



**ADDENDUM NO.: 2**  
**INVITATION TO NEGOTIATE NO.: 22-0001**  
**CLOUD DATA WAREHOUSE**  
**04/19/2022**

The purpose of this addendum is to answer questions received prior to the deadline in Section 1.9, Calendar of Events. Citizens believes the information provided is sufficient for Vendors to accurately respond to the Vendor Questionnaire, Feature Workbook, and Price Sheet. Any limitations to complete responses should be set forth in the Vendor's response. Further Q&A and information gathering will be allowed during the Negotiation Phase of the ITN for those Vendors advanced to negotiations.

**SOLICITATION CHANGES.**

1. Exhibit 2, Implementation Vendor Data Source Details, is hereby added to the ITN.

**ANSWERS TO QUESTIONS.** Answers to Vendor questions can be found starting on page 2 of this Addendum.

***FAILURE TO FILE A PROTEST WITHIN THE TIME PRESCRIBED IN SECTION 627.351 (6)(e), F.S., CONSTITUTES A WAIVER OF PROCEEDINGS. SEE SECTION 4, GENERAL CONDITIONS, WITHIN THE SOLICITATION DOCUMENT FOR DETAILS REGARDING HOW AND WHERE TO FILE A PROTEST.***

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## Answers to Questions

No.	Reference	Question	Answer
1		Is there any preference for a Cloud provider?	No preference at this time, Microsoft Azure is Citizens' current infrastructure as a Service provider, but we are open to other solutions.
2		Which region/location do you want to host DW solution to?	No preference at this time. Citizens' current Azure environment is in Microsoft's East US 2 region.
3		How many users access the DW system?	See answer to question 4 below.
4		How many users are expected to access the DW system concurrently?	5-10 (Adhoc reports + Standard reports). By "concurrent" we mean at the same millisecond. By users, we mean the data engineering team. If the question is more broad as to the total number of reports or reporting users running a query at any time against the DW system, see answers to questions to 29 and 167.
5		Can you provide the approximate number of non-critical ETL jobs / scripts?	Approximately 50.
6		Does your system have different persona with controlled access such as admin, report, analyst roles etc.?	Yes. Azure AD Security Groups are in place for roles such as admin, report users, analyst.
7		Is data displayed in the report controlled based on personas?	Yes, row level security in Power BI.
8		Is there any ETL tool being used in the current server such as SSIS, DataStage etc.?	Yes. SSIS, Azure Databricks, and Python (limited).
9		Do you want to migrate or modify existing ETL processes?	There may be migration or lift & shift of ETL. Citizens expects Vendors to propose the most optimal target architecture and solution for a Cloud Data Warehouse in line with what is mentioned in Section 1.1 of the ITN document. Other specifics will be reviewed as part of the negotiation phase - see Exhibit 1 for details.
10		How many reports are generated as part of your reporting system?	See answer to question 41 below.
11		How frequently is the data refreshed?	Citizens has a few datasets that are refreshed three times a day along with daily, weekly, and monthly jobs. Also, see Exhibit 2 for additional details on data sources.
12		How is versioning of jobs, database objects, ETL scripts etc. maintained in existing system?	Github is place for ETL jobs and scripts.
13		Can you please share existing high level on premises DW architecture?	Source systems are noted in Exhibit 1, the ETL tool is SSIS and we use staging area for pre load and cleansing. Main ETL is executed via SSIS packages and the data is transformed to OLAP via multiple dimensional solutions also represented in Exhibit 1. Citizens will share additional architecture details with vendors advanced to the negotiation phase of this ITN.
14		What is availability/SLA requirements for your system?	Vendors should refer to item 10.a. of Attachment D, Functionality Workbook. Citizens desires a system uptime of at least 99.5%.

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No.	Reference	Question	Answer
15		What are the security restrictions and industry specific compliance requirements you adhere to?	See answer to question 49 below.
16		What is your quality assurance/performance metrics for the system?	Nothing specific at this time. Evaluators may consider your proposed metrics in their initial evaluations, and this topic may be more fully addressed during the negotiation phase.
17		For Disaster Recovery, what replication technique is being used currently?	VMWare replication at the server level, Always-On clusters at database level
18		What is the frequency of replication for Disaster Recovery?	Server level replication (VMWare) is hourly, database level replication is real time. Also, see answer to question 17 above.
19		What is expected RTO/RPO for Disaster Recovery?	See answers to questions 17 and 50.
20		What is sensitivity level of data that is targeted for cloud? (PII etc.)	Restricted Confidential (e.g., PII and PCI information).
21		Are we able to submit additional questions based on the responses to the original list of questions? If yes, is the process the same – send them to citizens.purchasing@citizensfla.com? If yes, what is the expected turnaround time for a response?	No, Citizens will not extend the initial question and answer period. Vendors may at any time contact the Procurement Officer for procedural issues or clarifications. Other clarifications and exchanges of business information will take place during the negotiation phase. See section 1.9, Calendar of Events.
22		Is the 145 TB of data in the CDW inclusive of the data marts - 22 databases?	Yes.
23		Would you like the vendor to propose a failover/ DR environment to the same cloud different region? Different cloud/region?	Citizens expects vendors to propose highly reliable disaster recovery systems. Typically, this means same cloud, different region.
24		Do you have a public cloud preference? Azure, AWS, GCP?	See answer to question 1 above.
25		Please confirm that the cloud region would not require FEDRAMP.	FedRamp certification is not required by Citizens.
26		Can you provide more insight on the business intelligence and reporting that will be fed by this cloud data warehouse?	Right now, Power BI is the enterprise reporting tool which connects to different dimensional solutions and data marts via Power BI SQL connector and creates datasets native to Power BI. A smaller portion of report builders also access the data warehouse via SQL Queries and may use MS Excel to create reports.
26A		What tools are you using?	See answer to question 28 below.
26B		How many users do you have?	See answers to questions 3 and 4 above.
26C		How many reports?	See answer to question 10 above.
27		Do you anticipate the need of real time reporting from the cloud data warehouse?	Yes.
28		What analytics tools are being used and will be integrating with the cloud data warehouse?	Citizens currently utilizes Microsoft Power BI, SQL Server Reporting Studio, and MS Excel.
29		How many users of these tools exist?	See answer to question 28 above. Citizens has six super users, 15 power users, and 600 users.

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No.	Reference	Question	Answer
30		How long is the development expected to take?	See ITN Section 2.4 and Attachment E, Price Sheet. Citizens anticipates implementation to begin Q1 2023 with the intent to have the DW platform implemented and fully operational by September 2023.
31		Can you describe the 65 ETL jobs?	These jobs populate the "Targets" from the "Sources" mentioned in Exhibit 1. There are 80 Facts and 120 Dimensions overall that get populated by these jobs.
31A		What tools are you using?	See answer to question 8 above.
31B		Frequency?	Near Real-time, Daily, Weekly, Monthly - Access to the ODS (Operational Data Store) should be direct connection.
31C		How long do they run and how much data do they load?	See answers to questions 33, 38, and 41 below.
32	ITN 2.1 pg. 8	As mentioned, 65 jobs are critical. a) How many total jobs (Critical/ Non-Critical) are running? b) What is the frequency of these scheduled jobs, i.e. daily/alternate day/ weekly?	See answers to questions 33, 38, and 41 below.
33	ITN 2.1 pg. 8	What is the incremental data load size on a daily basis (in Gb's)?	600 GB today.
34	ITN 2.1 pg. 8	As mentioned there are 22 databases. Are these DB's holding different types of data marts or they are divided in partitions without data marts or specific domain/context?	See Exhibit 2 for additional details on data sources.
35	Section 3 pg. 3	How many concurrent users are expected or planned in current DW which will be accessing CITIZEN resources i.e. Dashboards, reports, any linked website etc?	See answer to question 4 above.
35A	Section 3 pg. 3	Will it be a live report hitting database every time or export of report/cached reports?	Both live as well as cached reports. Long running reports will be scheduled and sent to user's mailbox or at shared location.
36		How many dimensions & fact tables exist in present data-warehouse?	See answer to question 31 above.
37		How many approx. no of reports are expected as part of this project?	See answer to question 41 below. Vendors should note that the recreation or development of reports is not in scope for this ITN.
38		Is there Performance related SLA's to be adhered for ETL & BI?	Citizens will address SLAs during the negotiations phase of the ITN. At this time, Citizens envisions that simple reports should show results within 30 secs. And complex reports should not take more than 3 mins. To have better customer experience, we will schedule complex reports. Daily Jobs would be expected to be completed before 5 AM EST and monthly jobs completed by 2nd day of the month.
39		Are documents (design/data integration specification) available for the current data Warehouse system architecture?	See answer to question 13 above.
40		How much time is taken by incremental and full load on current data warehouse?	See new Exhibit 2 incorporated into this ITN.

