

**Request for Proposal Q01116
Data Warehouse Solution
Addendum #1
September 19, 2023**

All changes to the Request for Proposal (RFP) are valid only if they are issued by written addendum. Each respondent must acknowledge receipt of any addenda in their proposal submission. Each respondent, by acknowledging receipt of any addenda, is responsible for the contents of the addenda and any changes to the proposal therein. Failure to acknowledge receipt of any addenda may cause the proposal to be rejected. If any language or figures contained in this addendum are in conflict with the original document this addendum shall prevail.

This addendum consists of the following clarifications and amendments:

The objective of this RFP is to acquire a solution that provides the College with a strategy for managing data that are housed in disparate systems. The solution may include a custom solution, a data warehouse and/or data lake(s). The college is relying on proposers to recommend and provide the best solution, timeline and methodology to achieve that end.–We have attempted to answer specific questions below; however, we are not dictating the product(s) or solution.

1. The proposal Deadline has changed to November 3, 2023, at 2:00 p.m.
2. Oral Interviews and Vendor Demonstrations has changed to the week of December 4, 2023, for Shortlisted Vendors
3. Approval by Harper Board of Trustees has changed to January 2024
4. Implementation Begin date has changed to March 2025
5. The College is seeking to solve data aggregation challenges which impact the following:
 - a. Mandatory state reporting
 - b. Recreating historical information especially across disparate systems
 - c. Integration with learning management systems/student management systems.

This addendum consists of the following questions from the pre-proposal conference:

1. What is your new Data Storage?
Response: Currently the College uses AWS, OCI, Azure, we are not averse to others.
2. Do you consider customized or standardized?
Response: We are looking for proposers to provide the best solution for Harper.

3. How do you want to start?
Response: We would like to start with a subset of student and employee data with a plan to grow.
4. We are on a subscription-based solution and would like to know how many employees and students Harper has?
Response: Most recent headcounts reported to IPEDS are 12,434 credit students and 1,288 regular employees.
5. Have you all conducted Dataware strategies?
Response: We don't fully understand this question. However, this is expected to be within the scope of the project.
6. There are 14 data sources listed in RFP. Are you looking for a timeline to implement?
Response: We will start implementing with small sources then move to bigger sources. Vendors are expected to provide a recommended timeline.
7. Are there any limitations for off-shore vendors?
Response: Vendor needs to be responsive to Harper during Harper's business hours. Monday through Friday from 8:00am to 4:30 pm central time.
8. If we need to use another product, how should we engage with Harper team?
Response: We don't fully understand this question, however, your proposed solution should be included with your proposal along with any additional products that will need to be purchased. The College will evaluate along with the selected vendor the best strategy for acquiring those products.
9. Can you provide the existing reporting solutions?
Response: We largely use IBM Cognos and Power BI.
10. What is the current data storage?
Response: 1.5 to 2 terabytes for storage in current Operational Data Store. This does not include data in Fusion Cloud, or Destiny.
11. What is the population of data you would like included?
Response: Most recent headcounts reported to IPEDS are 12,434 credit students and 1,288 regular employees. We would like to include historical data.
12. What data solution are you looking for?
Response: The College is looking for a solution that can recreate the history across the system.

13. In terms of support, are you looking for support or will the College be hands off?
Response: We anticipate having expertise in-house to handle ongoing support and development. We expect that training and turnover will be part of the solution.
14. Do you need a contract vehicle to purchase this solution?
Response: It's not required, but if you have a contract vehicle, you can provide it with the proposal.
15. Is the ideal solution a public, private, or hybrid cloud solution?
Response: The College prefers a cloud solution and does not want an on-prem solution.
16. If the ideal solution is public or hybrid cloud, is the ideal solution based on Azure, another cloud vendor, or a mix?
Response: The College is open to any cloud solution.
17. For the narrative Response (C04.3.31 etc) is the ideal submission format in one centralized document in addition to the separate pricing document. Additionally, should we submit in word format or PDF?
Response: Pricing should not be included in the narrative document and should be provided in a separately sealed envelope. The PDF documents on a flash drive should also be provided in separate files, one for the proposal and the second one for the pricing.
18. We are not compliant, nor will we be compliant, to the Business Enterprise Program. We do not subcontract work, and the technology partners we work with are not BEP certified. Please let us know if Harper College can waive this requirement.
Response: The College expects that the vendors make a good-faith effort toward meeting the 30% aspirational goal. If you have made a good faith effort to utilize BEP firms where practical and cannot, request a waiver using the appropriate BEP forms included in the document.
19. Has your Data Strategy roadmap been fleshed out?
Response: We expect that after selection – there will be meetings to help us with/strategy for the right sources. Identification of initial data elements and a roadmap for completing in the inclusion of other sources.
20. When do we plan to implement?
Response: The project is scheduled to go to the January Board meeting for approval, project resourced by proposer, in February and implementation begins no later than March. Please submit confirmation in your executive summary that you will be able to achieve these key dates.

