E.4 Logical Framework Matrix – LFM

Wider Objective: *What is the general objective, to which the project will contribute?* IQPharm project general aims are raising the quality and modernization of pharmacy studies on public universities in BiH including reinforcement of semi-structured experiential education in compliance with EU standards and regulations of higher education, especially for regulated professions, amongst which is pharmacy, as well as bringing better employability of pharmacy graduates.	**Indicators of progress:** *What are the key indicators related to the wider objective?* Improved competencies of students of pharmacy and pharmacists leading to improved healthcare outcomes Compliance with EU regulation and practice on recognition of professional qualifications	**How indicators will be measured:** *What are the sources of information on these indicators?* Reports from national institutes of Public Health EU Directorate General (DG) Health assessment reports Euro Health Consumer Index (or equivalent) Institutional self-assessment and benchmarking reports		
Specific Project Objective/s: *What are the specific objectives, which the project shall achieve?* Development of academic staff professional and pedagogicaln competencies for more interactive and practical approach to delivery/teaching and assessment of the existing pharmacy curricula through the exchange of best practices between partner and programme institutions and active involvement of major stakeholders in real sector. Improvement of courses delivery through the introduction of assessment tests – Knowledge Retention Tests (KREF) and Objective Structured Clinical Examination (OSCE) for pharmacy students Improvements in experiential education educators' (pharmaceutical professionals) training and development of E-platform for experiential education management and administration.	**Indicators of progress:** *What are the quantitative and qualitative indicators showing whether and to what extent the project's specific objectives are achieved?* Indicators related to almost all other Specific Project Objectives such are KREF, OSCE, EE, E-platform; Knowledge retention test blueprint defined and adopted KREF implementation performed at all universities in BiH KREF Implementation Guidelines published OSCE blueprint defined and adopted OSCE implementation performed at all universities in BiH OSCE implementation Guidelines published Recommendations and transforming licensure based on KREF and OSCE published	**How indicators will be measured:** *What are the sources of information that exist and can be collected? What are the methods required to get this information?* Virtual library access, Contents, Number of items KREF and OSCE rules and regulations adopted at BiH HEIs; relevant decisions; new/updated documents posted on HEIs website Report on compulsory KREF and OSCE implementation at all BiH HEIs, students attendance records, test sheets, feedback received from students, teachers and technical staff Equipment listed in institutional inventory records Improvement of satisfaction of graduates based on the results of current situation vs. at the end of the project Improvement of satisfaction of employers based on the results of survey at the beginning vs. at the end of the project Number of documents published	**Assumptions & risks** *What are the factors and conditions not under the direct control of the project, which are necessary to achieve these objectives? What risks have to be considered?* Contribution and support from higher education regulatory authorities and health professionals organizations Motivation of students and health care practitioners to participate and provide feedback Motivation and resistance of academic staff to use novel teaching methods and resources Motivation of students and health care practitioners to participate and provide feedback Changes in management at faculty level in partner HEIs Willingness to change the regulations of the governmental institutions to which these recommendations are addressed	**How the risks will be mitigated:** Emphasizing the importance and role of regulatory authorities and pharmaceutical chambers in improving higher education capacities in the field of pharmacy and the need for joint cooperation Emphasizing the importance of their participation in the project itself and the benefits that their colleagues and they will have as an output Emphasizing the importance of the incorporation of new knowledge transfer techniques; the results of KREF and OSCE might be motivating factor for improvement. Emphasizing the importance of their participation in the project itself and the benefits that their colleagues and they will have as an output Defining an obligation in a Partnership Agreement that a changes in faculty management will not have any consequences on the implementation of the project activities Consolidated recommendation at national level; ministries of Health at entity level included as associate partners

Outputs (tangible) and Outcomes (intangible): *Please provide the list of concrete DELIVERABLES - outputs/outcomes (grouped in Work packages), leading to the specific objective/s.:*	**Indicators of progress:** *What are the indicators to measure whether and to what extent the project achieves the envisaged results and effects?*	**How indicators will be measured:** *What are the sources of information on these indicators?*	**Assumptions & risks** *What external factors and conditions must be realised to obtain the expected outcomes and results on schedule?*	**How the risks will be mitigated:**
