STATEMENT OF WORK
for
ERP Financial & Supply Chain Software Solution and Post-Implementation Support

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Statement of Work Revisions

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1 INTRODUCTION AND SCOPE

1.1 Introduction

1.1.1 Princeton Plasma Physics Laboratory Overview

Founded in 1951 by the late Dr. Lyman Spitzer, a Princeton University professor of astrophysics, Princeton Plasma Physics Laboratory, also referred to as "PPPL," or "Laboratory", is a Collaborative National Center for plasma and fusion science. PPPL is a Department of Energy (DOE) National Laboratory managed and operated by Princeton University.

PPPL works with collaborators across the globe to develop fusion as an energy source for the world and conducts research along the broad frontier of plasma science and technology. PPPL also nurtures the national research enterprise in these fields and educates the next generation of plasma and fusion scientists. PPPL has two coupled missions to develop:

- The scientific understanding of plasmas from nano- to astrophysical-scale; and,
- The scientific knowledge to enable fusion to power the United States and the world.

1.1.2 Project Objectives

The primary objective of this project is to replace PPPL's current Financial and Supply Chain business systems, and the related underlying Information Technology (IT) infrastructure, with a commercial SaaS solution(s) based on a fully integrated Financial and Supply Chain solution (referred to as the Enterprise Resource Planning (ERP) SaaS Solution) capable of supporting PPPL's current and future business operations. The implemented solution(s) will enable PPPL staff to perform duties associated with business operations, such as financial management, procurement management, and material management. The solution will also accommodate interfaces with PPPL's existing systems (**Attachment 4 - PPPL Interface Requirements**), such as Princeton University's PeopleSoft Human Capital Management/Payroll and Financial Supply Chain Management system, Concur Travel & Expense Management, Maximo and other PPPL systems.

In addition, the solutions(s) will enable PPPL to achieve the following objectives:

- Improve operational efficiency;
- Streamline the PPPL's core financial and procurement processes in conjunction with the implementation of practices available in the ERP SaaS Solution;
- Eliminate administrative activities and any unnecessary disparate systems that do not add value;
- Improve financial information transparency;
- A dashboard that provides measurable data to effectively capture, manage, and measure a program's success;
- Provide the necessary capabilities and training to enable data extraction to meet daily business reporting needs;
- Assure compliance and mitigate risk;
- Standardize business processes and practices to conform to DOE policies, regulations, and procedures to include best practices, compliance and reduce risk;
- Enhance adaptability;

- Provide ongoing access to industry improvements and features with moderate or minimal impact to the business operations; and,
- Address DOE policy changes as required.

1.1.3 Project Background

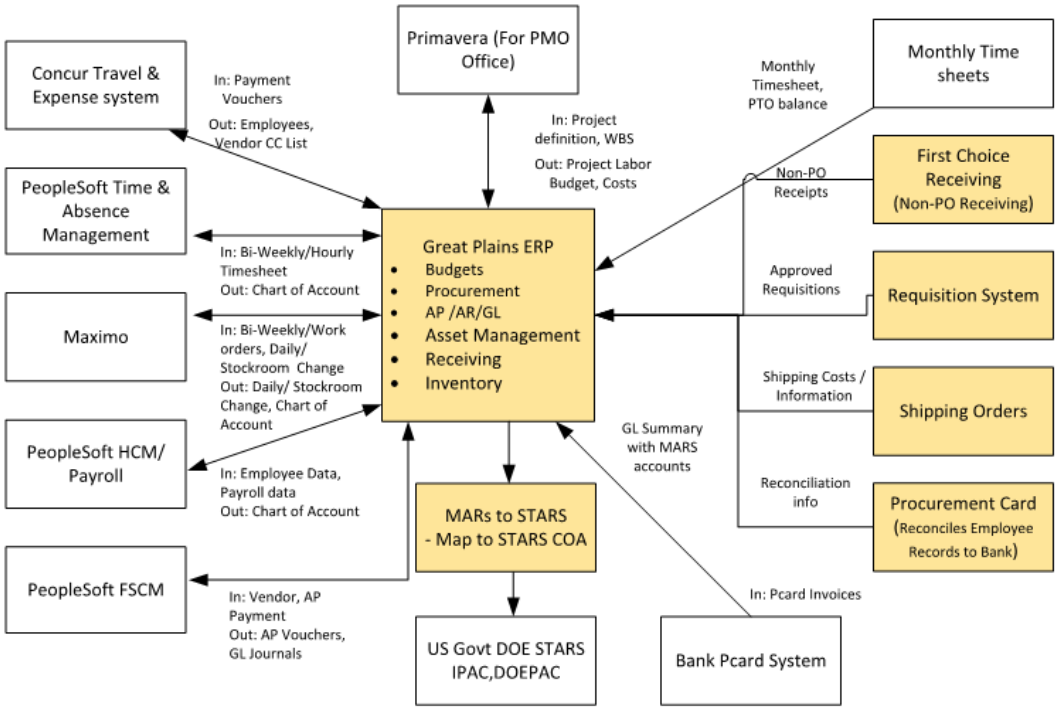
For approximately 15 years, PPPL has been operating a highly customized Great Plains (GP) fund accounting system on SQL Server 2005, as the system of record supporting all business operations related functions. Although the current ERP solution operates effectively, it is highly customized and is no longer supported by the manufacturer. At this juncture, software upgrades within the existing environment could potentially compromise GP's performance.

The goal of this Statement of Work (SOW) is to identify an ERP SaaS Solution that meets the Lab's requirements set forth within this document.

1.1.4 Current Business System Technical Environment

A high-level view of the current business system landscape at PPPL is provided below. This high-level system landscape includes the business systems at PPPL and those surrounding systems that may be impacted by this project. The current surrounding systems that are not part of this scope will need to integrate with the proposed ERP SaaS Solution.

Exhibit #1 – Current PPPL Enterprise Application Landscape



- The system in yellow boxes above will be replaced by the ERP SaaS Solution.
- Microsoft Great Plains System core modules currently in-use are:

- Project Management, Budget Planning, Cost Accounting, Asset Management, Inventory (Stockroom, Spare Parts) Management, Procurement, Labor Cost Distribution, General Ledger, Accounts Payable, Accounts Receivable, and Shipping and Receiving.

1.2 Project Approach and Timeline

1.2.1 Project Governing Principles

PPPL has defined the following governing principles and requires the Supplier to provide support throughout the entire project team. The below principles are to be used when making solution implementation decisions for the proposed ERP SaaS Solution, and to identify and document issues when characteristics of the solution conflict with these principles.

- **Reengineer** business processes, information structure and related business rules. Modify current business processes to enable an efficient implementation and adoption of best practices. The project will pursue changes to policy, procedure, and organization in order to realize the solutions benefits.
- **Standardize** business processes, data and object naming convention and structure to facilitate better communication, and to simplify reporting and solution integration.
- **Minimize** customization. Use an out-of-box solution whenever possible and align business processes to the industry best practices as much as possible. This will minimize on-going maintenance cost, ensure a stable upgrade path, and allow for the integration of other modules in the future.
- **Increase** data accuracy with a single source of data entry and validation. Accounting information must be complete and traceable to tangible business events; maximizing data quality, increasing the transparency of accounting transactions and reducing the effort to control and audit these transactions.
- **Interoperability over Integration** by leveraging the solutions designed for interoperability, which is the ability of different programs to exchange data via a common set of business procedures or technical standards. At a minimum, it is required that the ERP and fit-for-purpose solutions have the ability to integrate with other applications, as required.
- **Improve** information accessibility. Easy access to extract and present information.
- **Enforce** process controls by incorporating best practices that increase accountability and standardizes the processes across the ERP SaaS Solution.
- **Build** a solid platform for future growth and evolution.

1.2.2 Project Timeline

To replace the existing functional ERP solution and any unnecessary disparate systems in one implementation process with a goal to roll-out at the start of a fiscal year (preferred - October 1, 2022). Alternate proposals will be considered only if the proposed solution substantially addresses the objectives of reducing risk, replacing any unnecessary disparate systems, and providing additional benefits to PPPL. The Supplier will propose an implementation approach, along with the reasoning and justifications or the benefits and risks associated with an alternative proposed approach. The soundness and the reasonableness of the proposed

approach and schedule are critical components of the response. The Supplier shall propose their implementation approach and timeline with the following items taken into consideration:

- PPPL's fiscal year is October through September
- The benefits and implications of a Financials Go-Live date that coincides with the beginning of PPPL's fiscal year (10/1/2022 preferred)
- If the proposed approach is phased, each phase should provide fully functioning capabilities (including reporting)
- PPPL will require a minimum two months before go-live parallel operations of the current Great Plains system and the new ERP SaaS Solution. Efforts for reducing double entries and data reconciliation between the two systems should be part of the proposed solution

1.3 Project Scope

1.3.1 Overview

The Supplier[1] shall provide an ERP SaaS Solution, implementation support, post-production support and training as detailed in this Statement of Work.

