Alexandria Fontana & Samantha Torrez

#### Tandem Risk Assessment Pre-Conference



TANDEM

1

#### **Pre-Conference Agenda**

TANDEM RISK ASSESSMENT PRECONFERENCE

- 8:30 AM 10:00 AM: Information Security Risk Assessment
- 10:15 AM 11:30 AM: Internet Banking Risk Assessments
- 11:30 AM 12:30 AM: Break
- 12:30 PM 2:00 PM: Information Asset Risk Assessments

Full agenda can be seen at <a href="https://go.tandem.app/keys/">https://go.tandem.app/keys/</a>



SAMANTHA TORREZ

#### Information Security Risk Assessment with Tandem



3

#### **Disclaimer**

A FEW THINGS FIRST

#### This presentation is for information only.

Evaluate risks before acting based on ideas from this presentation.

#### This presentation contains opinions of the presenters.

Opinions may not reflect the opinions of Tandem.

#### This presentation is proprietary.

Unauthorized release of this information is prohibited. Original material is copyright © 2022 Tandem.





#### Samantha Torrez

TANDEM SOFTWARE SPECIALIST CSXF



5

#### **Agenda**

INFORMATION SECURITY RISK ASSESSMENT

- What is the Information Security Risk Assessment?
- · Answering the Questionnaire
- Documenting Location Information
- Reviewing Questionnaire Results
- Reviewing Threats
- Creating Risk Management Plans





# What is the Information Security Risk Assessment?

INFORMATION SECURITY RISK ASSESSMENT

7

..." designed to identify threats that could result in the unauthorized disclosure, misuse, alteration, or destruction of financial institution or customer sensitive data."

What is the Information Securi Risk Assessment?



#### **History of the ISRA**

WHAT IS THE INFORMATION SECURITY RISK ASSESSMENT?

#### Each Financial Institution Shall:

- Identify reasonably foreseeable threats
- Assess the likelihood and potential damage of threats
- Assess the sufficiency of controls



Gramm-Leach-Biliey Act (1999)
Interagency Guidelines Establishing Information Security Standards (2001)
FDIC 12 CFR Part 364 Appendix B III B (Assess Risk)
OCC 12 CFR Part 30 Appendix B III B (Assess Risk)
NCUA 12 CFR Part 748 Appendix A III B (Assess Risk)
FRB 12 CFR Part 208 Appendix D-2 III B (Assess Risk)

KEYS

#### **Information Security Program**

WHAT IS THE INFORMATION SECURITY RISK ASSESSMENT?









#### What's in the questionnaire?

ANSWERING THE OUESTIONNAIRE

Section	Completed
Structure and Responsibility	4/4
Size and Complexity	9/9
General Controls - 1	20/20
General Controls - 2	19/19
General Controls - 3	25/25
Previous Experience - 1	19/19
Previous Experience - 2	18/18
Natural Disaster/Elemental	14/14
Contractual, Legal and Regulatory	8/8
Audit and Security Testing	11/11
Security Awareness Training	6/6

- Asset Size
- · Password Complexity / MFA Rules
- Employee Training
- Remote Deposit Capture Procedures
- DDoS Response
- Supply Chain Tracking



13

#### Why should I use the questionnaire?

ANSWERING THE QUESTIONNAIRE

1

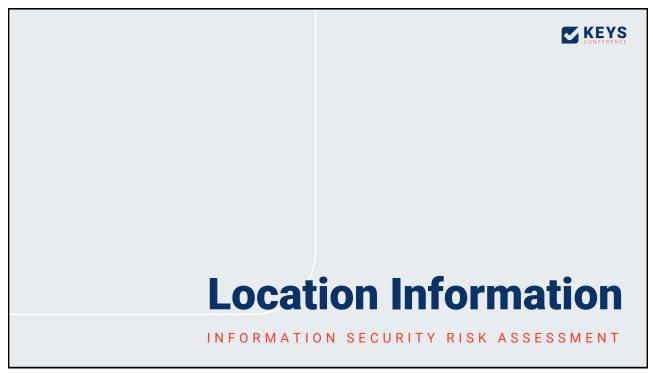
Starting Point 2

Additional Threats 3

Easily Updated 4

Suggested Residual Risk





#### What is the purpose of Locations?

LOCATION INFORMATION

- Hazard Reporting
- Threat Recommendations
- Threat Options
- Data Pulled for Critical Locations



