competency survey - from the group of representatives of logistics companies
- qualitative assessment of materials by students with a minimum grade of 4.0
- qualitative assessment of materials by academic teachers with a minimum grade of 4.0

5. QUALITY AND EVALUATION PROCESSES

Quality and evaluation of the project activities' implementation

Quality and evaluation indicators are closely linked to project objectives and specific goals, which all the partners will pursue. Staff members with experience in their assigned field, selected by each partner, will also follow their own indicators, keep them monitored during the project and report to the coordinator. Internal evaluation will be conducted on an ongoing basis in the form of regular online meetings held every three to five weeks, according to the chosen aspects of SCRUM methodology. The time between meetings will be spent on substantive work. During these meetings, known as "sprints", partners will discuss progress on the work. The Project Executive Board will then assess the results produced and approve the level of implementation. In addition, the partners will conduct a qualitative assessment of the materials produced, which will take the form of at least 8 reports on the project results. This assessment will be carried out within one month of the activity ending.

The following specific project evaluation objectives are proposed:

- to carry out ongoing monitoring of the project design and development activities, providing feedback and recommendations for corrective action whenever needed,
- to carry out ongoing monitoring of the project management activities, from the coordinator point of view, the work package leaders, and the individual partners, with special attention to communication and collaboration,
- to facilitate reflection and critical thinking among the partners on different aspects of the project, in order to generate and collect partner feedback and ensure an integrated approach to the project, in which all are participants,
- to carry out specific evaluation activities at various points in the life of the project corresponding to the points identified in the critical path analysis mentioned earlier in this document.

The executive board will be represented by above mentioned representatives chosen at the first project meeting. The coordinator will be responsible for quality assurance. The coordinator will also collect all relevant project documents and materials, create a project timeline, report templates and evaluation questionnaires, share to-do lists of tasks, monitor possible delays, and send out reminders before deadlines. Project work package leaders will

be responsible for monitoring activities within Sprint meetings. The Project Executive Board will subsequently evaluate the results achieved and formally approve the level of implementation for each activity. Approval will be given verbally during regular partner meetings (sprints). If the board has any comments, the results will be corrected and re-evaluated. Transnational project meetings will also serve as an opportunity to discuss progress on the project, report on potential weaknesses or delays, share positive inputs, etc. We will use analytics to monitor dissemination activities.

Quality and evaluation of general project management

Since each partner's knowledge and experience of the learning methodologies, approaches and the technological issues involved is different, and the range of perspectives involved is varied, it is of major importance to directly assess the needs and expectations of each partner, in order to cover as many aspects as possible. The evaluation outcomes should serve the whole consortium and respond to the needs and perspectives of each of the actors involved in the project. The aim is also for the evaluation to scope the full project life cycle, covering the whole range of project activity across the different project results, and lasting throughout the project lifetime.

Each partner's work needs to be monitored for:

- financial and physical advancement and

- timetable respect within sprint meetings.

The coordinator will be the lead of general project management. Signed and stamped quarterly report need to be sent by e-mail to the coordinator every three months. Originals must be kept by the partners, if not specified otherwise. At least after one month, the coordinator must communicate to each partner if there are some problems in terms of expenditure of the budget and realization of different activities and outputs. The timetable will be reviewed during regular online meetings, known as 'sprints'. Each partner must adhere to the timetable and report any delays to the completion of their assigned tasks. If this happens, the partners will discuss the problem together and agree on a new completion date, which will be no later than the end of the next sprint.

Quality and evaluation of project partnership

Since good partnership is essential for a good project with effective results, we will also evaluate the project partnership in terms of communication and common understanding of activities, tasks, and deadlines among partners. The quality of the partnership will be assessed at the end of the project. Due to the regular sprints, the quality of communication will be verified on an ongoing basis during meetings, with partners making oral statements. Any problems that arise will be analysed, and appropriate corrective action will be proposed and implemented.

Due to the use of the chosen aspects of SCRUM project management methodology and regular online meetings (sprints), partners supported by the executive board will evaluate the results on an ongoing basis. If the partners or the executive board notice any deviations, changes will be made to the results, which will then be re-evaluated by the board members. This process guarantees the high quality of the results achieved, enables efficient risk management and prevents delays. In addition, each activity declared within individual work packages will be assessed separately and summarised in a report. Reports on the implementation of activities will be prepared within one month of completion. The partners plan to produce a minimum of eight qualitative assessment reports on the results achieved.

Quality and evaluation of project results and activities

Throughout the project, a range of data will be generated by the activity. All of this data will be used to provide an overall impression of the degree of activity generated and estimate the interest in the project.