The proposed ERP SaaS Solution must be able to meet the requirements identified in Section 5 "Requirements".

1.3.2 Modules/Functions in Scope

The ERP SaaS Solution shall enable PPPL staff to perform the job functions associated with the following functional/service areas:

Table 1: Financial Management Service Area

Area ID	Function Name	Comments
AM	Asset Management	Include active assets & excess property
AP	Payable Management	
BD	Budget Planning & Execution	
GL	General Accounting	Include very limited Accounts Receivable activities
LA	Labor Distribution	
CM	Project Cost Management	
RPT	Financial Reporting	

Table 2: Procurement Management

Area ID	Function Name	

[1] The Supplier is defined as the sole party to the contract with PPPL and the sole point of contact between PPPL and the Supplier, who is accountable and responsible for the successful integration of all Solution components being proposed by the Supplier.

REQ	Requisition Management	
PM	Purchasing/Procurement Management	
PO	Purchase Order Management	
PC	Procurement Card (PCard) Management	

Table 3: Material Service Area

Area ID	Function Name	
IM	Inventory (Stockroom & Spare Parts Management)	
SR	Shipping & Receiving	

It will be the Supplier's responsibility to match PPPL's requirements with their delivered capabilities and propose the modules/functions required to support PPPL's business requirements provided in Section 5 "Requirements" and in Appendices of this document.

1.3.3 Scope of Services

The supplier will provide an ERP SaaS Solution, support during the implementation process, and training to support the deployment of the new ERP SaaS Solution.

1.3.3.1 Implementation Preparation

Supplier shall support PPPL and the System Implementer to identify subject matter experts in each of the following areas: Finance, Supply Chain and Project Cost Accounting.

To include the following tasks:

- **Update/finalize the business processes**: Assist PPPL's adoption of best business practices supported by the solutions capabilities.
- **Simulate project costing/burdening processes:** Demonstrate the project cost burdening process ensuring that the new financial data structure can fully support the project cost burdening process.
- **Estimate PPPL's effort for data extraction and conversion:** Work with PPPL's project team to create a data migration strategy, which includes, but is not limited to, defining data migration scope, migration methodology and modules, determining roles and responsibilities of PPPL and the Supplier, and estimating PPPL's efforts for data migration.
- **PPPL core team training:** Submit a training plan as part of the response and provide PPPL core team members with functional and technical training via existing online courses or via instructor led classes (including any manuals) before the implementation project starts officially. Supplier's training plan should include how the supplier will partner with PPPL and/or system integrator to lead or support end-user training programs, and to provide a value-added User Group Community or collaborative platform that will guide the future direction of the Offeror's offerings and allow PPPL the opportunity to interact with other customers.
- **Draft Project Management Plan:** Work with PPPL's Senior Project Manager to review and finalize the project management plan.

1.3.3.2 Implementation Support

The Supplier shall support the System Implementer in the following tasks which include, but are not limited to, project management, gap analysis, Conference Room Pilot (CRP)/Prototyping, design, build, testing, training, data conversion, cutover, and post go-live support.

- **Design/Build/Configuration:** The Supplier shall support the System Implementer performing system design, system configuration, bug fixing, and development of the solution. The Supplier shall support the joint team consisting of their experts, system implementer, and PPPL staff at the Lab in developing a solution that appropriately meets PPPL requirements.
- **Testing:** The Supplier shall support the testing of the solution. Testing shall include, but not be limited to the following tests: unit, system, integration, security, parallel and user acceptance.
- **Training:** The Supplier will develop a comprehensive training plan that will: identify the training needs of the solution's end-users; organize the application processes into a course structure, including course selections; develop the training materials needed to deliver the course specifications; and, determine the facility requirements necessary to support delivery of the training to all end-users.
- **System rollout and go-live support:** Supplier will support and review the System Implementer's strategy and plan for the transition of the system from development to the production environment. The Supplier shall be responsible for executing all cut-over activities, setting up production environment, migration to the production environment, and migration of historical data.
- **Knowledge transfer to PPPL Project Team:** Supplier is to provide the knowledge transfer to PPPL to enable them to properly support the operation and continuous improvement of the ERP SaaS Solution with limited support of external consultants.

1.3.3.3 Ongoing Service

The Supplier shall provide site-wide SaaS software subscriptions for the Solution's capabilities.

The purchase of the Solution subscriptions shall include the following at a minimum:

Hosted services including

- Software and Data Environments
  - Production, Testing, Development, and any other environments of the Solution required to successfully deploy the capabilities purchased, required systems integrations, routine data refreshment for non-production environments and security requirements
- System Access
  - Administrative access to all of the Solutions functionality for the specific capabilities purchased including access to PPPL databases, business data, system integration processing and system logs. This includes access to the databases for reporting and troubleshooting
- Storage
  - Storage of all data input and managed in the Solution's software modules. The data storage should include storage of native transactional information associated with

Finance and Supply Chain solutions and include the ability to store attachments such as PDF, Microsoft Word and Excel documents, and other file formats

- Backup and Recovery
  - RAID redundancy configuration
  - 24-hours a day, 7-days a week disaster recovery and business continuity, Recovery Time Objective (RTO) of 12 hours and Recovery Point Objective (RPO) of 1 hour
  - Automated daily system backup of Production, Testing, and Development and any other PPPL environments. Per PPPL procedures for data archives for production solution must be retained for no less than **8** calendars days, and non-production (Test, Development, etc.) solutions should be kept for no less than **10** calendars days. Once specified periods have expired, the backups must be destroyed
- Software Upgrades and Patches
  - Automated solution upgrades and patching of servers and databases, including advanced notification to the PPPL system administrator regarding all upgrades that will occur with options for opt-out or delay
  - Identification and correction of system defects as defined in the SLA (Service Level Agreement)
- Performance
  - 99%+ System uptime for Production, Testing, and Development environments
  - Performance monitoring tool
- Scalability
  - Adapt to a larger user base than originally intended
- Security Compliance
  - System security must comply with FedRAMP Moderate Impact System Authorization or NIST SP800-53 v4 standards at a minimum or as prescribed by PPPL Cyber Security requirements (**Attachment 2- PPPL Detailed Technical and Support Requirements**)
- Mobile Devices ready software
  - Mobile ready software solutions should include subscriptions that allow the Solutions functions on iOS and Android devices

Training

- Provide classroom, remote, Learning Management System, and on-demand training for the specific capabilities purchased
- Provide online training materials and self-service support
- Provide Solution Fundamentals Training
- Solution Adoption Training

Support

- Premium Support services including 24-hours per day 7-days per week for any needed systems analysis, help-desk support, system upgrades, fixes, data recovery assistance, issue handling, configuration change, and enhancements to the installed items
- Escalation Procedures
- Dedicated Customer Success Manager
- Periodic Solution Reviews and system usage guidance

- Solution-specific Release Update Information
- Delivery Assurance
- Refresh of non-production environment
- Regular reporting

2 APPLICABLE DOCUMENTS

- Federal Information Security Management Act (FISMA)

  http://csrc.nist.gov/drivers/documents/FISMA-final.pdf

- National Institute of Standards and Technology Special Publication SP 800-53R4
  https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-53r4.pdf

- Minimum Security Requirements for Federal Information and Information Systems
  https://nvlpubs.nist.gov/nistpubs/FIPS/NIST.FIPS.200.pdf

- Security Requirements for Cryptographic Modules
  https://csrc.nist.gov/publications/detail/fips/140/2/final

PPPL Business Requirements documents, listed in Appendices 1 ~ 10.

3 APPLICABLE DRAWINGS

Not Applicable

4 RESPONSIBILITIES

4.1 Princeton Plasma Physics Laboratory (PPPL)

PPPL will have a dedicated Senior Project Manager to oversee all aspects of the project. The Senior Project Manager will be the main point of contact for all project-related communications and issues. Supporting the Senior Project Manager will be a full time Functional Lead, 2 full time Business Analysts, 1 full time Technical Lead, 2 full time Application Developers, and a team of PPPL Subject Matter Experts (SMEs) and other project support personnel. Please refer to section 13 'PPPL Staff Resources' for details.

