08/22/18

REQUEST FOR PROPOSAL

INTEGRATED TECHNOLOGIES COLLABORATIVE

RFP 341901

DUE: 3:00 P.M., MST, 10/23/18

Time and Date of Pre-Proposal Conference	10:00 A.M., MST, 09/05/18
Deadline for Inquiries	3:00 P.M., MST, 10/09/18
Time and Date Set for Closing	3:00 P.M., MST, 10/23/18

TABLE OF CONTENTS

TITLE   **PAGE**

SECTION I – REQUEST FOR PROPOSAL

RFP 341901

Arizona State University is requesting sealed proposals from qualified firms or individuals for Integrated Technologies Collaborative (ITC).

Proposals are to be addressed and delivered to the receptionist area, first floor, University Services Building, Purchasing and Business Services, Arizona State University, 1551 S. Rural Road, (located on the east side of Rural Road between Apache Boulevard and Broadway Road) Tempe, Arizona 85281 **on or before 3:00 PM MST, October 23, 2018. No proposal will be accepted after this time. PROPOSALS MUST BE IN A MARKED SEALED CONTAINER** (i.e., envelope, box):

Name of Proposer
Title of Proposal
RFP Number
Date and Time Proposal is Due

No telephone, electronic or facsimile proposals will be considered. **Proposals received after the time and date set for closing, will be returned to the proposer unopened.**

A representative of Purchasing and Business Services will announce publicly the names of those firms or individuals submitting proposals**.** No other public disclosure will be made until after award of the contract.

Arizona State University's Overnight Delivery (FedEx, Airborne, and UPS) address is:
Purchasing and Business Services
University Services Building
Arizona State University
1551 S. Rural Rd
Tempe, AZ 85281

Arizona State University's U.S. Postal Service Mail address is:
Purchasing and Business Services
Arizona State University
P.O. Box 875212
Tempe, AZ 85287-5212

ARIZONA STATE UNIVERSITY

DocuSigned by:

9A7881725D4C414...

Lorenzo Espinoza, Sr. Buyer

SECTION II – PURPOSE OF THE RFP

1. <u>**INTENT**</u>

   Arizona State University ("ASU") seeks to engage providers to work under ASU's strategic and technology/architectural direction to bridge the Universities ability to deliver high quality and innovative information technologies services or cyberinfrastructure to faculty, researchers, and students through a strategic collaborative with a private sector collaborator. The successful collaborator will be expected to select and invest in technology solutions, strategies, and business models to drive the innovative adoption or technology enhance learning, research, and service.

   ASU expects a successful collaborator to propose, pilot, and implement an innovative business model that embraces ASU's strengths and assets in nationally recognized programs and services. ASU offers the collaborator an opportunity to work with the University community and ASU's regional and national collaborators to re-invent information technologies or cyberinfrastructure planning and services.

   ASU's Integrated Technology Collaborative (ITC) will assist the University by building new vendor collaborations, by working with ASU researchers and scientists to improve science-driven networks, and high performance computing environments. Since ASU's faculty and students expect the delivery of high quality services and networks, we ask that the successful collaborator provide well-articulated leadership in performance measures and quality service delivery on campus, in our communities, or any place where ASU delivers programs or services.

   The collaborator will be required to manage and upgrade the existing enterprise network and related services, but also to shape and integrate the next generation cyberinfrastructure, networking, cloud services/engineering, and vision of the smart city,that will facilitate ASU's mission to be the leader in "Smart Campus" technology and Universal Learning. ASU expects providers, through this ITC RFP, to showcase their expertise, to demonstrate their scalability, to exhibit advanced and innovative strategies, and to commit to investment in ASU's future.

   The ITC represents an opportunity for a provider to invite participation from best of class technology, management, and services companies to accelerate ASU's adoption of Universal Learning. We invite innovative and risk based solutions and structures to continue ASU's position as a national leader in innovation and in the advanced use of technology across the academic and administrative systems.

   This RFP is organized into functional areas, some of which have natural synergies, integrations, and business opportunities to drive cost effective

solutions and high quality operations. Respondents may propose solutions for any portion of this RFP, up to the entire scope of work. As it is understood that no one supplier will be able to effectively provide best-in-class services in every category, it is essential that respondents consider teaming strategies that advance their core area(s) of expertise as well as how they might align with other providers in synchronous delivery to ensure success at every level and across the ASU enterprise. Note the role of integrator/orchestrator as discussed in detail in the Specifications/Scope of Work section. The entity fulfilling this role will be critical to the success of this endeavor, and coordination by and among providers is essential.

With that, ASU intends to award one or more contracts to providers under this RFP, but reserves the right to not award any given section if responses do not meet ASU's needs. For contract(s) awarded under this RFP, ASU intends to extend services to other entities either currently or potentially affiliated with ASU.

ASU intends to complete implementation of the new structure by July 1, 2019. Transition coordination with existing managed service provider(s) will be crucial, and is expected to take place over several months leading up to a cutover date of July 1, 2019. The implementation timeline will be dependent on the respondents' ability to produce a stable system of providers working in congruence.

2.   **BACKGROUND INFORMATION**

ASU's enterprise network and related services are currently managed end-to-end and by a third party managed services provider. This managed services provider will have been in place for 10 years upon the conclusion of that contract June 30, 2019. ASU has maintained strategic management and direction under this relationship and will continue to do so with provider(s) going forward. New arrangements with provider(s) resulting from this RFP will necessitate not only an understanding of every aspect of ASU's cyberinfrastructure, networking, and high performance computing/networking operations, but also a commitment to forward-looking improvement, expansion, and technological innovation. Going forward, ASU anticipates an Integrated Technologies Collaborative (ITC) for advanced networking, the expansion of cloud services/engineering, and proliferation of technologies in support of a smart campus.

The ITC program aims to support advanced networking and research platforms designed and deployed across the U.S. academic and industrial networking research community. The ITC will enable experimental exploration of robust new networking, cloud services, and smart campuses located devices, communication techniques, networks, systems, and services that will drive and support research at ASU and throughout the region and across the nation. We expect the provider to bring technical and management expertise to plan and build a new cyberinfrastructure ecosystem intended to enhance connectivity,

expand the mobile use of systems and devices, leverage the emerging Internet of Things (IoT), and sustain ASU's leadership and economic competitiveness.

Arizona State University is a new model for American higher education, an unprecedented combination of academic excellence, entrepreneurial energy and broad access. This New American University is a single, unified institution comprising four differentiated campuses positively impacting the economic, social, cultural and environmental health of the communities it serves. Its research is inspired by real world application blurring the boundaries that traditionally separate academic disciplines. ASU serves more than 91,000 students in metropolitan Phoenix, Arizona, the nation's fifth largest city. ASU champions intellectual and cultural diversity, and welcomes students from all fifty states and more than one hundred nations across the globe.

If you would like more information about ASU, please visit us via the World Wide Web. Our home page address is http://www.asu.edu.

3.   **<u>TERM OF CONTRACT</u>**

Arizona State University is open to negotiating the term of the contract to maximize the value of the contract to ASU. Please provide multiple term options with your proposal, and at a minimum, please provide term options of 1, 3, and 5 years. The contract will be available for use by other University departments during this term.

SECTION III – PRE-PROPOSAL CONFERENCE

A pre-proposal conference will be held online and in person at 10:00 AM on September 5, 2018 at ASU's Skysong Location at 1475 North Scottsdale Road, Scottsdale, AZ 85257. In Skysong 1 Building, Room Global 201. Due to room capacity, you must register to participate, and in-person attendees are limited to three (3) per company. Those not attending in person may join via Zoom Video Conference.

The purpose of this conference will be to clarify the contents of this Request for Proposal in order to prevent any misunderstanding of the University's intention and desires, and/or to give prospective suppliers an opportunity to review the site of the work via a prepared video. Any doubt as to the requirements of this solicitation, or any apparent omission or discrepancy should be presented to the University representative at this conference. The University representative will then determine the appropriate action. If necessary, the University representative will issue a written amendment to this Request for Proposal. Oral statements or instructions shall not constitute an amendment to this Request for Proposal.

You do not have to send a representative to this pre-proposal conference. However, if you decide to not send a representative, then we may not know of your intent to participate in this Request for Proposal, and so may not send you any written amendments to this Request for Proposal. Further, we will assume that your failure to attend the pre-proposal conference is an indication that you expect us to review your proposal as if you had taken advantage of the pre-proposal conference.

To participate in the pre-proposal conference complete the following:

1. **Register by 5:00 p.m. on Friday, August 31, 2018**, for the event by sending an email of participants to Lorenzo.Espinoza@asu.edu. Include the following information:
    a. First and Last Name
    b. Company
    c. Title
    d. Email address
    e. Phone Number

2. On the day of the conference registered users will be emailed a link and a passcode to enter the virtual room.

SECTION IV – INSTRUCTIONS TO PROPOSERS

1. You must address and deliver your proposal to the receptionist area, first floor, University Services Building, Purchasing and Business Services, Arizona State University, 1551 S. Rural Road, Tempe, Arizona 85281, **on or before the time and date set for closing. No proposal will be accepted after this time.** The University Services Building is located on the east side of Rural Road between Apache Boulevard and Broadway Road. **PROPOSALS MUST BE IN A MARKED SEALED CONTAINER** (i.e., envelope, box):

   Name of Proposer
   Title of Proposal
   RFP Number
   Date and Time Proposal is Due

   No telephone, electronic or facsimile proposals will be considered. **Proposals received after the time and date set for closing, will be returned to the proposer unopened.**

2. **DIRECTIONS TO USB VISITOR PARKING**. Purchasing and Business Services is in the University Services Building ("USB") 1551 S. Rural Road, Tempe, AZ, 85281 (located on the east side of Rural between Broadway Ave and Apache Boulevard). A parking meter is located near the main entry to USB.

   All visitors to USB are required to check in at the USB Reception Desk to obtain a visitor's badge to wear while in the building. The receptionist will call to have you escorted to your meeting.

3. Proposer should use recycled paper and double-sided copying for the production of all printed and photocopied proposal documents. Furthermore, the documents should be clearly marked to indicate that they are printed on recycled content (minimum 30% post-consumer waste paper).

4. You may withdraw your proposal at any time prior to the time and date set for closing.

5. No department, school, or office at the University has the authority to solicit or receive official proposals other than Purchasing and Business Services. All solicitations are performed under the direct supervision of the Chief Procurement Officer and in complete accordance with University policies and procedures.

6. The University reserves the right to conduct discussions with proposers, and to accept revisions of proposals, and to negotiate price changes. During this discussion period, the University will not disclose any information derived from proposals submitted, or from discussions with other proposers. Once a contract is executed, the solicitation file, and the proposals contained therein, are in the public record and will be disclosed upon request.

7. Proposers submitting proposals which meet the selection criteria and which are deemed to be the most advantageous to the University may be requested to give an oral presentation to a selection committee. Purchasing and Business Services will do the scheduling of these oral presentations.

8. The award shall be made to the responsible proposer whose proposal is determined to be the most advantageous to the University based on the evaluation factors set forth in this solicitation. Price, although a consideration, will not be the sole determining factor.

9. If you are submitting any information you consider to be proprietary, you must place it in a separate envelope and mark it "Proprietary Information". If the Chief Procurement Officer concurs, this information will not be considered public information. The Chief Procurement Officer is the final authority as to the extent of material, which is considered proprietary or confidential. Pricing information cannot be considered proprietary.

10. The University is committed to the development of Small Business and Small Disadvantaged Business ("SB & SDB") suppliers. If subcontracting (Tier 2 and higher) is necessary, proposer (Tier 1) will make every effort to use SB & SDB in the performance of any contract resulting from this proposal. A report may be required at each annual anniversary date and at the completion of the contract indicating the extent of SB & SDB participation. **A description of the proposers expected efforts to solicit SB & SDB participation should be enclosed with your proposal.**

11. Your proposal should be submitted in the format shown in Section X. Proposals in any other format will be considered informal and may be rejected. Conditional proposals will not be considered. An individual authorized to extend a formal proposal must sign all proposals. Proposals that are not signed may be rejected.

12. The University reserves the right to reject any or all proposals or any part thereof, or to accept any proposal, or any part thereof, or to withhold the award and to waive or decline to waive irregularities in any proposal when it determines that it is in its best interest to do so. The University also reserves the right to hold all proposals for a period of **one hundred twenty (120) days** after the opening date and the right to accept a proposal not withdrawn before the scheduled proposal opening date.

13. **EXCEPTIONS:** The Arizona State University contract terms and conditions are included in this Request for Proposal in Section XII. These terms and conditions will be incorporated into the contract between the University and the successful proposer. **Proposals that are contingent upon any changes to these mandatory contract terms and conditions may be deemed nonresponsive and may be rejected.** All exceptions must be submitted with justification and alternate language, and MUST be submitted with the proposal. In no event is a Proposer to submit its own standard contract terms and conditions as a response to this RFP.

14. Unless specifically stated to the contrary, any manufacturer's names, trade names, brand names or catalog numbers used in the specifications of this Request for Proposal are for the purpose of describing and/or establishing the quality, design and performance required. Any such reference is not intended to limit or restrict an offer by any proposer and is included in order to advise the potential proposer of the requirements for the University. Any offer, which proposes like quality, design or performance, will be considered.

15. Days: Calendar days

    May: Indicates something that is not mandatory but permissible/ desirable.

Shall, Must, Will: Indicates mandatory requirement. Failure to meet these mandatory requirements will result in rejection of your proposal as non-responsive.

Should: Indicates something that is recommended but not mandatory. If the proposer fails to provide recommended information, the University may, at its sole option, ask the proposer to provide the information or evaluate the proposal without the information.

16. Any person, firm, corporation or association submitting a proposal shall be deemed to have read and understood all the terms, conditions and requirements in the specifications/scope of work.

17. All proposals and accompanying documentation will become the property of the University at the time the proposals are opened. **It will be the proposer's responsibility to request that samples be returned to the proposer and provide a method for doing so at the expense of the proposer.** If a request is not received and a method of return is not provided, all samples shall become the property of the University 45 days from the date of the award.

18. All required performance and payment bonds shall be held by the University in a secure location until the performance of the contract and the payment of all obligations rising there under have been 100% fulfilled. Upon completion of the project and all obligations being fulfilled, it shall be the proposer's responsibility to request the surety bonding company to submit to the University the necessary documents to approve the release of the bonds. Until such time the bonds shall remain in full force and effect.

19. The University of Arizona, Northern Arizona University, and Arizona State University are all state universities governed by the Arizona Board of Regents. **Unless reasonable objection is made in writing as part of your proposal to this Request for Proposal, the Board or either of the other two Universities may purchase goods and/or services from any contract resulting from this Request for Proposal.**

20. The University of Arizona, Northern Arizona University, and Arizona State University are all state universities governed by the Arizona Board of Regents. Unless reasonable objection is made in writing as part of your proposal to this Request for Proposal, the Board or either of the other two Universities may purchase goods and/or services from any contract resulting from this Request for Proposal.

21. Arizona State University is a member of various co-operative organizations, in accordance with A.R.S Sections 11-952 and 41-2632. Under these Cooperative Purchasing Agreements, the University may share and distribute a contract resulting from a solicitation. In the absence of a statement to the contrary, the University will assume that you do wish to grant access to any contract that may result from this Request for Proposal.

22. Administrative Fee: Awarded Suppliers shall pay ASU an Administrative Fee in the amount of 1 percent of the gross funds received by the Supplier from any of the Arizona Entities or any other similar entity in any other state. This fee will apply only to contracts entered into after the effective date of the signed contract. This fee will apply to any and all products and services sold by the Supplier that reference the signed contract as the supporting documentation to meet competitive bidding requirements. The Administrative Fee will be calculated based on all

sales transacted under the contract, minus all taxes and any returns or credits. The Supplier will submit the Administrative Fee, along with a quarterly usage report documenting all contract sales, to the ASU Chief Procurement Office within thirty (30) days following the end of each calendar quarter. Each quarterly report at a minimum, shall disclose all purchased goods and services, prices paid, and quantity, by individual purchasing agency, for all sales within the calendar quarter just ended. The Supplier will upload to and make continuously available in the Central Repository the quarterly usage report.

23. All formal inquiries or requests for significant or material clarification or interpretation, or notification to the University of errors or omissions relating to this Request for Proposal must be directed, in writing or by facsimile, to:

>Lorenzo Espinoza
>Purchasing and Business Services
>University Services Building
>Arizona State University
>PO Box 875212
>Tempe, AZ 85287-5212
>
>Tel: 480-965-3849
>E-mail: Lorenzo.Espinoza@asu.edu

Requests must be submitted on a copy of the Proposer Inquiry Form included in Section XI of this Request for Proposal. All formal inquiries must be submitted at least ten (10) calendar days before the time and date set for closing this Request for Proposal. Failure to submit inquiries by this deadline may result in the inquiry not being answered.

Note that the University will answer informal questions orally. The University makes no warranty of any kind as to the correctness of any oral answers and uses this process solely to provide minor clarifications rapidly. Oral statements or instructions shall not constitute an amendment to this Request for Proposal. Proposers shall not rely on any verbal responses from the University.

24. The University shall not reimburse any proposer the cost of responding to a Request for Proposal.

25. In accordance with an executive order titled "Air Pollution Emergency Proclamation" modified by the Governor of Arizona on July 16, 1996, the University formally requests that all products used in the performance of any contract that results from this Request for Proposal be of low- or no-content of reactive organic compounds, to the maximum extent possible.

26. Arizona requires that the University purchase ENERGY STAR® products or those certified by the Federal Energy Management Program as energy efficient in all categories available. If this Request for Proposal is for a product in a category for which ENERGY STAR® or certified products are available, please submit evidence of the ENERGY STAR® status or certification for the products you are bidding. Please note that if you fail to submit this information but a competitor does, the University will select your competitor's product as meeting specifications and deem your product as not meeting specifications. See A.R.S. §34-451.

27.	The University requires that all desktop computers, notebooks, and monitors purchased must meet Electronic Product Environmental Assessment Tool (EPEAT) Gold status as contained in the IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products. The registration criteria and a list of all registered equipment are at http://www.epeat.net on the Web.

28.	To the extent applicable to any contract resulting from this Request for Proposal, the proposer shall comply with the Standards for Privacy of Individually Identifiable Information under the Health Insurance Portability and Accountability Act of 1996 contained in 45 CFR Parts 160 and 164 (the "HIPAA Privacy Standards") as of the effective date of the HIPAA Privacy Standards on April 14, 2003 or as later determined. Proposer will use all security and privacy safeguards necessary to protect Protected Health Information (PHI), as defined by HIPAA, and shall immediately report to University all improper use or disclosure of PHI of which it becomes aware. Proposer agrees to ensure that its agents and subcontractors agree to and abide by these requirements. **Proposer agrees to indemnify the State of Arizona, its departments, agencies, boards, commissions, universities and its officers, officials, agents, and employees against all harm or damage caused or contributed to by proposer's breach of its obligations under this paragraph.**

29.	The University believes that it can best maintain its reputation for treating suppliers in a fair, honest, and consistent manner by conducting solicitations in good faith and by granting competitors an equal opportunity to win an award. If you feel that we have fallen short of these goals, you may submit a protest pursuant to the Arizona Board of Regents procurement procedures, section 3-809, in particular section 3-809C.

30.	Other Opportunities with the University **NOT** related to this Request for Proposal.

The ASU Magazine

Connect your business with an affluent, educated audience through a business partnership with the ASU Alumni Engagement and Impact Office (AEIO). The AEIO is the touchstone for the University's 450,000 alumni and provides valuable connections between them and a wide variety of businesses. By doing business with the University, the largest university in the United States, your company can stand above the competition.

ASU alumni represent a responsive target market for your product or service.
- Alumni live worldwide.
- 230,000 of alumni reside in Arizona.
- More than 200,000 alumni live in Maricopa County.
- 38,000 of alumni reside in California.
- 55% of ASU alumni are under the age of 55.
- 85% own their own place of residence.
- 60% earn more than $50,000 annually.
- 40% fall in the top two highest wealth rating categories.
- 14% hold multiple and /or advanced degrees.

