Question and Answers Summary
SAMS Payments PBITS Mini-Bid (PBITS-23-004-Minibid)

Please note: The following changes have been made to PBITS 23-004:

- **Key events and dates: Mini-Bid Response Due Date from 10/19/23 to 11/3/23.**
- **Section 2.1: Added clarifying language to the persona requirements.**
- **Section 2.2: Updated duties in BA, QA and UX Designer roles. Also renamed Senior UX Designer/Information Architect to Senior UX Designer**
- **Section 2.3: Updated which deliverables are ongoing, and which are one and done.**
- **Section 2.4: Split out deliverables. Eg instead of one deliverable being "develop and test xyz", these are broken out into "develop xyz" and "test xyz".**
- **Attachment 2: Reference to IV&V experience changed to experience relevant to migrating on premises legacy systems to low code, cloud-based platform.**
- **Financial Proposal: Revised to match revised deliverables in mini-bid.**

1. On page 7, there is language that states "To remedy this situation, NYSED seeks to partner with a Contractor to lead an OutSystems implementation migrating the entire payment functionality from the mainframe and legacy Oracle database to a cloud based low code development platform (LCDP)." Please elaborate. Is the expectation that we will replace the legacy mainframe and the SAMS Java Application? Or only the legacy mainframe (specifically the payment functionality)?
Answer: The scope of this project is to migrate the Payment system from the legacy mainframe and Java applications.

2. On page 8, there is language that states "Replicate data and user interfaces are hosted on a Java Enterprise Edition (JEE) application with an Oracle Relational Database Management System (RDBMS) datastore. Data replicates are also created on dBase data stores." How does this data replication occur? What do we do with the replicated data?
Answer: The data replication from the mainframe to the legacy Java application will continue during the migration of the Payments system. All the data required for the Payment implementation will be provided through a REST API or SFTP file transfer.

3. Is the calculation logic documented? What is the complexity level? (Pg 8)
Answer: Please see appendices for sample High/Med/Low calculations.

4. Where is the master data like cost center etc maintained in the current system? (Pg 8)
Answer: It is manually entered. The cost center is included in the voucher memo. In the future, this will be manually entered by the Payment Processor as well.

5. Are there any QR code/barcode on the voucher generated or GAAP certificate? (Pg 8)
Answer: No.

6. Oracle Financials sends back logs to State Aid Team. What is the frequency of this transmission? What is the file format? (Pg 8)

Answer: Today this is not a file per se. Oracle Financial sends a report in the form of an email with the results of all the payments processed, aka IDL messages. Today, the State Aid team needs to scroll through very long emails to find the errors, and then manually reprocess the payments. In the future we would like OF to send the messages directly to the new Payments system and have the IDL message status be reflected in the application. Frequency is on demand, as payments are processed.

7. Page 9 – "Key staff, such as the Project Manager and the Business Analyst, may be required to attend periodic meetings on-site in Albany, NY" . Is it expected to be just those 2 key staff members required for on-site period meetings, or any personnel marked as "key staff' in the Mini bid?
   Answer: Any personnel marked as Key Staff.

8. On page 10, there is language that states "It is assumed that the SI will comply with nonfunctional requirements including accessibility and cloud compliance/security." Please elaborate; what level of accessibility is required?
   Answer: Please see Accessibility deliverable in Section 2.4.

9. Page 10, Section 2.1 #6 burn report. The listed deliverables do not follow a strict sequential order, and several will be undertaken simultaneously. Given this overlap, can we assume that the mandated weekly burn report should capture the hours expended on all active deliverables during that specific week? Is this understanding correct?
   Answer: Yes, and it should be tracked against project completion. The hours burned should match the project burn.

10. On page 11, there is language that states "Once development is underway, NYSED will rely on the Contractor to produce a test-driven development approach to include unit testing, test driven development, peer reviews, and a formal code review process to be completed by NYSED developers." Please elaborate; what level of test-driven development is required?
    Answer: We are expecting two types of tests to be provided by the vendor. The first is unit tests developed using the Behavior-Driven Development (BDD) framework provided by OutSystems. The second are automated functional tests developed using Selenium.

11. Section 2.1 Page 12 Minimum Bidder requirements. Can the Prime contractor bidder, which is on the OGS Award #22772, Lot #2, bid with a subcontractor and use any of the subcontractor's experience to meet the requirements in qualifications outlined in 1, 2, or 3 below?
    The Bidder responding to this Mini-Bid must meet the following minimum bidder qualifications:
    1. A minimum of five (5) years' experience developing financial systems
    2. A minimum of two (2) years' experience developing on the OutSystems platform
    3. A minimum of two (2) projects developing OutSystems Theme templates
    4. Must be a current Contractor listed under OGS Award #22772, Lot # 2
    5. Pricing may not be excess of the "maximum Not-To-Exceed price" established by OGS Award 22772

Answer: Yes. Please note the below regarding additional information needed regarding the subcontractor.

If the Contractor's proposal includes use of a subcontractor to meet the bid requirements and / or complete work on the Mini-Bid's required deliverables, the Contractor must note throughout the technical proposal when Contractor resources and when subcontractor

resources will be used. The Contractor must also note in the technical proposal the name and business address of the subcontractor and the Contractor's previous work with the subcontractor. NYSED reserves the right to require proof of the selected contractor and subcontractor agreement for work on the required deliverables prior to executing a final agreement with the selected contractor.