PPPL shall be responsible to:

- Provide the Supplier business processes within PPPL;
- Assist with identification of detailed requirements, as needed, to define configuration and customizations;
- Conduct parallel and user acceptance tests and provide results;
- Assist with coordinating training (for both staff and system administrators);

- Assist with managing the project schedule; and,
- Provide project materials necessary to complete the requirements identified within the SOW.

4.2 Supplier

The Supplier is responsible for completing all activities associated with the tasks and deliverables outlined in the '5. REQUIREMENTS' section of this SOW.

5 REQUIREMENTS

The Supplier shall propose an integrated ERP SaaS Solution, and provide qualified personnel to meet PPPL's core requirements grouped in five (5) categories below:

1. Functional Requirements
2. Technical & Regulatory Requirements
3. Ongoing Service Requirements
4. Project Management Requirements
5. Training and Change Management

5.1 Functional Requirements

The section contains a high-level overview of the requirement details found in **Attachment 1 - PPPL Functional Requirements.** The Supplier will meet all functional requirements as defined in **Attachment 1**, **Attachment 5 – PPPL Reporting Requirements** and **Attachment 9 – PPPL Supplier Qualifications and Reference Workbook**.

*PPPL considers exchange of data and integration across business processes and modules to be an inherent capability of the ERP SaaS Solution and is, therefore, implied throughout this SOW.

5.1.1 General Accounting

General Accounting is the central support to PPPL's business processes, and the centralized data input and access throughout the Lab.

The proposed solution must provide the framework to streamline business processes and integrate with other PPPL and Princeton University Systems. PPPL requires robust processes that will standardize and control financial transactions. Functionality such as commitment control, on-demand financial reporting and configurable burdening/allocation processes will be required to meet current and future regulatory requirements and growth.

The proposed solution must provide the following:

- A Chart of Account (COA) structure to support management of financial information for three (3) different constituents: Lab management, Princeton University, and DOE STARS. STARS is the DOE financial management system that is the foundation for financial accounting, financial reporting, cost accounting, and performance measurements.

- The flexibility to accommodate the changing demands for information from DOE or Princeton University, allowing for efficient and accurate extraction of appropriate data.

- A flexible burdening process(es) that will apply cascading burdens in the appropriate order while offering the appropriate level of detail/visibility of costs to allow users to separate the direct cost from the associated burdens, concurrently maintaining a link between the direct cost and burdens.
- Budgetary control module that can actively manage budgets and control costs throughout the procure-to-pay and general accounting transaction lifecycle.
- A module to manage Accounts Receivable (AR) activities; although AR activities are limited.

Out of Scope: Implementation of multi-currency, translation ledger and consolidation will not be required for the ERP SaaS Solution.

5.1.2 Accounts Receivable

PPPL requires the Solution to support a standard Accounts Receivables processing such as billing, payment application and production of customer statements. The billing for the DOE is done by manual entry into the Federal government's VIPERS system. Receivables are low in volume and are broken down into the following categories:

- General category - Money owed to PPPL by government agencies other than the DOE. An example is money owed by the GSA for maintenance by PPPL of vehicles owned by GSA. In addition, money owed from sales of scrap and excess property; by Princeton University for stockroom withdrawals; and payroll costs for labor provided by PPPL employees to Princeton University departments.
- Pre-financing and reimbursement for Strategic Partnership Project (SPP) projects when the sponsor is not a Federal entity. PPPL requires a Solution that associates a project's expenses with the project sponsor by setting up the sponsor as a customer.
- DOE STARS use separate General Ledger Account values for receivables accounts for Other Federal Agencies, Non-Federal entities, and DOE.
- A solution that can vary receivable account assignment by customer type according to the above three categories.

5.1.3 Budget Planning & Control

Budget Planning and Control are the required business processes for planning and pricing resources, recording grants received and/or funds authorizations (both values and terms), tracking and controlling costs within the budgeted amounts. The ERP SaaS Solution must address integration capabilities between budget planning, funding, budget and cost.

PPPL requires the following:

- Project budget planning module to establish and maintain project budgets. The budget planning and control process requires the Planning and Control (P&C) officers to enumerate budget at a detail level by resource type, resource subtype, job function, FTE and project account. The costs are consolidated to show planned spending at multiple aggregation levels, including Work Breakdown Structure (WBS) (project and activities), cost categories, Budget and Reporting codes (Fund), and DOE program categories. The module will need to accept input at a detailed level and perform the necessary calculation, including real-time computation of allocated overhead to allow for reporting at both the

detail and summarized levels. The module will allow the users to create budgets based on actual or estimated costs.

- Budgetary Control module that will enable PPPL to manage the budget proactively. This module must be fully integrated with all Financial and Procurement Management modules in the ERP SaaS Solution. This must allow checks on actual transactions (such as actual expenditures and revenues) against budgets, record imminent future financial obligations (pre-encumbrances and encumbrances), apply recognized revenue to revenue estimate budgets, and issue alerts when the budget is near depletion.

5.1.4 Labor Distribution & Project Cost Management

Labor represents the largest area of PPPL's costs, and accurate distribution of labor to the correct cost objective is a critical factor. PPPL staff are employees of Princeton University and funded primarily by the Department of Energy (DOE). Payroll processing is done through Princeton University's PeopleSoft HR and Payroll system capturing information for Human Resources activities and payroll processing.

Princeton University's Time and Absence system is used to:

- Capture employee time and attendance information for non-exempt (biweekly/hourly) staff.
- Track leave and absence for Exempt (monthly) staff.

Time entered for all monthly employees is currently captured in a customized module which directly pulls the data into the current ERP Solution. The costs are distributed based on standardized (i.e. average) labor rates such as by employee's position and home department, or other means for all projects, except Strategic Partnership Projects (SPP) for which costs are distributed based on actual salary. The ERP SaaS Solution must:

- Interface with Princeton University (PU) PeopleSoft HR, Time and Absence system and payroll system, and PPPL's customized monthly timesheet system to obtain timesheet data needed for labor cost calculation and distribution.
- Provide the capability to calculate and track both the actual cost and the standard cost and keep track of overall variances between the two costs so that labor rates can be adjusted.
- Be capable of posting calculated labor cost (standard and actual) to an appropriate project account within the general ledger.
- Allow to reconcile calculated payroll costs with the actual payroll costs from Princeton University each month.
- Provide the ability to liquidate all costs (labor and non-labor), by charging them to projects funded by the Department of Energy (DOE) and other project sponsors.
- Provide the ability to generate burdens and overhead cost based on user defined rules and rate sets.
- Provide the ability to track the effectiveness of the cost liquidation process by comparing the non-project costs to the cost liquidation to determine if rate adjustments are needed.
- Provide the ability to generate an invoice for the subcontracted personnel timesheet to the supplier. The invoice, containing the actual hours that PPPL should be billed for, is reconciled to the paper invoice provided by the agency.

- Provide the ability to configure necessary rules for the 'Project' chart string.

5.1.5 Procurement Management

PPPL requires a purchasing module as described in **Attachment 1 - PPPL Functional Requirements** to manage the purchasing process for purchasing materials and services. To maintain information about the companies from which purchases / services are made. The ERP SaaS Solution will cover business processes, such as requisitions, sourcing, Purchase Orders (PO), change orders, PCard, and supplier management.
The ERP SaaS Solution must:

- Provide a configurable requisition approval workflow where approvals are dependent upon items ordered, project account(s) charged, and requisition dollar amount.
- Provide a configurable workflow for the Purchase Order Approval process for example, PO dollar amount is above the threshold or a change in the project account.
- Provide budget checking to track pre-encumbrance and encumbrance commitments against projects accounts and issue alerts to the budget owners when the fund is below a configurable threshold. A requisition will increase pre-encumbrance and decrease budget, which a purchase order will increase encumbrance and decrease pre-encumbrance or budget.
- Integrate with suppliers for purchase of commercial off-the-shelf (COTS) materials and services, so that a requisitioner may choose items for their shopping cart from a supplier's catalog hosted by PPPL, or via punchout to a PPPL-specific catalog on the supplier's site.
- Allow a requisitioner to create a PCard PO after a requisition has been approved.
- Provide a solution that will import supplier information from Princeton University's PeopleSoft FSCM system and allow supplier updates. Princeton University (PU) processes all supplier payments for PPPL in its' PeopleSoft FSCM system and PPPL needs to keep the supplier file in sync with PU's supplier file. The solution will import supplier information from PU's prime system via a nightly feed and allow users to update.
- Provide the ability to import bank statements from PPPL's procurement card issuer and provide reconciliation by each card holder of procurement card requisitions against the statement.
- Provide configurable reporting, to obtain accurate information for different types of reporting requirements. Such as supplier performance reports, and configurable dashboards showing transaction processing summaries and status.

