Terms of Reference

Consulting Services for the Preparation of the Feasibility Study and Design Documentation for the Public Investment Management Project "Reconstruction of the Building of Heart Institute of the MOH"

BACKGROUND

The implications of the Russian invasion of Ukraine brought about the need for the large-scale rehabilitation, renovation, and modernization of assets across all sectors of the Ukrainian economy. This situation has prompted the prioritization and management of projects of critical and strategic importance at both central and municipal government levels. To address this challenge, in 2023, Ukraine developed a comprehensive roadmap to establish a sustainable Public Investment Management (PIM) system aimed at improving the efficiency of public spending.

Ukraine's PIM system is structured around a single, standardized planning and project cycle. The previous multiple channels for investment projects are being replaced with a Single Project Cycle established under the PIM, resulting in a Single Project Pipeline (SPP) approved by the Strategic Investment Council (SIC), which includes all national, regional, and municipal projects of national strategic interest. The first SPP, comprising approximately 787 projects based on preliminary project evaluation criteria, has already been established by the Government of Ukraine (GoU), with priority projects identified for 2025.

The Preparation of Resilient Projects to Advance Recovery of Ukraine (PREPARE) Project by the World Bank Group ("WB Group") supports Ukraine's recovery and reconstruction by financing technical assistance for the preparation of priority infrastructure investments.

The current state of public healthcare facilities in Ukraine limits the ability to provide care in accordance with modern standards. The existing surgical capacity, diagnostics equipment, and rehabilitation facilities are outdated, with quality of services being compromised which impacts the healthcare outcomes.

The public investment project "Reconstruction of building lit. A of the State Non-Commercial Enterprise 'Heart Institute of the Ministry of Health of Ukraine', the address Kyiv, 5-A Bratyslavska St., and renovation of departments providing medical assistance using organ and tissue transplantation ("Project")" has been initiated by the State Non-Commercial Enterprise "Heart Institute of the Ministry of Health of Ukraine", supported by the Ministry of Health of Ukraine (MoH), and selected for preparation by the State Organization Agency on Support Public-Private Partnership ("PPP Agency") under the Ukraine Government Project Preparation Facility (Ukraine Government PPF) and using funds of the project "Preparation of Resilient Projects to Advance Recovery of Ukraine" (PREPARE Ukraine), supported by the WB Group .

The State Non-Commercial Enterprise "Heart Institute of the Ministry of Health of Ukraine" (the "Beneficiary", the "Heart Institute") serves as a pivotal institution in the country's healthcare system, being the sole clinic in Ukraine capable of performing heart, kidney, liver, and heart-lung complex transplants. The Heart Institute is a leading scientific and clinical institution in cardiology, pediatric cardiology, interventional cardiology, invasive electrophysiology, heart and great vessels surgery, vascular surgery, transplantation and related fields, as well as medical rehabilitation.

The purpose of this Assignment is to develop a comprehensive Feasibility Study for the Project according to national requirements and good international practice, and in line with the PREPARE Project Environmental and Social Management Framework (ESMF) and related instruments, including the Environmental and Social Commitment Plan (ESCP) and Stakeholder Engagement Plan (SEP) and ESMF. The Assignment will also include the development and expert examination of design and cost estimation documentation according to the national standards and requirements defined at the Feasibility Study stage to facilitate high quality Project preparation and implementation.

The Assignment will provide the analytical foundation for the Project's appraisal, approval and transition to the next phases of preparation and implementation in the PIM cycle including detailed design, financing (public and/or private), and the development of tender documentation (subject to further instructions).

PROJECT DESCRIPTION

The Project focuses on reconstructing and modernizing existing facilities of the State Non-Commercial Enterprise "Heart Institute of the Ministry of Health of Ukraine" at 5-A Bratyslavska Street, Kyiv, transforming it into a high-tech international-level transplantation center.

The existing building of the Heart Institute currently faces significant challenges including aging infrastructure, outdated engineering systems, limited space/capacity, non-compliance with modern healthcare and safety standards, etc.)

The Project addresses the rapid growth in transplantation procedures in Ukraine, which increased from 585 in 2023 to over 900 in 2024, with projections exceeding 1,000 per year. It emphasizes the urgent need for postoperative care, rehabilitation, and financial accessibility for vulnerable groups. Within five years, the center is expected to serve over 10,000 unique patients annually.

The Project foresees the reconstruction of the building, with the Heart Institute remaining the provider of medical services within the renovated premises.

The reconstruction of the building, which was commissioned in 2007, is planned without changing its external geometric parameters, including the repair of civil structures, engineering networks, the installation of engineering and medical equipment, and the upgrading of premises to ensure compliance with sanitary and modern healthcare standards.

The Project includes the reconstruction of part of the building "A" (cardiology department and departments that provide medical care with the use of transplantation) of about 5,000 sq. m., including engineering networks and equipment (including medical and laboratory equipment, engineering systems such as HVAC and refrigeration, compressors and vacuum pumping, elevators, electrical and IT equipment with software), and medical furniture. The class of consequences (liability) of the object according to national norms will be defined by design (preliminary - CC2), and the fire resistance level of the building is II, with relevant firefighting and alarm systems to be secured. In 2021, facade of the building and parts of the premises on the 1st, 3rd, and 4th floors were reconstructed at this facility in terms of replacing nuclear medicine equipment, angiography department systems for X-ray endovascular diagnostics and treatment, central sterilization room renovation. The reconstruction also included some energy-efficiency measures. Upgrading of public security arrangements, including shelter arrangement, as well as further improvements in energy efficiency and accessibility, shall be part of the Project. Coordination between ongoing operational and construction activities will be required and corresponding management plans will need to be developed.

Based on the initial estimations, the rehabilitation center is expected to achieve the following key indicators:

Preliminary indicator	**Now**	**Targeted after 2 years upon commissioning**
Number of kidney transplants performed at the center annually	10	70
Number of liver transplants annually	1	10
Number of heart transplants annually	40	100
Number of lung transplants annually	0	12
Number of patients undergoing a full cycle of surgical treatment	6 000	7 200
Number of jobs	444	508
Availability of a continuous clinical pathway model (from diagnostics to rehabilitation)	limited	Introduced and standardized
Area of specialized IT infrastructure (servers, telemedicine, training center), m^2	0	≥150

Based on initial estimations by the Beneficiary, cost of reconstruction is about UAH 1 billion.

According to PIM procedures, the Beneficiary has developed a Pre-Feasibility Study[1]. The next stage of the Project preparation is the development of Feasibility Study. At the moment, further design after the Feasibility Study is envisaged in a single design stage according to national legislation (“working design - RP”) with its design and cost estimation part to be approved by state expertise[1]. The development of design and cost estimation documentation, the support during state expertise, and the preparation of tender documentation are included in the scope of this assignment and will start after the decision of public stakeholders to implement the Project as a result of Feasibility Study approval.

According to the preliminary environmental and social risks screening, the Project has been evaluated as a “substantial” risk project[2] based on PREPARE ESMF classification. The E&S

[1] Available at DREAM: https://dream.gov.ua/, Project ref: DREAM-UA-110825-A8B7B46F

[2] https://pppagency.gov.ua/environmental-and-social-management-in-public-investment-projects-supported-by-ukraine-government-ppf/. The ESMF is the main instrument by which the GoU through the PPP Agency and UG-PPF will comply with the WB Environmental and Social Framework (ESF). ESMF outlines procedures for identifying, assessing, and managing environmental and social (E&S) risks associated with PIP preparatory activities.

risk level may be further re-evaluated and adjusted after the Feasibility Study and design are completed.

FOUNDATIONS FOR THE PREPARATION OF PUBLIC INVESTMENT PROJECTS

Given the Project's strategic importance for Ukraine's healthcare reconstruction and its inclusion in priority investment planning, the Government has committed resources through the Ukraine Government PPF to ensure high-quality Project preparation that meets both national regulatory requirements and international standards and good industry practice.

Good industry practice for feasibility studies involves a structured approach to assess the viability of a project before significant investment. This includes thorough demand analysis, technical assessments, environmental and social assessments, climate assessments, economic and financial analysis, and a review of legal and regulatory considerations. It is crucial to involve key stakeholders early on and maintain a clear, concise study that outlines findings and recommendations.

As a result, it is expected that the following frameworks will be considered during this assignment:

Five Case Model. Ukraine's adaptation of the Five Case Model as good international practice for the preparation of public investment projects begins with a clear articulation of the strategic need for each investment. This involves:

1. Aligning projects with national recovery and development strategies, including the State Program for Recovery and the EU accession roadmap
2. Ensuring that projects address critical needs such as infrastructure reconstruction, economic resilience, and social cohesion
3. Engaging stakeholders, including local authorities and civil society, to validate the strategic relevance of proposed investments.

The Five Case Model is a structured approach to developing business cases for public investment, originally developed by the UK Treasury. It is widely recognized as an international good practice for appraising and planning public sector projects, ensuring that investments are justified, affordable, and deliver value for money. The model comprises five interrelated cases:

4. Strategic Case – Establishes the rationale for intervention and its alignment with strategic objectives
5. Economic Case – Assesses value for money, comparing options and their net benefits to society
6. Commercial Case – Examines procurement, contractual, and market arrangements
7. Financial Case – Demonstrates affordability and funding arrangements
8. Management Case – Details deliverability, governance, and monitoring arrangements.

This methodology is applicable to policies, strategies, projects, and investment programs, and is increasingly being adopted by countries seeking to strengthen their public investment management (PIM) systems.

LEGISLATIVE FRAMEWORK, STANDARDS AND REQUIREMENTS

Ukrainian laws and requirements, the World Bank framework and guidelines, and other international good practice should be taken into consideration as applicable but not limited to the assessment of project's feasibility, including the environmental and social implications.

National Ukrainian Legislation. The Ukrainian legal framework applicable to the preparation of public investment projects encompasses various laws and regulations, a considerable part of which is dedicated to the governance of public finance matters. Key regulations relevant for the development of the Feasibility Study under this Assignment include, but are not limited to:

- Regulation of the Cabinet of Ministers of Ukraine (CMU) No. 527 dated 28 February 2025 (as amended), which approved, among others, (i) the Procedure for the Preparation of Public Investment Projects and Public Investment Programs, and (ii) the Procedure for the Appraisal of Public Investment Projects and Public Investment Programs
- Regulation of the CMU No. 232 dated 28 February 2025 (as amended), which approved, among others, the Procedure for Distribution of the State Budget Funds for the Preparation and Implementation of Public Investment Projects and Public Investment Programs
- Order of the Ministry of Finance of Ukraine (MFU) No. 131 dated 28 February 2025 (as amended), which approved the Methodology for Determining the Sources and Mechanisms of Funding for Public Investment Projects and Public Investment Programs
- Order of the MFU No. 316 dated 23 June 2025 (as amended), which approved the Methodology for Calculating the Value of Public Investment Project.

During the preparation of the Feasibility Study, the Consultant should also consider the Guidelines for the Development of the Mid-term Plan of the Priority Public Investments and for the Preparation, Appraisal, and Implementation of Public Investment Projects and Public Investment Programs[3].

Regarding the requirements for the environmental and social (E&S) assessment and other relevant analyses, which will be an integral part of the Feasibility Study, the Methodological Recommendations on analyzing the environmental impacts of public investment projects, as well as analyzing compliance with the requirements for inclusiveness, accessibility and the Sustainable Development Goals during the preparation of public investment projects at national, regional and local levels[1], should be taken into account.

In alignment with the Beneficiary, during the development of the Feasibility Study, the Consultant shall identify and account for, where applicable and to the extent possible the requirements of national legislation, building norms and sectoral standards for design and cost estimation documentation development and approval including, at a minimum but not limited to:

[3] Available in Ukrainian at https://cms.dream.gov.ua/uploads/Posibnik_UPI_c42d6fcb6a.pdf.

- State Building Norm A.2.2-3:2014 on Composition and Content of Construction Design Documentation (ДБН А.2.2-3:2014 "Склад та зміст проектної документації на будівництво"[4]
- State Building Norm V.2.2-10:2022 "Health Care Institutions. Basic Provisions" (ДБН В.2.2-10:2022 "Заклади охорони здоров'я. Основні положення")[5]
- State Building Norm A.2.2-1:2021 "Composition and Contents of Studies on Environmental Impact Assessment" (ДБН А.2.2-1:2021 "Склад і зміст матеріалів оцінки впливів на навколишнє середовище (ОВНС)"[6]
- Law of Ukraine "On Environmental Impact Assessment" (Закон України "Про оцінку впливу на довкілля")[7].

The Consultant is encouraged to apply in his assessment and solutions international good practice such as EU and other international guidelines applicable to design and operation of healthcare facilities, inter alia, the following sources may be used:

- WHO Europe. Hospitals of the future: a technical brief on re-thinking the architecture of hospitals[8]
- WHO. Safe, climate-resilient and environmentally sustainable healthcare facilities[9]
- World Bank. Resilient, Green and Inclusive Health Facilities. Guidance on planning, design, and operation[10].

In addition, social-related laws (listed below but not limited to) are also referenced to ensure that the Feasibility Study, design and cost estimates anticipate compliance during later implementation applied consistently with international social safeguard standards:

- Law of Ukraine "On Access to Public Information" (No. 2939-VI, 2011)[11]
- Law of Ukraine "On Public Consultations" (No. 3841-IX, 2024)[12]
- Labor Code of Ukraine (1971, as amended)[13]
- Law of Ukraine "On Occupational Safety" (No. 2694-XII, 1992)[14].

Regarding the requirements for the financial model, for cost-benefit analysis (CBA), value-for-money analysis (VfM), and other relevant analyses, which will be an integral part of the development of the investment feasibility study, the Methodology for conducting efficiency analysis of public-private partnership implementation[15] may be used as the closest reference.
Additionally, for fiscal risk analysis, the Methodology for fiscal risk assessment of PPP projects[16] may be used as a reference as well.

