ADDENDUM

IMPORTANT DOCUMENT – INVITATION TO NEOTIATE ADDENDUM

ITN NUMBER: 2021-04GCSA   OPENING DATE & TIME: September 29, 2021 at 3PM EST

ITN TITLE: Consulting Services for the University of Central Florida implementation of a Microsoft Azure enterprise data lake/warehouse and business intelligence cloud solution

ADDENDUM NUMBER: 2   ADDENDUM DATE: September 13, 2021

The purpose of this addendum is to answer questions asked during the open q/a period and to change the opening date. Bids are due September 29, 2021 by 3PM EST.

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_____   _____
PROPOSERS SIGNATURE   PRINT OR TYPE PROPOSER'S NAME

_____   _____
COMPANY NAME   EMAIL ADDRESS

1. Vendor Question: What security platform is being used currently at UCF that would be involved in this project?

    UCF Answer: UCF uses Active Directory and is beginning implementation of SailPoint IAM.

2. Vendor Question: Is there documentation that can be shared on the policies and guidelines that would be expected to be followed in the project?

    UCF Answer: UCF Policies can be found at https://policies.ucf.edu/; UCF IT policies can be found at: https://policies.ucf.edu/#ucfTechandComm. Additional requirements will be included as part of project planning.

3. Vendor Question: What are UCF's current governance polices related to the project?

    UCF Answer: Please see answer to question #2.

4. Vendor Question: What other tools outside of Tableau, Excel and PowerBI could potentially be in scope for integration within the project?

    UCF Answer: Tools such as SAS and SAS Visual Analytics are among the additional tools that could be integrated.

5. Vendor Question: What format is the historical data in? Structured data in databases, unstructured, semistructured, files?

    UCF Answer: The historical data is contained in Oracle databases.

6. Vendor Question: In Section 4.1 1 (c), does the University have preference for specific reporting tools?

    UCF Answer: No, this is dependent on use case, best fit, and best practices for the report identified.

7. Vendor Question: In Section 4.1 what are the sizes of PeopleSoft databases? How much data is expected to be in the data lake?

    UCF Answer: Total size could range from 3TB – 6TB of data ingested into the Lake. PeopleSoft is on-prem on Oracle databases. Additional data to be ingested to be determined based on priority use cases in Phase 2.

8.   Vendor Question: In Section 4.1 are there existing APIs to extract data from UCF applications OR will this have to be built?

>   *UCF Answer: API capabilities will be assessed and determined when the use case of the data source is identified.*

9.   Vendor Question: Please provide a list of applications that are expected to consume data from this data warehouse.

>   *UCF Answer: Applications, other than reporting tools, needing to consume data will be identified based on selected use cases for data ingestion.*

10.   Vendor Question: Would the data be loaded in the warehouse as a stream or in a batch process or both?

>   *UCF Answer: Determined by data and use case.*

11.   Vendor Question: Are there any third-party dependencies like external service providers that this solution must work with?

>   *UCF Answer: The new Data Governance tool which UCF is currently in the process of procuring. There may be others as project develops.*

12.   Vendor Question: Do you have any other data sources apart from Workday and PeopleSoft? If yes, Please specify the data sources?

>   *UCF Answer: There are several data sources that are planned to become part of the environment, but for Phase 1, the focus will be on historical PeopleSoft data; Phase 2 will incorporate additional data sources based on prioritization of use cases.*

13.   Vendor Question: What is the data size of the existing data sources? Where are the existing data source systems hosted? (Cloud/on-prem/hybrid)

>   *UCF Answer: Please see answer to question #7*

14.   Vendor Question: For each source system, what is the format of the backend database? (SQL, MS Access, Oracle, etc.) What would be the average growth of data per year?

>   *UCF Answer: PeopleSoft for Phase 1 is on Oracle. Other data sources span different backends depending on which are identified and prioritized for conversion.*

15. Vendor Question: What is the estimated number of End-users? Also, please specify the user roles.

   UCF Answer: Yet to be determined.

16. Vendor Question: Do you have templates for the list of reports that you would like to produce from the data warehouse/Data Lake?

   UCF Answer: Yes, for some, others will be built as needed.

17. Vendor Question: What is the minimum data refresh rate required (daily/weekly/monthly/hourly/real-time)?

   UCF Answer: To be determined, based on use case. We are not anticipating needing real-time refreshes.

18. Vendor Question: Is disaster recovery required for the data warehouse? If yes, what is the backup retention policy?

   UCF Answer: Yes, there will need to be a disaster recovery plan put in place. The Retention policy for the environment is to be determined.

19. Vendor Question: Can we assume that UCF will provide us the Development, Testing, and Production environment?

   UCF Answer: The selected vendor may have to provision those environments within our Azure space.

20. Vendor Question: Is it mandatory that the vendor should provide references in Higher Education or the public/government entities' reference is enough?

   UCF Answer: UCF is a state public university, so references in the education sector are preferred; however, relevant public entity/state government experience could be considered.

21. Vendor Question: What is the implementation timeline for Phase 2 & 3?

   UCF Answer: Dependent on Phase 1 completion but to start sequentially immediately thereafter; planning may begin prior to completion of Phase 1.

22. Vendor Question: Can you please specify the budget cap that we need to consider?

UCF Answer: Not at this time.

23.   Vendor Question: Can we utilize a hybrid resource model (on-site, remote, offshore) to accomplish this project?

UCF Answer: Please see answer to question below.

24.   Vendor Question: Can the work be performed remotely, or do you expect the vendor to perform the tasks on-site?

UCF Answer: At this time, we are planning for much of the work to be completed virtually. However, as the project progresses, there may be a need for limited on-site work, which will be identified and planned out.

 Section 2.42 & 3.2D.3 Travel Expenses Section 2.42 indicates….

The Respondent shall not under this ITN or any resulting contract charge UCF for any travel expenses, meals, and lodging without UCF's prior written approval. Upon obtaining UCF's prior written approval, the Respondent may be authorized to incur travel expenses payable by UCF to the extent and means provided by Section 112.061, Florida Statutes and applicable UCF policies. Any expenses in excess of the prescribed amounts shall be borne by the Respondent.

25.   Vendor Question: Travel expenses are not reimbursable, and this is not negotiable. Is our understanding correct?

UCF Answer: UCF's written approval must be received prior to incurring travel expenses in accordance with Section 112.061, Florida Statutes and applicable UCF policies.

26.   Vendor Question: Section 2.48 Work for Hire: Would UCF consider granting the vendor limited future use of the designs, prints, paintings, artwork, sketches, etchings, drawings, writings, photographs, or any other work or material or property produced, IP as opposed to a full work for hire clause?

UCF Answer: No

27.   Vendor Question: Section 4.2 Consultant Responsibilities & Deliverables: Is the expectation that all work will be complete in and data retained in the UCF licensed and controlled Azure Resources?

UCF Answer: Yes.

28.   Vendor Question: Section 4.1 Implementation Phases & Timeline: Are there specific historical PeopleSoft modules that are in/out scope for Phase 1.
      a.   If there are PeopleSoft modules out of scope for Phase 1, do these modules become part of scope for Phase 2 or 3?

UCF Answer: Modules in and out of scope will be determined during project planning

29.   Vendor Question: Section 4.1 Implementation Phases & Timeline: Will Phase 1 Workday Datasets be produced using the Reporting as a Service (RaaS) interface in Workday?
      a.   If so, are the creation of custom reports in Workday part of the scope of services to be delivered?
      b.   How many Workday Datasets are expected in Phase 1, 2 or 3?

UCF Answer: Workday datasets and methodology to be used yet to be determined; actual ingestion of Workday data will be part of Phase 2. Creation of custom reports in Workday is not in scope for this project.

30.   Vendor Question: Section 4.1 Implementation Phases & Timeline: Are there any high-level Phase 2 large scale data use cases already identified?
      a.   How many large-scale data use cases are anticipated?
      b.   Are the any priorities for data use defined yet?

UCF Answer: Some have been identified and prioritized; the Phase 2 use cases will be finalized during planning for Phase 2.

31.   Vendor Question: Section 4.1 Implementation Phases & Timeline: Are there any reporting use cases identified for Phase 1 data?
      a.   How many reporting use cases are anticipated?
      b.   Have anticipated user groups, lines of business, number of users, or report counts been established?

UCF Answer: Yet to be determined for both a and b.

32.   Vendor Question: Section 4.1 Implementation Phases & Timeline: Does the Phase 3 data warehouse have any identified or prioritized data domains?
      a.   Is there any information on use or requirements to establish scope of work?

UCF Answer: Prioritized use cases and requirements Phase 3 will be determined at the time of its planning and kickoff.

33. Vendor Question: Will UCF clarify if there are any page restrictions for submission of the ITN response?

     UCF Answer: None.