21. While reading the document our team noticed there is a statement acknowledging receipt of the RFP, we would like to know if there are any guidelines or any format to follow to send it, and could you clarify to us if there is any specific date to send it.
Response: Please disregard this requirement. Receipt of all addenda should be acknowledged with your proposal submission.
22. Whether companies from Outside USA can apply for this? (like from India or Canada)
Response: The College will evaluate any proposal received. However, management staff from the offsite location must be available to meet with Harper staff when needed.
23. Whether we need to come over there for meetings?
Response: Yes. In addition, if selected as a finalist during the evaluation period an on-site oral interview is mandatory if requested.
24. Can we perform the tasks (related to RFP) outside USA? (like, from India or Canada)
Response: Yes. However, Vendor needs to be able to work on Harper's time. Monday through Friday from 8:00 am to 4:30 pm central time.
25. Can we submit the proposals via email?
Response: No.
26. Considering the comprehensive scope of this proposal, the information shared is only the tip of the iceberg. Before we proceed, I would greatly appreciate insights into the allocated budget for this solution.
Response: The College is not sharing the amount of the budget at this time. The President has assured that funds will be available to complete this project.
27. Does Harper College want only a Data Warehouse or are they open to a Big Data Lake Environment?
Response: The RFP is for an overall data strategy solution and does not assume Data Warehouse or Data Lake components.
28. Is harper College open to a SaaS, Big-Data environment that can take data from multiple sources?
Response: Yes.
29. Does harper College require ongoing maintenance and management of the Big Data Lake environment?
Response: The RFP is for an overall data strategy solution. If a data lake becomes our solution, it will have to be maintained. We would like to have the expertise in-house, but that may be a decision made as we learn more about the solution.

30. Are the data sources unstructured or structured? Please name the database vendors
Response: Most are structured. Oracle database, Microsoft SQL database, and PostgreSQL are the major solutions we currently utilize.
31. Do the data sources need to be utilized or can RestApi get the data?
Response: We would like to use the best method to obtain and transform data, be it direct to data source or API. This also depends on the data source.
32. How often does the data need to be refreshed?
Response: The platform should be configurable such that data sources can be refreshed on different cadences. We expect that most data sources will be refreshed daily.
33. How many Datasets does the Platform need to ingest data?
Response: The sources of data are outlined in the RFP.
34. Please describe the data sources (Table, views, Excel, CSV files, RestApi, etc.) and quantity per type.
Response: All of the above and the amount to be determined during scope discovery.
35. How long does Harper College want to store its data?
Response: Indefinitely. Certain data may be purged on a retention schedule to be determined.
36. Can the vendor utilize a collector agent, rest API, or both to get the data?
Response: The College is looking for method that best ensures the data is being collected properly.
37. Is Harper College open to a new analytics/reporting platform versus Cognos and Power BI?
Response: Cognos and Power BI will continue to be used with this new platform. Please see B. Required Tasks and Services - 5, 16.
38. Does Harper College want to create its own reporting or is it open to having the reporting created and provided by the vendor in a timely manner?
Response: Harper creates its own reporting and is expected to continue to do so with this new platform.
39. How many reports does Harper College currently have?
Response: Variable. We currently have thousands of reports created in Cognos. Not all are in use, some might be ad hoc. Please note: The primary scope of this project is not report building.

40. How many reports does Harper College look to have in years 1-5?
Response: Depends on what is considered a report. Dashboards utilize multiple reports to display aggregate data and drill downs. We could envision the use of more dashboards or interactive reports to add value to our current list of reports. Please note: The primary scope of this project is not report building.
41. Does Harper College require alert mechanisms?
Response: Yes, we will require alerting at key points in the pipeline. Data source unavailable, ETL errors, etc.
42. Can we get a tally of the questions and answers that came up on the 8/29 call?
Response: Questions and Responses from the 8/29 meeting are included in this addendum.
43. Can you please confirm whether you require 5 references (per the reference form) vs. 3 per C.03.1?
Response: The College is looking for Five (5) references and Three (3) should be in higher education.
44. Are you willing to accept an electronic signature in lieu of a wet ink signature on all forms?
Response: Yes. As long the College can read and identify the signatory.
45. Are you willing to accept an electronic submission in lieu of the hard copies? If not, will Harper College accept responses on a USB shipped to your location (no hard copy provided)?
Response: The College will not accept electronic submission in lieu of receiving Two (2) sealed Hard Copy proposals and one (1) complete copy via USB flash drive.
46. Are you willing to waive notary requirements for this RFP? If not, is e-notary acceptable?
Response: E-notary is acceptable.
47. Is it acceptable for an authorized agent to sign on behalf of a company officer, accompanied by a letter of authority, to help streamline signature requirements?
Response: Yes, that will be acceptable.
48. Would you be open to vendors moving Attachments A and B into Word so that we can expand upon our response and include screenshots/images where necessary while ensuring the vendors maintain integrity of the attachments?
Response: Yes, that will be acceptable.

49. The pricing proposal mentions another RFP title (Video Creation and Management Platform). Can vendors replace that with the title of this RFP?
Response: Yes, please replace the title with Q01116 Data Warehouse Solution.
50. What is the size of data that needs to be processed?
Response: There are multiple data sources, some of which we do not know the underlying size. However, our Banner and Degree Works databases combine for about 1T of storage. We would expect that the other data sources will not add more than another 500G.
51. How many users are going to have downstream system access and what will the usage be like (will it be ad-hoc usage)?
Power BI users. There is a mix of pre-built, scheduled reporting, dashboards, and ad-hoc querying.
52. In the appendix (page number 27), what does N/A signify in the delivery column of the data sources table for sources like MS Excel, and delimiter files?
Response: Those data sources are generic, and may not be a part of the initial implementation, however we need the solution to be able to access those sources if necessary.
53. Is there a use case for transforming unstructured data to structured data for reporting purposes?
Response: We are not aware of any unstructured data. Most of our data is structured.
54. Do you have a current partnership with Snowflake?
Response: No
55. This is to check with you the possibility of submitting alternative references (not from the community colleges) for the solicitation. As per the RFP/page 28, recent Higher Education Market References of the solicitation, there is this mention - "provide at least five (5) references, of which a minimum of three (3) should be in higher education (preferably community colleges)" Though we have successfully delivered 100+ data analytics projects across several US public including the 2nd largest public school district i.e., Los Angeles Unified School District (LAUSD), and other private sector clients, we have not yet delivered a data analytics project to any of the community colleges and higher education clients. Given this situation, can we submit references for some of our leading data analytics engagements even though they may not have been from community colleges?
Response: Yes, you may submit Non-Higher Ed references to supplement your public sector clients. Please refer to the RFP for the actual scope of this project.

