



October 30, 2019

ADDENDUM NO. 2

REQUEST FOR PROPOSALS (RFP) # DK1902 – Enterprise Data Warehouse and Business Intelligence Solution

ONE (1) ORIGINAL SIGNATURE HARD COPY AND TWO (2) USB DRIVES OF THE RESPONSE TO BE SUBMITTED

All responses shall be addressed and returned to this location by the due date listed below:

City Colleges of Chicago
Dawson Technical Institute
Procurement Services
3901 South State Street, Room 102
Chicago, IL 60609

Attention: Debra King, Associate Director

*Responses must be received no later than 12:00 p.m. local Chicago time, on
Friday, November 15, 2019*

Responses to Questions and Points of Clarification

Question # 1 Will the reports and data be integrated into the new system? Can we recreate new report?

Answer: Yes, we will need to recreate 100+ enterprise reports which have been developed for our institution.

Question # 2 Is the conversion of the reports included in the cost of the RFP?

Answer: The conversion of the reports should be included in the price proposal.

Question # 3 Is there an inventory of the new of tables that will be provided?

Answer: CCC will be able to provide a list of tables from the CCC data sources during Implementation.

Question # 4 Within the scope of the RFP conversion of data is listed. Is there any information or data that can be provided to cost out the project?

Answer: Since the existing data warehouse is our current vendor product, we cannot migrate it to the new solution. However, we need the new vendor to help us to create the new data warehouse based on requirements and some data fields might be similar to the existing data warehouse. This effort should be a part of the solution. To give an idea of the effort, the current data warehouse consumes about 200 tables

from PeopleSoft Campus Solution, and a handful of tables from PeopleSoft HR and Financials.

Question # 5 Does the current system have real-time ability?

Answer: It does not.

Question # 6 What is driving CCC to pursue cloud vs on premise?

Answer: We are looking for a cloud solution that will provide high availability and scalability, enhanced disaster recovery and business continuity features, as well as lower maintenance cost.

Question # 7 Phase 1 replacing the current system with LMS and Student system, is there a road map outside of phase one?

Answer: We don't have a roadmap defined. We ask RFP respondents to recommend an implementation approach based on their implementations and experience with higher education.

Question # 8 Who will the reports be provided to? on the BI side who is the user population

Answer: We have a number of potential audiences for our reports and dashboards: CCC leadership, faculty and staff, current and prospective students, donors, city, state and federal agencies.

Question # 9 Does the predefined off the shelf extend to the dataset?

Answer: Yes, there should be some predefined datasets off of shelf for quick customization.

Question # 10 What is current storage size?

Answer: Our current data warehouse database size is 500GB. Note: this data is from one source, our Student Information System.

Question # 11 Are we looking for centralize model for data or from any internet source? **Answer:** We are looking for a centralized model.

Question # 12 How much data is included in the other sources?

Answer: We're not planning to load everything from the data sources listed below to the new data warehouse. We will define what is needed based on the requirements. The current data warehouse is using about 200 tables from Student Administration, and a handful of tables from HR and Financial. The refresh frequency should be at least once a day. If possible, near-real-time. Some of data sources are out of scope for phase 1 implementation but listed for reference.

1. PeopleSoft Enterprise Student Administration – 1TB, 29k tables, Phase 1

2. PeopleSoft Enterprise Human Resources Management– 260GB, 26k tables

3. PeopleSoft Enterprise Financial Management – 122GB, 66k tables

4. Student Portal – 45GB, 5k tables

5. Brightspace (LMS) – 90GB, currently using 72 tables for pilot reporting project, Phase 1

6. GradesFirst - Not available at this time because it's hosted on the vendor facility.

7. Taleo Enterprise (Recruitment Application) - Not available at this time because it's hosted on the vendor facility.

8. Ad Astra (Room and Event Scheduling Application) - Not available at this time because it's hosted on the vendor facility.

9. Q-Flow (Appointment Scheduling) - Not available at this time because it's hosted on the vendor facility.

10. CRM (Oracle Service Cloud) - Not available at this time because it's hosted on the vendor facility.

Question # 13 It was not called out explicitly in the RFP but in the pre-bid meeting there was a reference to publicly facing analytics. Does CCC require interactive reporting capabilities exposed to the general public?