34. Vendor Question: Section 2.15 State Licensing Requirements: Will UCF confirm that proof of state licensing will not be required until notification of award?

     UCF Answer: The awarded supplier shall have all appropriate licenses to conduct business in the State of Florida and Orange County at or prior to award of a contract.

35. Vendor Question: Section 2.57 Employee Background Checks: Will UCF confirm that the required background checks are not required until after notification of award?

     UCF Answer: Correct.

36. Vendor Question: Section 3.2.A.2: "Accounts provided shall be for work performed by the member of the project team being proposed in Section B below." Will UCF consider removing the language here that requires the references to come from projects that the proposed staff were directly involved in, or clarify the intention?

     UCF Answer: The intention is to see what kind of experience the proposed team has in relation to the requirements.

37. Vendor Question: Section 3.2.A.2: "Provide a list of current or very recent similar-type client references, if any, which are in the United States and in higher education." The ITN requests references for work performed within the U.S. and the higher education industry; will UCF additionally consider references from non-higher education clients?

     UCF Answer: Please see the answer to question #20

38. Vendor Question: Section 3.2.A.3: "Provide project descriptions for up to five (5) recent projects similar in scope and size to the proposed project in education (or similar public/government entity)…" The ITN requests recent project descriptions for higher education and/or similar public/government entities; will UCF additionally consider recent projects from commercial (non-public/government) clients?

UCF Answer: Please see the answer to question #20

39. Vendor Question: Section 3.2.B.1: "List the individuals who will provide services; include job titles and experience of each individual who will be assigned to the UCF project; include resume(s)." Will UCF clarify if the expectation is for the offeror to provide names and resumes for ALL proposed team members, or only those the offeror deems as "key personnel"?

UCF Answer: Our expectation is to review names and resumes for all proposed team members.

40. Vendor Question: Section 3.2.D: Overall Pricing -and-Section 4.1: Implementation Phases and Timeline. It is somewhat unclear if the expectation is for fixed price for Phase 1 followed by additional negotiation for Phases 2 and 3 based on discovery during Phase 1. Will UCF clarify the Phase 1, 2, and 3 timeline and expectations for the pricing schedule outlined in Sections 3.2.D and Appendix A?

UCF Answer: The clarification is fixed price for Phase 1, 2, and 3 for the proposal submission.

41. Vendor Question: Section 4.1: Phase 1, "a. Implement and stand-up a secured Data Lake/Warehouse environment within Microsoft Azure that is fully integrated with UCF data governance, identity management and security requirements by the end of January 2022."
    a. Will UCF clarify if the January 2022 date is a mandatory requirement, and what business objectives or constraints are driving this date?

      UCF Answer: We are still targeting January 2022, but are open to slight adjustment based upon project discovery and planning. The timelines are guided by Workday implementation project planned go-live date.

    b. If the Phase 1 complete date is not flexible, does UCF acknowledge that a larger delivery team may be needed to meet the timeline?

      UCF Answer: Yes.

42. Vendor Question: Sections 4.1 and 4.2 – General
    a. What are the UCF quality measurements currently in use or of interest for the project?

      UCF Answer: Expect to develop these in consultation with selected partner during project planning.

b. Are there any existing analytics models using these same data sets (People Soft, Workday, etc.) or is this a brand-new undertaking?

UCF Answer: These would be brand new integrations.

c. What are the UCF security requirements currently in use or applicable to the project?

UCF Answer: UCF Security requirements can be found at:
https://infosec.ucf.edu/risk-and-compliance/vrm/

d. What are the UCF identity management requirements currently in use or applicable to the project?

UCF Answer: UCF identity management information can be found at:
https://infosec.ucf.edu/identity-management/

e. Is UCF currently utilizing specific data governance software, or identified the software intended to be used for this project?

UCF Answer: Yes

f. What are the UCF data governance requirements and/or processes currently in use or applicable to the project?

UCF Answer: Under development

g. Is UCF looking for data governance guidance and support as part of this ITN?
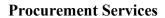
UCF Answer: No

43. Vendor Question: Sections 4.1 and 4.2 – General
a. How many environments will be involved/desired for this project (e.g., Dev, Test, Prod, etc.)?

UCF Answer: To be determined in consultation with selected partner

b. What processes currently exist within UCF for migrating between environments?

UCF Answer: Unknown at this time

c. How many business processes (facts) are expected to be represented in the data model?

   UCF Answer: To be determined

d. How many "critical" tables/datasets need to be ingested from PeopleSoft, Workday, and other systems (these systems historically have many thousands of tables)?

   UCF Answer: To be determined

e. How will information and data involved in this project be consumed—will this be handled entirely by business intelligence tools, or will the offeror need to consider the creation of APIs, etc.?

   UCF Answer: Expect it to be a variety of ways, based on use case.

f. What are the latency requirements for keeping the data lake and data warehouse up to date?

   UCF Answer: To be determined

g. Will any use cases require streaming data?

   UCF Answer: Please see answer to question #10

h. Will different data sources need to be processed at different intervals?

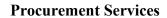   *UCF Answer: Please see the answer to question #17*

i. How many users will need to query this information directly from the data lake and/or data warehouse?

   UCF Answer: Please see answer to question #15

j. How much history needs to be retained in the data lake and in the warehouse?

    UCF Answer: To be determined

k. Is there a preference on archival process for each system?

UCF Answer: To be determined

l. Is there flexibility to make small edits to any of the source systems if needed to speed ingestion (Indexes, triggers, etc.)?

   UCF Answer: To be determined

44. Vendor Question: Sections 4.1 and 4.2 – Authorization and Authentication
    a. Will all users accessing this system be local to UCF?
    b. Will each user have an individual Azure AD account?
    c. Are there any B2B or B2C requirements?

    UCF Answer: a: Majority will be local, but some may not be
    b: Yes
    c: Potentially

45. Vendor Question: Sections 4.1 and 4.2 – Reporting
    a. How many users will be consuming information from this system?
    b. How many active users do we expect at any one time?
    c. Will reports be consumed by a custom-developed application, or consumed from the web, similar to Power BI Premium or Tableau Online?
    d. Are there existing reports that we would be looking to convert? If so, how many?

    UCF Answer:
    a. Please see answer to question #15
    b. To be determined
    c. Could be both
    d. Conversion of existing reports is not in scope of ITN

46. Vendor Question: Section 4.1 and 4.2 – Knowledge Transfer: Does UCF have staff with the skills and knowledge to take over the work once the project is complete, or will there be an expectation for the offeror to conduct training and development and/or provide ongoing support?

    UCF Answer: Selected partner will be expected to provide necessary knowledge transfer throughout all stages of the project to enable UCF staff to fully maintain and manage the environment and data when the project is complete. UCF staff skills and knowledge will be at various levels, depending upon area of support.

47. Vendor Question: Appendix A: Overall Pricing: Will UCF clarify if respondents to the ITN are allowed to modify Appendix A to reflect the requirements and associated pricing more accurately?

UCF Answer: Appendix A cannot be modified to exclude the original line items but clarification can be added as well as additional line items which the supplier believes will be needed for a successful implementation.

48. Vendor Question: Appendix V: HECVAT: Due to the sensitive nature of some questions within the Full HECVAT (Appendix V), is it possible to sign a Non-Disclosure Agreement (NDA) with UCF prior to completion of the HECVAT?

UCF Answer: Mark the HECVAT as confidential and in the case of a public records request, we will notify the respondent and work to redact what is permissible per FL Statute prior to releasing records.

49. Vendor Question: Section 2.2 Approximate Calendar of Events: Assuming UCF will be providing significant clarifications on/around September 8 with the release of answers to offerors questions, will UCF consider a 1-2 week extension to the proposal submission deadline?

UCF Answer: Yes. The proposal submission deadline has been extended to September 29, 2021 by 3PM EST.

50. Vendor Question: Has UCF engaged any outside consultants to define the requirements for this ITN? If so, can you share who that firm is and are they OCI'd out of responding to this ITN?

UCF Answer: No outside consultants have been engaged to define the requirements for this ITN.

51. Vendor Question: Phase 1a –
    a. The date of January 2022 seems a bit aggressive for this effort can you confirm this date is correct?
    b. Has UCF defined specific data use cases that require Dl/DW support already? Or are there specific use cases UCF wants us to focus on-for example, Reporting, Analytics?
    c. Can UCF share your data governance, identity management and security requirements so we can ensure we are scoping our solution properly?

UCF Answer: a. Please see answer to question #41.
          b. Yes, specific use cases are being collected and prioritized based on functional data needs and historical data storage.

      c. Planned UCF Data Governance program will be implemented upon completion of Data Governance tool procurement. Please also see answers to questions #42.c. and #42.d.

