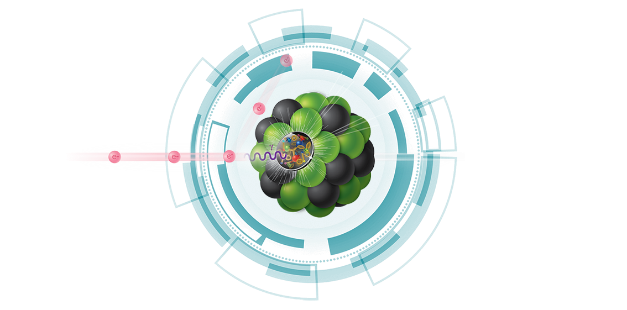
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**Project Planning Document**

**between**

**Brookhaven National Laboratory**

**(“BNL”)**

**and the**

**<Partner Institution>**

**as part of the**

**<Partner Agency >**

**for Participation in**

**The Electron-Ion Collider Project**

**(“EIC”)**

**Part 2: <IKC Deliverable>**

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# CHANGE LOG

This version of this document may not be the most current approved revision. The current revision is maintained in the EIC Document and Records Center, where all internal Project document approvals are managed. The current approved version is always available in the EIC Document and Records Center. This document is expected to be reviewed and updated as needed. The Document Manager is responsible for maintaining an up-to-date version and obtaining required signatures.

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| --- | --- | --- |
| **Release No.** | **Date** | **Revision Description, Edited by** |
| 1.0 | 12/4/2023 | First release, P. Berrutti |
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# Scope

This Project Planning Document (PPD) – Part 2 describes the Scope of Work (SoW) necessary for the <Partner Institution> (<Partner Laboratory>) as part of <Partner Agency/Institution> to supply <IKC deliverable> to the Electron-Ion Collider (EIC) Project. This SoW includes components and technical documentation. The PPD covers a technical description of the deliverable, project activities, schedule and key milestones.

EIC PPD – Part 2 is intended to complement any planning instruments and/or implementing arrangements completed by the time of DOE Critical Decision 2 (CD-2) and to define the SoW necessary to support project baselining at CD-2, authorization of construction at CD-3, and project completion at CD-4. It is understood that activities performed by the Partners of the EIC Project are such that all Partners recognize that the success of the EIC Project depends on each adhering to the proposed plans described in the PPD documents. It is further understood that PPD – Part 2 is to be updated, as needed, to maintain consistency with any applicable international agreements that are anticipated to be in place in advance of CD-3.

The SoW described in this PPD is intended to contain an appropriate level of detail, so as to permit the Participants to clearly understand the work that is planned, the duration of the work involved, the deliverables and the conditions of their acceptance.

# General Provisions

The provisions of this PPD – Part 2 [and its Appendices] are without prejudice to relevant international agreements and/or separate written agreements between BNL or DOE and <Partner Agency/Institution> (or its governmental authorities) as they have concluded or may mutually decide to conclude in the future concerning involvement in, or contributions to, the EIC Project. In the event of any conflict between the provisions of this PPD – Part 2, on the one hand, and such international agreements or separate written agreements, on the other hand, the latter are intended to prevail.

Except as otherwise specified in writing by the Participants (BNL and <Partner Agency/Institution>), each Participant is responsible for the costs it incurs in participating in the activities identified in this PPD – Part 2.

Each Participant’s participation in the activities contemplated by this PPD – Part 2 is subject to the availability of allocated funds, personnel and other resources from its respective Government.

Each Participant intends to conduct the activities contemplated by this PPD – Part 2 in accordance with applicable laws, regulations and procedures to which it is subject, and applicable international agreements to which its Government is party.

This PPD – Part 2 does not create any legally binding obligations between the Participants.

The cost estimate for the EIC Project is developed as a “cost-to-DOE Total Project Cost (TPC).” The TPC does not include the cost of assumed international In-Kind Contributions, while it does account for resources required to provide oversight of international activities and acceptance testing of in-kind contributions upon arrival at BNL.