#### What are some other Location type threats?

LOCATION INFORMATION

#### Crime Threat: Fraud The table below lists the answers and their effect on the levels for this threat. Likelihood Question / Crime Data / Storm Data Answer Damage How many employees does the bank have? 1-49 \$100-\$500 What is the bank's total assets (in millions)? In the last 12 months, has the bank experienced any unauthorized ation of hardware, software, or information with the intent of financia gain for the perpetrator? Does the bank use anti-fraud software? Average burglaries per year Average larceny-thefts per year 0.052789

Storm Threat: Snow/Ice Storm

Snow / Ice Storm

The table below lists the answers and their effect on the levels for this threat.  $\land$  = Increase and  $\lor$  = Decrease

 Question / Crime Data / Storm Data
 Answer
 Likelihood
 Potential Damage

 Average snow/ice storms per year
 3.2
 ^



17

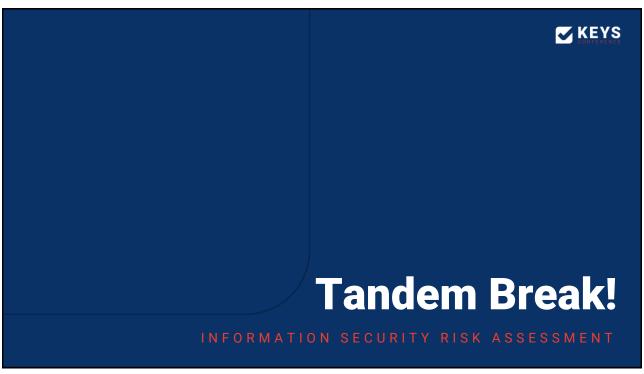
#### Where is this data pulled from?

LOCATION INFORMATION

- Federal Bureau of Investigation (FBI)
- National Oceanic and Atmospheric Administration (NOAA)
- Data Referenced for the Previous Year
- Annually Updated in Tandem November December
- Not All Locations Provide Information

Storm and Crime Statistics in Tandem









How do I review the results?

REVIEWING QUESTIONNAIRE RESULTS

The table below lists the answers and their effect on the levels for this threat Potential Ouestion / Crime Data / Storm Data Answer Likelihood Damage How many locations does the bank have? Regarding fire detection and prevention, select all that apply: The bank has a fire suppression system (e.g., fire sprinklers, etc.) Regarding fire detection and prevention, select all that apply: The bank has fire extinguishers. Regarding fire detection and prevention, select all that apply: Inspection of fire extinguishers are current. Is it reasonable to believe the backup media location would be susceptible to disruption by the same natural disaster event (e.g., tornado, hurricane, fire, etc.) as the data center? 0.909090909 Average wild and forest fires per year Average arson related crimes per year 0.000401

#### Look for:

- The Question(s) / Crime Data / Storm Data affecting the threat
- If the answer / data increased or decreased the Likelihood and Potential Damage



#### **How Questions & Stats Work Together**

REVIEWING QUESTIONNAIRE RESULTS

- More branches = higher likelihood & higher risk
- Fire prevention practices reduce risk
  - · Fire Suppression System
  - · Fire Extinguishers
  - Inspection
- Backup data at separate location
- · Wildfires / Forest Fires
- Arson