[4] Available in Ukrainian at https://e-construction.gov.ua/files/new_doc/3683782065003693791/2025-07-24/b1f70289-cdae-41e9-b5e1-257e850cc175.pdf
[5] Available in Ukrainian at https://e-construction.gov.ua/laws_detail/3530025933949896110?doc_type=2
[6] Available in Ukrainian at https://e-construction.gov.ua/laws_detail/3074091730048386648?doc_type=2
[7] Available in Ukrainian at https://zakon.rada.gov.ua/laws/show/2059-19#Text
[8] https://www.who.int/europe/publications/i/item/WHO-EURO-2023-7525-47292-69380
[9] https://www.who.int/publications/i/item/B09119
[10] https://documents1.worldbank.org/curated/en/099032725113028865/pdf/P178556-4158cc18-04a0-4127-a787-79810ee19264.pdf
[11] Available in Ukrainian at https://zakon.rada.gov.ua/laws/show/2939-17#Text
[12] Available in Ukrainian at https://zakon.rada.gov.ua/laws/show/3841-20#Text
[13] Available in Ukrainian at https://zakon.rada.gov.ua/laws/show/322-08#Text
[14] Available in Ukrainian at https://zakon.rada.gov.ua/laws/show/2694-12#Text
[15] Available in Ukrainian at https://zakon.rada.gov.ua/laws/show/z0109-22#Text
[16] Available in Ukrainian at https://zakon.rada.gov.ua/laws/show/351-2019-%D0%BF#Text

World Bank Guidelines and Frameworks. Deliverables under Public Investment Project (PIP) preparation financed via Ukraine Government PPF are subject to the policies and requirements of the World Bank Group (WBG), such as the WBG Environmental and Social Framework (ESF)[i], which includes 1-10 Environmental and Social Standards (ESSs); WBG Environmental, Health, and Safety (EHS) General Guidelines and Good International Industry Practice (GIIP), EHS Guidelines for Health Care Facilities, Good Practice Note – Addressing SEA/SH in Investment Project Financing (IPF) Involving Major Civil Works[17] and the WB Reference Guide for Climate-Smart Public Investment[18] and climate change policies.

The deliverables need to be prepared in accordance with PREPARE Environmental and Social Framework instruments: ESCP[19], SEP[20] and ESMF.

OBJECTIVES OF THE ASSIGNMENT

The overall objective of the assignment is to support the Beneficiary, MoH and PPP Agency with the two-phase preparation of the "Reconstruction of the Building of Heart Institute of the MOH" project: Phase 1) preparation of a consolidated feasibility study, including a preliminary ESIA after the confirmation of GoU to implement the project, Phase 2) preparation of detailed design, update/preparation of full ESIA, ESMP and SEP, and preparation of biding documents for the works execution based on the task descriptions provided below.

Specific objectives include:

Phase 1

- Review available Project-related materials and confirm/adjust the scope of the Project
- Review the assessment of the Project from all key dimensions (strategic, commercial, technical, legal, E&S, economic, financial, etc.) done at Pre-Feasibility Study stage
- Determine the most feasible and cost-effective sustainable reconstruction and modernization option.
- Identify major risks/issues and propose solutions to those risks/issues
- Prepare a first Stakeholder Engagement Plan - SEP (draft) that briefly maps key stakeholders, outlines suitable engagement methods and a preliminary consultation schedule, includes an initial hospital-specific GRM, and defines basic communication, disclosure, accessibility, and role-sharing arrangements.
- Prepare a stand-alone preliminary Environmental and Social Impact Assessment (preliminary ESIA) according to requirements set in this ToR. The preliminary ESIA

17 chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://thedocs.worldbank.org/en/doc/6f3d9ddc6010c4221315dd1282958e41-0290032022/original/SEA-SH-Civil-Works-GPN-Third-Edition-Final-October-12-2022.pdf?utm_source=chatgpt.com

18 https://documents1.worldbank.org/curated/en/099455012062224218/pdf/P1725690cd27300c30b5f101fd728276fe7.pdf

19 https://pppagency.gov.ua/wp-content/uploads/2025/02/proud-escp-draft-appraisal-feb-10-2025-clean.pdf

20 https://pppagency.gov.ua/wp-content/uploads/2025/02/proud-escp-draft-appraisal-feb-10-2025-clean.pdf

serves to further identify and assess environmental and social risks and impacts of the project design, building on the results of the feasibility study and the conceptual design, as it becomes available, and to demonstrate that environmental and social risks and impacts of the project design (can be are avoided, reduced to the extent possible, mitigated or compensated if necessary. The ESIA may contribute as needed to the analysis of design alternatives in the feasibility study.

- Prepare conceptual architectural and engineering designs in compliance with national regulations and healthcare standards. The conceptual design shall be carried out as detailed hereunder, including all required surveys and investigations
- Provide reliable cost estimates, financial and economic analyses, and implementation recommendations.
- Assess different procurement models and recommend the most suitable one, including procurement of construction, Design-Bid-Build, performance-based models such as EPC, EPC+, and DBO, etc.
- Support consultations with market participants and potential financiers to identify their interest in the Project
- Complete the Feasibility Study for GoU decision making regarding whether to advance with the Project to the design and implementation phase

<u>Phase 2</u>

- Align on requirements applicable for the subsequent design stage
- Provide necessary support to the Beneficiary during the Project's evaluation
- Perform the development of detailed design and cost estimation documentation and support the Beneficiary in the submission of design and cost estimation documentation for expertise and obtaining of expertise approval.
- Update/finalize a stand-alone full ESIA, ESMP and uupdate/finalize the SEP based on the SEP draft prepared during Phase 1.
- Draft bidding documentation for reconstruction works according to standards and policies (national or specific international) agreed with PPP Agency at later stages.
  If requested by the PPP Agency and the Beneficiary, engage with financiers and prepare bidding documents for implementation, depending on the selected procurement mechanism.

SCOPE OF SERVICES, TASKS AND EXPECTED DELIVERABLES

The Consultant shall carry out, but not be limited to, the following tasks:

1. INCEPTION PHASE

The Inception phase is aimed at (i) collection and analysis of available data from the Beneficiary and other available sources, (ii) support the Beneficiary in preparing and gathering outstanding information, (iii) perform initial required consultations with key Project stakeholders, (iv) identify high level potential E&S risks and management status and fill up required information gap identified in E&S screening to confirm the E&S risks category of the Project, (v) update the expected Feasibility Study preparation approach, define key assumptions and confirm them with the PPP Agency and the Beneficiary for further Feasibility Study and subsequent design preparation.

This phase will include, inter alia:

- Clarifying the list of key national and international regulatory frameworks and requirements applicable to each part of the Feasibility Study and subsequent design stage, including sector-specific requirements.
- Collecting and reviewing the initial data needed for the Feasibility Study development, including the Pre-Feasibility Study and Project screening and scoping information and documentation[21].
- Ensuring an iterative process of work, including regular updates and interim consultations to validate key assumptions and findings with the Beneficiary, PPP Agency and other stakeholders, prior to finalization of the Feasibility Study.
- Reviewing the existing Project's alignment with national healthcare strategies, transplantation program objectives, EU integration requirements, and sustainable development goals. Validating problem definition, intervention logic, and contribution to strategic healthcare outcomes.
- Analyzing key demographic trends, epidemiological data for end-stage organ diseases, patient socio-economic profiles, and geographic accessibility.
- Assessing the current transplantation services market including volumes by organ type, waiting lists, mortality rates, referral patterns, and capacity utilization. Reviewing Ukrainian Transplant Coordination Center, NHSU and MoH data on transplantation demand-supply gaps and projections for service requirements.
- Assessing the Beneficiary's current capacity, clinical profiles, support functions, asset registers, staffing levels, and operational performance data.
- Reviewing the Beneficiary's financial performance for the last three years and available financial plans, including NHSU reimbursements, other revenue sources, and operational costs breakdown by category (staffing, pharmaceuticals, utilities, maintenance, consumables).
- Listing and analyzing of reconstruction and innovation standards and requirements, including sanitary requirements, proven innovative approaches to optimize resource consumption, including Safe and SMART Climate Resilient Hospital standards, integrating climate-resilient infrastructure – e.g. energy efficiency measures, "green hospital" approaches, EDGE certification opportunities, and sustainable technologies. Preliminary defining of recommended innovative approaches to optimize resource consumption (e.g., an independent energy supply option, "green hospital" approach/EDGE and other certification, energy, water, heating, etc.) to account under the Feasibility Study and design phases.
- Performing a site visit, including a visual inspection of the site, building, facilities, networks, equipment and analysis of available technical and design documentation to verify assets technical condition and needs for demolition/reconstruction. It should include scan/initial assessment of energy efficiency, fire safety, emergency preparedness, civil defense, and safety (including mobility for disabled patients and patients' safety during works and operation), accessibility to conclude on respective measures to be anticipated in the Feasibility Study and as further requirements for design stage. This also includes a review of the hospital's planned operating approach while the civil works are underway (demolition and construction). The Consultant should evaluate the suitability and readiness of the proposed Project's sites for

[21] Selected Consultant will be shared with Pre-Feasibility Study and supporting information by the Beneficiary. Project's E&S risks screening, preliminary stakeholder mapping, draft ESMP and SEP prepared according to ESMF (add link when available) will be shared for use and further adjustments by the Consultant as well.

implementation, identifying any technical constraints or additional requirements that could affect Project delivery.

- In cooperation with the Beneficiary, identifying and describing of the technical parameters of the buildings, utilities, land plot and Project's components per Project's alternatives/options. Considerations as of the facility organization in light of efficiencies related to operating theatres and intensive/critical care unit need to be accounted.
- Providing a summary of key approvals, authorizations and permits available and required for implementation of the Project, including the status of obtaining formal initial data for design by the Beneficiary.
- Supporting the Beneficiary in obtaining MoH "no objection" for reconstruction, urban planning and limitations, technical conditions and requirements and other input data for design, including structural studies as deemed required.
- Checking and providing recommendations for addressing the material legal issues relating to land plots, if any.
- Reviewing and confirming the preliminary Project's E&S Risks Screening (E&S Screening forms completed at the Pre-feasibility Study stage will be provided to the Consultant awarded the contract).
- Literature review, and further investigation of Environmental and Social Risk Classification
    - Highlighting potential E&S risks that might pose a limitation on future operations and/or need urgent intervention/remediation, including but not limited to the following:
    - High-level Occupational Health, Safety, and Environmental (OHSE) audit of existing management practices, including construction activities, wastes and handling of medical waste to evaluate the ability and capacity for risk management and mitigation measures implementation, and to ensure these aspects are duly considered during Project preparation and implementation.
    - Availability of core environmental permits and requirements as of their update.
- Assessing the Beneficiary's organizational readiness for expanded services including staffing, systems, and management capabilities.
- Reviewing available preliminary equipment and works specifications and costs estimations (CAPEX and OPEX).
- Reviewing stakeholder mapping and stakeholder activities (ensuring inclusion of vulnerable groups and, where relevant, gender-responsive engagement) suggested for the Inception phase and supporting the Beneficiary in planning and implementing respective activities relevant to the Inception Phase, Feasibility Study and Design phases (preliminary stakeholders' identification will be provided to the Consultant awarded the contract).
- Identifying interconnectivity and potential synergies of the Project and other developments considered by the Beneficiary; defining associated facilities if any.
- For each field of analysis in the Feasibility Study, providing the methodology and listing key preliminary assumptions and key inputs (if applicable).
- Identifying key risks, gaps, and challenges of the following Feasibility Study and design and suggesting mitigation approaches that require confirmation with stakeholders. Preparing a draft of the Project's risk matrix which would be elaborated during the next stages of Feasibility Study and design.

As a result of the activities at this phase, the Consultant is expected to deliver the Inception Report to align with the Beneficiary on key data sources, inputs, methodology and assumptions for the Feasibility Study development and subsequent design stage and to develop a Project presentation and a teaser for the first sounding of market participants and financiers. The Consultant shall help with this sounding, as needed and agreed with the PPP Agency.

Indicative structure / table of contents of the Inception Report is provided in Annex 1.

2. FEASIBILITY ASSESSMENT

The Consultant should deliver a Feasibility Assessment for the Project that will assess whether it is strategically justified, economically feasible, commercially viable, financially realistic, and management feasible (following the framework of the Five Case Model).

Indicative structure/table of contents of the Feasibility Study is given in Annex 2.

For this purpose, the Consultant should perform the following tasks.

2.1 PROJECT DESCRIPTION

2.1.1 Overview of the Current State and Need Identified

Based on the information identified and analyzed in the Inception phase, the Consultant should provide a description of the current state and needs for the Project. Preliminary, it may include:

- Overview of the existing assets within the perimeter of the Project
- Overview of the Beneficiary's current and planned operations
- Overview of the Beneficiary's historical performance
- Capacity limits and needs for reconstruction/construction.

2.1.2 Definition of the Investment Project

The Consultant should provide a summary of the investment project, its key goals and parameters per Project phase and components.

Descriptive summaries should be supported with visualization and reference to the details given under relevant chapters of the Feasibility Study.

2.2 STRATEGIC JUSTIFICATION

The strategic substantiation for the Project should cover strategic alignment analysis under which the Consultant should confirm and complete the analysis of the Project's strategic alignment conducted at the pre-feasibility stage, specifically, that the Project aligns with national, regional, and local as well as sectoral strategic priorities and contributes to achieving Ukraine's healthcare and sustainable development objectives.

This analysis should cover, inter alia:

a) Define the relevant framework and confirm compliance with strategic documents
b) Perform beneficiaries and benefits analysis

c) Reflect alignment with sustainable development goals and cross-cutting considerations, including inclusive development assessment.

As part of the Strategic Case, the Consultant will examine other projects initiated by the Beneficiary that may impact Project preparation or implementation and assess their potential impacts and synergies, as well as coordination opportunities.