# Related documents

## Project Planning Document – Part 1

This PPD – Part 2 is accompanied by the following associated document:

* PPD – Part 1 “Project Management”

## Technical Documents

The following documents are applicable to the specific SoW planned in this document:

1. TBD with respect to the IKC deliverable
2. TBD with respect to the IKC deliverable
3. ….

Any change of these technical documents is to be managed through the Configuration Management Process detailed in the *EIC Configuration Management Plan* (CMP) [1].

## Project Management Documents

Project Management documents are applicable to all project tasks and phases. They are legally non-binding documents, mainly for informational purposes where it is understood that the Partners intend to follow the provisions of the document.

The project management documents include, but are not limited to, the following:

1. [EIC Project Management Plan (PMP)](https://pip2-docdb.fnal.gov/cgi-bin/private/ShowDocument?docid=172) [2]
2. [EIC Risk Management Plan (RMP)](https://pip2-docdb.fnal.gov/cgi-bin/private/ShowDocument?docid=163) [3]
3. EIC Configuration Management Plan (CMP) [1]
4. EIC Quality Assurance Plan (QAP) [4]
5. [EIC Systems Engineering Management Plan (SEMP)](https://pip2-docdb.fnal.gov/cgi-bin/private/ShowDocument?docid=1539) [5]
6. [EIC Technical Review Plan (TRP)](https://pip2-docdb.fnal.gov/cgi-bin/private/ShowDocument?docid=1542) [6]
7. [BNL ES&H Database](https://eshq.fnal.gov/manuals/feshm/) [7]
8. EIC Integrated Safety Management Plan [8]

# Terms and Definitions

## Definitions

The following terms and expressions, when used in capital letters in this Part and in associated Parts, have the meaning described below. Any term and/or expression defined in an applicable international agreement is intended to have the same meaning for the purpose of PPD – Part 1 and Part 2, unless otherwise specified in PPD – Part 1 or Part 2.

* **“Participant”:** The signatories to this PPD, i.e., BNL and <Partner Agency/Institution>, individually referred to as a “Participant” and collectively as the “Participants.”
* **“Partner”**: Any funding agency, research institution or university contributing to the EIC Project.
* “**In-Kind Contribution (IKC)**”**:** A non-cash contribution provided by a Partner and/or a Participant. It may cover:
  + Technical components for the EIC Project as well as personnel to perform testing, installation and/or integration of components;
  + Research and development work as well as personnel performing the work;
  + Personnel made available for specific tasks during the Construction Phase; and
  + Other products or services relevant to the completion of the EIC Project.
* **“Components or Services”**: any hardware, software element, system or sub-system, or services to be provided by <Partner Agency/Institution>.
* **“Documentation”**: any engineering drawings, travelers (these being quality control documents), test results and accompanying verification reports, material specifications, components manuals, procurement information for complex deliverables such as vendor qualification criteria, manufacturing inspection plans, and vendor in-process data, and related documents that describe the Component contributions.
* **“<Partner Agency/Institution> Deliverables”:** any Components, Services and Documentation,to be delivered to the EIC Project by <Partner Agency/Institution>.
* **“BNL Deliverables”:** any hardware, software, services, or documentation to be provided by BNL/EIC to <Partner Agency/Institution> for the performance of the SoW defined in this or associated PPD documents. The list includes contributions provided to <Partner Agency/Institution> either by (1): BNL/EIC directly or (2): another Partner through BNL/EIC, if they are required by <Partner Agency/Institution> to perform the SoW as described in this PPD – Part 1 and Part 2.

