



City of Tacoma

INFORMATION TECHNOLOGY DEPARTMENT

ADDENDUM NO. 2

DATE: 3/6/2024

REVISIONS TO:

**Request for Proposals Specification No. IT23-0326F
SAP S4 ANALYTICS DATA MIGRATION**

NOTICE TO ALL BIDDERS:

This addendum is issued to clarify, revise, add to or delete from, the original specification documents for the above project. This addendum, as integrated with the original specification documents, shall form the specification documents. The noted revisions shall take precedence over previously issued specification documents and shall become part of this contract.

REVISIONS TO THE SUBMITTAL DEADLINE:

The submittal deadline remains the same.

REVISIONS TO THE GENERAL INFORMATION AND REQUIREMENTS:

REMOVE SUBMITTAL CHECKLIST in its entirety and REPLACE with SUBMITTAL CHECKLIST marked Addendum 3 with the following revision:

One electronic copy emailed to sendbid@cityoftacoma.org of your complete submittal package, a maximum of 50 single sided pages for the sections identified below.

REMOVE EXHIBIT 04 in its entirety and REPLACE with EXHIBIT 04 marked Addendum 2 with the following revision:

Please provide at least three (3) business references for projects performed and completed within the past (3) years that include the following designated areas:

QUESTIONS AND ANSWERS:

Question 1: Did the City of Tacoma work with a partner/company that will be bidding on this project to generate the requirements and specifications of this project?

Answer 1: The city consulted various partners regarding the technology direction and overall architecture, but the requirements and specifications were developed in-house.

Question 2: What SAP tools are being licensed under the SAP Business Technology Platform?

Answer 2: The City has a CPEA agreement with SAP with a certain amount of credits a year. The City currently has Integration Suite implemented. The City can



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implement other BTP functionality with a consumption based cost model if needed.

Question 3: Are you expecting to source data from any other system, other than SAP?

Answer 3: Not within the scope of the RFP.

Question 4: How many years of data, if any, do you plan to migrate to SAP, and what is the plan for the data that won't be migrated?

Answer 4: With 20+ years of data in our existing ECC system, The City is assessing potential data cleanup opportunities in advance of our migration to S/4. We are working to identify some data that can be archived or deleted prior to or during the migration project, but at this time, we do not have definitive plans for the archiving or deletion of any data prior to that migration. If the City does move forward with archiving efforts for some datasets, that data will be stored in our Snowflake environment prior to its deletion from SAP.

Question 5: Are there any compliance regulations that would impact this project work?

Answer 5: PII data and other confidential information need to be stored properly with the appropriate permission, but there are no other compliance requirements within the scope of the RFP.

Question 6: Can you expose the list of HANA views that will be converted to CDS and their relative levels of complexity (t-shirt sizes are fine)?

Answer 6: Refer to Exhibit 1.

**Question 7: Please confirm the plan for ETL in the new environment:
Keep FME in place utilizing the ETL process created but changing connections from HANA Calc views to CDS views
Replace FME with SAP integration suite or other ETL tool**

Answer 7: The City is open to either option with appropriate cost/benefit analysis.

Question 8: Data pipes in place represent as follows: Small(9), Medium(31), Large(68), Extra Large(29). Assume sizing represents amount of data? If so please give an example of what (S), (M), (L), (XL) is.

Answer 8: Sizing represents the complexity of the data pipeline to migrate. For example, a small data pipeline will take fewer hours to complete its migration to the S4 architecture than a medium.

Question 9: If the amount of data is not the sizing, does it represent complexity? If not, what is the complexity of the data pipes, how much customization was done in the HANA Calc views?

Answer 9: Yes, sizing represents complexity. Almost all calculation views are custom built, but the goal is to leverage standard CDS views as much as possible.



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Question 10: Tableau is currently used directly against SAP. Will this be the preferred way to consume data directly from SAP S/4 in the future?

Answer 10: No, a very small percentage of Tableau dashboards connect to SAP HANA calculation views directly. The plan is to migrate them to use Snowflake data sources instead.

Question 11: What type of Tableau reports used directly against SAP? Operational reports? If so, is the City of Tacoma open to utilizing embedded SAC in S/4 HANA or is the preferred way for the CoT to use Tableau?