52. Vendor Question: Datasets:
    a. Can you please provide approximate sizing (Terabytes, Petabytes, etc.) of all the datasets in scope-PeopleSoft-Human Resources and Financial, WorkDay datasets?
    b. Are there any other data sets which are part of the implementation scope that we should take into consideration outside of PeopleSoft or WorkDay?
    c. Does the historical PeopleSoft Human Resources and Financial Data reside on-premise at UCF or offsite at a 3rd party service (i.e: Iron Mountain)?
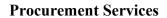
    UCF Answer: For a., b., c., please see answer to question #7

53. Vendor Question: Hardware/software/tools:
    a. Is UCF using any other data management, reporting, or BI tools that have not been mentioned in the ITN?
    b. Do you already have an Azure environment established?
    c. Are we responsible for the licensing, hardware and software costs associated with implementing UCF's Azure Data Lake, Synapse, and other data marts? Or does UCF already have negotiated rates with vendors to provide these?
    d. Are we responsible for pricing of tools/hardware/software mentioned in the ITN?
    e. Does UCF have established data pipeline tools for ingesting and processing data?
    f. Does UCF have an established ETL tool (ex. Informatica)?
    g. What Data Governance software mentioned in 4.2.4 does UCF use?

    UCF Answer:

    a) There may be others not mentioned but unknown
    b) Yes
    c) No, UCF has their negotiated rates
    d) No
    e) We expect that this project will create new pipelines based on use case.
    f) We are in the process of implementing Informatica data integration
    g) Planned UCF Data Governance program will be implemented upon completion of Data Governance tool procurement.

54.   Vendor Question: In section 3.2.D.1, you request a Fixed Bid per phase and in 3.2.D.2, you ask for billing rates for various personnel who will be involved. Can you please clarify the requirement in 3.2.D.2 as it doesn't align with your Appendix A pricing template?

UCF Answer: Appendix A is to provide total amounts for the various services. Billing rates to be provided for the different roles of personnel to be part of the team along with total hours.

55.   Vendor Question: What On Prem data storage application do you currently use across UCF?

UCF Answer: Data is stored On Prem in various applications.

56.   Vendor Question: Do you currently have an existing ETL tool that you use for data ingestion?

UCF Answer: Yes.

57.   Vendor Question: What data quality/metadata management tools are available? Do we have any data quality rules and cleansing incorporated already?

UCF Answer: No meta-data management tool is used. DQ rules would be developed per data use case

58.   Vendor Question: What interfaces are in place to send and receive data? (SFTP, WebAPI, etc)

UCF Answer: SFTP and other methods

59.   Vendor Question: Is there any test management tool available? (ex: JIRA, ALM)

UCF Answer: No

60.   Vendor Question: What major internal risk should be accounted for in the planning and execution of the engagement?

UCF Answer: Infrastructure setup and complexity of model for the amount of historical data.

61.   Vendor Question: What are your expectations for on-site visits vs. working and delivering remotely?

UCF Answer: Anticipate a hybrid approach.

62.   Vendor Question: Do you have an internal technical liaison that we would work with directly and perform knowledge transfer with?

UCF Answer: Please see answer to question #46.

63.   Vendor Question: Is there a preference for project management style and methodology? (ex: waterfall, agile)

UCF Answer: No

64.   Vendor Question: Please confirm the environments you'll want to host the solution through. (ex: Dev, QA, UAT, Prod?)

UCF Answer: Please see the answer to question #43.a

65.   Vendor Question: How many resources do you plan on allocating internally towards this engagement? Can you highlight some of their roles?

UCF Answer: Undetermined at this time.

66.   Vendor Question: Do you already have requirements documented and ready to be used for this program? What other documentation is available that can be used to jump-start this engagement?

UCF Answer: Beyond the ITN, additional considerations are still developing.

67.   Vendor Question: Please provide connectivity and integration requirements for third party data integrators?

UCF Answer: Not available at this time

68.   Vendor Question: Is there a need to store historical data? (ex: 5 years, 10 years, 20 years)

UCF Answer: Yes, this is the primary focus of Phase 1.

69.   Vendor Question: What refresh frequency and pattern do you expect for each of your data sources? Batch, near real time (NRT), or both? (ex: 2X day, daily, hourly, 30 minutes)

UCF Answer: Please see answer to questions #10 and #17.

70.   Vendor Question: What is the relative data volume we would be working with?

UCF Answer: Please see answer to question #7 for Phase 1

71.   Vendor Question: How many source system loads per day? What is the timing generally?

UCF Answer: To be determined based on use case.

72.   Vendor Question: How much change management will you require throughout the implementation of the project? (ex: communications plans, end-user training, rollout strategy)

UCF Answer: Change management is performed in-house. Please also see response to question #46.

73.   Vendor Question: What are your requirements and existing protocols for data security and access control?

UCF Answer: To be provided during project discovery and planning.

74.   Vendor Question: Is there any PII involved? If so, are there any tools already in use for the masking of PII?

UCF Answer: Potentially. Not aware of any masking tools outside of the ERP.

75.   Vendor Question: Do already have a data governance framework in place or should it be proposed by the vendor? (ex: Data lifecycle, lineage, monitoring, stewardship)

UCF Answer: Please see answer to question #53.g.

76.   Vendor Question: Are any MDM domains (ex: customer) that need to be mastered?

UCF Answer: MDM is not in-scope for this project.

77.   Vendor Question: Is there a need for reference data management strategy?

UCF Answer: No, not at this time.

78. Vendor Question: Will you expect a security mechanism as part of the dashboards? If so, at which level do you expect to implement such security (ex: project folder level, report level, data level security?)

UCF Answer: There will be some level, but structure is unknown at this time.

79. Vendor Question: How many internal users would you expect as an audience for this dashboard? What types of user personas? I.e. Students, faculty, etc.

UCF Answer: Please see answer to question #15.

80. Vendor Question: What is the main reporting tool (if any) that is utilized by UCF? If none, do you have an initial preference for anyone reporting tool?

UCF Answer: We use multiple tools: e.g. PowerBI, Tableau, SAS, Excel, SAS Visual Analytics

81. Vendor Question: How many reports do you actively maintain and wish to migrate to the unified reporting platform determined via this engagement?

UCF Answer: We maintain many reports across many systems and will migrate reports as needed.

82. Vendor Question: Will end users need to access this application from a mobile/tablet device? Or just desktop?

UCF Answer: Anticipate needing multiple ways to access the environment.

83. Vendor Question: Will you want to push for self-service reporting analytics at UCF or will you want IT to develop and vet all reports made available to your audiences?

UCF Answer: We are a heavy self-service reporting environment with multiple units that have the ability to create and deliver reporting. However, data access security and report governance will be part of this process.

84. Vendor Question: Are there any reports that you will be seeking to make public? (ex: embedded in the UCF website). Or are you keeping reports to be serviced by Azure Cloud environment internal?

UCF Answer: Yes, some reports will be publicly available.

85. Vendor Question: What percentage of your reports would you say are paginated reports?

   UCF Answer: Unknown at this time

86. Vendor Question: Are there any advanced reporting functionalities that you know you'd like to include as part of your future state reporting solution? If so, which ones?

   UCF Answer: Richer use of predictive analytics and deep learning in the future.

87. Vendor Question: As we understand, all data should be stored within the Data Lake / Warehouse? or can alternate storage solutions exist to support the solution be more efficient and optimized?

   UCF Answer: All historical PS data that has been identified as mission critical for Phase 1, and data identified for subsequent phases will reside in the Data Lake/Warehouse solution.

88. Vendor Question: Currently, what is the process to ingest data from the historical PeopleSoft (PS) data?

   UCF Answer: Direct query or internal PeopleSoft reports and queries

89. Vendor Question: Has the current data found in PeopleSoft (PS) been transferred to a data warehouse solution already? If so, which tools were used? Within Azure?

   UCF Answer: UCF has a census data warehouse based on older non-cloud technology that has subsets of PeopleSoft data in it. ETL tools revolve around SAS to ingest data

90. Vendor Question: Do you require two different platforms, one for a data lake and another for a data warehouse? Or, in the alternative, can one solution serve as both the data lake and the data warehouse?

   UCF Answer: We are looking for one solution to house both.

91. Vendor Question: What is the format of the files used in the current volumes of stored documentation?

   UCF Answer: Unknown.

92. Vendor Question: Is the data already partitioned by year, month, and day?

UCF Answer: This will vary by data source.

93. Vendor Question: Do the data stores need to be updated in real time or near real-time is enough (30-60 seconds after event)?

