**Rice University Facilities Engineering & Planning**

***“Project Management & Engineering Software Solution”***

RFP# 2018-07-001

# Date Submitted: July 20, 2018

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# Purpose

The purpose of this Request for Proposals (RFP) is to solicit proposals from qualified sources to establish a contract through competitive negotiations to provide project management and space management software for the Facilities, Engineering & Planning department of Rice University. The software will be used for management and financial accounting of approximately 200 projects and over 70 buildings, and 285 acres of grounds at any given time. The Project Management software should provide project managers and administrators with project financial information, cost projections, schedule information, and reporting options. The Space Management software should provide space administers and campus users the ability to manage inventory of university facilities and associated space utilization.

# Evaluation and Award Criteria

Responses to this RFP will be evaluated based on the proposer’s ability to:

* Meet the minimum required functionality.
* Provide additional capabilities deemed to be valuable to meeting the overall objectives of project management and space management.
* Provide support and training services needed to ensure program success.
* Provide university client references specific to the product and services required.
* Demonstrate focus on higher education requirements.
* Provide competitive overall price.

# Background

Rice University is a private research university located on a 295-acre campus in Houston, Texas. The university enrolls 3,800+ undergraduate students, 2,800+ graduate students (~6,500 total student population), ~ 2,900 faculty and staff for a total campus population of ~10,000 (including campus visitors/contractors). The Facilities, Engineering, & Planning department oversees campus maintenance, custodial services, landscaping, utility distribution, and maintenance and capital projects.

# Proposal Prep and Submission Guidelines

Proposals should be prepared simply and economically, providing a straightforward, concise description of capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content.

Only proposals for Project Management software solutions including these sections, at a minimum, will be accepted:

* Project Functionality
* Cost Management
* Budget Management
* Cash Flow (Automated and Forecasting)
* Reports/Dashboards/Program Management
* Bid/Procurement Management
* Schedule Management
* Contacts/Vendor Information/Project Directory
* Capital Planning Module
* Project Management Business Integration Requirements

Only proposals for Space Management software solutions including these sections, at a minimum, will be accepted:

* Space Management System
* Space Management Business Integration Requirements
* Space management as part of a secure Integrated Workplace Management System
* Space Management Workflow Engine

All proposals should include these sections:

* General Requirements Overview
* Company Information
* Technical Information
* Site Administrator Capabilities
* Technical Integration Requirements
* Implementation, Training and Support
* Other Capabilities, Future Enhancements, and Upgrades
* Pricing

Information which the proposer desires to present that does not fall within any of the requirements of the RFP should be inserted at the appropriate place or be attached at the end of the proposal and designated as additional material. Proposals that are not organized in this manner risk elimination from consideration if the evaluators are unable to find where the RFP requirements are specifically addressed.

As used in this RFP, the terms “must,” “shall,” “should” and “may” identify the criticality of requirements. Items labeled as “should” or “may” are highly desirable, although their absence will not have a large impact and would be useful, but are not necessary. Depending on the overall response to the RFP, some individual “must” and “shall” items may not be fully satisfied, but it is the intent to satisfy most, if not all, “must” and “shall” requirements. The inability of a proposer to satisfy a “must” or “shall” requirement does not automatically remove that proposer from consideration; however, it may seriously affect the overall rating of the proposer’s proposal.

Timeline for selection and implementation process is as follows:

* 1. Issuance of RFP: Friday, July 20, 2018.
	2. Notification of intent to respond or refuse shall be received on or before Friday, July 27, 2018 at 2:00PM. Notification of intent (or refusal) shall be sent via e-mail to Larry Vossler, Senior Project Manager at vossler@rice.edu and Charlita Marrs, Technology Procurement Manager at cam3@rice.edu.
	3. Final questions to be received in writing no later than Friday, August 3, 2018 at 2:00PM and will be accepted by e-mail to vossler@rice.edu.
	4. Clarification answers to be sent to all intending to propose by Friday, August 10, 2018.
	5. Proposals shall be sent via e-mail to Larry Vossler, Senior Project Manager at vossler@rice.edu and Charlita Marrs, Technology Procurement Manager at cam3@rice.edu no later than Friday, August 17, 2018 at 2:00PM.
	6. Finalists announced: Friday, August 31, 2018.
	7. Follow-up meetings and demonstrations: To be scheduled September 3-14, 2018
	8. Award notification to the successful Vendor: September 21.