Answer 11: A couple of reports related to budget directly connect to SAP HANA calculation views. The plan is to migrate them to use Snowflake data sources instead. There is no plan to use SAP Analytics Cloud. Tableau is City of Tacoma's preferred analytics tool.

Question 12: Do you expect this to be a product offering (COTS) or can it be a solution that we build specifically for you?

Answer 12: Professional service instead of COTS is the expectation.

Question 13: Do you expect the vendor to develop and deliver the same platform or the city is open for new modern platform recommendations?

Answer 13: The City is open to options other than FME based on cost/benefit analysis. There is no plan to switch to other platforms regarding Snowflake and Tableau.

Question 14: Does the city need the datasets from various sources to be ingested and analyzed in real-time or near real-time?

Answer 14: It is not a requirement, but the city is open to having real-time or near real-time capability without significantly increasing the project and ongoing maintenance cost.

Question 15: Is there any need to access or connect with real-time / production data?

Answer 15: It is not a requirement, but the city is open to having real-time or near real-time capability without significantly increasing the project and ongoing maintenance cost.

Question 16: How much data will be collected on a daily/weekly/monthly basis?

Answer 16: Most of our master data and light weight transactional data are full load in nature whereas most of our transactional data are delta load in nature. Daily full load volume is 393+ million records and daily delta load volume is 10+ million records spread across multiple data pipelines. We have about 3.5 billion records collected in Snowflake from SAP till date.



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Question 17: How many users will be concurrently accessing the system? Also, please specify the total number of users and their roles.

Answer 17: 2 to 8 concurrent users run queries in Snowflake. Total 264 active users, mostly with Analyst role and 80 users have Creator role too in Snowflake.

Question 18: Do you have any documented data quality metrics?

Answer 18: We check for duplicates while loading data from SAP to Snowflake.

Question 19: Can you please elaborate on the current "gaps in existing systems"? Is there particular functionality that has been identified as necessary?

Answer 19: "gaps in existing systems" is not referenced in the RFP.

Question 20: Will data be provided in a final clean format, or will the contractor be responsible for the data cleaning/file formatting?

Answer 20: The contractor will not be responsible for data cleaning.

Question 21: Do you have any preferences in visualization, reporting, and auto scheduling?

Answer 21: Tableau is the city's enterprise analytics platform, but visualization, reporting, and auto-scheduling for reporting are not considered part of the RFP scope.

Question 22: As per the requirements outlined in the Request for Proposal (RFP), proficiency in SAP ABAP development is essential. Given our experience in both enterprise and public sectors with SAP, could you kindly specify the sector preference for this project?

Answer 22: Considering that Tacoma Public Utilities is part of the City, both Utilities (IS-U) and public sector (IS-PS) experience are valuable.

Question 23: Could you provide more information about the nature of the data within the existing 137 data pipelines?

Answer 23: The data pipelines transform the data in SAP base tables into tables and views that business users can easily understand and use for building reports and dashboards.

Question 24: Are there any specific dependencies or interconnections between these data pipelines that we should be aware of?

Answer 24: Some tables and views are used in multiple data pipelines. Refer to Exhibit 1 for details.

Question 25: Can you elaborate on the current use case and functionality of FME in your data integration processes?



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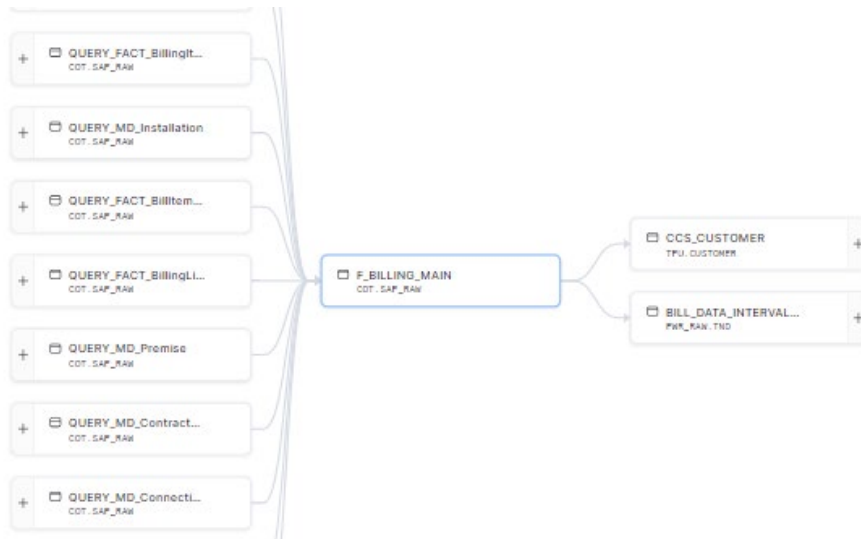
Answer 25: FME refresh the tables and views in Snowflake based on the corresponding SAP Hana calculation views on a nightly basis.