Answer: We do not require interactive reporting capabilities available to the general public (non-CCC employees).

Question # 14 In item 3.06 in Appendix A the requirement is worded "The solution provides an easy way to tag reports." Tagging could mean multiple things. Can you elaborate perhaps with an example the tagging functionality desired?

Answer: We want the solution be able to group the reports by tags. For example, an user created a list of reports for enrollment, which can be tagged "Enrollment" for easy identification.

Question # 15 Section 5 in Appendix A is labelled "Analytics (real-time analysis and forecasting)". In the pre-bid meeting it was suggested that the expectation for data to be refreshed from sources daily or potentially in a "near-real-time" frequency. Based on this should we assume that "real-time" refers to just the analyses?

Answer: This is correct, "real-time" refers to just analysis.

Question # 16 Could CCC please clarify requirement 11.08 "The solution is capable of provisioning programming studio/environment for easy integration of in-house applications or of middleware."

Answer: The solution should support power users in using programming languages such as Python, .Net, or other popular programming languages to create more advanced reports by calling API, custom functions or external data sources.

Question # 17 Item 3.05 from Appendix B asks to "Describe how the user can mask/encrypt data within the workflow to hide protected/sensitive information." Presumably this includes both protecting PII but also small cell suppression. The latter can be complicated to implement. What are CCC's rules regarding redaction and small cell suppression?

Answer: We're currently suppress the PII data by replaced it with either blank or random values on the front-end. For example, a report contains a list of students with their bio-demo info. One of the fields is SSN, we will suppress this field with blank value so it's not visible on the report. However, the actual SSN # exists in the database.

Question # 18 In item 3.07 from Appendix B asks to "Clarify if tool supports blending of measures only or union of multiple datasets with additional dimensions." Can CCC provide examples to clarify the perceived difference between the "blending of measures" and "union of multiple datasets with additional dimensions"?

Answer: We want to know if the tool can create dimensions based on joins on multiple datasets, or can it blend measures and dimensions, so that measures can be used as dimensions when appropriate and vice versa. For example, credits enrolled is a measure. We would like to be able to filter by this measure

1. Measures: numeric values

2. Dimensions: either numeric or categorical values

Question # 19 The timeline for the presentations and vendor selection is "TBD" within the RFP Overview document. Does your organization have an anticipated start date for the overall project?

Answer: We anticipate to start the project in spring of 2020.

Question # 20 Clarity Insights requires executed agreements before resources can be locked or "hard committed" to a project. The start date will assist us from an overall planning perspective.

Answer: See answer to question 19.

Question # 21 What is the budget for this initiative? I understand that CCC may be contemplating a multi-year project and plan, so the budget may be split out by year, or for the overall project.

Answer: This is correct. CCC considers multi-phased implementation, which will start this fiscal year. CCC is seeking vendors that will scope the deliverables required by the RFP and provide the best value and price. Vendors are encouraged to submit a cost proposal reflective of the cost of their solution and implementation.

Question # 22 What is CCC's overall technology stack preference (i.e. Microsoft, Amazon, Google or Oracle on the Data Warehouse front)? Because we have partnerships with all of the key vendors (many listed in the attached overview), we will align resources based upon the skillsets and technology preference within CCC.

Answer: Most of the technologies our institution uses are Microsoft products. When it comes to cloud service providers, we don't have a preference. Most important is that the cloud service provider we selected must work best for our BI solution and within our budget.

Question # 23 Does CCC have a Mutual Non-Disclosure Agreement for us to execute? Clarity Insights deems pricing and client references among the many details commonly requested to be treated as proprietary and confidential information. Having a signed Mutual NDA on file will allow us to release these details

Answer: A Mutual Non-Disclosure Agreement will be discussed/developed while working on the contract.

Question # 24 The statement "Our current data warehouse solution pulls data from Oracle PeopleSoft Campus Solution v.9.0, on a daily basis." mentions that CCC has a Data warehouse already implemented. Can you please mention where the DW was built on i.e. on MS SQL Server/ Oracle/ Postgres etc.? Number of tables? Pg. - 3/ Sec-1/ CCC Technical environment overview

Answer: Our current data warehouse is on-premise. It is using MS SQL Server and OLAP cubes. There are over 2,000 tables in the database but only using less than 20 tables. Most of them are the intermediate and lookup tables to help derive the final datasets to be surfaced on the front-end.