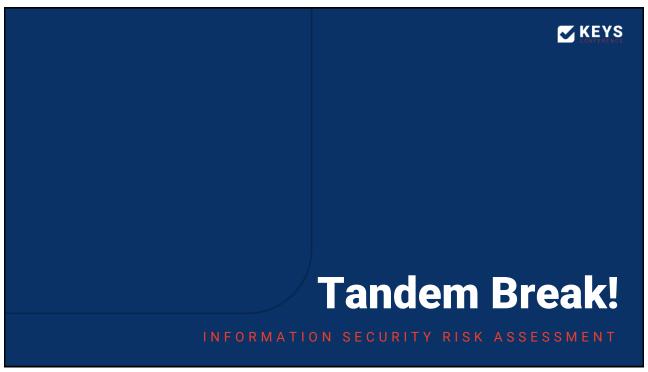
23

#### **Approving Suggested Residual Risk**

REVIEWING QUESTIONNAIRE RESULTS





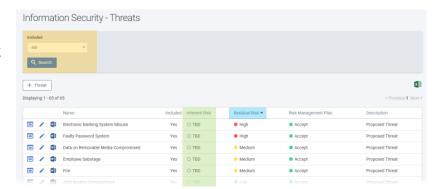




#### Where should I start?

REVIEWING THREATS

- Enable Inherent Risk
- · Sort by Residual Risk
- Use Included Filter
- Start with Familiarity





27

#### What should I be reviewing in my threats?

REVIEWING THREATS



Title, Details, and Included



Threat Category & Threat Type



Inherent Risk



Controls & Residual Risk



REVIEWING THREATS

In the ISRA, adjusting controls will not automatically adjust your residual risk.

When you adjust controls, be sure to also adjust your risk.

**KEYS** 

29

### Why are policies suggested as controls?

1

High Level Risk Assessment 2

Define Control
Environment

3

Your Practices Impact Risk

FFIEC Information Security Booklet, II.C.1 - Policies, Standards, and Procedures



#### Why are policies suggested as controls?

REVIEWING THREATS

"Policies, standards, and procedures should define the institution's control environment through a governance structure and provide descriptions of required, expected, and prohibited activities"