WP1 1. Organization of the IQPharm Kick-Off meeting 1.2 Design of the relevant survey questionnaires 1.3 Organization of the IQPharm Introductory Symposium 1.4 Publication of the Report (To publish the Quality of pharmacy studies: Required Changes and Improvements Report) 1.5 Preparation of tendering documentation, procurement of equipment and installation of the equipment WP2 2.1 Structured study visit for the knowledge transfer of QA systems in pharmacy education in EU 2.2 E-platform development (outlining system architecture and user requirements specification) 2.3. KREF development 2.4 OSCE development 2.5 Proposal of free modules 2.6 Developing of the Recommendation for change of legal regulation(s) in accordance with EU Regulations 2005/36 and 2013/55. WP3 3.1 Quality Plan, standards and procedures 3.2 Periodical quality reports 3.3 External Expert appointment WP4 4.1 Dissemination & Exploitation Plan development, implementation and evaluation 4.2 Project logo design and website design and maintenance 4.3 Organization of Project Open Days 4.4 Presentation and publications of project activities and outcomes 4.5 IQPharm Final Symposium planning and organization WP5	IQPharm Quality of pharmacy studies: Required Changes and Improvements Report published in M4 Introductory symposium organized in the M4 100 teachers trained (M4-12) KREF and OSCE assessment tool blueprint adopted (M12) Case studies virtual library developed (M16) Equipment purchased and installed (M12) 20 technical staff trained (M16) Report on pilots KREF and OSCE implementation publicised (M26) Institutional rules & regulations adopted (M28) 400 students took compulsory knowledge retention test and OSCE (M34) KREF and OSCE Evaluation Report adopted and publicised (M35) KREF and implementation Guidelines adopted and publicised (M36 KREF and OSCE -based recommenations transforming pharmacist professional examination publicised (M36) Project Quality Plan prepared and adopted (M6) 6 bi-annual Quality Reports prepared and submitted External expert appointed (M24) & External expert report submitted (M36) Project D&E Plan adopted (M6) Project website launched and social networks profiles created (M4), and regularly updated Project promotional materials, newsletters, pesentations and publications prepared, presented and/or printed Project Introductory and Final Symposium, as well as 12 Project Open-days organized	Required Changes and Improvements Report posted on the project website Position paper posted on the project website Workshops program, and training materials available on the project website Attendance records; Evaluation forms received Blueprints (KREF and OSCE) posted on the project website Virtual library access; Index; No of items Institutional inventory books; equipment photos Attendance lists Report posted on the project website New/updated documents posted on HEIs websites Attendance records; Test sheets scans Report posted on the project website Guidelines posted on the project website and distributed to stakeholders Online platform enrollment and usage data Report poted on the project website Publication posted on the project website Quality plan posted on the project website Quality reports posted on the project website Decision on the External expert appointment, and External Expert Report posted on the project website D&E Plan posted on the project website Website address; Social network profiles; No of website and social media posts; No of visits, no of contacts; feedback received Dissemination materials posted on the project website, and distributed by e-mail Symposium agenda, presentations and reports posted on the project website;	Attendance and input of all relevant stakeholders (policy makers, chambers, professional organizations, and students representatives) Teacher training workshops attendance Realization of financial transactions from EACEA, within deadline specified in the contract Adequate and timely public procurement of required equipment and services Adequate and timely staff training by equipment providers Fulfillment of project timeframe requirements by third party service providers Student motivation for participation and providing feedback Management changes that might affect the timeframe Stakeholders motivation, participation and adequate feedback Adequate mass media interest in project coverage	Emphasizing the importance and role of regulatory authorities and pharmaceutical chambers in improving higher education capacities in the field of pharmacy and the need for joint cooperation Emphasizing the importance of their participation in the project itself and the benefits that their colleagues and they will have as an output Emphasizing the importance of the incorporation of new knowledge transfer techniques; the results of KREF and OSCE might be motivating factor for improvement Adequate and timely planned public procurement of required equipment and services Defining an obligation in a Partnership Agreement that a changes in faculty management will not have any consequences on the implementation of the project activities Consolidated recommendation at national level; ministries of Health at entity level included as associate partners Carefully planned marketing and promotion of the project