Question 26: You mentioned being licensed for SAP's Business Technology Platform (BTP). Could you specify if there are any preferences or requirements regarding the use of BTP in the context of this migration project?

Answer 26: It is not a requirement to use BTP. The choice of using FME, BTP, or other integration technologies should be based on overall cost/benefit analysis.

Question 27: Could you provide more insights into the structure and schema of the Snowflake data platform where the SAP-related data is loaded?

Answer 27: Most of Snowflake table structures are replica of SAP HANA calculation query views which are designed as either dimensional or fact view, so it provides a star schema structure in Snowflake as below example.



Question 28: Are there any specific performance metrics or optimization requirements for the Snowflake tables or views that we should consider during the migration?

Answer 28: Most of the Snowflake table/view structures are expected not to change except for the area with architectural change in S4, for example, universal ledger related tables/views.

Question 29: Can you provide examples or specifics of the Tableau reports and dashboards currently in use by your analytics staff? Understanding the scope and complexity of these reports will help us plan for the necessary updates and support.

Answer 29: The City's monthly financial dashboard is an example:
<https://www.cityoftacoma.org/cms/One.aspx?portalId=169&pageId=204315>.



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Question 30: Are there any specific constraints or limitations we should be aware of when updating Tableau reports and dashboards post-migration?

Answer 30: The goal is to minimize the changes that need to be made to existing Tableau reports and dashboards. In the cases where such changes are necessary, the City's Tableau users are responsible for making those changes in general. The contractor is expected to provide guidance and potentially training to make such changes.

Question 31: What is the expected timeline for the S/4HANA migration project, including the migration of SAP analytics data?

Answer 31: The target is to start in Q3 of 2024 and go live in Q1 of 2026, spanning roughly 18 months.

Question 32: Do you expect all the resources to be deployed on-site or can the work be performed in the hybrid resource model (on-site/offshore/remote)?

Answer 32: Hybrid resource model works and on-site resource requirement would not be significant if it is needed. The Vendor is expected to accommodate the City's core working hours of 8am to 5pm PST/PDT. The City expects an approach that does not cause the City to lose an entire day waiting for responses/solutions from project team members if offshore resources are used.

Question 33: Do you have any not-to-exceed budget for this project?

Answer 33: The City has budgeted for this project, but cost is only one factor considering potentially different approaches and experiences of vendors. The City wants to allow the flexibility for vendors to propose different approaches with clearly stated assumptions.

Question 34: What is the anticipated project go-live date and tenure?

Answer 34: Target project go-live is Q1 of 2026.

Question 35: Will all Tableau reports be adjusted by the City's internal Analytics team?

Answer 35: Refer to Question 30.

Question 36: Please provide a list of data models available in snowflake? Is it fair to say that 1 HANA View equals 1 snowflake data model?

Answer 36: Refer to column 1 in Exhibit 1 for the Snowflake tables. In most cases, one Snowflake table corresponds to multiple HANA calculation views.

Question 37: How many calculations and transformations are in these HANA views?

Answer 37: There are 754 calculation views including 24 table functions. There are few local formulas like date, number formatting etc. in most calculation views.



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Question 38: Please list any other data sources used in HANA views in addition to SAP ECC.

Answer 38: Data sources other than SAP data are not used in HANA calculation views.