Question # 25 Can we interpret embedding the analytics into third party applications is integrating the dashboards into a web-applications. E.g. iFrame integration into a web page? Exhibit A/ 5.Analytics / 5.04

Answer: That is correct. In some cases, we want to be able to embed a report/dashboard in a web application (CCC website). That way users can see the report without going to BI front-end. This could be an iFrame integration.

Question # 26 Is native mobile application as a part of solution? If yes is it to view the reports/ search purpose only or it needs to have a provision to input the data as well? Exhibit A/ 8. Mobile Data delivery & Analysis/ 9.02

Answer: We would like our users using mobile devices to be able to view and share reports and dashboards with other users.

Question # 27 What would be the concurrency of the users accessing the data analytics/ reporting tool?
Exhibit A/ 9. Data modelling/ 9.02

Answer: We believe that we can have up to 200 active users who simultaneously log in to the BI system.

Question # 28 The statement "City Colleges of Chicago (CCC), District 508 is soliciting proposals from qualified firms ("Proposers") to implement an Enterprise Data Warehouse, Business Intelligence, and Data Analytics Solution" mentions that CCC is looking for end-to-end implementation of the EDW & BI-Analytics solution.

Answer: This is correct. We are looking for end-to-end implementation.

Question # 29 Will data migration from the existing DW to the EDW is also a part of solution?

Answer: Since the existing data warehouse is our current vendor product, we cannot migrate it to the new solution. However, we need the new vendor to help us to create the new data warehouse based on requirements and some data fields might be similar to the existing data warehouse. This effort should be a part of the solution.

Question # 30 Can CCC help us to identify the list & number of reports (tentative) to be developed? Total number of descriptive reports/ dashboards? Total number of Predictive reports?

Answer: Our current solution is a dynamic tool. In a given year, over 100 ready reports are available throughout the entire district. In addition, end users have created their own reports that may require reproduction in the new solution. We have not yet determined which of them will have to be restored in the new system.

Question # 31 Requesting CCC to provide the data volume in the environment that should be ingested into the DW? Please provide the info as size

- a. Total data size
- b. Number of tables
- c. Total number of sources both internal and external along with the frequency to consume the data from these sources.

Answer: See answer to question 12.

Question # 32 How many individual dashboards are required to satisfy CCC's initial needs?
(Approximately)

Answer: We currently have about 10 dashboards that are available to users or are currently being built to report: enrollment, KPI performance, course usage, and Early College performance. We are currently working to expand our dashboarding capabilities and capacity, so we would like a platform that has the capacity to support more.

Question # 33 Are you open to use open source software like Python for data analytics requirement?

Answer: Yes, open source software is acceptable, as long it has been proven working in the data analytic platform. However, the users should not be expected to write any code in order to create data analytic tasks. The solution should be easy to use and only requires drag and drop to create reports.

Question # 34 Do you have any pre-identified analytical use cases for each of the analytical categories given in RFP?

Answer: We don't have any documented analytical use cases to be share at this time. However, we would like to be able to perform predictive, performance, statistic, what if and etc. analyses.

Question # 35 Is CCC expecting us to provide a rate card for advance analytics professional services or you are expecting on the no of resources required to do the project?

Answer: Please provide number of resources required to complete this project.

Question # 36 How many team members do you expect to have access to the visualizations? What will be your visualization licensing needs? (Ex: All 5000 faculty?).

How many power users?

How many will need some data exploration functionality?

How many need simple viewer access?

Answer: Ideally, we would like to provide all CCC employees with access to visualizations to perform or interact with reports and dashboards, but we know that that may not be financially possible. Here are the approximate number of users by user category: 35 power users, 300 business users, 1550 viewers.

Question # 37 The RFP states that the following systems are not included in the current data warehouse. Will any (and which systems) be required in the new data warehouse? Are there any additional systems you already know to be on the CCC purchasing horizon that will need to be integrated?