FFIEC Information Security Booklet, II.C.1 - Policies, Standards, and Procedures



31

#### What should I be reviewing in my threats?

REVIEWING THREATS



Title, Details, and Included



Threat Category & Threat Type



Inherent Risk

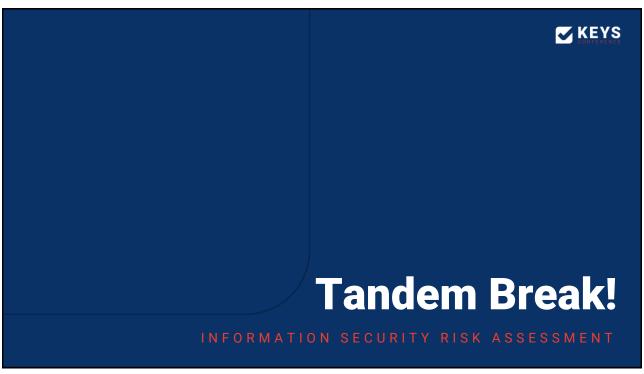


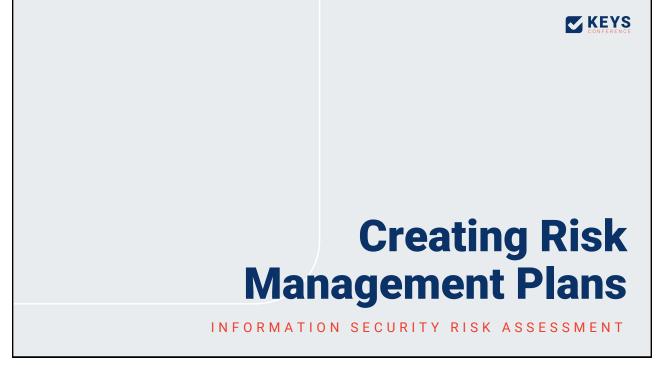
Controls & Residual Risk

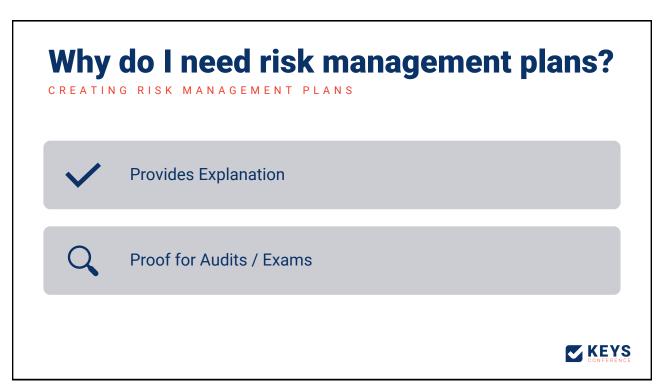


Verifications & Potential Impacts











#### What should be included in my RMP?

CREATING RISK MANAGEMENT PLANS

- · Recommended when choosing anything other than "Accept"
  - · Details can still be listed for "Accept"
- · Additional Mitigation Plans
- Control Details
- · Options for Transferring & Deferring Risk

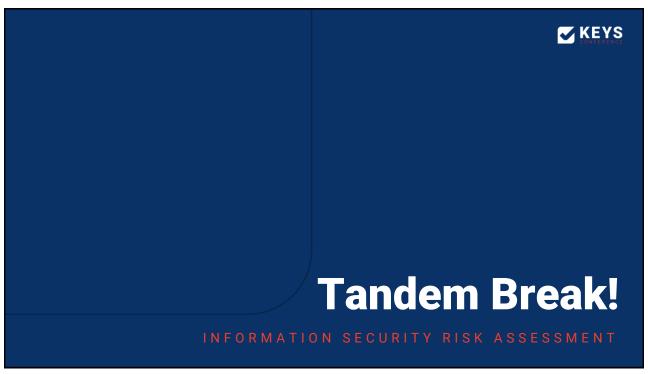


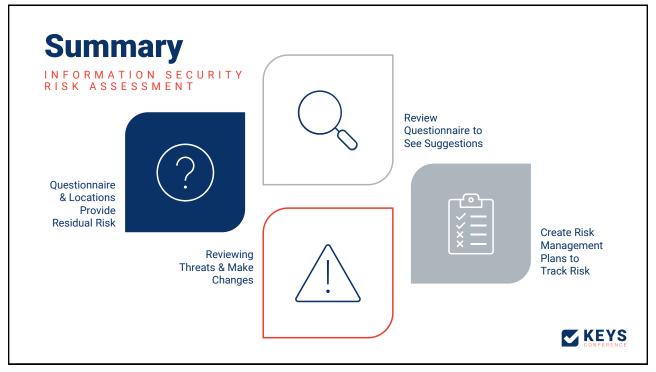
37

CREATING RISK MANAGEMENT PLANS

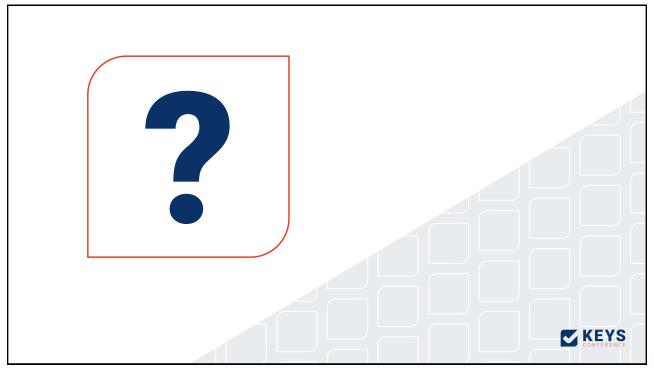
Your risk management plans should cover how you plan to handle the risks your institution faces.