Specific partnership opportunities exist in a variety of areas.
- Advertise in the ASU Magazine, mailed to more than 400,000 homes around the world three times per year.
- Sponsor one of the University's many programs and events and receive recognition and access to targeted audiences. Events include: Founder's Day, Homecoming, Legends Luncheon, Sun Devil 100, football tailgates, Career Fairs and many more! Create a unique partnership with us to suit your needs.
- Establish benefits for ASU alumni by offering targeted discounts and services to Sun Devil alums all over the world.
- Advertise on the ASU Alumni Web site or on our 110 Chapter/Club websites or in monthly E newsletter which is sent out to more than 240,000 people monthly.

Sun Devil Sports Marketing

Sun Devil Sports Properties is the exclusive marketing and corporate sponsorship partner for Arizona State University Athletics and manages all corporate marketing opportunities surrounding Sun Devil Athletics. Sponsorship opportunities include, but are not limited to, on-premise signage, radio, print, digital, premium hospitality, event marketing and promotions

Arizona PBS Delivers…

Arizona PBS, delivers award-winning, educational, cultural and current events programming to approximately 1.5 million viewers each week. Become an AZPBS sponsor.

- **AZPBS delivers – reach.** Comparable to other TV channels, well beyond cable channels and way beyond the top local radio stations and print media. AZPBS / KAET reaches 85 percent of the people of Arizona.
- **AZPBS delivers – quality audience.** Business leaders, decision makers, high income households, educated citizens & boomers and spenders with disposable income.
- **AZPBS delivers – marketing benefits:**
    - Build brand awareness by linking your business with high-quality programs
    - Generate community goodwill through support of public television
    - Promote your offerings to a broad audience at an affordable price
    - Market your brand in an environment free of commercial clutter
- **AZPBS delivers – multiple media platforms:**
    - 3 TV Channels – Eight HD, Eight Life & Eight World
    - Web views – www.azpbs.org (150,000 unique visitors a month)
    - E-Marketing – 40,000 email addresses … and more.

SECTION V – SPECIFICATIONS/SCOPE OF WORK

See attached Exhibits:

A – Specifications/Scope of Work
B – Questionnaire
C – Summary Questions (Excel Spreadsheet)

SECTION VI – GREEN PURCHASING REQUIREMENTS/SPECIFICATIONS

In order to reduce the adverse environmental impact of our purchasing decisions the University is committed to buying goods and services from manufacturers and suppliers who share the University's environmental concern and commitment. Green purchasing is the method wherein environmental and social considerations are taken with equal weight to the price, availability and performance criteria that we use to make purchasing decisions.

Proposer shall use environmentally preferable products, materials and companies where economically feasible. Environmentally preferable products have a less or reduced effect on human health and the environment when compared to other products and companies that serve the same purpose. If two (2) products are equal in performance characteristics and the pricing is within 5%, the University will favor the more environmentally preferable product and company.

If you are citing environmentally preferred product claims, you must provide proper certification or detailed information on environmental benefits, durability and recyclable properties.

The University and the supplier may negotiate during the contract term to permit the substitution or addition of Environmentally Preferable Products (EPPs) when such products are readily available at a competitive cost and satisfy the university's performance needs.

Unless otherwise specified, proposers and contractors should use recycled paper and double-sided copying for the production of all printed and photocopied documents. Furthermore, the documents shall be clearly marked to indicate that they are printed on recycled content (minimum 30% post-consumer waste) paper.

Proposer shall minimize packaging and any packaging/packing materials that are provided must meet at least one of, and preferably all, of the following criteria:

Made from 100% post-consumer recycled materials
Be recyclable
Reusable
Non-toxic
Biodegradable

Further, proposer is expected to pick up packaging and either reuse it or recycle it. This is a requirement of the contract or purchase order.

SECTION VII – PROPOSER QUALIFICATIONS

The University is soliciting proposals from firms, which are in the business of providing services as listed in this Request for Proposal. Your proposal shall include, at a minimum, the following information. Failure to include these items may be grounds for rejection of your proposal. The proposer must reply directly underneath each item below in Section VII for ease of evaluation in Exhibit F. The proposer's response should be no more than 20 pages (The Maximum page amount does not including resumes, CVs, Organizational Charts, and Financial Statements).

1. The proposer shall present evidence that the firm or its officers have been engaged for at least the past five (5) years in providing services as listed in this Request for Proposal.

2. The proposer must detail the ownership of your firm/company. Detail your affiliations, participation or ownership by/in other companies, including possible subcontractors.

3. The proposer shall provide their service level management programs and systems that will drive and reward excellence in performance and innovation. The proposer shall include:

   a. Describe your proposed solution for maximizing performance and value while minimizing business disruption through measurement and reporting of KPIs, workflows, altering, etc. Please provide sample measurements and reports.
   b. What program do you propose to incent providers to not only meet minimum performance requirements but also to exercise initiative and innovation in streamlining and continuously improving performance?
   c. Describe your proposed solution for implementing and following a mature ITIL performance management plan, to include incident management, service fulfillment, operational efficiency, innovation, and research and development.
   d. Please indicate any performance guarantees you are willing to provide and the associated remedies for failure to meet the guarantee.
   e. Describe the approach you take to ensure your service level agreements are obtained. Attach a sample of suggested Service Levels Agreements you will commit to.

4. Describe your firm's approach to providing the services described in Section V, as well as the methodology used. Include other steps if appropriate as well as the resources, from both organizations, that will be necessary for a successful implementation.

5. Describe what distinguishes the ability of your firm from that of your competitors to perform the services described in this Request for Proposal.

6. All key personnel proposed by proposer should have relevant experience, and be fully qualified to successfully provide the services described in Section V. Provide an organizational chart that provides organizational sections, highlighting the section that will have responsibility for performing this initiative, clearly noted. **Any replacements/changes to staff or organizational structure must be presented and approved by ASU prior to any award.**

7. Proposer must provide a summary outlining the qualifications and / or resume outlining the qualifications and experience of the key and supervisory personnel who will be dedicated to the project.

8. Proposer must provide any certifications/licenses/etc. they have that are pertinent to the Scope of Work.

9. The proposer must provide a minimum of three (3) references, a description of recent project and/or experience in providing similar services as described in this RFP, including institution size. References should be verifiable and able to comment on the firm's experience, with a preference for references receiving services similar to those described in this Proposal. Include the name, title, telephone number, and email address of the individual at the organization most familiar with the Proposer.

10. The proposer must provide what percentage of their business is outsourced. Please list the primary providers of those services.

11. The proposer must provide details if their firm, or any member of their firm, been declared in default, suspended, terminated or removed from a contract or job related to the services their firm provides in the regular course of business within the last five (5) years. If so, please explain how it was handled.

12. The proposer must respond to the following questions in regards to their pricing:

    a. **Pricing Structure.** Describe your pricing structure and the pricing model and approach used in support of that structure. Are you considered a low cost provider in your industry? How does this structure benefit your customer base?
    b. **Elements of Cost.** What are the 3 key elements of your products/services cost?
    c. **Cost Controls.** Do you have any programs in place to control / mitigate / hedge against cost variances? If so, please explain.
    d. **Cost Reduction Programs.** Describe your firms cost reduction programs. Are you proposing to offer a year over year cost savings percentage or a shared incentive program based on met SLAs or other metrics? If so, please be sure to provide these elements of your pricing structure.
    e. **Cost Baseline.** How does your organization help a customer to baseline their costs? Please explain

13. The proposer must complete Exhibit D – Service Management Response/Questions.

14. The proposer must provide a statement of their review and acceptance of ASU's Terms and Conditions included in this RFP under Section XII. **Note: all exceptions with justification and alternative language MUST be submitted with the proposal. Statements such as "We will negotiate in good faith if awarded" is not an acceptable response.**

15. Proposer must provide an acknowledgement of Section XIV for ASU's Security Review Process. Note: Section XIV of the RFP is intended for proposers to understand ASU's security review processes. The proposer must understand and agree to ASU security

assessment requirements if awarded this contract. This section is included only as reference.

16. The proposer must provide an acknowledgement statement that most deliveries to ASU will require delivery to a centralized location for consolidated distribution and must be coordinated with ASU Materials Management. A finalized logistics policy will be implemented during the course of this RFP and contract, and ASU expects the proposer to comply with ASU on a centralized receiving policy once implemented.

17. The proposer must provide an acknowledgement statement of their acceptance of Section XV SunRISE General Terms and provide clarity on their firm's ability to integrate with our e-Commerce system (Additional ordering and invoicing procedures are found in Section V, Attachment A of the RFP).

18. The proposer must provide an acknowledgement statement of their acceptance of ASU Policy PUR 210: Green Purchasing (reference https://www.asu.edu/aad/manuals/pur/pur210.html) and Section VI of the RFP.

19. Financial Statements:

    Option A. Proposers who have audited financial statements are to provide the following:

    Audited financial statements for the two (2) most recent available years. If the financial statements are intended to be confidential, please submit one (1) copy in a separate sealed envelope and mark as follows:

    Firm's Name
    Confidential – Financial Statements

    Option B. Proposers who might not have audited financial statements are to provide the following:

    It is preferred that audited financial statements for the two (2) most recent available years be submitted. However, if not available, provide a copy of firm's two (2) most recent tax returns or compiled financial statements by an independent CPA. If the financial statements or tax returns are intended to be confidential, please submit one (1) copy in a separate sealed envelope and mark as follows:

    Firm's Name
    Confidential – Financial Statements

SECTION VIII – EVALUATION CRITERIA

Proposals will be evaluated on the following criteria, listed in order of their relative priority with most important listed first:

No.	RFP Criteria Summary	Category %	Evaluation Criteria — Criteria Detail
1	Scope	38%	Response to Section V – Specifications/Scope of Work
2	Qualifications	37%	Response to Section VII - Qualifications
3	Pricing Schedule	15%	Response to Section IX – Pricing Schedule
4	Sustainability	10%	Response to Sustainability Efforts/Sustainability Questionnaire
		100%	

SECTION IX – PRICING SCHEDULE

Proposer shall submit a detailed cost proposal to include all aspects of providing the scope of work associated with this Request for Proposal. It is important that you include any implementation or other one-time costs, as well as recurring costs, for each year. If your proposal represents an offer that leverages a collaborative team of providers, please be sure to outline your team's pricing approach. Detailed pricing must be provided for each service category, as well as any bundling or roll-up pricing your team will use if submitting proposals for more than one category.

For your convenience, we have provided an MS Excel spreadsheet, Exhibit E, for you to provide an outline of your team's approach to pricing. Please use the following guidelines to complete each tab of the worksheet.

Tab 1 – Network, IoT Smart Campus, Infrastructure Components – Please provide your team's pricing approach for installation, management, refresh and upgrade for each category of infrastructure components.

Tab 2 – Other Pricing Models - If your pricing structure, approach or strategy for one or more elements of your team's proposal varies greatly from the cost structures or metrics used in tab 1 or if you have an alternate model to propose, please use this area to define your approach. Please include all total cost elements, describe the metrics and criteria for your pricing strategy as well as any implementation or other one-time costs, recurring costs, bundling discounts, etc.

SECTION X – FORM OF PROPOSAL/SPECIAL INSTRUCTIONS

Format of Submittal

To facilitate direct comparisons, your proposal must be submitted in the following format:

- **One (1)** clearly marked hardcopy "original" in 8.5" x 11" double-sided, non-binding form. No metal or plastic binding – may use binder, folder, or clip for easy removal of proposal; and

- **One (1) "single"** continuous electronic copy (**flash drive only**), PC readable, labeled and no passwords.

- Any confidential and/or proprietary documents must be on a separate flash drive and labeled appropriately.

- Proposer must check all flash drives before submitting. Company marketing materials should not be included unless the Request for Proposal specifically requests them. All photos must be compressed to small size formats.

Content of Submittal

If proposer fails to provide any of the following information, with the exception of the mandatory proposal certifications, the University may, at its sole option, ask the proposer to provide the missing information or evaluate the proposal without the missing information.

1. **Appendix 1 – RFP Checklist/Cover page**, Mandatory certifications, Sustainability Questionnaire and Substitute W-9 as per Section XIII.

2. Response to Section VII Proposer Qualifications (Maximum 20 pages not including resumes/CVs, Organizational Charts, and Financial Statements)

   a) Completed Exhibit D – Service Management Requirements/Questions (Excel Spreadsheet)

3. Response to Section V Specifications/Scope of Work

   a) Completed Exhibit B – Questionnaire (Word Document)

   b) Completed Exhibit C – Summary Responses (Excel Spreadsheet)

4. Response to Pricing Schedule per Section IX & Exhibit E Pricing Schedule (Excel Spreadsheet)

5. Acknowledgment and acceptance of ASU Terms and Conditions. All exceptions must be submitted with justification and alternate language, and MUST be submitted with the proposal.

SECTION XI – PROPOSER INQUIRY FORM

Pre-Proposal Questions, General Clarifications, etc.

PROJECT NAME: <u>INTEGRATED TECHNOLOGIES COLLABORATIVE</u>

PROPOSAL NUMBER: <u>341901</u>

INQUIRY DEADLINE: <u>   3:00 P.M., MST, October 9, 2018</u>

QUESTIONS ON:_____ORIGINAL PROPOSAL or_____ADDENDUM NO. _____

DATE: _____

WRITER: _____

COMPANY: _____

E-MAIL ADDRESS: _____

PHONE:_____   FAX: _____

QUESTIONS:

_____

_____

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SECTION XII – TERMS & CONDITIONS

The following terms and conditions will be incorporated into the contract between the University and the successful Proposer. Due to the complexity of this RFP, these terms and conditions may be adjusted in the final contract to reflect the proper scope of work provided by Proposer. **Proposals that are contingent upon any changes to these terms and conditions may be deemed nonresponsive and may be rejected.** All exceptions must be submitted with justification and alternate language, and MUST be submitted with the proposal. In no event is a Proposer to submit its own standard contract terms and conditions as a response to this RFP.

Arizona State University Standard Terms and Conditions

These Terms and Conditions (T&Cs) apply to the following (collectively, the PO): written offers, purchase orders, and other documents issued by the Arizona Board of Regents for and on behalf of Arizona State University (ASU) to _____ (Supplier) for furnishing equipment, materials, or supplies (Goods) and/or services (Services) to ASU (the Goods/Services) pursuant to **RFP 341901- Integrated Technologies Collaborative**. These T&Cs together with the PO, any other written agreements signed by both parties, and any other documents incorporated by reference therein or herein will constitute the Agreement. Any capitalized terms not defined in these T&Cs will have the meanings set forth in the Agreement.

1. **Offer and Acceptance.** The PO is subject to cancellation by ASU at any time prior to acceptance by Supplier. Supplier accepts all of the Agreement's terms and conditions, without qualification, upon the sooner of the following: 1) any written acceptance by Supplier; or 2) shipment, delivery, or performance of all or any of the Goods/Services. Any term or condition in any invoice, offer, or other document issued by Supplier that modifies, adds to, or changes these T&Cs or the PO is rejected, and will not be part of the Agreement unless agreed by ASU in writing.

2. **Order of Precedence.** In the event of an inconsistency or conflict between or among the provisions of the Agreement, the inconsistency or conflict will be resolved by giving precedence in the following order: i) the PO; ii) these T&Cs; and iii) any other agreement or document signed by authorized signatories of both the parties.

3. **Modifications**. Any modification to the PO, including changes to quantity, price, terms of payment, delivery terms, specifications, etc. must be in an updated PO signed by the parties. If a delivery must differ from the PO, do not ship, deliver, or perform the Goods/Services and instead contact the appropriate ASU Buyer.

4. **Term and Termination**.

   a. The Term of the Agreement is as stated in the Agreement. If the Agreement is silent as to the Term, the Term will extend from the date of acceptance of the Agreement by Supplier to the final delivery, acceptance, and payment of the Goods/Services. The Term will not exceed 5 years. Following the initial Term, the Agreement may be extended by mutual written agreement.

   b. ASU may terminate the Agreement, with or without cause, upon 180 days written notice to Supplier. Upon termination, Supplier will refund to ASU all prepaid amounts for Goods/Services not delivered or performed. If ASU terminates the Agreement pursuant to this section, ASU will pay Supplier, as full compensation under the Agreement: 1) the Agreement price for the portion of Goods/Services delivered or performed and accepted prior to the termination based on the unit prices in the Agreement, or, if no unit prices are provided, the pro rata amount of the total order price based on the amount delivered or performed; and 2) a reasonable amount, not otherwise recoverable from other sources by Supplier, and as approved by ASU, with respect to the undelivered, unperformed, or unacceptable portion of the Good/Services. In no event will compensation paid previously under the Agreement together with compensation paid under this section exceed the total PO or Agreement price.

   c. ASU may terminate the Agreement, in whole or in part, if Supplier defaults on any of its obligations in the Agreement and fails to cure such default within 7 days after receiving notice of default from ASU. In the event of such a default, ASU may procure the Goods/Services from other sources and Supplier will be liable to ASU for any excess costs ASU incurs.

d. ASU may terminate the Agreement at any time if Supplier files a petition in bankruptcy, or is adjudicated bankrupt; or if a petition in bankruptcy is filed against Supplier and not discharged within 30 days; or if Supplier becomes insolvent or makes an assignment for the benefit of its creditors or an arrangement pursuant to any bankruptcy law; or if a receiver is appointed for Supplier or its business.

e. Either party may terminate an individual Service in accordance with the individual Service term requirements with 60 days' prior written notice to the other party.

5. **Prices**. All Prices will be as listed in the PO or, if not listed in the PO, will be as otherwise set forth in the Agreement. Unless otherwise specified in the Agreement: 1) all prices are in US Dollars; 2) prices include all cost for shipping, packaging, shipping insurance, and handling; and 3) prices include all travel, labor, interest, import/export fees, and other costs associated with providing the Goods/Services.

6. **Settlement Method and Terms.** Payment will be subject to the provisions of Title 35 of the Arizona Revised Statutes (ARS), as amended from time to time, relating to time and manner of submission of claims. ASU's obligations will be payable only and solely from funds appropriated for the purpose of the Agreement. After delivery and acceptance of the Goods/Services, Supplier will submit an acceptable invoice to ASU. Invoices must be itemized, reference the Agreement or PO number, and include sufficient detail to document the invoiced amount. Unless otherwise specified on the PO, ASU will pay Supplier for the Goods/Services delivered and accepted net 45 days after receipt by ASU of an invoice meeting the requirements of this section.

7. **Taxes.** Unless otherwise specified in the Agreement, prices will include all taxes and fees, including, without limitation, sales, use, or excise taxes, import duties, value added taxes, permit fees, license fees, or similar charges (Taxes). Taxes do not include ASU income taxes or taxes related to ASU's employees.

8. **Inspection.** Supplier will supply the Goods/Services to ASU exactly as specified in the Agreement. The Goods/Services will meet the highest and best industry practices. ASU will have the right to inspect any Goods/Services prior to and a reasonable amount of time after delivery. If ASU determines that any Goods/Services are incomplete, defective, or not in compliance with the specifications or other requirements of the Agreement, ASU may reject such Goods/Services.

9. **Warranties.** In addition to any implied warranties, Supplier warrants to ASU that: 1) the Goods/Services will be free from any defects in design, workmanship, materials, or labor; 2) all of the Services will be performed in a professional and workmanlike manner and in conformity with highest and best industry standards by persons reasonably suited by skill, training and experience for the type of services they are assigned to perform; 3) Supplier will comply, and will be responsible for ensuring the Supplier Parties (as defined below) comply, with all applicable laws, rules, and regulations in the performance of the Agreement; 4) Supplier owns or has sufficient rights in the Goods/Services that they do not infringe upon or violate any Intellectual Property(as defined below) of any third parties, and are free and clear of any liens, claims, or encumbrances; 5) any data, code, or software developed or delivered by Supplier to ASU will not contain any viruses, worms, Trojan Horses, or other disabling devices or code; 6) all sensitive data, personal data, and personally identifiable data, as those terms may be defined in applicable laws (PII) provided by Supplier to ASU was obtained legally, and Supplier has obtained all requisite permissions from the individuals whose PII is being provided for (a) Supplier to provide the PII to ASU, and (b) ASU to use the PII for the purposes and in the jurisdictions set forth in the Agreement; 7) the prices of Goods/Services in the Agreement are the lowest prices at which these or similar goods or services are sold by Supplier to similar customers; in the event of any price reduction between execution of the Agreement and delivery of any Goods/Services, ASU shall be entitled to such reduction; and 8) all Goods/Services delivered by Supplier will conform to the specifications, drawings, and descriptions set forth in the Agreement, and to the samples furnished by the Supplier, if any. In the event of a conflict among the specifications, drawings, and descriptions, the specifications will govern.