UCF Answer: Please see the answer to questions #10 and #17

94. Vendor Question: What is the frequency for data ingestion from Workday datasets?

UCF Answer: To be determined

95. Vendor Question: What is the volume of the data expected to be migrated to the data lake and data warehouse?

UCF Answer: Please see the answer to question #7.

96. Vendor Question: How many users will have access to the data lake and data warehouse?

UCF Answer: Please see the answer to question #15

97. Vendor Question: Are there any other data sources aside from PeopleSoft (PS) and Workday? If so, what are they?

UCF Answer: Please see the answer to question #12

98. Vendor Question: What systems are currently used for data governance?

UCF Answer: Please see answer to question #53.g.

99. Vendor Question: Do we need to implement data transformations to the ingested data?

UCF Answer: Based on use case

100. Vendor Question: Does UCF currently have data models for the data to be ingested into the data lake and data warehouse? If so, where are these models stored? Any tool used to host these models?

UCF Answer: No, these have to be developed.

101. Vendor Question: Has UCF already implemented an Azure Data Lake solution? If so, can you elaborate on the work completed?

    UCF Answer: This is a new implementation.

102. Vendor Question: Has UCF already implemented a Synapse solution? If so, can you elaborate on the work completed?

    UCF Answer: Synapse has not been implemented.

103. Vendor Question: What are the current strategic goals?
    a. What measures or metrics are associated with each goal?
    b. How often are these updated?
    c. What data issues (gaps, quality, …) impacts each of these (or multiple) reports?

    UCF Answer: a. Our current strategic goals are to better leverage data for use with analytics to improve student outcomes and university operations.
        b. UCF goals change as needed.
        c. Please see answer to question #114.b.

104. Vendor Question: What Business Initiatives/Programs are running currently within UCF which could benefit from an Azure-based unifying data management and analytics platform?

    UCF Answer: Operational improvement and student success outcomes

105. Vendor Question: What Initiative or Program statistics are currently collected and what additional ones you would like to collect?

    UCF Answer: We collect a vast amount of data on students and university operations.

106. Vendor Question: Do you currently have any defined Data-driven Program or Initiative targets?

    UCF Answer: Please see answer to question #104.

107. Vendor Question: Are these targets associated with set Milestones?

    UCF Answer: Yes

108. Vendor Question: Are there any soft or qualitative targets that you would like to support with data? If yes, what type of data?

UCF Answer: These are wrapped up in the overall strategic goals.

109. Vendor Question: Are there examples of the types of predictive and prescriptive analytics which UCF would like to be able to leverage?

UCF Answer: Combined financial, hr, faculty, and student outcomes for holistic end to end analytics; additional student success and operational efficiency uses cases have been identified.

110. Vendor Question: What are the data retention needs related to the various data sources which are to be involved?

UCF Answer: It will vary by data source, usage, and state requirements.

111. Vendor Question: What existing Data Governance programs are there within UCF currently?

UCF Answer: Please see answer to question #53.g.

112. Vendor Question: What Data Governance and metadata management tools/platforms (if any) are in place or being currently implemented within UCF?

UCF Answer: Please see answer to question #53.g

113. Vendor Question: Does UCF have existing MS Azure Purview or Data Catalog implementations? Other platforms?

UCF Answer: No, UCF does not have either of these tools implemented. Data Catalog functionality is part of the Data Governance tool procurement currently in progress.

114. Vendor Question: What operational reports do you rely on?
    a. How is each report used, what is their focus and audience?
    b. What data issues (gaps, quality, …) impacts each of these (or multiple) reports?

UCF Answer:
a. We rely on many reports and dashboards. Their focus and audience are widespread.
b. Typical gaps include availability of data and identification of data elements

115. Vendor Question: What level of charting, graphing, and visualization is in use and what issues do they have?

UCF Answer: We span the continuum of visualization from the simplest to the most complex as needed.

116. Vendor Question: What other outputs are in use such as dashboards and what are their issues?

UCF Answer: Filters and controls

117. Vendor Question: What are the types of analysis that you perform today?

UCF Answer: Descriptive and some predictive analytics

118. Vendor Question: Does UCF have a current MS Azure tenant that you wish to build this solution on, or will it be net new?

UCF Answer: We have an existing Azure tenant where the solution will reside.

119. Vendor Question: Has UCF implemented Azure virtual networking for other initiatives already?   Are there existing standards and processes already in IT with respect to full Azure or hybrid Azure/on-premise application architectures, particularly around security and data privacy?

UCF Answer: We have network connectivity established in Azure with integration back to our on-premises resources with standards and process already in place.

120. Vendor Question: What are the current source systems (including file shares, Excel based, etc.) which are envisioned to participate in this data management and analytics architecture? (CRM, ERP, Billing, Financial Management and Reporting, Learning Management, Examination and Scheduling, Online Learning, Student Information, Faculty Information, Research, etc.)

UCF Answer: Please see answer to question #11

121. Vendor Question: What edge devices or data streams (non-traditional source systems) does UCF currently receive data from or send data to?

UCF Answer: We have integrations with a wide variety of SaaS solutions, some we receive data from and others we send data to.

122. Vendor Question: What planned edge devices or data streams should be included in the initial design and build?

UCF Answer: Please see answer to question #12.

123. Vendor Question: Does UCF have existing data integration tools?   How many jobs?

UCF Answer: Yes. Total jobs unknown at this time.

124. Vendor Question: Does UCF have existing MS SQL, Synapse, or other reporting databases?

UCF Answer: UCF has MS SQL on campus

125. Vendor Question: Does UCF have existing reporting and dashboarding tools?

UCF Answer: Yes, Tableau, PowerBI, SAS Visual Analytics

126. Vendor Question: What business goals are not well represented by the current reporting?

UCF Answer: Ability to perform deeper analysis.

127. Vendor Question: What issues do you currently face with the existing reports?

UCF Answer: Please see answer to question #114.

128. Vendor Question: What performance or risk areas are not well represented by current reporting?

UCF Answer: Comprehensive financial and operational reporting; aspects of student success

129. Vendor Question: What operational aspects are not well represented by current reporting?

UCF Answer: Enrollment management

130. Vendor Question: What information is missing that is critical to make better business-related decisions/outcomes?

UCF Answer: Certain data elements are not so much missing as they are siloed and not easily accessible.

131. Vendor Question: What KPIs do you currently track or wish to track?

UCF Answer: We track numerous KPI's on students, human resources, financial and others.

132. Vendor Question: Do you have Targets to capture Performance?

     UCF Answer: Yes

133. Vendor Question: Do you have any Risk Thresholds or Risk Tolerance?

     UCF Answer: Those are determined as needed.

134. Vendor Question: Any additional business sources/systems that you wish to connect and display combined data in Reports?

     UCF Answer: We have numerous sources of data we connect and report from.

135. Vendor Question: What are the major issues/hurdles that the business faces related to Data/Reporting?

     UCF Answer: Data siloes and multiple tools to gather and display data.

136. Vendor Question: Will client be setting up Development, Test/Staging and Production environments with appropriate configuration or Is it assumed to be vendor's responsibility?

     UCF Answer: Please see answer to question #43.a

137. Vendor Question: Can you please let us know the exact number of data sources?

     UCF Answer: Please see answer to question #12.

138. Vendor Question: Are all the databases for "Production sources" and legacy system, SQL Servers?

     UCF Answer: No

139. Vendor Question: Are all the data sources on-premise?

     UCF Answer: For PeopleSoft, yes. Others could be on-prem or cloud.

140. Vendor Question: Can you let us know the approximate number of tables to be imported?

UCF Answer: Unknown at this time, depends on use cases.

141. Vendor Question: Can you let us know the approximate number of use cases to be supported?

UCF Answer: Unknown at this time.

142. Vendor Question: Can you please let us know the exact number of reports & dashboards required to be built for the to-be solution? How many configurable reports are required?

UCF Answer: Please see answer to question #45.d.

143. Vendor Question: The understanding is that the reports will not be embedded in any web portal. Please confirm.

UCF Answer: Some reports could be embedded in web pages and portals

144. Vendor Question: How many reporting/analysis tools are anticipated? Could you let us know all of them?

UCF Answer: Please see answer to question #4.

145. Vendor Question: Can you please let us know whether UCF's current Azure tenant is on government cloud or commercial cloud?

UCF Answer: Commercial.

146. Vendor Question: Does the county already have a tenant with any of the cloud service providers or can we propose Azure as the tenant?

UCF Answer: Azure is our preferred tenant, which has already been established.

147. Vendor Question: How many users will be accessing the system?

UCF Answer: Please see the answer to question #15

148. Vendor Question: How much data is anticipated per day?

UCF Answer: To be determined.

149. Vendor Question: How much historical data needs to be imported?

UCF Answer: Please see the answer to question #7

150. Vendor Question: How many users will be authoring the reports?

UCF Answer: Please see the answer to question #15

151. Vendor Question: Will the reports be viewed by UCF staffs only?

UCF Answer: No, some will be public.