Question 39: SAP Cash Desk as well as third party Cashiering are identified as methods of accepting incoming payment. Please provide a breakdown of Cash Desk vs. third party Cashiering solutions by department / function.

Answer 39: The question is not relevant to this RFP.

Question 40: We note that SD is used for billing outside of the regular utility billing process. Is this limited to the sale of Stock and nonstock material and service items or do you also utilize SD for Capital Cost recovery billing / Contribution in aid of construction / Resource related billing where there are integration between Service Management / Project Systems / Sales and Distribution.

Answer 40: The question is not relevant to this RFP.

Question 41: Please describe security profile and authorization considerations which need to be addressed given that the business partner is shared to limit access to TALIS records vs regular Utility bill records.

Answer 41: The question is not relevant to this RFP.

Question 42: Will you consider a different solution other than using CDS views to extract out of S4 HANA?

Answer 42: Even though utilizing CDS views is the best option based on the City's preliminary research, the City is open to other approaches based on cost/benefit analysis.

Question 43: Are you using standard HANA live views (calculation views)? If yes, do you have any custom logic in the calculation views? If yes to using both standard live views and custom logic in live views, what is the percentage of standard live views vs. customized live (calculation) views.

Answer 43: All HANA calculation views are custom.

Question 44: Was there any gap analysis done between the HANA live views vs. the standard CDS views? If yes, can you share the results of that analysis.

Answer 44: Analysis of HANA calculation views and potentially corresponding standard CDS views is part of the RFP scope.

Question 45: Scope of Deliverables. The structures of S4 HANA are different than the Suite of HANA. Can we create new data structures in Snowflake or do you prefer a retrofit to your existing Snowflake table structures?



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Answer 45: Minimizing Snowflake table changes is the goal except for the area with architectural changes in S4, for example, the area related to universal ledger.

Question 46: Can you please provide details about your Snowflake schema (e.g., Raw, Silver, Gold schemas or just a direct 1:1 with HANA calculation views.)

Answer 46: The Raw Snowflake schema has a direct correspondence with HANA calculation views.

Question 47: What is your preference on the new ETL tool to load data into Snowflake. Do you need an enterprise-wide tool like Informatica or will you consider a vendor- provided tool?

Answer 47: The current ETL tool the City uses is FME. The city is open to new tools based on cost/benefit analysis.

Question 48: What is the current process to identify the change data capture (CDC) from HANA calculation views to load data into Snowflake?

Answer 48: The current process of updating is not based on CDC. The delta update is based on time period.

Question 49: Document / Section Exhibit: 02 RFP Functional Requirements.xls: 2.5.2 Testing: Can you share the standard test cases that get executed after any patching exercises

Answer 49: The question is not relevant to this RFP.

Question 50: Will the City permit use of offshore resources for this project, provided that the acceptable use guidelines are met?

Answer 50: Yes. The Vendor is expected to accommodate the City's core working hours of 8am to 5pm PST/PDT. The City expects an approach that does not cause the City to lose an entire day waiting for responses/solutions from project team members if offshore resources are used.

Question 51: Is the City amenable to considering alternative analytics solution strategies that utilize the tools outlined in the RFP?

Answer 51: The City is open to other integration solutions other than FME. The City currently does not consider analytics solutions not using Tableau or Snowflake.

Question 52: We understand the City will have resources assigned to the project. Can you please outline the roles and % FTE?

Answer 52: The City has one enterprise data architecture manager and three data engineers who can assist with the project. The capacity that can be dedicated to the project is estimated to be 3 FTEs.

Question 53: Has the City considered the use of real-time data ingestion in Snowflake?



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Answer 53: Real-time data ingestion is not a requirement, but the City is open to it based on cost/benefit analysis.

Question 54: Will the City have testing resources available for the project and, if so, their % FTE?

Answer 54: The City has one enterprise data architecture manager and three data engineers who can assist with the project. The total capacity that can be dedicated to the project is estimated to be 3 FTEs. The City's technical staff can assist with testing or other aspects of the project.

Question 55: What part of the City's organization is the sponsor for this project?

Answer 55: The project sponsors are the City Manager and TPU Director.

Question 56: How many Tableau visualizations will be impacted by this project?

Answer 56: The goal is to minimize the changes to Tableau reports and dashboards by minimizing the changes to the Snowflake table/view structure. There are currently more than 650 workbooks published on the City's Tableau server that are connected to SAP data either through Snowflake views or directly in SAP/HANA. How many of these workbooks will be impacted is to be determined.

Question 57: Is this a new RFP or are there any incumbents?

Answer 57: This is a new RFP

Question 58: Any major projects planned in coming years that vendors should be aware of?

Answer 58: The SAP S4 Analytics Data migration is the primary focus currently.

Question 59: Are offshore resources allowed as team members for this RFP?

Answer 59: See question 50.

Question 60: Is there a funding/financial/budget range estimated that can help us provide a quotation for this project?

Answer 60: The City would like to allow the flexibility for vendors to propose different approaches with clearly stated assumptions.

Question 61: For submitting the proposal, please clarify the email ID since sendbid@cityoftacoma.org is mentioned on Page 2, and bids@cityoftacoma.org is mentioned on Page 5.

Answer 61: See Addendum 2

Question 62: Could you clarify the reference requirement since on Page 15, it is mentioned to include 3 references with whom we worked within the last 3



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years? But in Exhibit 4, it is mentioned to include 5 references with whom we worked within the last 5 years.

Answer 62: See Addendum 2

Question 63: We are an NMSDC-certified MBE, can we fulfil Section 11: Equity in Contracting requirement?

Answer 63: No, we cannot accept other certifications than the OMWBE Certification at this time.

Question 64: Could you please confirm the page limit for the proposal since it is mentioned as a 25-page limit on Page 5 and a 50-page limit on Page 12?

Answer 64: See Addendum 2.

Question 65: Can you provide more specifics on the types of projects or depth of experience with SAP modules like FICO, Treasury, and HR that you are prioritizing for this migration?

Answer 65: The most relevant knowledge and experience in SAP functional areas include a deep understanding of how the SAP base tables translate to data fields in the SAP user interface. Knowledge about standard CDS views in these functional areas will also be very helpful. City's data spread across multiple SAP modules, FICO, FICA, SD/MM, HR, CIC0, PM, etc.

Question 66: Could you detail the complexity and scale of SAP CDS views development you expect, particularly any challenges or specific objectives you aim to achieve through this?

Answer 66: One goal of the project to leverage standard CDS views and reduce customization wherever possible. This needs to be balanced with the need to minimize the changes in Snowflake table/view structure and the need to modify Tableau reports and dashboards.

Question 67: Are there specific ABAP and SQL development standards or methodologies the city prefers, especially considering the integration with platforms like Snowflake?

Answer 67: The City has high level standards and guidelines and is open to work with the selected vendor to expand and evolve these standards and guidelines.

Question 68: Can you elaborate on the key challenges or specific integration patterns between SAP and Snowflake that the city anticipates needing special attention?

Answer 68: See Question 66



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Question 69: What are the City's expectations regarding data architecture in Snowflake, especially in terms of scalability, data modeling, and performance optimization?

Answer 69: Improving the data architecture in Snowflake needs to be balanced against the need to minimize the changes analytics users need to make to Tableau reports and dashboards. While the City is open to recommendations, this is not a primary goal.

Question 70: How does the city categorize its HANA calculation views for migration, and are there specific examples of views that require re-architecture due to S/4HANA's new functionalities like the New GL or Universal Ledger?

Answer 70: Refer to Exhibit 1 for details. Finance related views likely will need redesign because of the transition to Universal Ledger.

Question 71: For the ETL processes that need assessment and potential reimagination, does the city have preferences between continuing with FME or shifting towards BTP?

Answer 71: The City is open to either option based on cost/benefit analysis.

Question 72: Are there existing performance benchmarks or specific performance goals the city aims to achieve with the optimized data pipelines from SAP S/4HANA RISE to Snowflake?

Answer 72: The goal is to have the nightly ETL processes of migrated data pipelines perform at a level that is at least comparable to the performance of current data pipelines in terms of reliability and runtime.

Question 73: What level of detail and format does the city prefer for documentation to assist analytics staff in updating their Tableau reports and dashboards?

Answer 73: The goal is to enable Tableau users to make the necessary changes themselves, based on the provided documentation. The level of detail should be based on this goal. The City is open to different formats that are most effective to communicate the information.

Question 74: Could the City share insights on potential risks or challenges it foresees in this migration project, particularly those that could impact the project timeline or deliverables?

Answer 74: One risk the City would like to address early is to determine if using FME with OData meets the performance needs of the ETL process.

Question 75: Given the preference for hybrid or fully remote work, how does the city envision the coordination and communication flow to ensure project milestones are met effectively?



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Answer 75: The City expects to have a clear project plan outlining who does what by when. It is also important to frequently check progress against the project plan, escalate blocking issues, and adjust the project plan early when necessary.

Question 76: Can the City provide more information on its data access and storage policies, especially how they apply to data integration and architecture projects involving cloud platforms like Snowflake?

Answer 76: Currently for high level HANA calculation views, corresponding tables in Snowflake are created with similar structure. FME is used for data integration. Additional views are created in Snowflake based on these tables to make it easy for analytics users to use.

Question 77: What specific change management strategies does the City believe are crucial for the success of this migration, especially in terms of stakeholder engagement and training?

Answer 77: From the City's perspective, the key to success is to communicate with analytics users about the anticipated changes early, identify the reports and dashboards that potentially need to be updated, provide clear instructions and training about the changes that need to be made, and track progress and assist users who have difficulties.

Question 78: How does the city envision the knowledge transfer process post-implementation, to ensure long-term sustainability and self-sufficiency in managing the new system?

Answer 78: The City expects technical documentation that explain the reasoning of design and architectural decisions. The City's data engineers will participate in the project to be informed about the technical implementation.

Question 79: Are there any requirements for new Dashboards or Reports?

Answer 79: Building new reports or dashboards is not within the scope of the RFP.

Question 80: For the deliverables listed in the RFP, does the city have specific formats or templates it prefers vendors to use for the documentation and reports?

Answer 80: The City is open to different formats and templates as long as required information is clearly communicated.

Question 81: Are any data warehouse solutions in use today? The RFP indicates SAP BW is not in place, are there any other data warehouse solutions in place?

Answer 81: The Snowflake data platform the City uses serves as the data warehouse.

Question 82: Does COT have licenses for SAP Landscape Transformation (SLT) as part of the BTP licenses that have been procured?



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Answer 82: We do not currently license or have SLT.

Question 83: Does COT have licenses for Data Sphere or Data Intelligence? If yes, please share details of current use/ purpose.

Answer 83: No

Question 84: Will the SAP HANA DB (OnPrem) be sunset immediately after S4/HANA migration is complete? Or is there a timeline for deactivation?

Answer 84: The goal is to sunset SAP ECC as soon as possible.

Question 85: Are there any planned upgrades to Snowflake, Tableau or the existing HANA calculation views that would impact the scope identified in the RFP?

Answer 85: System upgrades or changes to Snowflake, Tableau, or existing HANA calculation views should not impact the RFP's scope.

Question 86: RFP indicates 3 data analysts and 1 data architect currently on the COT Analytics team. Are these resources dedicated to the Analytics migration project? Are there other subject matter experts and process owners already identified to engage on this project? Please share number/ type of resources and availability.

Answer 86: The City has one enterprise data architecture manager and three data engineers who can assist with the project. The capacity that can be dedicated to the project is estimated to be 3 FTEs.

Question 87: Migrating to SAP RISE on Amazon AWS would mean a the city of Tacoma will have a private SAP Hana Cloud instance?

Answer 87: Yes

Question 88: What are examples of the sizes for the pipelines, theres any more detailed documentation

Answer 88: Refer to Exhibit 1 for size detail based on complexity of calculation views and its related data pipelines. To get an overview of related data volume, refer to the answer to question 16

Question 89: Do direct connect queries from tableau need to be recreated in tableau to S/4HANA connection or can they be migrated to use Snowflake as singular source of truth

Answer 89: They can be migrated to use Snowflake.

Question 90: All calculated views are the ones in the Exhibit01_HANACalculationViews document or there more

Answer 90: All calculation views that are within the RFP scope are listed in Exhibit01.



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Question 91: Its possible to propose and implement a different technology for ETL like dbt or matillion or is mandatory to use the current ones

Answer 91: The City is open to use other integration technologies based on cost/benefit analysis.

Question 92: What are the long term goals for the data environment after migration? Does the town expect continued growth in data ingested to snowflake or reports developed in Tableau

Answer 92: Continued growth of data & analytics usage of Snowflake and Tableau is expected.

Question 93: Is there an expected deadline that the migration will need to be completed by? Is there a priority in migration of pipelines

Answer 93: The analytics data migration is expected to be completed around the same time when the overall S/4HANA migration goes live. Prioritization of the data pipelines to migrate is expected to be part of the scope of the RFP.

Question 94: RACI matrix. Who will be the key stakeholders and members from a ToC side besides the data architect and engineers

Answer 94: The Chief Data Officer is accountable for the project's success. The Tableau users who use SAP data in Snowflake are the key stakeholders.

Question 95: There are full technical and functional documentation regarding the current architecture and processes

Answer 95: For the current processes, we do have combined technical and functional documentation, which is known as data matrix at the city, we do maintain a cloud-based data catalog for Snowflake content.

Question 96: What are the expected roles and responsibilities from the data engineering team from City of Tacoma?

For example: QA and review only Actual development work? Will the data engineering team be involved in the project full time or part time?

Answer 96: The capacity that can be dedicated to the project is estimated to be 3 FTEs. The City is open to different options to best utilize the city's internal capacity to ensure the project's success.

Question 97: Which services are included as part of the City's BTP license? Anything specific to data, ETL, and reporting? Does City of Tacoma have licenses for SAP Data Services?

Answer 97: The City has a CPEA agreement for BTP Integration Suite. The City is not licensed for SAP Data Services



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Question 98: To confirm our understanding, does this mean City of Tacoma is open for other ETL tools and wants to include ETL tool assessment activities in the overall project plan?

Answer 98: Assessing or choosing another ETL tool is not a goal by itself. But if FME is deficient in the new architecture or another ETL tool has clear advantage based on the selected vendor's experience, the City is open to other options.

Question 99: Does this mean the actual Tableau reports and dashboard changes will be done by the City's own analytics staff? If so, the vendor's team provide the necessary documents and support, but not the actual changes on the Tableau reports and dashboards?

Answer 99: Yes, the vendor is expected to provide documentation, training, and support, but is not expected to make actual changes to Tableau reports and dashboards.

Question 100: Please confirm that our understanding is correct: this analytics RFP is for HANA calculation view conversion only for those objects listed in Exhibit 01, not for the needs or new requirements from the S/4HANA RISE and Service Cloud RFP.

Answer 100: Yes. However, there are areas that may need architecture changes, for example, areas related to universal ledger. Close coordination with the S/4HANA RISE and Service Cloud RFP effort would be needed in those areas.

Question 101: Can the City confirm it requires 3 references within the past 5 years?

Answer 101: See Addendum 2

Question 102: Please clarify the number of reports and dashboards being fed by the 137 data views.

Answer 102: There are currently more than 650 Tableau workbooks published on the City's Tableau Server that are fed by SAP data views from Snowflake or directly from SAP/HANA.

Question 103: Is Tableau Dashboard retrofit considered in scope?

Answer 103: The goal is to minimize the changes that need to be made to Tableau reports and dashboards. In the area that such changes are necessary, the vendor is expected to provide documentation, training, and support. The City staff is expected to make necessary changes.

Question 104: Will the current state data models in Snowflake stay As-Is with retrofit expected only between S4 and Snowflake Data Ingestion?

Answer 104: The goal is to minimize the changes to the data models in Snowflake. However, there are areas where such changes are expected, for example, the areas related to universal ledger.



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Question 105: Can you please specify, if there are any other reporting frontend tools being used besides Tableau?

Answer 105: There are other analytics tools used besides Tableau, but their usage is low and they are not expected to affect the scope of this RFP.

Question 106: Could you please specify if Real time operational reports need to be served Via snowflake or SAP?

Answer 106: Real time operational reporting is not a requirement. Existing Tableau reports using SAP HANA views directly can be migrated to use Snowflake. If SAP reporting is available in S/4 that can replace Snowflake or SAP HANA reporting to be migrated and is optimal, the City is open to a real time alternative.

Question 107: Can you please specify the number of reports and corresponding tables that need to be maintained AS - IS and retained in terms of design and functionality?

Answer 107: For the majority of the data pipes, the goal is to keep the Snowflake tables/views and the associated Tableau reports and dashboards as is. There are currently more than 650 Tableau reports connected to the Snowflake and HANA views in scope, and our goal is to minimize the amount of remediation needed for those reports.

Question 108: Could you please specify if there are any tools that serve glossary and lineage and need to be updated?

Answer 108: The City uses DQLabs as the data catalog, but the update to the data catalog is outside the scope of this RFP.

Question 109: We see you are using AWS , could you please clarify if you have license for Sagemaker and Glue if we want to use them for solution?

Answer 109: The City is not currently licensed to use Sagemaker or Glue.

Question 110: Please share more details on the sources of data for SAP HANA. How is data currently handled in SAP HANA?

Answer 110: The data is either SAP master or transaction data stored in SAP HANA database tables. Description tables are also included in the calculation views like DD07T or T006A for UOM text field names describing values where needed.

Question 111: As per the Exhibit01_HANACalculationviews there are just 3 custom Z tables used in the entire SAP HANA DB. Please confirm if there are more tables that are custom or just these three.

Answer 111: Refer to Exhibit 1 - column "Dependent Views and Path". There are about 19 custom Z tables. After moving to S4HANA RISE, these custom tables may or may not exist. Accordingly, dependent views may need to re-architected.



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Question 112: How are the custom tables populated with data , what is the source of data for the custom tables and data volume of these custom tables?

Answer 112: Sourcing of data in these custom tables within SAP is not relevant to this RFP. Data volume of these custom tables is not high as compared to standard ones.

Question 113: How will these custom tables be uploaded with data after moving to S4HANA on RISE?

Answer 113: This question is not relevant to this RFP. The task is to create data pipelines to connect CDS views using these tables with equivalent tables in Snowflake.

Question 114: What is the current ETL tool or snowpipe /SnowSQL?

Answer 114: FME is the current ETL tool.


NOTE: Acknowledge receipt of this addendum by initialing the corresponding space as indicated on the signature page. Vendors who have already submitted their bid/proposal may contact the Purchasing Division at 253-502-8468 and request return of their bid/proposal for acknowledgment and re-submittal. Or, a letter acknowledging receipt of this addendum may be submitted in an envelope marked Request for Proposals Specification No. IT23-0326F Addendum No. 2. The City reserves the right to reject any and all bids, including, in certain circumstances, for failure to appropriately acknowledge this addendum.

cc: Desiree Hochstein / Information Technology Department

SUBMITTAL CHECK LIST

This checklist identifies items to be included with your submittal. Any submittal received without these required items may be deemed non-responsive and not be considered for award.

Submittals must be received by the City of Tacoma Purchasing Division by the date and time specified in the Request for Proposal page.

<p>The following items make up your submittal package:</p>	
<p>One electronic copy emailed to sendbid@cityoftacoma.org of your complete submittal package, a maximum of 50 single sided pages for the sections identified below. The following sections should be included:</p>	
<p>Section 1: Signature Page</p>	
<p>Section 2: Prior/existing relationships with City of Tacoma</p>	
<p>Section 3: Executive Summary <i>(included in page limit)</i></p>	
<p>Section 4: Company Experience <i>(included in page limit)</i></p>	
<p>Section 5: Examples of Projects <i>(included in page limit)</i></p>	
<p>Section 6: Project Team & Qualifications <i>(included in page limit, except for resumes)</i></p>	
<p>Section 7: Project Methodology & Approach <i>(included in page limit)</i></p>	
<p>Section 8: Cost</p>	
<p>Section 9: Client Reference</p>	
<p>Section 10: Sustainability</p>	
<p>Section 11: Equity in Contracting</p>	
<p>Section 12: Credit Card Acceptance</p>	
<p>Section 13: Contract Exceptions</p>	