10. **Indemnification**. Supplier will indemnify, defend, save and hold harmless the State of Arizona, its departments, agencies, boards, commissions, universities, and its and their officials, agents and employees (collectively, Indemnitee) for, from, and against any and all claims, actions, liabilities, damages, losses, or expenses (including court costs, attorneys' fees, and costs of claim processing, investigation, and litigation) for bodily injury or personal injury (including death), or loss or damage to tangible or intangible property to the extent caused, or alleged to be caused, by (i) the negligent or willful acts or omissions of Supplier, or any of its owners, officers, directors, members, managers, agents, employees, contractors or subcontractors (the Supplier Parties); (ii) a breach of the Agreement; or (iii) failure to comply with any applicable law, rule, or regulation. Supplier will be responsible for primary loss investigation, defense and judgment costs where this indemnification is applicable.

11. **Responsibility.** Each party is responsible for the negligent or willful acts or omissions of its employees and contractors when acting under such party's direction and supervision. ASU recognizes an obligation to pay attorneys' fees or costs only when assessed by a court of competent jurisdiction. Notwithstanding the terms of the Agreement or any other document: (i) other than for employees and contractors acting under ASU's direction and supervision, ASU is not responsible for any actions of any third parties, including its students; and (ii) no person may bind ASU unless they are an authorized signatory in PUR-202.

12. **Intellectual Property Ownership**. All Intellectual Property (as defined below) that Supplier or any of the Supplier Parties make, conceive, discover, develop or create, either solely or jointly with any other person or persons including ASU, specifically for or at the request of ASU in connection with the Agreement (Contract IP), will be owned by ASU. To the extent any Contract IP is not considered work made for hire for ASU (or if ownership of all rights therein does not otherwise vest exclusively in ASU), Supplier hereby irrevocably assigns, and will cause the Supplier Parties to so assign, without further consideration, to ASU all right, title and interest in and to all Contract IP, including all copyright rights of ownership. Intellectual Property means all ASU Data (as defined below) any and all inventions, designs, original works of authorship, formulas, processes, compositions, programs, databases, data, technologies, discoveries, ideas, writings, improvements, procedures, techniques, know-how, and all patent, trademark, service mark, trade secret, copyright and other intellectual property rights (and goodwill) relating to the foregoing. Supplier will make full and prompt disclosure of all Contract IP to ASU. Supplier will, and will cause the Supplier Parties, as and when requested by ASU, do such acts, and sign such instruments to vest in ASU the entire right, title and interest in and to the Contract IP, and to enable ASU to prepare, file, and prosecute applications for, and to obtain patents and/or copyrights on, the Contract IP, and, at ASU's expense, to cooperate with ASU in the protection and/or defense of the Contract IP.

13. **Supplier's Intellectual Property**. Supplier will retain ownership of its pre-existing Intellectual Property, including any that may be incorporated into the Contract IP, provided that Supplier informs ASU in writing before incorporating any pre-existing Intellectual Property into any Contract IP. Supplier hereby grants to ASU a perpetual, irrevocable, royalty-free, worldwide right and license (with the right to sublicense), to freely use, make, have made, reproduce, disseminate, display, perform, and create derivative works based on, such pre-existing Intellectual Property as may be incorporated into the Contract IP or otherwise provided to ASU in the course of performing under the Agreement.

14. **Data Use, Ownership, and Privacy**. As between the parties, ASU will own, or retain all of its rights in, all data and information that ASU provides to Supplier, as well as all data and information managed by Supplier on behalf of ASU, including all output, reports, analyses, and other materials relating to, derived from, or generated pursuant to, the Agreement, even if generated by Supplier, as well as all data obtained or extracted through ASU's or Supplier's use of such data or information (collectively, ASU Data). ASU Data also includes all data and information provided directly to Supplier by (i) ASU students and employees, and (ii) any other third parties at the request or on behalf of ASU in connection with the Supplier's performance under the Agreement. ASU Data includes personal data, metadata, and user content.

ASU Data will be ASU's Intellectual Property and Supplier will treat it as ASU Confidential Information (as defined below). Supplier will not use, access, disclose, license, or provide to third parties, any ASU Data, except: (i) to fulfill Supplier's obligations to ASU under the Agreement; or (ii) as authorized in writing by ASU. Without limitation, Supplier will not use any ASU Data, whether or not aggregated or de-identified, for product development, marketing, profiling, benchmarking, or product demonstrations, without, in each case, ASU's prior written consent. Supplier will not, directly or indirectly: (x) attempt to re-identify or de-aggregate de-identified or aggregated information; or (y) transfer de-identified and aggregated information to any third party unless that third party agrees not to attempt re-identification or de-aggregation. For ASU Data to be considered de-identified, all direct and indirect personal identifiers must be removed, including names, ID numbers, dates of birth, demographic information, location information, and school information. Upon request by ASU, Supplier will deliver, destroy, and/or make available to ASU, any or all ASU Data.

Notwithstanding the foregoing, if the Agreement allows Supplier to provide aggregated and de-identified ASU Data to third parties, then Supplier may provide such ASU Data solely to the extent allowed in the Agreement, and, unless otherwise stated in the Agreement, only if such ASU Data is aggregated with similar data of others (i.e. is not identified as ASU, ABOR, or Arizona-specific).

15. **Nondisclosure and Trade Secrets**. Supplier may receive (or has received) from ASU and otherwise be exposed to confidential and proprietary information relating to ASU's business practices, strategies, and technologies, ASU Data, as well as confidential information of ASU necessary to perform and/or provide the Goods/Services (collectively, ASU

Confidential Information). ASU Confidential Information may include, but is not limited to, confidential and proprietary information supplied to Supplier with the legend "ASU Confidential and Proprietary," or other designations of confidentiality. As between Supplier and ASU, the ASU Confidential Information is the sole, exclusive, and valuable property of ASU. Accordingly, Supplier will not reproduce or otherwise use any of the ASU Confidential Information except in the performance or provision of the Goods/Services, and will not disclose any of the ASU Confidential Information in any form to any third party, either during or after the Term, except with ASU's prior written consent. Upon termination of the Agreement, Supplier will cease using, and will return to ASU, all originals and all copies of the ASU Confidential Information, in all forms and media, in Supplier's possession or under Supplier's control.

Supplier will not disclose or otherwise make available to ASU any confidential information of Supplier or any confidential information received by Supplier from any third party.

Supplier will have no obligation to maintain as confidential any ASU Confidential Information (other than ASU Data) that Supplier can show: (i) was already lawfully in the possession of or known by Supplier before receipt from ASU; (ii) is or becomes generally known in the industry through no violation of the Agreement or any other agreement between the parties; (iii) is lawfully received by Supplier from a third party without restriction on disclosure or use; (iv) is required to be disclosed by court order following notice to ASU sufficient to all ASU to contest such order; or (v) is approved in writing by ASU for release or other use by Supplier.

16. **Information Security.** The terms of this section apply to the extent: 1) ASU is purchasing or leasing software, or processing a software renewal; 2) Supplier is creating any code for ASU; 3) Supplier receives, stores, or analyzes ASU Data (including if the data is not online); OR 4) Supplier is hosting, or managing by infrastructure outside of ASU, including in the cloud, any ASU Data. This section applies to Goods/Services delivered or performed by subcontractors at all tiers and to all ASU Data.

All systems containing ASU Data must be designed, managed, and operated in accordance with information security best practices and in compliance with all applicable laws, rules, and regulations. To diminish information security threats, Supplier will (either directly or through its third party service providers) meet the following requirements:

a. <u>Access Control</u>. Control access to ASU's resources, including ASU Data, limiting access to legitimate business need based on an individual's job-related assignment. Supplier will, or will cause the system administrator to, approve and track access to ensure proper usage and accountability, and Supplier will make such information available to ASU for review, upon ASU's request.

b. <u>Incident Reporting</u>. Report information security incidents immediately to ASU (including those that involve information disclosure incidents, unauthorized disclosure of ASU Data, network intrusions, successful virus attacks, unauthorized access or modifications, and threats and vulnerabilities).

c. <u>Off Shore</u>. Direct Services that may involve processing or access to ASU Data or personal client data or development or modification of software for ASU, will be performed within the borders of the United States. Unless stated otherwise in the Agreement, this requirement does not apply to indirect or "overhead" services, redundant back-up services or services that are incidental to the performance of the Agreement.

d. <u>Patch Management</u>. Carry out updates and patch management for all systems and devices in a timely manner and to the satisfaction of ASU. Updates and patch management must be deployed using an auditable process that can be reviewed by ASU upon ASU's request.

e. <u>Encryption</u>. All systems and devices that store, process or transmit sensitive ASU Data must use an industry standard encryption protocol for data in transit and at rest.

f. <u>Notifications</u>. Notify ASU immediately if Supplier receives any kind of subpoena for or involving ASU Data, if any third party requests ASU Data, or if Supplier has a change in the location or transmission of ASU Data. All notifications to ASU required in this Information Security paragraph will be sent to ASU Information Security at Infosec@asu.edu, in addition to any other notice addresses in the Agreement.

g. <u>Security Reviews</u>. Complete SOC2 Type II or substantially equivalent reviews in accordance with industry standards, which reviews are subject to review by ASU upon ASU's request. Currently, no more than two reviews

per year are required.

h. Scanning and Penetration Tests. Perform periodic scans, including penetration tests, for unauthorized applications, services, code and system vulnerabilities on the networks and systems included in the Agreement in accordance with industry standards and ASU standards (as documented in NIST 800-115 or equivalent). All web-based applications (e.g. HTTP/HTTPS accessible URLs, APIs, and web services) are required to have their own web application security scan and remediation plan. Supplier must correct weaknesses withina reasonable period of time, and Supplier must provide proof of testing to ASU upon ASU'srequest.

i. ASU Rights. ASU reserves the right (either directly or through third party service providers) to scan and/or penetration test any purchased and/or leased software regardless of where it resides.

j. Secure Development. Use secure development and coding standards including secure change management procedures in accordance with industry standards. Perform penetration testing and/or scanning prior to releasing new software versions. Supplier will provide internal standards and procedures to ASU for review upon ASU request.

k. Privacy by Design. When developing, designing, selecting, and using Goods/Services for processing PII, Supplier will, with due regard to the state of the art, incorporate and implement data privacy best practices.

17. **End User Licenses.** The terms of this section apply if the Goods/Services include software or other computer programs or applications that require acceptance of a clickwrap, click-through, end user license, or other similar agreement (End User Agreement) prior to the use of the software. If Supplier requires ASU's individual users to accept an End User Agreement, the terms of the End User Agreement that conflict or are inconsistent, with the terms of the Agreement or ASU's Privacy Policy will be null andvoid.

18. **Background Checks**. Supplier will exclude from any direct participation in Supplier's performance under the Agreement, any unqualified persons. In addition, at the request of ASU, Supplier will, at Supplier's expense, conduct reference checks and employment, education, SSN trace, National Sex Offender Registry, and criminal history record checks (collectively, Screenings) on requested persons employed or contracted by Supplier to perform work under the Agreement. Supplier will maintain as part of the records Supplier is required to maintain hereunder, all Screening information and all documentation relating to work performance for each employee or contractor who performs work hereunder. Supplier will abide by all applicable laws, rules and regulations including the Fair Credit Reporting Act and any equal opportunity laws, rules, and regulations.

19. **Payment Card Industry Data Security Standard**. The terms of this section apply if Supplier is processing credit or debit card transactions as part of the Agreement. For e-commerce business and/or payment card transactions, Supplier will comply with the requirements and terms of the rules of all applicable payment card industry associations or organizations, as amended from time to time (PCI Security Standards), and be solely responsible for security and maintaining confidentiality of payment card transactions processed by means ofelectronic commerce up to the point of receipt of such transactions by a qualified financialinstitution.

Supplier will, at all times during the Term, be in compliance with the then current standard for Payment Card Industry Data Security Standard (PCI DSS), Payment Application Data Security Standard (PA-DSS) for software, and PIN Transaction Security (PCI PTS) for hardware. Supplier will provide attestation of compliance to ASU annually by delivering to ASU current copies of the following: (i) Supplier's "Attestation of Compliance for Onsite Assessments – Service Providers;" (ii) an attestation that all ASU locations are being processed and secured in the same manner as those in Supplier's "PCI Report on Compliance;" and (iii) a copy of Supplier's PCI Report on Compliance cover letter. Supplier will notify ASU immediately if Supplier becomes non-compliant, and of the occurrence of any security incidents (including information disclosure incidents, network intrusions, successful virus attacks, unauthorized access or modifications, and threats andvulnerabilities).

Supplier's Services must include the following:

a. Supplier maintains its own network operating on its own dedicated infrastructure. Supplier's network includes a firewall that (i) includes access control rules that separate Supplier's PCI network from ASU, and (ii) restricts any communication between Supplier's network devices and ASUsystems.

b. Supplier treats the ASU network as an untrusted network and no unencrypted cardholder data traverses or otherwise is stored on ASU's network, and ASU has no ability to decrypt cardholder data.

c. All devices must be SRED (secure reading and exchange of data), EMV (Europay, MasterCard and VISA) and PTS POI compliant.

20. **Americans with Disabilities Act and Rehabilitation Act**. To the extent applicable, Supplier will comply with all applicable provisions of the Americans with Disabilities Act, the Rehabilitation Act of 1973, and all applicable federal regulations, as amended from time to time (ADA Laws). All electronic and information technology and products and services to be used by ASU faculty/staff, students, program participants, or other ASU constituencies must be compliant with ADA Laws. Compliance means that a disabled person can acquire the same information, engage in the same interactions, and enjoy the same services as a nondisabled person, in an equally effective and integrated manner, with substantially equivalent ease of use.

21. **Foreign Corrupt Practices Act/UK Bribery Act/ Local Anti-corruption Law Compliance.** Supplier warrants that it is familiar with the U.S. laws prohibiting corruption and bribery under the U.S. Foreign Corrupt Practices Act and the United Kingdom laws prohibiting corruption and bribery under the UK Bribery Act. In connection with Supplier's work under the Agreement, Supplier will not offer or provide money or anything of value to any governmental official or employee or any candidate for political office in order to influence their actions or decisions, to obtain or retain business arrangements, or to secure favorable treatment in violation of the Foreign Corrupt Practices Act, the UK Bribery Act, or any other local anti-corruption law, either directly or indirectly. Any breach of the U.S. Foreign Corrupt Practices Act, the UK Bribery Act, or other local anti-corruption law, will be a material breach of the Agreement.

22. **Export Controls.** If any of the Goods/Services are export-controlled under the U.S. Export Administration Regulations, U.S. International Traffic in Arms Regulations, or through the sanctions and embargoes established through the Office of Foreign Assets Control (collectively, the Export Control Laws), Supplier will provide ASU with written notification that identifies the export-controlled Goods/Services and such Goods/Services export classification. None of the work undertaken pursuant to the Agreement will require either party to take or fail to take any action that would cause a violation of any of the Export Control Laws. The parties will cooperate to facilitate compliance with applicable requirements of the Export Control Laws.

23. **Assignment**. Supplier may not transfer or assign the Agreement or any of Supplier's rights or obligations thereunder, either directly or indirectly, or by operation of law, without ASU's prior written consent, and any attempt to the contrary will be void.

24. **Governing Law and Venue**. The Agreement will be governed by the laws of the State of Arizona without regard to any conflicts of laws principles. ASU's obligations hereunder are subject to the regulations/policies of the Arizona Board of Regents. Any proceeding arising out of or relating to the Agreement will be conducted in Maricopa County, Arizona. Each party consents to such jurisdiction, and waives any objection it may now or hereafter have to venue or to convenience of forum.

25. **Packaging.** Supplier will package the Goods in accordance with good commercial practice. Each shipping container will be clearly and permanently marked as follows: (i) Supplier's name and address; (ii) ASU's name, address, and purchase order number; (iii) container number and total number of containers, e.g., box 1 of 4 boxes; and (iv) the number of the container bearing the packing slip. Supplier will bear cost of packaging unless otherwise provided.

26. **Shipment Under Reservation Prohibited.** Supplier will not ship the Goods under reservation and no tender of a bill of lading will operate as a tender of the Goods.

27. **Title and Risk of Loss.** Title to and risk of loss of the Goods will not pass to ASU until they are delivered, received, and the contract of coverage has been completed. All risk of transportation and all related charges will be the responsibility of Supplier. Supplier will insure and file all claims for visible and concealed damage. ASU will notify Supplier promptly of any damaged Goods and will assist Supplier in arranging for inspection. Notice of rejection may be made to Supplier at any time within 1 month after delivery to ASU.

28. **No Replacement of Defective Tender.** Every tender of Goods will fully comply with all provisions of the Agreement as to time of delivery, quantity, quality, and the like. If a tender is made that does not fully conform, this will constitute a

breach and Supplier will not have the right to substitute a conforming tender.

29. **Business Continuity Plan**. If requested by ASU, Supplier will provide to ASU, within 30 days after such request, a comprehensive plan for continuing the performance of its obligations during a Public or Institutional Emergency (the Business Continuity Plan). The Business Continuity Plan, at a minimum, will address the following: 1) identification of response personnel by name; 2) key succession and performance responses in the event of sudden and significant decrease in workforce; and 3) contingency plans for the Supplier to continue the performance of its obligations under the Agreement, despite the emergency. In the event of a Public or Institutional Emergency, Supplier will implement the applicable actions set forth in the Business Continuity Plan and will make other commercially practicable efforts to mitigate the impact of the event. For clarification of intent, being obliged to implement the plan is not of itself an occurrence of force majeure, and Supplier will not be entitled to any additional compensation or extension of time by virtue of having to implement it, unless otherwise agreed to by ASU in writing. A Public or Institutional Emergency will mean a natural or manmade event that creates a substantial risk to the public, that causes or threatens death or injury to the general public, or that causes a significant disruption to the day-to-day business operations of ASU.

30. **Gratuities.** Supplier will not give or offer any gratuities, in the form of entertainment, gifts or otherwise, or use an agent or representative of Supplier to give or offer a gratuity, to any officer or employee of the State of Arizona with a view toward securing an agreement or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such Agreement. If ASU determines that Supplier has violated this section, ASU may, by written notice to Supplier, cancel the Agreement. If the Agreement is canceled by ASU pursuant to this section, ASU will be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the costs incurred by Supplier in providing gratuities.

31. **Modifications.** The Agreement may be modified or rescinded only by a writing signed by authorized signatories of both parties.

32. **Interpretation-Parol Evidence.** The Agreement is intended by the parties as a final expression of their agreement and is intended to be a complete and exclusive statement of the terms of their agreement. No course of prior dealings between the parties and no usage of the trade will be relevant to supplement or explain any term used in the Agreement. Acceptance or acquiescence in a course of performance rendered under the Agreement will not be relevant to determine the meaning of the Agreement even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity for objection. Whenever a term defined by the Uniform Commercial Code is used in the Agreement, the definition contained in the Code, as adopted by the state of Arizona, will control.

33. **No Waiver**. No waiver by ASU of any breach of the provisions of the Agreement by Supplier will be construed to be a waiver of any future breach or bar ASU's right to insist on strict performance of the Agreement.

34. **Labor Disputes.** Supplier will give prompt notice to ASU of any actual or potential labor dispute that delays or may delay performance of the Agreement.

35. **Assignment of Anti-Trust Overcharge Claims.** In actual economic practice, overcharges resulting from anti-trust violations are borne by the ultimate purchaser. Therefore, Supplier hereby assigns to ASU any and all claims for such overcharges.

36. **Sales and Use Tax.** Supplier will comply, and require all of the Supplier Parties to comply, with all applicable state and sales excise tax laws and compensation use tax laws and all amendments to same. Supplier will indemnify, defend, and hold harmless ASU, for, from, and against any and all claims and demands made against it by virtue of the failure of Supplier or any subcontractor to comply with the provisions of any or all tax laws and amendments. ASU is not exempt from state sales excise tax and compensation use tax.

