

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Project Proposal - Summary Sheet
Biennial Budget FY2007-2009

Project #85-01
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Project #	Agency	Project Title
85-01	Nebraska Public Employees Retirement Systems	Migration of PIONEER to the jClarity Platform

SUMMARY OF REQUEST (Executive Summary from the Proposal)

[Full text of all proposals are posted at: <http://www.nitc.state.ne.us/nitc/documents/fy2007-09/index.html>]

This project is for the migration of the PIONEER application to the Sabre jClarety framework based on J2EE technology and written in Java. The jClarety framework is a functionally rich solution with very stable and robust architecture specifically developed for public retirement systems. The need for this project to be implemented at this time is due to the fact that Forte (the language PIONEER was written in) was purchased by Sun Microsystems. Sun is a big proponent of Java and has decided to completely stop support of Forte. This leaves NPERS and our software system in a potentially dangerous situation not having software support.

FUNDING SUMMARY

PIONEER Migration to JAVA

Services	5,751,000.00
Hardware/Software	772,000.00
Total	6,523,000.00

Month	Service Fees	Delivery	Payment Due at Delivery	HoldBack	Cumulative HoldBack
1					
2				\$0.00	\$0.00
3	\$48,107.12	On-line Application - I: Requirements Documentation	\$43,296.40	\$4,810.71	\$4,810.71
4	\$221,292.73	On-line Application - I: Detailed Design	\$199,163.46	\$22,129.27	\$26,939.98
4	\$221,292.73	On-line Application - I: Integrated and Tested Code	\$199,163.46	\$22,129.27	\$49,069.26
5	\$386,000.00	Hardware/Software for Testing	\$386,000.00	\$0.00	\$49,069.26
5	\$471,449.73	On-line Application - I: Acceptance Testing	\$424,304.75	\$47,144.97	\$96,214.23
6	\$386,000.00	Hardware/Software for Production	\$386,000.00	\$0.00	\$96,214.23
7	\$124,422.89	On-line Application - II: Requirements Documentation	\$111,980.60	\$12,442.29	\$108,656.52
8	\$572,345.27	On-line Application - II: Detailed Design	\$515,110.74	\$57,234.53	\$165,891.05
9		Hold back on services: On-line Application I	\$96,214.23		\$69,676.82
10					\$69,676.82
11	\$572,345.27	On-line Application - II: Integrated and Tested Code	\$515,110.74	\$57,234.53	\$126,911.34
12	\$115,020.00	Batch Application: Requirements Documentation	\$103,518.00	\$11,502.00	\$138,413.34
13	\$1,219,344.27	On-line Application - II: Acceptance Testing	\$1,097,409.85	\$121,934.43	\$260,347.77
14	\$529,092.00	Batch Application: Detailed Design	\$476,182.80	\$52,909.20	\$313,256.97
15					\$313,256.97
16					\$313,256.97
17		Hold back on services: On-line Application II	\$248,845.77		\$64,411.20
17	\$529,092.00	Batch Application: Integrated and Tested Code	\$476,182.80	\$52,909.20	\$117,320.40
18	\$1,127,196.00	Batch Application: Acceptance Testing	\$1,014,476.40	\$112,719.60	\$230,040.00
19					\$230,040.00
20					\$230,040.00
21					\$230,040.00
22		Hold back on services: Batch Application	\$230,040.00		\$0.00
	\$6,523,000.00		\$6,523,000.00	\$575,100.00	\$0.00

PROJECT SCORE

Section	Reviewer 1	Reviewer 2	Reviewer 3	Mean	Maximum Possible
3: Goals, Objectives, and Projected Outcomes	14	10	10	11.3	15
4: Project Justification / Business Case	25	20	16	20.3	25
5: Technical Impact	18	12	13	14.3	20
6: Preliminary Plan for Implementation	7	6	5	6.0	10
7: Risk Assessment	9	7	5	7.0	10
8: Financial Analysis and Budget	15	17	12	14.7	20
TOTAL				74	100

REVIEWER COMMENTS

Section	Strengths	Weaknesses
3: Goals, Objectives, and Projected Outcomes	<ul style="list-style-type: none"> - Way back at the September 2003 SunNetwork Conference held in San Francisco, Sun Microsystems announced that the Forte/UDS platform will go into maintenance mode starting in 2004. From 2004 to 2008, support for Forte will reduce until it is completely phased out in 2008. During this period, licensing and support costs are expected to rise and minimal new functionality is expected to be added. - Modernization of code is clearly due, and is probably an overriding need. - The steps are described, but very limited information is provided. 	<ul style="list-style-type: none"> - No description of measurement/assessment methods, or of relationship to IT plan. One of the goals seems to be to maintain current vendor relationship ... possibly that's an appropriate goal, but it is a little unusual. - The goal is to migrate to JAVA, because of dropped support for FORTE, using their current vendor. What other options have been considered?
4: Project Justification / Business Case	<ul style="list-style-type: none"> - Good discussion - Strong description of the criticality of need. - The project is described at a very high level and gives the reader a sense of the impact this system has on the agency and clients. 	<ul style="list-style-type: none"> - No description of other solutions evaluated. Unclear if the architectural benefits mentioned in this section (reduction of support time and effort, use of multi threading batch processes, etc.) have been realized in other implementations of this product. -Because NPERS is working with existing vendor it doesn't appear that many solutions were considered. This recommendation is based on what the current vendor recommended. Has current vendor performed satisfactory to this point?
5: Technical Impact	<ul style="list-style-type: none"> - Movement to N-tier architecture described. Seems to be an appropriate modernized architecture. - Describes changes when moving from thick client to thin client. 	<ul style="list-style-type: none"> - No discussion about security. Will Explorer be the only browser allowed? What about Firefox or the Mac Safari browser? - No description of specific technology changes included. No description of changed hardware requirements, or of changes to data tier. Reliability, security, scalability, and compliance with NITC standards not addressed. - The impact of moving from client server to web based architecture is not a small undertaking. This change may require rewriting the majority of the application. The

Section	Strengths	Weaknesses
		<p>impacts to existing interfaces such as NIS are not addressed other than to say it will not change? It is likely that the current hardware used to support PIONEER will not be adequate nor will the skills required to support this environment be similar to the existing solution.</p>
<p>6: Preliminary Plan for Implementation</p>	<p>- Phased approach with multiple implementations will reduce risk. - Mentions review by CIO staff.</p>	<p>- Did not see any discussion regarding the use of automated migration tools. From what I read it seems we are looking at a total manual re-write of the system. I could not tell if that was the case given the proposal.</p> <p>There are commercially available migration tools that can automate the Forte to Java translation. Has this been explored??</p> <p>Most Forte projects have taken months and years to develop. If the translation were done manually, then it too would take approximately the same amount of time. A translation tool always generates the same code. This can eliminate programming and typographical errors that may be introduced by manual translation.</p> <p>- No timelines identified. Ongoing support requirements not identified. Technical staffing seems low if goal is to bring any significant portion of the maintenance in-house.</p> <p>Generally, a multiple rollout implementation will require bridging or scaffolding between the new functionality, and the remaining legacy functionality. That is not addressed in this plan.</p> <p>Data migration, or changes to the data tier are not addressed in the project plan.</p> <p>Non functional requirements (usability, security, performance, etc) should be identified early. They don't seem to be addressed in the preliminary plan.</p> <p>Project sponsor and agency project manager not identified.</p> <p>- Project estimates for work without knowing the scope of work to be accomplished seem unrealistic.</p> <p>A demo by Sabre should not be the deciding factor on choosing a vendor or software solution. NPERS current IT staffing seems inadequate based on the size to this project. There is no mention of project management staffing or executive oversight structure or steering group on NPERS side of project. A project of this size requires significant</p>

Section	Strengths	Weaknesses
7: Risk Assessment	<ul style="list-style-type: none"> - The migration of a Forte application to Java, though complex, can be managed successfully with the early adoption of a migration strategy in the lifecycle of a project. - The Iterative development approach proposed should reduce risk and lead to improved quality during the course of the project. - Describes a phased implementation of new solution. 	<p>resources from staff to complete. The vendor cannot be relied upon to provide project management alone. There needs to be a check and balance between NPERS and the vendor.</p> <ul style="list-style-type: none"> - This is a large project that, by virtue of its size, will bring with it a fair amount of risk. <p>I'm not familiar with the "jClarety Methodology", and can't speak to whether it provides sufficient rigor for a project of this size.</p> <p>I suspect staffing and supportability are risks with this project. It's unclear whether the Agency Business Systems Analyst and IT Staff (6-7 people?) will be assigned full time to this project. If they are not, I suspect there will be a high risk of missed requirements and/or inability to support.</p> <p>The timeline seems very short, introducing schedule risk.</p> <p>The need to scaffold between a legacy and new system in a iterative project also introduces some risks.</p> <ul style="list-style-type: none"> - Without analysis to existing solution how can we be sure that new solution and old will function along side of each other. This approach requires both old and new applications to be supported at the same time. This approach will add a burden to the development and business staff to maintain and test both solutions as the project moves forward. Moving from client server to web based development and not having current experience in this area is a risk. Not looking at alternate solutions and taking current vendors recommendation is a risk. No evidence of strong project management or oversight by NPERS staff is a risk.
8: Financial Analysis and Budget	<ul style="list-style-type: none"> - Deliverables based funding, and "holdbacks" are great approaches. - Looks like a price quote. 	<ul style="list-style-type: none"> - Not a lot of detail from my point of view. Does the cost include design and development of the cost by a contractor or does the development actually take place with staff in the IMS department or staff in another state department? <p>Is there funding for migration tools?</p> <ul style="list-style-type: none"> - As noted earlier, there are a number of items (data migration, non-functional requirements) that should be included in a deliverables based funding plan. <p>It does not appear that this budget includes Agency staff who will be participating in the project.</p>

Section	Strengths	Weaknesses
		- Estimates without requirements are dangerous. Is this a fix price quote? What assumptions has the vendor placed on these estimates? If NPERS can not perform to the vendors assumptions are the quotes still valid? The small technical staff at NPERS is not adequate to support an application of this size even with the addition of a developer FTE.

TECHNICAL PANEL COMMENTS

Technical Panel Checklist				Technical Panel Comment
	Yes	No	UNK	
1. The project is technically feasible.			✓	
2. The proposed technology is appropriate for the project.			✓	
3. The technical elements can be accomplished within the proposed timeframe and budget.			✓	

- The agency has legitimate concerns about the current system, and the technical issues need to be addressed.
- The agency should work with the Technical Panel to provide for an ongoing review of the technical elements of this project.

STATE GOVERNMENT COUNCIL COMMENTS

- The State Government Council recommends this project be categorized as a [Tier 1] project.

NITC COMMENTS

- Tier 1 (Highly Recommended. Mission critical project for the agency and/or the state.)
- Commissioner Peterson moved to leave Project 85-01, Retirement- Migration of Pioneer to the jClarity Platform, in Tier 1 and recommended that the agency coordinate with the Technical Panel for oversight of the project. Commissioner Hoelsing seconded. Motion passed.

APPENDIX**AGENCY RESPONSE TO REVIEWER COMMENTS**

Pioneer Migration Project Comments

- Project Proposal:
 - At the time the Project Proposal Form was completed, Nebraska Public Employment Retirement System (NPERS) understood something needed to be done, but only had information from the Pioneer vendor (Saber) that could be used in the Proposal. Also at this time, NPERS did not have a full time IT Manager to help provide direction. Consequently, it has generated a number of concerns during the review process.
 - Since this time, Jerry Brown from the Office of the CIO was invited to function as the NPERS IT Manager starting October 10th. We have since had discussions about:
 - RFI
 - RFP
 - Sole Source
 - Forte to Java conversion vendors, for example Softsol Group, who have done this in other locations.
 - Also, a draft technical review has been completed by the Office of the CIO and NPERS. The review was presented to the Nebraska Public Employee Retirement Board on October 16, 2006.
 - Be assured that this project will incorporate best practices in:
 - Project Management
 - Standards
 - Sponsor participation throughout the project
 - Establishment of a Steering Committee
- This is a project that must be completed by 2009 or before. Why?
 - The PIONEER application was developed in a language called Forte, which is a fourth generation language. Forte is owned by Sun Microsystems, who purchased the product suite in late 1999. Sun Microsystems has pledged to support Forte on select platforms until sometime in 2007, after which legacy systems (i.e. PIONEER) will need to look elsewhere for support.
 - PIONEER was written with some dependency on Windows 2000. It is projected that Microsoft will terminate Windows 2000 support by 2010. It is possible to transition to Windows XP, but would involve updating 75+ workstations, updating the software where appropriate, and testing the entire system. It is yet to be determined if this would be justified, based on when the transitioned system would be in production.
- Activities currently in progress or planned:
 - Prepare preliminary timeline for transition, Forte support and Windows 2000 support to determine if Windows XP conversion necessary.
 - Determine Transition Approach (establish requirements):
 - Possible RFI
 - RFP:
 - Totally different application (vendor): this is the least favored

- Use software tool to accomplish transition
 - Current vendor would perform transition, so no tool required
 - Process RFP through vendor selection
 - Establish more precise budget
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- Summary:
 - This project needs to be done, but possibly not exactly as written in the proposal
 - The project has a “defined” deadline, as discussed above
 - The project has Sponsor support from the Nebraska Public Employee Retirement Board
 - The agency has recent experience with a major application implementation, which will reduce the overall risk