12. On page 12, under the Description of the *Payment Processor Persona*, there is language that states "Receive Alert / Work Notifications to initiate mandated payments." Are you referring to email notifications? If so, what scenarios require email notifications?
    Answer: All personas should have in-app notifications and email notifications for all relevant tasks assigned to them. There are numerous other questions with the same flavor, the answer is the same.

13. On page 12, there is language that says "NYSED expects all Contractor team members to perform to the levels indicated under Personnel Requirements in section 2.2. If team members do not perform at this level, NYSED requests a replacement to backfill the hours burned against unqualified team members who were not able to perform." Please acknowledge <u>and confirm your acceptance</u> that the outputs and deliverables you have cited will be completed but may not necessarily be completed by the resource you listed. For example, business analysts do not create mockups/wireframes; these will be completed by another resource. Thus, a business analyst should not be deemed "inadequate" if they do not create mockups/wireframes.
    Answer: In this example, wireframes and mockups can be completed by the UX Designer. Updated in BA duties as well.

14. On page 12, there is language that says "NYSED expects all Contractor team members to perform to the levels indicated under Personnel Requirements in section 2.2. If team members do not perform at this level, NYSED requests a replacement to backfill the hours burned against unqualified team members who were not able to perform." In the event that you deem a resource "inadequate", are you suggesting that we need to backfill hours even though this is a fixed fee/milestone based project (and we are not billing on a T&M basis)?
    Answer: Yes. Otherwise, the project will be delayed.

15. On page 13, under the Description of the *View and Download Persona*, there is language that states "Alerts and Notifications." Are you referring to email notifications? If so, what scenarios require email notifications?
    Answer: See #12.

16. On page 13, under the Description of the *GAAP Certificate Approver Persona*, there is language that states "Receive approval notifications (email or Teams notification), alerts and reminders." What scenarios require email notifications?
    Answer: See #12.

17. On page 13, related to *Alerts and Notifications,* do you need email notifications for every status/category related to Payment Listing?
18. **Answer: See #12.**

19. On page 15-16, related to *Payment Processing + Certification,* which are the payment certifications generated as part of the payment flow?

Answer: All payments require a payment certification to be posted to the NYSED website. This is the last step in the workflow, assuming no IDL error messages coming back from the State Financial System.

20. On page 15-16, related to *Payment Processing + Certification,* which are reports that need to be developed/executed outside of the payment processor by a user? For anything that is generated, are we just puling the data "as is," or do calculations need to take place first?
    Answer: The reports – see above, they are payment certifications – are generated using data from the payment calculation. Calculations come first, then report is generated.

21. On page 16, there is language that states "The Contractor must build the Payments system using the core design specified in the SAMS Payment System Architecture Requirements, which is attached as Appendix 1." The outlined architecture contradicts OutSystems best practices. With this in mind, are we unable to recommend best practices or alternative solutions (which may be a better fit) related to architecture?
    Answer: You may. However, the final architecture and design must be explicitly approved in-writing by the NYSED Solution Architect.

22. On page 16, under the *Architecture & Code Quality Requirements*, there is language that states "Custom pro-code technologies, such as C#, Java, Python and JavaScript, may not be used." Are we unable to use C#, Java, Python, Javascript, or CSS anywhere during this project?
    Answer: CSS and JavaScript may be used to develop the NYSED Theme and requisite sub-components. Any other pro-code is prohibited unless it is explicitly authorized by the NYSED Solution Architect.

23. On page 16, under the *Architecture & Code Quality Requirements*, there is language that states "All interactions with the OutSystems managed database must be implemented by using OutSystems managed Aggregates. Direct queries or Advanced Queries may not be used." What about in scenarios where we simply cannot implement using aggregates?
    Answer: Use of custom SQL queries against the OutSystems managed database must be explicitly authorized by the NYSED Solution Architect.

24. On page 17, under *Architecture & Code Quality Requirements*, there is language that states "NYSED reserves the right to make changes to the underlining OutSystems platform or external system components." What does this mean and what specifically are you referencing from the platform side? Are you saying that you will be working with OutSystems to change the platform (product) itself?
    Answer: Our OutSystems platform will be a shared tenant. Other applications may be deployed during this PBITS engagement. Core components may also be upgraded to remove security vulnerabilities. NYSED and the vendor have a shared objective to minimize interruptions to this project. However, if there is a business need to make an improvement to the underlining platform, NYSED must reserve the right to make these changes. The vendor will be notified when any change to the platform will be made. Every effort will be made to prevent interruptions to the Payment deliverables.

25. On page 17, under the *Reliability* requirement, there is language that states "The developed system must accommodate the overall availability requirements of the system. Outages may not exceed a total of four (4) hours within a single calendar year." Please elaborate. What is driving

this requirement? How was 4 hours decided upon as the max outage time/year?
Answer: The 4-hour outage budget was directly requested by the program area. This is a mission critical system that must maintain uptime.

26. Are you making any distinction between scheduled and unscheduled outages for the above reliability requirement?
Answer: No. An outage is an outage.