37. **Rights to Inventions Made Under an Agreement or Agreement.** Agreements for the performance of experimental, developmental, or research work will provide for the rights of the United States government and the recipient in any resulting invention, in accordance with 37 CFR part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Agreements and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

38. **Parking**. Supplier will obtain all parking permits and/or decals required while performing any work on ASU premises. If needed, Supplier should contact ASU Parking and Transit, http://cfo.asu.edu/pts.

39. **Campus Deliveries and Mall Access**. Supplier will familiarize itself with ASU parking, campus delivery options, and loading zones. Not all campus buildings are directly accessible and some require Supplier to unload at lots or loading areas that may not be adjacent to the delivery or work location. As a result, Supplier must then transport Goods by using electric style golf carts, dolly, or other manual device across pedestrian malls. Many campuses include features and pedestrian malls that may have limited access for Supplier vehicle and carts. Walk-Only Zones prohibit access to all wheeled traffic during enforcement times, and deliveries or work requiring vehicular or cart access may need to be arranged outside of enforcement times. For details about parking permits, supplier permits, loading zones, mall access, and pedestrian mall restrictions, go to http://cfo.asu.edu/pts. For additional information, go to http://walk.asu.edu.

40. **Health Insurance Portability and Accountability Act.** To the extent applicable, Supplier will abide by all laws and regulations that protect the privacy of healthcare information to which Supplier obtains access under the Agreement. Certain portions of the Administrative Simplification section of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as codified at 42 U.S.C. § 1320d through d-8, and the federal privacy regulations as contained in 45 CFR Part 164 may apply to Supplier and ASU, and their relationships and operation under the Agreement. If necessary, Supplier and ASU will enter into a standard Business Associate Agreement, and any other required HIPAA agreements. To the extent the terms thereof relate to Supplier's performance under the Agreement, the provisions of the Business Associate Agreement will control.

41. **Liens.** All Goods/Services delivered and performed under the Agreement will be free of all liens and, if ASU requests, Supplier will deliver to ASU a formal release of all liens.

42. **Performance and Payment Bonds.** At the request of ASU, Supplier will provide and pay for performance and payment bonds. Bonds will cover the faithful performance (100%) of the Agreement and the payment of all obligations (100%) thereunder, in such form as ASU may prescribe. Supplier will deliver the required bonds to ASU not later than the date of executing the Agreement. Supplier will require the attorney in fact who executes the required bonds on behalf of surety to affix thereto a certified and current copy of his/her power of attorney indicating the monetary limit of such power. Surety will be a company licensed to do business in the State of Arizona and will be acceptable to ASU. Supplier will increase the bond amount to include any change order, at 100% of the total value amount of each change order.

43. **Price Adjustment.** ASU normally considers price changes at the end of one contract period and the beginning of another. Price change requests will be supported by evidence of increased costs to Supplier. ASU will not approve price increases that will merely increase gross profitability of Supplier at the expense of ASU. Price change requests will be a factor in the contract extension review process. ASU will determine whether any requested price increase or an alternate option is in the best interest of ASU. Any price adjustment to the Agreement will require an updated PO.

44. **Academic Freedom and Accreditation.** ASU will maintain ultimate authority over all curriculum. Nothing in the Agreement will limit ASU's academic freedom or require ASU to violate any of the policies, standards, and requirements of ABOR or any accrediting entities.

45. **Essence of Time.** Time will be of the essence as to matters contemplated by the Agreement.

46. **Non-Discrimination.** The parties will comply with all applicable laws, rules, regulations, and executive orders governing equal employment opportunity, immigration, and nondiscrimination, including the Americans with Disabilities Act. **If applicable, the parties will abide by the requirements of 41 CFR §§ 60- 1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex or national origin. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, national origin, protected veteran status or disability.**

47. **Conflict of Interest**. If within 3 years after the execution of the Agreement, Supplier hires as an employee or agent any ASU representative who was significantly involved in negotiating, securing, drafting, or creating the Agreement, then ASU may cancel the Agreement as provided in ARS §38-511.

48. **Arbitration.** The parties agree to arbitrate disputes filed in Arizona Superior Court that are subject to mandatory arbitration pursuant to ARS §12-133.

49. **Dispute Resolution.** If a dispute arises under the Agreement, the parties will exhaust all applicable administrative remedies provided for under Arizona Board of Regents Policy3-809.

50. **Records**. To the extent required by ARS § 35-214, Supplier will retain all records relating to the Agreement. Supplier will make those records available at all reasonable times for inspection and audit by ASU or the Auditor General of the State of Arizona during the term of the Agreement and for 5 years after the completion of the Agreement. The records will be provided at ASU in Tempe, Arizona, or another location designated by ASU on reasonable notice to Supplier.

51. **Failure of Legislature to Appropriate**. In accordance with ARS § 35-154, if ASU's performance under the Agreement depends on the appropriation of funds by the Arizona Legislature, and if the Legislature fails to appropriate the funds necessary for performance, then ASU may provide written notice of this to Supplier and cancel the Agreement without further obligation of ASU. Appropriation is a legislative act and is beyond the control of ASU.

52. **Weapons, Explosives, and Fireworks**. ASU's Weapons, Explosives, and Fireworks Policy prohibits the use, possession, display or storage of any weapon, explosive device or fireworks on all land and buildings owned, leased, or under the control of ASU or its affiliated entities, in all ASU residential facilities (whether managed by ASU or another entity), in all ASU vehicles, and at all ASU or ASU affiliate sponsored events and activities, except as provided in ARS § 12- 781, or unless written permission is given by ASU'sPolice Chief or a designated representative. Supplier will notify all persons or entities who are employees, officers, subcontractors, consultants, agents, guests, invitees or licensees of Supplier of this policy and Supplier will enforce this policy against all such persons and entities.

53. **Confidentiality**. ASU, as a public institution, is subject to ARS §§ 39-121 to 39-127 regarding public records. Any provision regarding confidentiality is limited to the extent necessary to comply with Arizona law.

54. **Indemnification and Liability Limitations**. Because ASU is a public institution, any indemnification, liability limitation, releases, or hold harmless provisions are limited as required by Arizona law, including Article 9, Sections 5 and 7 of the Arizona Constitution and ARS §§ 35-154 and 41-621. ASU's liability under any claim for indemnification is limited to claims for property damage, personal injury, or death to the extent caused by acts or omissions of ASU.

55. **Advertising, Publicity, Names and Marks**. Supplier will not do any of the following, without, in each case, ASU's prior written consent: (i) use any names, service marks, trademarks, trade names, logos, or other identifying names, domain names, or identifying marks of ASU (ASU Marks), including online, advertising, or promotional purposes; (ii) issue a press release or public statement regarding the Agreement; or (iii) represent or imply any ASU endorsement or support of any product or service in any public or private communication. Any permitted use of ASU Marks must comply with ASU's requirements, including using the ® indication of a registered mark.

56. **Privacy; Educational Records**. Student educational records are protected by the U.S. Family Educational Rights and Privacy Act, 20 U.S.C. § 1232g and its implementing regulations (FERPA). Supplier will not require any ASU students or employees to waive any privacy rights (including under FERPA or the European Union's General Data Protection Regulation (GDPR)) as a condition for receipt of any educational services, and any attempt to do so will be void. Supplier will comply with FERPA and will not access or make any disclosures of student educational records to third parties without prior notice to and consent from ASU or as otherwise provided by law. If the Agreement requires or permits Supplier to access or release any student records, then, for purposes of the Agreement only, ASU designates Supplier as a "school official" for ASU under FERPA, as that term is used in FERPA. In addition, any access or disclosures of student educational records made by Supplier or any Supplier Parties must comply with ASU's definition of legitimate educational purpose in SSM 107-01: Release of Student Information. If Supplier violates the terms of this section, Supplier will immediately provide notice of the violation to ASU.

57. **Data Protection.** Supplier will ensure that all Services are performed in compliance with applicable privacy and data protection laws, rules, and regulations. If Supplier will serve as a Processor of ASU Data that includes Personal Data of Data Subjects who reside in the European Union or other jurisdictions that have adopted the GDPR or similar laws, Supplier will cooperate with ASU to comply with the GDPR and similar privacy laws with respect to such Personal Data and Data Subjects. This includes ensuring that all Data Subjects have signed appropriate Consents, and signing and complying with all documents and agreements reasonably requested by ASU, including any data processing

agreements. All capitalized terms in this section not otherwise defined in the Agreement are defined in the GDPR.

58. **Authorized Presence Requirements**. As required by ARS § 41-4401, ASU is prohibited from awarding a contract to any contractor or subcontractor that fails to comply with ARS § 23-214(A) (verification of employee eligibility through the e-verify program). Supplier warrants that it and its subcontractors comply fully with all applicable immigration laws, rules, and regulations that relate to their employees and their compliance with ARS § 23-214(A). A breach of this warranty will be a material breach of the Agreement that is subject to penalties up to and including termination of the Agreement. ASU retains the legal right to inspect the papers of any contractor or subcontractor employee who works hereunder to ensure that the contractor or subcontractor is complying with the above warranty.

59. **Small Business.** If subcontracting (Tier 2 and higher) is necessary, Supplier will make commercially reasonable efforts to use Small Business (SB) and Small Diverse Business (SDB) in the performance and delivery of the Goods/Services. ASU may request a report at each anniversary date and at the completion of the Agreement indicating the extent of SB and SDB participation.

60. **Tobacco Free.** ASU is tobacco-free. For details visit www.asu.edu/tobaccofree.

61. **Title IX Obligation**. Title IX protects individuals from discrimination based on sex, including sexual harassment. ASU fosters a learning and working environment built on respect and free of sexual harassment. ASU's Title IX Guidance is available online. Supplier will: (i) comply with ASU's Title IX Guidance; (ii) provide ASU's Title IX Guidance to any Supplier Parties reasonably expected to interact with ASU students or employees, in person or online; and (iii) ensure that all Supplier Parties comply with ASU's Title IX Guidance.

62. **No Boycott of Israel**. To the extent required by ARS § 35-393.01, Supplier certifies it is not currently engaged in a boycott of Israel and will not engage in a boycott of Israel during the Term.

63. **Survival Clause.** All provisions of the Agreement that anticipate performance after the termination of the Agreement, and all provisions necessary or appropriate to interpret and enforce such provisions, will survive termination of the Agreement.

64. **Recordings; Use of Name and Likeness**. The terms of this section apply if Supplier is providing a speaking engagement or performance (Presentation) as part of the Agreement. Both parties may record the Presentation for internal records. No recording of the Presentation, either visual or audio, will be made by or on behalf of Supplier for the purposes of profit or significant distribution without prior written approval from ASU. ASU may require an additional payment for the privilege, and may require Supplier to sign a filming/recording agreement. ASU may record the Presentation on video tape, audio tape, film, photograph or any other medium, use Supplier's name, likeness, voice and biographical material in connection with these recordings for purposes within the ASU mission, including education and research, and exhibit or distribute the recording in whole or in part without restrictions or limitation for any educational or promotional purpose that ASU deems appropriate.

65. **No Revenue Sharing**. The terms of this section apply if Supplier is providing a Presentation for an ASU sponsored event (Event) as part of the Agreement. Supplier will not participate in any revenues associated with the Presentation or Event. This includes: sponsorship, ticketing, ticketing fees, ASU concessions revenues, and any other revenue streams that may be associated with the Event.

66. **Insurance Requirements**. Without limiting any liability of or any other obligation of Supplier, Supplier will purchase and maintain (and cause its subcontractors to purchase and maintain), until all of their obligations have been discharged or satisfied, including any warranty periods under the Agreement, insurance against claims that may arise from or in connection with the performance of the work hereunder by Supplier, its agents, representatives, employees or subcontractors, as described in the Insurance Requirements below.

67. **Federal Funding Provisions.** If the Agreement involves the use of United States federal funds, including from a government grant or funds from a subcontract at any tier relating to a federal government grant, the following terms apply to the Agreement:

   a. **Byrd Anti-Lobbying Amendment**. If the Agreement is for $100,000 or more, Supplier will file the certifications required by 31 U.S.C 1352 and associated regulations. Each tier certifies to the tier above that it will not or has not

used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any federal contract, grant, or any other award covered by 31 U.S.C. 1352. Each tier will also disclose any lobbying with non-federal funds that takes place in connection with obtaining a federal award. Such disclosures are forwarded from tier to tier up to ASU.

b. **Debarment & Suspension**. Supplier represents and warrants that neither it nor any of its subcontractors supplying the Goods/Services have either directly or indirectly or through subcontractors, been suspended, debarred, or otherwise excluded from participation in or penalized by any federal or state procurement, non-procurement, or reimbursement program. Supplier affirms that it has confirmed the above statement by checking The System for Award Management (SAM) www.uscontractorregistration.com within 180 days prior to commencing work under the Agreement. Supplier will provide immediate written notice to ASU upon learning that it or any of its subcontractors are under any investigation or proposed action that could result in such exclusion, suspension, or debarment.

68. **Government Subcontract Provisions.** If this order is a subcontract under a U.S. government prime contract, the clauses contained in the following paragraphs of the Federal Procurement Regulations (FPR) or the Armed Services Procurement Regulations (ASPR) are incorporated into the Agreement by this reference. Each regulation contains criteria for determining applicability of the regulation to a particular contract.

In the following clauses, the terms "Government" and "Contracting Officer" will mean ASU; the term "Agreement" will mean the Agreement and the term "Contractor" will mean Supplier. Supplier will comply with all applicable federal laws and regulations, including but not limited to Uniform Guidance (2 CFR Part 200) and Debarment and Suspension (45 CFR 620).

For purchases funded with federal funds, the following provisions are incorporated into the Agreement by reference where applicable and form a part of the terms and conditions of the Agreement. Supplier agrees to flow down all applicable clauses to lower-tier entities.

Federal Acquisition Regulations (FAR)**

52.202-1 Definitions
52.203-3 Gratuities
52.203-5 Covenant Against Contingent Fees
52.203-6 Restrictions on Subcontractor Sales to the Government
52.203-7 Anti-Kickback Procedures
52.203-12 Limitation on Payments to Influence Certain Federal Transactions
52.204-2 Security Requirements
52.209-6 Protecting the Government's Interest When Subcontracting with Contractors Debarred, Suspended or Proposed for Debarment
52.211-15 Defense Priority and Allocation Requirements
52.214-27 Price Reduction For Defective Cost or Pricing Data
52.215-1 Instructions to Offerors—Competitive Acquisition.
52.215-2 Audit and Records - Negotiation
52.215-12 Subcontractor Cost or Pricing Data
52.215-13 Subcontractor Cost or Pricing Data – Modifications
52.215-14 Integrity of Unit Prices
52-219-8 Utilization of Small Business Concerns
52-219-9 Small Business Subcontracting Plan
52.222-1 Notice to the Government of Labor Disputes
52.222-4 Contract Work Hours and Safety Standards Act Overtime Compensation
52.222-6 Davis-Bacon Act [Construction Wage Rate Requirements]
52.222-20 Walsh Healey Public Contracts Act [Contracts for Materials, Supplies, Articles, and Equipment Exceeding $15,000.]
52.222-21 Prohibition of Segregated Facilities
52.222-26 Equal Opportunity
52.222-35 Equal Opportunity for Veterans
52.222-36 Equal Opportunity for Workers with Disabilities

52.222-37 Employment Reports on Veterans
52.222-40 Notification of Employee Rights Concerning Payment of Union Dues or
Fees 52.222-41 Service Contract Act of 1965, as Amended
52.222-50 Combating Trafficking in Persons
52.223-3 Hazardous Material Identification and Material
Safety Data 52.223-6 Drug-Free Workplace
52.225-1 Buy American Act – Supplies
52.225-13 Restrictions on Certain Foreign
Purchases 52.227-1 Authorization and Consent
(Alt I in all R&D)
52.227-2 Notice and Assistance Regarding Patent and Copyright
Infringement 52.227-3 Patent Indemnity
52.227-10 Filing of Patent Applications--Classified Subject
Matter 52.227-11 Patent Rights – Ownership by the
Contractor (Alt I-V) 52.227-13 Patent Rights - Ownership by
the Government
52.227-14 Rights in Data –
General 52.233-1 Disputes
52.242-1 Notice of Intent to Disallow
Costs 52.242-15 Stop-work order
52.243-1 Changes - Fixed Price (43.205 (a) (1) Alts may apply)
52.243-2 Changes - Cost Reimbursement (43.205 (b) (1) Alts may
apply) 52.244-2 Subcontracts
52.244-5 Competition in
Subcontracting 52.244-6 Subcontracts
for Commercial Items
52.245-2 Government Property – Installation Operation
Services 52.246-15 Certificate of Conformance
52.247-63 Preference for U.S. Flag Air Carriers
52.247-64 Preference for U.S. Flag Commercial Vessels
52.249-2 Termination for Convenience of the Government (Fixed Price)
52.249-5 Termination for the Convenience of the Government (Educational and Other Nonprofit
Institutions) 52.249-14 Excusable Delays

Defense Federal Acquisition Regulations
(DFAR)** DFAR CIT. TITLE
252.203-7001 Prohibition on Persons convicted of Fraud or Other Defense-Contract-Related
Felonies 252.222-7000 Restrictions on Employment of Personnel
252.225-7000 Buy American Act and Balance of Payments
program 252.227-7013 Rights in Technical Data and
Computer Software 252.227-7016 Rights in Bid or Proposal
Information
252.227-7018 Rights in Noncommercial Technical Data and Computer
Software 252.227-7019 Validation of Asserted Restrictions – Computer
Software
252.227-7037 Validation Technical Data
252.243-7001 Pricing of Agreement Modifications
252.244-7000 Subcontracts for Commercial Items and Commercial Components

**Full text of the FAR clauses can be found at http://www.arnet.gov/far
**Full text of the DFAR clauses can be found at http://farsite.hill.af.mil/VFDFARs.htm

69. **Notices.** All notices and communications required or permitted under this Agreement will be in writing and will be given by personal delivery against receipt (including private courier such as FedEx), or certified U.S. Mail, return receipt requested. All notices and communications will be sent to the addresses below or such other addresses as the parties may specify in the same manner:

35

To ASU:
ASU University Technology Office
PO Box 870101
Tempe, AZ 85287-0101
Attn: Strategic Partnership Manager

To Supplier:
_____
_____
_____
_____

With a copy to:
ASU Purchasing and Business Services
PO Box 875212
Tempe, AZ 85287-5212
Attn: Chief Procurement Officer

With a copy to:
_____
_____
_____
_____

Notices, if delivered, and if provided in the manner set forth above, will be deemed to have been given and received on the date of actual receipt or on the date receipt was refused. Any notice to be given by any party may be given by legal counsel for such party.

70. **Provision of Goods/Services to ASU-Related Entities.** ASU has, and expects to enter into additional, service and management contracts with a number of third parties (Related Entities) to deliver some or all of the Goods/Services to ASU students. These Related Entities include, for example, third party managers or owners of ASU student residence halls. At ASU's option, Supplier will provide the Goods/Services to ASU's current and future Affiliated Entities consistent with the terms of the Agreement. Schedule A lists ASU's current Related Entity contracts.

71. **Billing Disputes**. If ASU disputes a charge in good faith on any invoice, ASU may withhold payment of that charge if ASU makes timely payment of all undisputed charges when due and provides Supplier with a written explanation of the reasons for ASU's disputes of the charge within 90 days after receipt by ASU of the invoice for such amount. If Supplier determines, in its good faith, that the disputed charge is valid, Supplier will notify ASU and within 5 business days after Supplier's notification, ASU must pay the charge, unless ASU continues to dispute the charge in good faith.

72. **Audit Rights for ASU**. ASU shall have the right, not more than once per contract year, to perform an audit, at ASU's expense, to determine if Supplier has billed Services in accordance with the pricing and terms and conditions of this Agreement. ASU may only audit periods up to 2 years from the date that ASU initiates an audit. If ASU completes an audit on a sample of the category of Services and the audit sample determines that billing was incorrect, extrapolated to the entire category, in an amount that exceeds the lesser of: 5% or $10,000 of the gross billing amount for the category audited, ASU may conduct an audit for the entire category of Services for the period in question, and the reasonable expense of Supplier, not to exceed $10,000, and not to exceed $50,000 annually in the aggregate.

73. **Approval**. Supplier and ASU will reasonably cooperate to reach mutual agreement if the State of Arizona requires modification or variation from the Insurance Requirements in the Agreement.