152. Vendor Question: Are there any applications that are in the on-going development phase? [if yes] What impact is expected (if any) in this RFP scope?

UCF Answer: UCF is in the midst of a Workday conversion. There will be Workday data which will be integrated with the new environment.

153. Vendor Question: Can you please provide the details that how many users to be trained as part of the project? Can the training be proposed in train the trainer model?

UCF Answer: Number of users to receive knowledge transfer is undetermined at this time. Please also see answer to question #46.

154. Vendor Question: Do you need maintenance and support for the to-be solution?

UCF Answer: No, we expect a thorough knowledge transfer from vendor to UCF staff to maintain and manage the environment upon completion of the engagement.

155. Vendor Question: Please provide expected timelines for the project execution/completion.

UCF Answer: Phase 1 to be completed by end of January 2022

156. Vendor Question: Can you please share the allocated budget for this project?

UCF Answer: Not at this time.

157. Vendor Question: Can you please share if there is an incumbent vendors?

UCF Answer: None for this project

158. Vendor Question: Can you provide remote access for some of the work that can be done offsite/offshore?

   UCF Answer: Yes

159. Vendor Question: We are assuming that vendor doesn't have to provide Azure subscription cost as part of the costing requirement. Please confirm.

   UCF Answer: We expect the vendor to assist in environment cost planning for the Data Lake/Warehouse and analytics areas.

160. Vendor Question: EXPERIENCE AND QUALIFICATIONS OF PROPOSER – "Provide a list of current or very recent similar-type client references, if any, which are in the United States and in higher education." We feel the above mentioned requirement is very stringent. If we can produce three project references from US based government clients, will that suffice? Alongside, we would also request you to strike-off the below requirement, as it makes it very hard for us to find a suitable project reference – "Accounts provided shall be for work performed by the member of the project team being proposed in Section B below"

   UCF Answer: Please see answer to question #20.

161. Vendor Question: We are assuming that filling up the "HECVAT-LITE" questionnaire would suffice. Please confirm.

   UCF Answer: Please refer to Appendix V on the ITN. The full version is required.

162. Vendor Question: What are the specific deliverables that UCF require from this project?

   UCF Answer: Please refer to the ITN section 4.2

163. Vendor Question: Please confirm that the AO activities should start at the completion of Phase 1

   UCF Answer: To be determined during project planning.

164. Vendor Question: Can you please share with us the UCF data governance, identity management, and security requirements referenced in the ITN? If they have not yet been fully developed, is creating these guidelines part of the scope for phase 1?

   UCF Answer: Please see answer to question #51.c.

165. Vendor Question: Will Personally identifiable information or other data requiring higher levels of security and confidentiality be involved in the phase 2 and 3 work? If yes, please provide details of the sorts of information you would expect to be involved.

UCF Answer: Yes, but those specifics are to be determined during project.

166. Vendor Question: Please confirm the start and end dates of Phase 1 that you expect. Are there business events that are driving these dates?

UCF Answer: Please refer to question #41.a

167. Vendor Question: What, if any, is the current usage of Azure and Azure based tools at UCF? If there is existing usage, please describe how this project should cooperate or interact with those other tools?

UCF Answer: UCF has been using Azure for 7+ years and it is our primary cloud provider. Central IT is the primary user for Azure. I do not believe that any of the data sources this project will interact with currently reside in Azure. For details on some of the specific Azure services UCF IT has operationalized, please see https://it.ucf.edu/cloud/what-we-offer/. At this time, there is not enough information regarding the architecture and design of this project to know how any specific Azure tools will interact.

168. Vendor Question: Are all of the future datasets for phase 2 and 3 currently on premise at UCF, or are some in cloud services? If so, which services? Please provide details of transaction volume related to specific data under scope of services

UCF Answer: It will be a mixture of both

169. Vendor Question: What are your key priorities from managed services perspective? Cost, Quality, Performance etc?

UCF Answer: Unknown at this time

170. Vendor Question: What Azure support operating model does UCF expect? What resources are UCF expecting to have in the support team? Are any systems going to be retired due to this work?

UCF Answer: To be determined.

171. Vendor Question: Do you have any specific expectations around business continuity or disaster recovery? Do you have specific requirements related to data archiving and backup?

UCF Answer: Please see answer to question #18

172. Vendor Question: Which ITSM software is currently used?

UCF Answer: UCF IT uses ServiceNow

173. Vendor Question: Please provide expected ticket volumes for the new solution, perhaps based on existing ticket volumetrics.

UCF Answer: To be determined because this will be a new implementation.

174. Vendor Question: What is the expected coverage of the Managed Services (e.g. 24x7x365, 24x5 plus on call at weekends etc)?

UCF Answer: Unknown at this time.

175. Vendor Question: What are language support requirements?

UCF Answer: The question doesn't provide sufficient detail to answer.

176. Vendor Question: Do you have specific SLA requirements?

UCF Answer: Not known at this time.

177. Vendor Question: Are there specific security or compliance needs which may apply to service delivery?

UCF Answer: Not known at this time.

178. Vendor Question: Is the use of offshore resources permitted?

UCF Answer: Yes. Disclose the information in the proposal.

179. Vendor Question: Do you have any specific requirements related to onsite presence of service delivery team?

UCF Answer: Unknown at this time.

180. Vendor Question: What reporting tools and applications does UCF plan to use for their reporting and analytics needs?

   UCF Answer: Please see answer to question #80

181. Vendor Question: With what other systems or processes will we need to integrate with or consider?

   UCF Answer: Please see the answer to question #12

182. Vendor Question: Provide the best-known list of "other data sources" as described in 4.1 Implementation Phases and Timeline.

   UCF Answer: Please see the answer to question #12

183. Vendor Question: Are there any compliance / regulatory requirements that will impact this project?

   UCF Answer: There will be security considerations as well as Federal (FERPA) and state requirements that will be considered.

184. Vendor Question: Is there a way to pilot or prototype this initiative?

   UCF Answer: To be determined based on needs and resources

185. Vendor Question: What constraints are there (time, people, funds, systems, organization) that might affect this project?

   UCF Answer: To be determined during initial project scoping after vendor is selected.

186. Vendor Question: Are there any known, identified dates that impact this project (internal or external mandates)?

   UCF Answer: Workday implementation go-live - July 2022.

187. Vendor Question: What do you think will be your toughest challenges?

   UCF Answer: Identifying data and reporting needed for integration

188. Vendor Question: Who will champion (or sponsor) this project?

UCF Answer: The project is sponsored as part of the UCF Knight Vision project.

189. Vendor Question: What has been done to date on this effort?

UCF Answer: Initial scoping of project and identification of key use cases for each phase of the project.

190. Vendor Question: What groups will be impacted by the work of the project (during development)?

UCF Answer: Multiple departments and areas will be involved during the project development: IT, HR, Financial, Student, Institutional Research, etc.

191. Vendor Question: What groups will be impacted by the outcome (end result) of the project?

UCF Answer: The environment is being designed to impact the entire university in various aspects.

192. Vendor Question: Will UCF have a project manager dedicated to this effort?

UCF Answer: UCF Project management will be provided by the Knight Vision Reporting & Analytics Workstreams leads.

193. Vendor Question: What dedicated project resources will UCF provide for this effort?

UCF Answer: There will be a team, but the actual number of individuals is not known at this time.

194. Vendor Question: What part-time or fractional resources will UCF provide for this effort?

UCF Answer: Undetermined at this time.

195. Vendor Question: List the UCF subject-matter-experts (by role is adequate) that will provide support for this effort.

UCF Answer: These individuals / specific roles have not been identified at this time.

196. Vendor Question: What is the UCF preference regarding in-person project progress or status meetings? Can the vendor provide services remotely with the use of video conferences?

UCF Answer: We anticipate that it will be a hybrid approach (in-person and remote) for project progress and meetings.

197. Vendor Question: Does UCF have a preference regarding project management software such as MS Project, Jira, Smartsheet, Trello, etc.?

UCF Answer: No, but we currently use both MS Project and Jira

198. Vendor Question: What is the preference regarding training modality? Does UCF prefer in-person instructor led classes, online interactive, recorded webinars, documented manuals and job aides, etc.?

UCF Answer: It will need to be determined which method(s) of knowledge transfer will best meet the needs of UCF staff.

199. Vendor Question: (Regarding change management) In addition to training, how will you prepare the various user groups to adopt what is being created?

UCF Answer: Please see the answer to question #72.

200. Vendor Question: Is there a UCF training department or are there training resources that will need train-the-trainer activities?

UCF Answer: We are not anticipating the need for train-the-trainer Please refer to question #46 for further information.