27. On page 17, under the *Configuration Management* requirement, there is language that states "Contractor staff will have access to the development environment of NYSED's OutSystems managed instance. The Contractor's Tech Lead will have deployment privileges for the QA environment. NYSED staff will perform the deployments to the staging and production environments. All deployments to environments other than development must be performed through the OutSystems Lifetime console." Please confirm that we (the development team) would have access to non-dev environments for testing, as we would need access to these other environments to perform validation.
Answer: Developers will have full access to the DEV and QA environments. Developers will have read-only access to Staging and Production/DR environments. A test account will be provisioned for staging and production to run synthetic tests using Selenium.

28. On page 17, under *Audit System Requirements*, there is language that states "Out-of-the-box (OOTB) audit features should be used on the OutSystems platform." Please elaborate; what are the OOTB audit features that you are referring to?
Answer: This is referring to the logs that are automatically sent to the OutSystems log database. These logs can be accessed in Service Studio from the Monitoring tab.

29. On page 17, under *Audit System Requirements*, there is language that states "Audit logs that result from payment processing changes must be sent to the primary OutSystems database. This is due to the possibility of lost logs that are sent to the OutSystems logging database." Please elaborate; what do you mean by "must be sent to the primary OutSystems database." Are you referring to the same database that we will be using for Development, or the OutSystems platform schema?
Answer: We are referring to this particular issue stated on this knowledge base article:
https://success.outsystems.com/documentation/11/reference/outsystems_apis/asynchronous_logging_api/

> ***The Asynchronous Logging API provides actions to perform the following asynchronously:***
> - ***insert records into the database***
> - ***register request events of your applications***
>
> ***The record or request event gets added to a message queue. Then the OutSystems log service processes it, and adds it to the database.***
> ***The message queue is non-persistent. This means that in case of a system failure, pending records and request events get lost.***

We cannot lose audit logs due to system failures. To mitigate this, we need a separate audit log table in the application data database, opposed to the log data database. Any change to payment information must be associated with persisted log. If an audit log is not persisted, the transaction must be rolled back as if nothing happened.

30. On page 17, under *Issue Response Time*, there is language that states "During the post-production stage, the Contractor must respond within the following response times: Any Production Issue: 1 hour (available 24/7), Any Issues Blocking Development: 24 hours (NYSED Business Hours), Any Other Issue: 2 Business Days. All issues will be registered and tracking using JIRA." What is the level of response expected? Is it acknowledgement of an issue, or a resolution?
Answer: Acknowledgement of an issue and a preliminary estimate of resolution.

31. On page 17, under *Third Party Components*, there is language that states "NYSED will provide all requisite Forge components onto the managed platform. Additional third-party Forge plugins must be reviewed, approved and installed by NYSED staff." Please elaborate; who from the NYSED staff will be reviewing/approving and what is the criteria/basis for approval? What is the timeframe/deadline for conducting reviews/making approvals?
Answer: This review will be performed by the NYSED Solution Architect. A decision will be made by the close of business of the following business day.

32. On page 17, under *Third Party Components*, there is language that states "NYSED will provide all requisite Forge components onto the managed platform. Additional third-party Forge plugins must be reviewed, approved and installed by NYSED staff." Please elaborate; what is the timeline for reviewing/approving? How can we ensure that the development team does not hit any delays due to delays in NYSED review/approval?
Answer: See response to #31.

33. On page 17, under *Third Party Components*, there is language that states "Custom components developed using Integration Studio must not be us." What is the concern around custom components developed using Integration Studio? Does this mean that we cannot use Integration Studio at all?
Answer: The whole purpose of migrating to a low-code development platform is to reduce our reliance of pro-code development resources. Using Integration Studio defeats the purpose of this key architectural objective. Furthermore, NYSED does not have staff capacity or expertise to support development in C#. The vendor may not use Integration Studio without express written authorization of the NYSED Solution Architect.

34. On page 18, you begin listing the "Key Personnel" for this project. Are you implying that we are restricted to only including these job functions/descriptions? Or are you just defining that these specific roles are the "key personnel" of a larger team, to be defined by the bidder.
Answer: These are the specific roles needed for this implementation.

35. All Personnel descriptions in Section 2.2 are marked as Key Personnel, was that intended?
Answer: Yes.

36. On page 18-19, under *Senior Business Analyst*, there is language that states "Using business analysis techniques, understand program needs and translate/document clear and detailed business PAGE 19 OF 34 requirements including creation of process flows, flowcharts, mockups, wireframes, etc." Business Analysts typically do <u>not</u> create wireframes/mockups in the OutSystems methodology, can the Job function/description requirements be adjusted between roles?
Answer: Since there is a UX Designer role, we will remove mockups and wireframes from the BA duties.

37. On page 19, under *Senior Business Analyst*, there is language that states “Operate in a hybrid (Agile/Waterfall) environment and actively manage requirements, change requests and user accessibility testing needs.” Please elaborate; what is an agile/waterfall environment?
Answer: Hybrid agile, meaning a combination of agile and non-agile techniques. Updated in document as well.

38. On page 19, under *Senior Business Analyst*, there is language that states “Operate in a hybrid (Agile/Waterfall) environment and actively manage requirements, change requests and user accessibility testing needs.” Please elaborate; given that this is a fixed fee project, the scope will be fixed, and thus any change requests will require mutual agreement and/or execution of a change order.
Answer: Correct. Additional scope will require a change order.