## Acronyms

|  |  |
| --- | --- |
| **ASME** | American Society of Mechanical Engineers |
| **BNL** | Brookhaven National Laboratory |
| **CD** | Critical Decision |
| **CDM** | Construction, Design and Management |
| **CMP** | Configuration Management Plan |
| **DOE** | Department of Energy |
| **EVMS** | Earned Value Management System |
| **FDR** | Final Design review |
| **FMEA** | Failure Module Effect Analysis |
| **BNL** | Brookhaven National Laboratory |
| **FRD** | Functional Requirements Document |
| **ICD** | Interface Control Document |
| **IKC** | In-kind Contribution |
| **I-MS** | International Milestones |
| **MIP** | Manufacturing Inspection Plan |
| **MRR** | Manufacturing Readiness Review |
| **MS** | Milestones |
| **NCR** | Non-Conformity Reports |
| **PDR** | Preliminary Design Review |
| **PID** | Project Initiation Document |
| **EIC** | Electron Ion Collider |
| **PMP** | Project Management Plan |
| **PPD** | Project Planning Document |
| **PRD** | Performance Requirements Document |
| **PRR** | Procurement Readiness Review |
| **QA** | Quality Assurance |
| **QAP** | Quality Assurance Plan |
| **QMP** | Quality Management Plan |
| **QC** | Quality Control |
| **RLS** | Resource Loaded Schedule |
| **RMP** | Risk Management Plan |
| **SAR1** | System Acceptance Review 1 |
| **SAR2** | System Acceptance Review 2 |
| **SEMP** | Systems Engineering Management Plan |
| **SHE** | Safety, Health and Environment |
| **SoI** | Statement of Interest |
| **SoW** | Scope of Work |
| **SPC** | Sub-Project Coordinator |
| **SPM** | Sub-Project Manager |
| **TPC** | Total Project Cost to DOE |
| **T** | Technical Representative |
| **TRR** | Transportation Readiness Review |
| **TRP** | Technical Review Plan |

# Project Definition

## Technical Description of Deliverable Components

<Partner Agency/Institution> plans to procure, fabricate, integrate, provisionally test and deliver <IKC deliverables> to BNL specified requirements for the EIC Project. The delivery includes procurement of all <IKC deliverables> subsystem components including:

* 1. Item #1
  2. ….

<IKC deliverables> related designs are developed by BNL & its Partners and are planned to incorporate into a baseline reference design. <Partner Agency/Institution> plans to utilise this design as a basis for its contribution to the EIC Project.

Within the scope of the <Partner Agency/Institution> delivery, description of activities.

This activity plans to include:

* 1. Item #1
  2. ….

<Partner Agency/Institution> technical staff are expected to engage with the respective BNL technical teams to ensure ongoing <IKC deliverables> design processes are effectively capturing <Partner Agency/Institution> responsibilities and that the final <IKC deliverables> and sub-system components designs consider <Partner Agency/Institution> input. This engagement is to ensure appropriate planning and preparation work at <Partner Agency/Institution> can be implemented, maintained and effectively managed. All <IKC deliverables> sub-system components are expected to be procured by <Partner Agency/Institution>. Chosen equipment suppliers -are expected to be qualified to ensure component delivery is successfully achieved to BNL design specifications and QA protocols.

<Partner Agency/Institution> is expected to have responsibility for acceptance testing all <IKC deliverables> sub-system components and where appropriate performing all necessary component tests as stipulated and agreed with BNL. Throughout all critical assembly stages for the <IKC deliverables>, it is anticipated that BNL technical support is made available to ensure processes conducted at <Partner Agency/Institution> are to specification.

<Partner Agency/Institution> and BNL intend to mutually decide upon a series of acceptance tests to be undertaken on all the completed <IKC deliverables>. These validation tests are planned to assess system conformance against all relevant BNL’s specifications. <Partner Agency/Institution> plans to work with BNL and other EIC international technical experts to develop a suitable transport frame design for the safe transport of the complete <IKC deliverables> from <Partner Agency/Institution> to BNL. Upon arrival at BNL, the plan is to perform identical acceptance tests in order to confirm the integrity during transport has been maintained. If the <IKC deliverables> acceptance tests at BNL highlight issues, a collective assessment between <Partner Agency/Institution> and BNL is planned to be undertaken in order to agree on the subsequent course of remedial action and associated responsibilities. Details of the <IKC deliverables> acceptance phases are included in the <IKC deliverables> Acceptance Plan and the <IKC deliverables> Acceptance Criteria documents.