74. **Transition**. Upon termination of this Agreement or any Service for any reason, the parties will work in good faith to transition services to ASU away from Supplier. Supplier agrees to continue to provide existing services and transition support during the transition period at rates consistent with the terms of this Agreement for a period up to 180 days from the termination of this Agreement. If requested by ASU, the parties will work in good faith to develop a transition plan that may require an additional statement of work which may include hourly payments to Supplier personnel to perform services associated with the transition.

75. **Third Party Arrangements**. The parties acknowledge that from time to time, ASU may enter into arrangements with third parties that may require Supplier to work cooperatively with and/or connect and use infrastructure with third parties. On a case-by-case basis, ASU and Supplier will work cooperatively, timely, and in good faith to take such actions as may be necessary or appropriate to give effect to ASU's third party agreements. Supplier will not be bound to terms and conditions of a third party that are different from this Agreement unless expressly agreed in writing. If the third party terms and conditions conflict with this Agreement's terms, impact Supplier's ability to meet service level agreements of this Agreement, or may cause Supplier to incur additional costs, then the parties   will

enter into good faith negotiations for an amendment to this Agreement prior to Supplier agreeing to compliance with the third party terms and conditions.

76. **ASU's Policies**. All Services will be provided in accordance with ASU's policies, as they may change or be updated. Changes to such policies or standards may directly or indirectly increase or decrease the scope of Services to be provided by Supplier under this Agreement. Where reasonably possible, ASU will collaborate with Supplier on policies and standards that may have a material impact on Supplier, and reasonably listen to Supplier's feedback in an effort to achieve the goals of ASU without introducing new or additional costs to provide the Services. If ASU presents a new or modified policy or standard that a party reasonably believes will materially increase or decrease Supplier's costs to provide the Services, the parties will meet in good faith to amend the Agreement as appropriate. If Supplier believes the impact to be an increase in scope or cost, Supplier will comply with the new or modified policy or standard to the extent possible under this Agreement until the parties can reach an amendment or agreement on how to address full compliance.

77. **Provision of Goods/Services to ASU Component Unit.** In addition to providing the Goods/Services to ASU, Supplier will provide some or all of the Goods/Services to each of ASU's Component Units that signs a separate Consent and Agreement to be Bound with Supplier, in form and content similar to Exhibit X. By entering into a Consent and Agreement to be Bound, each Component Unit will agree to be bound by the terms of this Agreement as if it were an original party to the Agreement, and Supplier will agree to provide the Goods/Services directly to the Component Unit. ASU will have no liability or responsibility for the performance of its Component Units under the Consents and Agreements to be Bound. Component Unit, means each entity named as a Component Unit in ASU's Comprehensive Annual Financial Report (Note B to Financial Statements). ASU's Component Units are legally separate entities governed by independent boards of directors whose goals are to support ASU or have a close affiliation with ASU. They are considered part of ASU's knowledge enterprise, but they are not Arizona public bodies, and ASU may not contract on their behalf. ASU's Component Units include the Arizona State University Foundation for a New American University, an Arizona nonprofit corporation, and ASU Preparatory Academy, an Arizona nonprofit corporation. Supplier will enter into a Consent and Agreement to be Bound with each Component Unit that so requests, and, except as may be set forth in a Consent and Agreement to be Bound, Supplier will provide the Goods/Services to each such Component Unit to the same extent and on the same terms as if the Component Unit were the customer under the Agreement.

78. **State Purchasing Cooperative.** The Agreement and ASU's RFP #_____ may be used by state, city, and county governments within the state of Arizona, Arizona state-funded K-20 educational districts and institutions (including charter schools), and the other two state universities governed by the Arizona Board of Regents: University of Arizona, and Northern Arizona University (collectively, the Arizona Entities). Each of the Arizona Entities may purchase some or all of the Goods/Services under the Agreement. ASU will have no liability or responsibility to Supplier or otherwise for purchases of the Goods/Services by the Arizona Entities. Supplier may negotiate different rates, terms, and conditions with the Arizona Entities.

79. **Administrative Fee.** Supplier will pay ASU an Administrative Fee in the amount of 1% of the gross funds received by Supplier from the Arizona Entities or any other similar entity in any other state. This fee will apply only to contracts entered into after the effective date of the Agreement. The Administrative Fee will apply to any and all Goods/Services provided by Supplier that reference the Agreement or the RFP as the supporting documentation to meet competitive bidding requirements. The Administrative Fee will be calculated based on all sales transacted, minus all taxes and any returns or credits. Supplier will submit the Administrative Fee, along with a quarterly usage report documenting all contract sales, to the ASU Chief Procurement Office within 30 days following the end of each calendar quarter. Each quarterly report at a minimum, will disclose all purchased Goods/Services, prices paid, and quantity, by individual purchasing agency, for all sales within the calendar quarter just ended. The Administrative Fee is payable by Supplier, from Supplier's funds, to ASU.

80. **Personnel.** Key personnel of Supplier assigned to the project who are identified by name in the proposal shall remain dedicated to this project. Changes in such key personnel (and their successors) are permitted only to the extent their replacements have equal or greater qualifications and experience, and are reasonably approved by ASU. Under no circumstances will ASU be deemed to be the supervisor, employer, or joint employer of employees or contractors of Supplier.

Insurance Requirements

Without limiting any liabilities or any other obligation of Supplier, Supplier will purchase and maintain (and cause its subcontractors to purchase and maintain), until all of their obligations have been discharged or satisfied, including any warranty periods under the Agreement, insurance against claims that may arise from or in connection with the performance of the work hereunder by Supplier, its agents, representatives, employees or subcontractors, as described below.

These insurance requirements are minimum requirements for the Agreement and in no way limit any indemnity covenants in the Agreement. ASU does not warrant that these minimum limits are sufficient to protect Supplier from liabilities that might arise out of the performance of the work under the Agreement by Supplier, its agents, representatives, employees, or subcontractors. These insurance requirements may change if Supplier is a foreign entity, or with foreign insurance coverage; in addition, these insurance requirements may be adjusted by ASU based on the scope complexity of the Agreement.

A.   Minimum Scope and Limits of Insurance: Supplier's insurance coverage will be primary insurance with respect to all other available sources. Supplier will provide coverage with limits of liability not less than those stated below:

1.   Commercial General Liability – Occurrence Form. Policy will include bodily injury, property damage, personal injury, and broad form contractual liability coverage.

•	General Aggregate	$15,000,000
•	Products – Completed Operations Aggregate	$5,000,000
•	Personal and Advertising Injury	$1,000,000
•	Contractual Liability	$1,000,000
•	Each Occurrence	$5,000,000

a.   Policy will include the following additional insured language: "The State of Arizona, its departments, agencies, boards, commissions, universities, and its officers, officials, agents, and employees, will be named as additional insureds with respect to liability arising out of the activities performed by or on behalf of Supplier."

b.   Policy will contain a waiver of subrogation against the State of Arizona, its departments, agencies, boards, commissions, universities, and its officers, officials, agents, and employees, for losses arising from work performed by or on behalf of Supplier.

2.   Automobile Liability. If Supplier will be driving on ASU campus or on ASU business the following section will apply: Policy will include Bodily Injury and Property Damage for any owned, hired, and/or non-owned vehicles used in the performance of the Agreement in the following amounts. If Supplier is not an individual then coverage will be a combined single limit of $5,000,000. If Supplier is an individual then coverage will be $100,000 per person, $300,000 per accident, and $50,000 property damage.

a.   Policy will include the following additional insured language: "The State of Arizona, its departments, agencies, boards, commissions, universities, and its officers, officials, agents, and employees, will be named as additional insureds with respect to liability arising out of the activities performed by or on behalf of Supplier, involving vehicles owned, leased, hired, or borrowed by Supplier."

b.   Policy will contain a waiver of subrogation against the State of Arizona, its departments, agencies, boards, commissions, universities, and its officers, officials, agents, and employees, for losses arising from work performed by or on behalf of Supplier.

c.   Policy will contain a severability of interest provision.

3.   Worker's Compensation and Employers' Liability. Applicable statutory limits, as amended from time to time.

a. Employer's Liability in the amount of $1,000,000 injury and disease.

b. Policy will contain a waiver of subrogation against the State of Arizona, its departments, agencies, boards, commissions, universities, and its officers, officials, agents, and employees, for losses arising from work performed by or on behalf of Supplier.

c. This requirement will not apply to any contractor or subcontractor exempt under ARS § 23-901, when such contractor or subcontractor signs the Sole Proprietor Waiver Form.

4. <u>Technology/Network Errors and Omissions Insurance</u>. The terms of this section apply if: 1) ASU is purchasing or leasing software, or processing a software renewal; 2) Supplier is creating any code for ASU; 3) Supplier receives, stores, or analyzes ASU Data (including if the data is not online); 4) Supplier is hosting, or managing by infrastructure outside of ASU, including in the cloud, ASU Data; OR 5) ASU is purchasing or leasing equipment that will connect to ASU's data network.

- Each Claim $15,000,000
- Annual Aggregate $15,000,000

a. This insurance will cover Supplier's liability for acts, errors and omissions arising out of Supplier's operations or services, including loss arising from unauthorized access, or use that results in identity theft or fraud.

b. If the liability insurance required by the Agreement is written on a claims-made basis, Supplier warrants that any retroactive date under the policy will precede the effective date of the Agreement, and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of 2 years beginning at the time work under the Agreement is completed.

c. Policy will cover professional misconduct for those positions defined in the scope of work of the Agreement.

5. <u>Professional Liability (Errors and Omissions Liability).</u> If the Supplier will provide ASU Services under the Agreement, the Policy will include professional liability coverage as follows:

- Each Claim $5,000,000
- Annual Aggregate $5,000,000

a. If the professional liability insurance required by the Agreement is written on a claims-made basis, Supplier warrants that any retroactive date under the policy will precede the effective date of the Agreement; and that either continuous coverage will be maintained or an extended discovery period will be exercised for 2 years beginning at the time work under the Agreement is completed.

b. Policy will cover professional misconduct for those positions defined in the scope of work of the Agreement.

B.   Cancellation; Material Changes: Cancellation notices will be delivered to ASU in accordance with all policy provisions. Notices required in this Section must be sent directly to ASU Purchasing and Business Services, email Insurance.certificates@asu.edu or mail to PO Box 875212, Tempe, AZ, 85287-5212.

C.   Acceptability of Insurers: Insurance is to be placed with duly licensed or approved non-admitted insurers in the State of Arizona with an "A.M. Best" rating of not less than A- VII. ASU in no way warrants that the above required minimum insurer rating is sufficient to protect Supplier from potential insurer insolvency. Self-Insurance may be accepted in lieu of or in combination with insurance coverage requested.

D.   Verification of Coverage: Each insurance policy required by the Agreement must be in effect at or prior to commencement of work under the Agreement and remain in effect for the term of the Agreement. Failure to maintain the insurance policies as required by the Agreement, or to provide evidence of renewal, is a material breach of contract.

If requested by ASU, Supplier will furnish ASU with valid certificates of insurance. ASU's project or purchase order number and project description will be noted on each certificate of insurance. The State of Arizona and ASU may require complete, certified copies of policies at the time of notice of any loss or claim.

E.   Subcontractors. Supplier's certificate(s) may include all subcontractors as insureds under its policies as required by the Agreement, or Supplier will furnish to ASU upon request, copies of valid certificates and endorsements for each subcontractor. Coverages for subcontractors will be subject to the minimum requirements identified above.

F.   Approval. These insurance requirements are the standard insurance requirements of ASU. Any modification or variation from the insurance requirements in the Agreement will require the approval of ASU's Department of Risk and Emergency Management.

<div align="center">CONSENT AND AGREEMENT TO BE BOUND
TO_____Agreement</div>

This Consent and Agreement to be   Bound to_____Agreement (this <u>Consent</u>) is entered into between_____ , a_____(<u>Supplier</u>) and_____ , an Arizona nonprofit corporation (<u>Company</u>). This Consent is effective as of the date of the last signature below (the <u>Effective Date</u>).

<div align="center">RECITALS</div>

A. Effective as of_____ , the Arizona Board of Regents for and on behalf of Arizona State University (ASU) and Supplier entered into a_____Agreement (the <u>Agreement</u>) whereby Supplier contracted to provide ASU with certain Goods/Services, and agreed to provide the same Goods/Services to ASU's Component Units if the Component Units agreed to be bound by the terms of the Agreement as if they were the customer thereunder. A copy of the Agreement is attached as <u>Schedule A</u>.

B. Company is a Component Unit of ASU.

C. Company desires to have access to the Goods/Services under the same terms as ASU, and to agree to be bound by the terms of the Agreement, and Supplier desires to provide the Goods/Services to Company to the same extent as if Company were ASU under the MA.

D. All capitalized terms not defined in this Consent have the definitions set forth in the Agreement.

<div align="center">AGREEMENT</div>

Supplier and Company agree as follows:

1. <u>Consent to be Bound</u>. Except as may be set forth in this Consent, Company will be bound by and observe all of the terms, conditions, and covenants of, and to perform all of the duties and obligations of, ASU under and pursuant to the Agreement, as if Company were the customer under the Agreement, and Company hereby executes and delivers the Agreement as a customer thereunder.

2. <u>Provision of Services</u>. Except as may be set forth in this Consent, Supplier will provide the Goods/Services to Company to the same extent and on the same terms as if Company were the customer under the Agreement. Each party to this Consent will be liable and responsible to the other for its actions to the same extent that ASU and Supplier are liable and responsible to each other under the Agreement.

3. <u>Company Representations</u>. Company represents to Supplier that: (a) it has the right, power, capacity, and authority to execute and deliver this Consent and the Agreement, and to fully and timely perform all of the duties and obligations required by the customer under and pursuant to the Agreement; and (b) the Agreement is a legal, valid, and binding obligation of Company, enforceable by Supplier against Company in accordance with its terms.

4. <u>Supplier Representations</u>. Supplier represents to Company that: (a) it has the right, power, capacity, and authority to execute and deliver this Consent and the Agreement, and to fully and timely perform all of its duties and obligations under and pursuant to this Consent and the Agreement; and (b) the Agreement is a legal, valid, and binding obligation of Supplier, enforceable by Company against Supplier in accordance with its terms.

5. <u>Company Specific Provisions</u>. The following apply to Company with respect to the Agreement:

(a) Company's authorized contacts for purposes of the Agreement are: Company's President and any Vice President.

(b) Company is not a public institution. Accordingly, the provisions in the Agreement stating that the customer is a public institution do not apply to Company.

<div align="center">41</div>

(c) Company's address information for notices pursuant to Section_____of the Agreement is:

(d) [Other]

6.   Other Documents. In addition to entering into this Consent, to the extent reasonably necessary, Company and Supplier will sign such other documents as may be required to obtain the benefits under the Agreement and to receive and deliver the Goods/Services ordered by Company. ASU will have no liability or responsibility for Company's performance under any other document signed by Company.

7.   Further Assurances. Each of the parties to this Consent will sign and deliver all such documents, and take all such actions as may be reasonably necessary to effectuate the purposes of this Consent consistent with the intentions of the parties.

Supplier
_____

_____   an Arizona nonprofit corporation

By: By:

Title: Title:

Printed Name: _____   Printed Name: _____   _____

Date Signed: Date Signed:

SECTION XIII – MANDATORY CERTIFICATIONS

(Fillable PDF versions of mandatory certifications are located on-line under Supplier Forms: http://cfo.asu.edu/purchasing-forms. ORIGINAL signatures are REQUIRED for either version.)

<u>CONFLICT OF INTEREST CERTIFICATION</u>

_____
(Date)

Purchasing and Business Services
Arizona State University
PO Box 875212
Tempe, AZ 85287-5212

The undersigned certifies that to the best of his/her knowledge: (**check only one**)

( ) There is no officer or employee of Arizona State University who has, or whose relative has, a substantial interest in any contract resulting from this request.

( ) The names of any and all public officers or employees of Arizona State University who have, or whose relative has, a substantial interest in any contract resulting from this request, and the nature of the substantial interest, are included below or as an attachment to this certification.

_____	_____
(Email address)	(Address)
_____	_____
(Signature required)	(Phone)
_____	_____
(Print name)	(Fax)
_____	_____
(Print title)	(Federal Taxpayer ID Number)

(Rev. 4/22/14)

FEDERAL DEBARRED LIST CERTIFICATION

Certification Regarding Debarment, Suspension, Proposed Debarment, and Other Responsibility Matters (Dec 2001)

_____
(Date)

Purchasing and Business Services
Arizona State University
PO Box 875212
Tempe, AZ 85287-5212

In accordance with the Federal Acquisition Regulation, 52.209-5:

(a) (1) The Offeror certifies, to the best of its knowledge and belief, that—
    (i) The Offeror and/or any of its Principals—

       (A) (check one) **Are ( )** or **are not ( )** presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency; (The debarred list (List of Parties Excluded from Federal Procurement and Non-Procurement Programs) can be found at https://www.sam.gov/index.html/#1#1.)

       (B) (check one) **Have ( )** or **have not ( )**, within a three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state, or local) contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property; and

       (C) (check one) **Are ( )** or **are not ( )** presently indicted for, or otherwise criminally or civilly charged by a governmental entity with, commission of any of the offenses enumerated in paragraph (a)(1)(i)(B) of this provision.

    (ii) The Offeror (check one) **has ( )** or **has not ( )**, within a three-year period preceding this offer, had one or more contracts terminated for default by any Federal agency.

(2) (a) "Principals," for the purposes of this certification, means officers; directors; owners; partners; and, persons having primary management or supervisory responsibilities within a business entity (*e.g.,* general manager; plant manager; head of a subsidiary, division, or business segment, and similar positions).

This Certification Concerns a Matter Within the Jurisdiction of an Agency of the United States and the Making of a False, Fictitious, or Fraudulent Certification May Render the Maker Subject to Prosecution Under Section 1001, Title 18, United States Code.

(b) The Offeror shall provide immediate written notice to the Contracting Officer if, at any time prior to contract award, the Offeror learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

(c) A certification that any of the items in paragraph (a) of this provision exists will not necessarily result in withholding of an award under this solicitation. However, the certification will be considered in connection with a determination of the Offeror's responsibility. Failure of the Offeror to furnish a certification or provide such additional information as requested by the Contracting Officer may render the Offeror nonresponsible.

(d) Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by paragraph (a) of this provision. The knowledge and information of an Offeror is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

(e) The certification in paragraph (a) of this provision is a material representation of fact upon which reliance was placed when making award. If it is later determined that the Offeror knowingly rendered an erroneous certification, in addition to other remedies available to the Government, the Contracting Officer may terminate the contract resulting from this solicitation for default.

_____   _____
(Email address)   (Address)

_____   _____
(Signature required)   (Phone)

_____   _____
(Print name)   (Fax)

_____   _____
(Print title)   (Federal Taxpayer ID Number)

<div align="right">
(Federal Debarred List Continued)
(Rev. 4/22/14)
</div>

ANTI-LOBBYING CERTIFICATION

Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions (Sept 2007)

_____
(Date)

Purchasing and Business Services
Arizona State University
PO Box 875212
Tempe, AZ 85287-5212

In accordance with the Federal Acquisition Regulation, 52.203-11:

(a) The definitions and prohibitions contained in the clause, at FAR 52.203-12, Limitation on Payments to Influence Certain Federal Transactions, included in this solicitation, are hereby incorporated by reference in paragraph (b) of this certification.

(b) The offeror, by signing its offer, hereby certifies to the best of his or her knowledge and belief that on or after December 23, 1989—

(1) No Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with the awarding of this contract;

(2) If any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress on his or her behalf in connection with this solicitation, the offeror shall complete and submit, with its offer, OMB standard form LLL, Disclosure of Lobbying Activities, to the Contracting Officer; and

(3) He or she will include the language of this certification in all subcontract awards at any tier and require that all recipients of subcontract awards in excess of $100,000 shall certify and disclose accordingly.

(c) Submission of this certification and disclosure is a prerequisite for making or entering into this contract imposed by Section 1352, Title 31, United States Code. Any person who makes an expenditure prohibited under this provision or who fails to file or amend the disclosure form to be filed or amended by this provision, shall be subject to a civil penalty of not less than $10,000, and not more than $100,000, for each such failure.