ALEXANDRIA FONTANA

# Internet Banking Risk Assessments with Tandem



43



#### Alexandria Fontana

TANDEM SOFTWARE SPECIALIST CSXF



#### **Agenda**

INTERNET BANKING RISK ASSESSMENTS

- Questionnaires
- Internet Banking Risk Assessment Examples
- Customer Education
- Tandem's Response to FFIEC Updates (Authentication & Access Guidance)



45



### **Internet Banking Admin Questionnaire**

INTERNET BANKING RISK ASSESSMENTS

#### What's the focus of this questionnaire?

INTERNET BANKING ADMIN OUESTIONNAIRE

- Organization Size & Complexity
   Previous Experience
- Internal Controls
  - Segregation of E-Banking Duties
  - Social Engineering Training
  - Backup Media Encryption
- Vendor Management
  - Reviewing Internet Banking Vendors

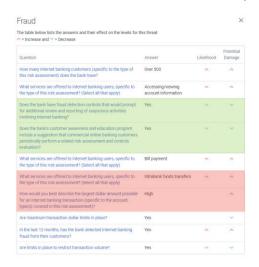
- - · Internet Banking Misuse Experience
- Audit and Security Testing
  - · Audits, Vulnerability Assessments, Social Engineering Tests



47

#### **What the Questionnaire Does**

INTERNET BANKING ADMIN QUESTIONNAIRE



#### **Review Questionnaire Results**

- Which answers increased my residual risk?
- Which answers decreased my residual risk?
- What is the overall residual risk?



#### **Threats - Internet Banking Admin**

INTERNET BANKING ADMIN QUESTIONNAIRE



Exploitation by Cyber Attack



Inadequate Vendor Management



Software Problem or Failure



Vishing



49

#### **Controls for Internet Banking Admin**

INTERNET BANKING ADMIN QUESTIONNAIRE

- Mostly "Policies" as Controls
- Controls Used:
  - Acceptable Use of Information Assets Policy
  - Employee Security Awareness Training Policy
  - Intrusion Detection / Prevention System
  - Vulnerability and Patch Management Policy

Training Your Employees with Tandem

> THURSDAY 9:10 AM TANDEM TRACK





#### Internet Banking Customer Questionnaire

INTERNET BANKING RISK ASSESSMENTS

51

#### What's the focus of this questionnaire?

INTERNET BANKING CUSTOMER QUESTIONNAIRE

- Organization Size & Complexity
   Customer Awareness and
- Authentication Controls
  - Methods Used to Authenticate Users
  - Challenge Questions
- General Controls
  - Transaction Limits
  - Review of Transactions

- Customer Awareness and Education
- Previous Experience
- Contractual, Legal, and Regulatory
- Audit and Security Testing

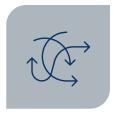


#### **Threats - Internet Banking Customer**

INTERNET BANKING CUSTOMER QUESTIONNAIRE



Man-in-the-Browser (MIB) Attack



Pharming



SMSishing (SMS Phishing)



Website Spoofing



53

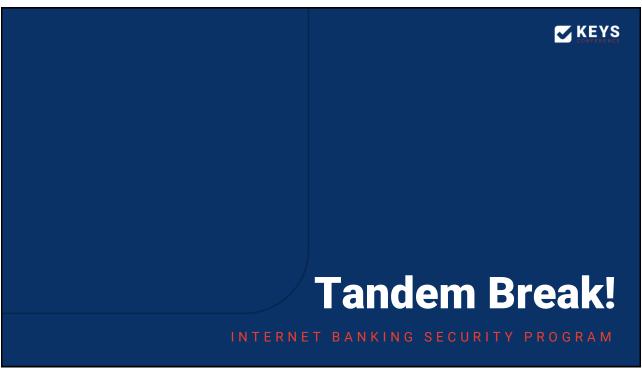
#### **Controls for Internet Banking Customer**

INTERNET BANKING CUSTOMER QUESTIONNAIRE

- Customer Awareness and Education
- Day / Time Restrictions
- Multi-Factor Authentication
- User Session Timeout









### Internet Banking Risk Assessment Examples

INTERNET BANKING RISK ASSESSMENTS

# When do I use these questionnaires? Internet Banking RISK ASSESSMENT EXAMPLES Internet Banking Admin 2 Commercial Internet Banking Retail Internet Banking 3