201. Vendor Question: Regarding training and knowledge transfer, to what groups will the vendor be providing this training and knowledge transfer?

UCF Answer: Please see response to question #46.

202. Vendor Question: Does UCF have organization change management resources that will support this project?

UCF Answer: Please see answer to question #72.

203. Vendor Question: Will UCF have an organization change management strategy and communications plan to support this project?

UCF Answer: Please see answer to question #72.

204. Vendor Question: Can any of the work of the vendor be provided by offshore (non-domestic U.S.) resources?

UCF Answer: Off-shore is allowed. Disclose the information in the proposal.

205. Vendor Question: From an Azure infrastructure side can you provide the following information:

a. What are you currently hosting in Azure (Number of VMs or services or nothing)?
b. Is your organization currently using M365 products?
c. Do you currently have the domain where your on-prem servers reside connected and syncing to Azure AD?
d. If you currently have an Azure environment, is it connected to your on-prem datacenter with a static VPN or EXPRESSROUTE?
e. If you currently have an Azure environment does your organization have limits on what kind of Azure services can be used to connect to your on-prem datacenter?
f. If you currently have an Azure environment, do you have strict processes around monitoring maintaining that environment?
g. Do you currently have an agreement with Microsoft, and do you have permission to operate in Azure from their BoD?
h. What other schools, organizations, or outside entities may need to access this data?

i. Will this account\subscription be shared with any other organization?

UCF Answer:

a. *100+ virtual machines, 200+ storage accounts, and several Azure services. For details on some of the specific Azure services UCF IT has operationalized, please see https://it.ucf.edu/cloud/what-we-offer/.*
b. *If this is referring to O365, yes, Office365 is our primary Office and collaboration platform.*
c. *Yes*
d. *A mesh topology of static VPNs, however, we have plans to migrate to Azure Virtual WAN to simplify this topology in 2022. We are open to migrating to ExpressRoute as needs dictate (including this project) and resources allow.*
e. *Generally, no. However, any services that are currently not operationalized will most likely need to be evaluated first. For details on some of the specific Azure services UCF IT has operationalized, please see https://it.ucf.edu/cloud/what-we-offer/. We do try and restrict our Azure infrastructure to the US East 2 region*

> *(unless HA is required, in which case we do have a second region, US Central, we can use for those kind of deployments)*
>
> f. *Generally speaking, yes. Note that we have two distinct Azure offerings. The first is "self-managed" for those customers who simply need a resource group or subscription provisioned but require no direct support from UCF IT. These resources are still monitored but maintenance falls onto the customer. We also offer a "UCF IT managed" offering where we architect, configure, administer, monitor, and maintain the Azure resources on the customer's behalf.*
>
> g. *Yes and yes.*
>
> h. *None at this time.*
>
> i. *Not to my knowledge.*

206. Vendor Question: What department is the primary driver and contact for this project? Who is the executive sponsor?

   UCF Answer: Analytics and Integrated Planning Division. The Reporting and Analytics Workstream of the Knight Vision Project.

207. Vendor Question: What department is the primary area for reporting and analytics at UCF? How do users access and use data or make data requests?

   UCF Answer: Analytics and Integrated Planning Division. Requests are primarily made online through a Qualtrics form.

208. Vendor Question: What is the impetus for this project? Does UCF have an existing list of data use cases that require a data lake/data warehouse to support and that we can review? If not, is the vendor to define these in conjunction with UCF?

   UCF Answer: The impetus for this project is the university's conversion to Workday and getting a more modern data and analytics platform in place to support growing needs. We currently have identified key uses cases for each phase, however, others may come up during the project.

209. Vendor Question: Several bullet items in section 4.2 start "Assist with….". How much of the workload does UCF anticipate their IT department will take on work will IT do vs. how much responsibility/level of effort does the vendor have? What internal resources will be dedicated?

   UCF Answer: Unknown at this time, but it is expected that there will be support from the IT department to stand-up the environment.

210. Vendor Question: What software does UCF use for data governance and identity management? What documentation is available for the security requirements for this project?

UCF Answer: Please see the answer to question #51.c

211. Vendor Question: What are UCF's current systems, sources, owners, and users for reporting and analytics? Is there an existing data warehouse structure?

UCF Answer: Please see the answer to question #12

212. Vendor Question: What are the "other data sources" referenced in 4.1.1.e?

UCF Answer: Please see the answer to question #12

213. Vendor Question: What is the total scope of data for this project? Is Phase 1 HR and Finance only? Will student data be incorporated eventually, and from what system?

UCF Answer: Phase 1 is to ingest historical PeopleSoft data primarily centered around HR and Finance. Student data may be ingested for this project, but is not in primary scope for the phases of this project.

214. Vendor Question: What other reporting tools does UCF have besides those named in section 4.2.5.a? Is UCF looking for the vendor to provide recommendations for additional tools?

UCF Answer: Please see the answer to question #80.

215. Vendor Question: Does UCF have a documented cloud strategy for applications and infrastructure that we can review?

UCF Answer: Yes. Please refer to https://it.ucf.edu/cloud.

216. Vendor Question: Confirm that UCF and not the vendor is providing all of the Azure infrastructure.

UCF Answer: UCF will provide all of the infrastructure within our own tenant.

Resources -

217. Vendor Question: Is off-shore allowed? or does it need to be on-shore only?

UCF Answer: Please see the answer to question #204

218. Vendor Question: If on-shore only, then does the resource need to be a US Citizen?

UCF Answer: Please see the answer to question #204.

Phase 1 –

219. Vendor Question: How many source tables are expected to be loaded in the data warehouse?

UCF Answer: To be determined

220. Vendor Question: Has any dimensional analysis and or data modelling been done? Do you have an idea of how many dimension and fact tables you would expect to see in the data warehouse?

UCF Answer: Please see the answer to question #100.

221. Vendor Question: How many entities are you expecting to load into the data warehouse? Approximately how many attributes?

UCF Answer: Unknown at this time and will be defined during project.

222. Vendor Question: What data governance and data quality management processes are currently in place?

UCF Answer: Please see answer to question #53.g.

223. Vendor Question: What data governance and quality management tools are currently used?

UCF Answer: Please see answer to question #53.g.

224. Vendor Question: How are data errors currently corrected? Do you have a data stewardship team that can investigate and correct data anomalies?

UCF Answer: These types of checks are typically accounted for during the ETL processes. For data governance, please see the answer to question #53.g.

225. Vendor Question: Do you have a data catalog for the PeopleSoft environment that you can share?

UCF Answer: Please see answer to question #113.

226. Vendor Question: Where is your PeopleSoft environment located? Is it on-premise, or with another cloud provider?

UCF Answer: On-prem

227. Vendor Question: Will we have direct access to the PeopleSoft data through SQL calls or CSV dumps, or would we need to use APIs (ODATA, REST, etc..) to access?

UCF Answer: Through SQL extracts.

228. Vendor Question: Is there an existing Azure deployment that is used by UCF?

UCF Answer: We have an existing Azure tenant where the solution will reside. There is no existing deployment of this specific project residing in Azure.

229. Vendor Question: Have you integrated it with Azure Active Directory?

UCF Answer: Our Azure AD is integrated with our local AD.

230. Vendor Question: How is connectivity to Azure currently managed? Do you have ExpressRoute configured?

UCF Answer: A mesh topology of static VPNs, however, we have plans to migrate to Azure Virtual WAN to simplify this topology in 2022. We are open to migrating to ExpressRoute as needs dictate (including this project) and resources allow.

231. Vendor Question: Are there specific ETL/ELT tools that you require to be used, or are you open to Dell Technologies recommendations?

UCF Answer: This will be use case specific.

232. Vendor Question: What project management and agile development tools do you currently use? Are you open to Dell Technologies recommendations?

UCF Answer: We are flexible in the types of project management methodologies we use.

233. Vendor Question: Are there any source systems apart from PeopleSoft and Workday that you expect to be integrated into phase 1?

UCF Answer: No, not at this time. Workday integration is not part of Phase 1.

234. Vendor Question: What is driving the end of January 2022 deadline?

UCF Answer: Workday implementation timeline and need to store historical PeopleSoft data.

All Phases - Data sources

235. Vendor Question: How many other major data sources are in scope of the project?

UCF Answer: There are sources identified for Phases 2 and 3 , but there may be others identified during these phases.

236. Vendor Question: Would we have direct access to the data stored in the systems through SQL calls or CSV dumps, or would we need to use APIs (ODATA, REST, etc..) to access?

UCF Answer: Please see answer to question #227.

Data Cleanliness

237. Vendor Question: Have you considered whether Master Data Management will be part of the project?

UCF Answer: MDM is not in scope for this project nor under consideration at this time.