2.3 ECONOMIC JUSTIFICATION

The Consultant should identify, evaluate, and select the optimal technical approach for achieving Project objectives. This requires analysis of multiple technical solutions defined in the Pre-Feasibility Study and supported by findings and collected initial data and inputs for the Feasibility Study at the Inception phase, including applicable construction and sectoral standards. This stage requires comprehensive analysis of benefits, disadvantages, and risks, leading to the selection of the final technical solution through rigorous economic analysis including economic, technical, E&S and climate impact aspects of the proposed options. This analysis should cover, inter alia:

2.3.1 Demand Assessment

The Consultant should establish the evidence base for the Project's necessity by analyzing current and future demand for respective services. This assessment provides the foundation for determining appropriate Project scope and scale and identifying beneficiaries.

The analysis should cover at least the following aspects:

Historic Market Analysis

a) Provide a comprehensive description of the healthcare situation in Kyiv and Ukraine, focusing on transplantation services and related medical care.
b) Analyze current demand for transplantation services using demographic, epidemiological, and clinical data from the Ministry of Health, National Health Service, and international benchmarks.
c) Conduct a high-level assessment of demand for heart, lung, kidney, liver, and combined organ transplantation services.
d) Incorporate population health trends, disease burden analysis, and international transplantation rate comparisons.
e) Provide a description of existing healthcare facilities (both private and public) offering related services, their capacity, specialization, and role in the broader healthcare ecosystem.

Demand Forecasting and Service Requirements

a) Forecast demand for health services based on Beneficiary's, Ministry of Health data, and demographic trends for a projected period of 15-30 years (the period may be clarified with the PPP Agency, considering also the horizon of existing national strategic documents and plans in the sector).
b) Translate demand assessment into specific clinical services and inpatient and outpatient requirements, including rehabilitation, bed numbers, operating theater capacity, intensive care units, and support services needed to meet projected demand.
c) Consider and take into account ongoing or planned projects/activities and sectoral programs that may affect the demand of the current project, ensuring that the demand assessment reflects broader rehabilitation market dynamics and long-term sector development trends.

2.3.2 Technical solutions Options and Selection

The Consultant will review and complete the assessment of technical feasibility of possible options/solutions for achieving Project objectives and contributing to target outcomes, comparing different approaches and options.

The level of detail of the technical assessment shall correspond to the national requirements set for the preparation of the Feasibility Study and cost estimation under Public Investment Projects as well as be advanced enough in technical perspective to provide adequate information for potential financing parties and data and inputs for the further smooth Project transfer to design and implementation phases.

This anticipates support to the Beneficiary in obtaining and collecting initial data and requirements for the subsequent preliminary design stage and analysis of options for technical solutions with comprehensive evaluation, including a scenario that does not provide for the implementation of any actions (leaving the situation in the current state) and covering the following aspects:

- Basis for design:
    - Medical assignment
    - Urban planning conditions and limitations
    - Technical conditions and requirements for connections (utilities
    - Engineering studies (e.g., geological and topographical), results of technical investigations and scoping for demolishing works
    - Other identified as needed.
- Medical program (key assumptions and process description, conceptual solutions), technical and economic indicators, resource, energy and utility balances
- Site layout, conceptual space-planning, architectural and structural layouts, and visualization
- Layouts and specifications for equipment (medical equipment and furniture, diagnostic and laboratory, elevators, engineering systems and networks, IT, BMS, etc.)
- Premises arrangement per category
- Preliminary energy efficiency and renewable energy solutions
- Preliminary public safety, shelter and fire safety solutions
- Preliminary barrier-free and wayfinding solutions
- Preliminary scope of work for demolition, reconstruction, and construction including buildings, networks and equipment
- Preliminary estimates of costs, advantages, disadvantages, and risks for each technical solution option and recommendations regarding the preferable option.
- Preliminary assessment of potential environmental and social impacts for each of the project's alternatives and design options and indicative costs of remediation

For further details on indicative overview of key elements of technical assessment at Feasibility Study and design stages, please refer to Annex 3.

2.3.3 Preliminary Environmental and Social Impact Assessment (preliminary ESIA – a standalone document)

In addition to the technical, economic, financial analysis, and environmental and social considerations within the feasibility study, a stand-alone preliminary environmental and social assessment will be prepared. The preliminary ESIA and Feasibility Study shall be prepared in an interactive manner. The Feasibility study will provide crucial Project details such as conceptual designs and logistical plans which are essential inputs for the ESIA. In turn, the preliminary ESIA's findings about the environmental and social risks and impacts of such designs and plans, shall be used to influence and refine the Feasibility Study's technical and financial analysis.

The aim of this assessment is, therefore, to provide an initial description of environmental and social conditions around the project location, establish legal and institutional framework against which the project will be implemented, identify the potential environmental and social risks and impacts, recommend mitigation and monitoring measures, and identify E&S instruments required for the identified project investments in accordance with relevant national frameworks and the World Bank's ESF, as well as its cost estimation.

The Consultant will conduct a preliminary assessment of potential environmental and social impacts for each of the Project's alternatives and design options, and prepare as separate documents the preliminary Environmental & Social Impact Assessment (preliminary ESIA) and related Environmental and Social Management Plan (ESMP), as well as the Stakeholders Engagement Plan (SEP) for the preferred Project design option consistent with national legislation, WB standards, occupational safety standards, and international best practices for healthcare infrastructure projects.

The preliminary ESIA aims to identify, predict, evaluate, and mitigate potential environmental and social impacts that may arise from the reconstruction and modernization of the Heart Institute building.

The preliminary ESIA will facilitate informed decision-making and sustainable project development aligned with regulatory requirements and international best practices, providing a robust framework for environmental and social management accounting for the level of identified risks.

2.3.3.1 E&S Assessment in Line with National Legal Regulation on PIM Process

The Consultant shall assess the project in line with the Methodological Recommendations approved by Order No. 353 of the MoE (28.08.2025), stipulating the requirements for the PIM process at the stage of preparing a feasibility study, specifically:

1) Assessment of the potential contribution of the Project activities to the achievement of one or more of the environmental and climate objectives listed in Annex 1 to the Methodological Recommendations
2) Analysis of the compliance of the activities envisaged by the project with the 'Do No Significant Harm' principle in relation to the six environmental and climate objectives
3) Assessment of emissions/removals or reduction of emission/increase in removal of greenhouse gas emissions expected to result from the implementation of the project activity

4) Analysis of the need for an environmental impact assessment following the Law on EIA/OVD (EIA/OVD).

2.3.3.2 Objectives of preliminary assessment of potential environmental and social impacts:

- Assess baseline environmental and social conditions at and around the project site.
- Identify potential positive and negative impacts associated with the proposed reconstruction and operation.
- Evaluate alternatives to minimize adverse impacts.
- Develop mitigation, management, and monitoring measures to prevent or reduce negative effects.
- Ensure stakeholder engagement and disclosure of information consistent with international safeguards.
- Prepare a separate preliminary ESIA and ESMP to guide implementation.
- Prepare a separate SEP.

<u>Social Impact Assessment</u>

The Consultant will perform preliminary social impact assessment of all proposed Project's options in sufficient detail to assist in the selection of the preferred option. The primary purpose of this preliminary task is to identify significant potentially adverse social impacts as well as indicative costs of remediation.

Once the preferred Project's option is selected, the Consultant will prepare a more detailed social assessment and a preliminary Environmental and Social Management Plan for this option. Specific activities under this task will include the following:

- Determine the area and the population affected by the Project.
- Assess the positive/negative impacts of the Project on the population of the affected areas.
- Separate long-term effects (such as resettlement/loss of income stream/livelihood) from the short–term benefits/dislocation associated with the Project.
- Analyze risks and impacts of the Project in the context of specific project cycles (pre-construction, construction, operations).
- Conduct disclosure and consultation meetings with the affected communities.

<u>Environmental Impact Assessment</u>

The purpose of this section of the Feasibility Study is to prepare preliminary environmental impact assessments for each of the proposed Project's options and a detailed, separate preliminary environmental assessment report (ESIA) as well as a preliminary Environmental and Social Management Plan (ESMP) for the preferred Project's option.

The Consultant will perform preliminary environmental impact assessment of all proposed Project's options in sufficient detail to assist in the selection of the preferred option. The primary purpose of this preliminary task is to identify significant potentially adverse environmental impacts as well as indicative costs of remediation.

The potential environmental impacts may include impacts or changes to the following:

- Air quality;
- Water quality;

- Soil quality;
- Noise and vibration levels;
- Waste generation and hazardous substances handling;
- Natural resources;
- Biodiversity

Specific activities for the preliminary environmental and social assessment includes:

- Determine the nature of national Legal Framework governing key environmental issues. Establish if the project, as currently designed, satisfies those requirements, and how these compare to good international practice. If major gaps and discrepancies are detected, determine what measures/modifications are necessary to assure compliance. This information shall be incorporated into a "Policy, Institutional and Legal Framework" section of the Environmental Assessment (EA) report and shall be obtained by reviewing existing legislation or, if required, meeting representatives of the relevant authorities.
- Review the existing data pool to assess the completeness, quality and relevance of this information and to identify inconsistencies and/or gaps as the basis for the EA report and ESMP. This should include field data retrieved from investigation campaigns, analytical data (chemical analyses of environmentally relevant parameters), published data and information on regional / local environmental conditions.
- Analyzing the Beneficiary's experience to coordinate operational and reconstruction activities and provide recommendations for the mitigation of social risks via properly organized planning of works, community and stakeholder engagement and addressing social aspects ensuring benefits for patients and the wider community.
- Assessing the Beneficiary's organizational readiness for expanded services including staffing, systems, and management capabilities.
- Reviewing available preliminary equipment and works specifications and costs estimations (CAPEX and OPEX).
- Prepare an impact assessment, propose mitigation measures and prepare a preliminary Environmental and Social Management Plan (ESMP) based on key environmental issues along the Project area.
- Investigate the connection between the proposed Project and the regional development master plan and induced development caused by the project. Some of the induced developments of the Project.
- Conduct a preliminary consultation process to assure that key aspects of the ES assessment are fully documented in accordance with the national legal requirements and WB ESF and demonstrate the validity of the process while respecting local values.
- Initial environmental permitting plan on schedule, estimated cost and party responsible for developing the required environmental document and obtaining the environmental permit.
- Prepare recommendations for further safeguards work on the project assuming that this Project will receive funding for final detailed engineering and construction.

The Consultant will identify and, where appropriate, assess the potential environmental and social risks and impacts of associated facilities. Such facilities shall comply with the requirements of the WB ESSs to the extent that the Beneficiary has control over, or can reasonably influence, their development and operation.

The Consultant will recommend measures to address identified risks and impacts in a manner proportionate to the level of control or influence. Specific activities under this task will include the following:

- Identification of applicable policy, legal, and administrative framework, including environmental permits and approvals requirements.
- Identification of Project location and area of influence.
- Project components description such as infrastructure, technology, processes involved, associated facilities/activities. Collection and analysis of data on the existing baseline environmental conditions and aspects that may be affected by, or may influence the Project, including topography, geology, hydrology, climate, land use, air quality, water resources and related conflicts, waste and wastewater management, biodiversity and protected areas, cultural heritage etc.
- Collection and analysis of relevant social and economic profiles of the Project area, commensurate with the risks posed by the current site operations and the Project, including population characteristics, demographics, key vulnerable groups in the project affected area, communications, available infrastructure, land issues etc.
- Risks linked to oxygen concentration plants and biomedical waste management plants (incineration) that may present explosion risks and nuclear medicine and diagnostics elements to be appropriately stored.
- Medical Waste Management Audit especially waste segregation capacity, container use, collection transport and storage, final disposal, monitoring practice etc.
- Risk assessment for air quality requirements, infection control, utility requirements, noise, vibration, and other hazards that affect care, treatment, or services
- If applicable, Risk Hazard Assessment of the site for identifying historical soil and groundwater contamination, including legacy contaminants such as petroleum hydrocarbons, heavy metals, asbestos, PCBs, and pesticides.
- Access to reliable and sufficient drinking water sources without compromising the water needs of the local community and how the wastewater produced during operation stage will be managed in accordance with actual norms in force; impact of construction and renovation on domestic water systems and potentially harmful waterborne pathogens that can be spread and released during construction activities.
- Potential risks related to job displacement, economic disruption during construction works or loss of professional medical staff.
- Potential social risks to patients during construction for example if they need to be relocated or transported.
- Analysis of publicly available information via media search about the Project, Beneficiary, sector, country, etc., to identify relevant news coverage, potential gaps or issues that might require specific management.
- Analysis of the Project and its alternatives, including risks categorization and a systematic comparison of feasible options, including the “no project” scenario, considering environmental and social impacts, feasibility of mitigation measures, and associated costs and benefits.
- Identification and assessment of potential positive and negative environmental and social impacts of the project. Impacts should be quantified, where possible, and appropriate mitigation measures proposed to address adverse effects.
- Identification of all potential environmental and social risks and impacts associated with the Project including but not limited to chemical (lead paint, asbestos, VOCs,

hazardous waste), biological (especially waterborne pathogens), physical (noise, dust, vibrations, impact on local traffic and road safety), social (health and safety and accessibility impacts on communities, including sensitive receptors, socio - economic impacts, land related impacts etc.).

- Assessing gender equality and human capital considerations and recommending relevant measures for integration into Project design and implementation, where appropriate.
- Describing residual impacts and opportunities for environmental enhancement.
- Carry out Stakeholder mapping to identify a list of key Project stakeholders including relevant authorities, patients, staff, residents of the affected communities (including vulnerable groups), local NGOs, suppliers, subcontractors etc., analyzing them according to their interests/influence/potential impact, with recommendations on how and at which Project stage they should be engaged.
- Support the Beneficiary in organization and documenting a public consultation process with key stakeholders, including the relevant governmental organizations, authorities, local residents, civil society organizations, and representatives of identified vulnerable groups, to timely gather feedback and address their concerns.

Specific activities and E&S requirements under this task are presented in **Annex 4.**

Findings from the preliminary ESIA shall be integrated into the feasibility report to ensure that environmental and social considerations are reflected in cost analysis, design, and implementation planning.