# Statement of Needs

## General Requirements Overview

1. Provide a high-level overview of the proposed solution.

## Company Information

1. Provide the primary point of contact and contact information for the proposer.
2. Describe the proposer’s form of business (i.e., individual, sole proprietor, corporation, nonprofit corporation, partnership, Limited Liability Company) and detail the name, mailing address and telephone number of the person the Institution should contact regarding the proposal.
3. Provide the following as documentation of financial responsibility and stability:
	1. A current written bank reference, in the form of a standard business letter, indicating that the proposer’s business relationship with the financial institution is in positive standing.
	2. Two current written, positive credit references, in the form of standard business letters, from vendors with which the proposer has done business or documentation of a positive credit rating determined by an accredited credit bureau within the last 6 months.
	3. A copy of a valid certificate of insurance indicating liability insurance in the amount of at least $3,000,000 in the aggregate.
4. Provide a statement of whether the proposer or any of the proposer’s employees, agents, independent contractors or subcontractors have been convicted of, pled guilty to or pled nolo contendere to any felony, and if so, an explanation providing relevant details.
5. Provide a brief, descriptive statement indicating the proposer’s credentials to deliver the services sought under this RFP.
6. Proposer must have provided similar services for a minimum of 5 years. Please describe.
7. Indicate the proposer organization’s number of employees, client base and location of offices.
8. Proposer must be able to warrant that they provide background checks on all employees and that only employees who have undergone background checks will have access to data.
9. Proposer should support higher education clients. State current number of higher education clients. Provide any appropriate customer retention statistics over the last 5 years.
10. Indicate the proposer’s focus on the unique needs of higher education as a customer base in their development and services road map.
11. Provide a narrative description of the proposed project team and its organizational structure, list its members and include resumes.
12. Provide customer references for three completed projects at institutions of similar size and mission currently serviced by the proposer.
13. Each reference must include:
14. The institution name and business address.
15. The name, title and telephone number of the company contact knowledgeable about the project work.
16. A brief description of the service provided and the period of service.
17. Provide copies of your company's latest financial statements and annual report, if applicable. Please provide gross sales, net income, and cost of sales for the past three years as related to products and services scoped in this proposal. These should be provided as an attachment to your response.
18. What is your total revenue?
19. How many customers do you have?
20. How many Higher Education customers for the proposed product do you have in North America?
21. How many commercial customers and government customers do you serve in North America?
22. How long has your organization been in business? How long have you been providing this service?
23. Do you have a program to keep your customers abreast of higher education and/or industry issues?
24. Please indicate the legal entity contracting with the institution to provide services.
25. Describe your organization’s business background and ownership structure, including all parent and subsidiary relationships.
26. Please validate our assumption that the institution will contract with only one party which will be held accountable for all performance-related issues and any penalties associated with missed performance standards.
27. Will your company provide all services, or will there be subcontracting? If the latter, can the institution approve/reject the subcontractor? How will you assure that the sub will be subject to the same standards regarding security, service recoverability, and confidentiality (including circumstances that may involve off-shoring or multi-national agreements)?
28. Please explain in detail any involvement in business-related litigation in the last five years by your organization, its management, or the staff that will be providing the administrative services.
29. Do you offer clear SLAs in writing? Can we review SLAs that exist for other customers? Can we review your base SLA?
30. Do SLAs stay at the same level or drop off over time?
31. How much advanced notice is provided before implementing an SLA change? Is it at least 90 days?
32. Does your organization have a comprehensive Business Continuity Plan?
33. Do you currently have any clients similar to Rice University, either in higher education or who are otherwise highly decentralized? Please provide a list. If you can’t reveal the university or company names, then just include type of education institution (or industry), general demographics, and services provided.
34. Please provide at least 3 references. More weight will be given to Higher-Ed institutions and those similar to the institution. If possible, provide references that have integrations with FAMIS (Work Requests) and/or JAGGAER (POs, Receipts, Invoices) and/or Banner Budgets/Actuals.
35. What is your recommended account/relationship management structure for managing a relationship for the services you propose to provide?
36. Please indicate the locations which will be engaged in delivering the scope of services and how locality (physical distance or local legal landscape) might interact with the performance or security expectations or your proposal. Is customer approval required before migrating across predefined geographic locations?
37. Please attach a copy of the standard contract terms in a MS Word format for review.

## Technical Information

1. Is the implementation a fixed fee agreement? What does the implementation include? Please attach an example arrangement for what services and deliverables are provided.
2. Are you willing to agree with the terms and conditions of the Institution's Data Security and Indemnification Terms? [We will forward, separately, a copy of Rice's Non Disclosure Agreement]
3. Licensing – how is product licensing handled? Are all components licensed from you, or are there certain components that the institution will need to license directly with the product author? If so, what are these?
4. Will you provide advanced notice of pricing changes?
5. Have you supplied products and/or services to the institution or its Campus in the last five years? If yes, please provide the institution contact, describe the products and/or services offered and the total value of the services provided.
6. How frequently do you release significant new software versions?
7. What is your expectation of client involvement in those software releases?
8. Describe the level of testing that is required for local configurations prior to upgrades and new version releases.
9. Is there a cost for new software releases?
10. Do clients have the option to not participate in or postpone an upgrade to a new release?
11. Software currency – what is your solution support strategy in relation to maintaining software currency? How many concurrent versions are you willing to run and support?
12. Is the system supported by standard platforms and physical or virtual environments?
13. What are your resource requirements from the institution for overall account management and contract governance?
14. Does the product have a web based interface? [yes/no]
15. If yes, are their multiple web interfaces and if so what are they used for?
16. What type of authentication methods does the web interface(s) support? [SAML2, Shibboleth, CAS, Kerberos, Active Directory, OpenID, etc]. Please indicate any additional cost for these options.
17. Does the product use the Internet2 Shibboleth implementation?
18. If yes, does this product support LDAP, Shibboleth/SAML2 authentication for Single Sign On? [yes/no]
19. Does the product support the use of signed metadata? [distributed via InCommon, distributed locally, stored locally on the server, etc]
20. When an account logs into the application through the web interface, what account attributes are required from the user? [eduPersonPrincipalName, DisplayName, Email, Phone, etc]
21. Who will have access to this account attribute data? [The application user viewing data about him/herself, application administrators, other application users viewing data about each other, etc]
22. How does the product authorize User access? Admin access? [local application permissions, local application groups, external groups, etc]
23. Does this product integrate with an external directory for user information? [yes/no]
24. Does this product integrate with an external directory for group information? [yes/no]
25. If yes to either of the above questions, which external directory does the product support? [Active Directory, Open LDAP, RedHat 389 LDAP, etc.]
26. How are new users provisioned in the application? [via an LDAP integration, a onetime import, feed file process, when they log into the application for the first time, etc.]
27. How are new groups or roles provisioned in the application? [via an LDAP group integration, a onetime import, provisioned by an admin inside the application, etc.]
28. Does the product store user information in its own database? [yes/no]
29. Does the product store group membership or role information in its own database? [yes/no]
30. If yes to either of the above questions, how and when is the user or group access deprovisioned from the application?
31. Does the product support or integrate with Multi-Factor authentication? [DUO, Azure, VASCO, etc.]
32. Is support available 24 X 7? Please describe your processes, procedures, and technology that enable 24 X 7 support.
33. Is there a warranty period? How long is support provided?
34. Do you offer an online-based mechanism for reporting errors or bugs with the service?
35. Do you have an incident management system for identifying, submitting and tracking cloud service incidents?
36. What is your response commitment for urgent tickets? Is it 15 minutes or less?
37. What is your resolution commitment for urgent tickets? Is it 4 hours or less?
38. What is your response commitment for non-urgent tickets? Is it 8 hours or less?
39. What is your resolution commitment for non-urgent tickets? Is it 48 hours or less?
40. What are the mechanisms for contacting your organization for support? Phone? Web? Other? How is support structured? Call center? Group or resources dedicated to Rice? How much turnover should we expect?
41. What are typical support structures, resources you would expect for Rice to provide internally? Admin, PM, Contractor, etc.?
42. Are there standard methods for notifying customers of outages and other disruptions in service? Please describe.
43. Do you offer free, online self-service support that includes FAQs, a knowledgebase and discussion forums?
44. Do you provide on-line help to describe functionality, assist in locating a function or feature, or for descriptions of fields, contents, and acceptable formats?
45. What level of user and technical support documentation is provided and maintained? Is that doc covered by NDA or is it public?
46. What testing processes are established and followed (e.g., development of test plans, personnel involved in the testing process, and authorized individual accountable for approval and certification of test results)?
47. How does your organization ensure that only application software verifiable as authorized, tested, and approved for production, and having met all other requirements and reviews necessary for commissioning, is placed into production?
48. Do change management procedures exist and are those procedures followed? Do the procedures include:
	1. An impact analysis of the upgrade is performed.
	2. The change is appropriately authorized.
	3. Changes are made first in a test environment.
	4. The ability to implement the upgrades/changes in the production environment is limited to appropriate IT personnel?
49. What is your strategy for engaging (or at least notifying) customers regarding upcoming functional updates?
50. Can an individual customer participate in the scheduling or request deferral of any specific update? Would any such deferral have a maximum timeframe?
51. Do the technologies and services you offer adhere to Federal AA/EEOC regulations including Section 508 of the Rehabilitation Act and the Americans with Disabilities Act?
52. If employing web-based technology, does your application conform to Level AA accessibility standards set forth in the WCAG 2.0?
53. If your application does not fully comply with the WCAG 2.0 Level AA standards, please describe areas of weakness within your application and what steps are being taken to remediate these weaknesses.
54. In the past 12-18 months, have you engaged an independent firm to evaluate that accessibility of your application? If so, please provide a copy of the audit report.
55. Do you encrypt customer data in storage? If so, please explain what encryption techniques are employed and how encryption keys are managed. Include details about primary storage facilities as well as backups.
56. Can the system mask sensitive fields, data and provide access according to security levels?
57. Do you encrypt customer data during transmission across network boundaries? If so, please explain what encryption techniques are employed and how encryption keys are managed.
58. Do you employ or allow any encryption algorithms that are not approved by the Federal Information Processing Standards (FIPS)?
59. Do you log electronic access to customer data? If so, please explain to what degree logging is employed, the retention period for those logs, how logs are protected, and whether they are accessible to the customer (and if so, how).
60. Do you log physical access to customer data? If so, please explain to what degree logging is employed, the retention period for those logs and how logs are protected (e.g. access to datacenter, server, backup tapes, etc.).
61. Does your solution support a phased modular deployment?
62. Does your proposed solution include any custom vendor-developed modules? If so, please describe the application(s), and how they will be developed.
63. Data conversion – please outline your approach to data migration from current legacy systems. Do you provide any tools or accelerators to speed up or otherwise improve the data loading process? If so, please describe the tool and any technology requirements on the part of the institution.
64. Describe your process to store, administer and report historical data in/from a Data Hub or other similar technologies.
65. Does Rice have unlimited access to its data through reporting, extracts and analytical tools?
66. Is application data throughout the system updated and available in real-time?
67. What are your training options? E.g. Classroom instruction, hands-on training at the institution site/vendor site, train the trainer, online training, job-aids for key or infrequent activities?
68. Is Rice able to modify training or help materials? Please describe how this would work, especially with new releases and updates? 100.What application integration technologies does the solution support?
69. What Data extraction mechanism and standards do you support?
70. Do you support real time interaction with external systems? If so, what technologies (e.g. REST, SOAP, SFTP) do you support? 103.Do you support direct connections to your backend database for integrations?
71. Are these connections Read-Only or are they Read-and-Write?
72. What database management system does the product require? Is a Data dictionary provided?
73. What operating systems can be used? Windows? Apple/Mac? etc. If your product runs on multiple Operating Systems, what are the OS dependencies of the application? Describe the migration process from one OS to another.
74. Do you support the uploading and storage of electronic documents? If yes, what security do you provide around this function?

What are your record retention capabilities for electronic and imaged data?

1. Is the system more form-based or web forms/screens that automatically load data?
2. What workflow technologies/capabilities do you support for approvals, alerts, or process orchestrations? 110.What type of documentation is available for training, support, installation, etc.?
3. How will users access the system? Do you provide a web interface for applicants, employees, PMs/Admin/Contractors? Which browsers are supported? Does your solution require other client software products? Does the system support browser plug-ins? If so, which ones are most popular with end-users?
4. Does the system have a usability review process? If so, please describe.
5. Can your system take advantage of mobile and/or GPS enabled mobile devices? Describe the capabilities. How is security ensured?
6. What are your capabilities for extending, configuring, or customizing the user interface? 115.Can the system be branded (i.e. logos and colors) for FE&P sites?
7. Does the system provide the ability to customize the site URL?
8. Ease of navigation: Do you offer any mechanisms for user friendly navigation? E.g. Quick paths, Context Sensitive help, etc. 118.Describe your system development lifecycle methodology including your environments, version control and change management. 119.How frequently do you release new software? What is your technology roadmap for the next 2 years for enhancements and bug

fixes? If a SaaS or vendor hosted solution, what are your expectation for the client in each release? How do you support client customizations from one release to another?

1. Identify the most current version of the software. Detail the percentage of live customers that are utilizing the proposed version of the software. Please provide a breakdown of customers (by percentage) for each version of the software currently in use.
2. Can you please provide the current list of bugs and their details? What is the process for Identifying, developing and deploying bug fixes and minor enhancements? What is average turnaround for fixes?
3. List average size of your current client’s support team, FTEs (Developers, DBAs, System administrators) and the amount of time that will be devoted to support your application.
4. How far back do you support old web browser/OS combinations?
5. Has your application been load tested? If so, what were the parameters of the load test? Number of simultaneous Users? What application functions were tested? What were the hardware specs for the load testing environment? What tool did you use for load testing? If so, what were the results of the load tests?
6. What options do you have in tuning your application for performance?
7. Do you support adding Indexes to your backend database to help tune performance?
8. In the last 12 months, have you engaged an independent auditing firm to examine and report on your organization's controls (e.g. SOC 2 engagement performed in accordance with SSAE-16 or a SAS-70 audit)? If so, please provide a copy of the most recent Type II audit report.
9. Is a documented data sanitization process in place for disposal or retirement of storage devices? Does this process adhere to DoD 5220.22-M and/or NIST SP 800-88?
10. Do you comply with ISO 9001? Are you certified or working towards certification?
11. Please provide a list of current implementations of a similar size and nature to that proposed for the institution. Would the infrastructure supporting the proposed solution be shared with other clients? If so what elements and how many clients are in a shared environment?
12. Will your company provide quality and performance metrics in relation to the scope of services and performance expectations for the services you are offering?
13. If your performance commitments are not met, what options do we as the customer have? Can we receive financial compensation for missed performance metrics? Is there an additional cost to the customer in order to adjust performance? (Like for hardware changes needed to improve performance.)
14. Describe what controls are in place to ensure that the institution can continue business without interruption or undue hardship in the event that your organization goes out of business or the contract is terminated.
15. Does your SLA address data loss and data integrity issues?
16. As part of your SLA, what compensation do you offer for unexpected and disruptive service outages or other failures? 136.Do you carry cyber-risk insurance to protect against unforeseen service outages or data that is lost or stolen?
17. Are ownership rights to all data, inputs and outputs retained by the institution? Are these rights retained even through a provider acquisition or bankruptcy event?
18. In the event of imminent bankruptcy, closing of business, or retirement of service, will you provide 90 days for customers to get their data out of the system and migrate applications?
19. Is an owner assigned who is responsible for the maintenance and review of the Business Continuity Plan? 140.Is the Business Continuity Plan written to address all hazards, or specific scenarios?
20. Is your organization's Business Continuity Plan tested on at least an annual basis?
21. Please indicate the last time that the Business Continuity Plan was tested and provide a summary of the scope and results 143.Does your organization conduct training and awareness activities to validate its employees understand their roles and

responsibilities during a crisis?

144.Are specific crisis management roles and responsibilities defined and documented? 145.Is there a defined crisis problem/issue escalation plan for impacted clients?

1. Is there a documented crisis communication plan for impacted clients?
2. Has your organization conducted an assessment to identify critical aspects of your supply chain that, if unavailable, would impact your organizations ability to deliver products and services to the institution?
3. Does your organization conduct annual tests with all critical suppliers that, if unavailable, would impact your organizations ability to deliver products and services to the institution?
4. Does your organization depend on non-US companies for the delivery of products and services?
5. Does your organization's management assess business continuity risk and formally identify risk mitigation opportunities that may decrease the likelihood of a service interruption to the institution?
6. Does your organization have multiple locations for employees to use as Alternate Work Areas, and/or do you support workplace mobility? If so, please describe distance between facilities or employees mobility capabilities.
7. Can your organization commit to a Recovery Time Objective of 24 hours in the event you experience a disaster or significant business disruption?
8. Can your organization commit to a Recovery Point Objective of 24 hours in the event you experience a disaster or significant business disruption?
9. Does your organization have a comprehensive Disaster Recovery Plan?
10. Is an owner assigned who is responsible for the maintenance and review of the Disaster Recovery Plan? 156.Is there a defined problem/issue escalation plan for impacted clients?
11. Is there a documented communication plan for impacted clients?
12. Are all components of the Disaster Recovery Plan reviewed at least annually and updated as needed to reflect change? Please describe that process.
13. Do we have the opportunity to review your Disaster Recovery Plan(s) and supporting documentation? 160.Please indicate the last time that the Disaster Recovery Plan was tested and provide a summary of the results.

161.Does your organization perform fully integrated end-to-end testing? If not, please describe the scope of your DR testing. 162.Do the documented test results identify your organizations actual recovery time capabilities for technology and facilities? 163.Based on your most recent Disaster Recovery Test, what was your actual recovery time?

1. Does your organization's executive management review and sign-off on documented test summaries, which include test objectives, results, and recommendations?
2. Does your organization have a Disaster Recovery site or a contracted Disaster Recovery provider? 166.What type of availability does your Disaster Recovery site provide (hot/cold)?
3. What is the distance (in miles)/location of the Disaster Recovery site from the primary technology location?
4. Are back-up files, information and materials required to restore and operate key computing environments stored at the alternate site for ready access by authorized personnel?
5. Are back-ups of the operating system software, utilities, security software, application software and data files necessary for recovery stored at the DR site or another off-site location?
6. If stored at another off-site location, what is the distance (in miles) between the primary site and off-site location?
7. Please describe the process for backing up the servers on which the service resides. Are backup copies made according to pre- defined schedules and security stored and protected? Does Rice or Vendor perform backups?
8. Is media used for long-term retention of business data and archival purposes stored in a secure, environmentally protected area? 173.Does the system provide archive functionality? Will Rice archive the data? Control the length of time in the archive? How will

Rice access the archived data?

174.Do procedures exist to ensure that retention and destruction of data meets established business and regulatory requirements? 175.If desired, can the institution extract a full backup? At what frequency?

1. Where are CDN service nodes or Datacenters located?
2. Does service have peering agreements with research/education networks (Internet2, NLR, TransitRail, etc)? 178.Does service use advanced IP protocols (IPv6, IP Multicast, etc)?

179.Describe the bandwidth requirements for connections between your systems and the institution's users. 180.Describe the typical duration of transactions.

1. Describe TCP/IP ports used between the service and any client or system that the institution operates. 182.Please explain your approach to firewall usage, policy, and management. Please include the following details:
	1. a) Basis and specificity for access filtering
	2. b) Default allow or default protect
	3. c) Change control procedures (e.g., who can change rules, how changes are tracked and verified)
	4. d) Self-service administration through an API, management console or both
	5. e) Firewall audit logging — every change is logged with the user, the time and the type of change
2. Have expectations been established for the availability of all systems and underlying services? What is the minimum allowed outage time per month? How is that measured?
3. Will you voluntarily inform the institution of a service disruption?
4. Describe how load balancing and redundancy are utilized in your environment to ensure availability? Are they offered within a single data center only? Are they offered across data centers and geographical zones?
5. How does your organization measure availability? Does the definition of downtime start the minute the outage occurs (i.e., is there a minimum time, such that, any outage less than the minimum is not counted)?
6. How do you monitor and respond to alerts regarding the availability of your service?
7. What are the procedures to recover systems, applications, and data from operational failures? What is your method for testing recoverability component level versus full restore versus etc.)?
8. How do you monitor and respond to alerts regarding the performance of your service?
9. Are network, processor, and database performance monitoring procedures established to identify capacity and performance trends? 191.Do you conduct performance and latency tests annually and share the outcomes with customers?
10. Are the following performance metrics part of the standard service and are they reported on in five-minute intervals or less:
	1. CPU Utilization
	2. Memory Utilization
	3. Network I/O Performance
	4. Disk I/O Performance
	5. Average disk queue length
11. Are upgrades or system changes installed during off-peak hours or in a manner that does not impact the customer?
12. Do procedures exist to provide that emergency changes are documented and authorized (including after the fact approval)? 195.Which data centers will be used to serve our application?
13. Do you own your data centers or lease them? If the latter, from whom?
14. Are the data centers staffed 24 hours a day, seven days a week (24x7)? What staff is on-site? 198.What physical security measures are in the data center?

199.Is there redundant power? Batteries? Generators? How often are they tested? 200.What cooling and fire suppression systems are available?

1. How many Internet service providers (ISPs) do you buy connectivity from? Are they on separate telephone company entrances to the facility?
2. What Tier Level is your data center (per levels defined by the Uptime Institute)?
3. Do you have an Information Security Policy that pertains to customer data? If so, please provide a copy of the policy as well as any appropriate supporting documentation.
4. Do you have a written Incident Response Plan? If so, please provide a copy of the plan as well as any appropriate supporting documentation.
5. Have you ever experienced a breach of customer data? If so, what were the conditions of this breach and how was the investigation and response managed in conjunction with the customer?
6. Are all employees required to sign a confidentiality agreement upon hire? If so, please provide a copy of the confidentiality agreement.
7. Are all employees within your organization required to complete security training prior to accessing customer data?
8. Do you conform to a specific industry standard security framework, such as ISO 27001 or NIST Special Publication 800-53? If so, please provide evidence of how your organization conformance. If no, please indicate how you satisfy the Guidelines for Data Protection relative to restricted data. For details, see: [We will forward, separately, a copy of Rice's Data Security Policy]
9. Briefly describe your security organization. Who is responsible for your information security program? What is the size of your security staff?
10. Describe how the institution's data is physically and logically separated from that of other customers. Do you employ a single tenant or multi-tenant environment? If multi-tenant, what controls are in place to ensure a compromise of one customer's data does not lead to compromise of another customer's data?
11. Please describe your approach and/or practices related to application security, including details about your development process as well as controls implemented in production.
12. Does the system provide a time-out capability? Is that configurable for different periods of time by Rice?
13. How do you monitor for and protect against common web application security vulnerabilities (e.g. SQL injection, XSS, XSRF, etc.). Do you perform both application and network layer vulnerability testing of your production systems on a recurring basis? If so, what is the frequency of your testing? See the OWASP Top Ten for a more complete list of application vulnerabilities (https://[www.owasp.org/index.php/Top\_10\_2017-Top\_10).](http://www.owasp.org/index.php/Top_10_2017-Top_10%29)
14. In the last 12 months, have you engaged an independent security firm to assess the security of your application? If so, please provide a copy of the assessment report.
15. Will you allow the institution to perform its own security testing of your application provided that testing is performed at a mutually agreed upon time and date?
16. Do you employ network based intrusion detection or prevention? If so, please explain. 217.Do you employ host based intrusion detection or prevention? If so, please explain.
17. Do you employ any other controls to monitor for attacks? If so, please explain.
18. Do you monitor for intrusions on a 24x7x365 basis? If so, is monitoring performed internally or by a third-party? 220.Scalability – how does the solution design and infrastructure support growth and scale to multiple sites, nationally and globally?

## Project Functionality

1. Is the solution capable of supporting a multi-project, multi-department program?
2. Can project access be limited according to project type, user role, or by a specific user?
3. Can projects be grouped by campus, division, phase, region, program, status, or any client-defined criteria?
4. Can the proposed solution report across groups of projects, complete programs, or multiple programs based on user defined or client defined criteria?
5. Can the proposed solution drill down from a program view into a project specific view and then further into specific details about a project from one screen?
6. Can the proposed solution systematically categorize potential projects as they move through various phases in the planning process?
7. Does the solution have capabilities to create dashboards for both projects and programs on the same screen?
8. Does the solution allow for creating program wide reports, as well as single project reports?
9. Is there a limit to the number of projects that can be managed in the solution without affecting performance?
10. Is there a limit to the number of budgets that can be managed in the solution at any one time? E.g., can we have 200+ projects in different phases and pull data as needed

## Cost Management

1. Can the cost management data be fed by either a workflow, third-party databases or through manual entry?
2. Can the proposed solution manage multiple funding sources?
3. Can funding sources be managed against budgets, commitments, or actual expenditures?
4. Can funding sources be managed based on client-defined business rules?
5. Does your system support master program account funding cost controls with allocations to commitments and actuals?
6. Can your system manage and track program or account level funding distributions and allocations across multiple projects?
7. Does your system track funding separate than of the budget with the ability to apply commitment cost controls against the funding?
8. Does your system support workflow for Account Level Funding separate from budgets or estimate workflow?
9. Does your system provide an easy means to review funding distribution analysis in addition to reporting capabilities?
10. Does your system support multiple funding sources including split rules and be tracked at the program account level and allocated or tracked separately at the project level?
11. Does your system allow the ability to import Funding, Budgets, Commitments/Encumbrances, or Actuals at a program account level?

## Budget Management

1. Can the proposed solution manage budget changes based on user-defined criteria?
2. Can a budget line item be defined as a percentage of one or multiple budget line items?
3. Can the proposed solution import a budget from another application, e.g., Excel?
4. Does your solution support budget template creation?
5. Can a budget template be applied to one or multiple projects?
6. Does your cost code structure support multiple segments (i.e., up to four)?

## Cash Flow (Automated and Forecasting)

1. Can cash flow be automatically generated using forecasted cost projections? 249.Can cash flow forecasts be automatically generated using predefined curves? 250.Can cash flow data be reported on a monthly, quarterly or annual basis?
2. Can cash flow data be reported by calendar year, or a client-defined fiscal year?
3. Does the solution have a forecasting component? If yes, please describe how a forecast is developed in the solution. 253.Does the solution provide a mechanism to forecast ‘items to be bought’ or project risks?

## Reports/Dashboards/Program Management

254.Is a third-party product required for reporting? If yes, would another company need to be contacted for support of this product? 255.Can the proposed solution create reports in multiple formats (e.g., Microsoft Excel, CSV, HTML)

1. Can the proposed solution pre-format header and footer information for reports?
2. Can reports be scheduled for automatic email delivery to users (e.g., the first day of each month, every Monday at 8:00AM)? 258.Can the proposed solution provide reporting at the program and project level? If yes, can a subset of projects be selected that are

part of a program?

1. Does the proposed solution support the viewing of reports in the web browser?
2. Does the proposed solution support the ability to run reports based upon previous time durations (e.g., Previous Fiscal Year, Last Month, Current Month, etc.?)
3. Can the proposed solution be configured by the user to produce exception based reports (e.g. Change orders greater than $10,000)? 262.Can the reports be edited by a user to meet their specific report requirements?
4. Can columns in a report be configured to be color-coded based upon defined thresholds?
5. Can the proposed solution query the database and return results for current project data vs. historical data? 265.Can a user define and save personalized reports? If yes can a user use an existing report as a baseline template? 266.Can a report be automatically generated and published to a project document folder?
6. Does the report only show the data a user has access to based on the user’s permissions?
7. Does the proposed solution provide a report folder hierarchy for the categorization of report (e.g., Daily Logs, Monthly, Quarterly) 269.Does the proposed solution provide dashboard capability for graphical reporting?
8. Can multiple dashboards be built by users and administrators (e.g., Program Level, Project Level)?
9. Can users click on links in the report to drill down into detail project record information pertaining to the report?
10. Can the proposed solution filter on date ranges in report results? If yes, can the results be filtered based on a defined fiscal period?
11. Does the proposed solutions’ reporting tool allow a user to create Daily Reports from Construction Manager, Inspector of Record (IOR), Contractor, Subcontractor, etc.?
12. Can the reporting tool create weekly reports for different roles, e.g., construction manager, project manager, executive, etc. 275.Can the proposed solution allow users to create Project Status Reports? Can they be exported and e-mailed to set recipients from

the tool itself?

1. Can the proposed solution allow users to create reports for Logs tracking Requests for Information, Architectural Supplementary Information, Change Order Requests, Change Orders, Reports from Users, Requests for inspection and testing, etc.?

Reporting and Analytics

1. Does the system include an easy-to-use reporting environment, including dashboards, and tools, etc.? 278.Are there dashboard views for VPs for key PM metrics, etc.?

279.Can anyone have access to create reports, analytical tools, use dashboards, etc.? 280.Does the system provide standard reports? Please provide a list/examples.

1. Does the system provide for system area, operational and strategic reporting?
2. Does the system provide the flexibility for tailoring standard report information to meet specific needs? 283.Is the creation of custom ad-hoc reports available?

284.Is it easy to control the formatting of the reports? 285.Can Rice PM create its own reports?

286.What is the cost for vendor to create reports? Assume difficult. 287.Can saved searches be created in the system?

288.Can the system export information into Excel or other software programs? 289.Are reports run on real time data?

290.Can reports be run for historical periods (2003?)? 291.Can workflow approvals be tracked and reported on?

292.Can we report on timeliness of activities? Workflow timings? 293.Can graphics, such as logos, be incorporated in reports?

294.Does the system have the ability to limit access to reports based upon role? 295.Can report results be sorted?

296.Can reports be scheduled? pushed out to other users? 297.Can reports be run on all areas of the system?

1. Does the system have an internal analytics module? If so, is there an additional cost for this?
2. Does the system have external analytics integration capability, such as Google Analytics or Data Mart integration? If so, is there an additional cost for this?
3. Can we pull data from different modules into one report?

## Bid/Procurement Management

1. Does your product include a bid/procurement module?
2. Can the module track non-cost factors (team, experience, on-time submission, etc.)? 303.Does the module allow for a weighted scoring methodology?

## Schedule Management

1. Can a schedule be created within the system?
2. IS the schedule in Gantt chart or tabular form? (or other?)
3. Can a schedule be imported from Microsoft Project or Primavera software?
4. Can an existing project schedule from another scheduling tool be imported to be managed within the proposed solution? If so, which ones?
5. Does the proposed solution provide a Critical Path (CPM)-type scheduling component that automatically updates the entire schedule as tasks are updated or changed?
6. Can the schedule track and graphically show the critical path?
7. Can the schedule be shown in the proposed solution and reported in a Gantt chart?
8. Can the schedule store a snapshot of the schedule at a point in time to be used for comparison with the current schedule? 312.Can a schedule template be created and utilized as a baseline schedule for a project?
9. Can the schedule track and maintain the baseline and actual start and finish dates?
10. If yes, does the proposed solution have a task variance report to show the difference?
11. Can the following constraint types be assigned to a task (start-to-finish, start-to-start, finish-to-finish, finish-to-start)? 316.Can lag be defined on a task?

## Contacts/Vendor Information/Project Directory

317.Does the proposed solution provide a central vendor contact database where all vendor companies and contacts can be stored? 318.Can the proposed solution import existing companies and contacts into the vendor contact database from within the user interface

without any custom programming?

1. Can the proposed solution accept company and contact information from other commonly used databases (e.g. Outlook, Act, Accounting software, and other contact management software)
2. Can a user manually create companies and contacts into the vendor contact database? 321.Can the proposed solution restrict access as to who can add/edit company and contact data?

322.Can the proposed solution allow the ability to add notes with a user/date stamp to a company and a contact? 323.Can the proposed solution electronically attach documents (e.g., insurance certificate) to a company and contact?

1. Can data fields be created at the company and contact level that will allow additional data to be entered for tracking and reporting purposes (e.g., Insurance Expiration, Vendor Rating)
2. Can vendors be grouped by a standard industry format such as the CSI codes or our own internal format?
3. Can the proposed solution track project bid history for a vendor including bid invitations, bid responses, and bid awards?

## Capital Planning Module

1. Does the product allow for remote project requests (from other departments) or do all requests need to come from licensed users? 328.Does the product allow for tracking the requests by cost, funding source, department, etc.?
2. Can unapproved projects remain in the module for future tracking?

## Project Management Integration Business Requirements

1. Can you integrate your funding in addition to other cost to an ERP system?
2. How does your software pull in information from other sources? (Banner, FAMIS Cloud, etc.) 332.Can a report be automatically generated and published to an FTP site?
3. What training is required to publish reports?
4. Confirm your products compatibility with the Integration Business Requirements Below:

|  |  |  |
| --- | --- | --- |
| **Project Design & Requirements** | **Data Direction** | **Integration Point Description** |
| **Budget Setup** | One-way | * PME Software to Banner
	+ Originate in PME Software
	+ Send Budget to Banner
 |
| **Budget Changes** | One-Way | * PME Software to Banner
	+ Originate in PME Software
	+ Send Budget Changes to Banner
 |
| **Commitment (PREQ)** | Bi-Directional | * PME Software to JAGGAER to PME Software

o Originate in PME Software as PREQ. |
| **Commitment (PO)** | One-Way | * Purchase Order
* JAGGAER to PME Software
	+ Originate in JAGGAER as PO (based on PREQ)
	+ PO sent to PME Software.
 |
| **Commitment Change** | Bi-Directional | * Change Order for Amendment and Construction Change Order
* BANNER to PME Software (new PO)
 |
| **Invoice** | One-Way | * Commitment Invoice (e.g., Vendor Invoice)
 |

|  |  |  |
| --- | --- | --- |
|  |  | * AP Director/ JAGGAER to PME Software.
* Received in AP Director/ JAGGAER by PM.
 |
| **Work Order (Labor and Misc. /****Other)** | One-Way | * FAMIS Cloud to PME Software.

o Cost will be applied to designated budget line item |

***Space Management System***

In addition to the submission of proposals for the provision of project management software, qualified vendors are also requested to propose facilities management software solutions for use in managing the inventory of university facilities and associated space utilization.

Inventory and Utilization

1. Does the proposed solution comprise a database of sites, buildings, floors, rooms, and campus locations along with both hierarchically-defined (allocated or occupying group(s) and individuals, type of space) and extendable user-defined attributes (such as custom space or occupancy types and room function coding)?
2. Is the product seamlessly integrated with AutoCAD and/or Revit such that it has the ability to extract information (such as area) represented in the CAD drawing file as well as represent information stored in the space database through the insertion of text, area hatching or other graphical reporting tools?
3. Does the product support space classification as outlined in the US Dept. of Education Postsecondary Education Facilities Inventory Classification Manual?
4. Does the solution fully support complex, multi-level proration of space-related attributes, through application of percentage share of rooms allocated to multiple individuals performing multiple functions and belonging to multiple groups?
5. Does the solution support the ability to track history of assignment changes through date/time stamping and auditing? Can the solution track “to/from” room number changes due to remodels?
6. Does the solution include a web-based floorplan viewer and associated set of intuitive, graphical reporting tools that supports enterprise-wide dissemination of real-time space inventory and utilization information?
7. Does the solution include a web-based interface that supports enterprise-wide editing and updating of space inventory and utilization information?
8. Can the solution be used on a mobile electronic device?

Space Planning, Move Management, and Chargeback

1. Does the solution support the creation of multi-year space forecasts based on headcount projections or percentage growth? 344.Is the solution capable of performing “what-if” scenarios to analyze space forecasts and identify best fit scenarios?
2. Does the solution have the ability to visually plan move scenarios, calculate future allocations, and make necessary adjustments?

Can stacking diagrams be generated as part of scenario visualization and graphical reporting?

1. Does the solution include an array of automated, integrated functions (such as work order generation, status tracking, reporting, and updating of occupancy information) to support move planning and relocations from origination through completion?
2. Does the solution support all transactional elements for the complete implementation of a space “chargeback” system?

Additional Criteria

1. Does the proposed solution include administrative functions to define and manage user roles and permissions? 349.Is the interface user-friendly and is the solution easily configurable for user customization?
2. Does the solution provide a robust suite of reporting tools including user-customizable exports into basic Excel formats? Are reports easily configured in the interface by the user?
3. Does the proposed solution include capabilities that would support implementation of emerging practices such as hoteling through room or workstation scheduling?

## Space Management Integration Business Requirements

1. Can your solution both provide space data to and receive data from other enterprise systems, in real time, to support the integration of room or campus location information? Including, but not limited to:
	1. Project Management
	2. Work Order Control

|  |  |  |
| --- | --- | --- |
|  | c. | Facilities Maintenance |
| d. | Utility Management |
| e. | Office of Information Technology |
| f. | Human Resources |
| g. | Environmental Health & Safety |
| h. | Office of the Registrar |
| i. | Campus Police |
| j. | Events Management |
| k. | Accounting (Banner) |
| 353.1. |  | System integration narrative. Briefly characterize the solution’s capabilities for integration with existing enterprise |

systems and describe what is typically required on the part of the vendor and owner respectively for integration to go smoothly.

## Site Administrator Capabilities

354.Does the system provide for a client site administrator? If so, what is the general range of capabilities? 355.What types and levels of training are available to the SA?

## Technical Integration Requirements

1. Can all the data be exported in SQL or similar database format?
2. Is your code developed completely in-house? If not, who writes your code and where are they located? 358.What is your QA and beta process?
3. Do you have a “Try before You Buy” program?
4. How many of your customers needed customizations to meet their requirements and what are the most common customizations? 361.What was your average uptime during past 12 months?

362.What is your renewal rate and is it trending up or down? 363.What is your employee turnover rate?

1. Do you offer Robust Integration? Please list all integration points and methods. Are these included or priced separately?

## Implementation, Training and Support

1. Describe any tools or services provided to maximize service adoption and registrations. Any additional costs should be clearly detailed in the pricing section below.
2. Proposer’s solution shall include initial training for system administrators and operators. Describe proposed training and detail any additional cost for future training.
3. Provide a brief description of the major steps in the implementation process, including university resource needs, any on-premise activities required and timelines.
4. Describe the support process provided.
5. Describe any ongoing resource requirements expected from the institution.
6. Proposer should provide an advanced training learning management environment that is available 24 hours a day. Describe offerings and usage.
7. Access to training resources should be unlimited.
8. Training resources should be supported on personal computers and via a mobile application supporting at least iOS and Android mobile devices. Describe functionality.
9. Proposer’s training system should offer a certification process that validates successful completion of courseware.

## Other Capabilities and Future Enhancements

1. Please provide a brief description of other products or services not specifically detailed in this document that you feel are relevant to a purchasing decision.
2. Please provide a brief overview of the general direction of your development focus over the next year and how you feel that will impact our capabilities.

# Pricing

Illustrate all financial elements in this section so that all costs (one-time, fixed, recurring, ongoing, optional, usage-based, etc.) for all services, hardware, software, licensing, hardware maintenance, software maintenance, development, documentation, training, support and operation are reflected. All pricing should be broken out by line-item category. The proposer shall also list and price any item that is part of the solution (whether hardware, software or management-related) that has not been specified in the requirements but is needed in order for successful installation, development and operation of this service.