56. Kindly share the anticipated/ballpark budget for this project?
Response: See response to question 26.
57. Can we provide services remotely (from a location outside of the USA, say India)?
Response: Yes, however, the services need to be available during Central business hours.
58. Kindly provide information about the existing data analytics platform – tool/technology used for data integration, data warehouse and data visualization?
Response: Data visualization is largely handled by Microsoft Power BI.
59. What is IT organization structure and high-level Harper Organization Structure?
Response: The IT department currently has 3 directors reporting to a CIO. The CIO reports to the Executive Vice President - Finance and Administrative Services.
60. Please provide the current Technology Architecture landscape.
Response: Currently Harper Employee system is SaaS, Oracle Fusion. Our student system runs as PaaS and IaaS.
61. Who are the business stakeholders for IT application?
Response: The primary users of this system will be Institutional Research, but it is anticipated that reports created from this system will help with overall decision making at the executive level.
62. What is the current security compliance protocol for data in transit and data at rest?
Response: Data in transit and at rest must be encrypted.
63. What is current Security Risk for Harper?
Response: We don't fully understand this question, therefore unable to answer at this time.
64. Can you provide information on the current audit compliance issues related to security and processes in the IT department?
Response: Harper College is required to be compliant with FERPA, HIPAA, GLBA.
65. Who bears the responsibility for hardware maintenance and vulnerability patches? Will it be the responsibility of the provider or Harper team?
Response: Depends on the solution.
66. In the RFP, performance monitoring is mentioned, could you please provide information about the KPIs for performance monitoring?
Response: The solution needs to perform in a timely manner, the KPIs depend on the solution chosen.

67. Are you seeking 24x7x365 support for Data Warehouse and for the analytical platform?
Response: The proposer should disclose their level of support and response time being proposed.
68. For offshore support, would 4-5 hours be a good overlap?
Response: It depends on the instance (Project implementation, Support or Future enhancements). In General, support needs to be responsive during Harper business hours. Provide the service levels and response time that you are proposing.
69. Will harper continue using its current support helpdesk or ticketing system, or will it be provided by the Managed Services? If Harper has an existing ticketing system, could you please specify the application being used to track the ticketing system?
Response: Harper will continue to use our ticketing system which is Service Desk Plus by Managed Engine.
70. RulesIQ use VPN connection (CISCO mainly) for remote connections to their clients. Does Harper permit remote access for IT Managed Services support? If so, what type of remote support connection is preferred, such as Zscaler, Cisco VPN, or any other specific method?
Response: Cisco VPN.
71. **Page 16. #1 - “The solution will store all our disparate source data, with historical reference points, indefinitely.”**
Q1: There is an inherent cost, complexity and performance implications in preserving a “hot” version of data to be accessed on demand in perpetuity. Is there room for future definition of “all data”?
Response: This solution is not all data – just the data needed for analytics, with data changes being maintained.

Q2: Are there resources at Harper today who can articulate the priority / importance of data so that the solution provider can make the best determination on how to approach storage?
Response: Yes, the key data will be identified as part of the initial project strategy.

72. **Page 16. #5 - “The solution must support integration with business intelligence tools at the semantic level. Changes to the data repository structure and semantics must be seamlessly provided to the BI tools.”**
Q1: Because all BI tools have some concept of a semantic layer (I.e. Power BI Model) it is truly an art and a science to determine how and where to store what we would call semantic layer information. What BI tool does Harper foresee becoming the primary BI tool across the university? especially for self-service access?
Response: Currently, Power BI is used for creating dashboards and interactive reports. Self Service for Harper employees will not be directly to this data source, but rather to the dashboards/reports created.
73. **Page 16. #10 - “The solution should support structure and model version history in addition to data history.”**
Q1: Can Harper expand on the scope of this requirement?
Response: Harper would like to be able to identify changes to the data.
74. **Page 16. #16- “The solution must be accessible by multiple, proven reporting tools. Examples include, but are not limited to applications such as Cognos, Power BI, Excel, and direct access through vendor tools (example: SQL*Plus.)”**
Q1: SQL Plue is an Oracle specific tool. What would be the use case for using this tool to access data in a non-oracle data repository?
Response: It was just an example. Harper needs to be able to query the data and create reports. This needs to be accomplished by appropriate tools.
75. **Page 16. #17 - “The solution must meet acceptable performance measurements. This may be determined/influenced by the type of solution but agreed upon by Harper College and the Applicant prior to engagement.”**
Q1: Can harper define performance measurements further?
Response: Data must load in a timely manner, during off hours so that business reports are ready for viewing the next business day,

Q2: How does Harper expect the solution provider to provide this information prior to the engagement?
Response: Response should be included in the RFP.

76. Page 27. Appendix (Source Systems)

Q1: Can you please provide the specific version and sub-versions/release numbers of the data sources listed?