39. On page 19, under *Senior Business Analyst*, there is language that states “Operate in a hybrid (Agile/Waterfall) environment and actively manage requirements, change requests and user accessibility testing needs.” Please elaborate; what are the user accessibility testing needs? Is your expectation that the Business Analyst is going to be the person documenting the accessibility requirements?
Answer: Please see above question regarding accessibility. It is not uncommon for BAs to test along with QA.

40. On page 19, under *Senior Business Analyst*, there is language that states “Contribute to design and architecture discussions, daily stand-ups, sprint planning sessions and other meetings.” Please confirm that your expectation is that the BA participates in these discussions/stand-ups/sessions but does not necessarily contribute.
Answer: Correct.

41. On page 19, under *Senior Business Analyst*, there is language that states “Describe in comprehensive written documentation what the system / process / service must do in order to satisfy the determined business needs.” Please elaborate on what you mean by “written documentation.” Are you just referring to user stories, or is there documentation that you require above/beyond user stories? If so, please provide detail on expectations for written documentation.
Answer: From the PBITS document: “Create/update user stories for all business, functional and non-functional requirements (F/NFR), including workflows, business rules, use cases, wireframes, activity & sequence diagrams”.

42. On page 19, under *Senior Business Analyst*, there is language that states “Meet project goals and objectives including CSSQ adherence, hierarchy-based communication, date commitments and functionality.” Please explain what CSSQ is, and your expectations surrounding adherence to CSSQ.
Answer: Cost, schedule, scope, quality. The expectation is that there will be quality work completed on time. We will update the language in the job description.

43. On page 19, under *Senior Business Analyst*, there is language that states “Support QA/Testing by developing timely test plans, writing and executing test cases, done/acceptance criteria, end-user testing and deliverables validation.” Please acknowledge <u>and confirm your acceptance</u> that the

Business Analyst will not the be person that will be developing timely test plans, or writing/executing test cases. This is a conflict of interest that should be deliberately avoided. Instead, this task should be completed by a QA resource.
Answer: The BA can assist with this as needed. It is common for a BA to also support front end testing.

44. On page 19, under *Senior Business Analyst*, there is language that states "Support training by developing training deliverables (quick reference guides, videos and presentations)." Please acknowledge and confirm your acceptance that the Business Analyst will not be the person that will be developing training; we would bring in a Training Expert to do this, instead.
Answer: It is not uncommon for the BA to train end users, especially if there are only a handful of end users and screens within the application.

45. On page 19, under *Senior Business Analyst*, there is language that states "Become a subject matter expert (SME) for the proposed system and involved business processes/rules." Our assumption is that NYSED SMEs would be providing the business direction on all calculation logic. Please confirm this assumption is accurate.
Answer: That is correct. However, if the dev team is working during off-NYSED hours, the SI BA should be able to answer these questions.

46. On page 20, under *Senior Developer/Tech Lead*, there is language that states "Demonstrates a deep technical knowledge of the OutSystems Managed Platform, AWS services, REST and XML services." Are there services that would require XML/SOAP? Or are the REST Services that you have highlighted using XML instead of JSON?
Answer: We retract the requirement for knowledge of SOAP and XML. This project does not require integration with a SOAP service.

47. On page 20, under *Senior Developer/Tech Lead*, there is language that states "Develops unit tests using the BDD Framework Forge Plugin." Please acknowledge and confirm your acceptance that the Tech Lead will not be the person that will be developing unit tests.
Answer: They do not have to develop unit tests, but they do need to understand the framework and review the work performed by the junior staff.

48. On page 20, under Senior Developer/Tech Lead, there is language that states "Develops HTML5, CSS, JavaScript, SQL and C# code as needed." However, previously in the document (page 16), it was stated that "Custom pro-code technologies, such as C#, Java, Python and JavaScript, may not be used." Please reconcile these comments. Are we allowed to use C#, Java, Python, JavaScript and/or CSS?
Answer: HTML5, JavaScript and CSS may be required to develop the Themes. We retract the requirement for experience with SQL and C#. However, there should be an expectation that a qualified tech lead has knowledge and previous experience with SQL.

49. On page 20, under Senior Developer/Tech Lead, there is language that states "Enters and tracks issues and status updates to JIRA and the OutSystems support portal." Please acknowledge and confirm your acceptance that the Senior Developer/Tech Lead will be *tracking* issues in JIRA but will not be responsible for *entering* them; that responsibility will fall on the BA/QA resource(s).

Answer: If a senior developer/tech lead identifies an issue, that person should enter the issue into JIRA. It will not be a primary responsibility, but it is a reasonable expectation to document issues when found.

50. On page 20, under Senior Developer/Tech Lead, there is language that states "Develops security logic using the OutSystems Crypto API." What security logic are you referring to? Where (or to what) does the security logic apply? Please be specific.
Answer: Credentials will be required to integrate with the REST API and the SFTP server. These must be encrypted using the Outsystems Crypto API.

51. On page 20, under Senior Developer/Tech Lead, there is language that states "Determines time estimates for feature development and other tasks." Given this is a fixed price for fixed scope project, are you referring only to sizing additional features that will be addressed via a change order?
Answer: Yes.

