University of Pittsburgh

3rd Party Risk Review Process

June 15, 2018

Agenda

- Use of third party vendors
- Need to assess risk
- Assessment methodologies
- Challenges
- PITT's process (past, now, future)
- Recommendations
- Questions

Use of third party vendors

Support scientific work on cyberinfrastructure

Examples:

- Globus
- Fisher Scientific
- Qualtrics
- AWS/Google/Azure
- Electronic Lab Notebooks
- Bill & Ted's Excellent Web Developers

Need to assess risk

- **Everyone has breaches**
- Will the vendor protect your information?
- Does your vendor have sufficient security to detect if/when they have a breach?
- Can you trust your vendor to notify you if/when they have a breach involving your information?

Goals of security assessment

- Be affordable
- Ensure all vendors are regularly assessed
- Provide reliable results that that support risk-based decisions

Assessment Methodologies

- Vendor self-assessment (SIG, HECVAT, NIST RMF, OCTAVE)
- Security ratings (BitSight/SecurityScorecard)
- Security Audit/Certification (SOC2, ISO, NIST 800-53/171, COBIT, FedRAMP)
- Vulnerability assessments
- Questionnaires

Pitt's process - Past

- Questionnaire based off ISO 27001 controls (loosely)
- Word Document
- All vendors got the same questionnaire

Application and Information Access Control - Sensitive System Isolation	a) Describe your network configuration. b) Are systems and networks that host, process and or transfer sensitive information 'protected' (isolated or separated) from other systems and or networks? c) Are internal and external networks separated by firewalls with access policies and rules? c) Is there a standard approach for protecting network devices to prevent *unauthorized* access/ network related attacks and data-theft?
Encryption	a) Describe how encryption is used to protect data at rest and data in transit. (Include protocols, algorithms and bit strengths). b) Describe how your private keys are protected and who has access to them.
Vulnerability Assessment and Remediation	a) How often do you perform periodic vulnerability scans on your information technology systems, networks and supporting security systems? b) Has any in-house written application undergone a source code security review? c) Are those scans performed internally or by an independent third-party? d) What is the security patch management criteria used to prioritize vulnerability remediation? e) What is the frequency for routine patch deployment?
Network Monitoring	a) Are connections to your network monitored and reviewed to confirm only authorized access and appropriate usage? (This includes internal and external connections) b) How long are those logs retained?

Pitt's process – Past (continued)

Not risk based – low risk engagements were treated the same as high risk

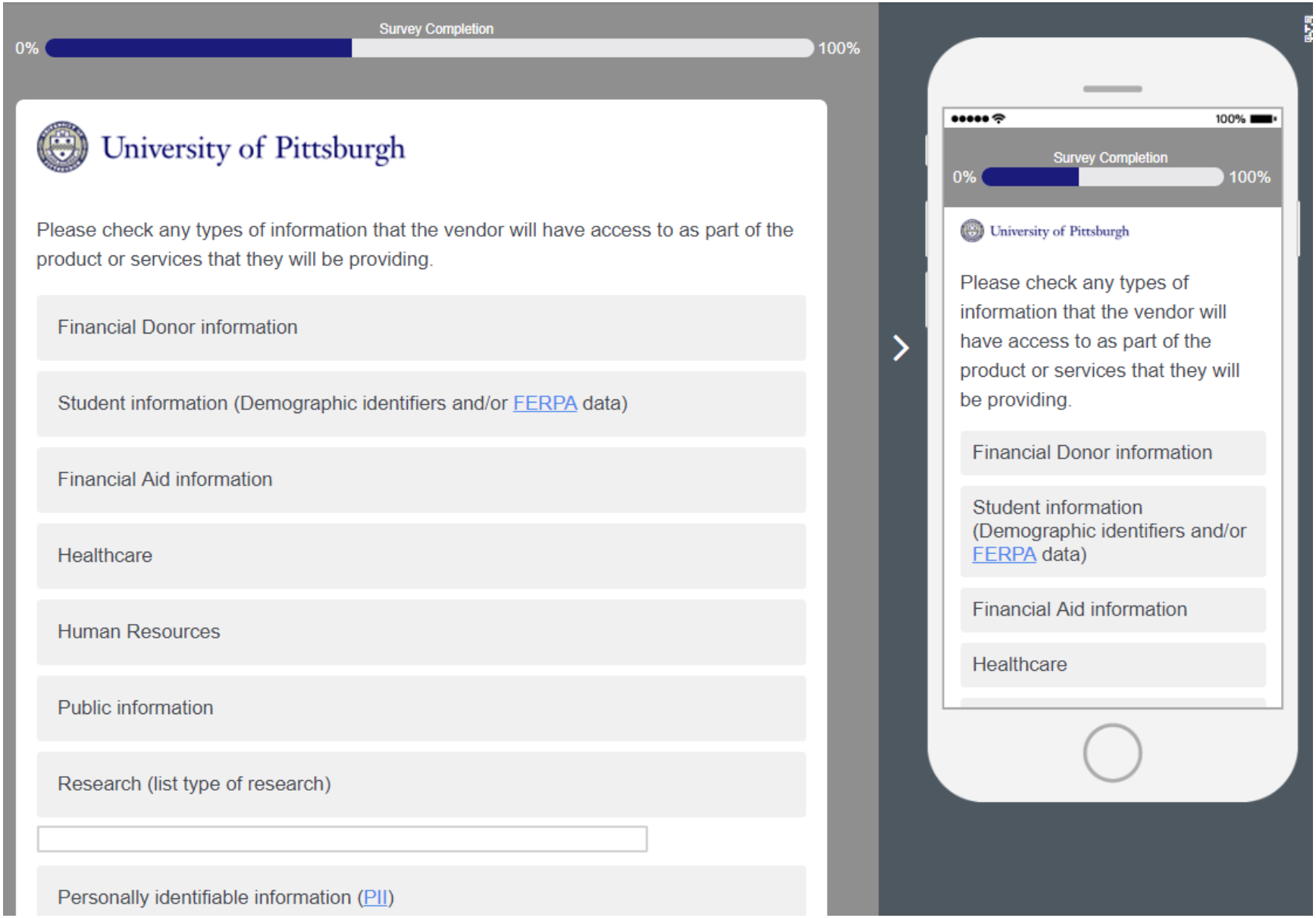
Process not formalized, publicized or enforced