2.3.4 Climate Assessment

The Climate Assessment shall include such elements as:

- Screening[22] to perform an initial assessment of a Project's climate vulnerability and identify potential climate-related risks.
- Assessment as more in-depth analyses of climate change adaptation options, adaptive decision-making, and evaluation of net effects of the Project on greenhouse gas emissions.
- Integration of identified risks and adaptation measures into conceptual solutions and requirements for subsequent design documentation development.

2.3.5 Socio-Economic Effects Analysis

The Consultant should quantify and validate the economic and social benefits of the Project, providing evidence for its economic viability. This includes confirmation of socio-economic effects with quantitative and qualitative indicators, while sensitivity analysis is essential for major projects to identify critical risk variables. This analysis should cover, inter alia:

a) Analyze health impact, including lives saved, quality-adjusted life years gained, disability-adjusted life years averted, and improvements in health outcomes for transplant recipients.

[22] E.g. using WB Climate and Disaster Screening Tools available at https://climatescreeningtools.worldbank.org/

b) Conduct economic benefits analysis including healthcare cost savings, productivity gains from improved health outcomes, employment effects, and regional economic development impacts.
c) Identify and analyze economic expenses related to the Project implementation.

Finalization of the cost-benefit analysis with necessary sensitivity analysis and confirmation of the selected technical solution will be made in Task 2.5.

2.4 COMMERCIAL JUSTIFICATION

2.4.1 Procurement Strategy Development

The Consultant will identify optimal procurement options for the Project based on legal requirements, market conditions, and project characteristics. The shortlist of options should then be tested for value for money during further analysis as part of the financial case to select the best procurement approach. At this stage, the analysis should be qualitative and cover, inter alia:

2.4.2 Procurement Models Analysis

a) Analyze procurement models suitable for the Project, including traditional construction procurement, design-bid-build approaches, integrated project delivery methods, as well as performance-based procurement models (e.g. EPC, EPC+, DBO, etc.) and public-private partnership options.
b) Analyze the procurement models for the Project from the Ukrainian law perspective, including in terms of the material legal issues (such as regulatory gaps/barriers), procedural requirements (i.e., which regulatory procedure(s) applies to each model under the law), and implementation timelines.
c) Assess the practical possibilities of implementing each procurement model, including practical advantages and disadvantages of each model.
d) Propose the optimal contract structures, risk allocation mechanisms, and performance-based contracting approaches (as may be appropriate) based on analysis of the procurement models.

2.4.2.1 Procurement Strategy Selection and Justification

a) Define and justify the procurement strategy for the final technical solution based on the analysis of the procurement models.
b) Select the optimal procurement model considering project complexity, market capacity, and regulatory requirements.
c) Determine the contract structuring strategy (e.g., single large contract vs. multiple specialized contracts, general scope of the project contract documents).
d) Establish a risk allocation framework between the client and contractors.
e) Define key performance indicators and quality assurance mechanisms.

2.4.3 Preliminary Market Engagement

The Consultant should support the PPP Agency, Beneficiary and MoH in preliminary market engagement focusing on three stakeholder groups to inform the financing and procurement strategy:

1. Construction market participants, equipment suppliers – to identify specialized healthcare construction contractors (local and international). Assess their capacity, experience, and interest in the Project, as well as collect their recommendations
2. International Financial Institutions (IFIs), bilateral donors active in Ukraine's healthcare sector and respective Export Credit Agencies – to test interest in financing/grant provision for the Project.

During preliminary market engagement, the Consultant is expected to provide support to PPP Agency and other stakeholders in organizing and conducting the market sounding process. This includes:

a) Preparing relevant materials (such as teaser, presentation) for initial engagement with potential stakeholders.
b) Providing support to the PPP Agency and other stakeholders in conducting market sounding discussions with potential suppliers, contractors, technology providers, financiers, and participating in such discussions if invited.
c) Assessing market feedback on technical specifications, procurement timelines, and commercial arrangements.
d) Documenting market sounding results and integrating feedback into procurement strategy.
e) Assessing market appetite for different risk allocation and commercial structures.

When requested, the Consultant should support the PPP Agency, Beneficiary and other stakeholders with further updates of marketing materials and communications with market participants and financiers at all stages of the Assignment.

2.5 FINANCIAL JUSTIFICATION

2.5.1 Cost Analysis and Costs Budget Preparation

The Consultant will develop comprehensive and accurate cost estimates for (1) pre-investment stage, (2) investment stage, (3) operational stage, and (4) closing stage, providing the foundation for financial planning and budget allocation. This includes detailed budget preparation based on established methodologies and comparison with similar projects. This analysis should cover, inter alia:

2.5.1.1 Comprehensive Cost Estimation

a) Prepare a detailed budget necessary for Project implementation, covering all major cost categories, e.g., pre-investment costs, capital investments, project preparation costs, consulting services, construction works, medical equipment procurement, IT infrastructure, and related expenses.
b) Develop comprehensive and detailed cost estimates based on technical assessment inputs with justified accuracy and contingencies that correspond to the development stage, distinguishing between capital expenditures and operational costs.
c) Include appropriate foreign exchange rate and inflation adjustments.

2.5.1.2 Cost Validation and Benchmarking

a) Conduct a comparison with similar projects and provide benchmarking analysis.
b) Validate cost estimates through market research and expert consultation.

2.5.2 Financial Analysis and Modeling

The Consultant is asked to assess the financial viability and sustainability of the Project through comprehensive financial modeling and analysis. This analysis demonstrates that the Project is financially realistic and provides evidence for decision-makers on the fiscal impact and long-term affordability of investment. This analysis should cover, inter alia:

2.5.2.1 Financial Analysis and Finalization of Economic Analysis

The Consultant will prepare a financial and economic model (using Microsoft Excel) including revenues, costs and other drivers that will be in line with the proposed technical solution, covering a period of at least 15 years (specific period will be agreed with the PPP Agency).

The financial and economic models will be prepared in nominal USD/EUR and local currency (LCU), considering the impact of macroeconomic scenarios, together with a financial summary, and including key ratios, translated into the currency of the financing to be provided. The Consultant is requested to prepare the model in line with the best international financial modeling standards.

For more details, please see Annex 5 of this ToR.

The Consultant will, inter alia:

a) Develop macroeconomic forecasting utilizing projections from both analytical agencies and official sources approved in Ukraine. Different macro scenarios might be applied if necessary.
b) Conduct comprehensive financial analysis including detailed revenue projections considering different sources of revenue (NHSU contracts, MOH financing, other national and local budget transfers, etc.).
c) Develop a financial model with cash flow projections over the Project lifecycle, incorporating capital investment phasing, operational cost escalation, and revenue streams where applicable.
d) Calculate financial performance indicators including net present value, internal rate of return where relevant, and other financial ratios if applicable.
e) Based on financial cash flows, finalize a comprehensive CBA (according to the methodology, agreed with the PPP Agency and other stakeholders during the Inception phase) for the defined technical solution to demonstrate economic viability through:
    - Systematic identification and monetization of all project benefits including direct healthcare savings, avoided overseas treatment costs, and indirect economic gains
    - Calculation of Economic Internal Rate of Return (EIRR) and Economic Net Present Value incorporating externalities and social benefits beyond direct financial returns
    - Benefit-cost ratio analysis over the project lifecycle with detailed justification of assumptions and benchmarking against international healthcare investment standards
    - Application of appropriate social discount rates for public healthcare investments.
f) Conduct sensitivity analysis for both financial and economic analysis: Conduct sensitivity analysis on critical variables including patient volumes, treatment costs,

technology advancement rates, and macroeconomic scenarios to identify key risk factors and validate economic robustness.

2.5.3 Financing Strategy and Sources Analysis

The Consultant will identify and analyze potential financing mechanisms and sources, ensuring that adequate funding can be secured for project implementation. This includes evaluation of optimal combinations of public funding, international financing opportunities, and potential private capital participation.

This analysis should cover, inter alia:

2.5.3.1 Financing Mechanisms Assessment

a) Analyze potential financing mechanisms in accordance with the Methodology for Identifying Sources and Mechanisms of Financial Support for Public Investment Projects approved by the Ministry of Finance.
b) Clarify potential financing sources and their optimal combination, considering public funding options, international financing opportunities, and blended finance mechanisms.
c) Assess state budget allocation possibilities, regional and local budget contributions, and public investment fund availability.
d) Examine international financing options, including multilateral development bank loans, bilateral development assistance, grant funding opportunities, and IFI financing programs.

2.5.3.2 Financing Structure Optimization

a) Evaluate financing structure optimization considering debt-to-equity ratios, currency and interest rate risk management, and repayment capacity.
b) Analyze funding sequencing and dependencies, constraints and limitations, and potential funding gaps requiring additional resource mobilization.
c) Assess potential for blended finance mechanisms combining public and private funding sources.

2.5.3.3 Affordability and Sustainability Assessment

a) Analyze affordability for the government budget and Heart Institute.
b) Assess fiscal impact on state and local budgets.
c) Evaluate long-term financial sustainability and ongoing operational requirements.

2.5.3.4 Financial Risk Management

a) Analyze financial risks that may affect Project financing including delays in funding availability, changes in market conditions, currency fluctuations, cost overruns, and revenue shortfalls.
b) Develop a detailed risk management plan incorporating risk prevention measures, response strategies, reserve calculations, and responsibility assignments.
c) Establish contingency planning for major financial risk scenarios.

2.5.4 Value for Money (VfM) Analysis of the Procurement Options

Following the analysis of procurement models as part of the Commercial Case, the Consultant will evaluate these options, including performance-based, public-private partnerships and other feasible models, and develop comprehensive financial risk management strategies. This includes identifying and conducting qualitative assessments of the risks associated with each procurement option, as well as performing VfM analysis to determine the most suitable model for project implementation. This analysis should cover, inter alia:

a) Conduct qualitative assessment of Project's suitability for various procurement options (including performance-based, public-private partnerships and other models) and perform quantitative assessment where applicable.
b) Conclude on the shortlist of procurement options (including performance-based, public-private partnerships and other models) to be tested during VfM analysis.
c) Perform VfM analysis comparing traditional public procurement with shortlisted alternative procurement options.
d) Assess risk allocation possibilities between public and private sectors, considering construction, technology, operational, and demand risks for shortlisted alternative procurement options.
e) Based on market feedback, market capacity, and interest in shortlisted alternative procurement options and results of VfM analysis, conclude on the recommended procurement option.

For further details on the requirements for VfM analysis, please refer to Annex 5.

2.6 MANAGEMENT JUSTIFICATION

2.6.1 Capacity Assessment of Project Implementation Team

The Consultant will analyze the necessary competencies for the successful preparation and implementation of the project, including identifying key functions, required skills and experience, and the need to engage independent experts and consultants of various profiles. This analysis should cover, inter alia:

2.6.1.1 Project Management Team Structure

a) Assess competencies and expertise available within the Heart Institute and Ministry of Health, identifying capability gaps requiring external support.
b) Determine the need for independent expert organizations including technical advisory services, financial and legal consultants, environmental and social specialists, and healthcare planning experts.
c) Provide an indicative structure of required expertise and estimate budget requirements for external consultant engagement.
d) Analyze necessary competencies for successful Project preparation and implementation, including healthcare infrastructure development, medical equipment procurement, construction management, environmental and social safeguards, and financial management capabilities.

2.6.1.2 Capacity Assessment and Development

a) Assess current institutional capacity for project management and implementation.

b) Identify training and capacity building requirements for project team members.
c) Evaluate the need for institutional strengthening measures.

2.6.2 Implementation Planning and Scheduling

The Consultant is asked to develop a realistic and comprehensive implementation plan that defines the sequence of activities, timelines, and critical dependencies for project delivery. This demonstrates project feasibility and management readiness through clear sequencing and realistic scheduling. This analysis should cover, inter alia:

2.6.2.1 Comprehensive Implementation Plan

a) Finalize a comprehensive Project implementation plan defining the sequence of actions and implementation schedule.
b) Identify the main phases, including pre-investment preparation, regulatory approvals, resource mobilization, construction and renovation phases, equipment procurement and installation, testing and commissioning, and operational readiness.
c) Conduct critical path analysis identifying key activities, dependencies, and potential bottlenecks.
d) Develop resource allocation plans and schedule optimization strategies.
e) Estimate duration for key activities including detailed design development, regulatory approvals, procurement processes, construction phases, and commissioning procedures.

2.6.2.2 Timeline and Milestone Development

a) Provide a Project timeline with realistic milestones reflecting Ukrainian regulatory requirements, procurement procedures, construction complexities, and equipment installation needs.
b) Include contingency planning for potential delays and schedule recovery measures.
c) Develop monitoring and progress tracking systems.

2.6.3 Risk Management Framework

The Consultant will identify, assess, and develop management strategies for all categories of risks that could affect project success. This includes elaborating the draft risk matrix developed at the Inception phase, reviewing and updating main risks, constraints, and dependencies, along with determination of risk management approaches and responsibility assignments to ensure project resilience. This analysis should cover, inter alia:

2.6.3.1 Risk Identification and Assessment

a) Identify main risks, constraints, and dependencies that may affect successful Project implementation, including technical, financial, regulatory, political, environmental, social, and institutional risks.
b) Categorize risks by probability and potential impact, developing a comprehensive risk register with detailed risk descriptions.
c) Determine risk management approach and assign responsibilities for different risk categories.
d) Develop risk mitigation strategies, including prevention measures, contingency plans, risk transfer mechanisms, and monitoring systems.

2.6.3.2 Risk Response and Monitoring

a) Establish risk escalation procedures and decision-making protocols for risk response.
b) Design risk monitoring and reporting systems enabling proactive risk management throughout Project implementation.
c) Include contingency planning for major risk scenarios and establish reserve funds or alternative arrangements for risk response.

2.6.4 Preliminary Environmental and Social Management

The preliminary ESIA will include a preliminary ESMP, but a complete, full ESIA and full ESMP will be prepared in the Phase 2, at the detailed design stage. Site-specific Environmental and Social Management Plan (ESMP) shall be developed by the Consultant in line with the WB ESF/ESSs, WB EHS Guidelines, ESMF and international best practices in the scope and level of detail that is commensurate with and proportionate to the nature and scale, potential risks and impacts of the Project.