52. On page 20, under Mid-Level Developer, there is language that states "Troubleshoots issues with custom OutSystems applications." Please acknowledge that this is limited to the scope of this project and the single application that will be implemented (i.e. does not apply to any other OutSystems applications that you have already implemented or will implement in the future).
Answer: Yes.

53. On page 20, under Mid-Level Developer, there is language that states "Authors technical documentation." Please elaborate on what you are expecting for technical documentation.
Answer: Primarily the runbook described in the deliverables. Code comments should be provided when appropriate.

54. On page 20, under Senior QA Tester, there is language that states "Lead QA team of two on all QA related activities." Please acknowledge and confirm your acceptance that the vendor will ultimately have the right to determine how many QA resources will be required (i.e. we may need more than a team of two).
Answer: We are open to alternative staffing plans that will produce the best value for NYSED.

55. On page 20, under Senior QA Tester, there is language that states "Review these testing artifacts with respective members for feedback and secure timely approvals." Please elaborate; given approval will be given by NYSED, what resources will be made available for approvals?
Answer: This is a critical project. The NYSED team will be available for feedback and approval.

56. On page 20, under Senior QA Tester, there is language that states "Review these testing artifacts with respective members for feedback and secure timely approvals." Please elaborate; given there will be a dependency on our team regarding approvals, what timeline will be provided for approvals?
Answer: See response to #55.

57. On page 21, under Senior QA Tester, there is language that states "Review these testing artifacts with respective members for feedback and secure timely approvals." Given we will be creating a test script for every user story, do you have the necessary resources to avoid this becoming a bottleneck?

Answer: See response to #55.

58. On page 21, under Senior QA Tester, there is language that states "Validate the data mapping of the fields between the legacy and the proposed new system." Please acknowledge and confirm your acceptance that the QA would be doing the testing to ensure it's mapped correctly, but ultimately the Tech Lead would need to work with NYSED SMEs (who will provide the correct mapping on which the QA will test).
Answer: Acknowledged. We're mitigating this risk by providing all legacy data through a NYSED supported API.

59. On page 21, under Senior QA Tester, there is language that states "Create automated test scripts for the smoke, integration, and regression test suites utilizing different testing tools such as Selenium, Salesforce, Jira/Confluence etc. for the mission-critical and frequently used functionalities in the Payments system." Please acknowledge and confirm your acceptance that the we will employ a QA resource who has comfort with one of these tools but not necessarily all of these tools.
Answer: Agreed.

60. On page 21, under Senior QA Tester, there is language that states "Create automated test scripts for the smoke, integration, and regression test suites utilizing different testing tools such as Selenium, Salesforce, Jira/Confluence etc. for the mission-critical and frequently used functionalities in the Payments system." Please clarify what should be covered with automated testing; is this limited to calculations, or the entire application?
Answer: Salesforce was added in error. All core functions of the Payment solution should be covered by an automated functional test. This language will be corrected.

61. On page 21, under Senior QA Tester, there is language that states "Support User Acceptance Testing (UAT)." Please elaborate on what is expected as part of this line item.
Answer: In case there are any business questions about how a feature should be tested, the Senior QA Tester would be able to provide guidance.

62. On page 24, under Senior Information Architect/UX Designer, there is language that states "Evaluate the performance of information architectures through analysis and research." Are you referring to usability testing?
Answer: Figure out the best way to build a site map based upon analysis and research. The language will be corrected.

63. On page 24, under Senior Information Architect/UX Designer, there is language that states "Improve information architectures for products and services in both digital and print mediums." What exactly do you have in mind with this? What specific deliverables are you looking for in the digital medium? What specific deliverables are you looking for in the print medium?
Duplicate: Should be just digital. References to printing was added in error. Fixed in document.

64. On page 24, under Senior Information Architect/UX Designer, there is language that states "Improve information architectures for products and services in both digital and print mediums." What exactly do you have in mind with this? What specific deliverables are you looking for in the digital medium? What specific deliverables are you looking for in the print medium?

Answer: See response to #63.

65. Page 24 -Section 2.3 / 2.4 The NYSED's plan indicates that the software implementation will progress through a standard development lifecycle comprising phases like requirements, technical design, development, testing, UAT, production deployment, and post-production monitoring. Each phase will have specific deliverables. However, it seems from the SPD_ deliverable bulleted points, that many of these deliverables will only be deemed complete in the latter stages of the project, even using an agile approach, resulting in a substantial concentration of vendor payments only towards the project's conclusion.
    Would NYSED be able to:
    a. Provide a mapping of each SPD deliverable to its corresponding phase in the software lifecycle where sign-off is anticipated?
    b. Consider revising certain deliverables to allow for earlier completion within the project's timeline?
    c. Contemplate segmenting the main development task of SPD_1 into multiple milestones based on a quantifiable measure, such as the percentage of pages developed (e.g., 25%, 50%, 75%, 100%), or functional areas?

Answer: The deliverables will be broken out at a more granular level to address this issue, and indicated which are ongoing and which are "one and done". For those which are ongoing, % complete would be based upon the project plan.

66. On pages 25-27, there is language (which appears in multiple places) stating "Prepare and deliver a final report indicating that work has been completed for this deliverable." Are you simply looking for an export of JIRA showing that the user stories have been accepted? Or is this a status report? Or what specific details are you looking for in the report.
    Answer: The expectation is that the vendor will keep track of all of the deliverables and be able to report on % complete during weekly statuses, and when the deliverable is fully complete, the vendor should be able to provide this information as well.