## Project Activities

This section provides a brief description of activities in support of SoW outlined in Section 4.1, leading to the milestones described in Section 4.3 of this document. Project activities are organized according to the four Project Phases defined in PPD – Part 1.

### Phase 1: Preliminary Design Phase

Phase 2, as described in PPD – Part 1, develops an engineering design of sufficient maturity to establish that requirements can be met and that a high-confidence cost and schedule estimate can be established. It culminates in the completion of the system and component Preliminary Design Reviews (PDR) and the closure of any requests for action generated by the reviews.

<Partner Agency/Institution> plans to contributed to the <IKC deliverables> preliminary designs, developed by BNL and its Partners. The <Partner Agency/Institution> technical staff engagement in the preliminary design of the <IKC deliverables> along with the BNL technical teams ensured the start of in-depth familiarity with the final <IKC deliverables> and sub-system components designs. This training was required to ensure that appropriate planning and preparation work at <Partner Agency/Institution> can be implemented, maintained and effectively managed.

Phase 2 <Partner Agency/Institution> contribution included the preliminary design development of a suitable <IKC deliverables> transport frame, capable of restricting shock loads to a pre-defined acceleration constraint. This work was analysed, reviewed and agreed with BNL <IKC deliverables> designers.

Phase 2 starts upon first successful kick-off meeting and ends with the successful completion of the Preliminary Design Review (PDR) for the <IKC deliverables> (including all sub-system components). This phase is considered completed.

### Phase 2: Final Design Phase

The final design phase develops an engineering design of sufficient maturity to serve as the basis for procurement, fabrication, assembly and testing of the system or component. The final design is supported by a complete set of assembly drawings and engineering notes, accompanied by an acceptance testing plan. The final design phase culminates in the completion of the system and component Final Design Reviews (FDR), and the closure of any requests for action generated by the reviews.

During Phase 3, <Partner Agency/Institution>’s proposed contribution is mainly focused on:

* Continued engagement of <Partner Agency/Institution> technical staff in the <IKC deliverables> final design and prototyping associated activities;
* The assessment and reconfiguration of the infrastructure at <Partner Laboratory> to enable testing to verify the <IKC deliverables> requirements and performance. <Partner Agency/Institution> plans to support BNL to update the cavity design drawings to include any <Partner Agency/Institution>-specific features required to match <Partner Agency/Institution> infrastructure;
* The assessment and re-configuration of all necessary <IKC deliverables> assembly infrastructure at <Partner Laboratory> as required for the controlled assembly of each item of <IKC deliverables>. <Partner Agency/Institution> plan to support BNL to update the <IKC deliverables> design drawings to include any <Partner Agency/Institution>-specific features required to match <Partner Agency/Institution> infrastructure. BNL is expected to retain design responsibility for the <IKC deliverables>;

<Partner Agency/Institution>´s work in this stage includes but is not necessarily limited to:

* **<IKC deliverables>:**
  + List of responsibilities for partner institution regarding the IKC deliverables
  + ….

The following work is excluded from the scope of <Partner Agency/Institution> Phase 2:

* List of activities/items to be excluded from Partner’s scope
* ….

Phase 3 starts at the successful completion of the Preliminary Design Review (PDR) for the <IKC deliverables> and ends with the successful completion of the Final Design Review (FDR) of the <IKC deliverables> (including all sub-system components).

### Phase 3: Procurement/Manufacturing/Acceptance Phase

The procurement/manufacturing/acceptance phase results in a completed product that conforms to the final design and meets testing and acceptance requirements at the Partner site and is ready to be transported to BNL. This phase is typically initiated by the Procurement Readiness Review and includes the validation of the transportation plan through the Transportation Readiness Review. The end of this phase comprises the two steps of SAR: the acceptance testing of the component or system at the <PARTNER INSTITUTION> site (SAR1) and acceptance testing of the component or system at BNL or another Partner if the component is destined for integration (SAR2). After a successful SAR2 the IKC deliverables are officially accepted, and their ownership can be transferred to BNL.