2.6.4.1 Environmental and Social Management for Substantial-Risk Project

Based on the results of the ESIA and confirmed level of E&S risks of the Project, the Consultant in close cooperation with the Beneficiary shall prepare the required E&S management plans including:

- Draft Environmental and Social Management Plan (ESMP) as a key instrument outlining feasible and cost-effective measures to reduce potentially significant adverse environmental and social impacts to acceptable levels following the mitigation hierarchy. The template for the ESMP for high and substantial E&S risks projects is provided in the ESMF[23]
- Draft Environmental and Social Monitoring Plan (as part of ESMP), specifying measures to track Project-related impacts and evaluate the effectiveness of mitigation actions during Project implementation and operation.
- Draft Emergency Preparedness and Response Plan (as part of ESMP), which shall cover measures to protect the safety and security of project personnel and nearby communities from war-related hazards and other relevant emergencies, including explosive remnants of war (ERW) management procedures, consistent with ESSs. The template for the EPRP is provided in the ESMF[24]
- Other plans: draft Road Safety and Traffic Management Plan, site-specific Waste Management Plan. The templates for the mentioned plans are provided in the ESMF[25].

2.6.5 **Stakeholder Management**

According to the WB ESF/ESS and ESMF requirements, a Stakeholder Engagement Plan (SEP) for substantial-risk project shall be developed by the Consultant in close cooperation

[23] See Annex 11: https://pppagency.gov.ua/environmental-and-social-management-in-public-investment-projects-supported-by-ukraine-government-ppf/
[24] See Annex 12: https://pppagency.gov.ua/environmental-and-social-management-in-public-investment-projects-supported-by-ukraine-government-ppf/
[25] See Annex 11a and Annex 11b: https://pppagency.gov.ua/environmental-and-social-management-in-public-investment-projects-supported-by-ukraine-government-ppf/

with the Beneficiary with the overall objective to define a program for stakeholder engagement, including public information disclosure and consultation throughout the entire Project cycle. The template for the SEP for high and substantial E&S risks projects is provided in the PREPARE SEP[26].

The SEP shall be based on stakeholder mapping and analysis (identifying key stakeholder groups such as hospital staff, patients, nearby residents, vulnerable groups, NGOs) and its scope and level of detail should be commensurate with and proportionate to the nature and scale, potential risks, and impacts of the Project and the concerns of the stakeholders who may be affected by or are interested in the Project.

The SEP shall ensure inclusive stakeholder engagement, identifying and addressing barriers to participation (e.g., digital access, mobility). Besides that, it should define the frequency and format of consultations and disclosure activities and include provisions for a project-level Grievance Redress Mechanism (GRM) covering labor, community, and access issues.

The SEP should be clear and concise; the suggested length is no more than 20 pages including annexes.

2.6.6 Climate Risk and Adaptation Management

Based on the Climate Assessment specific to the Project climate impact and adaptation measures will be developed as a dedicated section of the Project ESMP.

Phase 2

3. SERVICES UNDER DETAIL DESIGN[27] AND COST ESTIMATE DOCUMENTATION DEVELOPMENT STAGE

After the confirmation from the PPP Agency to proceed with this phase (e.g., upon the decision of the GoU to implement the Project as the result of Feasibility Study approval), the Consultant shall prepare design and cost estimation documentation based on requirements for the Project design and cost estimation documentation development and expertise clarified and aligned with the Beneficiary and PPP Agency during the preparation of the Feasibility Study.

Also, the Consultant is requested to provide support in the development of bid documents. This scope will include preparation of general procurement documentation templates, aligned with good international practice and national legislation. Detailed guidelines on procurement requirements, including any donor-specific templates or procedures, exact scope, timeline, and deliverables for this support will be agreed with the PPP Agency and Beneficiary.

At this stage, the Consultant shall update the E&S package developed at the Feasibility Study stage - ESIA (including formal EIA as procedure (if applicable) and environmental parts of design documentation developed according to national norms) and site-specific ESMP, SEP and other plans - and support the Beneficiary in performing, recording and accounting stakeholder engagement and consultations relevant to the design stage.

[26] See Annex 1: https://pppagency.gov.ua/wp-content/uploads/2025/01/sep_draft_ukraine_project_preparation_facility_dec_2024-db-jjd-az-jan_15.pdf

[27] In the meaning of detail design according to international standards and working papers stage of design documentation according to Ukrainian standards.

For further details on indicative overview of key elements of technical assessment at Feasibility Study and design stages, please refer to Annex 3.

REPORTING REQUIREMENTS AND TIME SCHEDULE FOR DELIVERABLES

The Consultant will be expected to provide the main deliverables in accordance with the timetable provided below.

Deliverable	**Indicative Timeline**
Feasibility Study stage:	
Inception Report, Project teaser	1 month after Contract signing
First Drafts of Feasibility Study and Presentation, including a financial model,	2 months after acceptance of the Inception Report
Drafts preliminary ESIA, preliminary ESMP and SEP	3 months after acceptance of Inception Report
Technical requirements and input data for the design stage	Two weeks after comments to First Draft Feasibility Study
Final Draft of the Feasibility Study and the Presentation,	Two weeks after comments to First Draft Feasibility Study
Final Draft Preliminary ESIA, ESMP, SEP and other site-specific plans	3 weeks after comments to first Draft Preliminary ESIA and ESMP, SEP
Final Feasibility Study and Presentation	Two weeks after comments to Final Draft Feasibility Study
Final Preliminary ESIA, ESMP, SEP and other site-specific plans	Two weeks after comments to Final Draft ESIA etc.
Detail Design stage - subject for approval of Project for implementation upon Feasibility Study:	
Design and cost estimation documentation package for submission for the expertise	3 months after GoU approval on Project implementation
Updated Drafts ESIA, ESMP, SEP and other site-specific plans	3 months after GoU approval on Project implementation
Positive conclusion under design and cost estimation documentation	1.5 months after submission of the design and cost estimation documentation for expertise approval
Detail design and bidding documentation development, updated Final ESIA, ESMP, SEP and other site-specific plans	1.5 months after positive expertise conclusion under design and cost estimation documentation and comments received on draft ESIA, ESMP, SEP and other site-specific plans

The Consultant should prepare the Feasibility Study, design documentation, and other deliverables in accordance with the requirements of Ukrainian legislation and international good practices. It is preliminarily assumed that the Feasibility Study should comply with requirements for investment feasibility study for public investment projects. However, the final requirements for the structure of the Feasibility Study will be clarified during the Inception phase.

The Consultant is required to produce high-quality work products in accordance with good international practices. This means, among other things:

- All deliverables shall be submitted in electronic versions. Electronic versions must be editable (Word or PowerPoint – for the reports or presentations, Excel – for the financial model). Electronic files should be readable without restrictions. If some parts of files should be locked to avoid unintended modifications or to protect key parameters/calculations, the passwords/permits should be provided to the PPP Agency.
- The Consultant's Team Leader will at all times oversee and ensure the quality of advice.
- All deliverables are subject to approval by the PPP Agency, in consultation with the Beneficiary, and considered final upon the PPP Agency's approval.

All deliverables should be prepared in both English and Ukrainian, unless specifically agreed with the PPP Agency. The Consultant should ensure the quality of translation and check the accuracy of translations.

The Consultant will be responsible for providing all translation/interpretation services that are necessary to complete this assignment, such as, for example, any on-site interviews and meetings, translation of data and documents, and other.

All deliverables approved by the PPP Agency should be available for disclosure to the Beneficiary. The Beneficiary should be able to use such documents independently for the purposes of preparation and implementation of the Project as public investment project in accordance with applicable Ukrainian law requirements.

After the provision of the First Draft Feasibility Study or Final Draft Feasibility Study or other key deliverables, the Consultant should participate in consultations with stakeholders, including the Beneficiary, the Ministry of Health of Ukraine, and the World Bank Group. The PPP Agency will coordinate the collection of feedback for the review and incorporation by the Consultant.

After the submission of the Final Feasibility Study, the Project will move to the appraisal stage. During this period, the Consultant may also be requested to participate in limited meetings/consultations.

Key assumptions:

The PPP Agency agrees that the Consultant may make the following assumptions:

1. It should be noted that the advisory process is "open" by nature and that it is the responsibility of the Consultant to be proactive and identify and execute any additional tasks that would be required to ensure the success of the Project. The Consultant must therefore be able to respond positively to the need for complementary analysis that the PPP Agency may request to complete the assignment. The Consultant should notify the PPP Agency about any areas that, in its view, may need complementary analysis and that may be beyond the Scope of Work as set forth below. It is further expected that the

Consultant will ensure an iterative process of work by maintaining regular communication with the Beneficiary, PPP Agency and Ukraine Government PPF team, and by conducting interim consultations to validate key assumptions and findings (including, but not limited to, decisions on commercial arrangements, design phase, interim approvals of the Feasibility Study) on a continuous basis prior to the finalization of deliverables. The Consultant will also be responsible for collecting data and other information necessary to ensure the successful execution of the assignment, and to assure an exhaustive and comprehensive analysis of all commercial and technical issues affecting the Project.

2. The timeline stated above is indicative; the actual timeline will depend on the complexity of issues discovered during the Inception phase and the Beneficiary's decision-making process. The PPP Agency may also instruct the Consultant to suspend work between the Inception and Feasibility assessment phases.
3. Once the Consultant's contract is effective, the PPP Agency will provide Project-related documentation and previously collected data.
4. The Consultant is expected to perform necessary site visits, and on-site assessments. For this purpose, it may engage local experts. The permanent presence or travel of all Key Experts to Ukraine is not required; however, the allocation of local engineering/ technical consultants and a stakeholder coordinator based in Kyiv is preferable. At this time, it is expected that meetings with the Beneficiary and other stakeholders will take place in virtual or combined (online/offline) formats.
5. The Consultant shall report to the PPP Agency while ensuring proper communication with representatives of the Beneficiary. The Beneficiary will designate a Project Manager to be the primary contact person with specific responsibility for assisting the Consultant and coordinating activities. The Beneficiary will provide reasonable access to all of their facilities and employees for interviews or assistance.

TEAM COMPOSITION & QUALIFICATION REQUIREMENTS FOR THE KEY EXPERTS

The Consultant should assemble a team of experts demonstrating expertise and proven experience in (i) defining, evaluating, and structuring investment projects in the health and public sector in emerging markets, (ii) preparation of feasibility studies according to international good practice and IFI requirements, (iii) advising public authorities for the preparation of similar investment projects and related procurements, preferably in the health sector. Knowledge and experience in the Ukrainian construction market and healthcare sector is considered a plus.

Position/Expertise	Qualification
Team Leader	- At least 15 years of relevant professional experience related to the preparation, assessment, or implementation of investment projects funded by IFIs - At least 10 years of relevant Project Management experience - Expertise/experience in the healthcare sector
Local Healthcare and/or Healthcare Financing Expert	- At least 10 years of relevant professional experience - Knowledge of the local healthcare financing system, healthcare services and hospital operations
Healthcare Planner/Health	- At least 10 years of relevant professional experience - Experience in health planning activities for large

Position/Expertise	Qualification
Economist	regional/tertiary hospitals - Relevant experience in the preparation of feasibility studies
Financial Modeler	- At least 10 years of relevant professional experience - Relevant experience in the preparation of financial models and development of feasibility studies and investor documentation for the healthcare sector and financial modeling of public investment projects - Relevant experience in financial modeling related to infrastructure projects / in Ukraine is an advantage
Healthcare Architect	- At least 10 years of relevant professional experience - Relevant experience in developing/rehabilitating similar healthcare facilities at the concept / feasibility stage
Design and Engineering / Technical Specialists	- At least 10 years of relevant professional experience - Relevant experience in the healthcare sector including development of feasibility studies and development of conceptual layouts, works and equipment specifications, CAPEX/ OPEX estimations, visualizations, and licensed for design documentation development in accordance with Ukrainian national legislation
At least one Environmental, one OHS and one Social Specialist	- At least 10 years of relevant professional experience - Relevant experience in assessing and restructuring infrastructure requirements of health facilities - Relevant expertise to perform environmental and social assessments, stakeholder engagement and occupational health and safety according to IFI and national requirements
Local Legal Expert	- At least 10 years of relevant professional experience - Relevant experience in the construction, and real estate sectors of Ukraine - Relevant experience in the healthcare sector is an advantage
Procurement Specialist	- At least 10 years of relevant professional experience - Relevant experience in preparing procurement strategies, market analysis, and bid documents for complex projects - Relevant experience with international procurement standards and knowledge of Ukrainian procurement legislation

All team members are required to have excellent English skills (written, and oral); knowledge of Ukrainian is required for local experts and considered an advantage for international experts. Experience of working on IFI-funded projects is an advantage.