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41		Please list expected number of reports in order of complexity (High - more than 5 UI controls, Medium - more than 3 and less than 5 UI controls, Low-- less than 3 UI controls), (UI Control - Conditional filtering, drill down, Gauge etc)	Citizens currently has 150 complex reports, 50 medium reports, and 50 low complexity reports. Vendors should note the recreation or development of reports is not in scope for this ITN.
42		Please provide details regarding existing BI tool. i.e. Version, Architecture	Microsoft Power BI (Latest version of both cloud and desktop as released). We connect through Power BI datasets.
43		Please provide details regarding existing ETL/ELT tool. i.e. Version, Architecture	See new Exhibit 2 incorporated into this ITN.
44		Please share SMS/SMTP broadcasting requirements for notifications?	Email SMTP details will be provided to the awarded vendor during implementation. Citizens prefers the solution secure SMTP methods: SMTP Auth, TLS, etc.
44A		Will CITIZENS provide required SMS/SMTP server for the notifications?	Yes.
45		How many days is a sudden workload spike expected on DW i.e. year-end or quarter-end activities?	Quarterly, Monthly, and during a Catastrophe event (Ref ITN Sec 2.1)
45A		What is the quantum of those activities considering normal day load i.e. 2X, 3x, 4X	Vendors should refer to ITN Section 2.1. Volumes could increase 5X times during a Catastrophe event, and Vendors should assume 5X times for Quarterly and Monthly.
46	pg.5	In reference to Please provide existing Architecture of current Data Warehouse, what kind of unstructured data is referred to here?	We expect the target state architecture to be provided by the Vendor in accordance with their proposed product. The existing architecture is a moot point as Sec 2.1, C, (iii) limits the "Lift & Shift" methodology. The "Targets" from the "Sources" are identified in Exhibit 1. There are 50 Facts and 1000 Dimensions overall that get populated by approximately 65 jobs. Unstructured data exists in the formats that need to be supported as mentioned in functionality workbook section 2. Additional information will be shared with vendors advanced to negotiations, as applicable.
46A		Text or Image?	Text and Image
46B		What is the source of these data?	Xactimate software. Vendors may refer to the vendor product links at: <a href="https://www.xactware.com/en-us/solutions/claims-estimating/xactimate/professional/">https://www.xactware.com/en-us/solutions/claims-estimating/xactimate/professional/</a> . However, this may change based upon the selected solution.
46C		Is it generated real time or it will be available in DB or File?	In a File system right now
46D		What is the expected size of this data?	Citizens average monthly is 2.2 GB; however, it could increase five (5) times the normal usage during a catastrophe event. Also, see ITN Section 2.1, Background.
47	Exhibit 1, pgs. 1 & 2	"SQL Ad-hoc Query Power BI Cloud" Please clarify above statement.	SQL for Ad-hoc reports. Also Power BI serves as Standard Reporting and Self Service tool

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47A	Exhibit 1, pgs. 1 & 2	From which data sources are these reports being populated OLTP or OLAP?	Both OLTP and OLAP.
47B	Exhibit 1, pgs. 1 & 2	If it is OLAP what is the frequency of executing these queries?	The frequency of executing OLAP queries is daily, weekly, and/or monthly.
48		Do you have any preferred Cloud Vendors for hosting a solution for this ITN?	See answer to question 1 above.
49		Are there any specific Data security and compliance policies at Citizens that any solution needs to adhere to?	Yes, Citizen's data security and compliance policies are based industry standard best practices adopted for Citizens. Additional information can be shared with vendors advanced to the negotiation phase.
50		Does the solution need to support or interface with any existing enterprise Backup & Disaster Recovery solution?	Proposed solutions should support disaster recovery in accordance with RPO/RTO/Uptime requirements as described in Section 10, Attachment D, Functionality Workbook. Vendors should propose solutions that utilize industry standard solutions or have alternative methods available as part of their proposed solution. Integration with the enterprise Disaster Recovery solution is not required.
51		Will Citizens Property Insurance accept multiple replies from the "DW Platform Services" component with different companies responding to the "Implementation Services" component?	Yes, each Reply will be considered and scored as a separate offer.
52		If Citizens Property Insurance has an active "Cloud Services contract", to this new Cloud Data Warehouse service, will Citizens Property Insurance use the same contract, or will it open a new one?	This is dependent on the proposed solution.
53		What is the configuration of your SQL Server 2016 (Cores and RAM) environment today?	120 CPU cores, 1.4 TB RAM across development and production environments.
54		How much users are Data Engineers (exploring and modeling the data)?	See answer to question 74 below.
55		How much users are Data Analysts (consuming the data by reports)?	See answer to question 74 below.
56		What is the total data volume from the 6 external data sources?	Currently, 5.5 TB.
57		What is the total data volume from the 13 internal data sources?	Currently, 14TB.
58		What is the periodicity of each data load, internal or external, for the new Data Warehouse environment?	Of the 65 ETL jobs, approximately 60% are daily, 25% are weekly and rest are monthly. Additionally, see Exhibit 2 for additional information on data sources.
59		What are the planning assumptions that were factored in for the Cloud Data Warehousing infrastructure budget allocation?	Citizens is awaiting responses from the market before making any budgetary decisions. At this time, there is not an established budget.
60		How many jobs (pipelines, insights, etc.) and compute did Citizens planned for the approved budget for procuring cloud data warehousing solution?	See answers to questions 46 and 53. Additionally, since Citizens does not currently have a cloud environment however the compute can be derived from the answer to question 53.