Response: Fusion is 23C, Banner is version 9. Versions and sub-versions are not relevant to demonstrating a solution as it must be flexible enough to change as Harper introduces new systems and upgrades current ones.

Q2: Harper mentioned there will be files and the examples cited are structured. Will there be any unstructured data? Also, please note if this includes images, video recordings, etc.

Response: Currently there is not, but we would like the system to be able to handle this as perhaps Harper might incorporate data from our Mobile system or future platforms.

Q3: Harper mentioned on the call that there is streaming data from Student apps. What other data API/REST/streaming/events need to be captured? Examples: Student lifecycle events, Employee lifecycle events, Business events.

Response: These should be the primary ones.

77. How many users will need to access the system?

Response: Less than 50.

78. Approximately what are your data storage needs?

Response: See response to questions 71-76.

79. Do you have a specific volume of data required for this solution?

Response: See response to question 34.

80. What are your expectations for the data transfer from your service/applications to the solution?

Response: See response to questions 71-76.

81. Does Harper have a preferred middleware for integration from your service/applications to the solution?

Response: No. The solution offered should dictate this.

82. What type of ingestion is required? (I.e. batch ingestion or streaming ingestion)

Response: The solution should support batch file uploads either scheduled or on demand, APIs and data changed by message queuing.

83. How much additional data storage is needed?

Response: See response to question 1.

84. How many profiles are to be harmonized?

Response: The College will not address at this time as we do not fully understand this question.

85. What use cases do you want to start with?
Response: Student Data followed by Employee data.
86. What is your timeline for implementation and going live?
Response: We would like to begin in March. Please propose a reasonable timeline to implement your solution, milestones, etc.
87. Does Harper College create the table views? or does the Vendor have to create the views?
Response: Harper would work in conjunction with the vendor and ultimately fully assume this responsibility.
88. Does Harper College export the data from all the data sources to a JSON or does the vendor need to do it?
Response: This needs to be part of the solution - How is data to be pulled from the originating source.
89. Please indicate the number of tables/views, records, and the method of exporting data that the vendor ingests into the Data Warehouse. An example of how to extract is via RestApi or Select statements or manually export via application UI or Application UI has the data export mechanism and uses that, etc.
Response: This will be developed as part of the solution.
90. Is Harper open to more than one technology to meet the requirement?
Response: Yes, as long as they work together, and the data appears seamless.
91. We as a service provider do not have experience in higher education, but our technology partners do. Please advise if this is acceptable and if our technology partners' references in higher education will suffice.
Response: You are responsible for demonstrating you have the resources, staffing and products to meet our requirements.
92. Please define the business drivers for this RFP. What challenges does Harper currently face in its current state?
Response: Ability to create mandated State reports in an easily executable manner, as well as analyzing different business scenarios including Student retention and completion.
93. Which team is leading and funding this project?
Response: This is led jointly by IT and IR.
94. Who are the main stakeholders involved with this project?
Response: IR and IT.

95. Which other business teams (departments) are involved in this project?
Response: May include Student Engagement HR and the Business Office.
96. How many teams and people will interact with the proposed solution?
Response: Mainly IR providing dashboards for the organization's consumption.
97. Is there a deadline for when the solution needs to be live?
Response: See response to question 86.
98. Are there any systems which Harper is looking to replace/sunset?
Response: Not at this time.
99. Are there other, parallel initiatives running along with this RFP?
Response: Yes, there are other projects running parallel along with this project.
100. Does Harper have a team(s) responsible for change management?
Response: Not a dedicated team.
101. As there is student data involved, we assume firms will need to comply with PII requirements, please confirm.
Response: Yes.
102. **Contract Goal to be Achieved by Vendor:** This solicitation includes a specific BEP participation goal of 30% of the total dollar amount awarded to MBEs and FBEs, with at least 50% of the total dollar amount awarded to FBEs. Can the college please provide clarity on requirements for Minority and Women Owned Businesses. Is the 50% FBE requirement taken from the total contract or from the 30% BEP number?
Response: The solicitation includes a specific BEP participation goal of 30% of the total dollar amount awarded to MBEs and FBEs. The College will accept any combination of MBE, FBE % toward meeting the aspirational goal.
103. Can more detail be provided in terms of the scope from a business perspective? What are the goals/objectives of the data warehouse from a business, not technical, standpoint?
Response: See response to question 92.
104. What are a few primary use cases or desired outcomes once fully implemented?
Response: See response to question 92.
105. Are there higher priority uses that William Rainey Harper College (Harper College) wishes to achieve nearer term?
Response: Yes. Successful mandated state reporting with ease.

106. On a scale of 1-10 (where 1 is “not a problem” and 10 is “a significant problem”), could Harper College provide information on the current challenges being experienced most frequently with using data today?
Response: The biggest challenge is not listed. We are unable to onboard and integrate new systems into our current data platform, making changes to data transformations is impossible in some cases. Refer to clarifications listed above.
107. Can Harper College share who will be on the evaluation committee for this RFP?
Response: The evaluation committee includes IT experts, functional experts from Institutional Research and procurement.
108. What are the top 5 kinds of analyses that the institution would expect the data warehouse to provide?
Response: See response to question 92.
109. Is this project currently budgeted and if so, what is the budget?
Response: See response to question 26.
110. What is the expected delivery timeline for implementing the solution? This year, next year, etc.?
Response: See response to questions 20 and 86.
111. Which institutional department(s) is/are funding this project?
Response: The College is not disclosing that information.
112. Which institutional department(s) will be leading this project?
Response: IT and institutional research (IR).
113. Can Harper College provide some detail around current technical capabilities for Harper College staff? On a scale of 1-10 (where 1 means “no capabilities” and 10 means, “very skilled capabilities”), can you describe your in-house or existing third-party partner expertise with:
- Database management / Database Administration
 - Relational database management?
 - SQL administration/querying
 - Cloud platforms (such as AWS, GCP, Azure)
- Response: Proposer should identify the internal resources and expertise required by the College and we will evaluate where we need to add staffing if necessary.**