ANNEX 1 – INDICATIVE STRUCTURE / TABLE OF CONTENTS FOR THE INCEPTION REPORT

1. **Executive Summary**
    a. Summary with key findings and recommendations
    b. Critical success factors and implementation readiness assessment
    c. Next steps and decision points
2. **Current Operations and Existing Facilities**
    a. Description of current operations and performance (capacity, clinical profiles, support functions, staffing levels, operational and financial performance data)
    b. Land plots, neighborhood and site connectivity
    c. Buildings, facilities and equipment
    d. Utilities and infrastructure
    e. Asset registers and available technical documentation
    f. Technical needs for reconstruction/ construction including Energy Efficiency, Fire Safety, Emergency Preparedness, Civil Defense and Accessibility
3. **Regulatory Requirements for the Feasibility Study**
    a. National (PIP, reconstruction/construction, sector-specific)
    b. International and good practice
    c. Innovative and green
4. **Project Definition, Scope and Options**
5. **Strategic Considerations**
    a. Project strategic alignment
    b. Interconnectivity and potential synergies with other developments considered by the Beneficiary
    c. Approach, inputs and gaps for Feasibility Study
6. **Economic Considerations**
    a. Demand assumptions
    b. Technical initial data (technical requirements and planning conditions and limitations) and engineering studies
    c. Technical and economic indicators
    d. Approach, inputs and gaps for Feasibility Study
7. **Environmental, Social and Climate Risk Considerations**
    a. Summary of preliminary environmental and social baseline conditions
    b. Applicable environmental, social & climate regulatory and institutional framework
    c. Preliminary environmental and social risk identification

d. Approach for initial assessment of cumulative and indirect impacts
e. Approach for E&S and climate considerations for each project option

8. Commercial Considerations

a. Market and delivery model assumptions

b. Implementation considerations including market sounding

c. Approach, inputs and gaps for Feasibility Study

9. Financial Considerations

a. Investment costs, financial assumptions and assessment of financial sustainability

b. Approach, inputs and gaps for Feasibility Study

10. Management Considerations

a. Organizational readiness for expanded transplantation services including staffing, systems, and management capabilities

b. Stakeholder engagement and E&S planning

c. Risk management

d. Approach, inputs and gaps for Feasibility Study

11. Appendices

a. Site visit report

b. Stakeholder engagement records and consultation results

c. Regulatory Framework

d. Obtained technical initial data (technical requirements and planning conditions and limitations) and engineering studies for Feasibility Study

e. PIM and teaser

Note: The sections stated above should summarize key information gathered, highlight key findings identified by the moment and provide necessary methodology and assumptions for future analysis for confirmation with stakeholders. It is not expected that this report will include feasibility analysis itself.

ANNEX 2 – INDICATIVE STRUCTURE / TABLE OF CONTENTS OF THE FEASIBILITY STUDY

1. **Executive Summary**
    a. Project overview including investment value, scope, and beneficiaries
    b. Summary with key findings and recommendations
    c. Critical success factors and implementation readiness assessment
    d. Next steps and decision points
2. **Project Description**
3. **Strategic Case**
    a. Problem and needs analysis with healthcare system context
    b. Project definition, scope, and strategic alignment
    c. Stakeholder analysis and cross-cutting considerations
    d. Strategic vision and long-term outcomes
4. **Economic Case**
    a. Demand assessment and beneficiary analysis
    b. Options identification, analysis, and selection
    c. Technical description, concept, layouts, specifications, models
    d. Outcomes of Cost Benefits analysis
    e. Climate Assessment
5. **Preliminary Environmental and Social Impact Assessment and Stakeholder Mapping**
    a. Objective and scope of preliminary environmental and social impact assessments for each of the proposed options – scope and methodology
    b. Project description summary: an overview of the project, location, size, and major components.
    c. Description of environmental/social legal and institutional framework
    d. Summary of baseline environmental and social conditions at and around the project site.
    e. Preliminary assessment of potential environmental and social impacts for each of the project's alternatives and design options and indicative costs of remediation – construction and operation phases
    f. Preliminary environmental and social management plan (ESMP) for the preferred project's option – construction and operation phases
    g. Risk Categorization: confirmation of project's environmental and social risk category
    h. Stakeholder mapping - initial desktop study on stakeholder mapping for the project including identifying all stakeholders, their level of interest and authority over the project.

i. Further steps and developments - based on the preliminary ESIA and gap analysis, methodology proposal for developing/updating a full ESIA, including the identified specific studies and social processes to be carried out.
j. Overall Viability: conclusion on the overall E&S feasibility of the project.

6. **Commercial Case**
    a. Market analysis and delivery model assessment
    b. Procurement strategy and commercial arrangements
    c. Implementation approach and timeline
7. **Financial Case**
    a. Investment cost analysis and financing strategy
    b. Revenue analysis and financial modeling
    c. Affordability assessment and sustainability analysis
    d. VfM Analysis
8. **Management Case**
    a. Organizational arrangements and capacity assessment
    b. Implementation planning and stakeholder engagement
    c. Risk management framework and monitoring systems
    d. Environmental, social, climate, and legal management integration
9. **Conclusions and Recommendations**
    a. Feasibility assessment summary across all five cases
    b. Overall project recommendation and critical success factors
    c. Implementation readiness and next steps
    d. Decision points and approval pathway
10. **Appendices**
    a. Comments on key input data used in the preparation of the feasibility study
    b. Supporting analysis, data, models, and documentation
    c. Stakeholder engagement records and consultation results
    d. Financial model in Excel format

Preliminary ESIA (for Project preferred option) - separate document, including the preliminary Environmental and Social Management Plan (including Environmental and Social Monitoring Plan, Emergency Preparedness and Response Plan, climate impact and adaptation measures)

e. Preliminary Stakeholder Engagement Plan – separate document
f. Draft Road Safety and Traffic Management Plan (if applicable)
g. Draft site-specific Waste Management Plan
h. Draft Technical requirements for the design stage

i. Risk analysis and management planning details
j. Other documentation, e.g., legal, environmental, social, climate assessment

Detailing out the Task to feed into item # 5 of Annex 2

The feasibility study report - Environmental & Social (E&S) chapter - shall fully integrate key preliminary ESIA inputs to ensure that technical, financial, and economic analyses reflect environmentally and socially responsible project design. The preliminary ESIA prepared separately is the basis that provides essential data, analysis, and proposed actions for the E&S chapter of the feasibility study report. This chapter is essential for evaluating project viability and informing a final investment decision.

Key ESIA inputs should be integrated into the feasibility study under the following headings:

- **Objective and scope of preliminary environmental and social impact assessments** for each of the proposed options – scope and methodology
- **Project description summary**: an overview of the project, location, size, and major components. A description of the project that highlights all components, activities, and alternatives with potential environmental and social implications. This includes identifying the project footprint, land-use requirements, affected communities, environmentally sensitive areas, and preliminary construction, operation, and decommissioning processes.
- **Description of environmental/social legal and institutional framework**: The legal and institutional framework governing environmental and social management for the project shall be summarized, including required permits, approvals, and compliance obligations. The Feasibility Study shall identify responsible authorities, applicable regulatory procedures, and any constraints or opportunities posed by the institutional environment.
- **Summary of baseline environmental and social conditions** at and around the project site. The consultant shall integrate baseline environmental and social conditions into the feasibility analysis. Environmental baseline data including climate, air quality, water resources, hydrology, soils, noise, biodiversity shall be reviewed and used to guide site selection, layout design, and technology choices. Social baseline considerations shall include demographics, land tenure and resource use, livelihoods, gender dynamics, vulnerable groups, and existing community health and safety conditions. These baseline inputs shall inform risk identification and help assess the technical and economic viability of project alternatives.
- **Preliminary assessment of potential environmental and social impacts for each of the project's alternatives and design options and indicative costs of remediation**. The Feasibility Study shall incorporate the preliminary identification, screening, and assessment of potential environmental and social impacts associated with proposed project activities. This includes anticipated impacts during construction, operation, and decommissioning; cumulative effects; and indirect or induced impacts. Based on the impact assessment, the feasibility study shall present environmental and social design inputs and mitigation strategies that influence project configuration. This includes recommendations for avoidance, minimization, and mitigation measures; alternative project designs; resource efficiency and pollution control measures;

biodiversity management requirements; and preliminary measures for occupational and community health and safety. All necessary mitigation and remediation measures will be quantified indicative costs for each of the proposed project's alternatives.

- **Preliminary environmental and social management plan (ESMP) for the preferred project's option** – mitigation measures during construction and operation phases. The consultant shall prepare a preliminary Environmental and Social Management Plan (ESMP) framework, outlining key mitigation, monitoring, reporting, and institutional responsibilities. The consultant shall estimate the costs associated with environmental and social management measures, including mitigation actions, monitoring programs, compensation requirements, community development measures, and capacity-building for environmental and social management. These costs must be fully integrated into the financial and economic analyses of the feasibility study.
- **Risk Categorization**: confirmation of project's environmental and social risk category. The feasibility study shall integrate environmental and social risk considerations into the overall project risk assessment and provide an evaluation of residual environmental and social impacts, compliance risks, and long-term sustainability considerations.
- **Stakeholder mapping** - initial desktop study on stakeholder mapping for the project including identifying all stakeholders, their level of interest and authority over the project. The stakeholder mapping exercise will support early integration of environmental and social considerations. The mapping shall identify all individuals, groups, and institutions who may be affected by the project or who may influence project development, including directly affected communities, vulnerable or marginalized groups, traditional authorities, local and national government bodies, civil society organizations, private sector stakeholders, and any other relevant parties.
- **Further steps and developments** - based on the preliminary ESIA and gap analysis, methodology proposal for developing/updating a full ESIA, including the identified specific studies and social processes to be carried out. This methodology shall outline the additional data collection, technical studies, and social processes required to close identified gaps and ensure that the full ESIA is comprehensive and suitable for regulatory approval. The consultant shall detail the scope, approach, and sequencing of all specialized studies including, but not limited to, biodiversity assessments, hydrological and water-quality studies, air and noise modeling, cumulative impact assessments, climate risk and vulnerability analysis. For the social domain, the methodology shall include the approach to updated socio-economic surveys, stakeholder engagement activities, participatory mapping, assessments of vulnerable groups, gender analysis, and community health and safety evaluations. Furthermore, the consultant shall propose a structured approach for preparing and updating the Environmental and Social Management Plan (ESMP), including mitigation measures, monitoring requirements, reporting systems, responsibilities, and capacity-building needs. It shall also define the timelines, resource needs, and coordination mechanisms required to complete the full ESIA within the project preparation schedule.
- **Overall Viability**: consideration on the overall E&S feasibility of the project. The feasibility study shall present clear conclusions on the viability of the project from an environmental and social perspective, including any conditions precedent that may be required by regulators or financiers. The feasibility study shall ensure that

environmental and social issues are treated as core project feasibility criteria rather than parallel processes.

ANNEX 3 – TECHNICAL FEASIBILITY ASSESSMENT AND DESIGN

Indicative Key Elements of Technical Assessment at Feasibility Study and Design Stages

Key Elements	**Description of Minimum Content of Feasibility Study**	**Design Documentation Requirements According to the National Construction and Sectoral Norms**[1]
Basis for Analysis /Design	Preliminary key data collection and initiation of formal basis for design (support to the Beneficiary): • Preliminary medical assignment • Preliminary urban planning conditions and limitations • Preliminary technical conditions for connections (utilities and infrastructure) • Preliminary engineering studies /collection of available data • Visual investigation and scoping of technical investigations and demolishing • Preliminary collection of baseline data and requirements for environmental assessment according to national, IFI and good international practice requirements	Formalized and complete basis for design including: • Medical assignment • Urban planning conditions and limitations • Technical conditions for connections (utilities and infrastructure) • Engineering studies according to national design norms • Technical investigations, including reports with conclusions on the results of the inspection of building structures, measurement drawings, and information on the sequence of relocation of existing engineering networks and communications (as applicable) • Inventory of assets, decisions on demolition and compensation for buildings and structures, green spaces • Baseline data and requirements for environmental assessment according to national requirements
Process and Architectural	Draft medical program (key assumptions and process description, conceptual solutions), technical and economic indicators, resource and utility balances as justification of Project concept	Detail medical program and design documentation chapters dedicated to process and architectural solutions developed according to national norms

	and its key indicators	
Layouts, Specifications and Visualization	Conceptual layouts, technical specifications for equipment (including medical, diagnostic and laboratory, elevators, engineering systems) as basis for scope of work; visualization of conceptual solutions	General layout and landscaping solutions, structural solutions, 2D layouts and specifications developed according to national norms. BIM and 3D can be used
Fire Safety, Civil Defense, Energy Efficiency, Accessibility	Preliminary solutions and scoping of key requirements for design based on IFI requirements and national norms to reflect in ToR for design and estimate impact on scope of work and cost estimation under FS	Specific requirements as part of technical assignment for design and dedicated design documentation chapters developed according to national norms
Environmental and Social Impact Assessment	ESIA, draft ESMP and SEP according to IFI requirements to confirm E&S risks and develop project-specific mitigation measures and stakeholder engagement as well as reflect requirements in ToR for design and estimate impact on scope of work and cost estimation	Formal EIA as procedure (if applicable) and design documentation chapter developed according to national norms, ESIA according to IFI requirements and relevant stakeholder engagement (in scope applicable). Update of ESMP and SEP and other site-specific plans
Class of Consequences	Preliminary calculation to define permitting roadmap	Calculation and declaration by the Beneficiary and designer of class of consequences according to the methodology set by national norms and performing of relevant expertise and permitting
Construction Organization	Key requirements as part of ESMP	Dedicated chapter of design documentation
Cost Estimation	Cost estimation according to methodology applicable to PIP preparation and good international industry practice including benchmarking, market prices verification, physical and financial contingencies	Cost estimation according to national building norms and as part of design and permitting package (usually done using cost estimation software tools)

[1] Design and cost estimation documentation development and approval according to the applicable national construction and sectoral standards as a minimum:

- State Building Norm A.2.2-3:2014 on Composition and Content of Construction Design Documentation (ДБН А.2.2-3:2014 «Склад та зміст проектної документації на будівництво»[1]
- State Building Norm V.2.2-10:2022 "Health Care Institutions. Basic provisions"[2]

[1] Available in Ukrainian at https://e-construction.gov.ua/files/new_doc/3683782065003693791/2025-07-24/b1f70289-cdae-41e9-b5e1-257e850cc175.pdf

[2] Available in Ukrainian at https://e-construction.gov.ua/laws_detail/3530025933949896110?doc_type=2

ANNEX 4 – PRELIMINARY ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (Stand alone Document)

According to the preliminary E&S risks screening, the Project is being evaluated as "substantial" risk project according to the ESMF classification. The E&S risk level may be further re-evaluated and adjusted after the feasibility study and design are completed.

According to the ESMF[28], substantial-risk projects are those that involve E&S risks and potential adverse impacts that are more varied or complex than those of moderate-risk projects but remain limited in scale and are of lesser magnitude than those of high-risk projects. Such impacts are reversible, predictable, with a relatively smaller footprint and lower likelihood of significant cumulative effects. However, these projects may also have potentially significant environmental, social, OHS risks, which can be difficult to determine at the Project identification stage.