Out of Scope:

- PPPL will NOT generate contract content from the ERP SaaS Solution, therefore there is not a need to build a content library of contract. PPPL will create the content of a contract offline and attach a copy of the contract to a PO or Procurement Contract in the solution.
- PPPL will utilize PU's web application that allows suppliers to manage their own business information and bid information and there is not a need to implement a supplier-facing module for supplier's onboarding and bidding process.

- PPPL will utilize PU's sourcing module, Jaggaer, to manage the sourcing process.

5.1.6 Accounts Payable

Accounts Payable (AP) is part of the full procure-to-pay process which is composed of the activities to manage the flow of data from requisition through payment to the supplier.

PPPL requires a solution that will interface with Princeton University (PU) PeopleSoft Accounts Payable system. The proposed solution will enable PPPL to import the supplier file from PU, send invoices to PU for payment processing, and receive a detailed payment file from PU by nightly batch processes. The solution will assign check numbers to each invoice based on the payment file, mark the invoice as paid, and generate accounting entries for the payment. The solution will enable PPPL to stop payments, reissue checks and generate accounting entries via the interface.

In addition, the proposed solution will enable automated approvals with configurable workflows, allow for two-way, three-way and four-way invoice matching, and provide the ability to upload 3rd party electronic invoices or produce electronic invoices from receipts matched to purchase orders. The solution will also provide the ability to associate bank accounts with DOE or Non-DOE funds and default the bank account for each invoice based on the project account, and process standard accounts payable transactions, such as credit memos, voids and manual pays.

PPPL does not process 1099 withholding within the AP system. Princeton University withholds tax and issues 1099 form to the supplier via their PeopleSoft AP system. PPPL sends PU a yearly 1099 file which lists suppliers qualified for 1099 form, along with their qualified invoices.

5.1.7 Asset Management

PPPL requires an Asset Management module that will enable PPPL to manage its assets in accordance with DOE requirements and regulations. The proposed solution shall integrate with procurement-to-pay processing, project costing, general ledger, Shipping Orders, Inventory Management, and allow for seamless tracking, monitoring, and reporting of assets whether capitalized or not, from funding to fabrication/purchase through disposition.

The solution shall support tracking the location and status of all property valued over ten thousand dollars, as well as assigning/maintaining a DOE asset type within each property, conducting periodic physical wall-to-wall and statistical sampling inventories for monitored assets, processing fabricated assets, tracking loaned assets and excess property, disposing assets, calculating depreciation and generating financial entries for the fixed assets.

When assets are shipped off-site, PPPL's Shipping Order solution needs to integrate with Asset Management to provide changes for asset status. Similarly, when assets are received at PPPL, newly purchased assets need to be added to the solution and returned assets need to have their status updated.

Government regulations require that material identified as excess, no longer needed property, be disposed of according to a set procedure that includes formal approvals. Excess items may or may not be assets. PPPL

needs to track attributes of each excess item such a value, location, type of material, condition and eventual disposition. The solution shall enable PPPL to track these attributes and provide approval process for the disposition of each excess property.

PPPL employees at times wish to loan equipment to other research organizations. When a PPPL employee is located at the other research organization, the arrangement is considered to be property collaboration instead of a property loan. The DOE requires formal approval within PPPL and by the borrowing or collaborating organization before items can be sent off-site. The solution shall enable PPPL to track the details of Loan and Collaboration agreements and record the internal/external reviews.

5.1.8 Inventory Management

PPPL requires a solution that provides storage location and item definitions, inventory management, stock movement, inventory valuation, physical and statistical inventory counts.

PPPL maintains warehouses and a stockroom used to store material that employees may requisition for laboratory work. This material consists of stockroom supplies, equipment spare parts, administrative supplies and records, and equipment/supplies stored for future use in project experiments. Inventory of cylinders used for storage of gases such as helium must be tracked since PPPL is charged rental fees for the cylinders by the gas supplier. PPPL will cost its inventory on a First-In, First-Out (FIFO) costing basis.

Perpetual inventory counts and inventory value is kept for stockroom/spare part inventory. This inventory value is tracked within PPPL's General Ledger financial record, except for those equipment's reserved for the future experiments. Perpetual inventory counts and inventory values are maintained but has no effect upon the General Ledger financial records since the material has been already charged to a project account.

The DOE requires that financial reporting be done separately for Stores, Spares, Inventory Allowance, and precious metals. The DOE also requires that inventory expenses be reported per type such as stockroom withdrawals and inventory adjustments. To meet these DOE requirements, the proposed solution must provide flexibility for PPPL to specify accounts by items, item classes, and/or inventory transaction types.

PPPL needs a solution that will schedule continuing periodic physical inventory counts for stockroom inventory. PPPL also needs an alternative statistical sampling method of physical inventory where the solution shall randomly choose items to be counted. This is done for spare parts inventory. Count variances shall automatically generate journal entries to adjust inventory value.

Item catalogs for stockroom, spare parts and future project equipment need to be available for review on PPPL's intranet. Employees need to review available inventory prior to requesting inventory withdrawals. Withdrawals may be restricted to authorized employees depending upon the item. Equipment for future experiments may be withdrawn by a restricted list as well. Stockroom and spare part withdrawals are charged to the appropriate project account.

5.1.9 Shipping & Receiving Management

PPPL requires a solution that allows employees to input requests to ship items into the solution; these requests are called shipping orders. These shipping orders require project accounts for cost distribution and Signature Authority approval as well as full descriptions of what is to be shipped, the destination, and the required date to be returned. PPPL needs to track these shipping orders within the solution. When an item is shipped back, Receiving needs to be able to identify the receipt as PPPL property previously shipped out and flag the shipping order as returned property. The solution needs to allow for identification of shipments that require that an Export Control form be filled out and approved.

The Shipping Orders Solution needs to integrate with other delivered capabilities, such as Asset Management (including excess property management), General Ledger, Procurement and Loans/Collaborations to process excess items, warranty replacements, loaned items, and other types of shipments.

PPPL's receiving dock handles a wide variety of material ranging from office supplies to heavy equipment and hazardous materials. PPPL requires a solution that allows PPPL to receive goods/services and create receipts automatically from standard purchase orders, subcontracts, and PCard purchase. The solution shall also allow PPPL to create receipts manually for goods/services without any procurement agreements, such as property collaborations, and excess property reutilization. At PPPL, some Blanket Purchase Agreements (BPA) allow for a variable price, in this case the solution shall allow receiving personnel to input or update prices for a receipt.

The solution will notify Quality Assurance automatically when items marked as 'inspection required' arrive at the receiving dock. The solution will suspend processing the receipt for these "inspection required" items for a configurable number of days. For those items which failed inspection, the solution will enable PPPL to track and manage goods returned to suppliers for exchange or for credit.

5.2 Technical & Regulatory Requirements

This 'Technical Requirements' section will describe the technical requirements to be met by the Supplier in the fulfillment of this project, background information which is relevant to the topic, preferences of PPPL with regard to the nature of the work to be performed and a description of the information to be provided by the Supplier in their proposal. The section contains a high-level overview of the technical requirement details found in **Attachment 2-PPPL Detailed Technical and Support Requirements** and **Attachment 8-PPPL Implementation and Support Requirements**. The Supplier will meet all functional requirements as defined in **Attachment 2** and **Attachment 8.**
The proposed solutions should be in compliance with the regulatory requirements identified below:

- FedRAMP Moderate Impact System Authorization or an equivalent level of security for the technical environment that hosts the ERP SaaS Solution
- FIPS 140-2

5.2.1 Access to PPPL Information Systems

(a) Definitions

- A "federal information system" is an information system used or operated by an executive agency, by a contractor of an executive agency, or by another organization on behalf of an executive agency.
- An "information system" is a discrete set of information resources organized for the collection, processing, maintenance, use, sharing, dissemination, or disposition of information.
- "Security controls" means the management, operational, and technical controls (i.e., safeguards or countermeasures) prescribed for an information system to protect the confidentiality, integrity, and availability of the system and its information.

(b) The Supplier shall comply with FedRAMP Moderate Impact System Authorization or NIST SP800-53 v4 standards at a minimum or as prescribed by PPPL Cyber Security requirements (Attachment 2- PPPL Detailed Technical and Support Requirements) .

5.2.2 Security Controls Compliance Testing

On a periodic basis, PPPL reserves the right to evaluate any or all the security controls and privacy practices implemented by the Supplier under the clauses contained within the contract. Within 10 working-days' notice, at the request of the PPPL, the Supplier shall fully cooperate and assist in an PPPL-sponsored security controls assessment at each location wherein PPPL information is processed or stored, or information systems are developed, tested, operated, maintained, or used on behalf of PPPL. PPPL may also conduct a security control assessment on shorter notice (to include unannounced assessments) as determined by PPPL in the event of an incident or at any other time.

5.2.3 Cybersecurity Training

(a) All Supplier employees requiring access to PPPL information and PPPL information systems shall complete the following before being granted access to PPPL networks:

(1) Sign and acknowledge understanding of and responsibilities for compliance with the Rules of Behavior relating to access to PPPL information and information systems;

(2) Successfully complete PPPL Cyber Security Awareness training and annual refresher training as required;

(3) Successfully complete any additional cyber security or privacy training, as required for PPPL personnel with equivalent information system access [to be defined by the PPPL program official and provided to the Contracting Officer for inclusion in the solicitation document – e.g., any role-based information security training required in accordance with NIST Special Publication 800-16, Information Technology Security Training Requirements.]

(b) The Supplier shall provide to the COR and Contracting Officer a copy of the training certificates or other proof of training for each applicable employee within one week of the initiation of the contract and annually thereafter, as required. It is the Supplier's responsibility to ensure the Agency is notified of new staff at the lab members who require training. Notification should be made to the COR and Contracting Officer within 24 hours.

(c) Failure to complete any mandatory training within the required timeframes shall be grounds for suspension or termination of all physical and/or electronic access privileges and removal from work on the contract until such time as the training is completed.

5.2.4 Service Organizational Control (SOC) Audits

Supplier must annually perform a SOC 1 Type 2 or SOC 2 Type 2 audit on itself and its System Implementers/ partners involved in this contract. A registered independent auditing firm in good standing with the Public Company Accounting Oversight Board will perform the audit. The Supplier will provide the:

(1) Auditor's SOC Report
- Auditor's scope
- Description of controls
- Testing results and opinion
- Any recommendations and any required planned or completed corrective actions;

(2) Supplier Corrective Actions (if applicable)
- Corrective action plans with committed delivery dates
- Evidence to support successful resolution of audit recommendations

5.2.5 Disaster Recovery and Business Continuity Plans

(a) The Supplier (and any supporting Suppliers) shall have a Business Continuity Management System (BCMS), including Information Technology Disaster Recovery Plans, that meets a business continuity industry professional standard (e.g., ISO 22301, NFPA 1600 v2013, or ANSI/ASIS SPC.1) specifying requirements to plan, establish, implement, operate, monitor, exercise and test, review, maintain and continually improve a documented management system to protect against, reduce the likelihood of occurrence, prepare for, respond to, and recover from disruptive incidents when they arise. The contractor's BCMS shall be appropriate to its needs and meet PPPL's service level agreement requirements (**Attachment 2 PPPL Detailed Technical and Support Requirements** and **Attachment 8 PPPL Implementation and Support Requirements**.).

(b) The contractor shall participate in at least one joint Business Continuity Plan (BCP) Disaster Recovery (DR) exercise (contractor and PPPL) annually. Exercise scenario planning, evaluation, after-action reporting etc., shall be coordinated with representatives from each organization.

(c) The contractor shall conduct and provide PPPL the results of internal audits at planned intervals to provide information on whether the contractor's BCMS conforms to: 1) the organization's own requirements; 2) the requirements of the applicable business continuity standard; 3) PPPL service level support requirements (RTO's etc.) and 4) is effectively implemented and maintained.

(d) The contractor shall participate in annual management reviews of the contractor's BCMS with PPPL to ensure its continuing suitability, adequacy, and effectiveness. The starting month and year of the review cycle will be coordinated between the parties.

5.2.6 Information System Security

(a) The Supplier shall ensure adequate LAN/Internet, data, information, and system security in accordance with PPPL policies and standard operating procedures, conditions, laws, and regulations.

Any security violations or attempted violations shall be reported to the COR, Contracting Officer, and to the designated Information System Security Officer (ISSO) within 5 days of the contractor learning of the violation or attempted violation.

(b) Flow down of requirements to Suppliers

(1) The Supplier shall incorporate the substance of this clause, its terms and requirements including this paragraph, in all subcontracts under this contract vehicle, and require written Supplier acknowledgement of same.
(2) Violation by a Supplier of any provision set forth in this RFP will be attributed to the Supplier.

5.2.7 Continuous Monitoring and Reporting

(a) The Supplier shall ensure the National Institute of Standards and Technology (NIST) Special Publication (SP) 800 137, Information Security Continuous Monitoring (ISCM) for Federal Information Systems and Organizations is implemented to ensure PPPL maintains ongoing awareness of information security, vulnerabilities, and threats to support organizational risk management decisions.

(b) The Supplier shall provide PPPL Continuous Diagnostic Mitigation (CDM) dashboard monitoring overall risk showing the organization which areas are being continuously monitored and which areas still need to be tracked.

(c) The CDM Dashboards shall provide PPPL information on what is on the network; who is on the network; what is happening on the network; how data is protected.

(d) The CDM Dashboards shall provide PPPL near-real time results; prioritization of problems within minutes; identify and mitigate flaws at network speed; and lower the operational risk and exploitation of government IT systems and networks.

5.2.8 Sizing & PPPL Technical Environment

The proposed solution shall accommodate staff at the Lab and data volumes as described in Table #4 and Table #5. Selected metrics are provided below to assist with sizing the processing and storage requirements of the proposed solution(s):

Table #4 – PPPL Business System Users

Total number of Employees = ~600

User Type	Count	Comments
Heavy Users	30	Accounting, Procurement, Budget, and Material Service- daily
Medium Users	20	Project Manager and P&C (Planning & Control) daily or weekly
Light Users	~550	550 light users

Table #5 – PPPL Data Matrix

Data Name	Data Type	Avg Lines Per Month	FY 2019 Total Count	Comments
GL Journals	Transaction	<15,000	200,000	Each month varies, ranging from 10,000 to 16,000. 80% created by the project cost burdening and allocation process.
AR/Billing	Transaction	50		Varies from month-to-month, ranging from 30 to 100
Requisition	Transaction	20	2,400	1,200 requisition headers
PO	Transaction	250	3,000	900 PO headers
Vouchers	Transaction	~600	5,800	Each month varies ranging from 450 to 600 invoices, which includes 80 to 150 invoices loaded from Concur system.
Asset	Transaction	~50	~6,000	Includes 300 fixed assets. Average 50 per month, 600 per year
Excess Property	Transaction	~40	~1500	Approximately 10K excess property, but will migrate 3 years of Excess properties
Inventory	Transaction		5000	Inventory on hand for spare parts, values of inventory on the book
Project	Master		<300	Utilization of Cost Center to store project information and is used for many purposes in GP, such as: ● High level aggregate of work under a funding source ● Individual 'project' ● Specific task within a project ● A type of cost for a project ● Sponsor or Funding Type ● Principal Investigator portfolio of activity ● Division or another org structure ● Balance sheet account activities
Account	Master		600	Use of expense class to classify expense type, cost center and balance sheet code to map to DOE's SGL account.
Supplier	Master		15,000	Including employees
Employee	Master		700	Employee personal data and job data
Items	Master		~10,000	Items in the catalog
Customer	Master		<25	

Table #6 – PPPL Technical Environment

Type	PPPL Current Application
Email	Postfix SMTP Server, Gmail
Relational Database for BI	SQL Server (2016, 2019)
QA –Testing module	N/A
File Transfer Network protocol	SFTP
Office Applications	Office 2016/2019 Desktop Apps/Office 365
Report Distribution	SAP Business Objects
Web Browser	Windows IE, Chrome, Edge, Safari, Firefox
BI modules	Microsoft Power BI
Virtualization	Microsoft Hyper-V Windows Server 2016/2019
Project Management	Primavera, MS Project
Scheduling/Monitoring module	SolarWinds
Single Sign-On Solution	Microsoft ADFS 4.0
Security Solution	Active Directory
Learning Management System (LMS)	Oracle Taleo Learn (cloud)
Document Management	OnBase

5.2.9 Workflow

PPPL requires a solution with strong workflow capabilities to help automate common financial, procurement, and material service transactions. The solution should include automated approvals and notifications supporting a paperless environment that PPPL wishes to attain in the future.

The proposed solution shall have the ability (but not limited) to:

- Create/configure custom workflows based on PPPL's business rules
- Route by cost attributes, expense category, item attributes and by the combination of dollar amount and approver hierarchy
- Allow the approver to change the cost attributes, such as project, account number, etc.
- Allow the approver to add one or more ad-hoc approvers
- Allow the requisitioner to add one or more ad-hoc approvers
- Track transactions submitted for approval and review with a date / time stamp
- Integrate with PPPL's email system to provide notification and approval steps
- Allow for review of attachments during the approval process

5.2.10 Reporting / Data Warehouse

PPPL requires a solution with robust reporting and analytics capabilities. The solution shall (but not limited to):

- Provide a user-friendly report writer with drill-down/drill-across capability, that will enable PPPL users to create/update reports in a self-service capacity
- Provide the ability to run reports by user-defined schedule and formats (e.g. excel, csv, text, HTML, and pdf format)

- Provide the ability to distribute/burst reports by user-defined reporting structure
- Provide the ability to export data to Excel spreadsheets and flat files and generate reports in HTML and .pdf formats
- Provide a data warehouse tool with built-in standard reports for the modules purchased by PPPL, or provide a data extraction tool that allows PPPL to extract data to PPPL's data warehouse
- Provide on-screen inquiry and ability to download and/or print results
- Provide the ability to save frequently run reports to favorites
- Provide the ability to publish results online for use by other staff at the Lab with solution access and with results constrained based on the security profile of those users
- Provide security access within reporting based on security roles
- Provide the ability to modify existing reports to include new data elements
- Provide the ability to develop new reports which generate accurate results (results that complement those provided via canned reports and inquiry capabilities)
- Provide a report writer that can be used by users with no technical background

In addition to the software capabilities, the supplier will provide initial training to PPPL staff on the Solution's Reporting & Analytics tools and mentor PPPL staff through knowledge transfer.

In addition to the technical reporting requirements identified in **Attachment 2 - PPPL Detailed Technical and Support Requirement**; an initial listing of reporting requirements has been assembled in **Attachment 5 - PPPL Reporting Requirements**. However, a full review of the reporting needs must be conducted to design the most effective reporting strategy. PPPL will begin the review prior to implementation and complete it with the assistance of the awarded system implementer.

PPPL intends to develop the majority of the reports in-house. Upon the completion of the initial fit/gap analysis, PPPL and the Supplier will determine which reports the system implementor will develop, and which reports PPPL in-house developers will build.

Of all the reports listed in **Attachment 5**, the Supplier will be responsible for identifying which reports the solution can provide "out-of-the-box" and which reports require development, detailed in Table #7.

Table #7 – Report Complexity estimated by the Supplier

Complexity	Complexity Criteria
Low	* Less than 5 overall tables, 2 or less custom tables * Maximum of 2 report parameters * Simple list output
Medium	* Less than 10 overall tables, 4 or less custom tables * Maximum of 4 report parameters * Moderate customized output and layout
High	Meet 2 or more of the following criteria: * More than 10 overall tables, 4 or more custom tables * Need additional program to massage data * Complex customized output/layout * Complicated conditional logic

5.2.11 Data Conversion

PPPL has adopted a philosophy of converting the minimal amount of data possible to maintain data quality and reduce the conversion effort while meeting the financial reporting needs of the Lab.

PPPL IT staff at the Lab will obtain data extracts from the existing source systems. PPPL will provide resources for data clean up and mapping. Utilizing delivered technology, the Supplier will be responsible for supporting the System Implementer loading of the data into the solution. In addition, the Supplier will be responsible for assisting PPPL with identifying problem areas within the legacy system data during data scrubbing and helping PPPL with data validation and cleansing.

Items to be converted have been detailed in **Attachment 3** - **PPPL Conversion Items**. The Supplier will support the System Implementer in the deliverable for data conversion which can be found in the 'Milestone and deliverable' section of this SOW.

5.2.12 Interface

PPPL requires that the ERP SaaS Solution provide interfaces that support PPPL's interface needs. Some of those interfaces may be as simple as standard format data feeds accommodated by delivered interfaces. Others will be customized and more complex interfaces to transform and load data from existing legacy systems or external systems to the ERP SaaS Solution.

PPPL assumes the supplier will provide built-in interfaces among its modules, such as from Accounts Payable to General Ledger, and from Procurement to Project Cost Management etc. In addition to these built-in interfaces, PPPL has identified 24 interfaces, as listed in **Attachment 4 - PPPL Interface Requirements**. PPPL looks to identify best practices and utilize delivered interface capabilities wherever possible to eliminate custom development. The Supplier will need to support/address all interface requirements listed in **Attachment 4** within its proposed solution, either through delivered integration technology or customization. The Supplier will be responsible for:

- Participating in workshops or meetings with the selected System Implementor, PPPL SME and IT staff at the Lab regarding interface requirements
- Identifying development approach for interfaces
- Mentoring PPPL staff at the Lab through knowledge transfer

5.2.13 ERP Application Security

In addition to cyber security requirements described in section 5.1, PPPL requires the ERP SaaS Solution to be secured at the business capability level. The ERP SaaS Solution should enforce comprehensive security that includes, but not limited to:

- User sign-on, including 2-factor sign-on for key personnel
- Integration to MS Active Directory
- Restricted access to specific pages or processes or objects by user roles
- User group security
- Personally, Identifiable Information (PII) data encryption
- Security Audit

The following elements are examples of PII, as defined by Federal, State, and Local legislation:

1. Date of birth
2. Social Security number
3. Driver's license number
4. Non-driver photo identification card number
5. Any Financial services account number or code (credit card, checking, savings brokerage account, ATM number, etc.)
6. Personal identification number
7. Computer system password
8. Electronic signature

The additional Supplier's responsibilities include:

- Participating in workshops and meetings to verify and analyze PPPL's security needs
- Recommending a security plan that provides a high-level overview of the security management process to be used for PPPL's ERP solution
- Assisting in the validation of roles and profiles for all users of the solution based on PPPL's security policies and procedures
- Providing assistance with the development of policy and procedures for security maintenance
- Supporting the System Implementor with the Implementation security roles and profiles
- Mentoring PPPL security staff at the Lab

5.3 Ongoing Service requirements

PPPL requires Hosting, Operation and Application Maintenance support for a period of five (5) years. Please refer to **Attachment 2 - PPPL Detailed Technical and Support Requirements** and **Attachment 8 - PPPL Implementation and Support Requirements** for details.

After go-live, PPPL requires the ERP SaaS Solution supported through a three-tiered support model as depicted below:

Tier 1 Support: One single point of contact with a corresponding email address and phone number. PPPL Help Desk staff will perform most of the Tier 1 Support for PPPL and manage the incidents in ServiceNow. The Help Desk will escalate the request to the Supplier's Tier 1 support staff at the Lab for further evaluation if the issue cannot be resolved by the Help Desk nor by the knowledge base.

Tier 2 Support: All Tier 2 requests are corrections to the existing production environment due to a configuration, data, or development object failure. The Supplier will provide Tier 2 support. The Supplier's support lead shall assign the Tier 2 Request its highest priority classification and ensure that the required resources are available to resolve the request in a timely manner. The generally accepted prioritization of Tier 2 Request Types, their description, response and resolution time and penalties will be negotiated post selection.

Tier 3 Support: Tier 3 support requests are for new functionality or enhancements to the existing production system and must go through a change control process, and then be designed and assigned a cost and priority.

Cost for Tier 3 is not included in the initial implementation project budget. A separate budget will be established for Tier 3 support on an annual basis.

5.4 Project Management Requirements

The Supplier must provide a proposed project management approach towards engagements of similar size/scope of PPPL's business system implementation project. At a minimum, the Supplier should propose plans for the items listed below identifying how the Supplier will support the work; additional plans identified by PPPL to help better manage the project. Please reference Attachment 8 - PPPL Implementation and Support Requirements for details.

5.4.1 Project Management

The Supplier will work with PPPL and the System Implementer in the development of a proposed project task plan and schedule. The Supplier will participate in regular reporting of progress against the plan, recommending corrective actions to be taken in the event of unanticipated changes to the plan or schedule, and regular updates to the plan and schedule to accommodate any changes.

5.4.2 Risk Management

The Supplier shall develop a comprehensive Risk Management Plan for the ERP solution. While it is the responsibility of each person associated with the project to identify risks (system integrator as well as PPPL staff at the Lab), the Supplier shall develop a strategy to identify and address all risks that have been raised.

5.4.3 Issue Management

It is important that the project has an issue management process that provides visibility into problems and issues, accountability as to who will resolve them, and how they will be resolved in a timely manner. PPPL has established an Issue Management Plan that describes,

- How issues are raised
- How issues are evaluated and prioritized
- How issues are logged and tracked
- Assigning and executing resolution actions
- Defining issue management roles and responsibilities

The Supplier's responsibility includes:

- In collaboration with PPPL, develop and execute PPPL's issue management plan
- Identify, document, prioritize and track issues
- Participate in issue analysis and resolution
- Train the Project Team in the issue management procedures
- Communicate the issue status to the stakeholders during the project

5.4.4 Configuration Management

The Supplier shall provide technical and administrative direction and surveillance over the entire implementation lifecycle. This includes the identification and documentation of the functional and physical characteristics of configuration items as well as performing impact analysis on potential system changes. The

Supplier shall control changes to configuration items and their related documentation as well as record and report information needed to manage configuration items effectively, including the status of proposed changes and implementation status of approved changes. The Supplier shall audit configuration items to verify conformance to functional and technical specifications and other contractual requirements. The Supplier shall create clear documentation and communication of system changes and maintain baseline and version control of ERP software and applications. The Supplier shall provide their approach to Configuration Management including managing risk associated with Configuration Management, modules they shall utilize to support Configuration Management activities, the communication mechanisms, roles, and responsibilities, etc. The Supplier shall also provide the instance schedule and the proposed progression of configuration items from instance to instance throughout the implementation. Please reference **Attachment 8 - PPPL Implementation and Support Requirements** for details.

5.4.5 Resource Management

The Supplier's responsibility includes the need to:

- Provide and maintain sufficient numbers of qualified technical and functional staff
- Identify all team participants (roles and responsibilities) and commit them for the life of project
- Schedule and assign Supplier's staff
- Present replacement candidates and credentials

5.5 Training and Change Management Requirements

The Supplier will also be responsible for providing instructor-led classroom and web-based training courses, facilitating a train-the-trainer program, and supporting the development on-the-job training (OJT) materials. The contents of the training materials will be role-based to align with user responsibilities. All specific training materials will be reviewed and approved by PPPL before releasing to PPPL user community. It is required that the Supplier will integrate training every step of the way from the beginning of the project to post Go-Live, assess training effectiveness as needed, and incorporate feedback into subsequent training sessions.

The Supplier must complete and include with their response **Attachment 11 - PPPL Training Response Form**.

5.6 Product Strategy

Provide a clearly articulated summary of your product strategy in areas relevant to PPPL and this proposal. This should include significant functional enhancements or additions, significant technical and/or architecture developments, product acquisition vs. internal development strategy, product differentiators, and software delivery strategy, and any industry offerings relevant to organizations similar to PPPL.

Provide a projected capital budget for such technologies, products, and services for the next 5 years and indicate where it expects such capital to be deployed (e.g., systems upgrades, training, physical assets, staff additions, research and development, new businesses), as well as how such investments will directly benefit Nemours.

Indicate how the solution is scalable for future growth.

The Supplier must complete and include with their response **Attachment 10 - PPPL Software Solutions Response Form**.

6 TEST AND INSPECTION REQUIREMENTS

The Supplier needs to be able to support the Systems Implementers (once selected) unit, system, conversion, security, and integration testing before PPPL conducts user acceptance test. The Supplier will provide written certification that adequate and sufficient testing has occurred prior to PPPL performing user acceptance test.

PPPL currently does not utilize any testing software. The Supplier may recommend and justify a testing solution, either built in the ERP SaaS Solution or a third-party solution, that could be utilized during implementation and beyond. The recommendation shall include the number of licenses, cost estimation and corresponding hardware and software components, where applicable. In the event the proposed ERP SaaS Solution comes with testing capabilities, PPPL requires the Supplier provide preloaded testing scripts for the delivered functionality.

7 MINIMUM QUALIFICATIONS

All Suppliers are required to meet the following Minimum Qualifications in order to be eligible to submit a Proposal for this RFP.

Offeror outlined a minimum of (10) ten years' experience in providing SaaS for Financial, Budgeting, and Procurement capabilities for governmental clients.

In addition, the Supplier must complete and include with their response **Attachment 9 - PPPL Supplier Qualifications and References Workbook**.

7.1 Supplier Qualifications

The Supplier will possess the following corporate qualifications:

- The Supplier has previous experience in a regulated environment (U.S. Department of Energy, Department of Defense, Nuclear Regulatory Commission, or ISO, for example).
- The supplier has a history of three (3) successful implementations including the providing of software subscriptions and hosting government business systems on the Solution's platform.
- The supplier has a favorable history of repeat business and customer subscription renewal.
- A minimum of (10) ten years' experience in providing SaaS for Financial, Budgeting, and Procurement capabilities for governmental clients.

7.2 Key Personnel

In addition to being US citizens, Key Personnel for this implementation shall include the following:

- **Senior Executive** — responsible for executive oversight; has profit and loss responsibility for the product and services being offered with ten (10) years of experience of providing executive leadership roles supporting similar organizations like PPPL.
- **Account Executive** — responsible for managing the entire relationship with five (5) years of experience providing day to day support to similar organizations like PPPL.
- **Solution Architect** — responsible for ensuring that the solution integrates with all applicable modules (Solution's components as well as required third party or legacy components), that overall security

and data architectures are following best practices and that technical performance is stable and scalable. The individual should have 10 years of experience with advance certifications specific to the solution being presented by the Offeror.

- **Technical Architect** — responsible for technical aspects of the implementation to provide direct access to product release or development issues and opportunities with seven (7) years of experience with implementing the solution being presented by the Offeror and appropriate technical and functional certifications specific to the solutions.
- **Implementation Consultants** – responsible of the implementation of the purchased solution according to best practices and PPPL requirements with five (5) years of experience and certifications specific to the solution being presented by the Offeror

7.3 Supplier Training

The Supplier shall ensure that its personnel meet and maintain the appropriate training, qualification, and certification requirements.

- All Supplier personnel shall complete required PPPL cybersecurity and general training required for site access, if necessary.

7.4 Security and Badging Requirements

For any on site work, Supplier employees will be required to submit to vehicle searches and not personally carry or transport certain prohibited articles. The scope of work **will not** require special access authorization (security clearance).

7.5 Work Location / Potential Access Requirements

Currently it is not expected that the supplier will require access to any work locations at the PPPL site.

7.6 Site Access and Work Hours

As services provided will be in the form of software subscriptions, there is no work site access requirements or limitations on work hours associated with this scope of work.

8 ENVIRONMENT, SAFETY, AND HEALTH

Not Applicable

9 QUALITY ASSURANCE REQUIREMENTS

The Supplier shall be responsible for performing quality workmanship and to conduct the quality control measures necessary to ensure work conforms to applicable procedures, drawings, specifications, codes & standards, and other requirements as defined in the SOW. Supplier shall also maintain a configuration management process that includes, but not limited to component naming, baseline numbering, and a problem reporting process.

All items and services provided by the Supplier are subject to review, inspection, or surveillance by PPPL.

The Supplier shall flow down or invoke applicable portions of the SOW to sub-tier suppliers/vendors providing services and/or material for this scope of work.

Procurement of Potentially Suspect or Counterfeit Items: The Supplier shall warrant that all items furnished under this Subcontract are genuine (i.e. not counterfeit) and match the quality, test reports, markings, and/or fitness for use required by the Subcontract. See Subcontract General Provisions, Suspect or Counterfeit Items.

The Supplier shall provide a legible/reproducible Certificate of Conformance which shall include the following information, as a minimum:

1. Identify the appropriate Purchase Order or Contract Number under which the item or service is being supplied.
2. Identify the specific procurement requirements that were met by the purchased item or service and/or any approved changes, waivers, or deviations applicable to the item or service.
3. The Certificate of Conformance shall also identify any procurement requirements that have not been met along with an explanation and the means for resolving the nonconformance.
4. The Certificate of Conformance shall be signed (or otherwise authenticated) by the Supplier's representative responsible for quality.

10 SHIPPING STORAGE AND HANDLING

Not Applicable

11 WARRANTY

Warranty Clause of PPPL Commercial Terms and Conditions apply- PPL-PD-CTC (Commercial) Rev. 24; Sept. 2019.

12 DOCUMENTATION AND DELIVERABLES

12.1 Deliverables

In addition to the deliverables described in **Attachment 2 – PPPL Detail Technical and Support Requirements**; other deliverables may be required determined by the terms of the final agreement.

13 PPPL STAFF RESOURCES

PPPL will provide the necessary staff resources to support the project. These Lab resources may be a combination of dedicated or part-time assignments and may be sourced from internal PPPL staff at the Lab, or from a Supplier. Table #9 below summarizes a representative team of resources planned for the project and their utilization rate for the project. The Supplier should provide a proposed PPPL Staffing Plan necessary to support a project of this size at an organization similar to PPPL.

Table #9 – PPPL Staff Resource

PPPL Description	Utilization Rate	Comments
Project Manager	100%	100% on project management

PPPL Description	Utilization Rate	Comments
Functional Lead	100%	15+ years ERP experience
Senior Business Analyst (Financials)	100%	10+ years ERP experience
Senior Business Analyst (Supply Chain)	100%	
Functional SME (Accounting)	50%	
Functional SME (Assets)	50%	
Functional SME (Inventory)	50%	
Functional SME (Budget)	50%	
Functional SME (Accounts Payble)	50%	
Functional SME (Procurement)	50%	
Functional SME (Labor Distribution)	50%	
2 Integration, Conversation, Reporting SMEs	100%	
Database SME	50%	
Cyber Security SME	50%	
Data Security SME	25%	
Communication Support	25%	The Project Manager will lead PPPL Communication Office on change management activities throughout the project
Change Management Support	50%	
Quality Assurance	50%	

- **Functional SME**

PPPL will be providing 1 project manager, 1 functional lead and 2 full time senior business analysts to lead a team staffed by relevant SME's (e.g., Contract Accountants, Ledger Accountants, Labor Distribution Analyst, Buyers, Financial Analysts); these SMEs will typically have a .50 FTE commitment to the project. In addition to these committed functional resources, the project will also draw input and support from the larger PPPL business community as necessary.

- **Technical Staff**

PPPL plans to devote 3 FTEs to the project for data conversion, interface, and report development. Princeton University technical resources will make functional and technical changes to the PPPL interfaces in PU's system.

14 PROJECT ASSUMPTIONS

The Assumptions in this section are provided to describe the basis that PPPL has relied on to develop the scope, resources, roles, and responsibilities for the project. These assumptions are intended to establish a

clear understanding between PPPL and Supplier to reduce the risk of unanticipated events during project execution. Material deviations from Assumptions that arise during the proposed project may result in adjustments to the project scope, estimated schedule, and other terms.

- Changes to source code are termed "modifications," which is not recommended either by the software manufacturer or by Supplier as an integrator. The intent of PPPL is not to modify the Application Software, but to customize the Application Software using enhancements and/or bolt-ons that are upgradeable to future releases of the software. The goal of this project is to maximize the use of configuration, which means making changes to configurable tables to reflect business rules, and to minimize the need for customization.
- Microsoft Office products (version 2010 or above) will be standard for the project. Microsoft Visio will be used for the process maps and other graphics documents. Microsoft Project will be the standard for project plans.
- The business process lists in the **Attachment 6 - PPPL Business Process Inventory** will be used as the basis for requirements mappings, process flow definition, test script groupings and training materials groupings.
- PPPL and Supplier will mutually agree upon a set of project standards prescribing the adopted processes, responsibilities, and timeframes for key project activities, including, but not limited to: deliverable review and acceptance; issue management; risk management; software construction standards; work product reviews; change order management; and quality management. These standards will be documented in the project management plan deliverable.
- PPPL will manage any third-party Suppliers whose services are acquired directly by PPPL in connection with this project. The Supplier will work collaboratively with all the PPPL's designated partners.
- Currency transactions and reporting requirements are in US dollars only; language requirements are English only.
- PPPL will attain permission from Princeton University to build interfaces between PPPL's ERP SaaS Solution and their PeopleSoft FSCM, Payroll, Time & Absence and HCM system.
- The DOE will make no significant changes to its policies and rules which will affect the requirements.

15 REQUIRED LISTING OF ATTACHMENTS

Attachment 1 – PPPL Functional Requirements

Attachment 2 – PPPL Detailed Technical and Support Requirements

Attachment 3 – PPPL Conversion Items

Attachment 4 – PPPL Interface Requirements

Attachment 5 – PPPL Reporting Requirements

Attachment 6 – PPPL Business Process Inventory

Attachment 7 – PPPL Use Cases

Attachment 8 – PPPL Implementation and Support Requirements

Attachment 9 – PPPL Supplier Qualifications and References Workbook

Attachment 10 – PPPL Software Solutions Response Form

Attachment 11 – PPPL Training Response Form

Attachment 12 – PPPL Supplier RFP Pricing Response

16 GLOSSARY OF TERMS

Term	Definition
AM	Asset Management
AP	Accounts Payable
API	Application Interfaces
AR	Accounts Receivable
B2B	Business-to-Business
B&R	Budget and Reporting
BCMS	Business Continuity Management System
BD	Budgeting
BOA	Blanket Ordering Agreement
BOM	Bill of Materials

Term	Definition
BOO	Board of Overseers
BPR	Business Process Reengineering
CDM	Continuous Diagnostic Mitigation
CFO	Chief Financial Officer
COA	Chart of Accounts
COTS	Commercial Off the Shelf
CRP	Conference Room Pilot
CWIP	Construction Work In Progress
DNS	Domain Name System
DOE	U.S. Department of Energy
DR	Disaster Recovery
ERP	Enterprise Resource Planning
ES&H	Employee Safety & Health
EVMS	Earned Value Management System
FAMIS	Facilities Asset Management Information System
FBR	Field Budget Request
FedRAMP	Federal Risk and Authorization Management Program
FIFO	First In, First Out
FIN	Financials
FIPS	Federal Information Processing Standards
FISMA	Federal Information Security Management Act
FM	Financial Management
FSCM	Financial and Supply Change Management
FTE	Full Time Equivalent

Term	Definition
FWP	Field Work Proposal
GL	General Ledger
GP	Great Plains
GSS	Government Scientific Source
HCM	Human Capital Management
HOD	Home Demographics
HR	Human Resources
IM	Inventory Management
ISCM	Information Security Continuous Monitoring
ISSO	Information System Security Officer
IT	Information Technology
LD	Labor Distribution
LMS	Learning Management System
LOA	Leave of Absence
LPR	License Plate Reader
MSP	Managed Service Provider
NIST	National Institute of Standards and Technology
NTP	Network Time Protocol
OJT	On-the-Job Training
OPI	Other Party Information
OS	Operating System
P&C	Planning and Control
PA	Payroll
PC	Project Costing

Term	Definition
PDG	Payroll Demographics
PI	Principal Investigator
PII	Personally Identifiable Information
PM	Project Manager
PMO	Project Management Office
PO	Purchase Orders
PPPL	Princeton Plasma Physics Laboratory
PR	Procurement
PSO	PPPL Site Office
PU	Princeton University
QA	Quality Assurance
QC	Quality Control
RFBA	Request for Baseline Adjustment
RFP	Request for Proposals
RPO	Recovery Point Objective
RTO	Recovery Time Objective
RICEW	Reports Interfaces Conversions Extensions Workflows
SaaS	Software as a Service
SAN	Storage Area Network
SAR	Standard Authorization Request
SCM	Supply Chain Management
SDLC	System Development Lifecycle
SLA	Service Level Agreement
SME	Subject Matter Expert

Term	Definition
SOC	Service Organizational Control
SOW	Statement of Work
SPP	Strategic Partnership Project
SR	Shipping & Receiving
STARS	The Standard Accounting and Reporting System
T&A	Time and Attendance
TE	Travel and Expense
UAT	User Acceptance Testing
VPN	Virtual Private Network
WBS	Work Breakdown Structure