114. Does William Rainey Harper College (Harper College) currently have contractual access to retrieve data (either via direct database access, Application Programming Interfaces (APIs), or other form of extract) from the vendors of the listed data sources?
Response: Yes.
115. Does Harper College have a preferred cloud services vendor (for example, Amazon Web Services, Google Cloud Platform, Microsoft Azure, etc.)
Response: Harper uses OCI Azure and AWS and we are not averse to others.
116. What are the primary reporting, dashboarding, and other analytics tools that Harper College would like to connect to the provided solution beyond those listed in section B.16?
Response: See response to question 9 and 40.
117. Are there other direct query tools used by analysts beyond SQL*Plus, such as Oracle SQL Developer that Harper College would need to continue using moving forward?
Response: Harper is open to using the appropriate query tool for the proposed solution.
118. Could Harper College kindly consider granting an extension for the due date?
Response: Not at this time. Please note changes to key dates provided in this addendum.
119. Could Harper College please provide clarification regarding the permissibility of engaging a subcontractor in this project?
Response: It's permitted to use subcontractor for some elements of this project.
120. Could Harper College kindly consider accepting electronic responses?
Response: See response to question 45.
121. Does Harper College accept remote resources to work on the project?
Response: Yes. See response to question 24.
122. Does Harper College prefer on-site resources to execute the project?
Response: The resources do not have to be on-site but must be available during Harper's business hours.
123. Could Harper College please clarify if it is allowed to use digital signatures?
Response: See response to question 44.
124. Does Harper College require wet ink signatures?
Response: See response to question 44.

125. Is there an overall page limit for proposals?
Response: There is no specific page limit for the proposal.
126. Could Harper College please clarify if it is required to provide the Good Standing Certificate alongside the proposal response?
Response: It's not required.
127. Is there any incumbent associated with this project? If so, please disclose the name?
Response: No.
128. Is it required to provide the COI alongside the proposal response?
Response: No. The COI is only required for the awardee.
129. If the resources we provide at the time of proposal submission are not available at the time of a potential contract award, could we replace them with equally qualified resources?
Response: The expectation is that the team to which the College awards the contract will be available to perform the project and reserves the right to accept or reject changes.
130. C.03 Proposals of Respondents (Statement of References), if we are using a subcontractor, can we provide the subcontractor references?
Response: Yes. See response to question 55 and 91.
131. Is it allowed to provide commercial references?
Response: See response to question 55 and 91.
132. Does Harper College have a mandatory participation goal for DVBE/SBE/MBE?
Response: The solicitation includes a specific BEP participation aspirational goal of 30% of the total dollar amount awarded to MBEs and FBEs.
133. If we are using a subcontractor, can the subcontractor meet the DVBE/SBE/MBE participation?
Response: Yes. You can use subcontractors to meet the 30% participation aspirational goal.
134. Will Harper College have preferences for a vendor that is certified as DVBE/SBE/MBE?
Response: The College will evaluate proposals based on the criteria outlined in the RFP.
135. How many vendors is Harper College looking to award?
Response: We are anticipating awarding a contract to one vendor.

136. Our firm is a certified MBE in California by NMSDC. Could Covered California please clarify if we can claim the preference or incentives?
Response: Only firms certified by the state of Illinois count towards the BEP goal.
137. What is the estimated budget for this entire project?
Response: See response to question 26.
138. Page 30 of the RFP, FORM OF PROPOSAL: Could Harper College please clarify whether the mentioned form requires a seal?
Response: A seal is preferred. However, the signature of an individual(s) with actual authority to bind the company/corporation is acceptable in Lieu of the corporate seal. Please identify that individual in your executive summary letter.
139. Page 30 of the RFP, FORM OF PROPOSAL: states that the president, vice-president, secretary, and treasurer must sign this form. Could Harper College please clarify if we have to complete those signatures or if those are from Harper College's side?
Response: The proposer is required to provide those signatures.
140. Page 34 of the RFP, pricing signatures, states that the president, vice-president, secretary, and treasurer must sign this form. Could Harper College please clarify if we have to complete those signatures or if those are from Harper College's side?
Response: The proposer is required to provide those signatures.
141. Page 34 of the RFP, Pricing: Could Harper College please clarify whether the mentioned form requires a seal?
Response: A seal is preferred. However, the signature of an individual(s) with actual authority to bind the company/corporation is acceptable in Lieu of the corporate seal. Please identify that individual in your executive summary letter.
142. UTILIZATION PLAN form on page 45 of the RFP: Could Harper College please clarify if this form must be completed by the prime and by the subcontractor for the BEP goal?
Response: The BEP form must be completed by the prime. If you are going to use subcontractors, please identify them in the BEP Utilization Plan.
143. What is the suggested font size and type for the proposal?
Response: The College has no specific requirement.
144. Is it allowed to use a subcontractor for 100% of the completion of this project?
Response: As there is a 30% goal associated with this project, subcontracts should conform to federal statutes, the State of Illinois Business Enterprise Program, as well as specifications included in this RFP.