238. Vendor Question: For the data sources, has any data quality analysis been performed? Are there any data quality or remediation efforts that are required or occurring in conjunction with this project?

UCF Answer: Data sources are always assessed for completeness and overall quality. Any additional quality issues to be resolved for this project will be considered at that time.

Team Experience

239. Vendor Question: How much training and/or experience do your team members have in
    a. Data Warehouse Design
    b. Data Transformations / ETL

    c.   Power BI
        i.   Power BI dataset building (Power Query, data mashup, cleaning, etc.)
        ii.   Use of Power BI visuals
        iii.   Use of the MDX and DAX languages
    d.   Other Reporting and Analytics Tools
        i.   Tableau
        ii.   Visual report building in general

UCF Answer: UCF staff that would be the primary maintainers of the system do have extensive amount of experience in warehouse design and support; other team members also have expertise in data visualization design, Tableau and SAS Visual Analytics. Additionally, there is knowledge of PowerBI in various units.

240. Vendor Question: How large is your technical team for this project? Where do you expect your team to be participating in the project build?

UCF Answer: The exact number of technical team members is not known at this time. It is our expectation that members of our team will be involved during each phase of the project.

Reporting and Analytics

241. Vendor Question: How many reports are currently in the organization that you see being replaced by this solution?

UCF Answer: Please see answer to question #144

242. Vendor Question: What platforms are those reports built upon?

UCF Answer: Peoplesoft, excel, and others

243. Vendor Question: Are they graphical/interactive in nature or simply tables of information?

UCF Answer: Reporting will contain both types

AI and Big Data

244. Vendor Question: Do you have any deployments or experience using Hadoop or other Big Data/NoSQL platforms?

UCF Answer: Unknown capabilities in this area at this time.

245. Vendor Question: Are you using any specific AI or Machine Learning platforms or tools?

UCF Answer: Not directly. These types of methods are embedded in other 3rd party applications.

246. Vendor Question: Do you anticipate or use any streaming data sets for analytics or application capabilities?

UCF Answer: Please see answer to question #10.

247. Vendor Question: With the desire to structure this project as a Fixed Fee engagement, is there a change control process you will employ as the scope firms up as the requirements are defined at the beginning of Phase 2?

UCF Answer: Yes

248. Vendor Question: ITN Section 1.2 (Contract Award). This section references a sample of UCF's standard terms and conditions and provides a link (https://procurement.ucf.edu) which includes the following contract templates under the "For UCF Employees >Forms" tab: the "Standard Consulting Services Agreement" and the "Standard Contractual Agreement". Please clarify which contract is applicable for this ITN.

UCF Answer: The Standard Contractual Agreement is applicable to this ITN.

249. Vendor Question: ITN Section 2.20 (Insurance) and Standard Contractual Agreement Section 34 (Contractor Insurance): Is it acceptable for the Supplier/Contractor to provide the 30-day notifications referenced in the last sentence of the General Liability, Auto Liability, and Workers' Compensation subsections in lieu of obtaining a policy endorsement, if such endorsement is not commercially available from Supplier/Contractor's insurance provider? If yes, how should we address this request in our proposal response given Section 2.20 is designated as "Non-negotiable" on Appendix I?

UCF Answer: *A Respondent's disagreement with any non-negotiable section of this ITN may be automatically rejected. Respondents shall not check sections as "understood and agreed upon" with the intent to negotiate a change to those sections/terms and conditions after tentative award of a contract resulting from this ITN.*

250. Vendor Question: ITN Section 2.20 (Insurance) and Standard Contractual Agreement Section 34 (Contractor Insurance): Please confirm that the Additional Insured status referred to in the "Certificates of Insurance" subsection only relates to the General Liability and Auto Liability policies, and not the Workers' Compensation policy, as an Additional Insured endorsement is not

available under the Workers' Compensation Policy. If confirmed, how should we address this request in our proposal response given Section 2.20 is designated as "Non-negotiable" on Appendix I?

UCF Answer: A Respondent's disagreement with any non-negotiable section of this ITN may be automatically rejected. Respondents shall not check sections as "understood and agreed upon" with the intent to negotiate a change to those sections/terms and conditions after tentative award of a contract resulting from this ITN.

251. Vendor Question: ITN Section 2.48 (Work for Hire) and Standard Contractual Agreement Section 26 (Work for Hire): Will the University consider adding language to this section to clarify that Supplier/Contractor's (and its subcontractors) pre-existing and independently developed proprietary methodologies, processes and intellectual property remain the exclusive property of Supplier/Contractor (or its subcontractor). If yes, would inclusion of such request on Appendix I cause Respondent's offer to be rejected? Suggested language for consideration: "Notwithstanding the above, all pre-existing and/or independently developed trademarks, service marks, patents, copyrights, trade secrets, and other proprietary rights of Contractor or its subcontractor ("Contractor Pre-Existing Materials") are and will remain the exclusive property of Contractor or its subcontractor, as the case may be. For Materials that are delivered under this Agreement, but incorporate Contractor Pre-Existing Materials, Contractor hereby grants to the University a nonexclusive, royalty-free, right to copy, perform, display, execute, reproduce, and modify the Contractor Pre-Existing Materials, solely as contained within such Materials to the extent reasonably necessary or useful for the University to receive the benefit of the services or any deliverables from the services as contemplated by this Agreement."

UCF Answer: Respondent disagreeing with any negotiable term or condition of this ITN are to provide a clear and detailed reason for the disagreement and a solution to the disagreement in his/her offer.

252. Vendor Question: ITN Section 2.48 (Work for Hire) and Standard Contractual Agreement Section 26 (Work for Hire): Will the University consider adding a customary warranty disclaimer? If yes, would inclusion of such request on Appendix I cause Respondent's offer to be rejected? Suggested language for consideration: "Notwithstanding anything else to the contrary, except for the express warranties made, Contractor makes no other warranties concerning the services or deliverables including, but not limited to, any implied or verbal warranties, warranties of merchantability, or fitness for a particular purpose."

UCF Answer: Respondent disagreeing with any negotiable term or condition of this ITN are to provide a clear and detailed reason for the disagreement and a solution to the disagreement in his/her offer.

253. Vendor Question: Will the University consider adding language to the contract to ensure any Supplier/Contractor confidential information shared during the engagement is protected? If yes, would inclusion of such request on Appendix I cause Respondent's offer to be rejected? Suggested language for consideration: "To the extent that Contractor provides the University with Contractor confidential information, including but not limited to: business activities, products, processes, methodologies, strategies, trade secrets, know-how, technical knowledge or any other confidential information ("Contractor Confidential Information"), the University shall, subject to the Florida Public Records Law(s), protect such Contractor Confidential Information from disclosure using the same standard of care, but no less than reasonable standard of care, that the University uses to protect its own confidential information from disclosure."

UCF Answer: Respondent disagreeing with any negotiable term or condition of this ITN are to provide a clear and detailed reason for the disagreement and a solution to the disagreement in his/her offer.

254. Vendor Question: How many potential systems, data sources, or datasets, are likely to be ingested into the DL/DW?

UCF Answer: Please see answer to question #12.

255. Vendor Question: How many tables are in each system that will potentially be ingested into the DL/DW? What is the size of these tables?

UCF Answer: Unknown at this time.

256. Vendor Question: What types of data (ex: Healthcare, PII, etc.) are likely to be ingested into the DL/DW?

UCF Answer: Data related to university operations like financial, HR, student.

257. Vendor Question: Is the data to be ingested into the DL/DW stored in databases on and/or off prem, other various formats (ex: csv, access, xml, json, parquet), or both?

UCF Answer: Data will be in structured data-bases, both on and off prem, and could be in non-structured formats.

258. Vendor Question: Is the data to be ingested into the DL/DW structured, unstructured or both?

UCF Answer: Will be a mixture of both.

259. Vendor Question: What is the size of the historical data from PeopleSoft that is to be ingested and stored?

UCF Answer: Please see answer to question #7.

260. Vendor Question: How readily available to end-users does the historical data from PeopleSoft need to be?

UCF Answer: Will need to be available as needed without a lengthy delay in retrieving.

261. Vendor Question: What is the desired interval to integrate data into the DL/DW? For example, would the ingestion and integration need to occur weekly, daily, near real-time or in real-time?

UCF Answer: Cadence will be determined during the project based on use case and best practice. However, we are not anticipating the need for real-time updates.

262. Vendor Question: What is the volume of data (number of tables, size of data, format of data) that will have to be extracted from Peoplesoft HR & Financials Data?

UCF Answer: Please see answer to question #7.

263. Vendor Question: Will the data to be ingested be provided in a staging or shared location for the proposed Data Lake to consume or will the data have to be pulled from the source systems directly?