- a. PeopleSoft Human Capital Management, Version 9.2
- b. PeopleSoft Financials and Supply Chain Management, Version 9.2
- c. PeopleSoft Portal, Version 9.1
- d. Taleo Enterprise – Recruitment Application, Version 17.6
- e. Ad Astra – Room and Event Scheduling Application, Version AS8
- f. Q-Flow - Appointment Scheduling, Version 5.9
- g. Brightspace - Learning Management System, Version 10.8.9
- h. GradesFirst - Student Retention and Appt Scheduling System, Version 2019
- i. CRM – Oracle Service Cloud, Version 17D

Answer: See answer to questions 7 and 12.

Question # 38 For the in-scope systems, is CCC anticipating any changes over the next 5 years (i.e., replacement / migration away)?

Answer: In the next years we may implement new CRM system. We do not anticipate any changes to our ERP or LMS systems. Any solution under consideration should provide a generic set of connectors that will allow us to connect to any data source (internal or external) provided that data source complies with the requirements of the connector.

Question # 39 How is the CRM being used on campus today? Prospect recruitment, communication with

current students, and/or advancement efforts?

Answer: CRM – Oracle Service Cloud is for technical support only (helpdesk). CCC is currently collecting requirements for a future comprehensive CRM system.

Question # 40 Will CCC’s audit of their go-forward reporting needs be completed prior to desired implementation of this enterprise data warehouse? Does CCC want a partner that can help define and build the reports being generated from the enterprise data warehouse?

Answer: CCC’s data needs are constantly evolving as institutions grow. At minimum, we will require recreating current reports that supports enrollment, retention, course utilization, student success measures, and our Key Performance Indicators.

Question # 41 Understanding that SIS and LMS data are considered foundational and part of a phase 1, up to how many systems could CCC envision being adopted into the enterprise data warehouse through fully adopted roll-out?

Answer: In addition to enterprise student data (admission, enrollment, student financials, financial aid,) we consider including data from LMS, enterprise financial information, Human Resources data, and space data.

Question # 42 Does CCC want the ~5,000 employees who have access to the current warehouse to also have access to this enterprise data warehouse, or will those employees largely have access to the BI environment being fueled by the enterprise data warehouse?

Answer: We are looking to provide our users largely with access to the BI environment. Approximately twenty IT technical staff will have access to Data Warehouse.

Question # 43 CCC mentioned on the pre-proposal meeting that they anticipated recreating aspects of their current reporting environment in the new solution. Can CCC estimate the number of reports currently in use today?

Answer: See answer to question 30.

Question # 44 CCC also mentioned on the pre-proposal meeting a desire to revamp certain reports. Can CCC provide any additional information about the additional desire? A given data domain (student, courses, employees, prospects, etc.)? Or individual use cases they would like to better understand?

Answer: Generally, we are happy with the information in our current reports, but we are looking for a solution that allows us to better visualize information and include components coming from outside the data warehouse. For example, it would be helpful to visualize enrollment progress towards target, with current enrollment sources from the data warehouse, but the targets added and edited as needed.

Question # 45 For the MWBE requirements, a listed certification is “National Minority Supplier Development Council and its regional affiliates including the Chicago Minority Supplier Development Council”. Is this either the National Minority Supplier Development Council or the Chicago Minority Supplier Development Council? Meaning if we want to include a company that is registered with the National Minority Supplier Development Council but not the local Chicago council, is that acceptable to CCC?

Answer: Yes, City Colleges of Chicago only requires a vendor be certified by one agency. The list of acceptable vendors is not limited to local Chicago based agencies.

Question # 46 On the evaluation criteria, can CCC please share the percentages or points allocated to each category?

Answer: No, we decided not share this information.

Question # 47 For the goals for participation by certified MBE and WBE firms, can CCC please share if this is graded on a participation scale? Meaning if vendors show effort towards the participation goals, will they be provided a full score for this category in the evaluation criteria?

Answer: The point process is not shared. Should a vendor require a full or partial waiver from the M/WBE goals the Schedule D with required narrative should be submitted per Appendix 1.

Question # 48 Can CCC please confirm when a final decision might be made on this RFP? **Answer:** February Board Meeting for consideration is the target.

Question # 49 If proposing company is privately held and financial statements are not publicly available, would CCC be willing to accept other published forms of financial security such as a Dun and Bradstreet report? If no, would CCC be willing to sign an NDA prior to disclosure of the financial statements?