145. Is Harper College looking for a cloud or on-premises solution?
Response: See response to question 15.
146. How will Harper College evaluate proposals as there are no points specified in the Evaluation Criteria?
Response: The evaluation criteria are listed in B.06 Evaluation Considerations. However, the College will not share.
147. How many sources must the solution be able to ingest?
Response: See response to question 6.
148. Are there specific visualization tools Harper College prefers?
Response: See response to question 58 and 176.
149. Can a firm with no educational experience but with Data experience submit a response to this solicitation?
Response: See response to question 43 & 55.
150. Can Harper College please provide information about third-party data sources?
Response: The information is listed in the RFP.
151. Does Harper College have any existing data source in the cloud (Azure or AWS)?
Response: Yes, and OCI.
152. Does Harper College have any existing reporting system for analyzing data?
Response: See response to question 9.
153. How does Harper College rate the quality of data for each of the data source systems?
Response: For the purpose of this RFP assume that data clean-up is not required and that the quality of data will be sufficient.
154. What is the approximate size of current data sources?
Response: See response to question 10.
155. Does Harper College have any portal or software application to capture data?
Response: No.
156. Does Harper College have any centralized system to store data from multiple data sources or is analysis done from transactional sources?
Response: Analysis is done through a combination of tools and workflows and is not currently centralized.

157. Does Harper College have any preferred cloud solution for data warehouse (Azure/AWS)?
Response: See response to question 151.
158. Is there any historical data that needs to be loaded in the centralized data repository? If so, please mention the period for which the history data load needs to be considered.
Response: Yes. Historic data will be imported from freeze tables in ODS and additional legacy repositories.
159. What is the expected source-wise data growth rate in terms of % on a yearly basis?
Response: <10%.
160. Is there a preferred database/data warehouse platform that aligns with the internal skill sets for the long-term supportability of the solution? (SQL Server/Oracle/PostgreSQL)?
Response: No. Harper is open to the best solution for this proposal.
161. Can Harper College please describe the existing technical stack?
Response: Source systems are listed in the RFP.
162. Is Harper College looking for a specific reporting/dashboard solution (Power BI/Tableau)?
Response: See response to question 37. Harper is open to the best solution for this proposal.
163. Can you share with us the types of resources/roles/skillsets you have within your team whom we might be able to leverage?
Response: See response to questions 113.
164. How are you staffed for ongoing support/maintenance within IT?
Response: IT has a skills in Oracle and Microsoft SQL, and it is anticipated that additional staff will be added for the ongoing support of this solution.
165. Due to Non-Disclosure agreements with our clients, we will be able to provide the contact details related to our Client PoCs at a later point of time/prior to commencement of interviews with shortlisted vendors. please confirm.
Response: References requested need to be provided with the proposal submission, however the actual contact information can be provided at a later date when requested.
166. References with regards to our proposed personnel experience in the similar projects and those projects PoCs will also be shared later. Please confirm.
Response: See response to questions 43 and 55.

167. Pricing: total cost of ownership over 5 years period is mentioned under the pricing section, but the prior contract period is defined as 2-year period. Please clarify.
Response: We anticipate the contract term will be about 2 years to complete the scope of work and can be negotiated based on the needs of your proposed solution. The College desires to gain an understanding of the totals cost to anticipate the five-year cost based on ongoing expense as a result of this solution (e.g., ongoing licenses and support fees, etc.).
168. What is harper Colleges' current Data Warehouse solution
Response: We do not have one.
169. What data governance systems and policies exist at the college?
Response: The College will define and determine as part of the implementation.
170. Are there existing data lifecycle policies/practices?
Response: Harper College follows State requirements for data retention.
171. Do your team follow agile or waterfall development?
Response: Harper College is open to either approach as required for the proposed solution.
172. What resources does Harper College have to support this work?
Response: See response to question 164.
173. Is Harper College looking for ongoing, post-engagement support?
Response: The proposer should identify what will be required and identify the College's 5-year cost.
174. In the current state, do you have the in-scope data sources (listed in appendix) already co-located in a data lake and/or data warehouse? What is the tech stack (e.g. SQL Server, Oracle, etc.)?
Response: No, the data is not currently co-located in a data warehouse or lake, that is part of the scope of the RFP. Harper is open to any appropriate tech stack for the solution.
175. In the current state, do you have the cloud infrastructure within which to build? If so, which platform (e.g. AWS, Azure, Google Cloud)? And do you have workloads already in production or only in a non-prod exploratory environment?
Response: Harper College has both non-production and production workloads in OCI, Azure and AWS.