67. On pages 25, there is language (which appears in multiple places) stating "Provide documentation supporting the fact that all non-functional requirements are adhered to." Are you simply looking for an export of JIRA showing that the user stories have been accepted? Or is this a status report? Or what specific details are you looking for in the report.
    Answer: See response to #66.

68. On page 25, there is language stating "Develop and execute non-functional requirement test plan that covers all Non-Functional Requirements in Section 2.1." Does this mean that we have to list every input?
    Answer: Yes

69. On page 25, there is language stating "Create clickable interactive wireframes/prototype for each page/feature within the system." Is this based on each page? Or each feature?
    Answer: The functionality of a feature within the system, eg "ability to enter payment information for each payment", will require a user interacting with the application, and therefore moving through screens. So both.

70. On page 25, there is language stating "Create Selenium automated test scripts, and test to be sure these work as expected." Earlier in the document you state "utilizing different testing tools

such as Selenium, Salesforce, Jira/Confluence." Please confirm that we will have flexibility around choosing the best automated flexibility tool.
Answer: Confirmed.

71. On page 26, there is language stating "Create UAT test strategy including plan for functional and regression testing. Provide UAT training and walkthroughs for program staff." Please confirm that we are responsible for Unit and QA testing, and that you will perform UAT testing.
Answer: The NYSED business users will perform UAT. The vendor will come up with the UAT training strategy and plan.

72. On page 26, there is language stating "Create training artifacts (QRGs, videos, documents)." Please confirm if the training can be limited to documentation and recorded demos, or if you are looking for customized training videos.
Answer: If the recorded demos cover all aspects of how an end user from the State Aid team will interact with the Payments system, these will suffice.

73. On page 26, there is language stating "Train key NYSED program staff on BDD Framework and developed modules." What are your expectations here? Our normal process is to sit with your development team for up to 8 hours to go through the project and have this recorded and available for future developers. Is that along the lines of what you are looking for, or is it more in depth?
Answer: There are one or two people within the program area (non-IT) that are interested in directly testing the system after the final implementation. This will be an in-depth training session on the BDD framework and what was developed for the system.

<u>Attachment 2 of submission forms</u>

74. On Attachment 2- Contractor References is asks to "Submit a total of <u>THREE (3)</u> references for the Bidder relevant to **IV&V experience**". Is that correct?
Answer: This was an error. Please provide reference relevant to migrating on premises legacy systems to low code, cloud-based platform.

<u>Appendix 1- SAMS Payment System Architecture Requirements</u>

75. In the Process Flow table on page 3, the description for *Prepare Payments Prior to Payment Processing* says "Payment Process tasks are created based on the Payment Schedule and other imported data." Please elaborate on what the tasks are that you are referring to.
Answer: The tasks of calculating and authorizing payments.

76. In the Process Flow table on page 3, Java is included as the Target System for *Import SAMS Output Reports & Other External Data*. Please elaborate- is an integration with Java required?
Answer: The REST API used to obtain payment parameters will be written in Java. This will be developed by NYSED staff. The integration will be made through a REST API.

77. In the Process Flow table on page 4, Adobe Sign is included as the Target System for *Generate GAAP Listing* and *Approve GAAP Listing*. Please confirm that an integration with Adobe Sign is required.
Answer: Correct

78. In the Process Flow table on page 4, Talend is included as the Target System for *Generate and Submit EFRT File*. Please confirm that an integration with Talend is required, and what the method of integration is (e.g. REST API).
Answer: The integration with the EFRT system will be managed by NYSED prior to the start of the project. The vendor will use a module provided by NYSED.

    In the Process Flow table on page 5, Telend is included as the Target System for *Generate and Submit Payment File*. Please confirm that this is a typo and that it should read "Talend." If not, please confirm that an integration with Telend is required, and what the method of integration is (e.g. REST API).
    Answer: The integration with the Oracle Financials system will be managed by NYSED prior to the start of the project. The vendor will use a module provided by NYSED. This is a typo.

79. In the Process Flow table on page 5, GoAnywhere is included as the Target System for *Generate and Submit Payment File* and *Post Payment Certifications*. Please confirm that an integration with GoAnywhere is required, and what the method of integration is (e.g. REST API).
Answer: This integration is required. GoAnywhere is a SFTP server.

80. In the Process Flow table on page 5, please confirm that *Review Errors and Resolve Issues* is referring to a manual entry of a JIRA ticket for development to address (per standard agile SDLC process).
Answer: No. An issue will be created in JIRA using the JIRA provided API. Issues will be generated based on the information provided in the IDL file.

81. In the Process Flow table on page 5, Jira is included as the Target System for *Review Errors and Resolve Issues*. Please confirm that an integration with Jira is required.
Answer: No. An issue will be created in JIRA using the JIRA provided API. Issues will be generated based on the information provided in the IDL file.

82. In the table on page 7, the description for *Other External Reports* reads "Various external parties provide data files that provide Payment Parameters." Please elaborate; we need to know exactly what parties/systems you are referring to and the method(s) of integration (e.g. REST API).
Answer: NYSED will handle these integrations for the vendor. An OutSystems module will be provided to the vendor prior to the engagement.