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No.	Reference	Question	Answer
61		There is no weightage for DW platform fee for year 6-10, so would it be okay if we do not provide that information, given that by then the data volumes would be much higher?	Yes. However, if pricing is available for years 6-10, Vendor responses should provide <u>initial</u> pricing for those years using the assumptions provided in Attachment E (which includes an annual growth assumption of 35%). Pricing will be further explored during negotiations.
62		Have you established a tentative start date for the project?	Citizens anticipates implementation of the Data Warehouse Platform may begin as early as Q1 2023.
63		What is the allocated budget for this contract?	See answer to question 59 above.
64		How much is Citizens willing to invest for the Cloud Data Warehouse given the data volume of 145 TB with anticipated 35% year on year growth.?	See answer to question 59 above.
65		Do you expect the vendor to deploy any on-site resources to complete any tasks in the project?	Not at this time. However, occasional on-site work (e.g., meetings, trainings, etc.) may be appropriate. This subject can be addressed during the negotiation phase.
66		Can we utilize hybrid resource model (on-site, remote, off-shore) to accomplish the project?	Yes, Citizens will consider a hybrid resource model, subject to negotiations and review by Citizens IT Security department. Vendors should describe their resource model in their answer to question 12 of Attachment C, Vendor Questionnaire.
67		Is Citizens open to resources equivalent to the proposed key personal in terms of skills and experience at the time of project start?	Yes, substitution of personnel is allowed when necessary so long as doing so will not diminish performance of services. Vendors would need to advise Citizens of any needs to replace key personnel as soon as practicable.
68		Which data warehousing solution/data mart is currently employed by Citizens?	See ITN Section 2.1. Citizens current data warehouse solution is a home-grown (internally designed and built) dimensional model that runs on SQL Server 2016.
69		Do you have an enterprise license agreement with Oracle or Microsoft?	Yes.
70		Which data visualization solution(s) is currently employed by Citizens?	See answers to questions 8 and 28.
71		What is the allocated budget for procuring the Cloud Data Warehouse solution?	See answer to question 59 above.
72		Please enlist all the tools currently used and anticipated by Citizens to be used under this contract.	See answers to questions 8 and 28.
73		Please share the number of users to be trained by function and usage.	See answer to question 167 below.
74		What is the estimated/current number of users under this project by functions and usage?	See answers to questions 29 and 167 below.
75		Do you have a preference between Oracle Cloud or Azure?	See answer to question 1 above.

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No.	Reference	Question	Answer
76		Are there any Data Services contractors engaged with Citizens? If yes, please share their names and nature of services provided.	No.
77		Does Citizens have any preference for the Cloud Datawarehouse solution?	No.
78		How critical is the information on DW platform fee for year 6-10?	See answer to question 61 above.
79		What are the current/anticipated use cases for using semi-structured and unstructured data?	Currently, text analytics via data extracted from .pdf estimates. Future state should include image recognition and analytics, and social media sentiment analysis.
80	Exhibit 1	Does Citizen expect the contractor to work only on the yellow highlighted data sources in Exhibit 1?	See ITN Section 2.4 and Exhibit 1. The yellow highlighted cells, in Exhibit 1, indicate the data sources Citizens <b>anticipates</b> the Implementation Services provider will be responsible for implementing the Target and Reporting Layer. However, Citizens is open to discussing alternative vendor implementation solutions with vendors advanced to <u>negotiations</u> .
81	Exhibit 1	Do the yellow highlighted data sources in Exhibit 1 constitute 50% of the total data volume?	Not necessarily the data volume, but a combination of scope and % of the ETL volume.
82	Exhibit 1	Do we have to propose cost for only the yellow highlighted data sources in Exhibit 1?	Yes, see the Pricing Assumptions provided on Attachment E, Price Sheet.
83		Can you please list the 65 ETL jobs by source and target?	See Exhibit 2 for additional details on data sources.
84		How is the division of labor arrived at?	See answer to question 84A below.
84A		Is it based on the 19 source systems or is it based on the 22 target databases?	If this question pertains to ITN Section 2.4 C, Implementation Services, it is a combination of scope and % of the ETL volume. See answers to questions 81 and 82 above.
84B		Considering this is a fixed fee contract, could Citizens possible share why roughly half of this work needs to be done by the internal resources?	See answer to question 85 below.
85		What is the perceived value behind Citizens' internal resources having to work on the 50% data provisioning only?	Citizens' internal staff needs to learn and develop new data integrations to service future and current Citizen's data needs.
86		What is the reasoning behind Citizens requiring a contractor to ensure 50% data provisioning only?	See answer to question 85 above.
87		Have you identified the 50% areas that have to be provisioned by the contractors?	Yes, see Exhibit 1 as well as ITN Section 2.4 C, Implementation Services. Also, see answer to question 80 above.
88		What is the data volume of the identified 50% areas that have to be provisioned by the contractor?	See answers to questions 80, 81, 82, 87, 134, and 160.
88A		Should we propose cost for the 50% or for the entire data provision and by extension the entire project?	See answers to questions 80, 82, and 87.



No.	Reference	Question	Answer
89		Can you please describe what the function of each of these are by the departments they are used by (primarily): *Acuity *Bolt (Clearinghouse) *MyService (Service Now) *CHATS (Oracle Service Cloud) *Xact Analysis *CenterPoint (Oracle Fusion ERP)	<a href="#">Acuity</a> . Data from our legal billing system. <a href="#">Bolt</a> . Clearinghouse data that houses quotes requested by agents. <a href="#">MyService</a> . Service Now based IT ticketing and workflow management. <a href="#">CHATS (Oracle Service Cloud)</a> . Customer Survey data <a href="#">XactAnalysis</a> . Claims Management Software - <a href="https://www.xactware.com/en-us/solutions/claims-management/xactanalysis/overview/">https://www.xactware.com/en-us/solutions/claims-management/xactanalysis/overview/</a> <a href="#">CenterPoint (Oracle Fusion ERP)</a> . Modules HCM, financials and procurement
90		What are your Data Use Compliance regulation requirements?	<a href="#">See answer to question 49 above.</a>
91		Do you require an SLA included for High availability and disaster recovery?	<a href="#">Yes, see Exhibit A of Attachment F, Citizens Standard Terms and Conditions for anticipated Service Levels, subject to negotiations.</a>
92		What technology is currently being used for your ETL process?	<a href="#">See answer to question 43 above.</a>
93		Any performance or feature issues in the current environment you can describe ?	<a href="#">Since Citizens current environment is not a cloud solution, elasticity, scalability, and other challenges from on-premise solutions prevail.</a>
94		Any preference with any specific technologies? E.g. Azure Databricks or Azure Data Factory?	<a href="#">Not at this time. See answer to question 1 above.</a>
94A		If not, why?	<a href="#">See answer to question 94 above.</a>
95		Are large corporations eligible for award?	<a href="#">Yes, no point preference is given to small or large vendors.</a>
96		Is there a bid preference for a small/diverse company?	<a href="#">No.</a>
97		Is there a preferred cloud service provider?	<a href="#">See answer to question 1 above.</a>
97A		If not, is there a primary and secondary provider? That would imply most of the data and applications will reside on the primary CSP or it will be the initial CSP to migrate to.	<a href="#">No.</a>
97B		Is there a specific requirement for multi-cloud?	<a href="#">No.</a>
97C		If so, what is the reason for a multi-cloud architecture?	<a href="#">Not applicable, see answer to question 97B above.</a>
97D		Will Citizens use a hybrid architecture? Leaving some data and applications on-premises and some in the cloud.	<a href="#">Most of Citizens' systems are cloud-based or will be moving to the cloud in the next several years. The DW platform must be a cloud product.</a>
97E		Will some applications be split between the location of the data and the application?	<a href="#">Refer to the exhibit 1 for source applications (on-prem or otherwise)</a>
98	Attachment D - Functionality Workbook	<b>System Architecture and Design 1a: ability to reside on single or multi-cloud tenant.</b> Can you clarify if you mean running as the sole tenant in a CSP vendor (as opposed to having that instance support other non-Citizen systems) OR the ability to run across different CSP tenants? We believe the former but wanted to clarify as wording can be read both ways.	<a href="#">Ability to run across different CSP tenants.</a>