At the start of the output production process, the proposed structure of the output will be evaluated according to the following indicators:
- the contents are in accordance with the objective stated in the project description,
- the allocation of the tasks is realistic and consistent with the roles of the partners as defined in the proposal, unless modifications have been made,
- the given timetable is realistic and matches the deadline set out in the project proposal unless modifications have been made.

During the production of the outputs, there may be intermediate phases where partial drafts are reviewed, but this is not obligatory. All partners are however responsible for playing

their part in checking the quality of the outputs as it progresses and making appropriate comments and suggestions for modification. The key quality criteria used for the final review of each output are as follows:

- compliance with the objectives as stated in the project description in the Grant Agreement,
- the completeness of the documentation describing the work done,
- compliance with the templates and editing guidelines provided by the work package leader and/or project coordinator,
- clarity and legibility,
- the degree to which the output constitutes a complete response to the task usefulness to the target reader and audience,
- complete version history.

To keep track on the quality of the project activities, results and partners' outputs, we will prepare evaluation tools in the form of online Quality Assurance questionnaires to monitor the following elements:

- project results – 3 courses,
- 4 training activities for staff and students,
- 1 conference closing the project,

This way we will ensure the best experience not only from the organizational point of view, but also from the participants' and give the partners a good tool to provide them with the necessary feedback information.

Quality and evaluation of project results

Evaluation of project results will take place at several levels by partners and participants, covering usability, interest, content of handbooks and teaching materials, usefulness of the training, competencies acquired, etc.

BAS4SC project encompasses three main project results:

- WP2: competencies need analysis
- WP3: courses programmers and materials development
- WP4: piloting and testing

During the project implementation period, we will closely monitor the realization of the following KPIs:

- WP2: supply chain management study programs, business intelligence study programs, skill-gap analysis
- WP3: programme with 3 courses and corresponding materials
- WP4: 4 trainings and one final competition during the conference
- The project results will also be reviewed from the following perspectives:
  - results are/are not usable and transparent,
  - results are/are not available to all the partners and other stakeholders, as defined in the application form.

The results will be audited by the executive board, the certified evaluator – the chief of project executive board, and the coordinator, who will accept its quality and compliance.

Quality and evaluation of transnational project meetings

The project will last 36 months, and we are planning two project meetings (TPM1, TPM2). Minutes will be taken at each meeting and an oral evaluation by each partner will be carried out. It is important that the evaluation takes place immediately after the meeting, when participants still have a fresh memory of the discussions. At least one participant per partner will attend.

During the meeting, the project coordinator will take the minutes. All minutes must contain: (i) date; (ii) location; (iii) presences or meeting photos; (iv) topics covered; (v) decisions taken; (vi) tasks to be carried out and deadlines. Thanks to the Sprint methodology, the prepared task plan and the task verification template, managing current affairs will be straightforward and the risk of errors will be reduced. The minutes will be sent to all partners within 7 working days. It is expected that the partners will give feedback and approval of the minutes within 7 days upon receival (only if needed).

Quality and evaluation of multiplier events

Multiplier events will take place in each partner country in the middle of the project timeline. 20 local participants per national events are expected. At least 50 participants are expected to attend the final event (conference). Overall, we expect at least 200 participants at the events.

Indicators of achievement in event activities are:
- minimum 10 multiplier events in 4 countries (>20 participants/event),
- 1 final international conference (>50 participants),

- lists of participants (minimum 200 participants total),
- minimum 10 event agendas with details on daily activities,
- minimum 6 e-newsletters in 5 partner languages (> 50 recipients),
- event photos.

Quality and evaluation of training activities

The staff training and students' trainings represent an evaluation of the prepared training materials, gathering feedback and possible improvement comments from our project target groups. In order to achieve the most efficient training activities, we will use anonymous questionnaire forms to provide feedback.

Indicators of achievement in teachers training activities are:
- 1 training in 1 countries (minimum 15 learners),
- 1 list of participants (minimum 15 learners),
- 1 training agenda with details on daily activities,
- event photos,
- evaluation of content and quality of all three courses,
- 3 reports regarding materials quality evaluation – 1 per each course.

We will conduct an interactive evaluation of trainings at the end of the event. From the perspective of the event itself, the materials will be evaluated in terms of completeness, quality, applicability to educational programs, coverage of competency gaps, and level of relevance to business needs. A materials quality evaluation in the form of the report will be written within 30 working days after the activity completion.

Indicators of achievement in students training activities are:
- 3 trainings in 3 countries (minimum 20 students per training),
- 3 lists of participants (minimum 20 students per training),
- 3 training agendas with details on daily activities,
- event photos,
- evaluation of content and quality of all three courses,
- 3 reports regarding materials quality evaluation.