<Partner Agency/Institution>´s work in Phase 4 includes, but is not necessarily limited to:

* **<IKC deliverables>:**
  + List of responsibilities for partner institution regarding the IKC deliverables
  + ….
  + Develop cavity test verification documentation requirements to be reviewed and agreed with BNL.
  + Provide documented test and verification results to BNL according to agreed acceptance test specifications.
  + Conduct acceptance testing for each <IKC deliverables> at <Partner Agency/Institution> premises (System Acceptance Review 1 (SAR1)), ahead of formal shipment to BNL utilising approved shipment processes.
  + Provide documented <IKC deliverables> assembly and acceptance test verification results.
  + Ship <IKC deliverables> to BNL, utilising approved shipment processes and close any actions.
  + Support acceptance testing for each <IKC deliverables> at BNL (SAR2),
  + Transfer ownership of each <IKC deliverables> at BNL to DOE.

Phase 4 starts at the successful completion of the Phase 3 for all <IKC deliverables>, and ends with the successful completion of the Site Acceptance Review 2 for all <IKC deliverables> accepted. The acceptance plan and acceptance criteria are detailed in the <IKC deliverables> Acceptance Plan and <IKC deliverables> Acceptance Criteria documents.

## Project Schedule and Key Milestones

The milestones listed in Table 1 below provide the primary mechanism for monitoring progress made at <Partner Agency/Institution>. These In-kind Milestones (I-MS) establish and align with each in-kind deliverable component or system that are governed by appropriate specifications documents, including those related to Functional Requirements Document (FRD), Interface Control Documents (ICD). The milestones are captured within the EIC Project Resource Loaded Schedule (RLS).

There are two broad categories of milestones: technical milestones, which are measurable quantities associated with the component or system meeting performance goals, and milestones linked to the technical reviews. Both types of milestones are to be used to define and monitor progress.

BNL-driven milestones (MS) used as input to a Partner’s schedule are identified with a L (Level) in front of the milestone name reported below, while MS related to Partner’s completion scope of work are identified with a I (international). The Milestones captured within the EIC RLS are tagged with a corresponding milestone ID number.

**Table 1: Project Schedule and Key Milestones**

|  |  |  |
| --- | --- | --- |
| **Deliverables** | | |
| **Milestone ID** | **Completion Milestones** | **Planned/ Baseline Date** |
| **Phase 1: Conceptual Design Phase – completed** | | |
| **Phase 2: Preliminary Design Phase** | | |
| WBS task code <description> | | |
| XXX | CODE- <description> (e.g., PDR) | Month-202X |
| **Phase 3: Final Design Phase** | | |
| WBS task code <description> | | |
| XXX | CODE- <description> (e.g., FDR) | Month-202X |
| **Phase 4: Procurement/Manufacturing/Acceptance** | | |
| WBS task code <description> | | |
| XXX | CODE- <description> (e.g., PRR) | Month-202X |

# Project Deliverables

There are two kinds of <Partner Agency/Institution> Deliverables for the EIC Project:

* Components, which include any hardware, software element, system or sub-system to be delivered.
* Documentation, which includes progress and status reports, data packages at the completion of each Project Phase, and a Final Report.

## Deliverable Components

<Partner Agency/Institution> plans to deliver to BNL the fully functional components listed in Table 2 and Table 3 below. These deliverables are further detailed in section 5.1.

**Table 2: Summary of <Partner Agency/Institution> Deliverable Components**

|  |  |  |
| --- | --- | --- |
| **Deliverables** | **PRD ID#** | **Quantities** |
| <IKC deliverable> | XXX | XXX |

**Table 3: <Partner Agency/Institution> Deliverable Components with schedule margins**

These Deliverable dates have been adjusted to account for BNL and <Partner Agency/Institution> delay impacts due to <cause>, which are reconciled here to identify an extension to the original EIC funding envelope of approximately <XX> months.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **WBS no.** | **<Partner Agency/Institution> Deliverable Components** | **PRD ID#** | **Close SAR2 Early Date** | **Close SAR2 Late Date** |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

The late delivery date is beyond the official end of the current <Partner’s> project schedule. BNL (EIC Project) should make every effort to allow <Partner Agency/Institution> to finish by the early delivery date endeavouring to provide any necessary input to <Partner Agency/Institution> needed to be consistent with the early delivery schedule.