Answer: Yes, Per Section III Submittal Requirements #9 Financial Statements - CCC will also accept as alternative information in substitute of Financial Statements, three (3) years of Profit/Loss Income Statements and Balance Sheets. The City Colleges of Chicago reserves the right to accept alternative information and/or documentation submitted by Proposers.

Question # 50 Who are the intended end-users?

Answer: See answer to question 8.

Question # 51 How many licenses is the college planning to deploy to users?

Answer: See answer to question 36.

Question # 52 How important is it to have separate database and BI instances for Test, Development, and Production? Should the RFP include license costs for all 3 instances?

Answer: It is very important that we have two separate instances of Test/Development and Production for our Data Warehouse. The license costs should be included.

Question # 53 How important is it to have the ability to restrict end-users to only seeing a report filtered by their students? For example, if a department chair at a college sees a report, the report is automatically filtered to students in his/her department, but if a faculty member views the same report it is filtered to just his/her students

Answer: Yes, this is very important.

Question # 54 What about people with multiple roles? For example, a user might be a department chair at one college but a faculty member at a different college. Is it important for the user to be able to switch roles and see the report from each of these perspectives?

Answer: Yes, this is important.

- Question # 55** How many users currently have access to the system?
Answer: Nearly 3,000 users have access to our current solution; however, there are only 250 active users per year.
- Question # 56** How many users would need access in the solution for this RFP?
Answer: See answer to question 36.
- Question # 57** Should end-users have the ability to make simple modifications to the report on their own, like add a field to a report or filter, or is CCC comfortable having those requests go through the IT office?
Answer: Yes. This is critical. In a large institution, we do not have the capacity to create reporting for every single need. The solution needs to have flexibility for users to make their own copies of reports and make edits as required by their role.
- Question # 58** What is meant by social collaboration tools? Please provide an example of social collaboration you are looking for.
Answer: As an example, in the future we may want to analyze Twitter discussion data about educational experience with our institution and the effects of feelings expressed regarding our colleges or the completion of our programs.
- Question # 59** Will any of the existing infrastructure be reused in this RFP?
Answer: No, we will not reuse any of the existing infrastructure.
- Question # 60** What database is currently being used for the EDW?
Answer: We are using MS SQL Server 2014 and analysis services.
- Question # 61** Are the dashboards and reports to be converted included in the RFP scope? **Answer:** Yes, converting existing enterprise reports is in the project scope.
- Question # 62** Please share quantity of reports and dashboards.
Light?
Complex?
Quantity of dashboards?
Light?
Complex?
Answer: See answer to question 43.
- Question # 63** What is the BI tool currently used to create these reports?
Answer: The current BI tool is using SSRS and Office Windows Component (OWC) to render the reports.
- Question # 64** What benefits do you want to see by going to a cloud-based solution?
Answer: Benefits from cloud-based solution should include high availability and scalability, enhanced disaster recovery and business continuity features, as well as lower maintenance cost.

Question # 65 Please breakdown the number of users by role and usage level:

- General Report/Dashboard users
- Heavy Report/Dashboard users
- Data Scientists
- data Engineers (for data connection and transformation tasks)

Answer: See answer to question 36.

With regard to data engineers, we ask solution providers to specify the number and type of resources required to implement the Data Warehouse and BI system.

Question # 66 The programming language should be common programming language if required to use the tool in advanced mode. What is meant by advanced mode?

Answer: We're looking for a solution that can be integrated with some sort of programming language so the power users can do more advance reporting by calling API, custom functions, and external data sources.

Question # 67 The look-and-feel of the solution can be customized to meet users' specific needs, even to the extent of making the interface similar to the existing business software. - What business software are you currently using? Is this for reports and dashboards or are you looking for application specific customization?

Answer: This feature is a nice to have. We're looking for the front-end solution that can be customized. That means user can change the look and feel of the home page by adding text and images and shortcuts to the most frequently used report/dashboard. The business applications are the CCC internal applications.

Question # 68 The solution has the capability to point out issues within the data. What types of issues? Can you provide examples?

Answer: Data issues such as: inconsistent data formats, duplicate records, incomplete data, etc.