Addressing the impacts of substantial-risk projects requires the preparation of an Environmental and Social Impact Assessment (ESIA), the project-specific Environmental and Social Management Plan (ESMP) including OHSP, WMP and Emergency Preparedness and Response Plan (EPRP), Stakeholder Engagement Plan (SEP), and preparation of any additional site-specific E&S management plans where relevant. The ESIA ensures a comprehensive assessment of environmental and social impacts, facilitating informed decision-making and sustainable project development. The ESIA shall comply with WB ESS1, Project ESMF, WB EHS Guidelines, and national regulatory requirements. It will be proportionate to the Project's risks and impacts and will provide an integrated assessment of all relevant direct, indirect and cumulative E&S risks and impacts throughout the Project life cycle, including those specifically required under the WB ESS2 to 10.

Environmental impacts and considerations that are identified under preliminary E&S risks screening:

- The project involves the reconstruction of existing healthcare facilities (including elimination of current incompliances for engineering systems and safety structures), located in the urban area of Kyiv City.
- No impacts on sensitive natural habitats, biodiversity, or cultural heritage are anticipated. However, the adjacent green zone requires careful management of environmental aspects during both reconstruction and operation.
- During the construction phase, the main potential negative impacts relate to:
    - Air quality – temporary deterioration due to dust emissions from vehicle traffic, material handling, and dismantling works; exhaust emissions from construction machinery and trucks.
    - Noise and vibration – short-term increases from construction equipment and transport that may temporarily disturb patients and hospital staff.
    - Waste generation – substantial amounts of construction and demolition waste, including possible presence of hazardous materials, requiring proper management practices.

[28] Available at the following link: https://pppagency.gov.ua/environmental-and-social-management-in-public-investment-projects-supported-by-ukraine-government-ppf/.

  - Water and soil pollution risks – accidental spills of fuels and lubricants, and stormwater runoff from the construction site may contaminate nearby soil and groundwater.
- During the operational phase, the key environmental risks are associated with:
  - Healthcare waste – generation of hazardous waste (infectious, chemical, pharmaceutical, sharps, radiological) requiring safe collection, segregation, treatment, and disposal to avoid contamination and health risks.

Currently, healthcare waste is collected at the place of its generation (in Treatment and Operating Rooms) and transferred daily to licensed waste management companies, as required by national law. However, the capacity of the existing waste management system to handle the anticipated increase in medical waste volumes resulting from the project has not yet been assessed. The project will therefore need to evaluate the current national and facility-level healthcare waste management practices, including the adequacy of existing infrastructure, contractual arrangements, and treatment/disposal facilities.

The feasibility study and ESIA will further assess these aspects and determine whether the project should contribute to strengthening medical waste management systems (e.g., by upgrading on-site segregation, storage, or treatment facilities).

Overall, the project's environmental risks are assessed as **substantial** given the current information gaps. The E&S risk classification is to be revisited upon completion of the feasibility study and ESIA when more detailed data on healthcare waste handling capacity and management practices become available.

Social impacts and considerations identified under preliminary E&S risks screening:

- First social impacts of the Project implementation are positive, contributing to enhanced access to quality healthcare services, increased community well-being through improved facilities and access to unique transplantation services being increasingly demanded by society. A reconstructed facility will provide new jobs and contribute to the economic sustainability of the institution; better servicing and physical environment conditions will contribute to improved life quality. The existing professional and academic research potential of the clinic will be given an opportunity to expand and generate important solutions for health care system and human life prolongation in long term perspective.
- However, there could be also potential negative impacts during construction, like job displacement, or temporary economic disruption during construction works etc. The mentioned social risks are subject to further clarification at the FS stage.
- There are potential risks related to infrastructure interdependencies (energy, water, wastewater, waste facilities), disruptions of continuity of service provisions temporarily during the works and physical inconveniences for patients during repair works.
- Potential risks of temporary discomfort during construction like noise, additional waste generation at the territory of the hospital (incl. dismantling waste), social conditions for construction workers, patients etc. are preliminary assessed as **moderate**. Additional safety risks for patients and staff could be associated with the current lack of shelter compliant with new applicable standards including radiation safety. The possible options of shelter and an issue of associated facilities to be verified at the FS stage.

The identified social risks are manageable and can be mitigated by properly organized planning of works, community and stakeholder engagement and addressing social aspects ensuring benefits for patients and wider community after project implementation. All works will be carried out inside the building, limited to specific floors of the operating HCF, with access strictly restricted to prevent entry by patients, staff, and visitors.

A preliminary Environmental and Social Impact Assessment (ESIA) shall be drafted for the preferred option at Feasibility Study stage and finalized (final ESIA) at detail design stage and is an instrument to identify and assess the potential environmental and social impacts of the proposed Project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures.

The preliminary ESIA report shall be prepared as a separate document in line with the country's rules and regulations and with the World Bank Environmental and Social Framework (ESF) that includes ten ES Standards.

The minimum scope of work for the preliminary Environmental and Social Impact Assessment includes:

i. Identify relevant good international industry practice, including international standards of best practice applicable to the assessment and management of risks and impacts related to the proposed investment.

ii. Review and analysis of national legal and institutional frameworks for environmental and social management, including obligations under national law and relevant good international industry practice, on environmental permits/clearance, waste management, pollution control, and stakeholder engagement that are applicable to the project.

iii. Define the planned management interventions, including options/alternatives under consideration, in coordination with the technical team; in terms of locations, designs, land requirement, resources utilization (manpower, equipment, construction materials, energy), and waste (solid, wastewater, hazardous) generation and identify any ancillary or associated facilities (access roads, laydown areas, etc).

iv. Conduct initial desktop study to describe the current environmental and social baseline conditions at the proposed project site. This shall include, but not limited to, the physical environment (topography, geology, soil, water resources, air), biodiversity (flora, fauna, endangered species, habitats, sensitive and protected areas), ecosystem services, socio-economic conditions including the social structures.

v. Initial desktop study on stakeholder mapping for the project including identify all stakeholders, their level of interest and authority over the project.

vi. Identify and assess the preliminary assessment of environmental and social risks/impacts of the project based on the initial baseline conditions and project activities in consideration of the environmental and social requirements for each option/alternative, addressing potential direct, indirect and cumulative impacts. The risks/impacts shall be organized based on project phases, i.e., (i) pre-construction, (ii) construction, (iii) operation and maintenance, and (iv) decommissioning. The preliminary assessment should include, but not limited to, biodiversity, water resources, climate change, natural hazards, wastes, occupational health and safety, cultural heritage, physical displacement, economic displacement and livelihoods, availability and access to natural resources, GBV/SEA/SH, child and forced labor, and discrimination.

vii. Identify mitigation measures to avoid, reduce/minimize and mitigate risks and impacts for each option/alternative. Make recommendations on the most environmentally and socially suitable option/alternative.

viii. Identify any potential missing data or information and propose further assessments or studies that are needed for Phase 2 (update/full ESIA) as provided by the applicable E&S requirements and standards.

Indicative Preliminary Environmental and Social Impact Assessment (ESIA) Outline

Executive Summary

- Concisely discusses significant findings and recommended actions.

Legal and Institutional Framework[29]

- National legislation in the field
- Analyzes the legal and institutional framework relevant for the Project, within which the environmental and social assessment is carried out, including the issues set out in ESS1, paragraph 26[1].
- WBG Environmental, Health and Safety guidelines:
  - WBG guidelines for Healthcare Facilities
  - World Health Organization (WHO) Guidance on Management of Solid Health-care Waste at Primary Healthcare Centers.
- Compares the country's existing environmental and social framework and the ESSs and identifies the gaps between them.
- Identifies and assesses the environmental and social requirements of any co-financiers.
- Assesses the need for an environmental impact assessment following the Law on EIA/OVD (EIA/OVD).

Project Description

- Concisely describes the proposed project and its geographic, environmental, social, and temporal context, including any offsite investments that may be required (e.g., dedicated pipelines, access roads, power supply, water supply, housing, and raw material and product storage facilities), as well as the project's primary suppliers.
- Through consideration of the details of the project, indicates the need for any plan to meet the requirements of ESS1 through 10.
- Includes maps of sufficient detail and photographs showing the project site and the area that may be affected by the project's direct, indirect, and cumulative impacts.

ES Baseline Data Collection and Description

- Sets out in detail the environmental and social baseline data[2] that is relevant to decisions about project location, design, operation, or mitigation measures. This

29 This analysis will also include labor, health, and safety laws.

should include a discussion of the accuracy, reliability, and sources of the data as well as information about dates surrounding project identification, planning and implementation.

- Identifies and estimates the extent and quality of available data, key data gaps, and uncertainties associated with predictions.
- Based on current information, assesses the scope of the area to be studied and describes relevant physical, biological, and socioeconomic conditions, including any changes anticipated before the project commences.
- Takes into account current and proposed development activities within the project area but not directly connected to the project.

Environmental and Social Risks and Impacts

- Takes into account all relevant environmental and social risks and impacts of the Project during construction and operational phases. This will include the environmental and social risks and impacts specifically identified in ESS2–8, and any other environmental and social risks and impacts arising as a consequence of the specific nature and context of the project, including the risks and impacts identified in ESS1, paragraph 28.
- Specifically, E&S risks are those that may include (Project related):
  - Climate change
  - Threats to human security
  - Risks and impacts on the disadvantaged or vulnerable
  - Any prejudice or discrimination toward individuals or groups in providing access to development resources and project benefits
  - Potential impacts on the health, safety and well-being of workers and project-affected communities
  - Effects on the communities due to negative impacts on ecosystem services
  - Effects on communities due to the design of infrastructure
  - Risks related to ventilation, wastewater, and treatment of demolition debris
  - Risks related to increased traffic, dust and noise, stormwater runoff from disturbed areas
  - Generation of medical waste and its communal effect
  - Occupational health and safety risks typically associated with civil works
  - Risks related to medical wastes generation
  - Risks related to historical risk hazard
  - Any risk due to migrant workers
  - Potential risks related to job displacement, or temporary economic disruption during construction works
  - Potential social risks to patients during construction
  - Continuity of healthcare services (ICU, emergency, transplant).

Mitigation Measures Development

- Identifies mitigation measures[3] and significant residual negative impacts that cannot be mitigated and, to the extent possible, assesses the acceptability of those residual negative impacts.
- Identifies differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable.

- Identifies specific mitigation measures related to the management of bio-medical waste on site, and transfer of liquid and solid waste to autoclaves, incineration sites, waste pits, landfills, and/or other disposal locations.
- Identifies specific mitigation measures related to the maintenance and care standards for biomedical waste treatment equipment, i.e. autoclave and incinerator, air handling and filtration equipment, wastewater collection and disposal systems.
- Standard Operating Procedures (SOP) and engineering options for infection control such as quarantine and voluntary self-isolation procedures, contact and airborne precautions, cleaning and disinfection procedures, monitoring and managing exposed healthcare personnel.
- Mitigation measures for addressing social risks such as community health and safety and accessibility, emergency response, traffic and road safety, risks related to SEA/SH.
- Assesses the feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of proposed mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the proposed mitigation measures.
- Specifies issues that do not require further attention, providing the basis for this determination.
- Appropriate mitigation and monitoring measures, as inputs for the ESMP and other site-specific plans defined according to the E&S risks screening for E&S compliance for Project as per the guide notes of WB and GIIP. In particular, preliminary identified risks are considered manageable through the development and implementation of a site-specific ESIA, ESMP, Waste Management Plan (WMP), Emergency Preparedness Response Plan (EPRP), Stakeholder Engagement Plan (SEP) and appropriate occupational and community health and safety measures, and properly organized stakeholder engagement including Project specific grievance mechanism implementation.
- Procedures for contractor and labor management including any specific E&S contractual clauses to be included in bidding documents.

Analysis of Alternatives

- Systematically compares feasible alternatives to the proposed project site, technology, design, and operation – including the "without project" situation – in terms of their potential environmental and social impacts.
- Assesses the alternatives' feasibility of mitigating the environmental and social impacts; the capital and recurrent costs of alternative mitigation measures, and their suitability under local conditions; and the institutional, training, and monitoring requirements for the alternative mitigation measures.
- For each of the alternatives, quantifies the environmental and social impacts to the extent possible, and attaches economic values where feasible.

Design Measures Analysis

- Sets out the basis for selecting the particular project design proposed and specifies the applicable EHSGs or if the EHSGs are determined to be inapplicable, justifies recommended emission levels and approaches to pollution prevention and abatement that are consistent with GIIP.

Stakeholder Engagement

- Document the key stakeholder mapping and public consultation, including the method of communication and grievance redress system.
- Illustrate the maintenance of continuous engagement of stakeholders and how it will be reported during the implementation of the ESMP and SEP.
- Provide disclosure and information sharing/reporting back to the stakeholders' modalities.

Key Measures and Actions for the Environmental and Social Management Plan (ESMP)

- Mitigation Measures: Development of an ESMP outlining measures to eliminate, minimize, or mitigate adverse impacts. The plan should include cost estimates, timelines, and responsibilities for implementation.
- Monitoring and Auditing: Establishment of procedures for monitoring environmental and social impacts during project implementation and operation.
- The ESMP will detail the social and environmental monitoring to be conducted during project implementation and transposed into an Environmental and Social Monitoring Plan.
- Safety Measures: Proposals for ensuring the health and safety of workers and the surrounding community during the project's lifecycle.
- Summarizes key measures and actions and the timeframe required for the project to meet the requirements of the ESSs. This will be used in developing the Site Specific Environmental and Social Management Plan (ESMP).
- Summarize the Capacity Building Plan
- Summarize the gaps which need to be addressed in the Final ESIA and ESMP after detail design is available
- Summarize the roles and responsibilities
- Indicative Estimated Cost for ESMP implementation
- Indicative sections to incorporate part of the bidding document.