(Signature page follows)

_____
(Email address)

_____
(Address)

_____
(Signature required)

_____
(Phone)

_____
(Print name)

_____
(Fax)

_____
(Print title)

_____
(Federal Taxpayer ID Number)

LEGAL WORKER CERTIFICATION

_____
(Date)

Purchasing and Business Services
Arizona State University
PO Box 875212
Tempe, AZ 85287-5212

Authorized Presence Requirements. As required by ARS § 41-4401, ASU is prohibited from awarding a contract to any contractor or subcontractor that fails to comply with ARS § 23-214(A) (verification of employee eligibility through the e-verify program). Vendor warrants that it and its subcontractors comply fully with all applicable federal immigration laws and regulations that relate to their employees and their compliance with ARS § 23-214(A). A breach of this warranty will be a material breach of this Contract that is subject to penalties up to and including termination of this Contract ASU retains the legal right to inspect the papers of any Contractor or subcontractor employee who works hereunder to ensure that the contractor or subcontractor is complying with the above warranty.

A breach of the foregoing warranty shall be deemed a material breach of the contract. In addition to the legal rights and remedies available to the University hereunder and under the common law, in the event of such a breach, the University shall have the right to terminate the contract. Upon request, the University shall have the right to inspect the papers of each contractor, subcontractor or any employee of either who performs work hereunder for the purpose of ensuring that the contractor or subcontractor is in compliance with the warranty set forth in this provision.

_____   _____
(Email address)   (Address)

_____   _____
(Signature required)   (Phone)

_____   _____
(Print name)   (Fax)

_____   _____
(Print title)   (Federal Taxpayer ID Number)

(Rev. 6/23/14)

The Supplier Sustainability Questionnaire is used to help the University understand how sustainable a supplier is. Sustainability is an important goal for the University, and as such, we expect our suppliers to help us support this goal.

Today's Date: _____

SUSTAINABILITY QUESTIONNAIRE

Internal practices

1) Does your firm have published sustainability goals and a plan?   Yes ☐ / No☐

   If so, provide the link:

(link)

2) Does your firm have published sustainability progress metrics?   Yes ☐ / No☐

   If so, provide the link:

(link)

3) ASU has a goal to achieve carbon neutrality by 2025 for Scope 1 & 2 emissions and by 2035 for Scope 3. Do you have a public carbon neutrality goal?

   If so, provide the link: Yes ☐ / No☐

(link)

4) Has your firm conducted a greenhouse gas inventory?   Yes ☐ / No☐

   If so, provide:

	Year	Qty (MTCDE)
Baseline		
Most Recent		
% Increase (decrease) vs baseline		%

   Comments:

(comments)

5) Has your firm taken measures to reduce emissions related to air and commuting travel?
   Yes ☐ / No☐

   If yes, please provide some examples:

(examples)

6) ASU has a goal to divert 90% of its waste from landfills by 2025. Does your organization have a waste diversion goal?   Yes ☐ / No☐

If so, provide the link:

(link)

7) Does your firm track its solid waste?   Yes ☐ / No☐

If so, provide the following (indicate units of tons or lbs, as appropriate):

	Year	Recycled	Compost	Landfill
Baseline				
Most Recent				

Comments:

(comments)

8) Has your firm taken measures to reduce printing and paper waste?   Yes ☐ / No☐

If yes, provide some examples:

(examples)

9) ASU has a goal to reduce water use by 20% by 2022. Does your organization have a water reduction goal?   Yes ☐ / No☐

If so, provide the link:

(link)

10) Does your organization participate in / support community service, not-for-profit organizations and inclusive community success?   Yes ☐ / No☐

If yes, provide some examples:

(examples)

11) Has your firm developed measures to improve organizational diversity and inclusion and enhance employee engagement?   Yes ☐ / No☐

If yes, provide some examples:

(examples)

12) Does your company have any external ratings, certifications or awards related to diversity, inclusion and employee engagement? (GPTW, JUST, etc.)

Yes ☐ / No☐

If yes, provide the names and a link:

```
(name and link of certifications)
```

13) Do you provide health care insurance to your employees?   Yes ☐ / No☐

What percentage of your employees are covered by your health care insurance?

```
(%)
```

14) Is your organization a 501C-3, employee-owned, a co-op or incorporated as a B-Corp? Or do you provide employee profit-sharing?   Yes ☐ / No☐

If yes, specify.

```
(specify)
```

15) Does your company have any external sustainability certifications? (DJSI, GRI, GBB, Green C, Certified B Corporation, Green America, Green Plus, etc.)

Yes ☐ / No☐

If yes, provide the names and links:

```
(name and links of certifications)
```

16) Has your company committed to any goals created by an external organization related to climate change?   Yes ☐ / No☐

If so, provide the goals your company has committed to:

```
(name and links)
```

51

17) Are there any other internal sustainability efforts you would like to mention?

(Comments)

ARIZONA STATE UNIVERSITY

RETURN TO ASU		DO NOT SEND TO IRS

ATTN: Foreign individuals who are non-residents for US tax purposes only complete IRS Form W-8BEN. Foreign entities complete IRS Form W-8BEN-E.

► Taxpayer Identification Number (TIN)		☐ Employer ID Number (EIN) ☐ Social Security Number (SSN)

► LEGAL NAME: (must match TIN)	
► LEGAL MAILING ADDRESS:	(Where tax information and general correspondence is to be sent)
DBA/Branch/Location:	
ADDRESS LINE 1:	
ADDRESS LINE 2:	

CITY:		ST:		ZIP:	

► REMIT TO ADDRESS:	☐ Same as Legal Mailing Address
DBA/Branch/Location:	
ADDRESS:	
ADDRESS LINE 2:	

CITY:		ST:		ZIP:	

► ENTITY TYPE (EP: exempt payee [backup withholding] exemption code; FC: FATCA exemption code)

☐ Individual (not a business)	☐ Sole proprietor (individually owned business) or sole proprietor organized as LLC or PLLC	☐ Corporation (not providing health care, medical or legal services) (EP: 5)	☐ Corporation (providing health care, medical or legal services) (EP: 5)	☐ Partnership, LLP or partnership organized as LLC or PLLC
☐ The U.S. or any of its political subdivisions or instrumentalities (EP: 2 FC: B)	☐ A state, a possession of the US or any of their political subdivisions or instrumentalities (EP: 3 FC: C)	☐ Tax-exempt organizations under IRC §501 or §403 (EP: 1 FC: A)	☐ An international organization or any of its agencies or instrumentalities (EP: 4)	☐ State of Arizona employee

Corporations: Is your or an affiliated company's stock regularly traded on one or more established security markets?
☐ Yes ☐ No (FC: D/E)

► CERTIFICATION

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct TIN (or I am waiting for a number to be issued to me).
2. I am not subject to backup withholding because I am exempt from backup withholding, I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or the IRS has notified me that I am no longer subject to backup withholding.
3. I am a U.S. citizen or other U.S. person (defined below).
4. The FATCA codes entered on this form, if any, indicating that I am exempt from FATCA reporting are correct.

Certification instructions. You must cross out item 2 if you have been notified by the IRS that you are currently subject to backup withholding because you failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement and, generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN.

Signature of U.S. Individual	Date:

NOTE: *IF BOTH PAGES OF THIS FORM ARE NOT COMPLETED THE FORM WILL BE RETURNED TO YOU*. **Arizona State University (ASU) is fulfilling a mandate associated with state agencies increasing procurements from Arizona Small and Diverse Businesses.**

53

Financial Services
Vendor Authorization Form

RETURN TO ASU		DO NOT SEND TO IRS

► Legal Name:	TIN:

Are you doing business in Arizona for purposes of sales/use tax collection and remittance? ☐ Yes ☐ No

If you select Yes, please provide your Arizona License # _____ and sales/use tax rate charged _____ % DUNS# _____

SECTION 1 - FEDERAL INFORMATION

What is your business' federal classification type? See the definitions in the link or on the Vendor Authorization Form instructions. (S.B.A. Small Business definition FAR 19.001 and size standards FAR 19.102) http://www.sba.gov/size

Large Business? YES ☐ NO ☐
Small Business? YES ☐ NO ☐

Please check all that apply to your business for the federal supplier type or check Not Applicable here: ☐

Service-Disabled Veteran-Owned (VD) ☐	Small Disadvantaged (SD) ☐	Women-Owned (WO) ☐
Veteran-Owned (VO) ☐	Minority Institution (MI) ☐	HUB Zone (HZ) ☐

SECTION 2 - STATE OF ARIZONA SMALL BUSINESS INFORMATION

Are you self-certified according to this State of Arizona definition? **"Less than 100 full-time employees OR less than $4 million in volume in the last fiscal year"**	YES ☐	NO ☐

Per FAR 52.219-1 and under 15 U.S.C. 645(d), any person who misrepresents a firm's status as a small, HUB Zone small, small disadvantaged or women-owned small business concern to obtain a contract to be awarded under the preference programs established pursuant to section 8(a), 8(d), 9 or 15 of the Small Business Act or any other provision of federal law that specifically references section 8(d) for a definition of program eligibility, shall be punished by imposition of fine, imprisonment or both; be subject to administrative remedies, including suspension and debarment; and be ineligible for participation in programs conducted under the authority of the Act.

Print Name:	
Signature:	
Phone:	Fax:
Email:	

VENDOR: List the product or service provided.	

If the buyer name is listed, please **return** to the buyer.	Buyer:	Phone:	Email:

NOTE: *IF BOTH PAGES OF THIS FORM ARE NOT COMPLETED THE FORM WILL BE RETURNED TO YOU*. **Arizona State University (ASU) is fulfilling a mandate associated with state agencies increasing procurements from Arizona Small and Diverse Businesses.**

341901 RFP   Rev 03/22/18

SECTION XIV – SECURITY REVIEW PROCESS (REFERENCE DOCUMENT #1)
Form version: 2016-06-20

Expectations

This checklist is to be filled out by the ASU project team, because the ASU project team is responsible for designing and implementing security controls. Vendor provided documents and diagrams are not sufficient.

Please have your answers completed and your **Security Architecture Diagram** available in your google project folder one week before your scheduled review. Projects with incomplete documentation will be asked to reschedule.

A preliminary review may be held, and is recommended, early in a project's lifecycle while there is still time to change course if design issues are identified. The final review should be held shortly before the project goes live, when the contemplated servers have been set up at least to the point where the required vulnerability scans can be done.

Overview

The ASU security review process is designed to guide each project team to implement solutions efficiently while minimizing security risks. At the beginning of a project, for most of the questions below the answer will probably be "Unknown". As design and development continues, you can start filling in the answers you know. When you are ready for a discussion with an Information Security Architect, please email Security.Review@asu.edu

Where you see the checkbox "☐" symbol below, if that is your answer, delete the checkbox and replace it with an "X".

Projects do not always achieve a "perfect" score; however the goal is to reduce all risks to low or addressed. The purpose of this document is to allow management to get an evaluation of the risk in this project as compared to other projects and ASU standards.

Scope of Review

It is not practical to bring all existing systems up to current standards. Instead, our goal is "No new bad". So for each project we look at what changes are being made as part of that project. This includes:

- New hardware
- New software developed for the project: web sites or otherwise
- New software acquired, installed here, hosted elsewhere...
- New software in the form of a "cloud service" or similar
- New connections between new or existing systems
- New data flows between new or existing systems
- New data stores: added tables or columns, data files, network shares...

For our purposes "new" means new to ASU -- it has not been through an ASU Security Review before. So if ASU starts using an existing "cloud service" that service should be reviewed even if the service is not implementing any changes for ASU's project.

Also if an existing system is changed for the project, the change is "new" because it hasn't previously been reviewed.

Example: Existing system "A" regularly transfers a data file to existing system "B". The project will add software that runs on "B" and makes a new use of the data on "B". System "B" is in scope because it is being changed, but system "A" and the data file transfer are not in scope because they are not changing. System "A" can still be shown on your Security Architecture Diagram to clarify the workflow.

Project Information

What is the name of your project? Please use the same name that appears in project status systems.

[ ]

If you are using Planview for project management, what is the Planview project ID number (usually 4 to 7 digits?

[ ]

X This project is not using Planview.

What is the purpose of your project? Briefly describe what you'd like to accomplish.

[ ]

Who is the Steward for the project (the ASU employee who decided we should do this, the sponsor from a business perspective)?
Name:
Title:
Department:

Who is the Technical Administrator for this system (the ASU employee who will manage ongoing system maintenance, enhancement and patching or manage the vendor who will perform this function)?
Name:
Title:
Department:

(For separation of duties reasons, the Steward and the Technical Administrator should not be the same person. Technical people implement business requirements. Technical people should not unilaterally create systems for which there is no business requirement or sponsor.)

Responsibility for Secure Design

Security practitioners have found that to be effective, security measures must be "baked in from the beginning" rather than "pasted on at the end". This is one of the reasons for using a **System Development Life Cycle** (mentioned elsewhere in this checklist) that includes security checkpoints as the project progresses.

Attackers usually take advantage of mistakes. These flaws frequently arise at the boundaries between independent components, due to misunderstandings or weaknesses in how the parts are put together. This means you can have a collection of "secure" *parts*, but yet not have a secure *whole*. Someone must create a holistic design that ensures all the parts fit together in a way that complies with regulations and ASU standards.

Who is responsible for the secure design of the entire system?

☐	**Unknown**	We don't know who is responsible for the security design of the entire system.
☐	**High**	Although certain parts may be designed for security, nobody is responsible for the security design and ASU standards compliance of the entire system including users and their devices.
☐	**Medium**	A vendor claims to be responsible for the security design and ASU standards compliance of the entire system, but the vendor has not signed ISO language, or the scope of the vendor's contracted responsibility does not cover the entire system including users and their devices.
☐	**Low**	A single vendor has accepted responsibility for all of the security design and ASU standards compliance, has signed ISO language, and the scope of the vendor's contracted responsibility covers the entire system including users and their devices.
☐	**Addressed**	One or more ASU employees have designed the system with a holistic security perspective from the beginning, selecting components and/or vendors that meet regulatory requirements and ASU standards. The ASU employee(s) responsible for the security design and ASU standards compliance are: _____ _____

Additional information (optional)

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Sensitive Data

The expectations for the project's security measures depend on how much harm could occur when things go wrong. For definitions of the following data classifications please see the Data Handling Standard at http://links.asu.edu/datahandlingstandard

What is the most sensitive data in this project? (Check all that apply.)

Regulated Data
☐ PCI regulated (credit card data)
☐ FERPA regulated (student data)
☐ HIPAA regulated (health data)
☐ ITAR (import, export, defense-related technical data or foreign students)

ASU Data Classifications

- ☐ Highly Sensitive - disclosure endangers human life health or safety
- ☐ Sensitive - regulated data (including regulations above) or Personally Identifiable Information
- ☐ Internal - a login is required
- ☐ Public - anyone can see it without logging in

Additional information (optional) - examples of sensitive data elements etc.

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Note: If you checked *any* of the highlighted boxes above, ASU's Data Handling Standard calls for this data to be encrypted for all new systems, and an encryption transition plan for existing systems. In addition, encryption is recommended for all data classifications on all systems. If you can, encrypt everything everywhere.

One reason for encryption in transit is to prevent other computers on the network from reading sensitive data as it goes by.

How will sensitive data be protected in transit, as it travels across the network? (Check all that apply.)

☐	**Unknown**	We haven't determined this yet, for some or all connections.
☐	**High**	Sensitive data will be traveling across one or more connections without any protection.
☐	**High**	All systems and connections storing or processing sensitive data are within the ASU data center, but sensitive data is not encrypted as it moves from system to system.
☐	**High**	Firewalls, network segmentation, and/or other techniques limit sensitive traffic to only those systems that are intended to receive it. Other systems are prevented from connecting, or listening to sensitive traffic. However, sensitive data is not encrypted in transit.
☐	**Addressed**	All sensitive data is encrypted as it travels over each network connection.
☐	**Addressed**	All* web sites are using https encryption. Servers have valid https certificates. (The certificates are correctly configured and installed so that no warnings are seen.)
☐	**Addressed**	This project has no sensitive data.
☐	**Addressed**	This question is not applicable for this project because all of the following are true: ● No ASU equipment or network connections will be used to transmit sensitive data. ● If a vendor is transmitting or receiving sensitive data, the vendor has accepted responsibility for protecting the data by signing a contract that includes ISOlanguage.

Additional information (optional)

* Note: ASU Information Security recommends https encryption for <u>all</u> web pages, whether there is sensitive data or not. Here are some reasons:

● Some Internet Service Providers have started altering page content so you don't see what you requested, you see what they want you to see. Thus even the simplest public static web page can be abused. The http protocol cannot detect this; https can.

● An increasing variety of entities are interested ineavesdropping on your Internet use, which also becomes much harder under https.

● Google gives preference to https pages in its search results: see
http://googleonlinesecurity.blogspot.in/2014/08/https-as-ranking-signal_6.html

Encryption at rest is a defense against the possibility that media might be misplaced, stolen, or not disposed of properly. Sensitive data should be protected wherever it goes -- on servers, desktops, laptops, mobile devices, and backups of these systems.

How will sensitive data be protected at rest, wherever it is stored? (Check all that apply.)

☐	**Unknown**	We haven't determined this yet, for some or all devices.
☐	**High**	Sensitive data will be stored without any protection, on devices available to the general public without logging in.
☐	**High**	Sensitive data will be stored without encryption at rest, even though PCI or other applicable regulations require it.
☐	**Medium**	Sensitive data will be stored without encryption, but the devices require a login, and there is no applicable regulation requiring encryption at rest.
☐	**Medium**	All systems storing or processing sensitive data are within the ASU data center, but sensitive data is not encrypted on disk. There is no applicable regulation requiring encryption at rest.
☐	**Low**	Sensitive data is encrypted on disk, but not on backups. There is no applicable regulation requiring encryption at rest.
☐	**Addressed**	All sensitive data is encrypted at every location where it is stored, including user devices and backups.
☐	**Addressed**	This project has no sensitive data.
☐	**Addressed**	This question is not applicable for this project because all of the following are true: ● No ASU equipment will be used to store sensitive data. ● If a vendor is storing sensitive data, the vendor has accepted responsibility for protecting the data by signing a contract that includes ISO language.

Additional information (optional)

Security Architecture Diagram

For instructions on how to create a security architecture diagram, please see How to Create a Security Architecture Diagram. Note: not all diagrams are security architecture diagrams suitable as the roadmap for your review.

Include administrative interfaces. Although they may not be intended for users, they are still a potential point of attack and, given the privileged access they provide, are even more valuable to attackers.

A Security Architecture Worksheet (example here) is not required, but it can help you gather the information needed for your diagram. You may find a blank worksheet in your security review folder. If not, you can request one by email to security.review@asu.edu

Has a complete security architecture diagram been submitted?

☐	**Unknown**	The security architecture diagram has not yet been submitted.

☐	**Unknown**	There are one or more diagrams, but they are incomplete, inconsistent, or do not provide the necessary information (all endpoints with fully qualified DNS hostname or IP address, all connections with protocol, encryption type, and listening port). The rating is "Unknown" because there may be systems or connections that are not reviewed because they are not detailed on the diagram.
☐	**Unknown**	A diagram has been submitted, but it is a vendor's generic diagram and does not show ASU specific systems, hostnames, IP addresses, connections, or other details. The rating is "Unknown" because there may be systems or connections that are not reviewed because they are not detailed on the diagram.
☐	**Addressed**	The security architecture diagram includes every endpoint that will be part of the project, and every connection between endpoints. Every endpoint that listens for connections is identified with its fully qualified DNS hostname and/or IP address. Every connection is labeled with protocol, encryption type if any, and port number on the listening device.
☐	**Addressed**	The security architecture diagram includes every ASU specific endpoint and connection, but not vendor internal architecture. However all connections from ASU to the vendor's border are shown, and the vendor has signed a contract including ISO language accepting responsibility for adequately protecting ASU's sensitive data. Every ASU endpoint that listens for connections is identified with its fully qualified DNS hostname and/or IP address. Every ASU connection is labeled with protocol, encryption type if any, and port number on the listening device.

If you checked one of the answers saying there is a diagram, please upload a copy of it to your google Security Review folder and fill in its document name here:

Additional information (optional)

☐Has this project been to the Architecture Review Board? (Suggestion: share this document with ARB to provide advance answers to many possible ARB questions.)