Question # 69 The solution allows users to compare business processes and performances. Does this mean something like budget vs. actual? Or something else? Please provide examples.

Answer: For example, we would like to perform benchmarking analyses to evaluate and measure staffing levels, or student achievement.

Question # 70 The solution enables users to understand data by creating relevant summaries and presenting the data in self-explanatory mode. What is meant by self-explanatory mode?

Answer: It means that the report/dashboard should be easy to understand.

Question # 71 The solution allows users to view past versions of a report. Does this mean versions of report output? Versions of report object? Other

Answer: Yes, we would like a way to capture term and fiscal year snapshots of student-level data for enrollment and awards data. Additionally, it would be helpful to see or revert to previous versions of reports when making updates.

Question # 72 Are you open for public cloud solution?

Answer: Yes, we are open to public cloud solution.

Question # 73 Is there any indication of the amount of data ingestion required for the Data Warehouse?
Answer: See answer to question 12.

Question # 74 Is multi region availability required?
Answer: Multi-region availability is desired and preferred, but we could accept a multi-location availability, provided there is plenty of distance between to minimize risk in case of a disaster.

Question # 75 Can you please provide additional explanation around the ability to support unstructured data in the future?
Answer: Currently we don't have any plans to analyze any unstructured data. In the future we may want to perform log analytics, or create a recommendation for any video or audio files collected by our institution.

Question # 76 What sort of data security capabilities are required (e.g. should data be secured dynamically by user account)?
Answer: We prefer role-based access control but we are open to suggestions, provided they would keep data secure, enhance functionality, simplify administration and lower the cost in a multi-user and multi-campus environment.

Question # 77 Do you have any documentation on the data elements that you want to bring into the data warehouse from each system?
Answer: This information is currently not documented. We're working to gather this information.

Question # 78 The future configuration schematic mentions Data Mapping from each source system into the data warehouse. Has any of this data mapping been accomplished to date?
Answer: We will not be able to reuse our current Data Warehouse data mapping while implementing new Data Warehouse and BI solution. Also, we don't have the new mappings because need to understand the new BI solution architecture.

Question # 79 How much data is in the source systems? How big are the databases for each source system? This will help us better estimate the amount of time for an ETL process.
Answer: See answer to question 12.

Question # 80 What is the expected rate of data growth per month/year
Answer: Based on current data warehouse, the approx. growth is 1GB/month.

Question # 81 Is external access to the solution required from either partners, vendors or the public?
Answer: It is not required at this time.

Question # 82 Is data exporting through the BI product in an on-demand fashion required?
Answer: Yes, users should be able to export data from the BI solution on demand.

Question # 83 Are there specific formats that the data needs to be exported in?

Answer: In Exhibit A document, 6.02: The solution supports user reports and output to be saved (exported) in common formats, such as HTML, Excel, CSV, or PDF to provide flexibility.

Question # 84 Is there a target number of end users that will be accessing the BI solution?

Answer: See answer to question 36.

Question # 85 Is predictive analytics a requirement for the solution?

Answer: Yes, predictive analytics is one of the requirements. We are looking for a BI solution that utilizes real-time analysis and forecasting to observe current performance and predict future possibilities.

Question # 86 Regarding social media integration, is semantics analysis a requirement for the solution?

Answer: See answer to question 58.

Question # 87 How many reporting and analytical deliverables are expected? In addition to “static and ad-hoc” reports, are other delivery mechanisms desired? (Interactive dashboards, mobile information deliver, etc.)

Answer: See answer to questions 30 and 32.

Question # 88 Is the platform for only reporting, or should users have the ability to do data inquiry (i.e.. Adhoc reporting), data analysis (i.e. Slicing/dicing across different dimensions), and write back to the data warehouse directly?

Answer: Our users should be able to view existing reports and dashboards, and analyze data by creating new reports and dashboards. At the moment we do not require write-back functionality to data warehouse.

Question # 89 Do you want dashboards and scorecards? If so, do you have a list of metrics and KPI’s that you want to measure?

Answer: Yes. We currently have a scorecard for our KPIs. Future KPIs are in progress, but you can see previous KPIs here: <https://www.ccc.edu/menu/Pages/Reinvention-Scorecards.aspx>. We require dashboard beyond these, but priority dashboards and scorecards will be related to student enrollment and student success measures.