176. Current state BI platforms include Power Bi and Cognos, is there an effort to consolidate onto a single enterprise-wide standard data visualization platform to gain efficiencies regarding focused skills and the maintenance of a single code base?
Response: At this time, no. However, a new reporting solution may prompt us to evaluate our position again.
177. Does Harper College have an established Architecture Review Board (ARB) to review/approve key enterprise architecture and data architecture decision points?
Response: The College doesn't have a formal review board, and we would need guidance about data governance best practices.
178. Does Harper College have an established Data Governance office with clearly defined roles and responsibilities?
Response: No. The College would need guidance as a part of the solution.
179. Does Harper College have an existing MDM (master data management) platform used to cleanse and deduplicate?
Response: No.
180. What Domains are highest priority to be mastered in both the current and future state? E.g., student, faculty, course, etc.?
Response: Student and related data.
181. Does Harper College have a preference for a particular data modeling methodology (e.g. Data Vault 2.0, Kimball-style data marts vs inmon EDW)?
Response: The College does not have a preference for any particular data modeling methodology.
182. Does Harper College already have systems, applications, and presence in either of these two public clouds: AWS and/or Azure? Or an existing IT skill set? Which of these two Clouds' presence is greater? Is there any preference for the College for choosing an AWS-based or Azure-based solution all other things being equal?
Response: We are familiar with Oracle Cloud Infrastructure, Azure, and to a lesser extent, AWS. Between Azure and AWS, we have more presence with Azure. We might prefer Azure to AWS, but we are not opposed to using AWS.
183. For all Data Sources listed in the Appendix, can you provide an estimate of the number of raw tables that may need to be landed from this system at the current project phase (in-scope of the project the suppliers are bidding for this RFQ)? When exact information is not available, please provide a range (+- 50%).
Response: This will be discovered as part of this project.

184. For generic data sources ("Oracle Database", "SQL Server", "REST Data Services", "Delimited Files"), please provide the number of distinct database instances (API endpoints, file feeds) that need to be ingested in-scope of the project. For each database, please provide a number of tables that will need to be ingested in the scope of the project.

Response: This will be defined as part of project implementation.

185. For IaaS and On-Premises Data Sources (Ellucian Banner, Degree Works, SARS, Ellucian ODS), can you indicate the database that they run on, and whether the data ingestion needs to be done directly from this database, via file extracts, or via an API?

Response: The solution must support all methods of data extraction – so outlining by each system is not required at this point.

186. Is this a green field implementation, or were there any legacy Data Warehouses in place previously? If there were, please share the details of the current-state or legacy Data Warehouses that need to be replaced - including the Platform, Technology, and Volumetrics (which data sources they covered, how many tables were being ingested, derived tables built, reports built, etc.).

Response: There is no current data warehouse.

187. Please clarify the status of Ellucian ODS. Will it be a Data Source continuously feeding the new Data Warehouse - or is it essentially a legacy Data Warehouse (ODS) that needs to be replaced by the New Data Platform (but may coexist with it during the project delivery, and can be used for historical and frozen data migration)?

Response: ODS will continue to be used for its current purpose, the New Data Platform will run in conjunction. The frozen data can be used to seed the New Data Platform.

188. Are there requirements to build or migrate any use-case-specific BI reporting or to support any specific business use-cases (by building derived data products, data marts, and/or reports)? If yes, please outline the specific use-case requirements for each use-case and report to be built or migrated, and the total number of derived data mart tables and reports that the Vendor on this project is expected to build and deliver (in addition to the foundational data platform and raw data ingestion)

Response: The vendor for this project is not expected to build reports, but rather demonstrate the capability of the solution to be the source of reports.

189. Since we unfortunately missed the pre-submission meeting on Aug 29, is there a recording available?

Response: There is no recording available. The questions asked and official responses have been incorporated into this addendum.

190. Does Harper College have any existing ETL jobs in place for current architecture?
If yes How many ETL jobs are there in the current system?
Response: These ETLs are for our current ODS.
191. What are the different data types and formats of the data that will be stored in the proposed centralized database/repository?
Response: It depends on the solution proposed. The solution must support all data types.
192. Approximately, how many reports are expected to be developed as part of this project?
Response: The project is looking for the best solution that can generate reports from all 14 data sources.
193. Is there any preference for a development framework such as Agile/Scrum?
Response: No preference.
194. What is the current skillset of the incumbent team? Are there data scientists, analysts, developers?
Response: While we do not have anyone with the job title data scientist, we do have an analyst with that skill set. In addition, we have research and business analysts, developers and DBAs.
195. Do you expect the vendor to deploy any on-site resources to complete any tasks in the project?
Response: Onsite is not required.
196. Can we utilize a hybrid resource model (on-site, remote, off-shore) to accomplish the project?
Response: Yes. See response to questions 7 and 122.
197. Who will be the target audience for business training – Data analysts? System owners? Reporting users? Report builders?
Response: Data analysts, Report builders, System owners and IT.
198. Do you want the solution to easily integrate with various data sources commonly used in education, such as Student Information Systems (SIS), Learning Management Systems (LMS), and financial systems?
Response: Yes.
199. Does the solution need to comply with relevant data protection regulations such as GDPR, HIPAA, or FERPA?
Response: Yes.

- 200.** Let us know the support hours post implementation?
Response: See response in question 13.
- 201.** What are the number of concurrent users for Data Visualization (Eg # of db admins, db users,)
Response: Less than 200.
- 202.** Number of named users and concurrent users to connect to the system?
Response: Less than 200.
- 203.** Can you provide information on recovery time objectives (RTO) and recovery point objectives (RPO)?
Response: System must be recoverable within 48 hours. Since the data is available in other systems, solution needs to be able to re-ingest needed data.
- 204.** Is there support for APIs and connectors for custom integrations needed?
Response: Not currently.
- 205.** What is your requirement for handling data governance, including data lineage, data quality, and metadata management?
Response: This is required, and the College would need guidance about data governance best Practices. (We request guidance on data governance best practices as we will establish them for requirement.)
- 206.** What is the pricing model for your data warehouse solution? Is it subscription-based, pay-as-you-go, or based on data storage and processing?
Response: There is no specific requirement. Please complete the pricing form. -Attach additional pages as needed to provide further information regarding pricing as applicable to your solution.
- 207.** What level of customer support and training would you like to ensure that your IT and data teams can effectively use the solution?
Response: The support and training need to meet IT and IR expectations and comfort level of using the solution.
- 208.** What are the primary objectives of implementing a Data Warehouse Solution in the college?
Response: See response to question 92.
- 209.** What data sources will be integrated into the Data Warehouse?
Response: The data sources are listed in the RFP.
- 210.** What is the approximate budget for the project?
Response: See response to question 26.