Servers

As you look at your Security Architecture Diagram you will most likely see two types of endpoints: clients and servers. A server is any device that listens on a defined port for incoming connections.

Each server used by your project should be shown on the diagram (unless all connections to the server occur inside a vendor's "cloud", the vendor has signed ISO language, and ASU cannot make any changes to the server's software or configuration). If the server is new for your project, or is being changed for your project, the server should be scanned for vulnerabilities that may be introduced by your changes.

List each server's fully qualified DNS hostnames and/or IP addresses here:

(Note: A DNS name is not a URL. URLs for web servers are requested in a different question.)

If you filled out a Security Architecture Worksheet (example here) you probably already have some of this information on the first tab (endpoints) under the Servers heading.

Production (intended for normal use)

QA (should be virtually identical to production)

Development (for unfinished work, programmer testing etc.)

Additional information (optional)

Have the above servers been scanned or penetration tested for security vulnerabilities? What was the outcome? Note: to request a server scan send email to scanrequest@asu.edu

☐	**Unknown**	Some new or changed servers have not yet been scanned or penetration tested.
☐	**High**	A scan or penetration test reported one or more high severity issues that have not yet been addressed.
☐	**Medium**	A scan or penetration test reported one or more medium severity issues that have not yet been addressed (but no highs).
☐	**Low**	A vendor says the server(s) have been scanned or penetration tested and issues have been addressed but we do not have evidence (e.g. a copy of the report).
☐	**Addressed**	All new servers have been scanned or penetration tested. No high or medium severity security issues were reported, or all issues have been addressed. Any fixes have been rescanned to confirm the fix. We have evidence of the scan (e.g. a copy of the report).
☐	**Addressed**	This project has no new servers and no changes to existing servers (other than servers inside a vendor's "cloud" and the vendor has signed ISO language).

Additional information (optional)

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Web Servers

Each device that accepts connections using the http (or https) protocol is a web server. In addition to the server vulnerability scan above, each web site on a web server should be scanned.

A "web site" is anything that responds to the Hypertext Transfer Protocol (HTTP) whether or not a traditional web browser is used. The term includes, for example, Web Services and device control interfaces, in addition to human-oriented "web applications".

To facilitate automated vulnerability discovery (scanning) a web site should have an entry point that provides links, directly or indirectly through intermediate pages, to all of the URLs offered by that site. For example, some web services use a WSDL to allow automated enumeration of the available calls and parameters. Any URLs that are not found by automated testing should be manually tested for potential security vulnerabilities. The web site may offer more than one entry point, for example to support different user roles. In this case each entry point should be listed. If you filled out a Security Architecture Worksheet (example [here](#)) you probably already have some of this information on the third tab (web sites).

If your project includes new web sites or changes to existing web sites show their entry point URLs here:

Production (intended for normal use)

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QA (should be virtually identical to production)

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Development (for unfinished work, programmer testing etc.)

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Additional information (optional)

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Based on the above URLs, do the web sites have adequate test environments?

☐	**Unknown**	At present we don't know if there will be development or QA instances of the web site(s).

☐	**Medium**	Only a production instance exists. There is no place to test code or changes without impacting live systems and data.
☐	**Low**	A QA or development instance exists, but it is different from production to the extent that there could be flaws in one environment that do not exist in the other.
☐	**Addressed**	All sites have QA instances that are sufficiently identical to production that the results of tests in QA can be relied on to evaluate the production instance.
☐	**Addressed**	This project has no web sites.

Additional information (optional)

Have these new web sites or changes to existing web sites been scanned or penetration tested for security vulnerabilities? What was the outcome? Note: For best results, we recommend scanning QA first, then after any issues are resolved and migrated to production, scan production to verify the fixes. To request a web scan send email to scanrequest@asu.edu.

☐	**Unknown**	Some web sites have not yet been scanned or penetration tested.
☐	**High**	A scan or penetration test reported one or more high severity issues that have not yet been addressed.
☐	**Medium**	A scan or penetration test reported one or more medium severity issues that have not yet been addressed (but no highs).
☐	**Low**	A vendor says the site has been scanned or penetration tested and issues have been addressed but we do not have evidence (e.g. a copy of the report).
☐	**Low**	All sites have been scanned or penetration tested, but the tests were not run against the production site or against a QA site that is essentially identical to production. No high or medium severity security issues were reported, or all issues have been addressed. Any fixes have been rescanned to confirm the fix.
☐	**Addressed**	All sites have been scanned or penetration tested against the latest version of code that has gone live or will go live. Tests were run against the production site or against a QA site that is essentially identical to what is or will be in production. Either ASU did the scan, or we have evidence of the scan (e.g. a copy of the report). No high or medium severity security issues were reported, or all issues have been addressed. Any fixes have been rescanned to confirm the fix.
☐	**Addressed**	This project has no web sites.

Additional information (optional)

Based on the project's access to sensitive data, what is the proposed criticality rating of your web site(s)?

For a definition of "criticality" see the Web Application Security Standard at http://infosec2.uto.asu.edu/files/web%20application%20security%20standard.pdf.

☐High	The web site will have access to modify the authoritative source of sensitive data. (To request that an application be considered for ASU's High Criticality list, submit a request to your Security Review Architect.)
☐Medium	The web site has access to sensitive data, but is not rated High.
☐Medium-Low	The web site has confidential data, but not sensitive data. (Most web sites with a password fall in this category, unless they have sensitive data, which would be Medium or High.)
☐Low	The web site only has public information. Web sites in this category do not use a password.

Additional information (optional)

Database Servers

Servers that have databases containing sensitive data should be protected from various types of attacks. A database server directly connected to the Internet has no defenses except the ID and password that may be required. A database server directly connected to a web server may lose *even that ID/password defense* if the web server is compromised.

What database protections are in place?

☐	**Unknown**	The database protections have not yet been determined.
☐	**High**	There are one or more databases with access to sensitive data. The database servers have publicly routable IP addresses and there is no firewall limiting connections to the database. People from anywhere in the world can connect directly to the database server.
☐	**Medium**	A database containing sensitive data is directly accessible by a web server, but the database only accepts requests from the web server. Other devices cannot make connections to the database.
☐	**Low**	Web servers can connect to database servers directly, but alternate protections are in place to defend the database from a web server compromise, such as a Web Application Firewall in front

65

☐	(yellow)	of the web server. (Describe in the notes how the protective technology protects the database from a web server compromise.)
☐	**Addressed** (green)	Web servers cannot connect directly to database servers due to network segmentation, firewall rules, etc. Web servers interact with database servers through an application server that only permits a white list of known good transactions (a three tier architecture). Web servers also have defenses against typical attacks (such as SQL injection) via parameterized queries, stored procedures, or other techniques that do not pass arbitrary strings to the SQL command interpreter.
☐	**Addressed** (green)	None of the systems in this project have access to a database containing sensitive data.
☐	**Addressed** (green)	This question is not applicable for this project because all of the following are true: - No ASU equipment will be used to store a database with sensitive data. - If a vendor has a database with sensitive data, the vendor has accepted responsibility for protecting the data by signing a contract that includes ISOlanguage.

Additional information (optional)

User Authentication

How do the project's systems verify user identity and access rights?

☐	**Unknown** (red)	User authentication systems have not yet been defined.
☐	**High** (red)	When a user logs in, their password is sent across the network without encryption. For example, users log in from a web page that does not use https encryption. Or as another example, users have client software on their computers which logs in to a server, but the connection to the server is not encrypted.
☐	**High** (red)	One or more systems maintain an independent user authentication technique instead of standard ASU enterprise "single-sign-on" authentication systems such as WebAuth or CAS.
☐	**Medium** (orange)	The login page uses https encryption and standard ASU enterprise "single-sign-on" authentication systems such as WebAuth or CAS, but subsequent pages revert back to http.
☐	**Low** (yellow)	Ordinary users are authenticated using standard ASU enterprise "single-sign-on" systems, but privileged users, such as site owners or administrators, are authenticated using a separate mechanism.
☐	**Addressed** (green)	All systems that require users to identify themselves use standard ASU enterprise "single-sign-on" authentication systems such as WebAuth or CAS.
☐	**Addressed** (green)	Because all data is public, no user authentication is needed. Administrator access is controlled through existing mechanisms outside the scope of this project.

Additional information (optional)

66

Servers Authentication

When one server connects to another server, <u>both ends of the connection</u> should have a way to verify that the other server is the correct one and not an impostor.

How do the project's servers authenticate each other?

☐	**Unknown**	Server authentication techniques have not yet been defined.
☐	**High**	One or more servers initiate or accept connections with their peers, but do not verify or otherwise restrict which servers can connect.
☐	**High**	When a server logs in to another server, a password or other secret is transmitted across a network connection without encryption.
☐	**Medium**	Firewalls, network segmentation, or other controls make it impossible for connections to be opened between anything other than the intended servers. Connections are limited by a "black list" identifying which addresses are not allowed to connect.
☐	**Low**	Firewalls, network segmentation, or other controls make it impossible for connections to be opened between anything other than the intended servers. Connections are limited by a "white list" specifically identifying which addresses are allowed to connect, and denying all others by default.
☐	**Low**	Servers use credentials to identify each other, but there are weaknesses (explain in the notes). For example: (A) the credentials are not unique to one application (B) the credentials are not safely stored, or (C) it is difficult to change the credentials.
☐	**Addressed**	Each server uses a standard mechanism, such as https, to verify the other server's identity when initiating a connection to another server. If using https, servers have valid https certificates, and clients verify certificate validity. (The certificates are correctly configured and installed so that no warnings are seen.) The listening server authenticates the requesting server using credentials that are unique to this application. The credentials are not stored where they can be accessed without authorization. Credentials are periodically updated, and can be quickly updated if a compromise is suspected.
☐	**Addressed**	The project does not have more than one server, so there is no need for servers to authenticate each other.
☐	**Addressed**	The changes being made as part of this project will not affect a situation where two or more servers are communicating with each other, so the question does not apply.

Additional information (optional)

Vendor Involvement

☐ This project is being done entirely by ASU employees, including development and hosting of all components.

If you did not check the box above, list the companies or people contributing to this project who are not ASU employees, and indicate when (if) the vendor agreed to ISO Contract Language**:**

Any vendor that provides hosting services, physical or virtual, has access to the data stored or processed there. Thus even hosting providers should be included in your list of vendors.

Vendor	Date vendor signed contract with ISO language

Additional information (optional)

Is there a contract with each vendor, and does the contract include ISO language?
Note: ISO's standard contract language can be found here and is essential for contracts involving sensitive or highly sensitive data.

☐	**Unknown**	Vendors have not yet been selected, or the decision to do this entirely within ASU has not been finalized.
☐	**Unknown**	Status of vendor contract(s) or inclusion of ISO language is presently unknown.
☐	**High**	There are one or more vendors with whom we do not yet have a contract.
☐	**Medium**	There is a contract with each vendor, but one or more contracts do not include current ISO language. The vendor is not willing to change the contract to include ISO language.
☐	**Low**	There is a contract with each vendor, but one or more contracts do not include current ISO language. The vendor is willing to change the contract to include current ISO language.
☐	**Addressed**	There is a contract with each vendor, and each contract includes current ISO language.
☐	**Addressed**	This project has no vendor involvement.

Additional information (optional)

Backup, Disaster Recovery, and Business Continuity Strategy

Systems should be able to recover from damaging events such as hardware failures or accidental or malicious data or software corruption.

What is the backup strategy?

☐	**Unknown**	The backup strategy has not yet been determined.
☐	**High**	There are no backups of some or all systems that are relied upon to store data.
☐	**Medium**	Backups are being made, but the ability to fully restore after a total data loss has not been tested.
☐	**Low**	All essential systems are regularly backed up. Restore capability is tested at least once a year. If data or software damage or loss were to occur, restoring the latest backup or reinstalling the software would be sufficient; the loss of updates since the last backup would be tolerable.
☐	**Addressed**	All essential systems are frequently and automatically backed up to a separate physical location. Restore capability is tested at least once a year. Audit logs or other mechanisms are in place that can back out accidental or malicious changes.
☐	**Addressed**	Not applicable. The systems involved in this project are not the authoritative store of any data. It could be recreated from elsewhere if lost, so no backups are needed. Original software install media and ASU-specific install instructions will be kept in a safe place so that the system can be rebuilt in the event of hardware failure or system corruption.

Additional information (optional)

For the following question, your project has "Mission Critical" components if any of the following are true:

● Any web site associated with this project has a "Tier 1" rating. (The Web Application Security Standard at https://getprotected.asu.edu/sites/default/files/web%20application%20security%20standard.pdf defines these ratings.)

69

- There are regulatory requirements that mandate Disaster Recovery and/or Business Continuity planning.
- Your project sponsor wants this considered a "Mission Critical" system for some other reason (by whatever definition is meaningful to the sponsor).

A plan is recommended whether your project includes Mission Critical elements or not. However, expectations are higher for Mission Critical components.

☐ This project has no Mission Critical components.

Have you documented and tested your disaster recovery and business continuity plan?

☐	**Unknown**	We do not currently know the status of Disaster Recovery and Business Continuity plans.
☐	**High**	This is a Mission Critical project but it doesn't currently have Disaster Recovery and Business Continuity plans.
☐	**Medium**	Disaster Recovery and Business Continuity plans don't exist at this time, however, the project is not Mission Critical.
☐	**Medium**	The Disaster Recovery and/or Business Continuity plans have been drafted, but key elements are missing, for example: redundant systems are not in place, contracts with vendors are not finalized, or the plan has not been tested.
☐	**Low**	All mission critical components have geographically-dispersed redundancy with enough capacity to sustain mission critical operations during an extended loss of the primary systems. Disaster Recovery and Business Continuity plans are in place, complete with any contracts for vendor services during an adverse event. However, these are not regularly tested by staging mock disaster scenarios.
☐	**Addressed**	All mission critical components have geographically-dispersed redundancy with enough capacity to sustain mission critical operations during an extended loss of the primary systems. Disaster Recovery and Business Continuity plans are in place, complete with any contracts for vendor services during an adverse event. Systems, plans, and recovery-critical personnel are tested annually by staging mock disaster scenarios.
☐	**Addressed**	The Disaster Recovery and/or Business Continuity plan has been documented and tested, and there are no Mission Critical components. (Projects with Mission Critical components should choose one of the other answers.)

Additional information (optional)

If this project is "Mission Critical", please upload a copy of your plans to your google Security Review folder and fill in the document name(s) here:

Logging and Alerting

Please see ASU System Audit Requirements Standard http://links.asu.edu/systemauditrequirementsstandard for information about what is required to be logged.

Systems should be designed to recognize and alert on typical attacks. For example, authentication or authorization systems should watch for brute force password attempts or other unauthorized access. Web servers, or protective appliances, should watch for the OWASP Top Ten Vulnerabilities and similar attacks.

Do systems watch for undesirable or unexpected activity and log these events? Do logged events trigger alerts? What happens then?

☐	**Unknown**	The availability of logging is presently not known.
☐	**High**	Some systems do not recognize and log typical attacks, or other unexpected or undesired events.
☐	**Medium**	Potential security events are logged, but there is no human or automated review of those logs to alert on possible problems.
☐	**Medium**	Potential security events are logged, but the logs do not fully comply with the ASU System Audit Requirements Standard http://links.asu.edu/systemauditrequirementsstandard.
☐	**Low**	Logs are maintained in compliance with the ASU System Audit Requirements Standard http://links.asu.edu/systemauditrequirementsstandard, alerts are raised when appropriate, but staff may not be available to respond to the alerts.
☐	**Addressed**	Logs are maintained in compliance with the ASU System Audit Requirements Standard http://links.asu.edu/systemauditrequirementsstandard, events are raised when appropriate, and staff will be available to respond to the alerts throughout the lifecycle of the application.

Additional information (optional)

Software Integrity

Whoever writes your software gains control of your computer, sensitive data, and identity. Thus it is important to be sure the software comes from sources you trust. Verify the origin of software before installing it, and keep it up to date if security fixes have been released.

Current versions should be originally installed, upgrades should be applied when available, and security patches should be applied promptly. During original installation or subsequent updates, controls should be in place to ensure that all software comes from trustworthy authors, and has not been tampered with along the way.

Are current versions of software being deployed? Will upgrades and patches be promptly applied?

☐	**Unknown**	Version and/or patch management information is presently unknown for one or more systems.
☐	**High**	Some systems run outdated versions of their operating system, utilities, or installed applications. Or, systems are initially deployed with current software, but nothing will be in place to keep them current in the future.
☐	**Medium**	There is a capability in place to distribute the most recent software version or updates, but it does not have controls to protect against fake (malicious) updates.
☐	**Low**	Initial install files and/or updates carry a signature (e.g. a hash or checksum) to verify file integrity, but the file must be (and will be) manually checked against a trusted list of valid signatures.
☐	**Addressed**	Software, including operating system, utilities, applications, and any other executable code, is only obtained from trusted sources. It is distributed using mechanisms that automatically ensure it is not altered, for example, files are cryptographically signed or delivered over a channel that ensures end-to-end file integrity. Current versions of software are initially installed. Patching and upgrades are performed regularly and as needed. Patches are automatically verified so that administrators and users cannot be tricked into installing a malicious update.
☐	**Addressed**	This project does not include any new software. Nothing new is installed on user computers or on servers used by this system. There are no new web pages with code that runs on the server (for example, receiving form input) and no new web pages with code that runs on the browser (such as media players, Java, Active X, JavaScript etc.)

Additional information (optional)

ASU's Software Development Life Cycle (SDLC) standard (https://getprotected.asu.edu/sites/default/files/Software_Development_Life_Cycle.pdf) calls for all software development to occur within an SDLC that includes information security controls and separation of duties to help ensure the controls are effective.

Is the software included in this project developed under a written Software Development Life Cycle?

☐	**Unknown**	We do not know if software (including vendor software, ASU developed software, or software obtained from other sources such as libraries or frameworks) is or was developed under the control of a written SDLC.
☐	**High**	One or more software components used within this project have no SDLC.

☐	**Medium**	An SDLC exists, but it is not written, it is not routinely followed, or it does not include security controls.
☐	**Low**	We have evidence that a written SDLC with security controls is routinely followed, however the development organization does not have enough people to implement full separation of duties.
☐	**Addressed**	All software (including vendor software, ASU developed software, and software libraries imported from other sources) is or was developed under the control of a written SDLC which includes security checkpoints and separation of duties to control the advancement of software past those checkpoints.
☐	**Addressed**	This project does not include any new software. Nothing new has to be installed on user computers or on servers used by this system. There are no new web pages with code that runs on the server (for example, receiving form input) and no new web pages with code that runs on the browser (such as media players, Java, Active X, JavaScript etc.)

If you checked one of the answers saying there is a written SDLC, please upload a copy of it to your google Security Review folder and fill in its document name here:

Additional information (optional)

Has the new software developed or purchased in this project undergone vulnerability scanning or penetration testing by an entity other than the developer?

☐	**Unknown**	The status of vulnerability scanning or penetration testing is not known at this time.
☐	**High**	One or more components of new software (other than web sites) have not been vulnerability scanned or penetration tested.
☐	**Medium**	Vulnerability scanning or penetration testing has been performed, but by a member or close affiliate of the development team or vendor, such that its independence is not assured.
☐	**Low**	New software (other than web sites) has been vulnerability scanned or penetration tested by a party independent from the developer or vendor, however some issues remain unaddressed. The project team has evaluated the open issues and does not consider them a risk to ASU (explain in notes below).
☐	**Addressed**	New software (other than web sites) has been vulnerability scanned or penetration tested by a party independent from the developer or vendor, and any issues found have been addressed.
☐	**Addressed**	Vulnerability scanning or penetration testing is not required for this project because there is no new software other than web sites, and the web sites have been scanned for security vulnerabilities.

73

☐	**Addressed**	This project does not include any new software. Nothing new has to be installed on user computers or on servers used by this system. There are no new web pages with code that runs on the server (for example, receiving form input) and no new web pages with code that runs on the browser (such as media players, Java, Active X, JavaScript etc.)

Additional information (optional)

Deprecated or Dangerous Technologies

Frequently an exciting new technical capability is rapidly adopted without due consideration for the security consequences. Hackers begin taking advantage of weaknesses, so some technologies carry added risk. Users can defend themselves by disallowing unwanted technologies, but then some web sites refuse to serve those users until they place themselves at risk again.