UCF Answer: Pulled from source systems.

264. Vendor Question: "Design architecture which allows for ingestion for Workday datasets, as needed, and other data sources". Kindly specify what are the other data sources and data volume that will have to be ingested into the Data Lake

UCF Answer: Please see answer to question #12.

265. Vendor Question: Is it expected that the SI will have to identify the use cases for DL/DW or will this be given by the UCF IT Team

UCF Answer: Uses cases have already been identified, but others may come during the project.

266. Vendor Question: Kindly specify how do you assess the quality of data in UCF. Will there be a need to create a Data Quality Rules Engine?

UCF Answer: Please see answer to question #238.

267. Vendor Question: Kindly specify the data retention requirements in all layers of the Target Environment (DL/DW/Data Marts)

UCF Answer: Please see answer to question #18.

268. Vendor Question: How will the phase 2 and phase 3 of the project be logically separate? Both the phases have the same set of activity scope and hence require some clarity

UCF Answer: Phase 2 will be ingesting additional data sources beyond phase 1 and looking at building out the core warehouse based off data in Phase 1. Phase 3 is building out core warehouse for phase 2 data.

269. Vendor Question: UCF has proposed Agile methodology. Will thee be a Product Owner from UCF who will prioritize the backlog?

UCF Answer: UCF will have a project owner for the project.

270. Vendor Question: We assume that UAT will be undertaken by UCF. Kindly validate the assumption

UCF Answer: Yes, we will be doing validation and testing as the project moves along

271. Vendor Question: How many advanced analytics use cases has UCF identified as part of scope for this engagement? Will the SI vendor be expected to develop the Advanced Analytics use cases?

UCF Answer: These types of uses cases are not in scope for this project at this time.

272. Vendor Question: Will there be a need to create a sandbox for Advanced Analytics users?

UCF Answer: Not for these phases of the project.

273. Vendor Question: Does UCF intend to use only Azure based tools or can other softwares be used?

UCF Answer: That will depend on the software and the complexity required to integrate it with Azure and maintain it long-term. Any SaaS solutions not already in use will first need to be approved by UCF Information Security through the following process: https://infosec.ucf.edu/risk-and-compliance/vrm/

274. Vendor Question: What is the Data Governance software being used in UCF?

UCF Answer: Please see answer to question #53.g.

275. Vendor Question: Kindly specify what are the additional tools that will have to be supported during the integration

UCF Answer: Tools here are vague, but those will be determined based on use case.

276. Vendor Question: How many reporting users are proposed to use the new system?

UCF Answer: Please see answer to question #15.

277. Vendor Question: How many training hours does UCF expect the SI to undertake?

UCF Answer: To be determined, but as much as needed to ensure a thorough knowledge transfer to UCF staff has taken place.

278. Vendor Question: How many users will be expected during each of the training sessions?

UCF Answer: Unknown at this time.

279. Vendor Question: Does UCF allow remote training sessions?

UCF Answer: Delivery of training will be determined based upon which method(s) of knowledge transfer will best meet the needs of UCF staff. Remote training can be an option.

280. Vendor Question: We assume that the training will be about the ETL procedures, proposed systems and architecture. The trainings will not be on Softwares or Applications. Kindly validate this assumption

UCF Answer: That will be determined during initial planning. The expectation is that enough information will be shared to maintain the environment from bottom to top.

281. Vendor Question: What is the span of UAT cycles at UCF?

　　UCF Answer: UAT is project specific as the project demands.

282. Vendor Question: How many environments are to be considered in scope for the engagement (Dev, Test, Prod)?

　　UCF Answer: The number of environments will be determined in consultation with the selected vendor.

283. Vendor Question: Does UCF have any reservation on the choice of ETL tool? Are open source tools allowed in case required?

　　UCF Answer: Please see answer to question #231.

284. Vendor Question: Azure environment and reporting tools will be procured and provisioned by UCF. Kindly validate the assumption

　　UCF Answer: UCF will procure tools. However, selected vendor may be responsible for provisioning.

285. Vendor Question: UCF will provide the facility and logistics for the training. SI will provide training sessions and material. Kindly validate this assumption

　　UCF Answer: Yes, that is correct.

286. Vendor Question: Kindly specify the volume of users and the user groups

　　UCF Answer: Please see answer to question #15.

287. Vendor Question: Is there a need for data encryption or data masking?

　　UCF Answer: To be determined during data ingestion, use case, and in accordance with UCF security and policies regarding data security and privacy.

288. Vendor Question: Is there a need for Metadata Management, Data Lineage and Data Catalog? Kindly specify

UCF Answer: These are not in scope for this project.

289. Vendor Question: How will the downstream systems communicate with the target DW as direct query or as APIs

UCF Answer: Either or could be used and will be based on use case. However, we are in the process of implementing an enterprise data integration solution (Informatica)

290. Vendor Question: Kindly provide the details of the reports i.e. number of reports, types of user personas

UCF Answer: Please see answer to question #142.

291. Vendor Question: Is the test environment separately managed by the Development team. Are there any business users data that need to be managed in the test environment?

UCF Answer: A test environment would have to be built for this project.

292. Vendor Question: Will implementation team be exposed to PII or otherwise sensitive data? If yes, please provide more details about nature of the data.

UCF Answer: Yes. The sensitive data may include protected student, financial and HR information.

293. Vendor Question: What tools do you currently use to support SDLC (source control, CI server, artifacts repository, defect tracking tools etc.)?

UCF Answer: Information not available at this time.

294. Vendor Question: "Please clarify the typical process of deliverables acceptance to production. Please provide information pertaining to:
    a. procedural gates necessary to pass in order to deploy into production.
    b. required documentation package for the gates (CAB artifacts, documentation required by operations teams etc.).
    c. performance acceptance considerations.

UCF Answer: These will be developed as part of initial project discovery and planning.

295. Vendor Question: During the design and development of the target cloud platform, are there any inflight projects or data sources that may introduce data model changes in the DL or DW or DataMart's?

UCF Answer: Yes, the major one is the Workday implementation. However, those data sets are primarily slated for Phase 2.

296. Vendor Question: Describe the KPIs on how are we going to jointly measure success (e.g., defects, test results, SLA)?

UCF Answer: These will be determined at project start.

297. Vendor Question: Are the existing ETL/ELT audit, balance, and control processes expected to be migrated to the cloud without any changes?

UCF Answer: There is potential for this. However, we expect new processes and considerations will have to be built for this project.

298. Vendor Question: Do you have near-real-time data ingestion and reporting needs?

UCF Answer: Not for Phase 1. This cadence will be based on use cases beyond Phase 1. However, we're not anticipating needing real-time refreshes.

299. Vendor Question: Section 4.1 - Phase 1 "Fully Integrated with UCF data governance"
    a. Can you please identify the tool that is required to be integrated?
    b. Also, has UCF fully implemented the Data Governance tool?

UCF Answer: Please see answer to question #53.g.

300. Vendor Question: Please confirm that Phase 1 is about:

1 - Historical People Soft PS Data only? Or

2 - People Soft PS Data and Workday Data? Or

3 - Workday data which already includes PeopleSoft data migrated into Workday?

UCF Answer: Phase 1 is to load historical PeopleSoft data into the data lake.

301. Vendor Question: Phase 2: Identify specific large scale data use cases that require DL/DW support.

     a. Can UCF provide an approximate count of data sources that are targeted for entire solution?

     b. Also an approx. size of aggregate data?

UCF Answer: These are still to be determined, but some data sources have been identified for Phase 2. Data size of these have not been determined at this time.

302. Vendor Question: Sub bullet 4: Provide recommended data migration and mapping plan.
     a. What is the source for data migration and will that system be sunset? Or
     b. Was this referring to integrating with existing data sources?

UCF Answer: a. Phase 1 is focused on migrating historical PeopleSoft data. Sunset timeline has not yet been determined.   b. Yes.

303. Vendor Question: Since this contract is only for Systems Integration Services, has UCF already purchased Azure Data Analytics services or has conducted a POC for the same?

UCF Answer: We have not purchased Azure Data Analytics services or conducted a PoC.

304. Vendor Question: Does UCF already have an express route or like implementation to prioritize traffic between UCF on-premise to Azure Cloud?

UCF Answer: We currently have a mesh topology of VNET VPN gateways that provides connectivity between Azure and on-premises.

305. Vendor Question: Does UCF already have an express route or like implementation to prioritize traffic between UCF on-premise to Azure Cloud?

UCF Answer: We currently have a mesh topology of VNET VPN gateways that provides connectivity between Azure and on-premises.

306. Vendor Question: What is the size of the Data Management team who are planned to take ownership of the new Data Lake Platform?

UCF Answer: The exact number of team members has not yet been determined.