Annexes

- Supporting Documents: Inclusion of relevant data, maps, and records of consultations as annexes to the ESIA report such as but not limited to:
  - List of the individuals or organizations that prepared or contributed to the environmental and social assessment.
  - References – setting out the written materials both published and unpublished, that have been used.
  - Record of meetings, consultations and surveys with stakeholders, including those with affected people and other interested parties. The record specifies the means of such stakeholder engagement that were used to obtain the views of affected people and other interested parties.
  - Tables presenting the relevant data referred to or summarized in the main text.
  - List of associated reports or plans.

The following REFERENCES should be used:

- The World Bank Environmental and Social Framework (ESF)
- The World Bank's Environmental and Social Standards (ESS)

- World Bank Group General Environmental Health and Safety Guidelines (EHSG) (https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/policies-standards/ehs-guidelines)
- World Bank Group Industry Sector Guidelines for Construction Materials Extraction (Same as above)
- IFC Guidelines on Cumulative Impact Assessment (CIA) (https:\\www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_handbook_cumulativeimpactassessment)
- Good Practice Note on Labor Influx Management (https://thedocs.worldbank.org/en/doc/fc074f5b6cc1621dc65675bf83c9d0b8-0290032021/original/ESF-Labor-Influx-Good-Practice-Note.pdf)
- Good Practice Note on Addressing GBV (https://documents1.worldbank.org/curated/en/399881538336159607/pdf/Environment-and-Social-Framework-ESF-Good-Practice-Note-on-Gender-based-Violence-English.pdf)
- Guidance Notes for Borrowers (ESS 1-10) (https://www.worldbank.org/en/projects-operations/environmental-and-socialframework/brief/environmental-and-social-framework-resources#guidancenotes)

ILO OHS Standards

[1] ESS1, paragraph 26, states that the environmental and social assessment takes into account in an appropriate manner all issues relevant to the project, including: (a) the country's applicable policy framework, national laws and regulations, and institutional capabilities (including implementation) relating to environment and social issues; variations in country conditions and project context; country environmental or social studies; national environmental or social action plans; and obligations of the country directly applicable to the project under relevant international treaties and agreements; (b) applicable requirements under the ESSs; and (c) the EHSGs, and other relevant GIIP.

[2] The data may include, among others, environmental quality status (air, noise, water, soil), physical environmental context (physiography, topography, geology, seismicity), hydrology, terrestrial and aquatic ecosystem, basic demographic summary (data on gender, age, educational background, livelihood, housing etc.), status of land use, identification of squatters, common social facilities and buildings (CPR), status of GBV, availability and types/capacity of labor, presence of ethnic minorities, vulnerable groups etc.

[3] Mitigation measures may include, among others, issues related to air quality, noise, soil pollution, water resources, traffic management, waste disposal, protecting biodiversity, how concerns and expectations of vulnerable and disadvantaged are addressed and incorporated in the management plan and their engagement modalities during the lifecycle of the project, occupational and community health and safety, GBV, labor issues etc. This chapter will also include estimations for environmental management and monitoring of E&S compliance, financial and manpower allocation requirement etc.

ANNEX 5 – ECONOMIC & FINANCIAL FEASIBILITY ASSESSMENT

1. **Financial Modeling Standards and Requirements**

1.1. Model Structure and Technical Standards

The Consultant will ensure that the financial model and analysis are accurate, structured, flexible and transparent, and in line with the specific requirements laid out in the Terms of Reference. The use of the FAST financial modeling standard (http://www.fast-standard.org) is strongly recommended and any deviation from this should be agreed with the Beneficiary in advance. The Beneficiary may provide a template suitable for the Project, and the Consultant will liaise and agree on this before commencing the financial modeling. The developed model will be used for financial, economic (CBA), and VfM analyses.

The financial model must be organized with the following structure:

- Dashboard Summary Sheet: First sheet containing a one-page summary with key outputs, assumptions, and performance indicators.
- Input Assumptions Sheet: Centralized inputs including macroeconomic assumptions, construction costs, operational parameters, and financing terms with clear source documentation.
- Calculation (Income + Cash Flow Statements) Sheet: Detailed revenue and cost projections modeling by source (NHSU, out-of-pocket, government transfers) and operational cost modeling.
- Sheet with Other Analyses (e.g., Economic and VfM).
- Sensitivity Analysis Sheet: Scenario modeling and sensitivity testing on critical variables.
- Check Sheet: Calculation verification and model balance confirmations.

1.1.1. Model Architecture and Accuracy Requirements

The financial model must accurately match all financial and operational assumptions presented in the available due diligence information and all terms proposed in preliminary agreements, including facility size, tenor, grace periods, interest rates, and currency specifications. Financial covenants must be modeled as contractually defined, and the model should include the last three years of audited historical financial statements where available. Projections for the running year must be in accordance with the latest available estimates or interim results.

1.1.2. Structure and Flexibility Requirements

All sheets must maintain a consistent column structure and time ruler throughout the model, with sheets arranged so that calculation order flows from left to right. All inputs must be separated in specifically denominated sheets, with no inputs hard coded outside them. The input sheet must link through the model, enabling a fully integrated, flexible model. The source of each particular input shall be clearly stated in a comment (e.g. Feasibility Study, Beneficiary information, etc.).

Outputs are presented in specifically denominated sheets, with no calculations in them. Consistent format styles must be used to improve the readability of the model, with color coding for inputs, link imports/exports across sheets consistently applied. Complex calculations should be avoided by breaking them down into more basic steps, and no use of Excel names is permitted.

1.1.3. Transparency Requirements

The model must not have any circularity, and the use of macros has to be kept to a minimum. Any macros must be short, concise and easily traceable. No links to external worksheets outside the model are permitted. The model must have no hidden worksheets, rows or columns that include data, whether material or immaterial, though grouping is allowed. The model must not have any unexplained “offset” account or entry to offset mismatches.

2. Inputs and Assumptions Framework

As a first step, data necessary for the model must be gathered. The broad categories of inputs and assumptions include macroeconomic data, construction data, sources of funds and amounts, and operational data. Critical macroeconomic (e.g., inflation rates, historical gross domestic product, exchange rates, and interest rates) and demographic (population growth rates) data must be compiled.

2.1. Macroeconomic Data Requirements

Macroeconomic Forecast – utilize projections from both analytical agencies and official sources approved in Ukraine. Where necessary, consider macroeconomic scenarios and incorporate them into the forecasting process.

2.2. Operational Data and Revenue Projections

Analysis of operational indicators and specific metrics must be conducted as part of the comprehensive financial analysis. Operating cost projections should be based on a detailed analysis of expected operating costs, including personnel costs, administration costs, utilities, maintenance costs, etc.

Operating revenues are based on the contract structure and must consider all revenue streams, including NHSU reimbursements, out-of-pocket payments, government budget compensation, and ancillary services. For healthcare projects, revenue forecasts are based on demand studies and analysis to forecast revenue based on projected service volumes and service fees. The analysis must include a tariff affordability assessment to ensure sustainable cost recovery while maintaining accessibility for target patient populations.

2.3. Financial Performance Indicators

The financial analysis must calculate key performance indicators, including net present value, internal rate of return, and debt service coverage ratios (if applicable) as specified in the main ToR section. The analysis should demonstrate project viability and the ability to service debt obligations over the project lifecycle.

3. Economic Analysis Methodology

3.1. Economic Analysis Framework

The objective of the Economic Analysis is to determine if the project demonstrates societal benefits in excess of the “whole of life” cost. The analysis determines all factors over the asset life and computes the social investment returns. These returns are then analyzed by converting all future cash flows to their discounted present value (as for discount rates, please follow established requirements in Ukraine and international practices). The return must be of adequate size to justify the initial investment.

There are four broad steps in project economic analysis: define the project's objective; identify gross project benefits and costs; quantify and value the benefits and costs, initially in market or financial prices; adjust the costs and benefits to reflect their economic values; and compare gross economic benefits with economic costs. Project benefits and costs should cover both the implementation period of major investments and operating years or the project operating life cycle.

3.1.1. Benefits Identification and Valuation Methodology

Cost-benefit analysis must include externalities and quantify them where possible, including assessment of negative consequences that must be systematically assessed as part of the comprehensive cost-benefit framework. The economic analysis takes for granted that the project is technically sound and that its institutional arrangements will be effective during implementation, fitting with the government's strategy for the country and the healthcare sector.

The main objectives of the Economic Analysis are to evaluate the economic impact and consequences of the Project’s implementation and confirm the Project’s economic viability, demonstrating higher benefits to society compared to the economic costs of Project implementation. The analysis must include systematic identification and monetization of all project benefits, including direct healthcare savings such as avoided overseas treatment costs, reduced patient travel expenses, and healthcare system efficiency gains from specialized service provision.

Indirect economic benefits must be quantified where feasible, including productivity gains from reduced illness duration and improved health outcomes, labor force participation increases from better health status, and reduced family caregiver burden with associated opportunity costs. Health outcome benefits should be valued using established methodologies and Value of Statistical Life approaches for mortality reduction benefits.

3.1.2. Economic Performance Calculation

The analysis must include the calculation of economic net present value (ENPV), cost-benefit analysis and sensitivity analysis when testing various assumptions about the Project’s implementation, taking into account their possible impact, and the calculation of the cost-benefit ratio (BCR) and economic internal rate of return (EIRR) according to the methodological recommendations that are set or can be foreseen by Ukrainian legislation.

Externalities and social benefits must be incorporated, including environmental benefits from reduced medical travel through carbon footprint reduction, regional economic development and employment creation effects, knowledge transfer and medical education capacity building, healthcare system resilience and pandemic preparedness improvements, and emergency response capacity enhancement.

3.2. Value for Money Analysis Methodology

3.2.1. VfM Analysis Framework

The purpose of undertaking a Value for Money Analysis is to assist in determining the best procurement method for a government project – through standard government procurement, performance-based contracts or through some form of PPP. The Value for Money analysis will be one of the factors that the government considers in making that determination, providing data on how the public sector standard procurement process compares with adopting any alternative forms, including PPPs as the procurement method.

A VfM assessment involves a mix of quantitative and qualitative criteria for the capital expenditure of a project, the operational expenditure of a project, and the potential for savings or more efficient approaches by the private sector, a comparison between normal government procurement of the project and other options, and the full value of the Project Risk including the value of government retained risk and the value transferred risk by the government to the private sector.

3.2.1.1. **Public Sector Comparator Development**

The Consultant must assess not only direct impacts from cash flows, but also, where possible, quantify risks in each procurement model. The analysis requires building a baseline Public Sector Comparator (without risk consideration) as the foundation for comparison with alternative procurement approaches.

The baseline Public Sector Comparator represents the cost of traditional government procurement and operation, incorporating government financing at sovereign borrowing rates, public sector construction management and operational efficiency assumptions, and historical cost and schedule performance benchmarks. This baseline must then undergo adjustment for risks that are transferred to the private partner for the purpose of comparing alternatives.

Risk quantification must cover construction risk assessment including cost overrun probability distributions based on historical data, schedule delay impacts and associated cost implications, design change and scope creep risk quantification, and contractor performance and completion risk evaluation. Operational risk evaluation must address service quality and performance standard compliance, demand variation impacts on cost recovery and utilization, technology obsolescence and upgrade requirement timing, and regulatory and policy change adaptation costs.

3.2.1.2. **Procurement Options Assessment and Comparison**

The methodology requires project cost assessment for alternative scenarios followed by determining comparable indicators for scenarios taking into account implementation time (discounting). The analysis must determine which alternative is more appropriate for project implementation, supported by applying sensitivity analysis to determine the robustness of the conducted analysis.

The quantitative comparison framework requires whole-life cost analysis with net present value calculation for each procurement option over the asset lifecycle, risk-adjusted cost comparisons incorporating probability-weighted scenarios, and sensitivity analysis on key cost drivers and risk assumptions to ensure robust procurement recommendations based on comprehensive evidence.

4. Risk Assessment and Sensitivity Analysis Methodology

Risk assessment must identify potential risks that could affect project outcomes, quantify their impact and probability, and develop appropriate risk management and mitigation strategies. The risk assessment will inform the financial modeling, economic analysis, and procurement option evaluation by establishing a comprehensive risk register covering all phases of the project lifecycle, from initial development through construction to long-term operation.

Construction phase risks must be systematically identified including site conditions and geological risks affecting construction costs and schedule, design changes and technical specification modifications, contractor performance including financial distress and completion capability, material cost escalation and supply chain disruptions, regulatory approvals and permit delays, and weather and force majeure events during construction.

Operational phase risks require detailed analysis covering demand risks including patient volume variations and demographic changes, revenue risks from NHSU reimbursement changes and payment delays, cost inflation exceeding revenue escalation mechanisms, medical equipment reliability and technology obsolescence, staffing availability and healthcare professional retention, and regulatory and accreditation requirement changes.

Financial risks must address currency exchange rate fluctuations affecting USD/EUR-denominated costs, interest rate changes impacting debt service costs, refinancing risks and credit market conditions, inflation rate variations beyond projected ranges, and government fiscal constraints affecting healthcare budget allocations.

Sensitivity analysis must be conducted systematically to validate project robustness under various scenarios. The analysis requires probabilistic risk modeling incorporating risk correlations and dependencies, probability distributions for key risk variables based on historical data and expert judgment, cumulative risk impact assessment on project financial performance, and Value-at-Risk calculations at different confidence levels.

Sensitivity analysis must test critical variables, for example, patient volume variations, NHSU reimbursement rate changes, construction cost overruns, operating cost inflation, foreign exchange rate fluctuations, or interest rate changes.

The methodology must include individual risk assessment through risk impact matrices showing probability and consequence ratings, quantitative assessment of cost and schedule impacts where feasible, risk interdependency analysis, and cascade effect evaluation, and risk mitigation cost-benefit analysis for alternative management strategies. This comprehensive approach ensures that sensitivity analysis application for determining the robustness of the conducted analysis meets international standards for healthcare infrastructure risk assessment.