We will conduct an interactive evaluation of trainings at the end of each student training event. From the perspective of the event itself, the materials will be evaluated in terms of completeness, quality, applicability to educational programs, coverage of competency gaps, and level of relevance to business needs. The trainings will be evaluated in terms of delivery, venue, organization, accommodation. A materials quality evaluation in the form of the report will be written within 30 working days after the activity completion.

Indicators of achievement in final competition (conference closing the project) activities are:

- 1 training (final competition) in 1 country (minimum 25 students, 5 teams),
- 1 list of participants (minimum 25 students, 5 teams),
- 1 training agenda with details on daily activities,
- event photos,
- evaluation of content and quality of the final competition and competition task,
- 1 report regarding of the final competition evaluation.

We will conduct an interactive evaluation of training at the end student training event (final competition). From the perspective of the event itself, the final conference will be evaluated in terms of The usefulness of the materials in understanding the task and the organisation of the competition, and in developing analytical skills. A final competition and competition task quality evaluation in the form of the report will be written within 30 working days after the activity completion.

6. FINANCIAL MONITORING OF THE PROJECT ACTIVITIES

Surveillance of the implementation of the project activities will be done by observing and interpreting the different actions carried out by the consortium and providing feedback at appropriate moments within the project cycle. Templates will be uploaded to the project cloud and available to all partners. Each document will contain essential partner and project information and will be filled out accordingly and in due time.

Sprint template

Sprint task plan

Spint XX   **Time duration:**   **DD.MM.YYYY- DD.MM.YYYY**

Goal of the Sprint
1. Goal no. 1
2. Goal no. 2

No	WP	Activity	Task Ttile	Partner	Assigned to	Results description	Repo (link)
1	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
2	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
3	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
4	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
5	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
6	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
7	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
8	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
9	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	
10	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	

Sprint task review

Spint XX   **Time duration:**   **DD.MM.YYYY- DD.MM.YYYY**

Goal of the Sprint
1. Goal no. 1
2. Goal no. 2

No	WP	Activity	Task Ttile	Partner	Assigned to	Results description	Status	Remarks
1	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
2	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
3	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
4	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
5	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
6	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
7	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
8	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
9	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	
10	WPX	Type of activity	Name of the activity	Partner responsible	Person responsible	Result of completing the activity description	done/in progress	

Financial periodic report template – Quarterly report

FINANCIAL PERIODIC REPORT

Project title: **Business Analytics Skills for the Future-proofs Supply Chains "BAS4SC"**

Partner organization:

Reporting period:

Work Package – WP1 (Total Budget WP1 – **Amount** Euro)

No.	Appendix number		Cost (Euro)
	Transposition cost from the previous financial periodic report		
1.	WP1.1	(date of the document)	
2.	WP1.2.	(date of the document)	
3.	WP1.3.	(date of the document)	
4.	WP1.4.	(date of the document)	
5.	WP1.5.	(date of the document)	
...	...	...	
		Total	

Work Package – WP2 (Total Budget WP2 – **Amount** Euro)

No.	Appendix number		Cost (Euro)
	Transposition cost from the previous financial periodic report		
1.	WP2.1	(date of the document)	
2.	WP2.2.	(date of the document)	
3.	WP2.3.	(date of the document)	
4.	WP2.4.	(date of the document)	
5.	WP2.5.	(date of the document)	
...	...	...	
		Total	

Work Package – WP3 (Total Budget WP3 – **Amount** Euro)

No.	Appendix number		Cost (Euro)
	Transposition cost from the previous financial periodic report		
1.	WP3.1	(date of the document)	
2.	WP3.2.	(date of the document)	
3.	WP3.3.	(date of the document)	
4.	WP3.4.	(date of the document)	

No.	Appendix number		Cost (Euro)
5.	WP3.5.	(date of the document)	
…	…	…	
		Total	

Work Package – WP4 (Total Budget WP4 – **Amount** Euro)

No.	Appendix number		Cost (Euro)
	Transposition cost from the previous financial periodic report		
1.	WP4.1	(date of the document)	
2.	WP4.2.	(date of the document)	
3.	WP4.3.	(date of the document)	
4.	WP4.4.	(date of the document)	
5.	WP4.5.	(date of the document)	
…	…	…	
		Total	

Work Package – WP5 (Total Budget WP5 – **Amount** Euro)

No.	Appendix number		Cost (Euro)
	Transposition cost from the previous financial periodic report		
1.	WP5.1	(date of the document)	
2.	WP5.2.	(date of the document)	
3.	WP5.3.	(date of the document)	
4.	WP5.4.	(date of the document)	
5.	WP5.5.	(date of the document)	
…	…	…	
		Total	

Each document mentioned in the appendix should be assigned to the correct Work Package of the project according to the description of financial document.

All documents mentioned in appendix have to be scanned and provided with the report and description of financial document.

Responsible person:

Signature:

Stamp: