

## Session 18 - Technology

Date: Wednesday, April 20, 2022

Time: 10:45am - 12:00pm and 12:45pm - 3:30pm

Ellucian

Evaluator's Name: \_\_\_\_\_

|  | Functionality  | Comments |
|--|--|----------|
| <b>Technology Platform and Support</b> |  |          |
| 1.                                     | Provide a technical history of your product including when it was first created and how it has changed over the years in terms of major releases and significant technology milestones. Discuss the technology roadmap for the next three years. Discuss the types of development methodology being applied. |          |
| 2.                                     | Describe your software architecture including your technology stack.   |          |
|  | a. User interface  |          |
|  | b. Business logic  |          |
|  | c. Data persistence  |          |
|  | d. Other layers  |          |
|  | e. Coding language   |          |
| 3.                                     | Describe the technology team that supports your product including their location, team size, and tenure with the company. How many full-time employees are exclusively dedicated to supporting your proposed solution?   |          |
| 4.                                     | What communication channels are available to contact your support staff? Is support responding to these channels 24/7 or is there a separate escalation process outside of standard hours?   |          |
| 5.                                     | Describe, in detail, your cloud solution technologies that support the proposed software applications.   |          |
| 6.                                     | Describe the services provided under your SaaS model. For example, database/system administration and tuning, application software patch and upgrade management, disaster recovery.  |          |

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| 7.  | What is the update schedule for your product? Are updates required at the time of release? If not, how long do we have before becoming non-compliant? What notice is given for updates?   |          |
| 8.  | Demonstrate the update procedure and if feasible, demonstrate the ability of the system to roll back from a failed or bad update.   |          |
| 9.  | Demonstrate any dev/test environments available for non-production testing. How can the dev/test environment replicate updated production data (automatically on a schedule or manually)? Can product updates be tested before going into production?                         |          |
| 10. | Describe the technical environment as it relates to production, testing, and sandboxes. How many of each are customers allowed? How often are they refreshed and/or backed up? Does the customer have control over the frequency?   |          |
| 11. | Provide detail on the technical support needs for your system that are not provided under the SaaS or managed services contracted support services.   |          |
| 12. | What kind of technical training is available and how often is it offered? What technical and functional user documentation is available and how is it accessed? Demonstrate how an end user may be able to access technical documents, how-to's, KB articles, or user groups. |          |
| 13. | Describe the types of technical skills that Campbellsville staff will need in order to deal with primary support issues for your solution.  |          |
| 14. | Describe how remote vendor support is provided and the necessary infrastructure (VPN, Go-To-Meeting, etc.).   |          |

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| 15.   | What is the escalation process for support tickets? Demonstrate how an end user, power user, and programmer would each be able to request technical support. Demonstrate how a change request would be submitted, tracked, reported, and searched.   |          |
| 16.   | What types of changes and modifications can Campbellsville University staff do to the SaaS or cloud solution?  |          |
| 17.   | How are emergency (regulatory, security) upgrades, patches, and enhancements managed with your SaaS or cloud offering?   |          |
| 18.   | For your cloud and/or SaaS offering, how do you monitor and report breach issues? Explain the liabilities should a breach occur. Is there any insurance that is offered that covers any data breach occurrence? Demonstrate your solution's ability to insulate Campbellsville University from breach fallout. |          |
| 19.   | Describe the licensing scheme for production, test, development, and disaster recovery site instance of the system.  |          |
| 20.   | Besides a web browser, does your product require client-side software? Demonstrate your product on a modern web browser such as Google Chrome, Mozilla Firefox, Microsoft Edge, or Apple Safari, etc. Explain any limitations or anomalies with any specific browser or client.                                |          |
| <b>System Performance Measurement, Monitoring, and Alerting</b> |  |          |
| 21.   | Demonstrate the measurement and monitoring tools provided by your system for use by Campbellsville University staff to troubleshoot the performance and functionality of the proposed system. Include information about your SaaS or cloud solution if applicable.   |          |

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| 22. | Campbellsville University uses products to monitor network, server, and system/application performance and status and to provide alerting to Campbellsville University staff when problems occur. Describe how your system can be monitored using such tools. Include information about your SaaS or cloud solution if applicable. |          |
| 23. | What tools are available for database monitoring and tuning? Are these tools available to the Campbellsville University staff or only used by the vendor's support teams?  |          |
| 24. | Do monitoring/audit tools have the ability to alert on suspicious activity such as high numbers of failed logins or source address (foreign country)?  |          |
| 25. | Describe the disaster recovery strategy for the SaaS datacenter environment, if applicable. What is the estimated downtime, if any, until services are restored? What alerting options are available when outages or degradation of services occurs?   |          |
| 26. | In the event of process or data issues in a specific functional area, how is selective data recovery handled?  |          |
| 27. | If you offer a SaaS or cloud solution, please describe in technical detail the most recent two outages that resulted in unplanned downtime of more than 15 minutes for any of your customers.  |          |
| 28. | For a SaaS solution, if a user were to accidentally delete important data, what would be the process to restore the data? How do we request the data restoration? How long would it take to perform the restoration?   |          |
| 29. | Describe the typical scope of the Information Technology ERP support team post implementation.   |          |
| 30. | What external audits (e.g. SAS-70/SSAE 16) have been completed to ensure business continuity and security meet industry standards?   |          |

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| <b>System Administration and Security</b> |   |          |
| 31.                                       | Provide a technical overview or demo of the following items:<br><br>a. Typical system administration  |          |
|   | b. Typical operations   |          |
| 32.                                       | Describe how end users are affected during updates, reconfigurations, and modifications to a system in production.  |          |
| 33.                                       | Describe your solution's logging and auditing capabilities including logging level granularity and what third-party systems can read the logs.  |          |
| 34.                                       | How granular is the security access to logs? Can access be delegated to non-admin level accounts at a reduced detail level? Are non-admins able to view change dates/operators for relevant data fields within their department?                        |          |
| 35.                                       | The RFP asked you to describe how your system integrated with several systems that Campbellsville University uses outside our existing SIS. Select one of those systems and demonstrate how your system integrates with it from a technical standpoint. |          |
| 36.                                       | Demonstrate the creation and management of user accounts in the system and the assignment of access controls for screens, fields, and other data items. What reports are available to identify and compare users?                                       |          |
| 37.                                       | Demonstrate the ability to impersonate a user (faculty and student) or gain remote vision/control of user sessions for technical support purposes.  |          |

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| 38. | Demonstrate how your product can be used as the primary data source for automating user account creation/modification/deletion to Active Directory (i.e. when HR or Payroll activates/modifies/deactivates an employee record, it triggers processes to update AD). |          |
| 39. | Do you have session controls such as password lockout and auto-logout?  |          |
| 40. | Demonstrate the helpdesk functionalities including role/rights capabilities, submission of tickets, communications during open tickets, access to current and past tickets, etc.  |          |
| 41. | Demonstrate how your solution supports SAML, AD, AUTHN/AUTHZ, multi-factor, and other authentication methods.   |          |
| 42. | Demonstrate how your solution integrates with existing Single Sign-On (SSO) solutions.  |          |
| 43. | Elaborate on your solution's support for FERPA, PII, GDPR, and other current and emerging data security standards.  |          |
| 44. | How is data secured/encrypted in transit as well as at rest? Where is data stored (both who's system and geographical location) and what access does Campbellsville University have to the data? Who owns the data?   |          |
| 45. | Demonstrate how local printing is configured and managed especially as it relates to specialized documents (transcripts) or secure printing (checks) needs.   |          |
| 46. | Demonstrate the introduction of local or user-defined fields into the system  |          |

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| 47.                  | Demonstrate how Campbellsville University staff can extract, import, validate, and map data using native or common SQL tools.   |          |
| 48.                  | What is the average bandwidth consumption per user? What is the recommended increase for internet bandwidth going from an existing on-premise solution to your SaaS/cloud solution? |          |
| <b>Configuration</b> |   |          |
| 49.                  | Demonstrate how the proposed solution can be configured to accommodate local requirements for which the delivered product has no preexisting functionality.                         |          |
|                      | a. What programming languages can be used to interface with your solution?  |          |
|                      | b. Does your solution include any open source software/components?  |          |
|                      | c. What development platform is your system based on and does it require a proprietary development software suite to access?  |          |
| 50.                  | Demonstrate how controls can be placed on screens/fields in order to enhance data input and validation. Include the following:  |          |
|                      | a. Address lookup and validation  |          |
|                      | b. Required/optional fields   |          |
|                      | c. Show subsequent input choices based on previous input selections   |          |
| 51.                  | What technology is used to prevent and identify duplicate entry?  |          |

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| 52.       | Demonstrate and describe mobile capabilities of the system and detail the deployment framework. What technologies are used and what mobile platforms are supported? What additional end user requirements or limitations exist? Demonstrate your mobile capabilities on iOS and Android. |          |
| 53.       | Discuss and demonstrate the following tools available to assist with integration between Campbellsville University's other enterprise applications.  |          |
|           | a. Describe any APIs/web services.   |          |
|           | b. What security is attached to the APIs/web services?   |          |
|           | c. What tools are provided for data conversion from other systems?   |          |
|           | d. Describe any content/data that is NOT accessible via API/web service in both read-only and read-write capacity.   |          |
|           | e. What are the data export capabilities of this system for integration with other systems?  |          |
|           | f. Do you have API support for multiple programming languages such as Python, Java, or .NET?   |          |
| 54.       | If the API is updated, will it be backwards compatible?  |          |
| Workflows |  |          |
| 55.       | Discuss and demonstrate the steps required to build and maintain workflows.  |          |
| 56.       | Demonstrate the creation of a workflow for changing a student's name.  |          |
| 57.       | Demonstrate the modification of an approval workflow. For example, adding an approval level.   |          |



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| 58. | How are delegations or ad-hoc changes accommodated in the workflow process?   |          |
| 59. | Demonstrate logging and auditing of the workflow engine.  |          |
| 60. | Demonstrate how your workflow solution can be used at the department level (power user) with minimal technical skills including, but not limited to, data integration and approval routing. |          |
| 61. | Demonstrate the ability to create workflows based on automatic triggers (e.g. class is cancelled) or manual start initiated by staff or student (e.g., request change of program)           |          |
| 62. | Demonstrate the ability to create workflows that automate a sequence of steps   |          |
| 63. | Demonstrate the ability to branch workflow based on conditional logic   |          |
| 64. | Demonstrate the ability to configure steps as "notification" (no action required) or "approval" (action required)   |          |
| 65. | Demonstrate the ability to send auto-reminders if an approval has not been acted on in N days   |          |
| 66. | Demonstrate the ability for approver to approve, deny, or return with questions/comments  |          |

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**Evaluation Form**

Perceived Strengths of Vendor Solution:

Perceived Weaknesses of Vendor Solution:

Additional Comments:

Acceptability of Vendor Solution:    \_\_\_\_\_ Yes                      \_\_\_\_\_ No