## Documentation Deliverables

<Partner Agency/Institution> plans to provide technical documentation required to specify, produce, accept, validate, install, commission, operate, and maintain components listed in Table 2. Documentation deliverables between <Partner Agency/Institution> and BNL are itemized in Appendix 1 and aligned to the project milestones and organized by project phases. Documentation deliverables follow the guidelines established in the EIC Technical Review Plan [6]. Documentation exchange in each project phase is expected to be completed when the final milestone within the phase is achieved. The specific list of documents for each component deliverable is to be jointly developed and approved by both BNL and <Partner Agency/Institution>.

### Status Reports

<Partner Agency/Institution> plans to provide a monthly written status report covering all in-kind contributions, accompanied by a report at a monthly status meeting for the EIC Project, during all phases of the project continuing through final acceptance. The monthly report is to include technical status, status of all milestones, and forecasts for upcoming milestones for each <Partner Agency/Institution> Deliverable.

### Preliminary Design Phase data package

The preliminary design phase documentation contains engineering design and technical information necessary to demonstrate the design compliance with requirements and interfaces. The preliminary design definition and supporting requirements are detailed in the EIC Technical Review Plan [6]. The detailed list of technical documents aligned with the preliminary phase milestones are to be jointly developed and agreed upon by <Partner Agency/Institution> and BNL prior to approval of this document. All specified engineering documentation is to be made available in advance of the PDR.

### Final Design Phase data package

The final design phase documentation includes technical information to support design configuration and integrity of the selected design; verification planning, requirements, and compliance; operations planning and requirements; and production and testing support equipment requirements and specifications. The final design definition and supporting requirements are detailed in the EIC Technical Review Plan. The detailed list of technical documents aligned with the final phase milestones are to be jointly developed and agreed upon by <Partner Agency/Institution> and BNL prior to approval of this document. All specified engineering documentation is to be made available in advance of the Final Design Reviews (FDR).

### Procurement/Manufacturing/Acceptance Phase data package

The documentation developed and exchanged during this phase includes technical information to support procurement, assembly, and fabrication of major subsystem assemblies, as well as documentation to support System Acceptance Reviews (SAR1 and SAR2) and records of acceptance tests. Handoff agreements from <Partner Agency/Institution> to BNL may also be included in this data package. The document deliverables contain technical, procurement and management information outlined in the EIC Technical Review Plan [6]. The detailed list of technical documents aligned with the construction phase milestones are to be jointly developed and agreed upon by <Partner Agency/Institution> and BNL prior to approval of this document. All specified engineering documentation are to be made available in advance of the applicable review, which may be PRR, MRR, TRR, SAR1 or SAR2 depending on the stage of the project execution.

### Final Report

Following acceptance of a deliverable by BNL, <Partner Agency/Institution> plans to provide a Final Report that includes a comprehensive summary of the contributions made, works and services undertaken, and project results achieved.

# **Tasks applicable to all project phases**

## Project Management and Control

According to PPD – Part 1, the EIC Project is mandated by DOE to use the Earned Value Management System (EVMS) as a tool for managing progress and performance. This translates into a requirement for tracking deliverables from Partners to the EIC Project.