83. In the table on page 7, the description for *Output Reports* reads "An aggregate report of Form Submission data with additional calculated fields." Please elaborate; is the Output Report an export of the fields/values used in the calculation(s) as part of the Payment Processor Testing?
Answer: All the values for the Output Reports will be provided by the Payment Parameter API. They are input values to the payment calculations.

84. In the table on page 7, the description for *Payment Request* reads "A document that is created by a Local School District. It requests NYSD to authorize a one-time payment. The document will list the parameters that are required to authorize the payment." Please elaborate; is the Payment Request Entity document used by the Payment Processor to enter a manual payment request in the system?
Answer: Yes.

85. In the Application Context Architecture diagram on page 11, you refer to "Other NYS Agencies." Please elaborate. How many other agencies? What are the other agencies (specifically)? What will their involvement/requirements be? Are any integrations involved?
    Answer: NYSED will handle these integrations for the vendor. An OutSystems module will be provided to the vendor prior to the engagement.

86. Regarding the Application Context Architecture diagram on page 11, please elaborate on what is required to output to the modeling system. What is the payment system outputted, and what is the expected way? Are there any calculations between the input and output? Is this data that we already have, or is it something separate?
    Answer: We will be replicating the OutSystems application database. NYSED will develop an ETL process to integrate with Payments using this replicate.

87. On Page 12 of the SAMS Payments System Architecture Requirements, two applications are listed with their respective descriptions:
    Adobe Sign owner Adobe (Vendor): Used to export GAAP Listings for e-signatures, storing the GAAP Listing in the Adobe cloud, with a link to the signed document saved in...
    S3 owned AWS (Vendor): Hosts Payment Request documents and other static files, chosen for its compatibility with the OutSystems managed platform.
    Given this context, does the term "Vendor" imply that Adobe and AWS are the existing or intended service providers that NYSED will utilize, and that the OutSystems solution will be integrated with these platforms? Or does NYSED expect the SAMS implementation partner to procure and/or manage these services?
    Answer: NYSED will provide the platforms.

88. In the Application Descriptions table on page 12, SpringBoot Proxy Service is listed as a Provider for *SAMS Service*. Please elaborate; what is SpringBoot Proxy Service? What are the expectations for that?
    Answer: NYSED will provide this API. The vendor will have to call it from OutSystems. We will provide detailed documentation prior to the implementation.

89. In the Service Model diagram on page 16, you state "Note: This model does not contain all the service interfaces required by the Payments System." Please elaborate on this statement. Are you planning on having any other types of interfaces? What is/are the method(s) of integration (e.g. REST API)? Would we have another party (aside from NYSED and ourselves, the bidder) managing 3rd party interfaces?
    Answer: We're referring to JIRA and Adobe. All the integrations needed are listed in the System Interactions section.

90. On page 18, in the Conceptual Deployment Architecture Diagram, it is depicted that the GAAP Approver is going directly to Adobe Sign (rather than interacting with Adobe Sign via an integration in the OutSystems application). Is this correct? If so, why are they going directly to Adobe Sign?
    Answer: The GAAP approver is a high-level executive. We intend to have Adobe handle the email notifications to the approver. Making the GAAP approver log into the system to sign a document doesn't add value to the process.

91. On page 18, there is language that states "The Lifetime, DEV, QA, STAGING and PROD environments of OutSystems will be hosted in North Virginia. The Disaster Recovery (DR) environment will be

hosted in Oregon." Is there an expectation that the Staging environment will serve as a clone of PROD (in terms of both code/modules <u>and</u> application data)?
Answer: Yes.

92. In the table on page 19, Adobe Sign is listed as a Component. Conceptually, how will OutSystems know that the document has been Adobe Signed?
Answer: Adobe Sign supports callback APIs. An OutSystems Timer will also be used to periodically check the status.

93. In the table on page 20, the purpose for *SQL Server* is listed as "Staging Database." Please elaborate on what the SQL Server Staging Database/ETL Tools will be used for.
Answer: This is the replicate database of the OutSystems application database. This will be used for all ETL or ad-hoc queries. Direct communication to the OutSystems application database is prohibited.

94. On page 22, there is language that states "The system will also require multiple (approximately 30) Payment eSpaces. For illustrative purposes, one fictitious Payment eSpace is included in Figure 7 (ABC Payment). Each Payment eSpace will include a process flow, entities, user interface, and business rules associated with the payment." Please elaborate; do each of these 30 Payment eSpaces have their own unique user interfaces, business rules, etc?
Answer: Yes.

95. On page 22, there is language that states "These [Payment eSpaces] modules will be highly volatile due to churn associated with the business rules. Due to the churn of these modules, no modules should reference any Payment module." Who will be expected to make the code changes given the volatility? Are you looking for an easy user interface to allow a business user to do this? Or is this going to be part of a training/support model?
Answer: This is an architectural constraint to reduce the number of reference refreshes and deployments. If another module is dependent on a payment module, the client module will need to be redeployed constantly.

96. Are we expected to connect directly with Oracle database (direct database connection)?
Answer: No. All connections to Oracle will be through an API provided by NYSED.