5.1 Project Management Structure, Project Management Manual and Consolidated Work Plan 5.2. Project Coordination and Administration 5.3. Project Management Meetings 5.4. Project Management Reports	Steering Committee (SC), Project Support Team (PST) and Work Package Coordinators (WPC) appointed; Project Manul and consolidated workplan adopted (M4) Day-to-day coordination, communication, and reporting SC meetings held regularly Periodical project progress reports prepared and approved Project interim and final reports prepared and submitted to EACEA in time	Attendance records; Photo gallery; Participants evaluation forms Decision on SC, PST and WPCs appointment Project management manual, and consolidated workplan posted on the project website e-mails, timesheets, staff conventions, travel reports, orders, invoices and other relevant supporting documents available SC meetings minutes; Attendance lists signed Project reports submitted to SC and/or EACEA		
Activities: *What are the key activities to be carried out (**grouped in Work packages)** and in what sequence in order to produce the expected results?* 1.1. Organization of the IQPharm Kick-Off meeting 1.2 Design of the relevant survey questionnaires 1.3 Organization of the IQPharm Introductory Symposium 1.4 Publication of the Report (To publish the Quality of pharmacy studies: Required Changes and Improvements Report) 1.5 Preparation of tendering documentation, procurement of equipment and installation of the equipment 2.1 Structured study visit for the knowledge transfer of QA systems in pharmacy education in EU 2.2 E-platform development (outlining system architecture and user requirements specification) 2.3. KREF development 2.4 OSCE development 2.5 Proposal of free modules 2.6 Developing of the Recommendation for change of legal regulation(s) in accordance with EU Regulations 2005/36 and 2013/55. 3.1 Quality Plan, standards and procedures 3.2 Periodical quality reports 3.3 External Expert appointment	**Inputs:** *What inputs are required to implement these activities, e.g. staff time, equipment, mobilities, publications etc.?* Total staff time: 3026 days Manager days: 355 Teacher days: 804 Technician days: 1015 Administrative days: 852 Total staff costs: 232 946,00 EUR Manager costs: 45 412,00 EUR Teacher costs: 72 678,00 EUR Technician costs: 68 426,00 EUR Administrative costs: 46 430,00 EUR Total equipment costs: 239 000,00 EUR Total number of mobilities: 527 Total cost of stay: 183 370,00 EUR Total travel costs: 95 640,00 EUR Total sub-contracting: 47 000 EUR		**Assumptions |& risks** *What pre-conditions are required before the project starts? What conditions outside the project's direct control have to be present for the implementation of the planned activities?* Support from governmental bodies and professional and student associations; Potential delay of activities because of the summer holiday season (July - August). Related risk will be minimized by carefully planning. Related risk will be minimized by carefully planning. Teaching staff readiness to adopt and implement new teaching tools and methods; Motivation of students to participate and provide feedback; Support from faculty management Motivation of academic staff to improve EE and education of EE educators Motivation of pharmaceutical professionals to be included in EE as teacher practitioners and their commitment to learning and teaching of the students Awareness of the relevant regulatory bodies about the importance of harmonisation of licensing process of the pharmacist in the two entities of BiH (Federation of BiH and Republic of Srpska) with EU acts;	**How the risks will be mitigated:** Dedication of all the HEIs management structures towards the achievement of the project goals Efficient procedure of acquisition, VAT exemption and import of equipment Timely availability of human and technical resources Venues are available at partner HEIs for planned training events and dissemination activities Readiness, availability and the interest of target groups to participate in the project activities Realization of financial transactions from EACEA, within deadline specified in the contract Adequate and timely public procurement of required equipment and services Adequate and timely staff training by equipment providers Fulfillment of project timeframe requirements by third party service providers Good communication and timely provision of information necessary for quality reports, from all the contact persons and WP coordinators. Good communication and exchange of information about dissemination opportunities

4.1 Dissemination & Exploitation Plan development, implementation and evaluation 4.2 Project logo design and website design and maintenance 4.3 Organization of Project Open Days 4.4 Presentation and publications of project activities and outcomes 4.5 IQPharm Final Symposium planning and organization 5.1 Project Management Structure, Project Management Manual and Consolidated Work Plan 5.2. Project Coordination and Administration 5.3. Project Management Meetings 5.4. Project Management Reports			Motivation of pharmacist in practice and regulatory authority to participate and provide feedback. Some Institutions could be reluctant to dedicate a sufficient amount of the working hours of their staff for tasks related to implementation of new teaching tools and methods. The successfully implemented WP1 will significantly reduce this risk. To ensure that project will meet its specific objectives and maintaining the project activities on schedule as indicated in the project work plan. Timely definition of Dissemination & Exploitation Plan; Commitment of the project team members to dissemination activities; Consortium partner contact persons dedicated to project activities outcomes accomplishment; Support from partner HEIs management structures in project administration;	Good communication established among the contact persons, project coordinator and project administrator The successfully implemented WP1 will significantly reduce this risk.