The <Partner Institution/Laboratory/Project> has its own specific governance arrangements and associated Project Management Plan (PMP). Within the <Partner Institution/Laboratory/Project>  Project Management Plan, each sub-projects has its own management plan that is subordinate to the <Partner Institution/Laboratory/Project> Project Management Plan. <Partner’s specific description to be added>

It is expected that the <Partner Agency/Institution> EIC develops and share with BNL all of the planning information for the EIC Project includes but it is not limited to:

* A brief description of the project;
* Project organization;
* Objectives and Deliverables;
* Work Breakdown Structure (scope of work);
* Project schedule, including key review/decision points;
* Finance (cost plan and profile, budget structure, management of contingency);
* Funding and income profile;
* Resources, including staffing, accommodation, equipment;
* Contract Management Plan (for commercial project work);
* Procurement Plan;
* Risk Management Plan;
* Stakeholder Communication Plan;
* Monitoring and reporting;
* Quality plan, including documentation control, change control, and project and technical reviews;
* Safety, Health and Environment (SHE) Plan. The standards and controls expected can be found in the <Partner Agency/Institution> SHE Codes; and
* Consideration of diversity issues.

## Risk Management

The <Partner Agency/Institution> plans to generate, update and share its Risk Management Plan (RMP) in order to account for technical and financial risk. The risk assessment process is planned to cover the following major items:

* Risk identification, integration in the project risk register;
* Risk assessment;
* Definition of actions for risk treatment;
* Follow-up of preventative and corrective actions and risk control; and
* Improve experience feedback (lessons learned);

The <Partner Agency/Institution> TR/Project Manager is expected to be responsible of coordinating the risk evaluation process and to generate preventative and corrective actions and to allocate a proper risk contingency. Each action generated is considered to aim at mitigating the risk criticality down to an acceptable level. Risks are planned to be monitored and updated during the full project lifetime. A risk register is planned to be built and updated continuously. Actions generated by risk analysis process is planned to be integrated in the action management process.

## Quality Assurance and Safety

The <Partner Agency/Institution> Quality Assurance Plan (QAP) for EIC In-Kind Contribution is expected to document the processes used by the project team in quality assurance and quality control for the project. The purpose of the plan is to ensure that, after shipping, deliverables are operating with expected performances as defined in FRD and PRD documents defined by EIC project. The <Partner Agency/Institution> QAP is planned to be developed to cover the following major items:

* Identify, control, record and ensure validity and accessibility of any data/documents;
* Identify requirements of the contribution (HR, technical, instrumental, etc.);
* Make sure correct standards are applied; and
* Specify monitoring, controls and management of non-conformities.

Non-Conformity Reports (NCR) are planned to be created for each deviation from the agreed standard production cycle and two priority levels apply:

* NCRs that do not impact Fermilab technical interfaces are managed and approved internally by <Partner Agency/Institution>;
* NCRs that do impact BNL technical interfaces are managed by <Partner Agency/Institution> and approved by BNL, in writing.

## Organization and Subproject Managers/Coordinators

SPCs and SPMs have been designated for the EIC Project, with senior coordinators also identified:

|  |  |  |
| --- | --- | --- |
|  | US-DOE | <Partner Agency/Institution> |
| Principal Representative | NP Director | N. Lastname |
| Technical Representative | J. Yeck | N. Lastname |
| Sub-Project Managers/Coordinators Leaders | BNL SPMLs | <Partner Agency/Institution> SPCLs |
| Sub-Project Managers/Coordinators | BNL SPMs | <Partner Agency/Institution> SPCs |

A comprehensive high-level Organization Chart (Example) for the <Partner Agency/Institution> EIC Project Structure is shown in Figure 1. The <Partner Agency/Institution> organization chart has to be defined down to the SPC level according to the Organizational Breakdown Chart in Figure 1. The EIC Project Organization Chart and roles across all Partner Institutions detailed in the EIC PPD – Part 1.

Diagram

Description automatically generated

**Figure 1** – High level <Partner Agency/Institution> EIC Organization Chart.

## Transportation

A comprehensive plan for transportation of the complete <IKC deliverables> from <Partner Agency/Institution> to BNL is intended to be developed following an initial period of research, development and testing of transportation solutions. <Partner Agency/Institution> plans to be responsible for the design of a suitable transportation frame which is expected to reduce shock and vibration loading on the <IKC deliverables> to as low as is reasonably practicable.