No.	Reference	Question	Answer
99	Attachment D - Functionality Workbook	<b>System Architecture and Design 1e: output data in form of a data mart with targeted data assets. This question (and 5a) implies certain architecture choices and there are no questions on database optimizations that would reduce/eliminate data marts.</b> Is any of that being taken into consideration or is there another rationale for the physical data mart structures? Can the data marts be co-located in the data warehouse to reduce data export and maintenance?	No architecture choices have been made at this time. Target architecture is expected to be provided by the Vendor in accordance with the product that they implement. Also, see answer to question 46 above.
100	Attachment D - Functionality Workbook	<b>Data Ingestion 2a: ability to connect and ingest from AWS Bucket. You do not ask about Azure blobs or GCP object-store.</b> As you have not defined a CSP can it be inferred that you would prefer AWS or should the other object storage be noted as well?	The question is about connectivity to the AWS data protocol and should not be construed as a choice of CSP. Vendor responses should state if their product can establish connectivity to AWS and provide other comments in the Functionality Workbook.
101	Attachment D - Functionality Workbook	<b>Operational Aspects 3c,d,e: autoscaling, how to prevent it, and suspending compute. All of these seem to imply the ability to control the cost of computing from run-away queries or paying for provisioned compute when not in use. There are other ways to manage workload effectively but we did not see any questions about workload management or optimization or true "pay for consumption".</b> Can we consider and provide for these features in this section?	Yes.
102	Terms and Conditions	Attachment F, Section 11.2.2 mentions implementation of NIST 800-53 controls. Would utilizing a repository such as AWS or Azure GovCloud meet the requirements? Is FedRAMP compliance required? If so, at what level (High, Med, Low)?	Citizens is willing to discuss these questions and possible alternatives during the negotiation phase. Also, see answer to question 25 above.
103		Are you looking for a hybrid environment (Data Center)/Cloud or moving entirely to the Cloud?	Citizens is seeking a completely cloud-based solution for the warehouse portion. The source applications currently reside as described in Exhibit 1, Data Sources.
104		Are you looking for a multi-cloud or single-cloud vendor?	See answer to question 96 above.
105		Are you considering a cloud option for Disaster Recover or the high availability of two clouds?	See answer to question 50 above.
106		What is your timeline to migrate into the Cloud?	Citizens intends to begin implementation in Q1 2023 and have the DW platform full operational by September 2023.
107		In the Contract term section (1.3), are the three-year minimums the length of time to move into the new environment?	No, see answer to question 106 above.

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No.	Reference	Question	Answer
108		Is the desire for a fully managed service or self-managed or open-source managed service?	There is no preference at this time. We request the vendors to propose the most optimal solution based on their product and implementation experience. Citizens may explore other options during the negotiation phase if the Vendor is advanced. Vendors may mention then other options in response to question 18 of Attachment C, Vendor Questionnaire. If Vendor chooses to propose multiple options grouped by managed vs. self-managed, it is welcome.
109		Do you want to carry licensees, or are you looking for open source licensing?	Vendor responses should include the requisite licenses. The use of option source licensing may be explored further during negotiations.
110		Are you looking for an out-of-the-box Data Lake or complete transformation solution?	See answer to question 46 above.
111		How do you plan to connect from Data Center to the new cloud environment?	Vendor solutions should include the capability to connect to our on-premise data (i.e., Citizens connects to our SQL Server data via a Microsoft Gateway option). Also, see answer to question 46.
112		Are you looking for {1} vendor to build and another {2} to manage or one vendor to do both, build and manage?	No preference at this time, although there may be advantages of having one vendor do both.
113		Can we assume that Citizens is currently leveraging on-prem SSIS for ETL purposes?	See answer to question 8.
114		While there are questions about ingestion from the Data Platform, is there a separate ETL solution that is also being considered in conjunction with the Data Platform implementation	Citizens is expecting the Cloud Warehouse to have all the functionality set out in the Functionality Workbook and as described in Section 3.8 E of the ITN (Proof of Technology).
115		Would you be interested in solutions slightly outside the requirements listed in this document (ETL, Data Replication, and Data Governance)?	Yes. Citizens is open to alternative solutions so long as a Vendor can explain why a particular expectation or desired functionality is not needed.
116		Other than Service Now and CHATS (which are presumably semi-structured data sources), what "unstructured" data source are anticipated?	See answer to question 46 above.
117		Can we assume PowerBI Cloud will remain the main consumption layer?	Yes.
117A		What about SQL Ad-hoc?	Yes. See Exhibit 1, Data Sources for additional information.
117B		Any others?	Others may include Azure Analysis Services, Python, and R language
118		What is the desired latency from source systems into DW. Batched daily or hourly, or continuous/semi real-time?	See answer to question 38.
119		Would you be interested in any Managed Services at the conclusion of "Implementation Services"?	Potentially. See answer to question 108.

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120		Will Citizens 6 external systems Cloud and SaaS based applications need to be migrated into the new CDW platform?	This ITN is not about migrating applications. If the question is about migrating the data for consumption and curation in the Cloud Data Warehouse, that is the target state architecture that the vendor should propose. Also, see answer to question 46 above.
121		Will Citizens continue with their current CDW application or is Citizens looking to replace the entire existing DW Application?	See ITN Section 1.1, Statement of Purpose which in relevant part states [emphasis added]: "The solution will enable Citizens to <u>replace</u> and enhance its existing data warehouse functions to better serve Citizens' stakeholders now and in the future."
122		Would Citizens be willing to use their current CDW application in as the base application to the new DW?	No. As referenced in Exhibit 2, Citizens desires the structure of the data warehouse to remain as is, but the source to target architecture is the Vendors product features and functions. Current and historical data should be loaded into the Vendor solution at the time of migration.
123		Will Citizen accept an on premise Platform as a Service (PaaS) offering?	No.
124		Can respondents, respond with more than one solution response?	No, initial responses should be limited to one proposed solution and one proposed price. Optional products and services can be mentioned in response to question 18 of Attachment C, Vendor Questionnaire. Alternative solutions and prices may also be proposed during negotiations if a Vendor advances to that stage. See ITN section 1.1. for Reply Options. Also, see answer to question 51 regarding how the same product could be proposed by different implementation partners.
125	Exhibit 1	"Exhibit 1 Data Sources" Will the existing AS400 remain intact or does this workload need to be considered as part of the net new solution?	AS400 system data will be retired by the time of the ITN implementation.
126	Generic	Are you open to a hybrid approach with an onsite install of the CDW mirrored to the cloud?	No. See answer to question 97D above.
127	ITN	What are all the data marts that are present. There is a mention of 22 databases referencing data marts. Are these individual data marts (meaning we have 22 data marts) or are these some other downstream data bases?	See new Exhibit 2, Data Sources Details incorporated into this ITN.
128	ITN	Does the scope include re-designing of the Data warehouse including the data marts? Or only the data warehouse?	In accordance with IT section 3.8 E, Vendors should review and provide their optimal product and solution implementation. Also, see answer to question 46 above.
129	ITN	What are the downstream applications / reporting tools accessing the marts?	Power BI datasets, Access via SQL Server, Azure Analysis Services, R language, and Python.
130	ITN	Do we have any direct access from the Data warehouse also?	Yes.

## ITN 22-0001 Cloud Data Warehouse

## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
130A	ITN	If yes, once new DW is designed and implemented, who would be making the changes to the downstream applications accessing the ware house?	Citizens internal Data Engineering team.
131	ITN 2.1	<b>It is mentioned in section 2.1 that during catastrophe response, that data transfer loads can increase 5 times?</b> Is the increase in the data volumes or do we have increase the frequency of Loads (being triggered multiple times a day)?	There is an increase in load, and in some modules (such as Claims) there will be an increase in volume.
132	ITN	Can we get the detailed Architecture of the AS IS CDW (along with upstream and downstream).	See answer to question 13 above.
133	ITN 2.4.C.i	<b>Section 2.4 -- C - (i). It is mentioned that Citizens expects the implementation partner to own 50% of the conversion jobs, while Citizens internal resources would be responsible to remaining 50%".</b> Can you please provide some more details on this? a) Is there an initial assessment done on the total number of objects and classifications?	See answers to questions 84A and 88A.
134	ITN 2.4.C.ii	<b>Section 2.4 -- C (ii), It is mentioned that Vendor will be responsible as a resource to Citizens' as needed for the work that Citizens will perform.</b> Can you please elaborate on this?	The vendor will be responsible for 50% of the implementation as indicated by the yellow highlighted portions in the Exhibit 1. Citizens' internal staff will be working on the remaining portion and may require guidance from the vendor as this parallel migration occurs. Also, see new Exhibit 2 and answer to question 133 above.
135	ITN 2.4.C.iii	<b>Section 2.4 -- C - (iii) -- It is mentioned that Citizens' does not anticipate any Data models to migrate, which means we are looking at re-designing of the data models for the new data warehouse, Data marts and the respective ETL jobs.</b> Please confirm the assumption.	Confirmed. See answer to question 122 above.
136	Attachment D - Functionality Workbook	<b>Functional Workbook - Data Integrations: Mentions about ability to ingest data formats, and one of the formats being mentioned is .PDF.</b> Can you please provide more details on this? a) Are we looking at implementing PDF data extract functionality as well as part of this implementation?	Citizens currently utilizes a PDF extraction routine. Vendors responses should provide details of their proposed solution for consideration by Citizens.
137	Attachment D - Functionality Workbook	Is there any requirement of implementing streaming data as well?	We do not have a current streaming data feed.
138	ITN	<b>It is mentioned to have ability to ingest unstructured data?</b> Do we already have any unstructured data ingestion to be implemented as part of this program or is this more to ensure we have the capability to ingest in future as need be.	Citizens currently utilizes a PDF extraction routine, a solution that is outside the current warehouse. Citizens would like to review the capabilities of the proposed solutions.

## ITN 22-0001 Cloud Data Warehouse

## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
139	ITN	Development Environments: How many environments does Citizens' expects / or is looking at to be maintained (Dev, QA, UAT, Pre-prod, Prod, DR ...)?	Development, Test, Production, and Sandbox
140	Attachment D - Functionality Workbook	Data Protection: Do we have any requirements to implement any data Encryption as part of the new EDW implementation?	State of the art data encryption is expected for PII information and other sensitive information. Further details may be discussed during the negotiation phase.
141	Attachment D - Functionality Workbook	Does Citizens' already has any Data Encryption tool in place?	Yes, Citizens currently uses column-level 'Always Encrypted' functionality.
142	Exhibit 1	There are some of the data sources like CHATS, Xact Analysis, CenterPoint (Oracle Fusion ERP) etc. Are these individual integration with specific data marts or they are referential integrations with the PAS data in data warehouse?	Individual integrations.
143	Exhibit 1	For the legacy systems (WIND, POINT) AS 400 based data base, is the data exposed as Files or we have integrations with the data base to pull the data?	See answer to question 125 above.
144		How many years of Historical data is maintained in the warehouse.	Citizens has legacy data that dates back to 2003. Also, see answer to question 122.
144A		Do we have any data archival process in place?	No, Citizens does not have ongoing archival processes in place. Periodic archival is performed as necessary.
145		Citizens' has an existing data warehouse (DW) instance, can you please share the challenges and or any pain points that need to be addressed in the new DW solution?	See answer to question 93 above.
146		Do you have any ETL/ELT performance related challenges that need to be addressed through the new DW solution?	Most performance issues are RAM related. CPU utilization is significant but does not exceed limits. Code modifications/refactoring would address most of this.
147		What is the frequency of data extraction from source systems and/or data ingestion into CDW?	See answer to question 11 above.
148		How many products/LOBs data need to be ingested into the new DW solution?	Vendors should refer to Exhibit 1, Data Sources.
149		What are reporting/visualization expectations from the new DW solution?	See answer to question 26. Citizens data engineering team will connect to the new data warehouse solution for reports.
149A		How many pre-built reports and dashboards are expected?	Vendor is not expected to create new or convert existing reports.
150		Do you have any advanced analytics needs that need to be fulfilled from the DW solution?	Yes, data mining, text mining, and predictive analytics.



## ITN 22-0001 Cloud Data Warehouse

## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
151		Production support - Can you please specify, how long the production support will be needed post Go-live?	As part of the Implementation Vendor services, Citizens anticipates 60-90 days for post Go-Live support. Citizens expects the Platform Vendor to provide technical and production support throughout the term of the contract. Citizens is also open to other solutions, such as a managed services arrangement.
152		Production support - How many inquiries or change requests do we anticipate during weekdays and weekends?	15 Change Requests per month on an average.
153		Testing - Apart from UAT, will the current Citizens' testing team perform testing on some modules OR entire testing services will be undertaken by the Implementation Vendor?	There will be in-house testing in addition to UAT but the vendor preferably has to do a shakeout upon implementation and provide Citizens with their results/scope for review and continuation.
154		Can you please mention what was the team size including developers, project managers, architects, and quality analysts who were involved in data migration and data warehouse setup in Citizens' last project of similar or comparable system?	Citizens has not had a project of a comparable system previously.
155		Post the Intent to Award Contract(s) announcement on 9th August, 2022, what is the anticipated/actual project implementation start date?	See answer to question 62 above.
156		How much time will be required for granting all the access and facilitation/training of existing system, post 9th August Intent to Award Contract(s) announcement?	Vendors should note that an award resulting from this ITN is subject to approval by Citizens Board of Governors (BOG). Citizens anticipates an award from this solicitation would be presented at its September 2022 BOG meeting. Execution of a contract typically takes 90-days. Therefore, Citizens anticipates implementation activities, with the awarded Vendor, to begin in the first quarter of 2023.
157		Should 100% of implementation team (one-time implementation) be sourced from US region?	See answer to 66 above.
157A		Can some of the developers and architects be sourced from off-shore region?	See answer to 66 above.
157B		Can we provide mix of team members from US and off-shore/nearshore region?	See answer to 66 above.
158		Should 100% of post Go-live on-going production support requires to be sourced from US region? Can this be facilitated from mix of Offshore/nearshore and US region?	See answer to 66 above.
159		Is there any preferred pricing model such as Time and material, Fixed price etc., which is favourable for Citizens'?	Vendors should refer to Attachment E, Price Sheet for instructions & assumptions that should be used when preparing initial pricing.
160		It is mentioned starting the project in Q1 2023 and completing in September of 2023. Is it expected that all data from all those systems to be loaded and balanced in less than 9 months?	See new Exhibit 2. Additional information will be shared with vendors advanced to negotiations, as applicable.

## ITN 22-0001 Cloud Data Warehouse

## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
161		Do you expect a vendor to migrate the data from the on-premise data center to the cloud solution?	Citizens anticipates vendors to provide an optimized product, architecture and implementation solution. If the proposed architecture warrants migration of data from the on-premise data center to the cloud, that needs to be outlined. Also, see answer to question 46 above.
162		Do you have any preferred technologies/technologies you would favor over others? (For example Microsoft/AWS/Google Cloud etc)	See answer to question 1 above.
163		Do you have an official budget for this initiative and can you share what it is?	See answer to question 63 above.
164		Do you expect the vendor to include change management activities to ensure the user groups adopt the new solution (is this something that you would like us to include?)	Some change management service may be helpful. Vendors are encouraged to propose such options in response to question 18 of Attachment C, Vendor Questionnaire.
165		Are there any specific accreditations/certifications you expect a vendor to have for this project?	Not at this time.
166		How large is the team that will take on administering/maintaining the Cloud solution after implementation?	If the question is about Citizens' team size, it will depend on the proposed solution and what the vendor offers as ongoing support services. See section 2.3 C of the ITN document for Technical and Production Support Services. Citizens is open to outsourcing within reason.
167		Can you share the quantity of people per group that you expect to interact with the new solution (such as analysts, external etc). What level of technical skills do they have?	The technical users include 9 Data Engineers and 5 Cloud Engineers. Data Engineers include 60% senior and 40% intermediate skill level.
168		Why are you looking to make this change now (what is the reason for issuing an ITN at this time?)	See answer to question 93 above.
169		Can you share the full list of data types and respective volumes in the existing database?	See Exhibit 2 for additional information on data sources.
170		Can you share any documentation/Entity Relationship Diagrams relevant to the current solution?	Citizens will share these materials with vendors advanced to the negotiation phase of the ITN.
171		Are any of the existing ETL logic/transformation steps redundant (will new logic be needed or is all existing logic still applicable)?	Vendor is encouraged to provide a completely new Data Warehouse solution in line with their product and keeping track with the features and expectations based on ITN document sections 2.3, 2.4 and 3.8.
172		How do existing users authenticate against the existing solution?	Azure Active Directory.
173		Is there a preference for on prem/cloud/hybrid solutions?	See answers to questions 1, 46, and 103 above.
174		Can you share how a typical analyst interacts with the current solution?	Analyst run reports via PowerBI using dimensional solution, and create adhoc reports from OLTP system. Also users create reports from cubes and datasets created by reporting team.

## ITN 22-0001 Cloud Data Warehouse

## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
175		Are there any data quality rules you apply to ensure cleanliness?	Standard data quality to ensure data length and data type consistency to the target system.
176		Do you have any existing data integration/ETL tools in your tech stack? If so, can you share what these are?	See answer to question 8 above.
177		Can you share the breakdown of technologies in your current tech stack?	Data Ingestion: SSIS, Azure Databricks, Python Reporting: Power BI, Azure Analysis Services, SSRS Modeling: SAP Powerdesigner Database: SQL Server 2016
178		What is being considered/discussed in terms of Automation (CI/CD)?	Citizens uses GitHub for source control, but there is no automation in deployment.
179		Are you looking for any data visualization/dashboarding services or this ITN is for housing and modeling the data only?	Housing and modeling only, no visualization/dashboarding. Note: The tool or vendor should provide (either out of the box or build out) reports for the performance, health, and tuning capabilities of the warehouse.
180		Please describe the groups of query users for the Cloud Data Warehouse including 1) the quantity of users in each user group 2) and whether each are primarily analytics-oriented, reporting-oriented, ad hoc-oriented, and/or data scientist-oriented.	See answer to question 74 above.
181		Please describe the Service Level Agreements (SLAs) that you have for any of the query user communities above	See answer to question 38 above.
182		Please describe the initial load amounts in TB or GB including each of the data sources.	See answers to questions 22, 33, 56 and 57 above.
183		Please describe the Service Level Agreements (SLAs) that you have for any ingest or loading or batch jobs you require in regard to specific time frames including sizes in GB or TB, the complexity of transformations required, and data source for loading hourly, daily, weekly, monthly, etc.	See answer to question 38 above.
184		Please describe any real-time replication / change-data-capture of data required including the data sources.	Real-time access and reporting are currently only done as needed during a Catastrophe event (see ITN Section 2.1). A combination of historical snapshots of data is used to populate the dimensional solutions.
185	Attachment D	Section 8 "Governance" What organizations, processes and systems are in place today related to governance functionality described in this section, including cataloging, flagging security/confidential classifications, maintaining data lineage, and maintain a data glossary?	Today there are manual processes for cataloging, flagging for security classifications, data dictionary, records retention, and a governance committee for data changes. For this project we want to add tool capabilities for metadata management processes for data lineage, relationships, stewards, data glossary, and self-service discovery/insights for business power users.

No.	Reference	Question	Answer
186	Attachment D	Section 6 Design and Development Environments (d) and (e) – support for ML/AI development, model training, and deployment – Please describe what, if any, ML/AI capabilities and systems Citizens has today?	Citizens is currently using R language and Python for machine learning development. Citizens is interested in what options Vendors have available.
187	2.3B	What types of user backgrounds and capabilities will need training? Does it include power users? Advanced analytics users (“data scientists”), PowerBI Developers?	Data Engineers and Data Scientists.
188	1.1A (iv) d:	“support for Citizens’ existing reporting and data lake needs”: Please describe what, if any, data lake capabilities exist today at Citizens? Does the anticipated 35% annual growth in data include data lake data or is that estimate restricted to structured, data warehouse data? Does Citizens have a current “lakehouse” or similar architecture in place or identified needs that would combine structured and unstructured data ingestion, usage, and collaboration between users such as data scientists and analysts?	The 35% annual growth in data does include the data lake. Citizens has a very limited "lakehouse" which is being used as a proof of concept.
189	2.4 C (iii)	“Citizens does not anticipate there being any data models to migrate (lift and shift) from the current platform.” Is it a correct assumption that the dimensional models that are in the current data warehouse will be part of an overall redesign based on functional and technical requirements?	See answer to question 122 above.
190	Section 2.4, Implementation Services, Part C, Subsection (i)	What skills does Citizens Florida have in house already in order to anticipate 50% responsibility on transformation or conversions of the source-to-target-to-end point provisioning services?	See answer to question 167 above.
191	Section 2.4, General Question -	Does Citizens Florida allow for offshore consulting?	See answer to question 158 above.
192	Exhibit 1	Citizens has identified internal and external system data sources. Has the team assessed the data quality of the legacy source systems? If not, will an appropriate data cleansing phase be allotted to ensure clean migration?	The data in the external and internal systems are present in the existing data warehouse today. Therefore, we expect the Vendor solution and architecture to fulfil the ETL / ELT via their product and recreate the target data structures as best optimized by their product / solution / architecture.

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## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
193	Attachment F Citizens Standard Term conditions	Item 3.5 Development and Test Environments: The additional environments will need possibly new subscriptions with resources assigned to them. You also mention that the same storage will be needed. Does Citizen want to maintain over 145 TB of space growing at a 50TB per year rate to match production for both environments?	Growth for production is correctly noted; however, provisioning development and test environments is a function of the Vendor product and architecture and those environments can be transient
194	Section 2.1 Background	Please describe the high level architecture or the DW and the business logic within in?	See answer to question 46 above.
195	Section 2.1 Background	What data models and business processes?	See answer to question 11 above.
196	Section 2.1 Background	Is offshore delivery and ongoing support acceptable?	See answer to question 66 above.
197	Section 2.1 Background	Is there an existing Azure subscription into which the DW environment can migrate to?	Yes.
198	Section 2.1 Background	How may environments are required in cloud and are there any metrics on sizing and growth and current architecture?	See answer to question 139 above.
199	Section 2.1 Background	The current CDW runs on SQL Server 2016 and other areas also use 2016 version, is there a preference to run 2017 version instead of 2019 in cloud to cover any potential version compatibility issues?	See answers to questions 10 and 46 above.
200	Section 2.1 Background	Where do the current dimension refresher (65) ETL processes reside? And are those to be lifted to the cloud or re-written based on new architecture? What language/tool are they written in?	See new Exhibit 2 incorporated into this ITN. Also, see answer to question 122 above.
201	Section 2.1 Background	With entitlements and access provided through windows authentication protocols, will Active Directory be an option for both on-prem and cloud authentication/access?	Azure Active Directory would appear to be ideal from a security perspective.
202	Section 2.1 Background	With the disaster response period load increase defined as can increase workload 5 times or higher, do you have a standard that you use for average number of disaster response periods per year to help in doing a more accurate pricing model?	No, hurricanes in Florida are too difficult to predict. Vendors should simply refer to the pricing assumptions provided in Attachment E, Price Sheet when preparing their <u>initial</u> pricing response. Specifically, item 2.b. that states "there will be an annual growth of thirty-five (35%) in data." Surge pricing will be addressed during the negotiation phase.
203	Section 2.1 Background	Can you describe the 5x workload processes that will increase during a disaster?	Hurricanes in Florida are too difficult to predict and so is the catastrophe response. The increase in process could be running workloads 5 times more frequently (changing the daily load to one running every 5 hours for instance)

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## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
204	Section 2.1 Background	How may environments are required in cloud and are there any metrics on sizing and growth for the non-production environments?	See answer to question 139 above. Specifically, item 2.b. that states "there will be an annual growth of thirty-five (35%) in data."
205	Section 2.1 Background	How many number of ETL jobs currently running? (65 critical refresh + howmany non-critical refresh?)	See answer to question 58 above.
206	Section 2.1 Background	What are the ETL tools in place?	See answer to question 8 above.
207	Section 2.1 Background	Any Stored procedures used in any ETL Jobs?	Yes, Citizens has stored procedures. Details can be found in new Exhibit 2.
208	Section 2.1 Background	Can all the Source systems be accessed from the cloud directly	No.
209	Section 2.1 Background	What are the DW integrations(or any Third party products)/adaptors with existing ETL jobs?	None.
210	Section 2.1 Background	Any programming languages (JavaScript, Python, .Net etc) used for Data ingestion?	Yes, Python, R language, and Rest API's.
211	Section 2.1 Background	Any softwares or external applications using for data ingestion?	See answer to question 8 above.
212	Section 2.1 Background	How many production sites/customer locations will be covered as this will affect the data pipeline and integration?	There will be one production site/customer location (Jacksonville, Florida).
213	Section 2.1 Background	What kind of analytics currently performed in Citizens to be implemented? Is there any plan to update/modified /add new analysis?	Citizens, currently performs Descriptive Data Analytics & Diagnostic Data Analytics. Also, see answers to questions to 147A and 179 above.
214	Section 2.1 Background	Is Customer involved in evaluating any products for analytics and data lake ?	No.
215	Section 2.1 Background	What are the Downtime constrains for data migration in new system?	The existing warehouse should sync to the new warehouse with reasonable downtime for the one-time migration.
216	Section 2.1 Background	What is volume of historical data (period, size) to be migrated	For period, see answer to question 144 above. For size, see answers to questions 55 and 56 above.
217	Section 2.1 Background	How is data security implemented? Are there any regulatory or security issues in your region that will inhibit/impact an Data Analytics/Data Migration Initiative?	Data security is implemented using data masking and row/column level security. Also, see answer to question 49 above.
218	Section 2.1 Background	Do Citizen want the incumbent to help in establishing data governance context and setting up the data governance board? (data audit, data monitoring)	Yes.
219	Section 2.1 Background	Please share the applicable performance management and tuning guidelines?	See answer to question 261 below.



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## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
220	Section 2.1 Background	Please share the documentations available for the Business, Information, Application & Technical architecture -current IT Landscape?	See answer to question 13 above.
221	Section 2.1 Background	Please share the list of Batch/Real time/Third Party integration/ process used in the current setup and their frequency	See new Exhibit 2 incorporated into this ITN.
222	Section 2.1 Background	List any manual processes involved in data processing e.g. :- data updating/loading via excel sheet?	Citizens pulls data from the source and does not have any manual loading processes.
223	Section 2.1 Background	Please share any specific data compliance and security restrictions	See answer to question 49 above.
224	Section 2.3 C. (v)	How many P1,P2 Incidents are created each month for the current on-premise data warehouse?	2 P1 & 98 P2 incident tickets in 2021, Avg 8 tickets per month
225	Section 2.3 C. (v)	How many major incidents are raised each month or in a year?	We have currently encountered 2 P1 incidents in 2021
226	Section 2.3 C. (v)	What is the current Support and Uptime, RPT>RTO SLA and needed for the new environment?	See answer to question 50 above.
227	Section 2.3 C. (v)	Is there a current Service Desk where 1st line Support calls are received and triaged?	Yes, Citizens has a 1st line Technical Operations Center that receives calls/ alerts and sets up triage.
228	Section 2.3 C. (v)	What is the ITSM/Ticketing system that will be used to records incidents?	Citizens uses ServiceNow.
229	Section 2.3 C. (v)	What is the current RPT/RTO & Platform Availability SLA needed for the new environment?	See answer to question 50 above.
230	Section 2.3 C. (v)	Is there a current Service Desk where 1st line Support calls are received and triaged? Or does the solution need to standup a L1 Service Desk to receive and triage incident call?	See answer to question 227 above.
231	Section 2.3 C. (v)	What is the ITSM/Ticketing system that will be used to records incidents?	See answer to question 228 above.
232	Section 2.3 C. (v)	Pg 9 - Is Technical support required 24x7 on desk or on call will suffice?	At this time, Citizens expects the Product Vendor to provide technical, telephonic support 24x7x365 (see ITN section 2.3 C (v)). Citizens is open to vendor solutions on-desk or on-call.
233	Section 2.3 C. (v)	Will the CDW be phased out after implemenation of new solution? What would be the timelines if it needs to be decomissioned? Who would be responsible for this part?	Yes. Citizens will be responsible for the phase out.
234	Section 2.3 C. (v)	Can Citizens share their current ticket/incident volumes broken down by support levels and priority?	2 – Critical 84 – High 8 – Moderate 1 – Low 5 - Planning

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## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
235	Section 2.3 C. (v)	How many incidents do they receive for the current on-premise data warehouse each month?	See answer to question 224 above.
236	Section 2.3 C. (v)	Are all the datamart, data sets and dimensions etc in Targets column part of CDW only?	Yes. See Exhibit 2 for additional information on data sources.
237	Section 2.4 Implementation Services	<p>Pg 9 - Vendor will be responsible for transformation or conversion of approximately fifty percent (50%) of the source-to-target-to-end point provisioning services, while Citizens internal resources would be responsible for the other fifty percent (50%).</p> <p>Could Citizens elaborate on the split, and scope for this part</p>	See answers to questions 80, 82, and 87. Also, see Exhibit 2 for additional information.
238	Exhibit_1_Data Sources	Is the PowerBI cloud service listed already exist and is managed but Citizens? Or will the solution need to include standing up a PowerBI Service as part of the solution?	Citizens already has Power BI Cloud service licenses and manages internally. Vendor is not required to include Power BI or any reporting tool as part of the functionality desired.
239	Exhibit_1_Data Sources	Does Citizens have PowerBI licenses already, or will that needed to be included in the proposal? If so, how many users will be needed and what type of users?	Yes, Citizens already has PowerBI licenses. See answer to question 238 above.
240	Exhibit_1_Data Sources	Does the Azure analysis services already exist and is configured in a Citizen subscription and Resource Group? If not, will that need to be included as part of the solution?	Azure Analysis Services already exists and is configured within Citizens' subscription.
241	Exhibit_1_Data Sources	If there is a Azure subscription service already configured, will that subscription be utilized for this ITN, or will the solution include a new Subscription for levels like Dev, Prod etc...	See answer to question 240 above.
242	Exhibit_1_Data Sources	Has a cloud foundation assessment been performed to determine the level of cloud maturity Citizen is at? If not, will that need to be included as part for this solution?	Yes. Cloud foundation assessment is not required.
243	Exhibit_1_Data Sources	Is the AS400 connection listed using the DB2 for i ? What version? If not, what is the AS400 connection?	See answer to question 125 above.
244	Exhibit_1_Data Sources	Are there any pre-built queries that will need to be migrated or will all queries be ad-hoc?	If the context is for reporting queries, Citizens does not expect Vendors to rebuild such queries. However, the data warehouse structure needs to be migrated to the vendor solution. Also, see answer to question 122 above.

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## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
245	Exhibit_1_Data Sources	What type of Data sources (Database type, File types etc) for below systems? GW Claim Center, GW Policy Center, GW Billing Center, IMS (InspectionManagement System) CTS (Claims Tracking System), CAIS (Credential AccessInspection System), FMAP (Florida Managed Assistance Program), MyAgency (Salesforce), GW Integrator, MMP (Manage My Policy)	Database Type for source: SQL Server 2014, DB2 9.7. Vendors should note that the DB2 database system will be retired by the time of the ITN implementation.
246	Exhibit_1_Data Sources	What would be the plans and schedules for the data sources / targets not highlighted in the exhibit?	The ones not highlighted will be part of the other 50% that citizens' internal resources will be migrating as specified in Sec 2.4 C of the ITN. The same section encourages vendors to provide alternate implementation solutions (e.g., transformation and conversion of all source to target to end point conversion).
247	Exhibit_1_Data Sources	What are the connectivity types (odbc, jdbc, oledb interfaces etc) used?	Citizens uses ODBC and OLEDB interfaces.
248		What are the current gaps that need to be addressed?.What are the expectations/ improvements required on the current systems?	See answers to questions 93 and 146 above.
249		Are there any restriction to leveraging offshore resources for implementation and ongoing support?	See answer to question 158 above.
250		How far along are you in determining which technology stack you want to use (i.e., Azure vs. AWS vs. Snowflake, etc.)?	Citizens is at the beginning stages of determining which technology it wants to use. See answer to question 250A.
250A		Have you completed any Proof of Technology or Proof of Concept efforts already?	Yes, Citizens has conducted limited market research and proof of technology in 2020 and 2021.
251		Is the new DW required to match exactly with the current DW's data and schema? Meaning, are the downstream systems/apps expected to be able to query in exactly the same way and get exactly the same results?	That is the current expectation. See new Exhibit 2 incorporated into this ITN.
251A		If not (meaning a completely new data schema will be created), is the vendor expected to work on or consult on updating downstream consuming systems?	See answer to question 251 above.
252		Are improvements in the data/schema for downstream consumption expected as part of this solicitation (e.g., new or improved aggregations, new or improved views into the data)? If so, what are the expectations?	Any improvements to the performance will be considered by the Citizens team during negotiations. However, Citizens expects the current structure of the warehouse to be populated and maintained. See new Exhibit 2 incorporated into this ITN.
253		Are there expected changes in the ETL/ELT processes related to what data is acquired from source systems or how that data should be represented in the DW (besides a change in the ETL/ELT technology used)?	Citizens expects the current structure of the warehouse to be populated and maintained. See new Exhibit 2 incorporated into this ITN.

## ITN 22-0001 Cloud Data Warehouse

## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
254		What are the plans for acceptance testing?	Citizens internal data engineers will determine their scope of testing based on the testing done by the vendor and results provided from it.
255		Is the vendor expected to perform, assist in, and/or support the setup and/or testing of downstream consumption (via Power BI or SQL)?	Vendor is expected to establish connectivity via Power BI and for ad-hoc SQL Query. Vendor is not required to recreate reports.
256		Is the vendor expected to make modifications to existing or create new downstream consumption utilities (e.g., modify or create new Power BI reports)?	No, Vendor is not required to modify or create reports.
257		Are there any other downstream consumption technologies the solution needs to support other than Power BI and T-SQL queries?	Refer to Exhibit 1 and Attachment D Functionality Workbook section 5
258		The ITN mentions future planned source systems. What are they?	While systems, applications and platforms evolve, Sections 2 and 5 from the Attachment D Functionality Workbook is indicative of potential future system ingestion and target state types
259		What tools/technologies are Citizens planning to use to make T-SQL queries against the DW?	SQL Server based SSMS and SSDT, Azure Data Studio, SSDT
260		Will data from the existing DW need to be migrated to the new DW? For example, is there historical data needed that only exists in the old DW (no longer available via source systems)?	See answer to question 122 above.
261		What are the monitoring requirements?	Expectations would include monitoring/alerting for resource utilization, DDL changes, session duration, and access by account.
261A		How is the current DW being monitored? What needs to be the same and what needs improvement?	Current DW is monitored by a combination of 3rd-party DBA products and proprietary tools developed in house. DW is monitored for resource utilization, DDL changes, session duration, and access by account.
261B		Are there any expectations regarding monitoring and/or alerting automation?	Expectations for monitoring would be similar to what exists now. Also, see answer to question 261A.
262		What are the support requirements and SLAs (other than 24 x 7 x 365)?	See answer to question 50 above.
263		What is the availability requirement (e.g., 999.9/9999.9)?	See answer to question 14 above.
264		Are there data latency requirements?	Citizens current data latency, as interpreted with regards to our high availability solution, is no more than 5 minutes between nodes. Citizens would expect proposed solutions to meet or improve this.
265		What are the Business Continuity and Disaster Recovery requirements?	See answer to question 50 above.
266		What are the security requirements?	See answer to question 49 above.
267		What technology is each of the data source systems built upon (relating to the technology the data is stored upon or sourced from)?	See Exhibit 1 to the ITN for information on Data Sources.

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## Addendum 2

## Answers to Questions

No.	Reference	Question	Answer
268		What are the current data transfer rates and loads under normal usage?	Subject to network latency, Citizens typically gets 150 MBits per second.
269		What is/are the current technology(s) used to for ETL processing?	See answer to question 8 above.
270		Can we get an architecture document showing the current DW architecture?	See answer to question 13 above.
271		Does Citizens have a single DW holding 145 terabytes of data and also has an additional 22 data marts? Or is the DW a set of 22 data marts with a combined storage of 145 terabytes? If the former, how much data is stored in each data mart and how are the data marts used differently from the DW?	145 terabytes is the total figure which includes the data marts.
272		Is there a business requirement for needing to hold data in different data marts?	Yes.
273		What are the networking requirements for connectivity to on-prem?	Supported methods can include: private connectivity via Equinix Cloud Fabric, site to site VPN, etc.
274		The ITN mentions training identified users. What specific training is the vendor to provide? What are the user roles that will need training?	Training refers to knowledge transition and shadowing for the 50% implementation described in ITN Section 2.4 C. between the Vendor and Citizens' data engineering team. Also, see answer to question 167 for additional information on the number and mix of these roles and skills.
275		What is meant by "Ability to reside on a single or multi-cloud tenant?" Did you mean single vs multi-tenant cloud? If so, is there a requirement to support multi-tenant? Did you mean to refer to hybrid cloud? If so, what is the requirement?	The Vendor product should not be exclusively tied to one CSP (Cloud Service Provider) and should be able to run on Azure or another platform as well.
276		For Data Ingestion section of Attachment_D, are all the data ingestion technologies expected to be implemented as part of this ITN or are some of these seen as potential future uses? If the latter, which ones are expected to be needed for this ITN?	The functionality workbook specifies the desired system functionality which contains a set of current and potential future source systems as applications and systems evolve. Vendor is expected to provide any additional comments on their product in Column C of the Functionality Workbook.
277		Do you have production or pre-production Power BI reports already developed that will need to be migrated by the vendor over to the new DW?	No, Report migration is not part of the requirements.
278		Do you have one or more existing Azure subscriptions that are available to use for this project?	If the solution is proposed to be run within Citizens Azure environment, an appropriate subscription (existing or new) will be identified and made available.
279		Can you add more detail to the DataSources document like: number and size of tables, refresh frequency requirements? Is the data within the source systems structured or unstructured?	Data in the source systems is structured and semi structured. Also, see Exhibit 2 for additional information.

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Addendum 2

Answers to Questions

No.	Reference	Question	Answer
280		Is redaction of an entire financial document considered a single redaction?	Yes.