Many of these techniques include automatically or manually downloading software from unknown or untrusted authors. Also see the **Software Integrity** section for additional questions that pertain to any executable code that is downloaded or installed such as a plug-in or media player.

Does the project require any of the following technologies in order to make full use of the system?

☐	**Unknown**	We do not know if the project will use any of the technologies listed in this section.
☐	**Medium**	Users are required to enable Java in their web browsers. (Due to a history of many vulnerabilities that go unpatched for months or years, Java has become one of the top malware distribution mechanisms.)
☐	**Medium**	Users are required to permit Active-X controls. (Active-X controls give a web site more control of a user's computer, making it easier for attackers to exploit defects in the operating system, browser, or Active-X control itself. Also, dependence on Active-X locks out users of operating systems and browsers that may be more secure.)
☐	**Medium**	A password protected web site imports JavaScript code or other client-executed code from another web site that is beyond ASU's control. (This makes it possible for the other site's script to perform identity theft against ASU users.) Users are not allowed to use essential features of the site if they protect themselves by disabling JavaScript.
☐	**Medium**	A password protected web site imports JavaScript code or other client-executed code over an http (unencrypted) connection. (This makes it possible for a man-in-the-middle to inject a script to perform identity theft against ASU users.) Users are not allowed to use essential features of the site if they protect themselves by disabling JavaScript.
☐	**Low**	Users are required to enable Flash in their web browsers. (Due to a history of many vulnerabilities that go unpatched for months or years, Flash has become a common malware distribution mechanism.)

☐	**Low**	Users are required to allow pop-up windows in their browsers. (Several popular web browsers now disable pop-ups by default because they have been abused by advertisers and malware.)
☐	**Low**	The web site only allows certain browsers, and refuses service to users of other browsers. (Such web sites frequently lock out users of operating systems and browsers that may be more secure.)
☐	**Low**	Users are required to enable or install other plug-ins or media players not listed above. (Please describe in notes below.)
☐	**Addressed**	The project uses one or more of the above technologies, but they are entirely optional. Users can still accomplish all the functions of the system even if the user shuts off the deprecated technologies.
☐	**Addressed**	The project will not use any of the technologies listed in this section.

Additional information (optional)

Other Risks

If you are aware of other risks you would like to document, describe them here and assign what you think is the appropriate risk rating, considering the classification of the data involved. (Copy and paste a table cell containing the rating you want to apply.)

☐		
☐		
☐		

Additional information (optional)

Risk Score

Total up the boxes checked above. Each question should have at least one box checked.

Risk Rating	Unknown	High	Medium	Low	Addressed
Count of boxes checked					

Approval

Please be aware that if your Risk Score includes any **Red** items, approval of the ASU Provost or CFO may be needed. **Orange** items may require approval of the sponsoring business unit's Dean or comparable leadership.

SECTION XIV- CONTINUED (REFERENCE DOCUMENT #2)

Upon award, the successful Proposer(s) is expected to submit a Security Architecture Diagram.

How to Create a Security Architecture
Diagram Revised 2016-05-27

This describes how to make a Security Architecture Diagram for a security review.

Here is the information you will need to gather to create a Security Architecture Diagram:

- Identify each <u>role</u> your new system will support. A role is a group of users who can all do pretty much the same things. For example your system may offer one collection of services to *students* and other services to *faculty*. These are two roles. Roles may also depend on the type of device being used. For example if mobile devices use an "app" instead of using the web site provided for desktop users, you probably have a *mobile users* role and a *desktop users* role, although different descriptions may be more applicable.

    o Don't leave out the administrators. The *administrator* role is an important part of system maintenance, and privileged roles are an attractive hacker target.

- Identify each <u>endpoint</u> in the system. Each role will be an endpoint, and each type of <u>server</u> is also an endpoint. Endpoints include any device that sends or receives data. But if there are multiple devices that perform the same operation, they can be represented as a single endpoint. For example, we don't need to distinguish each end user computer when they all do the same thing. Similarly, if there is a cluster of identical servers doing the same thing, that's one endpoint.

- Identify each <u>connection</u> between endpoints. If data is moving, there must be a connection to carry it. But unlike a data flow diagram, what matters here is not *which way* the data flows (it might be both ways) but *which endpoint* initiates the connection. Usually a connection is requested by a client (for example, your web browser) and accepted by a server (the web site). The server is <u>listening</u> for connections, usually on a predefined <u>port</u>.

- If you make backups, that is yet another data flow from one endpoint to another. How does the data get there? Show the connection if it is network based, or describe the physical security if sensitive data is moved by hand (e.g. backup tapes to a vault).

- For each server, determine what IP address and/or Fully Qualified DNS hostname will be used by the server, and on what port(s) it will be listening. What protocol is being used to communicate over each connection? Is the data protected in transit? How do the endpoints of the connection authenticate each other? (How do they verify that they have connected to the correct endpoint?)

You are now ready to start making your drawing.

- Choose a symbol to represent the endpoints. Typically this is a box, but it could be something else. Draw a box (if that's your choice) for each endpoint. Again, that would be one box to represent all the users who share a single role, and another box for each server (or group of identical servers). If different users connect to different servers, that would be a distinct endpoint. Don't forget the users! The system can't work without them.

- Label endpoints that are permanent (e.g. servers) with their IP address and/or Fully Qualified DNS hostname*. Users, of course, come and go all the time, and their IP address or name doesn't matter.

- Choose a symbol to represent the connections. Typically this is a line, but it could be something else. Draw a line (or whatever) from each endpoint to each other endpoint with which it communicates.

- Choose a symbol to identify which end of the connection is the client and which end is the server. Remember that the server is passively listening on a port for requests, and the client is initiating those requests. You could represent this, for example, by an arrowhead on the server end of the line, indicating that the client sends a connection request to the server.

- Near the server end of the connection, identify the port number on which the server is listening.

- Indicate the communication protocol used by the connection. For example, a web site may use the http or https protocol. Even for public sites, https is preferred.

- Describe, on the diagram or elsewhere, what type of data is flowing along each connection. Is it confidential? Regulated? If the data is sensitive, describe how it is protected in transit. For example, is it encrypted? Using what type of encryption? Describe any controls to limit who or what can connect and fetch the information.

- If there is confidential or sensitive data, describe how it is protected at each endpoint of the connection. Is it encrypted at rest? If so, how? Is the endpoint protected by a firewall? If so, what does the firewall block or allow? Is the data viewed but not stored (e.g. by a client) so that secure storage is a non-issue?

*See   https://en.wikipedia.org/wiki/Fully_qualified_domain_name

Summary

So for each server (anything that accepts connections) you should have:
- Fully Qualified DNS name and/or IP address

- Description of what it is or what it does (web server? database?)

For each connection you should have:
- Port number where the server is listening

- Protocol (http, ssh...)

- Sensitivity of data flowing across that connection

- Protection of data flowing across that connection, if it is not public (encryption? what type?)

- If the server authenticates the client, how? (User ID and password?)

- If the client authenticates the server, how? (For example https uses a server certificate signed by a known certificate authority, which the client can verify.)

Additional Info

It may also help to distinguish existing endpoints, to which you will merely connect, from new endpoints that will be created as part of your project.

It may also help, if it is not obvious, to briefly describe the role or purpose of certain endpoints. For example: web server, database server, normal user, administrative user -- don't forget to show them too if they use different connections! Use consistent and unique names throughout; don't call it the "data server" here and "MySQL server" somewhere else and "repository" a third place.

It is not necessary to show disk drives that are physically within a single server. However network shares are most likely part of a file server, and the file server should also be shown as a distinct endpoint.

When you are done, save your diagram in a format that will open on other types of computers (e.g. pdf) for people who may not have your software.
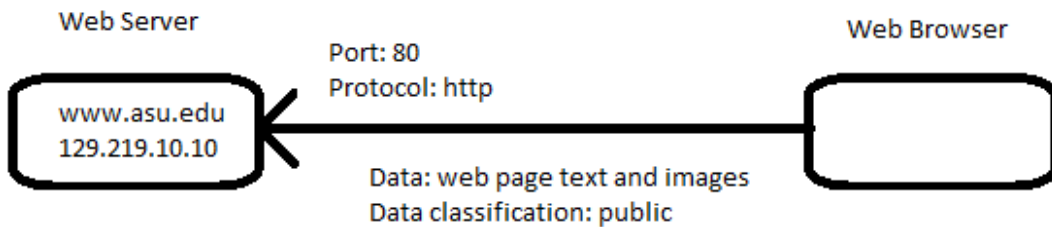
EXAMPLES

Example Security Architecture Diagram
Revised 2015-07-31
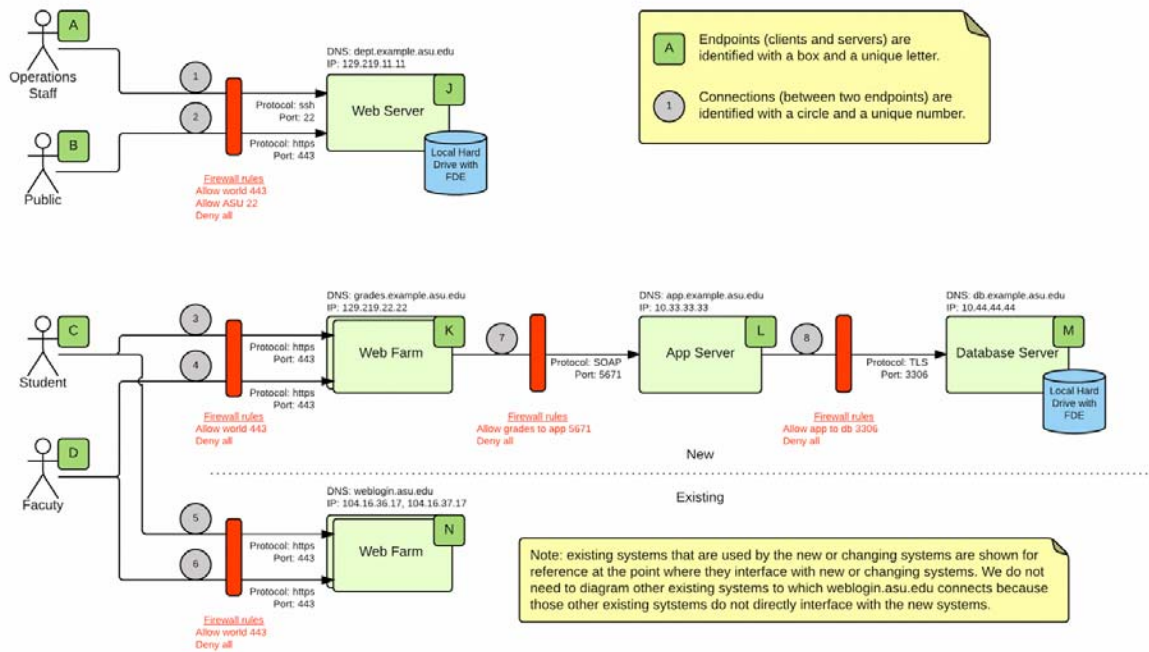
The diagram need not be colorful. Although this diagram (below) is very simple, it conveys all the requested information. Visual appeal can be beneficial, but the factual information is what really matters.

SECTION XV – SUNRISE GENERAL TERMS

1. eProcurement solution (Jaggaer)

Arizona State University (ASU) uses the Jaggaer platform for its eProcurement solution, known as SunRISE. SunRISE is an internet-based procurement tool that facilitates the purchase of goods and services by campus departments ("Customers") from one or more Suppliers. This document provides information on how to conduct business with Purchasing and Business Services through the ASU SunRISE system.

2. Definitions

"Catalog(s)" means a listing of detailed product information, manufacturer part numbers and services descriptions relating to the Supplier's Goods to be offered to a Customer that is maintained either as a Punch-Out Catalog, a Hosted Catalog or in a combination of Punch-Out and Hosted Catalog formats. This may include the creation of multiple Hosted Catalogs.

"Hosted Catalog" means a Catalog that is a properly formatted computer file supplied to Jaggaer and hosted on the Jaggaer site as a part of SunRISE.

"Customer" means any authorized end user.

"SunRISE" or "eProcurement solution" means the University's electronic web-based purchasing and Catalog system licensed by Jaggaer.

"Enabled" means a Customer is able to place an order for applicable Supplier Goods in SunRISE.

"Order" means an order for Supplier Goods placed by a Customer through SunRISE.

"Order Data" means all data and information relating to Orders, including, without limitation, the specifics of a given transaction.

"Other Agreement" means a strategic or master agreement between Supplier and SunRISE.

"Punch-Out Catalog" means a Catalog, hosted by Supplier on the Supplier Site. Customer may access this Punch-Out Catalog via an internet link provided by Supplier to SunRISE that redirects a Customer from SunRISE to the Supplier Site. The Punch-Out Catalog will permit: (a) Customer to access the Supplier Site when a Customer selects the Punch-Out Catalog in SunRISE; (b) Customer to create an Order through SunRISE; (c) SunRISE to forward an Order to the Supplier Site for confirmation and Order processing along with order status inquiry.

"Site" means the Supplier Site and/or SunRISE, as the case may be.

"Supplier Goods" means goods and services marketed or sold by or through Supplier's Catalog, whether or not manufactured by Supplier or bearing a Supplier trademark.

"Supplier Site" means an Internet site operated and maintained by Supplier that has been made subject to this Agreement.

3. Right to Use

SunRISE is the property of ASU and Jaggaer. ASU grants Supplier the right to sell Supplier Goods to Customers through SunRISE. Any cost of operation or dispute with regard to SunRISE is the Supplier's responsibility.

4. **Establishment / Maintenance of Catalog Flags** **(e.g., recycled, sustainable, hazmat, etc…)**
Supplier must provide ASU with Catalogs that contain accurate pricing and data. If ASU determines there are errors in the pricing or data attributes of a Catalog, ASU will notify Supplier of those errors in writing. Supplier shall have two business (2) days to review and correct the errors.

ASU will provide the supplier with a hosted or punchout catalog spot for the initial implementation. If at any time the supplier chooses to migrate to another type of catalog or have a catalog in both environments, the supplier's cost of the implementation will be a one-time fee of $1,800.00.

All Supplier-provided pricing in any Catalogs, whether Hosted or Punch-Out Catalog, shall be total pricing inclusive of all charges with the exception of freight, except as specified in Attachment A.

Supplier may not substitute items, change SKU numbers or the number of items in a package without ASU's prior consent, which means the supplier, must contact the customer/end user.

Supplier understands that the University may have contracts with other vendors, and that some items in Supplier's Catalog may be in conflict with these other vendor agreements. Upon request of the University, Supplier agrees to remove these items from Supplier's Catalog.

The supplier will provide a price file per Attachment A and a new one at each renewal period prior to loading the prices on the punch-out site or hosted price file. The price file must contain at a minimum the following category headers, Product name, product description, product unit of measure, supplier list price and ASU price, manufacturer part number, manufacturer name, UNSPSC codes, and product flag indicators **(e.g., recycled, sustainable, hazmat, etc…)**.

The supplier will provide the following contact types and must keep the contacts current at all times by providing the updates to those listed in number (10) below.
- ASU Representative-main point of contact for issues and questions
- Contracts-someone who has signature authority
- Technical-someone who works with the Jaggaer system

Within sixty (60) days of request from Purchasing, Supplier agrees to complete the following:
- Provide a note to Customers on the Supplier Site (outside of SunRISE) informing Customers that orders must be placed using the supplier catalog via the ASU SunRISE system
- Disable Customer's ability to order directly (outside of SunRISE) on Supplier Site.
- Disable Customer's ability to place orders with Supplier via phone, fax or any other method other than SunRISE, with the exception of emergency orders.

5. **Punch-Out Catalog**
For Punch-Out Catalogs, when mutually agreed to, Supplier will use a Punch-Out Catalog to integrate its existing Supplier Site to the SunRISE system. The parties will use commercially reasonable efforts to electronically link the functionality of each Customer in accordance with the Jaggaer interface requirements.

The Supplier must provide ASU with an updated version of the Price File per Attachment A when new items are added to the punch-out catalog and at each renewal period. Supplier must provide suggested additions, deletions or modifications to ASU thirty (30) days prior to any suggested additions, deletions or modification dates. Upon ASU's approval of such suggested addition, deletion or modification Supplier may make the suggested changes. In any event where there is a conflict between a price in an ASU Punch-Out Catalog, ASU will be invoiced at the lower price.

6. **Hosted Catalog**

For Hosted Catalogs, Supplier must provide ASU with updated versions of the Catalog with, at a minimum, the Supplier's full descriptions and images that Supplier currently utilizes for items offered on its own proprietary Supplier Site(s) and Punch-Out Catalog(s). Supplier must provide suggested additions, deletions or modifications to ASU thirty (30) days prior to any suggested additions, deletions or modification dates. Upon ASU's approval of such suggested addition, deletion or modification, Supplier may make the suggested changes. In any event where there is a conflict between a price in an ASU Hosted Catalog, ASU will be invoiced at the lower price. If the price discrepancy is due to an undisputed delay by ASU in updating a Hosted Catalog, ASU will work with the Supplier to rectify the problem as soon as possible.

7. **Supplier Goods/Pricing**

Supplier will provide Supplier Goods at the pricing described in Attachment A. Special orders or bulk purchases may be quoted to customers individually however the quote must be processed in the SunRISE system by using "Quote to Order" functionality. If the parties agree, new Supplier Goods may be added at any time during the term of this Agreement. In the event that ASU discovers that the pricing for Supplier Goods does not match the pricing described in Attachment A, Supplier agrees to correct the pricing within one (1) business day upon receiving notice from ASU.

8. **Records**

Supplier agrees to maintain an electronic record of each transaction. ASU will be granted reasonable access to the electronic records upon request.

9. **Invoicing**

Supplier must provide invoices to the University directly through SunRISE using one of the following methods: cXML, EDI. Supplier must comply with the format and submission instructions of SunRISE. Supplier must monitor and correct delivery failures of these electronic invoices.

The decision to allow exceptions for Suppliers who are unable to provide invoices via cXML will be made on a case-by-case basis. Suppliers who provide non-cXML invoices must provide detailed invoices at the line item level. ASU will not accept summary invoices. ASU requires the supplier to submit monthly statements along and daily line item detailed invoices.

Invoices must clearly indicate the following information:
- Purchase Order number
- Description, quantity, Catalog number, and manufacturer number of item(s) ordered
- Cost of each item
- Ship To and Bill To
- ASU Account Number

- Any applicable discount

For efficiency purposes, the University desires that only a minimum number of account numbers exist with each SunRISE Supplier. The University prefers to not maintain a separate account number for each individual user or individual department who purchases from SunRISE Suppliers. The University would prefer only one account number per Supplier where possible. In the event that multiple account numbers are required by the Supplier, the Supplier commits to working with the University to reduce the number of separate account numbers to the least number of accounts possible.

10. Point-of-Contact

The individual named below will serve as the Point-of-Contact for day-to-day operations for the Hosted and Punchout Catalogs via the Jaggaer platform.

The Point-of-Contact cannot approve amendments or price changes to this Agreement, which must go through the ASU Buyer managing this contract and the ASU Contracts Group.

Name: Tami Scanlon, Supply Chain Specialist, Sr.
Arizona State University
Purchasing and Business Services
PO Box 875212
Tempe, AZ 85287-5212
Phone: 480.965.0658
Email: tscanlo1@asu.edu
Fax: 480.965.2234

Name: Lorenzo Espinoza, Senior Buyer
Arizona State University
Purchasing and Business Services
PO Box 875212
Tempe, AZ 85287-5212
Phone: 480.965.3849
Email: Lorenzo.Espinoza@asu.edu
Fax: 480.965.2234

Name: Stacie Malekooti, Associate Director
Arizona State University
Purchasing and Business Services
PO Box 875212
Tempe, AZ 85287-5212
Phone: 480.965.8860
Email: Stacie.Malekooti@asu.edu
Fax: 480.965.2234

ATTACHMENT A

INSERT PRICING STRUCTURE HERE
OR
PROVIDE A CD OR FLASH DRIVE

PRICING SHOULD INCLUDE A MINIMUM OF THE FOLLOWING CATEGORY HEADERS

Product name	Description	Unit of Measure	List Price	ASU Price	Mfg Part Number	Mfg Name