57

#### What is commercial internet banking?

INTERNET BANKING RISK ASSESSMENT EXAMPLES

"Electronic payment system that enables business banking customers to conduct a range of financial transactions through the website by connecting to a core banking system"

https://www.lawinsider.com/dictionary/corporate-internet-banking



#### What is retail internet banking?

INTERNET BANKING RISK ASSESSMENT EXAMPLES

"Banking that provides financial services to individual consumers rather than businesses"

https://www.investopedia.com/terms/b/business-banking



59

INTERNET BANKING BISK ASSESSMENT EYAMDIES

Answer the questions based on what you're assessing – either retail or commercial services.

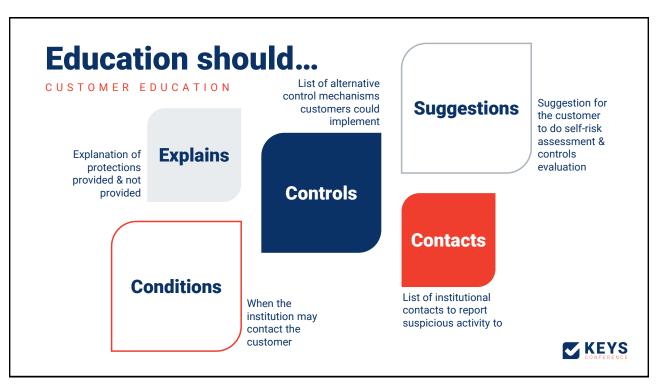




WHY DO I NEED CUSTOMER EDUCATION?

# Recommended by FFIEC Supplement to Authentication in an Internet Banking Environment Booklet







#### **Online Banking Security Tips**

CUSTOMER EDUCATION

- Mobile Device Security
  - Require Passcode
  - Keep software up-to-date
  - Sign-out of apps
- Online Security
  - · Don't click suspicious / unknown links
  - Website Encryption
  - Don't use public devices

- General PC Security
  - Up-to-date antivirus
  - Utilize Firewalls
  - · Require Password
- Passwords
  - Different Passwords for Different Accounts
  - Long Passwords
  - Avoid using common information



65

THE RISK ASSESSMENT & CONTROL EVALUATION

# Intended to "help commercial internet banking users identify threats and measure the strength of their controls".

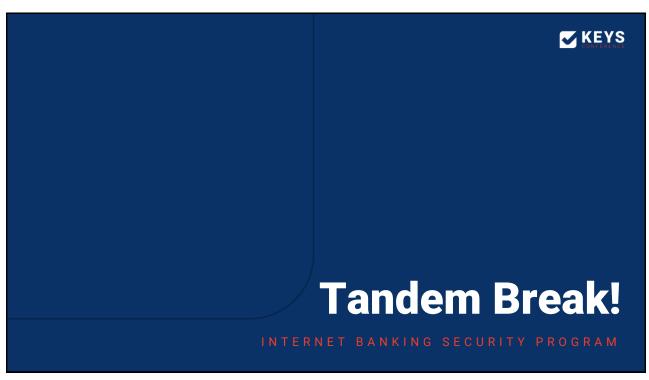


#### **The Risk Assessment & Control Evaluation**

- Questions about:
  - Personnel Security
  - System Security
  - Physical Security
  - Previous Experience



67





## Tandem's Response to FFIEC Updates

Internet Banking Risk Assessments

69

#### **What FFIEC Updates?**

TANDEM'S REPSONSE TO FFIEC UPDATES

#### FFIEC Authentication and Access to Financial Institution Services and Systems Guidance

- Replaces previous documentation (2005 & 2011)
- Current Cybersecurity Threat Environment; Increased Remote Access
- · Importance of risk assessments for authentication practices
- Emphasis layered security; importance of MFA
- Examples of Authentication Controls