<Partner’s specific wording>.

## System Acceptance

Acceptance testing is planned to be carried out in accordance with the EIC Systems Engineering Management Plan (SEMP) and the subordinate EIC Technical Review Plan which details the requirements of System Acceptance Reviews [5,6]. BNL and <Partner Agency/Institution> are engaged on the production of the <IKC deliverables> Acceptance Plan and EIC <IKC deliverables> Acceptance Criteria documents which fully describe the division of responsibilities, non-conformance handling, and criteria by which the <IKC deliverables> may be accepted at BNL following transportation from the <Partner’s location>.

# Modifications

This PPD – Part 2 and its Appendices may be modified at any time by mutual written decision of the Participants in accordance with procedures to be specified by the EIC In-Kind Contribution Execution Board (EIEB).

The Participants intend to take appropriate measures to ensure that the information contained in this PPD – Part 2 and its Appendices is kept up to date. To this end, the Participants intend to review the content and execute subsequent modifications at least annually in advance of EAB and the RRB meetings. BNL may also request that modifications occur in advance of project reviews or other significant events.

In the event that modifications are made to this PPD – Part 2 or its Appendices, BNL intends to notify both the highest-level management boards, the EAB and the RRB.

# Commencement and Discontinuation

Activities under this PPD – Part 2 may commence upon signature by authorized representatives of the Participants and continue for the duration of the EIC Project unless earlier discontinued in accordance with the following paragraph.

The Participants may discontinue cooperative activities under this PPD – Part 2 at any time by mutual written decision. If only one of the Participants wishes to discontinue its participation in the activities under this PPD – Part 2, that Participant is expected to provide at least six (6) months advance written notice to the other Participant and to the EAC and the RRB and is expected to discuss the terms for such discontinuation.

# Appendix A – <Partner Agency/Institution> document deliverables

|  |  |
| --- | --- |
| **PHASE 1** | |
|  |  |
| **WBS task code Desription** | |
| **BNL Milestone** | | **Document Deliverables** |
| Milestone ID | Description |
| <Partner Agency/Institution> Provides | Items… (e.g., Design Report) |
| BNL Provides | Items… (e.g., IKC deliverable Requirements Documents) |
|  |  |

|  |  |
| --- | --- |
| **PHASE 2** | |
| **WBS task code Description** | |
| **BNL Milestone** | **Document Deliverables** |
| Milestone ID | Description |
| <Partner Agency/Institution> Provides | Items… (e.g., Vendor documentation) |
|  |  |
|  |  |

|  |  |
| --- | --- |
| **PHASE 3** | |
|  |  |
| **WBS task code Description** | |
| **BNL Milestone** | **Document Deliverables** |
| Milestone ID | Description |
| BNL Provides | Items… (e.g., IKC Acceptance) |
|  |  |
| <Partner Institution> Provides | Items…. (e.g., SAR1 report) |
|  |  |
|  |  |
|  |  |
|  |  |

# References

[1] “EIC Configuration Management Plan” Document number: EIC-ORG-PLN-025

[2] “EIC Project Management Plan” Document number: EIC-ORG-PLN-026

[3] “EIC Risk Management Plan” Document number: EIC-PSD-PLN-003

[4] “EIC Configuration Management Plan” Document number: EIC-ORG-PLN-025

[5] “EIC Systems Engineering Management Plan” Document number: EIC-SEG-PLN-022

[6] “EIC Technical Review Plan” Document number: EIC-SEG-PDN-009

[7] “BNL Environmental Safety and Health Database” Available: <https://intranet.bnl.gov/safety/>

[8] “EIC Integrated Safety Management Plan” Document number: EIC-ESH-PLN-007

**Signed in duplicate:**

**FOR BROOKHAVEN NATIONAL LABORATORY: FOR THE <Partner Agency/Institution>:**

Date: Date:

Place: Place:

Signature: Signature:

Name: Name:

Position: Position: