



July 24, 2018

Daniel Amzallag - Chief Executive Officer
Ivalua, Inc.
702 Marshall Street, Suite 520
Redwood City, CA 94063

Re: Ivalua, Inc.-E-Procurement Solution/ PASSPort
Change Order # 2
Contract No: 858-20161425412

Dear Mr. Amzalla:

Enclosed is a fully executed copy of Change Order # 2 to Contract No: 858-20161425412 which has been registered by the Office of the Comptroller. The value of the contract has been increased by \$15, 000,000.00 to a new contract maximum of \$45,515,448.83. The term of the contract remains unchanged. Please reference the contract number on all correspondence related to this contract and all invoices submitted for payment.

If you have any questions, please contact Vito a Pulito at (718) 403-8502.

Very truly yours,



John Katsorhis
Agency Chief Contracting Officer

c: D. Symon, D. Sunderland, J. Winker, V. Ahern & File

**THE CITY OF NEW YORK
DEPARTMENT OF INFORMATION TECHNOLOGY &
TELECOMMUNICATIONS**

**CHANGE ORDER #2
TO THE
IMPLEMENTATION AGREEMENT**

**FOR THE DESIGN, DESIGN, IMPLEMENTATION, DEPLOYMENT AND
MANAGEMENT
OF A VENDOR MANAGEMENT, SOLICITATION, CONTRACTING AND
PROCUREMENT SOLUTION
FOR THE CITY OF NEW YORK**

Bill de Blasio, Mayor
Anne Roest, Commissioner

CONTRACTOR: Ivalua, Inc.
CHANGE ORDER 2 DATE:
ORIGINAL CONTRACT No.: CT1-858-20161425412

This SECOND CHANGE ORDER ("CHANGE ORDER") TO THE AGREEMENT FOR THE DESIGN, IMPLEMENTATION, DEPLOYMENT AND MANAGEMENT OF A VENDOR MANAGEMENT, SOLICITATION, CONTRACTING AND PROCUREMENT SOLUTION ("Agreement"), effective as of DATE: _____, reflects the contractual promises and representations between the City of New York (the "City"), through its Department of Information Technology and Telecommunications ("DoITT"), located at 2 Metrotech Center, Brooklyn, New York 11201, and Ivalua, Inc. ("Contractor" or "Ivalua"), with its principal place of business at 702 Marshall Street, Suite 520, Redwood City, CA 94063 (each a "party" and collectively, the "parties").

BACKGROUND AND AUTHORITY

The parties have determined to divide the project into phases. Phase 1 comprised completion of Release 1, which went live on August 1, 2017. During Phase 1, the Contractor and DoITT were required to perform additional work affecting the project schedule. Phase 2 includes Releases 2 and 3, and will also include the implementation of the full functionality of the e-Sourcing and Procurement Solution for the Department of Education.

Pursuant to Section 9.01 of Appendix A to the Agreement, this Change Order will modify the Agreement to (1) increase the Services identified in Attachment SOW and (2) adjust the pricing set forth in Attachment PRC, to reflect the inclusion of the implementation of DOE in the scope of the Agreement and additional Services provided during the completion of Phase 1.

ACCORDINGLY, THE PARTIES AGREE AS FOLLOWS:

1. All terms capitalized and not defined herein, and all definitions outlined and defined in Section 1.0 of the Agreement shall have the meanings ascribed thereto in the Agreement.
2. Section 5.2.1 is deleted in its entirety and replaced with the following:

"In consideration of the Contractor's satisfactory and timely performance of the Services described in the Statement of Work, this Agreement's not-to-exceed amount is \$45,515,448.83. The fixed prices of the Change Order (#2) Agreement is \$15,000,000.00 and will be paid in accordance with the Payment Schedule set forth in Attachment PRC. All invoices are due and payable in accordance with Section 4-06 of the PPB Rules."
3. Attachment SOW (Statement of Work) to the Agreement is amended by:
 - a. Renaming the original Attachment SOW: "Attachment SOW – Part 1"; and
 - b. Incorporating Exhibit 1 to this Change Order as "Attachment SOW – Part 2."
4. Attachment PRC (Pricing Schedule) to the Agreement is deleted in its entirety and replaced by Exhibit 2 to this Change Order, as "Change Order # 2 Attachment PRC."
5. Section 2.1 of the Agreement is deleted in its entirety and replaced with the following:

2.1. Scope of Work. Contractor shall provide the City with an e-Sourcing and Procurement Solution consistent with the scope of Services described in Attachment SOW — Part 1 and Attachment SOW – Part 1 (collectively "Attachment SOW (Statement

of Work)). While the Statement of Work consists of two (2) Phases, comprising three (3) Releases, the Statement of Work may be amended upon mutual agreement of the parties to include additional Releases and Services consistent with the RFP.

6. All other terms and conditions remain in full force and effect.

IN WITNESS WHEREOF, the parties undersigned executed this First Change Order to the Agreement effective as of the day and year first written above.

[SIGNATURE PAGE FOLLOWS]

**CITY OF NEW YORK
DEPARTMENT OF INFORMATION TECHNOLOGY
AND TELECOMMUNICATIONS**

IVALUA, INC.

By:



Name: SAMIR SAINI
Title: COMMISSIONER
Date: 6/13/18

By:



Name: Dan ANZALLAG
Title: CEO Ivalua Inc
Date: 6/6/2018

EXHIBIT 1

New York City Department of Information Technology and Telecommunications

e-Sourcing and Procurement Solution

ATTACHMENT SOW

STATEMENT OF WORK, CHANGE ORDER #2

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1.Objective

This Statement of Work ("SOW") for ("The City", "City", "DOITT" or "the City") serves as an amendment to the e-Sourcing and Procurement Statement of Work #12281 dated April 19, 2016. The amendment is effective as of June 13, 2018 (the "SOW Amendment Effective Date") and is entered into between Ivalua, Inc. ("Ivalua") and the City, and is governed by the DOITT Agreement between the Parties dated June 13, 2018 (the "Agreement"). Upon execution by the Parties, this SOW will be incorporated into, and be considered part of, the Agreement without further action.

The purpose of this amendment is to describe the changes to the services, timing of the work, approach and deliverables to be provided to the City as part of the implementation of the Ivalua solution.

The remaining sections of this Amended Statement of Work (SOW) will identify the specific sections of the previous SOW dated April 19, 2016 that have either changed or are being added. To simplify the language used to distinguish between the completed work described in the SOW dated April 19, 2016 and the go-forward work described in this amended SOW, we are introducing the terms "Phase 1" and "Phase 2". Phase 1 refers to work completed for general project mobilization, Release 1, and Release 1 stabilization. Phase 2 incorporates the work to be completed for Releases 2 & 3.

2.Scope and Solution Overview

The Scope and Solution Overview section of the SOW remain unchanged from the previous SOW dated April 19, 2016 except for the following modifications and additions:

Modification:

In developing the Conceptual Design, Ivalua has considered the Requirements provided with the RFP and a set of process descriptions as well as a set of supporting capabilities required to deliver a solution that meets the needs of the City. An initial mapping of these requirements is included in this section as a baseline for the Solution. However, since the design is not completed and requirements have not yet been validated, Ivalua and the City acknowledge that the configuration and development effort estimates are preliminary and subject to change during the Release Planning and Requirements Management activities. See section 2.5 for requirements traceability and scope management. In the following sections, the process and supporting capability requirements can be found in:

- 2.2 Process Overview: This section depicts the organization of the process scope into three (3) workstreams: Vendor Management, Source-to-Contract, and Requisition-to-Order. Included in this section is a description of the processes included in each workstream and a mapping of Requirements to each process.
- 2.3 Process Detail: For each process, a set of key process functionalities has been defined and used as a guide to map the enabling Ivalua Modules required, the estimated configuration effort, and the development objects planned. These initial mappings, while adequate to complete the Conceptual Design, will not supplant the detailed Requirements described in the RFP. These requirements will be confirmed, updated, and mapped during the project
- 2.4 Supporting Capabilities: A set of supporting capabilities has been identified that is required across the workstreams, including secure, role-based access by users and vendors, execution of pre-configured as well as ad-hoc reports, management of attached documents, and search capability. An initial mapping of these requirements is included in section 2.4, though these requirements will also be confirmed, updated and mapped during the project

Add the following introductory sentence to Scope Item BI1.5: "Procurement Performance / Operational Indicator Reports: The following is an illustrative list of reports. How the City chooses to design and implement specific processes and features will inform the viability and usefulness of various reports. The City and Ivalua will mutually agree on a list of reports based on the systems functions included in the Business Design."

Addition:

Phase 2 of this project will implement basic invoice functionality to accompany Releases 2 and 3. The goal is to implement the Ivalua Invoice functionality as close to "out of the box" as possible and offer it as a feature to agencies whose needs are met by the initial offering. The expectation would be that in the future the City may choose to build upon the initial invoice offering to add features to meet a wider range of agency needs. The effort to incorporate Ivalua's invoice module into the PASSPort solution includes:

- Collect requirements from the City Project Team that represents the input of the four selected agencies as described above
- Analyze the interface requirements necessary to provide invoice data to the systems financial system of record (FMS)
- Configure and test the Ivalua invoice functionality to meet City-specific requirements where the City's requirements cannot be changed to conform to the out-of-the box functionality. Note – all efforts possible will be made to conform to the out-of-the box functionality with minimal configuration or customization.

- Build and test the integration of the invoices from PASSPort to FMS
- The solution shall support the process of generating an invoice for payment directly from an order or to be drafted according to deliverables outlined in a contract, for example. The solution should allow the creation, review, and approval of an invoice between the vendor and the City resulting in a payment voucher sent to the City's ERP system for disbursement of funds. A two-way and three-way automatic match against the order, receipt, and invoice should assist in authorizing the payment voucher creation.
- The solution shall enable the use of purchase order information to prepopulate and generate draft invoices in addition to enabling vendors the capability to draft an invoice while referencing only the contract.
- The solution shall enable the vendor to manage a workflow with reviewers and approvers retaining the capability to forward and delegate tasks as appropriate
- The solution shall enable the capture and referential integrity of related information to compile an invoice including, but not limited to the contract reference, order reference, requisition reference, sourcing event reference, item amounts and quantities, discounts, early payments and billing information.
- The solution should allow the vendor to submit the invoice for payment issuance to the City while allowing for the vendor to reflect changes made to an order after an invoice has been submitted.
- The solution shall accommodate cancelled/returned items in addition to errors on invoices resulting in the need to generate a new invoice and link an old invoice. This may impact either the Vendor or the Agency.
- The solution shall enable a two- or three-way match (receipt, order, invoice) to allow an approval and final submission of a payment voucher to FMS.
- The solution shall enable the addition of accounting lines to create a payment voucher and to enable the completed payment voucher to FMS.
- The solution shall integrate with FMS and other systems (e.g., vendor EDI) to allow for the creation of a finalized payment voucher (PRC2) and the handling of errors between the two systems. This may include the ability to manage accruals and expenses in anticipation of submission errors. In the case of a vendor EDI integration, there would only be one specification that all vendors would integrate with.
- The solution shall enable the vendor and agencies to print the invoice, and to view all completed or draft invoices associated with orders, requisitions, and contracts.
- The solution shall allow the Invoice to incur discounts or apply credits resulting from early payments, or negotiated percentages

Phase 2 of this project will incorporate requirements for the Department of Education into the Source-to-Contract solution to be implemented in Releases 2 and 3. This effort includes:

- Assess the Department of Education's "As Is" processes related to the Source-to-Contract functions.
- Collect requirements from the City that represent the agreed upon "To Be" approach for including the Department of Education in PASSPort for Source-to-Contract functions.
- Identify gaps between the Department of Education's requirements and the Citywide PASSPort design (based on the Ivalua product). Develop mitigation approaches to address the gaps.
- Refine or revise the Citywide Source-to-Contract design to incorporate the Department of Education based on the activities above.
- Configure and test the PASSPort Source-to-Contract functions to meet the agreed upon needs of the Department of Education.
Note – all efforts possible will be made for the Department of Education to conform to the Citywide Source-to-Contract solution developed as part of this project.

- **Summary:** Much of the functionality that the Department of Education subsumes aligns with the functionality outlined in the STC and RTO scope. Below are areas where considerations would be made during the effort to understand as-is and the development of the to-be approach.
 - CTS (Contract Tracking System) is an Access based system located on a SQL server that facilitates and manages the contract procurement process for the NYC DOE. The current CTS system at its base, functions as a process management system, tracking the end to end process from request through to contract Registration.
 - CPS (Contract Processing System) is a system similar to CTS that facilitates contract registration and Corp Counsel approval. Currently two separate systems that are required to facilitate the procurement process. Integration between the two systems would enable a much more streamlined overall process.
 - MTAC (Multiple Task Award Contract) Plus allows schools to select the services they need. When a school has a need for a specific service, the school sends an MTAC proposal request e-mail to a number of vendors. Vendors submit a proposal according to the criteria detailed in the MTAC. The requestor then evaluates the proposals based on which vendor's request is the "best value". This process can be compared to the Task Order contracts that the rest of the City conducts.
 - Other systems that require consideration during design, but would **NOT** be replaced by the solution:
 - Financial Accounting Management Information System (FAMIS) is DOE's Enterprise Resource Planning (ERP) system. All accounting and some requisition functions (creation of encumbrance document) and business functions occur in FAMIS. It has approximately 10,000 users.
 - Vendor Research & Price Analyst (VRPA) is a system that facilitates the collection of vendor data to conduct background checks, vet vendors for responsibility and risk.
 - ShopDOE is DOE's hosted catalog site. It is here where schools may purchase textbooks, school supplies, and furniture among other goods. Over 90,000 users have access to ShopDOE. PO creation can begin and is integrated to FAMIS.
 - GALAXY is DOE's spending plan and budgeting system. This system is integrated to FAMIS and budget structures in this system are referenced to manage the transactions and accounting in FAMIS.
 - VPortal is the Vendor Management Portal for vendors that contract with DOE. Vendors can manage transactions and generate invoices from the VPortal.
- The approach with DOE would be to consider functionality during Discovery phases to ensure that functionality is being properly designed to align with an eventual DOE incorporation into PASSPort.

Modification:

2.5 Requirements Management

The City and Ivalua agree to the following framework to manage the scope, objectives and changes to the City requirements:

- During the mobilization phase, the baseline requirements will be prioritized and mapped to a Release Plan.
- During the requirements confirmation and design activities, Ivalua will facilitate iterative workshops to confirm, refine and analyze requirements for each workstream.
- For new or modified requirements that cannot be accommodated, a change control process will be followed. The change control process will be a deliverable established during the Mobilize phase of the program. Both Ivalua and the City will agree to the appropriate reviews and approvals required to accept a change to the scope, timeline, resources and cost of the program. The possible outcomes of a change that cannot be accommodated could be:
 - Mapping of the requirement to a release with no cost implication to the City
 - Mapping of the requirement to a new or existing release that would exceed the scope, time and schedule agreed in the Release Plan, with an expected additional cost to the City
 - The City accepts responsibility for the configuration or development item

- De-prioritization of the requirement
 - De-prioritization of other requirements to allow for new requirements to be addressed
 - Other outcomes as mutually agreed by Ivalua and the City
- Changes in Requirements and/or Design are expected to be accepted by Ivalua up to the point of completion of the Design phase.

Addition:

2.7 Scope Confirmation Checkpoints

For the design of the Requisition-to-Order (RTO) and Source-to-Contract (STC) components of the solution, as well as Invoicing functionality, the following design confirmation process will be followed.

- Prior to the commencement of the Design Specification activities, Ivalua will produce a Conceptual Design Deliverable as a method to confirm scope ("Conceptual Design Scope Review").
- Upon delivery of the Conceptual Design, Ivalua and the City will conduct the Conceptual Design Scope Review based upon the scope described in the Conceptual Design Deliverable and confirm estimates for the remainder of design, build and test.
- If, after completion of the Conceptual Design Scope Review the original estimates contained within this SOW prove: (a) materially inaccurate as a consequence of requirements not reasonably anticipated by Contractor; (b) the functional scope required to complete the design, build and test activities change in a material fashion that would require a material increase in the level of effort the City will proceed as follows:
 - i. work with Contractor to adjust the Conceptual Design scope to fit within the originally estimated budget;
 - ii. provide an equitable adjustment to Contractor reflecting the results of the Conceptual Design Scope Review, but such a Change Order and corresponding equitable adjustment shall apply only to the extent necessary to address the inaccuracy, the revised functional scope or the revised delivery approach and will be based upon, but not necessarily equal to, the Contractor's estimated level of effort and hourly rates.

Contractor may dispute a determination by the City regarding an equitable adjustment under this Section under the procedures in Section 12.03 of Appendix A to the Agreement.

The Parties agree that such Conceptual Design Scope Review process shall occur within a reasonable period of time, so as to not unduly affect the Project Schedule.

2.8 R1 Extension Scope

As part of Release 1, the City requests new requirements outside of the scope of originally planned release resulting in an extension to the original planned date of Go-Live.

A summary of scope in the release 1 extension are outlined below.

- **12-month aggregate.** This results in the development of a report and an update to the user interface to reflect a vendor's preceding 12-month aggregate contract value. It requires new interfaces from FMS related to additional contract versions and subcontractors extract and new data fields along with updated design.
- **Historical relationships.** The development of a historical relationships report that shows the list of vendors and principals from VENDEX information. This report can be used to look up relationships in VENDEX associated with vendors in PASSPort. It requires updates to report and cutover design as well as a new migration.
- **EIN merge.** An update to the interface sequence from FMS is required to accommodate multiple Vendor Customer Codes and business objects to align by TIN/EIN (e.g., contracts, performance evaluations, etc.). A job is to be created to allow for the merge of business objects to EIN.

» **Additional enhancements and defect resolutions:**

- i. *27 enhancements.* Including the enhancements mentioned above, there are a number of enhancements to update home pages, ensure all notification language is in place, add new alerts to workflow steps, and refine report design. This impacts the configuration and design as well as the change management materials.
- ii. *57 resolutions to outstanding defects.* As part of testing, some minor/cosmetic defects were identified. To resolve, they require updates to design documents as well as change management and training materials.

These items were mapped to specific components of deliverables or items that were to be delivered, with associated costs. In general, they align with the approach to the segmentation of duties outlined below and include updates to requirements and design as well additional activities around built, test, change management and training.

A detailed update to the deliverables associated with the R1 Extension scope is outlined in the Attachment: PRC.

3.Approach

The Approach section of the SOW describes the approach for Phase 2 of the program and fully replaces the Approach section from the previous SOW dated April 19, 2016.

An overview of the Implementation approach is summarized below.

Table P2-1: Implementation Approach Phases

Phase	Objectives
3.1 Mobilize Phase 2	<ul style="list-style-type: none">Formally launch Phase 2 the program, establish the program plan and confirm governance as well as the project management processesEstablish a new Ivalua environment for training the core team and City designated administrators and configurators
3.2 Requirements Confirmation	<ul style="list-style-type: none">Confirm and elaborate City requirements for areas of the solution for which Requirements were not confirmed during Phase 1 of the program, i.e., Invoicing
3.3 Design	<ul style="list-style-type: none">Develop the specifications for the solution, addressing requirements validated in the Requirements Confirmation phase.
3.4 Build and Test	<ul style="list-style-type: none">Configure the Ivalua modules andDevelop interfaces and migrations based on the design agreed to with the City.Ivalua conducts unit, integration, and performance testing
3.5 User Acceptance Testing (UAT) and Deployment	<ul style="list-style-type: none">City testing of the new processes and workflows has met the acceptance criteria and will be made available for a Production releaseFacilitate cutover activities required to migrate data, processes and users to the new solution

3.1 Mobilize:

The objective of the Mobilize phase is to initiate Phase 2 of the project, establishing the plans, management and governance structure. During this phase, high level project guidance materials such as a project charter, team structure, and project objectives will be confirmed with the City leadership. A detailed project plan outlining the tasks, expected durations, interdependencies, and resource accountabilities will be developed. This project plan will outline the work activities for the duration of the project. In addition, a formal Phase 2 kickoff meeting will be held to launch the project and gain consensus among stakeholders on the objectives, work plan, and expected deliverables.

In support of the mobilization effort, Ivalua will:

- Confirm the project charter.
- Confirm the Interface Management approach.
- Confirm templates for project deliverables (i.e., weekly status reports).
- Develop the Phase 2 project plan.
- Develop the initial risk register.
- Create weekly status reports to document progress, risks and issues against planned activities, schedule, and cost.
- Environment readiness and provisioning
- Development of standards for deliverable review

In support of the mobilization effort, the City will:

- Provide physical project environment, including work space and access credentials.
- Confirm the project charter.
- Confirm the Interface Management approach.
- Confirm process to mask Private and Confidential data before submitting to Ivalua in support of Information Protection Plan.
- Review and approve the project plan.
- Review weekly project status reports.

Table P2-2: Mobilize Deliverables

Deliverable #	Deliverable Name	Description
M1	Baseline Workplan	<p>Workplan that addresses all tasks and deliverables required to complete the PASSPort program. The major project activities should include, but not be limited to: analysis, design, build, testing, implementation, and deployment. The plan includes activities required to be performed by Ivalua as well as City staff to accomplish the project deliverables. Upon approval by the City, the workplan will be baselined and updated with actuals and estimated to complete on a weekly basis.</p> <p>The Deliverable will include the following:</p> <ul style="list-style-type: none"> ■ Work Breakdown Structure (WBS), which aligns with the project scope ■ Major project phases ■ Start and end dates ■ Task dependencies ■ Task durations divided into components of a manageable size ■ Identification of critical path tasks ■ Identification of Deliverables ■ Key milestones, including approval points and deliverable reviews by the City

3.2 Requirements Confirmation

The objective of the Requirements Confirmation phase is to confirm and elaborate City requirements in order to create a baseline for each workstream, allowing for the further evolution of requirements during design. The phase will include a discovery process to identify additional information or documentation that will assist the Ivalua team in the confirmation and elaboration process for a specific phase of functionality. Discovery will include the issuance of an information request, execution of identified interviews, and review of current City systems, processes, and data.

Ivalua Activities

In support of the requirements confirmation, Ivalua will:

- Develop data requests and surveys to collect current state information and requirements.
- Conduct interviews.
- Review existing documentation of current City systems, processes and data.
- Conduct confirmation workshops.
- Document requirements.
- Map requirements to solution modules, configuration items, and development items.

City Activities

In support of the requirements confirmation, the City will:

- Provide documentation of current processes, systems and data, to the extent it exists.
- Participate in interviews.
- Participate in confirmation workshops.
- Review and confirm baseline requirements.

Table P2-3: Requirements Deliverables

Deliverable #	Deliverable Name	Description
N/A*	RTMS addendum for new scope items	The RTMS were developed for Phase 1. Requirements related to the additional scope not covered by the Phase 1 work will be documented for incorporation into the Design phase documentation.

* This work product produced through the above activities serves as input to the Design Phase. It is not a payment deliverable.

3.3 Design

The objective of the Design phase is to conduct a series of design sessions to develop the specification for the solution, addressing requirements confirmed and elaborated in the Requirements Confirmation Phase. Using these requirements, the Ivalua team will work with the City to define specific configurations, workflows, and user roles needed to make the Ivalua solution work for the requested business function. In addition, functional and technical specifications for development objects will be documented.

For each design session, the Ivalua team will conduct preparation work to develop preliminary design documents which will identify required clarifications and other information needed to complete the design. Ivalua will then conduct design sessions with the City team to review and refine the Business Design Document (BDD).

Based on the BDD, Interface Designs will be developed for data conversion, interface routines and custom objects required for the solution. Once all design sessions are completed, design documents will be updated in order to create a validated design for the Build phase.

Additional components of the Design phase include the drafting of a test plan and deployment plan to articulate the testing and cutover activities that will be required to successfully validate the enabling modules and technical components are working as designed, that the business process meets the requirements, and that the system is properly prepared for cutover. Both of these deliverables will be updated in future phases, but will be established in Design. For testing, several different types of tests will be considered in developing a comprehensive test strategy:

Table P2-4: Testing Definitions

Test Phase	Test Phase Description
Unit Testing	Unit Testing is used to verify the input and expected output for each newly developed or configured functionality. During unit testing, the Ivalua configuration resource is responsible for testing and verifies the new configuration meets the specific design specification. Similarly, the Ivalua developer responsible for each Migration, Interface, or Extension is expected to perform the Unit testing for each development object.
System Testing	System testing is carried out by the Ivalua team (with support from City Technical Leads) to validate the functionality and confirm that the business requirements are met as expected per the agreed upon design and configurations. System test confirms that the system performs properly, both from a functional and technical perspective, and will include the testing of configurations and all development objects in the planned Release. Ivalua will submit system test entry and exit criteria in the Test Plan deliverable for concurrence by the City.
Integration Testing	Integration testing is the responsibility of the Ivalua team (with support from City Technical Leads) following the successful completion of system testing. The objective of Integration testing is to test a process end-to-end across modules and systems. This testing may be further subdivided into Functional Integration Testing, that is, testing a process end-to-end without the benefit of fully functioning interfaces, and System Integration Testing, which assumes testing the end-to-end process WITH fully functioning interfaces. Ivalua will submit the Integration test entry and exit criteria within the Test Plan deliverable for concurrence by the City.
Regression Testing	Regression testing verifies that system modifications have not caused unintended effects and that the existing software or system components still comply with specified requirements. For this implementation, regression testing becomes a key activity to test functionality from Phase 1 during the testing of later phases.

Test Phase	Test Phase Description
	Regression Tests are based on approved scripts and data-sets from the passed System, Integration and UAT tests for Production released modules. The Ivalua Extranet tool will house the approved test scripts and will be the tool used to track the testing program, any fallout and the resolution.
Performance & Load Testing	Performance and load testing are required to validate that system response times meet the expected service level agreements under a load that is consistent with expectations during production. Test scripts from System Testing and Integration testing, with supporting data sets, are executed in a simulation environment that will replicate the load and validate performance metrics in a production-like environment (hardware, software, configurations and interfaces). For public facing components of the solution, performance testing will be performed per the Citywide Policy for Performance Testing of Public-Facing Applications maintained at http://www1.nyc.gov/assets/doitt/downloads/pdf/performance_testing_public.pdf .

In support of design, Ivalua will:

- Conduct business process design workshops.
- Draft process flows, roles and responsibilities and supporting capabilities.
- Develop the Business Design Document (BDD).
- Define specific configurations, workflows, and user roles needed to make the Ivalua solution work for the requested business function.
- Develop functional and technical specifications for development objects.
- Develop unit tests for configurations and development items.
- Develop test plans.
- Draft deployment plan.

In support of design, the City will:

- Participate in business process design workshops (Demos, Design Workshops, Fit Gap Sessions, Conference Room Pilots).
- Review and approve the Business Design Document (BDD).
- Review and approve configuration documents.
- Review and approve functional specifications.
- Review and approve technical specifications.
- Review and approve test plans.
- Review and approve deployment plan.

Table P2-5: Design Deliverables

Deliverable #	Deliverable Name	Description
D1	Conceptual Design	Conceptual Design is the high-level functional design. The output is a Conceptual System Design Document capturing functionality including screen and workflow designs representative of enhanced PASSPort functionality. The Ivalua team will provide the Conceptual Design validation to the City to facilitate the Scope Confirmation Discussions described in Section 2.7 of this SOW.
D2	Business Design Document (BDD)	The BDD document describes the agreed upon design of the Ivalua solution from a business perspective. It may include screen layout/design, business rules/exceptions, required fields/data elements, workflow, alerts, notifications, business processes, reports, description of the source and the target systems, design considerations for interfaces, conversion, and testing, and implementation, design considerations for user groups, roles, and security.
D3	Interface Design Document	A document for describing the functionality of the data exchange with external entities including other NYC agencies and 3rd party vendors. The Deliverable will include the following: <ul style="list-style-type: none"> ■ Business rules and exceptions ■ Required fields and data elements

Deliverable #	Deliverable Name	Description
		<ul style="list-style-type: none"> ■ Data flow ■ Description of the source and the target systems ■ Design considerations for interfaces, testing, and implementation
D4	Conversion Plan & Design Document (CPDD)	The CPDD describes the conversion plan and design for the Ivalua solution and provides a detailed mapping of the data migration elements, the targeted systems, assumptions and resolution for data elements that may or may not be within the Ivalua solution.
D5	Test Plan	<p>Test plan will include the test cycle, conditions, a plan for test data creation, and expected results definition for each test phase. Areas the test plan will cover:</p> <ul style="list-style-type: none"> ■ Details on testing approach. ■ Details of pretest preparations, including use of migrated data or interfaces points. ■ Roles and responsibilities of testing team. ■ Acceptance criteria for the completion of each phase of testing. ■ Procedure for reporting and resolving defects including performance metrics and trend analysis, to track the progress of software testing and defect resolution. ■ Descriptions of the standards and reviews used during testing, including procedures for retesting.
D6	Deployment Plan	<p>Describes the detailed activities that need to be performed in order to deploy Ivalua solution for production usage. The plan would include the steps needed for deployment, including:</p> <ul style="list-style-type: none"> ■ Readiness Checklist. ■ Deployment strategy and approach. ■ Cutover Plan. ■ Deployment/conversion implementation detailed plan. ■ Post-deployment activities.

3.4 Build and Test

During the Build and Test phase, the Ivalua team will configure the application, develop custom objects based on the designs reviewed by the City during the Design Phase, and subsequently, test the solution. The Ivalua team will build the application starting with modules for which the designs have been completed.

In support of the Build and Test activities, Ivalua will:

■ Build

- Iterative Build: teams work on tactical detail designs and configuration activities with unit testing of results.
- Work in Progress releases will be shared with the City according to an agreed upon schedule (approximately monthly during the build phase)
- Interface Builds will be defined in the Project Plan with the City.
- The Ivalua Team will work with the City to coordinate any City resources required to connect, understand and test with external systems.
- Interface builds may utilize separate test environments to prove out the viability of developed interfaces.
- Interface builds may affect the Design as different methods are developed and tested. Such updates to the Design will need to be reconciled with the Functional design and documented in updated Design documents.
- Migrations are initiated only once configuration and interface schema changes are finalized. The Migration and interface testing will be defined in the Project Plan.
- The Ivalua Team will work with the City to coordinate City resources required to connect, understand data, test and reconcile migrations.
- For each migration, the cutover activities will be added to the cutover plan and reviewed with the City.
- Actual Migration execution to happen post Deployment in the Production system.

- Ivalua is responsible for: mapping legacy document fields to Ivalua fields, writing of ETL (import) scripts, running sample migrations for testing and documentation of the process to be followed in Production by the City.
 - Migration prototyping may affect the Design as new fields and field types may be realized in the data. Such updates to the Design will need to be reconciled with the Functional design and documented in updated Design documents.
 - Ivalua will work with the City to determine the appropriate timing from loads to be performed in Production; this includes cut-over planning.
- **Test**
- Unit, and System testing will occur through and after the build cycles with pass/fail rates being monitored and reported to the City as part of the Project Management Process.
 - Multiple test cycles will be conducted with expected pass/fail rates defined for each cycle.
 - Ivalua will provide the City a set of customized test scripts for Integration Test scripts that reflect agreed upon requirements.
 - Test cycles will be captured within Ivalua’s Extranet tracker tool which will be used to track the test scripts, results, identified defects, and status throughout test.
 - The testing Phase will be considered complete as per the exit criteria defined to and agreed upon by the City and Ivalua.
- **Documentation**
- Adjustments to the Design Documentation may be required based on mutually agreed upon deviations in specific configurations.
 - User and Administrator Documentation will be customized to the delivered configurations.

In support of the Build and Test activities, the City will:

- Participate in development checkpoints and any required design clarification activities.
- Provide test environments for “sending” and “receiving” systems.
- Support “sending” or “receiving” system build and test activities.
- Prepare sample data sets to support migration testing.
- Support migration test reconciliation (led by Ivalua).
- Review and approve updated Design Documents.
- Review and approve updated User and Administrator documents.
- Review and approve test scripts and test results.

Table P2-6: Build and Test Deliverables

Deliverable #	Deliverable Name	Description
B1	Monthly Work In Progress Review (Releases 2 & 3)	Checkpoint of build that will include the current progress of new configurations and development objects.
B2	System Test	System test scripts and expected results for each of the test cycles identified in the System test plan. Identify, document and correct defects in the software, configuration, hardware or processes. Create documentation describing defects and corrective action to be taken. Each test script package should contain summary of the results of the successful testing against the exit criteria.

3.5 User Acceptance Testing and Deployment

Upon an explicit “GO” from the City team, the latest “code push” to TEST will be used to prepare and conduct the User Acceptance Testing program. Ivalua will provide support as the City team plans testing, trains testers, executes testing, and reports test results. Critical activities in this section will be the development of a Readiness Checklist.

Specifically, Ivalua will:

- Support development User Acceptance Test Plan and support the facilitation of user acceptance testing sessions.
- Provide a user acceptance test environment and training environment as agreed in the Test Plan.
- Configure the test environment and migrate configuration, development objects and stage data required to support user acceptance testing.
- Validate test scripts/scenarios to be tested.
- Support reporting and progress tracking against testing plans, escalate issues, and support UAT exit criteria evaluation.
- Support debugging and remediation of defects.
- Track progress against the Readiness Checklist to be used by the City to validate production readiness.
- Resolve issues as they align with the exit criteria agreed upon between the City and Ivalua.
- Perform the technical deployment to Production. The Production environment will be available but may not be fully “Live” until certain post-production activities are performed.
- Execute cutover plan.
- Execute deployment plan.
- Document deployment results.
- Hand-off to City Administrators and Ivalua Maintenance: The Ivalua implementation project team will hand-off the responsibility of support for the deployed functionality to the Ivalua Maintenance team while the City project team inaugurates the City Administrator(s) of the Ivalua Solution for ongoing production usage. This may involve completion of a Knowledge Transfer session.

In support of UAT and Deployment, the City will:

- Lead development of User Acceptance Test Plan.
- Identify and secure testers for UAT.
- Determine test scripts and scenarios to be tested (from the existing Integration and System test scripts).
- Provide data required to execute UAT testing.
- Execute user acceptance testing.
- Identify and report issues and defects.
- Prepare data files for migration.
- Remediate defects for components where City responsible.
- Assess go/no-go decision factors and make go/no-go decision.
- Execute City tasks in cutover plan.
- Execute City tasks in deployment plan.
- Review and approve deployment results.

Table P2-7: User Acceptance Testing and Deployment Deliverables

Deliverable #	Deliverable Name	Description
U1	Readiness Checklist	A list and definition of the criteria to be evaluated by the City to approve the solution for moving into production. Criteria will include readiness of organizational stakeholders, technical infrastructure, testing, operations, and training, and change management. Note: training and change management deliverables are the City's responsibility.

Deliverable #	Deliverable Name	Description
U2	System Acceptance	Successful operation of the system in production for thirty (30) consecutive days without the occurrence of a Severity Level 1 or Severity Level 2 defect.

4. Timeline

The Timeline section of the SOW describes the timeline for Phase 2 of the program and fully replaces the Timeline section from the previous SOW dated April 19, 2016.

The beginning Phase 2 of this program will include a detailed project plan with a refined timeline. For the purpose of establishing the baseline timing, please refer to the Gantt chart below.

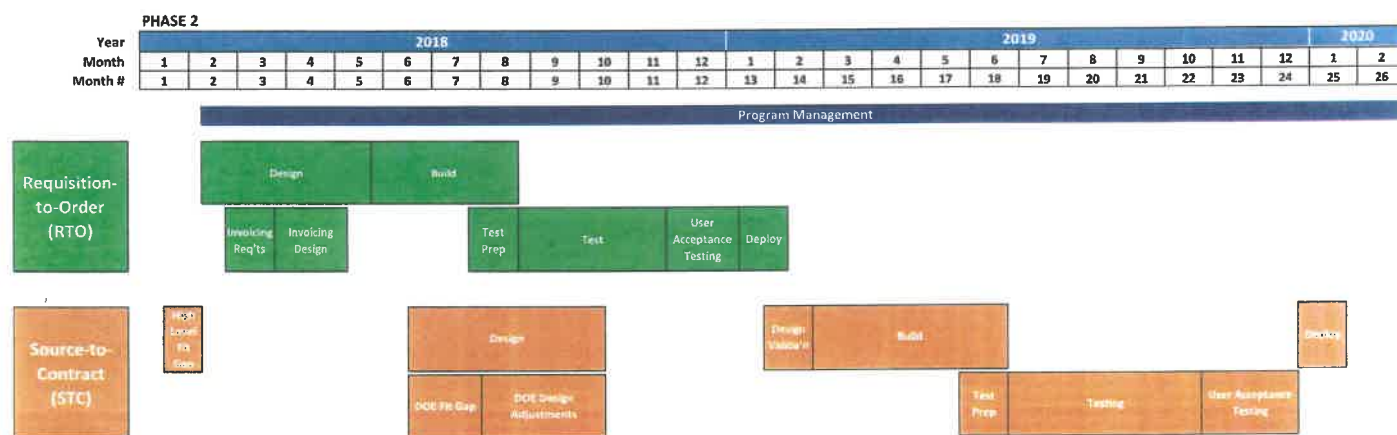
4.1 High-level schedule

Figure P2-8: Proposed timeline

Timeline Legend

All Phases
VMT: Vendor Management (Citywide)
RTO: Req-to-Order (4 Agencies)
STC: Source-to-Contract (4 Agencies)

Phase 2 Timeline



4.2 Notes

Ivalua and its team will be resourcing for the following anticipated timeline:

- Quick deployment of a City accessible instance with Ivalua's best recommended configurations.
- Early training of City configurators and administrators so that they may participate (where mutually agreed) in the Build process.
- Each Workstream team can operate independently of the others (so that they may overlap in the timeline).
- Steps that require a "go or no-go" approval from the City will not be delayed by more than what is agreed to in the timeline.
- Start of the entire project will be upon City signature, recognizing that full Registration will still be required.

4.3 Deliverables

As depicted in the Proposed Timeline, the project will include aspects that are managed by workstream as well as some elements that run across workstreams. Therefore, the deliverables in Table have been organized to depict the phase and relevant workstream of each phase and deliverable.

Deliverable names described in the following section have been developed using the following naming convention (for example, deliverable Ph2.B1.RTO.M1):

- Ph2 to indicate it is a deliverable associated with Phase 2 of the program as described in this statement of work
- 1-2 character prefix & deliverable number: indicates the approach phase of the deliverable, for example (B) refers to the Build phase of the approach; the number unique numbering inside each phase of the approach, in this example, the first Build deliverable (1).
- Workstream: if a workstream is noted after the deliverable number, it is for clarification that the deliverable refers only to the identified workstream. In the example provided (RTO) indicates the deliverable B1 applies only to Requisition-to-Order.
- Month (if applicable, also refers to Sprint for Release 1 only): this designation is unique to the build deliverables, where there are expected to be monthly work in progress checkpoints of build activity. In the example provided, M1 indicates the first monthly work in progress checkpoint.

Table P2-9: Program Deliverable

#	Deliverable name	Description
Ph2.M1.RTO	Requisition-to-Order Baseline Workplan	Updated workplan that addresses all tasks and deliverables required to complete the Requisition-to-Order phase of the program. The major project activities should include, but not be limited to: analysis, design, build, testing, implementation, and deployment. The plan includes activities required to be performed by Ivalua, the System Integrator, as well as City staff to accomplish the project deliverables.
Ph2.D1.RTO	Requisition-to-Order Conceptual Design	Conceptual Design is the high-level functional design. The output is a Conceptual System Design Document capturing functionality including screen and workflow designs representative of enhanced PASSPort functionality. The Ivalua team will provide the Conceptual Design validation to the City to facilitate the Scope Confirmation Discussions.
Ph2.D2.RTO	Requisition-to-Order Business Design Document	The BDD document describes the agreed upon design of the Ivalua solution from a business perspective. It may include screen layout/design, business rules/exceptions, required fields/data elements, workflow, alerts, notifications, business processes, reports, description of the source and the target systems, design considerations for interfaces, conversion, and testing, and implementation, design considerations for user groups, roles, and security.
Ph2.D3.RTO	Requisition-to-Order Interface Design Document	A document for describing the functionality of the data exchange with external entities including other NYC agencies and 3rd party vendors. The Deliverable will include the following: Business rules and exceptions, Required fields and data elements, Workflows, Description of the source and the target systems, Design considerations for interfaces, testing, and implementation.
Ph2.D4.RTO	Requisition-to-Order Conversion Plan & Design Document (CPDD)	The CPDD describes the conversion plan and design for the Ivalua solution and provides a detailed mapping of the data migration elements, the targeted systems, assumptions and resolution for data elements that may or may not be within the Ivalua solution.
Ph2.D5.RTO	Requisition-to-Order Test Plan	The test plan will include the test cycle, conditions, a plan for test data creation, and expected results definition for each test phase. The plan outlines information needed to effectively execute testing.
Ph2.D6.RTO	Requisition-to-Order Deployment Plan	Describes the detailed activities that need to be performed in order to deploy Ivalua solution for production usage. The plan would include the steps needed for deployment, including: Readiness Checklist, Deployment strategy and approach, Cutover Plan, Deployment/conversion implementation detailed plan, Post-deployment activities.
Ph2.B1.RTO.M1	Requisition-to-Order Work in progress review 1	Checkpoint of build that will include the current progress of new configurations and development objects.
Ph2.B1.RTO.M2	Requisition-to-Order Work in progress review 2	Checkpoint of build that will include the current progress of new configurations and development objects.
Ph2.B1.RTO.M3	Requisition-to-Order Work in progress review 3	Checkpoint of build that will include the current progress of new configurations and development objects.

#	Deliverable name	Description
Ph2.B2.RTO	Requisition-to-Order System Test	System test scripts and expected results for each of the test cycles identified in the System test plan. Identify, document and correct defects in the software, configuration, hardware or processes. Create documentation describing defects and corrective action to be taken. Each test script package should contain summary of the results of the successful testing against the exit criteria.
Ph2.U1.RTO	Requisition-to-Order Readiness Checklist	A list and definition of the criteria to be evaluated by the City to approve the solution for moving into production. Criteria will include readiness of organizational stakeholders, technical infrastructure, testing, operations, and training, and change management. Note: training and change management deliverables are the City's responsibility.
Ph2.U2.RTO	Requisition-to-Order System Acceptance	Successful operation of the system in production for thirty (30) consecutive days without the occurrence of a Severity Level 1 or Severity Level 2 defect.
Ph2.M1.STC	Source-to-Contract Baseline Workplan	Updated workplan that addresses all tasks and deliverables required to complete the Source-to-Contract phase of the program. The major project activities should include, but not be limited to: analysis, design, build, testing, implementation, and deployment. The plan includes activities required to be performed by Ivalua, the System Integrator, as well as City staff to accomplish the project deliverables.
Ph2.D1.STC	Source-to-Contract Conceptual Design	Conceptual Design is the high-level functional design. The output is a Conceptual System Design Document capturing functionality including screen and workflow designs representative of enhanced PASSPort functionality. The Ivalua team will provide the Conceptual Design validation to the City to facilitate the Scope Confirmation Discussions.
Ph2.D2.STC	Source-to-Contract Business Design Document	The BDD document describes the agreed upon design of the Ivalua solution from a business perspective. It may include screen layout/design, business rules/exceptions, required fields/data elements, workflow, alerts, notifications, business processes, reports, description of the source and the target systems, design considerations for interfaces, conversion, and testing, and implementation, design considerations for user groups, roles, and security.
Ph2.D3.STC	Source-to-Contract Interface Design Document	A document for describing the functionality of the data exchange with external entities including other NYC agencies and 3rd party vendors. The Deliverable will include the following: Business rules and exceptions, Required fields and data elements, Workflows, Description of the source and the target systems, Design considerations for interfaces, testing, and implementation.
Ph2.D4.STC	Source-to-Contract Conversion Plan & Design Document (CPDD)	The CPDD describes the conversion plan and design for the Ivalua solution and provides a detailed mapping of the data migration elements, the targeted systems, assumptions and resolution for data elements that may or may not be within the Ivalua solution.
Ph2.D5.STC	Source-to-Contract Test Plan	The test plan will include the test cycle, conditions, a plan for test data creation, and expected results definition for each test phase. The plan outlines information needed to effectively execute testing.
Ph2.D6.STC	Source-to-Contract Deployment Plan	Describes the detailed activities that need to be performed in order to deploy Ivalua solution for production usage. The plan would include the steps needed for deployment, including: Readiness Checklist, Deployment strategy and approach, Cutover Plan, Deployment/conversion implementation detailed plan, Post-deployment activities.
Ph2.B1.STC.M1	Source-to-Contract Work in progress review 1	Checkpoint of build that will include the current progress of new configurations and development objects.
Ph2.B1.STC.M2	Source-to-Contract Work in progress review 2	Checkpoint of build that will include the current progress of new configurations and development objects.
Ph2.B1.STC.M3	Source-to-Contract Work in progress review 3	Checkpoint of build that will include the current progress of new configurations and development objects.
Ph2.B1.STC.M4	Source-to-Contract Work in progress review 4	Checkpoint of build that will include the current progress of new configurations and development objects.
Ph2.B2.STC	Source-to-Contract System Test	System test scripts and expected results for each of the test cycles identified in the System test plan. Identify, document and correct defects in the software, configuration, hardware or processes. Create documentation describing defects and corrective action to be taken. Each test script package should contain summary of the results of the successful testing against the exit criteria.
Ph2.U1.STC	Source-to-Contract Readiness Checklist	A list and definition of the criteria to be evaluated by the City to approve the solution for moving into production. Criteria will include readiness of organizational stakeholders, technical infrastructure, testing, operations, and training, and change management. Note: training and change management deliverables are the City's responsibility.
Ph2.U2.STC	Source-to-Contract System Acceptance	Successful operation of the system in production for thirty (30) consecutive days without the occurrence of a Severity Level 1 or Severity Level 2 defect.

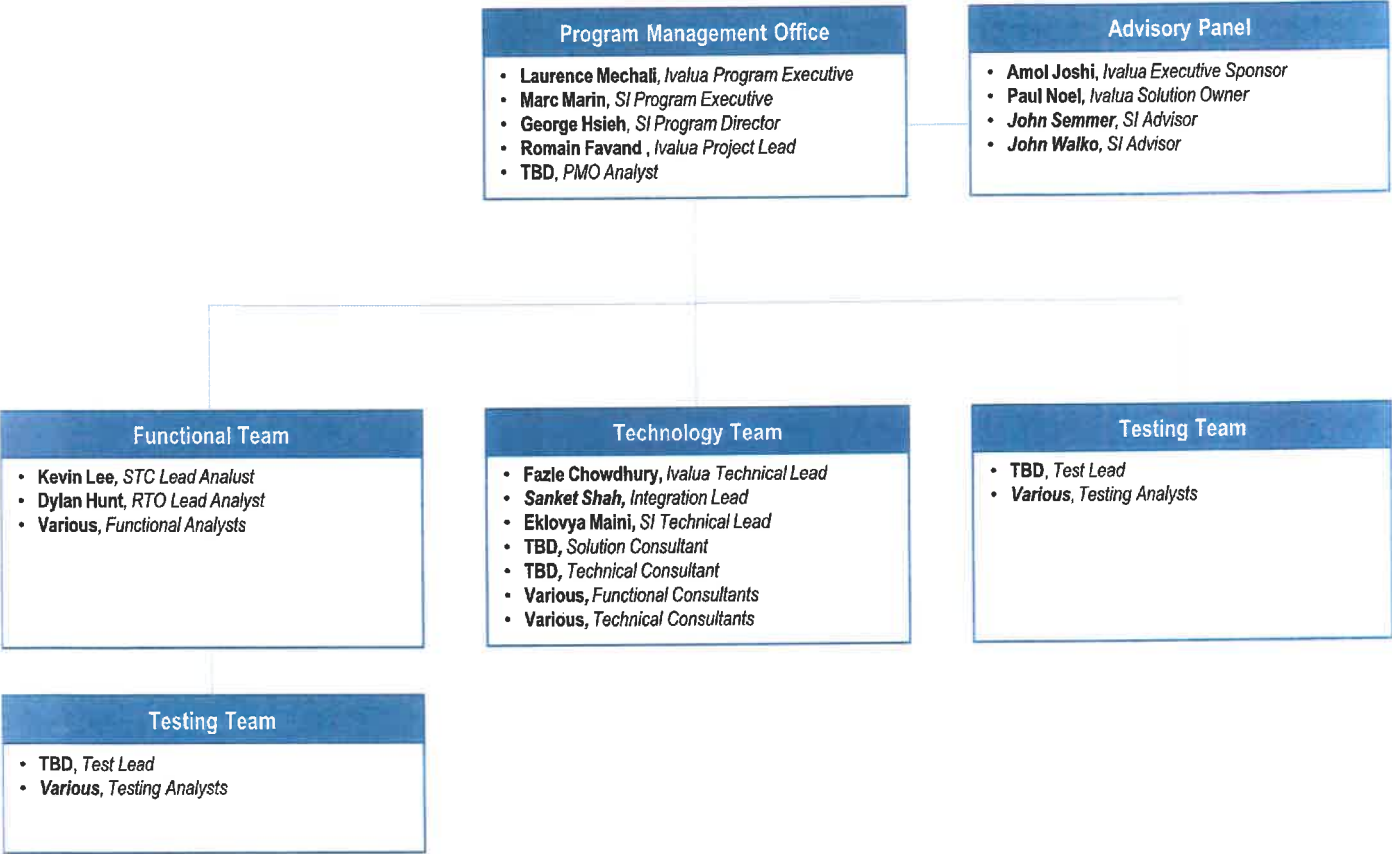
5.Team

The Team section of the SOW describes the team for Phase 2 of the program and fully replaces the Team section from the previous SOW dated April 19, 2016.

The project team for Phase 2 of the program effort is represented in the organization chart below.

5.1 Project organization chart – Phase 2

Figure P2-10: Project Organization Chart



5.2 Roles- Phase 2

Responsibilities, work location, time commitments, and skills requirements associated with each role are defined in the table below. If a resource is named below and not available upon the start of work, the assigned resources will have comparable skills and experience as the named resources provided.

Table P2-11: Ivalua Project Roles

Role	Location	Type	Responsibilities	Skills	Name	Commit
Ivalua Executive Sponsor	Offsite	Ivalua	<ul style="list-style-type: none"> Manages client executive relationships and expectations Ensures access to relevant Ivalua resources to support engagement Provides executive level guidance to the project team during the course of the engagement Participates in executive meetings with City leadership 	<ul style="list-style-type: none"> Leadership role within Ivalua Deep procurement subject matter knowledge Large program delivery experience Expertise in the Ivalua solution 	Amol Joshi	Oversight
Ivalua Solution Owner	Offsite	Ivalua	<ul style="list-style-type: none"> Responsible for Software Solution architecture Represents NYC to Ivalua R&D Manages relevant Ivalua resources to support engagement Point of escalation for Project related issues Manages sub-contractors 	<ul style="list-style-type: none"> Leadership role within Ivalua Deep procurement subject matter knowledge Large program delivery experience Expertise in the Ivalua solution 	Paul Noel	Part Time
Ivalua Program Executive	Onsite / Offsite	Ivalua	<ul style="list-style-type: none"> Responsible for overall engagement execution Manages client executive relationships and expectations Participates in executive level meetings Responsible for deliverable quality Assists with identification of strategic risks and issue resolution Responsible for Software Solution architecture Represents NYC to Ivalua R&D Manages relevant Ivalua resources to support engagement 	<ul style="list-style-type: none"> Deep knowledge of Ivalua Product/ Procurement subject matter knowledge Executive advisory expertise Large complex program delivery experience Full systems lifecycle implementation experience Strong written and verbal communication skills 	Laurence Mechali	Part Time

Role	Location	Type	Responsibilities	Skills	Name	Commit
Ivalua Project Lead	Onsite	Ivalua	■ Point of escalation for Project related issues		Romain Favand	Full Time
			■ Provides oversight over the overall execution of the functional workstreams	■ Ivalua solution expertise		
			■ Manages the work effort of the Ivalua configuration resources	■ Large program delivery and SDLC experience		
			■ Serves as the overall go-to person for Ivalua functional solution guidance	■ Team management experience		
			■ Drives delivery of the Ivalua solution	■ Strong configuration capabilities		
			■ Manages functional risk, scope, schedules			
Ivalua Technical Lead	Onsite	Ivalua	■ Provides oversight over the overall execution of the technical workstreams	■ Ivalua platform expertise	Fazle Chowdhury	Full Time
			■ Manages the work effort of the Ivalua development resources	■ Large program delivery and SDLC experience		
			■ Serves as the overall go-to person for Ivalua technical solution guidance	■ Team management experience		
			■ Drives delivery of the Ivalua technical solution	■ Strong written and verbal communications		
			■ Manages technical risk, scope, schedules			
Integration Consultant	Offsite	Ivalua	■ Leads interface design and strategy for integrated solution delivery	■ Integration engineering education	Sanket Shah	Part Time
			■ Coordinates integration/interface development resources	■ Ivalua platform expertise		
			■ Liaison with NYC system developer resources	■ Large project integrations experience		
Ivalua Solution Consultants	Offsite	Ivalua	■ Responsible for Software Solution architecture	■ Leadership role within Ivalua	Various	Part Time
			■ Represents NYC to Ivalua R&D	■ Deep procurement subject matter knowledge		
			■ Manages relevant Ivalua resources to support engagement	■ Large program delivery experience		
			■ Point of escalation for Project related issues	■ Expertise in the Ivalua solution		

Role	Location	Type	Responsibilities	Skills	Name	Commit
			<ul style="list-style-type: none"> Manages sub-contractors 			
IT Operations Lead	Offsite	Ivalua	<ul style="list-style-type: none"> Leads environment, security and performance readiness for all NYC technical environments Coordinates IT operations resources Liaison with NYC security and IT resources 	<ul style="list-style-type: none"> IT Architecture education Ivalua platform expertise Large Project implementations operations experience 	Didier Cabannes	Part Time
Functional Consultants	Offsite	Ivalua	<ul style="list-style-type: none"> Configurators in Ivalua environments addressing the areas below User Interface configuration Master data table management Workflow & Alerts development Forms & Reports configuration Migration data mapping and ETL load support 	<ul style="list-style-type: none"> Computer science or related education Ivalua product expertise Specific Module/Process expertise 	Various	Burst
Technical Consultants	Offsite	Ivalua	<ul style="list-style-type: none"> Developers in Ivalua environments addressing the areas below Interfaces Complex migration scripting New functionality development Environment upgrade management Liaison with R&D updates 	<ul style="list-style-type: none"> Engineering education Ivalua product development expertise 	Various	Burst

Role	Location	Type	Responsibilities	Skills	Name	Commit
SI Executive Advisor	Offsite	SI	<ul style="list-style-type: none"> Manages client executive relationships and expectations Ensures access to quality SI resources to support engagement Provides executive level guidance to the project team during the engagement Participates in executive meetings with City leadership 	<ul style="list-style-type: none"> Leadership role within SI Deep procurement subject matter knowledge Executive advisory expertise Large complex program delivery experience 	John Semmer, John Walko	Oversight
SI Program Executive	Onsite	SI	<ul style="list-style-type: none"> Responsible for overall engagement execution Manages client executive relationships and expectations Participates in executive level meetings Responsible for deliverable quality Assists with identification of strategic risks and issue resolution 	<ul style="list-style-type: none"> Deep City of New York subject matter knowledge Executive advisory expertise Large complex program delivery experience Full systems lifecycle implementation experience Strong written and verbal communication skills 	Marc Marin	Part Time
SI Program Director	Onsite	SI	<ul style="list-style-type: none"> Manages project planning and execution Manages risk, scope, schedules Architects project integration / implementation approach incorporating NYC leading practices Leads definition of methods, deliverable templates, and tools incorporating NYC leading practices Leads deliverable QC Participates in executive level meetings Develops and manages project schedules Conducts project status monitoring and reporting 	<ul style="list-style-type: none"> NYC implementation experience Large complex program delivery experience Full systems lifecycle implementation experience NYC and other Government client service experience Large complex program delivery experience Full systems lifecycle implementation experience Strong written and verbal communication skills 	George Hsieh	Full Time

Role	Location	Type	Responsibilities	Skills	Name	Commit
PMO Analyst	Onsite	SI	■ Manages action item list, issue log, and risk register		TBD	Full Time
			■ Supports tracking of schedules, risks and action items	■ Analytical skills		
			■ Supports development of executive communications	■ Strong written and verbal communication skills		
			■ Manages action item list, issue log, and risk register	■ Experience with project management methods and tools		
			■ Captures meeting minutes			
Functional Team Lead, STC Lead Analyst	Onsite	SI	■ Leads functional design workshops	■ Procurement functional skills	Kevin Lee	Full Time
			■ Leads development of Charter and Roadmap	■ specific management skills		
			■ Leads requirements development	■ Team management experience		
			■ Leads functional design for specific workstream elements	■ Strong written and verbal communications		
			■ Provides functional support for specific workstream configuration			
			■ Provides functional support for test planning, script development, testing, and UAT for specific workstream elements			
			■ Leads requirements development for specific workstream functionality			
			■ Provides input on Functional leading practices			
			■ Supports transition to production with technical lead and provides go-live support			
			■ Provides project reporting and			

Role	Location	Type	Responsibilities	Skills	Name	Commit
RTO Lead Analyst	Onsite	SI	communications content		Dylan Hunt	Full Time
			Leads functional design workshops	Procurement functional skills		
			Leads development of Charter and Roadmap	Specific management skills		
			Leads requirements development	Team management experience		
			Leads functional design for specific workstream elements	Strong written and verbal communications		
			Provides functional support for specific workstream configuration			
			Provides functional support for test planning, script development, testing, and UAT for specific workstream elements			
			Leads specific enrollment strategy and planning			
			Provides input on Functional leading practices			
			Supports transition to production with technical lead and provides go-live support			
Functional Analysts	Onsite	SI	communications content		Various TBD	Full Time
			Supports Workstream lead	Procurement functional skills		
			Gathers requirements	Specific management skills		
			Supports design documentation	Team management experience		
			Supports planning, script development, execution, and documentation for testing and UAT	Analytical skills		
Testing Lead	Onsite	SI	Lead overall testing activities for the solution coordinating project Functional, Configuration, Integration and City resources	System testing experience	TBD	Full Time
			Lead development of testing strategy and plan spanning system, integration	Knowledge of leading testing methods and tools		
			Support development of performance test and UAT plans	Team management experience		
				Ivalua certification		

Role	Location	Type	Responsibilities	Skills	Name	Commit
Testing Analysts	Onsite and Offsite	SI	■ Support development, execution, and documentation of UAT test scripts			
			■ Support development, execution, and documentation of system, integration, and performance, scripts			
			■ Coordinate defect resolution efforts			
			■ Support testing planning	■ System testing experience	Various TBD	Full Time
			■ Support test script documentation	■ Strong analytical skills		
			■ Support test execution	■ Strong business and technical communication skills		
			■ Support test result documentation			

Ivalua also anticipates that the City will fill the following roles during the course of the project:

Table P2-12: City Roles and Responsibilities

Role	Location	Type	Responsibilities	Skills	Name	Commit
Project Manager	Onsite	City	<ul style="list-style-type: none"> Manage the City's team Manage scope Manage and escalate issues internally as needed 	Project management experience Authority to approve deliverables Authority to make decisions regarding the direction and needs of the project	To be designated by the City	Full Time
Core Project Team	Onsite	City	<ul style="list-style-type: none"> Coordinate and support analysis, design, and execution of the solution. Plan and execute deliverable development in conjunction with Ivalua. 	Understanding of City procurement requirements	To be designated by the City	As needed to provide input and make decisions during requirements and design steps
City Testers	Onsite	City	<ul style="list-style-type: none"> Collaborate with Ivalua on functional testing and lead user acceptance testing 	Understanding of the City's testing standards	To be designated by the City	As needed to conduct UAT
City Trainers	Onsite	City	<ul style="list-style-type: none"> Deliver training to City users 	Training skills and knowledge of the City's training procedures and standards	To be designated by the City	As needed to train users of the solution prior to go-live
City IT Administrators	Onsite	City	<ul style="list-style-type: none"> Provide required information about City systems and data Provide technical requirements input Make technical design decisions Provide required access to City data, systems, and system services for testing and go-live of interfaces and data migrations 	Hardware and software expertise, specifically in web and application servers	To be designated by the City	As needed to participate in technical requirements and design sessions and to support interface and migration activities

6. Fees and Payment Schedule

The Fees and Payment section was removed from the SOW and the Fee and Payment information is included in Attachment PRC: Pricing.

7. Assumptions

The Assumption section of the SOW remain unchanged from the previous SOW dated April 19, 2016 except for the following modification:

The introductory paragraph of section 7. Assumptions now is modified to the following:

Phase 1 of this Project work to deliver Release 1 – Vendor Management will begin on April 19, 2016. Phase 2 of this Project work to deliver Release 2 – Requisition-to-Order and Release 3 – Source-to-Contract will begin on or about January 22, 2018.

Exhibit A –

Ivalua Platform and Modules comprising the Software Solution

For reference only, find below a list of the Ivalua Software platform and modules that are being licensed by the City. Modules that apply to this scope of work are noted in the SOW for each workstream as appropriate.

Ivalua Buyer Platform

- Master Data (orgs, commodities, suppliers, addresses, UOM (units of measure), Currencies, calendars, charts of accounts, tax tables, payment terms)
- Document Repository (versioning, archives, workflow)
- Configurable Workflow engine
- Alerts and Notifications
- Analytics Engine (actual cubes included depend on modules enabled)
- Collaboration Framework (blog comments and attachments)
- User Mgmt. (contacts repository, authorizations, profiles, perimeters)
- Configuration Engine (design mode, update texts, table & page Mgmt.)
- Branding (client logo and style sheets)
- Module Specific (clause Mgmt., evaluations, RFIs (requests for information), project tasks and Gantt charts) - deployed as required

Supplier Portal

- Access for Supplier users to functionality opened to them through specific modules
- Dashboard of accessible content for Supplier view
- Supplier management of their contacts
- Supplier view of data about their company as maintained by their client
- EDI (electronic data exchange) and cXML (commercial extended markup language) interface point for punchout catalogs, outbound orders, inbound acknowledgements, ship notices and receipts.

Integration Toolbox

- ETL (Extract, Transform, Load) functionality (flat file import, transformation and loading)
- Query functionality (flat file output, scheduling, multiple formats)
- EAI engine (manage complex sequential integration actions, WebServices, REST (representational state transfer), Scheduled push and pull of data, AS2 (Applicability Statement 2) Pipes, SFTP (secure file transfer protocol), HTTPs (hypertext transfer protocol) – secure), SSO (single sign-on) integrations)
- WebServices and REST
- Integration Protocols (AS2, SFTP, HTTPS)
- SSO framework (SAMLv2 (security assertion markup language version 2), Active Directory or other SSO protocols)

Supplier Repository

- Credentials Management
- Approval Matrix
- Supplier Cleansing Workbench (deduplication, merge data)

Supplier Data & Registration

- Supplier Registration form and workflow
- Onboarding and Updating RFI integration
- Financials

Performance & Risk Management

- Supplier Performance/Risk KPIs (key performance indicators), Questions, Scorecards
- Supplier Performance/Risk Campaign Management
- Supplier Performance/Risk Analytics

Sourcing Projects

- Project Types define different Sourcing processes: simple RFI to complex, multi-round RFx (request for information/quote/proposal/tender/bid)
- Manage Team members, Currencies, Internal/External Communications, Document Library
- Build detailed task schedules including a Gantt chart view reflecting task dependencies
- Manage an internal process for c requirements prior to an RFx from all the stakeholders
- Gather Suppliers in a List, using Discovery in your Repository, logging issues and qualifications, adding suppliers discovered elsewhere

RFx

- Creation or selection of RFIs or RFPs (request for proposal) from a library of templates
- Create new quote sheets or RFI questions in Online forms or with Excel
- Progress tracking of Supplier responses with reminder notifications
- See Quoted Items and RFI responses side-by-side
- Management of multi-round quotes and of Supplier proposal iterations
- Supplier portal allows proposals entered online or by upload of Excel files
- Proposal Evaluations for scoring individual supplier bids

Auction

- Option to initiate auction by retrieving the RFQ (request for quote) result data
- Different types of auction possible (English, Dutch, Japanese)
- Price adjustment weighting by Supplier
- Real-time updates as suppliers bid or message
- Multi-lot auction management
- Forward Auctions also available

Contract Repository

- Contract Repository, Dates and Pricelists only (not full Contract Lifecycle Management)
- Track Contract Compliance at the line level through Requisitions, Orders and Invoices
- Process non-PO (purchase order) Invoices directly against Contract

- Suppliers can see their Contracts, Items and invoiced contract items

Contract Authoring & Lifecycle

- Configurable Contract types and Workflows
- Invite other internal or external users to view or interact
- Manage Contract Dates, Renewal terms and reminders
- Attach Documents of any type as Exhibits, with version controls
- Authoring and Clause Library for online or Word-based Contract drafting
- Price list copied from Sourcing and available for Requisitioning

Items and Catalogs

- Item Master with Pricing, lead-times, configurable metadata and cross-reference information to a standard spec
- Configurable features by Category for Item attribute definition
- Portal for online and Excel-based management of catalogues by Supplier
- Manage Services Definitions, Rate Cards and Job Profiles
- Punch-out Integration

Procurement (Requisitions, Orders, Receipts, Budget Tracking)

- Purchase Requisitions
 - Shop Online searching in one sanctioned list of Catalogue/Contract Items
 - Create personal kits of catalogue items for repeat buys
 - Manage configurable requisition types with workflows, alerts, default settings that streamline the request and approval process
 - Specify new items, added suppliers, ship-to addresses
 - Define subscription or milestone based deliverables
 - Optional Spot Bid integration (simple RFx)
- Purchase Orders
 - Manage POs by type with workflows to inform suppliers or with optional EDI/cXML integration to specific suppliers
 - Easily release portions against "open orders"
 - Change Orders that open new derivative Requisitions with audit trail
- Goods Receipts
 - Simple Receipt form with workflow and alerts for compliance
 - Supplier may use "draft" receipt as Advance Ship Notice or the workflow can be used to signal "Ok to ship"
 - Process returns through similar forms
 - Alternative screen for processing multiple receipts quickly
- Budget Tracking
 - Configure specific Chart of Accounts segments for Budget tracking
 - Log budget totals by period Online, through imports or with integration
 - Track encumbrance (requisition), commitment (order), usage (invoice)

Invoicing & Payments

- Capture Invoices through PO-Flip, Receipt-Flip, Online Entry or by optional integration via EDI/cXML or integrated Scan/OCR (optical character recognition) solutions
- Alerts on Invoices signal supplier, requisitioners or buyer of reconciliation issues before the invoice can be submitted to AP (accounts payable)
- Accounts Payable interface for managing the accounting allocations of the invoice lines, accruals logic for receipts and voucher details
- Supplier sees invoice reconciliation status and payment schedule

Purchase Intelligence (Analytics, Enrichment, Procurement Project Management)

- Analytics & Dashboard
 - Extended Cube indicators and dimensions beyond Platform's analytics for enabled modules
 - Configurable imports of 3rd party or outside system data for custom analytics
 - Custom Dashboards, inserted into pages within modules and applying filters as necessary for their context
- Spend Enrichment Workbench
 - Configurable import specification for spend from AP vouchers, invoices, PCard (purchasing card), travel, outsourced services, and other sources
 - Leverage a configurable spend taxonomy based on the UNSPSC but rolling up to source-able categories for maximum identification of savings opportunities
 - Spend enrichment workbenches to define clues in the spend data and rules for finding the actual commodity of the spend line by line. Ivalua's spend rules engine allows for full transparency of why spend is classified and has an easy to use interface for clients to change the rules with immediate effect on all past and future spend
- Savings Tracking & Action Plans
 - Define Category wide Objectives for cost reduction or supply-base improvement, with links to categories addressed, organizations involved, Suppliers targeted, etc.
 - Organize a team and project manage their tasks, dependencies and timing
 - Set a Budget plan by month for the entire Action plan
 - Estimate a Planned savings by month for each participating business unit and roll those up to the overall plan
 - Link multiple sourcing projects to the Action plan and have their identified savings report back to the Action plan as they are contracted and achieved
 - Report on status of plan and linked Sourcing projects using embedded reports or with the Analytics cube
- Procurement Project Management
 - Standalone Project that represents Client-specific Projects, Corporate Initiatives, Manufacturing New Product Introduction processes
 - Manage Teams, Docs, Communications and workflow for the project
 - Track tasks with a Project Plan with task dependencies and Gantt charts
 - Report on linked Sourcing, Contracts, Orders and Invoices

E-Signature

- Document(s) generation in an "envelope" for eSignature processing
- Integration with 3rd party licensed e-Signature provider

EXHIBIT 2

New York City Department of Information Technology and Telecommunications

e-Sourcing and Procurement Solution

ATTACHMENT PRC, CHANGE ORDER 2 PRICING

I. Total Pricing

In consideration of the Contractor's satisfactory and timely performance of the Services described in the Statement of Work, this Agreement's not-to-exceed amount is forty-five million, five hundred fifteen thousand, four hundred forty-eight dollars and eighty-three cents (\$45,515,448.83). The fixed price of the Agreement is fifteen million dollars (\$15,000,000.00) which will be paid according to the following schedule:

Table 1 Project Deliverable Schedule

Phase	Deliverable ID	Type	Deliverable name	Est Completion Date	Fees
N/A	Ph1.M1	Deposit	Cash for Performance Bond Collateral	4/28/2016	\$1,150,000.00
Subscription	N/A	Subscription	Year 1 Subscription	4/28/2016	\$704,992.00
1	Ph1.M2	Service	Mobilize Complete	5/13/2016	\$904,788.23
1	Ph1.R1.VM	Service	Vendor Management Requirements	6/16/2016	\$1,244,083.82
1	Ph1.CM1.VM	Service	Change Management Plan & Vendor Enablement Strategy	7/16/2016	\$236,603.00
1	Ph1.CM1.STC/RTO	Service	Change Management Plan & Vendor Enablement Strategy	7/16/2016	\$474,320.00
1	Ph1.D1.VM	Service	Vendor Management Business Design Document	8/15/2016	\$872,631.18
1	Ph1.D2.VM	Service	Vendor Management Design Document	9/15/2016	\$484,707.98
1	Ph1.B1.VM.S1	Service	Monthly Release to TEST 7/16	8/15/2016	\$468,551.05
1	Ph1.B2.VM.S2	Service	Monthly Release to TEST 8/16	9/15/2016	\$570,960.17
1	Ph1.B3.VM.S3	Service	Monthly Release to TEST 9/16	10/15/2016	\$570,960.17
1	Ph1.R2.STC	Service	Source-to-Contract Requirements	9/15/2016	\$1,357,182.35
1	Ph1.R3.RTO	Service	Requisition-to-Order Requirements	9/15/2016	\$1,357,182.35
1	Ph1.B4.VM.S4	Service	Monthly Release to TEST 10/16	11/15/2016	\$570,960.17
1	Ph1.T1.VM	Service	Training Materials	11/15/2016	\$827,947.99
1	Ph1.B5.VM.S5	Service	Monthly Release to TEST 11/16	12/15/2016	\$570,960.17
1	Ph1.U1.VM	Service	Vendor Management UAT & Deployment Complete	1/13/2017	\$614,788.23
1	Ph1.P1.VM	Service	Vendor Management Production	3/10/2017	\$798,345.29
1	Ph1.VE1.VM	Service	Vendor Management Vendor Communications	6/10/2017	\$332,640.00
1	Ph1.M3	Expense	Cost for Performance Bond (1st half)	1/19/2017	\$150,000.00
N/A	Ph1.M4	Deposit	Cost for Performance Bond (1st half) - reimbursement	1/19/2017	(\$150,000.00)
Subscription	N/A	Subscription	Year 2 Subscription	4/28/2017	\$926,536.00
1	Ph1.N/A	Service	VM Extension	8/1/2017	\$1,359,766.00
2	Ph2.M1.RTO	Service	Requisition-to-Order Baseline Workplan	Phase 2, Month 1	\$1,642,582.52
2	Ph2.D1.RTO	Service	Requisition-to-Order Conceptual Design	Phase 2, Month 4	\$1,564,066.02
2	Ph2.D2.RTO	Service	Requisition-to-Order Business Design Document (BDD)	Phase 2, Month 5	\$1,642,582.52

Phase	Deliverable ID	Type	Deliverable name	Est Completion Date	Fees
2	Ph2.D3.RTO	Service	Requisition-to-Order Interface Design Document	Phase 2, Month 6	\$1,314,066.02
2	Ph2.D4.RTO	Service	Requisition-to-Order Conversion Plan & Design Document (CPDD)	Phase 2, Month 6	\$657,033.01
2	Ph2.D5.RTO	Service	Requisition-to-Order Test Plan	Phase 2, Month 7	\$657,033.01
2	Ph2.D6.RTO	Service	Requisition-to-Order Deployment Plan	Phase 2, Month 7	\$657,033.01
2	Ph2.B1.RTO.M1	Service	Requisition-to-Order Work in Progress Review 1	Phase 2, Month 6	\$985,549.51
2	Ph2.B1.RTO.M2	Service	Requisition-to-Order Work in Progress Review 2	Phase 2, Month 7	\$985,549.51
2	Ph2.B1.RTO.M3	Service	Requisition-to-Order Work in Progress Review 3	Phase 2, Month 8	\$985,549.51
2	Ph2.B2.RTO	Service	Requisition-to-Order Work System Test	Phase 2, Month 11	\$985,549.51
2	Ph2.U1.RTO	Service	Requisition-to-Order Readiness Checklist	Phase 2, Month 12	\$657,033.01
2	Ph2.U2.RTO	Service	Requisition-to-Order System Acceptance	Phase 2, Month 14	\$657,033.01
2	Ph2.M1.STC	Service	Source-to-Contract Baseline Workplan	Phase 2, Month 3	\$1,642,582.52
2	Ph2.D1.STC	Service	Source-to-Contract Conceptual Design	Phase 2, Month 8	\$1,564,066.02
2	Ph2.D2.STC	Service	Source-to-Contract Business Design Document (BDD)	Phase 2, Month 10	\$1,642,582.52
2	Ph2.D3.STC	Service	Source-to-Contract Interface Design Document	Phase 2, Month 11	\$1,314,066.02
2	Ph2.D4.STC	Service	Source-to-Contract Conversion Plan & Design Document (CPDD)	Phase 2, Month 11	\$657,033.01
2	Ph2.D5.STC	Service	Source-to-Contract Test Plan	Phase 2, Month 17	\$657,033.01
2	Ph2.D6.STC	Service	Source-to-Contract Deployment Plan	Phase 2, Month 15	\$657,033.01
2	Ph2.B1.STC.M1	Service	Source-to-Contract Work in Progress Review 1	Phase 2, Month 15	\$788,439.61
2	Ph2.B1.STC.M2	Service	Source-to-Contract Work in Progress Review 2	Phase 2, Month 16	\$788,439.61
2	Ph2.B1.STC.M3	Service	Source-to-Contract Work in Progress Review 3	Phase 2, Month 17	\$788,439.61
2	Ph2.B1.STC.M4	Service	Source-to-Contract Work in Progress Review 4	Phase 2, Month 18	\$788,439.61
2	Ph2.B2.STC	Service	Source-to-Contract Work System Test	Phase 2, Month 22	\$788,439.61
2	Ph2.U1.STC	Service	Source-to-Contract Readiness Checklist	Phase 2, Month 23	\$657,032.34
2	Ph2.U2.STC	Service	Source-to-Contract System Acceptance	Phase 2, Month 25	\$657,033.01
2	N/A	Expense	Expense for Performance Bond Fee		\$150,000.00
N/A	N/A	Deposit	Cash for Performance Bond Collateral - reimbursement		(\$1,000,000.00)
Subscription	N/A	Subscription	Year 3 Subscription	4/28/2018	\$1,061,741.00
Subscription	N/A	Subscription	Year 4 Subscription	4/28/2019	\$1,061,741.00
Subscription	N/A	Subscription	Year 5 Subscription	4/28/2020	\$1,061,741.00
Grand Total					\$45,515,448.83

Below is a list of R1 Extension Deliverables associated with item Ph1.N/A from above.

Table 2 Project Total Summary

Item	Estimated Fees
Phase 1 Total	\$13,767,378.15
Phase 2 Total	\$26,931,319.68
N/A Total	\$0.00
Subscription Total	\$4,816,751.00
Service Contract Total (Phase 1 + Phase 2)	\$40,698,697.83
Total Contract Fees	\$45,515,448.83

Table 3 R1 Extension (Deliverable: Ph1.N/A)

Phase	Type	Milestone Name	Fees
Requirements	Service	Requirements for Additional Functionality	\$27,195.32
Design	Service	Updated BDD	\$135,976.60
Design	Service	Updated TDD	\$108,781.28
Design	Service	Updated CPDD	\$81,585.96
Build	Service	Resolve remaining minor/cosmetic defects	\$163,171.92
Build	Service	Configuration Management & configuration changes	\$95,183.62
Test	Service	New & Updated Test Scripts & Execution	\$163,171.92
Test	Service	Updated Ivalua Performance Testing	\$135,976.60
Deploy	Service	Cutover Execution & Production Readiness Changes	\$108,781.28
Project Management	Service	Weekly PMO governance and reporting	\$163,171.92
Training & Change Management	Service	Updated Training Materials	\$67,988.30
Training & Change Management	Service	Updated Vendor Enablement Plan	\$54,390.64
Training & Change Management	Service	Updated Change Impact Analysis	\$54,390.64
Total			\$1,359,766.00