No recurring assessments

No formal scoring

Pitt's process - Current

- Questionnaire - Based on NIST 800-171
- Online (Qualtrics)
- Risk based – low risk vs high risk
- Different assessment based on risk
- More formal scoring
- Onboarding process more formalized


Survey Completion
0%
100%
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Please check any types of information that the vendor will have access to as part of the product or services that they will be providing.
Financial Donor information
Student information (Demographic identifiers and/or FERPA data)
Financial Aid information
Healthcare
Human Resources
Public information
Research (list type of research)
Personally identifiable information (PII)
100%
Survey Completion
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100%
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Financial Aid information
Healthcare

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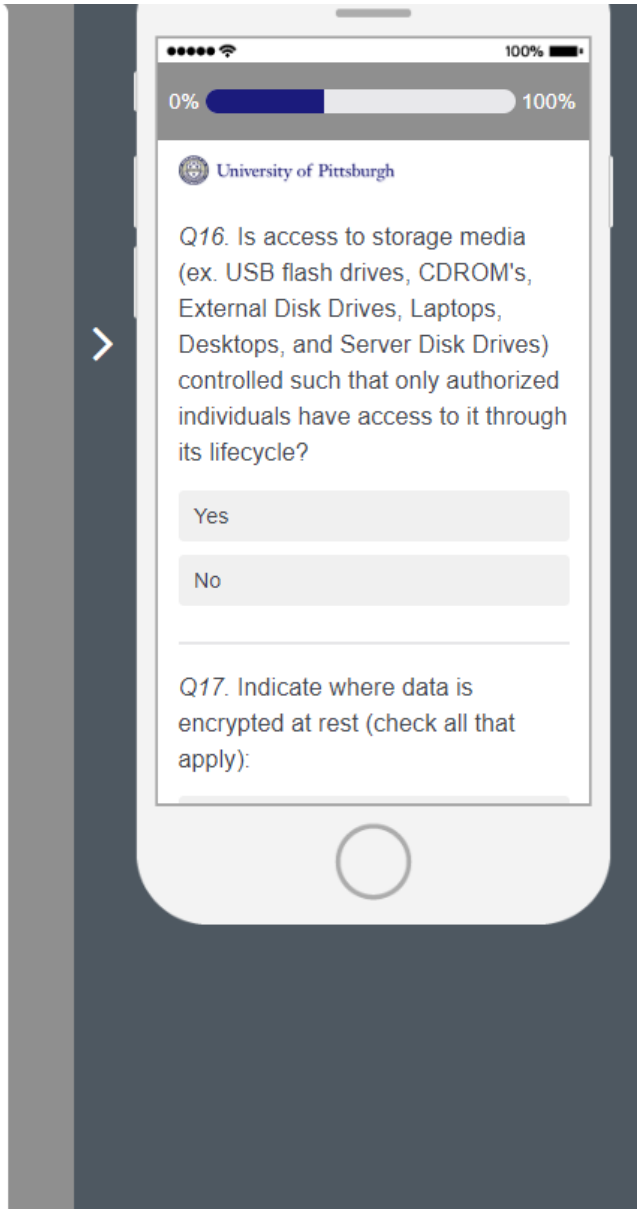
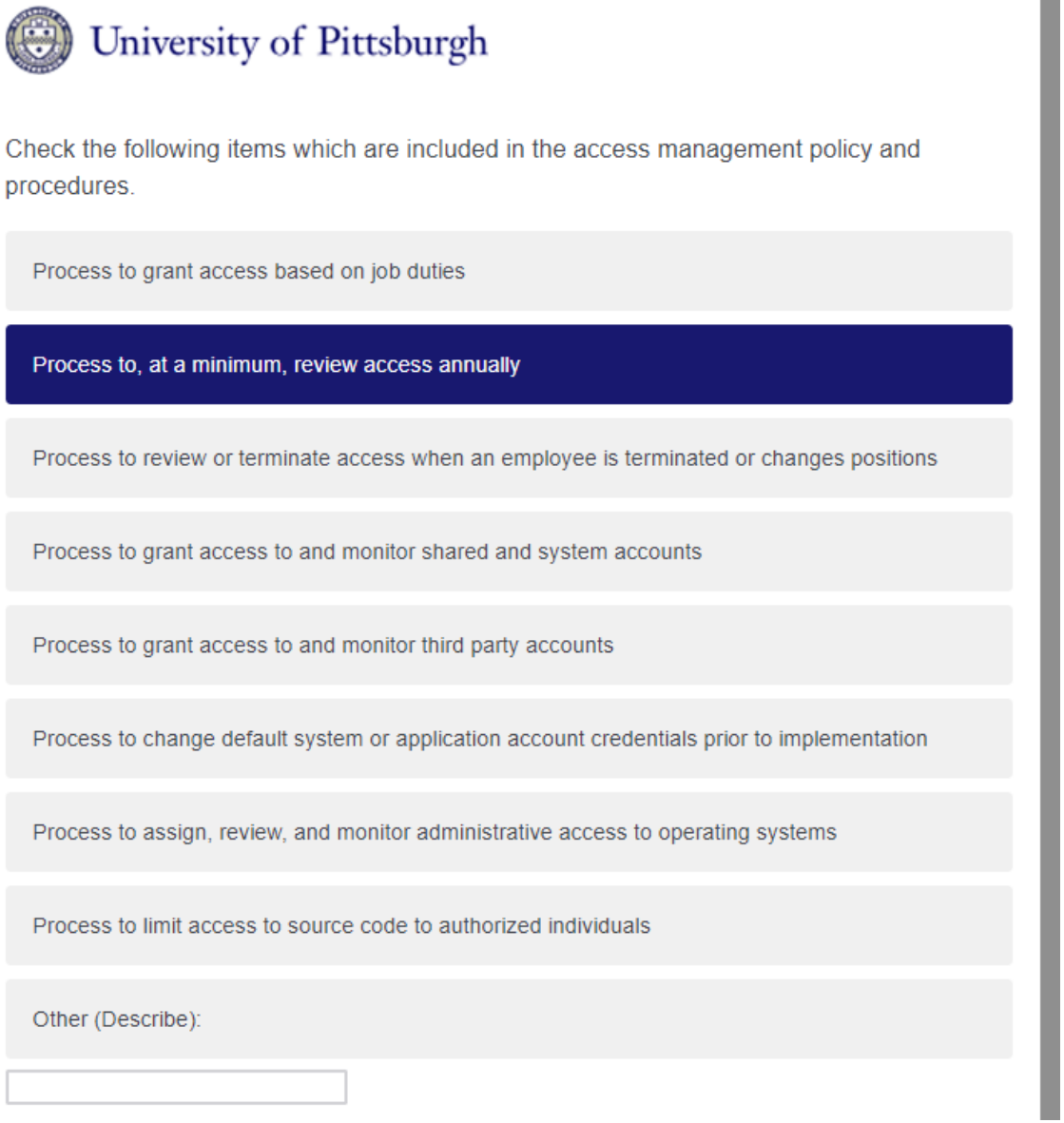
Q16. Is access to storage media (ex. USB flash drives, CDROM's, External Disk Drives, Laptops, Desktops, and Server Disk Drives) controlled such that only authorized individuals have access to it through its lifecycle?

- Yes
- No

Q17. Indicate where data is encrypted at rest (check all that apply):

- Server
- Desktops
- Laptops
- Portable Storage (i.e. USB, CDROM, External Hard Drives, etc)
- Smart Phones & Tablets
- Other

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Check the following items which are included in the access management policy and procedures.
Process to grant access based on job duties
Process to, at a minimum, review access annually
Process to review or terminate access when an employee is terminated or changes positions
Process to grant access to and monitor shared and system accounts
Process to grant access to and monitor third party accounts
Process to change default system or application account credentials prior to implementation
Process to assign, review, and monitor administrative access to operating systems
Process to limit access to source code to authorized individuals
Other (Describe):

Pitt's process - Future

- Formal University Procurement Policy
- Better data management
- Continuous vs point in time assessments
- Automated scoring

"Weak but continuous assessment processes are more reliable than rigorous assessments conducted once" - Gartner

Recommendations

- Develop ‘some’ process
- Decide what you want to accomplish
- Risk based –

  level of effort to assess and remediate risk should be commensurate with the threat to your institution

Questions???

Thank You