Question # 90 Are you looking for reports to be interactive or have drill down capability? If you are looking at a dashboard with a chart showing actuals over each period, would you want to be able to drill down to the specific transactions?

Answer: Yes. We strive to be an organization that uses data to drive action. End users should be able to get student/staff/class-level information from a dashboard to act on their takeaways from a report or dashboard.

Question # 91 How many users will be using the reporting system at peak time? How many on average?

Answer: We anticipate to have approximately 500 active users. We believe that we can have up to 200 active users who simultaneously log in to the BI system.

Question # 92 How many existing “standard reports” and ‘dashboards’ will need to be developed?

Answer: See answer to question 43.

Question # 93 Is there a desire to perform forward looking data analytics on the DW for AI and ML.

Answer: No initially. We may look into it in the future.

Question # 94 Will all Q&A be returned and when can we expect them back?

Answer: Yes, See RFP DK1902 Section II Scope of Services the section outlining Procurement Activities. The response date for City Colleges of Chicago is listed as 10/28/19.

Question # 95 Other than the City Colleges of Chicago Ethics Policy and Mayoral Executive Order 2014-1, are there any other regulatory concerns that need to be taken into account when developing the solution?

Answer: There are no regulatory concerns beyond what is outlined in the RFP DK1902 document.

Question # 96 Are there any SDLC or other processes/policies to which the vendor must adhere?

Answer: Propose the SDLC model that would work best for your solution.

Question # 97 Should the contractor's proposal include specific reporting tool recommendations (e.g. Microsoft BI Stack), or should tool selection be part of the engagement?

Answer: We ask RFP responders to recommend a specific BI solution.

Question # 98 The RFP mentions a number of critical systems from which City Colleges of Chicago will need to extract information and build reports. Will these systems contain any PII?

Answer: PII such as student/employee name, address, SSN, gender, dob, age may be included.

Question # 99 What is the main decision criteria on a data warehouse offering?

Answer: Our main criteria are cloud-based solution, supported data types, reliability and scalability.

Question # 100 What is your time frame on beginning demo(s), trial period, technology decision and purchase?

Answer: We plan to invite finalists in January 2020 for in person presentations/demos. We also plan to make a final decision by February, and sign a contract by April 2020.

Question # 101 Do you intend on only choosing a Service Integration / Consulting firm or individual technology vendors?

Answer: No preference.

Question # 102 What are the types of source systems?

Answer: See answer to question 12.

Question # 103 What data formats are included? Structured vs. unstructured?

Answer: Structured

Question # 104 What are sizes and volumes for each source systems?

Answer: See answer to question 12.

Question # 105	What are frequency of data ingestion?
Answer:	See answer to question 12.
Question # 106	What are the retention policies for data?
Answer:	Information is not available.
Question # 107	What are major ETL tools deployed in Data Platform for ingestion?
Answer:	Our current ETL tool was written in Python.
Question # 108	What are the ingestion patterns? (batch, CDC, real time etc.)
Answer:	Batch
Question # 109	What does the data progression (flow of data) architecture look like?
Answer:	Information is not available.
Question # 110	What are the existing SLAs in place for ingestion?
Answer:	Information is not available.
Question # 111	How are the ETL scheduled and orchestrated?
Answer:	Scheduled to run nightly.
Question # 112	What is your security framework?
Answer:	Information is not available.
Question # 113	Is the data encrypted on disk? Is there any third party tool involved?
Answer:	No
Question # 114	Is there any special treatment for PII or any confidential data on the source systems?
Answer:	Information is not available.
Question # 115	What are the performance and latency requirements for data to be ingested?
Answer:	See answer to question 12. The desired solution should use a copy of the data, rather than connecting directly to the production systems, to minimize the delay or performance degradation.
Question # 116	Are there any data sources with specific regulations applicable? (PCI DSS compliant)
Answer:	No
Question # 117	Datawarehouse models: briefly describe current data model deployed
Answer:	Star schema
Question # 118	What are major processing patterns for data transformations?
Answer:	Information is not available.