https://www.ffiec.gov/press/pr081121.htm



#### **How will Tandem Respond?**

TANDEM'S RESPONSE TO FFIEC UPDATES













Questionnaires

Threats

Controls

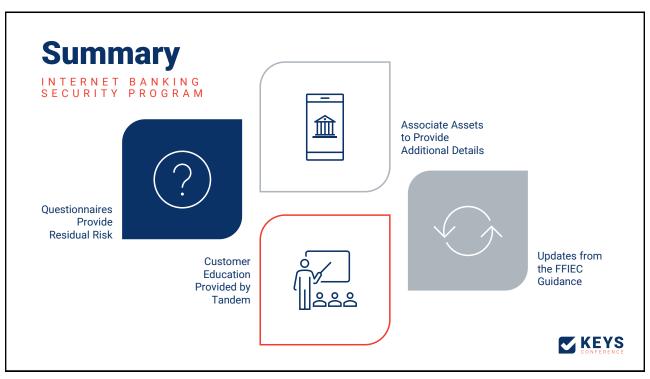
Document Introductions

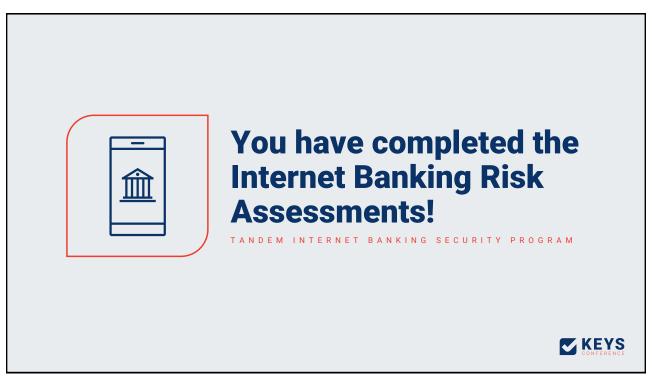
Customer Education Resources

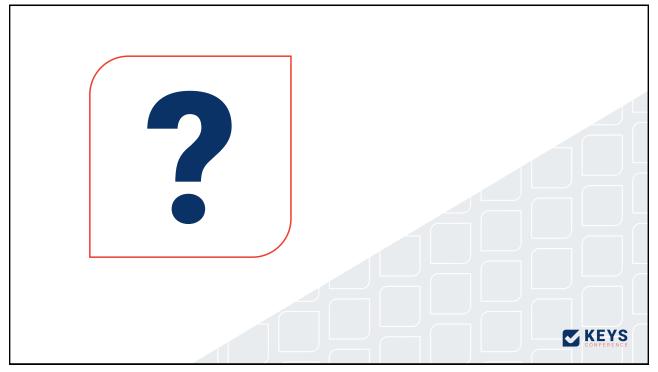
New Terminology & Considerations from Guidance



71







Samantha Torrez

### Asset-Based Risk Assessments with Tandem



75

### **Agenda**

ASSET-BASED RISK ASSESSMENTS

- Difference Between Asset Based vs Questionnaire Based
- Managing Information Assets
  - Data Classifications & Data Types
- · Importance of Associations, Custom Fields, and Security Requirements
- Risk Assessment Types
- Applying Threats & Controls
- Integrations with other Tandem Products





### Difference Between Asset & Questionnaire Based Assessments

Asset-Based Risk Assessments

77

### What's the difference?

DIFFERENCE BETWEEN ASSET BASED & QUESTIONNAIRE ASSESSMENTS

### **Questionnaire Based:**

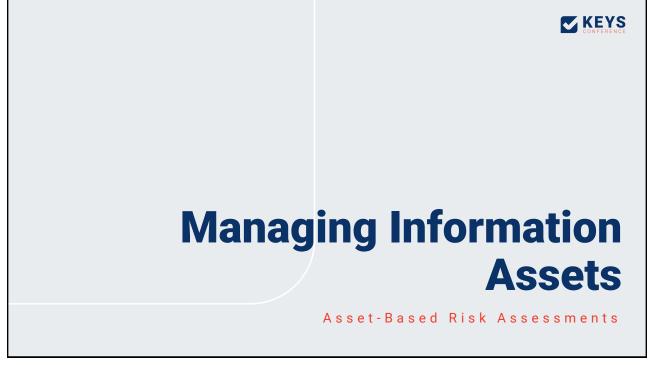
- Use Ouestionnaires
- No Risk Assessment Types
- Risk based off Questionnaire & Location Results
- High-Level Overview of Risk
- Policies
- No Control Reduction Values