211. Are you fine for an onshore and offshore delivery model?
Response: See response to questions 7 and 122.
212. What types of data will be stored in the Data Warehouse (e.g., student records, financial data, enrollment data, etc.)?
Response: The college will not be using the data warehouse for storing.
213. What is the expected data volume and growth rate over time?
Response: See response to question 159.
214. What are the security and compliance requirements for handling sensitive student and institutional data?
Response: See response to question 62.
215. What are the key performance indicators (KPIs) and metrics that the Data Warehouse should support for reporting and analysis?
Response: See response to question 66.
216. Who are the primary stakeholders and users of the Data Warehouse, and what are their specific reporting and analytics needs?
Response: See response questions 61 and 51.
217. What is the timeline for implementing the Data Warehouse Solution?
Response: See response to questions 20 and 86.
218. Are there any existing systems or databases that need to be migrated or integrated into the Data Warehouse?
Response: No. Only the data sources that are listed in the RFP will be integrated into the Data Warehouse.
219. What reporting and visualization tools are you currently using for accessing and analyzing data in the Data Warehouse?
Response: See response to questions 9 and 58.
220. What data retention policies and archiving strategies will be in place?
Response: Harper adheres to State retention policies.
221. How will data access and permissions be managed to ensure that only authorized users can access specific data sets?
Response: This must be demonstrated as part of the solution. Ideally data permissions should flow from source system.
222. How will the Data Warehouse handle historical data and support time-based analysis (e.g., trend analysis, year-over-year comparisons)?
Response: That should be part of the solution. The solution should support any permutations from all sources of data.

223. What measures will be taken to ensure that the Data Warehouse solution aligns with the college's long-term strategic goals and adapts to changing requirements?
Response: The solution needs to provide guidance in regard to data governance to ensure continued value of the solution to the College.
224. Would you like to have an end to end system monitoring capability as part of the solution?
Response: Yes.
225. What is the expected growth in data volume annually?
Response: See response to question 159.
226. How much historical data will need to be initially ingested into the solution?
Response: To be determined during the project. It will depend on the initial data to be loaded.
227. Which specific sources require data capture frequencies less than 24 hours, and what are their preferred intervals?
Response: See response to question 32 – solution needs to be flexible in its ingestion of data.
228. Could you provide examples of the types of slowly changing dimensions you are currently dealing with?
Response: We are currently freezing the data to simulate SCD functionality.
229. Could you provide examples of the types of business relationships, rules, and model changes the college anticipates or has experienced in the past?
Response: New vendors and applications are introduced as the business requires.
230. Which Business Intelligence tools does the college currently use or plan to use in the future?
Response: See response to question 37. Cognos and PowerBI, primarily.
231. Are there any existing logical data models or metadata structures the college wishes the solution to incorporate or align with?
Response: Matching Ellucians ODS structure would be useful for student data as well as some Oracle Fusion functionality.
232. Are there any anticipated features or requirements that will be needed in the foreseeable future?
Response: All current requirements are outlined in the RFP.
233. What are the current authentication technologies being used at Harper College?
Response: Azure AD; Active Directory.

- 234.** Can you specify the exact security and auditing standards the college adheres to or wants the solution to meet?
Response: Audit PII data access and general system access.
- 235.** What is the current technical expertise of the Harper College team that will be interfacing with the solution?
Response: See response to question 113.
- 236.** How many users are expected to be trained, and what is their technical proficiency?
Response: Less than 50 all SMEs.
- 237.** What are the current benchmarks or performance measurements that the solution should aim to achieve or surpass?
Response: See response to question 66.
- 238.** Are there any preferences for cloud service providers?
Response: See response to question 15.
- 239.** Are there any geographic or jurisdictional concerns regarding where the data resides?
Response: Must be in the United States/Canada.
- 240.** Are there any specific standards or benchmarks the college uses to measure data quality?
Response: Data compared to source systems for consistency, and it should be considered part of the solution.
- 241.** What are the current master data management practices or tools used by the college, if any?
Response: Harper does not have an overarching data management practice. Data is managed by System.
- 242.** How frequently does Harper College anticipate modifying data structures?
Response: Unknown, but as we onboard and offboard systems we will need to review and update data structures.
- 243.** What are the expected hours of operation for support?
Response: See response to question 67.
- 244.** What's the preferred response time for critical vs. non-critical issues?
Response: See response to question 67.
- 245.** Are there any milestones or phases the college anticipates for the rollout?
Response: Phase 1 is a subset of student and employee data. Additional data will be road-mapped as part of the solution.

246. Does the college have a preference for vendors with experience in the educational sector, or are there specific client references they'd like to see?

Response: The College would prefer vendors who have experience in the higher education sector. However, we also accept vendor's references or experiences with similar size projects from another sector.

247. Are there anticipated customizations or unique features not covered in the RFP that the college is considering?

Response: See response to question 232.

248. In case of termination of the contract or if a need arises to change the solution provider, how does the college envision the handover or migration process?

Response: In the event of termination, vendor must provide access to Harper and ETL strategies.

Sincerely,
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