- Question # 119** Data Catalog exists?
Answer: We are developing data catalog.
- Question # 120** Is the data lineage tracked and reported? If so, how?
Answer: Data lineage is not documented. We are working to document this.
- Question # 121** What is retention strategy? Is there any tiered storage?
Answer: Information is not available.
- Question # 122** Any big data type systems such as Hadoop, Spark, noSQL are in use today, if so what and how are they leveraged?
Answer: We don't use any big data type systems at this time.
- Question # 123** What is the auditing framework used for conformed data sets?
Answer: Information is not available.
- Question # 124** How are the etl workflows scheduled, executed and monitored?
Answer: See answer to question 111.
- Question # 125** What are the major data consumption patterns: BI report, Ad hoc, applications, portals, downstream application integration, any others?
Answer: BI reports and dashboards, Ad hoc reports.
- Question # 126** What is the governance process to onboard applications into Data Platform?
Answer: Currently we have data from only one source. We are working on developing the governance process.
- Question # 127** What are users / personas associated with each of the consumption patterns?
Answer: See answer to question 36.
- Question # 128** Is there a common data repository (data catalog) for the enterprise?
Answer: We are developing a data catalog.
- Question # 129** What current tools are being leveraged for BI and Visualization
Answer: MS SQL Server, SSRS, Tableau, Power BI, Excel
- Question # 130** What is overall enterprise integration architecture?
Answer: Information is not available.
- Question # 131** How much data is consumed by each of the consumption patterns?
Answer: See answer to question 12.

- Question # 132** What is the security architecture and pattern for the Consumption layer? How is security context shared between data & consumption layer?
- Answer:** Information is not available.
- Question # 133** Are there any applications that "write back" to Data Platform?
- Answer:** See answer to question 88.
- Question # 134** How are workloads for each consumption patterns scheduled and prioritized?
- Answer:** Information is not available.
- Question # 135** What systems are connected for the Visualization and Reporting purposes?
- Answer:** Data Warehouse and LMS.
- Question # 136** Are there any circumstances where you would require data to be pulled from History to Hot? Are there any lookups requiring historical data?
- Answer:** When compiling compliance reports, we may need to refer to historical data.
- Question # 137** What are the performance / concurrency requirements for each of the consumption patterns?
- Answer:** Information is not available.
- Question # 138** What are the current tools and process that are used by Data Scientists?
- Answer:** Excel, SAS, R, SQL Server
- Question # 139** What data is available and how is it accessible?
- Answer:** See answer to question 12.
- Question # 140** Describe the model training and deployment process?
- Answer:** In our RFP, we are asking the RFP respondents to provide a detailed plan for solution training.
- Question # 141** What is the data discovery process?
- Answer:** Information is not available.
- Question # 142** Provide any system architecture diagrams that are available per product and/or process
- Answer:** Information is not available.
- Question # 143** Data flow diagrams from source systems to the data warehouse and consumption layers if available
- Answer:** Information is not available.
- Question # 144** Data integrated into end user products
- Answer:** Information is not available.

- Question # 145** Current data volume across all databases and data warehouses, aggregates with top 5 would be good
Answer: See answer to question 12.
- Question # 146** Daily or monthly data growth and data ingestion volume (ballpark figures are ok)
Answer: See answer to question 80.
- Question # 147** Various types of data, maybe categorized by purpose or product (everything that can be listed from marketing data, student data, third party data etc.)
Answer: See answer to question 12.
- Question # 148** List of all products or services and abbreviations will make it easier to be acquainted with some of the terminology and systems names that will be used during the sessions
Answer: Information is not available.
- Question # 149** Is your organization open to multi-cloud approach?
Answer: Yes
- Question # 150** Any workloads are running in public cloud? If so, please provide the vendor name.
Answer: Information is not available.
- Question # 151** Is your organization open in assessing and selecting the best fit cloud provider?
Answer: Yes
- Question # 152** Are there any strategic cooperations in place between your organizations and public cloud providers currently?
Answer: We currently use Office 365 and Microsoft Azure.
- Question #153** Is CCC able to provide the Exhibits A & B as an Excel document?
Answer: Yes, included as separate documents with Addendum #2 posting.

Please acknowledge receipt of all Addenda in your proposal responses.

END OF ADDENDUM