<u>**General**</u>

97. Overall, Can additional clarifications for expectations around UAT Testing and Other Testing be made?
Answer: UAT testing will be mostly front end testing, with the payment processing workflow tested end to end, for each payment type. Other Testing will be based upon acceptance criteria in each user story. Other Testing – basically anything done by the QA – should include automated testing as well which can be used for testing regressions.

98. Overall, Can additional clarifications for expectations around Training areas be made?
    a. Business Users
    b. Developers

Answer: NYSED will provide training for developers, SI will provide training for Business Users.

99. Resources: Who will / can support each team as the SME, PO, and BA? Is there the NYSED capacity

to support 2 or 3 development teams?
Answer: There is no product owner role on the business team. First line of contact for the SI will be the NYSED BA, and we will loop in the business as needed.

100. Please confirm that the scope of this project includes building the calculations around what a payment <u>should</u> be, and that we are not actually dispersing payments through the application.
Answer: The payments are calculated by this system. The disbursements are made by SFS. If the business logic of this application is wrong, there will be catastrophic financial repercussions.

101. What happens when payments are approved? Does OutSystems handle the payment, or is there another external system in place that handles this? Or is it a manual process?
Answer: Please read section 1.3: Business Processes Impacted

102. Is there an external database integration? Are we connecting directly with the Oracle database?
Answer: No. All connections to the Oracle databases will be through a REST API.

103. Are we migrating any data from the old system to the new system? If so, please quantify the amount of data (# of GBs, # of entities/tables, # of foreign keys, # of lines of source code,etc.).What is the online interface? What database(s) are in use? What language(s) are in use?
Answer: All legacy data will be accessed just-in-time through a REST API. The entire legacy database is 90 GB.

104. Given the # of questions and the importance of having answers in order to come up with estimates, can you extend the deadline for providing RFP response?
Answer: The mini-bid response date is being extended until November 3, 2023.

105. Can the Prime contractor bidder, which is on the OGS Award #22772, Lot #2, bid with a subcontractor and use any of the subcontractor's experience to meet the requirements in qualifications outlined in 1, 2, or 3 below?

The Bidder responding to this Mini-Bid must meet the following minimum bidder qualifications:
1. A minimum of five (5) years' experience developing financial systems
2. A minimum of two (2) years' experience developing on the OutSystems platform
3. A minimum of two (2) projects developing OutSystems Theme templates
4. Must be a current Contractor listed under OGS Award #22772, Lot # 2
5. Pricing may not be excess of the "maximum Not-To-Exceed price" established by OGS Award 22772

Answer: See #11.

106. Can we utilize development resources located overseas that can access only the development and QA environment? We have access to development talent overseas who have worked with Outsystems which will be critical to the success of this project. The PM, BA, and some development and QA resources will be located within the US.
Answer: All staff must be in the continental US. From the PBITS Mini-Bid:

All work performed for this engagement must be performed within CONUS. The vendor may not have direct access to production systems or data. All system deployments to the staging or production envirorments must be performed by NYSED staff. Other security controls will be specified within the requirements sections of this RFQ.

107. What is the scope (size) of data conversion? Do we need to handle in-flight data?
Answer: All legacy data will be accessed just-in-time through a REST API. The entire legacy database is 90 GB.

108. Will the existing system be decommissioned at go-live, or will we still have access through an integration layer?
Answer: The legacy system will coexist with the new system until the program area is ready to shut down the legacy system. This will occur after this engagement.

109. Do schools need access to this system? If so, will this be through a portal?
Answer: For initial implementation, only NYSED employees will be accessing the system.

110. Can we use Azure DevOps for requirements management, work assignments, testing, and release management?
Answer: No. Confluence will be used for requirements management. JIRA will be used for work assignments. We will not integrate Lifetime with an external CI/CD platform. We may decide to use Jenkins to manage automated schedule for Selenium scripts.

111. Can you extend the due date by 4 weeks to allow adequate time to partner and prepare the response?
Answer: The mini-bid response date is being extended until November 3, 2023.

112. Payment voucher Word documents - this is sent by State Aid Team. How is it sent to SAMS app?
Answer: Today, the State Aid team sends a word doc to the Legacy application team. The voucher has the mainframe rules for how the payment should be calculated in the mainframe. The mainframe developer executes the rules in the word document in the mainframe. No data is sent anywhere – it is a word document sent as an attachment to a mainframe developer. In the future, the new system will generate a voucher memo, and from there a GAAP certificate will be generated. Also see Business Processes Impacted 1.3.

113. Is there a mobile app requirement for any features?
Answer: No

114. What is the type of OutSystems license owned by client?
Answer: Procurement for OutSystems is still in progress.

115. What kind of authentication mechanism is expected from the new system?
Answer: ADFS will be used for authentication. We will use SAML 2.0 or OIDC. This configuration will be performed by NYSED prior to the start of the engagement.

M/WBE

116. On Page 1 of the Mini bid, the procurement guidelines state that the target of 30% M/WBE participation can be achieved through any mix of MBE and WBE participation. Can you please confirm if it's permissible to allocate the entire 30% to either MBE or WBE, with no participation from the other?
    Answer: This is correct.

117. On Page 2/3 of the Mini bid encourages the use of SDVOB for 6% of the contract, can you confirm that there are no waiver requirements if the Vendor does not or cannot utilize SDVOB for the project.
    Answer: This is correct.