### **Asset Based:**

- No Questionnaire
- Use Risk Assessment Types
- · Risk based off Assets / RA Type
- · Specific Threats & Controls Applied
- Controls
- Control Reduction Values Applied







MANAGING INFORMATION ASSETS

## An information asset is anything that accesses, stores, transmits, or protects information.

KEYS CONFERENCE

81

### **Examples of Information Assets**

MANAGING INFORMATION ASSETS



ACH System



**Employees** 



Mobile Devices



Remote Work



Wire Transfer System



### FFIEC AIO BOOKLET:

"Data identification and data classification are important components of data management. To effectively manage data, it is important to identify what data the entity has, particularly to identify sensitive customer and entity information."



83

### **Data Classifications**

KEYS CONFERENCE

MANAGING INFORMATION ASSETS

### **Public**

"Data types should be classified as "Public" when the unauthorized disclosure, alteration, or unavailability of the data would result in little or no risk to the institution or its customers."

### **Private**

"Data types should be classified as "Private" when the unauthorized disclosure, alteration, or unavailability of the data could result in a moderate level of risk to the institution or its customers. By default, all data types should be considered "Private," unless otherwise classified."

### Restricted

"Data types should be classified as "Restricted" when the unauthorized disclosure, alteration, or unavailability of the data could cause a significant level of risk to the institution or its customers."

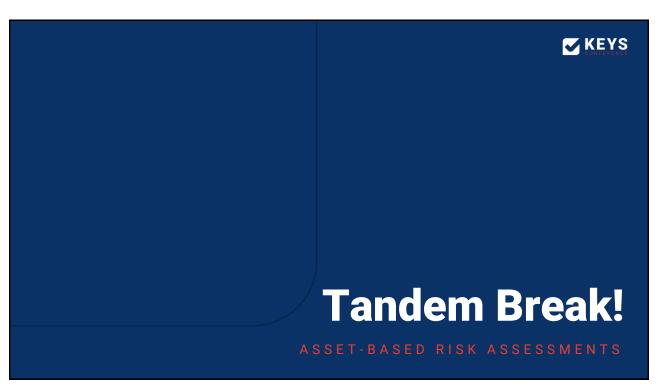
### **Data Types**

MANAGING INFORMATION ASSETS

- ACH Origination (Restricted)
- Backup Files (Restricted)
- Contact Information (Public)
- Employee Applications (Private)
- · Loan Files (Restricted)
- Wire Transfer Information (Restricted)



85





### Associations, Custom Fields, and Security Requirements

Asset-Based Risk Assessments

87

### When should I use Associations?

ASSOCIATIONS, CUSTOM FIELDS, AND SECURITY REQUIREMENTS

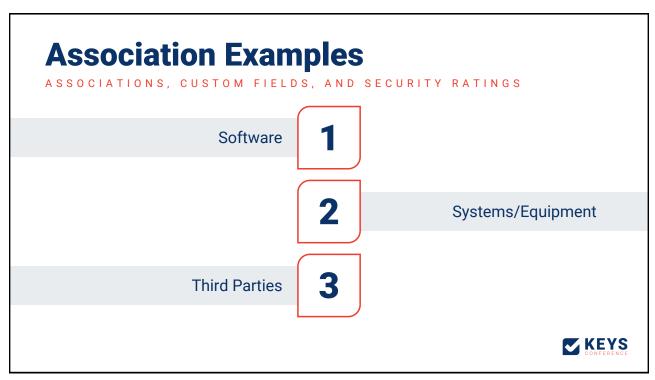


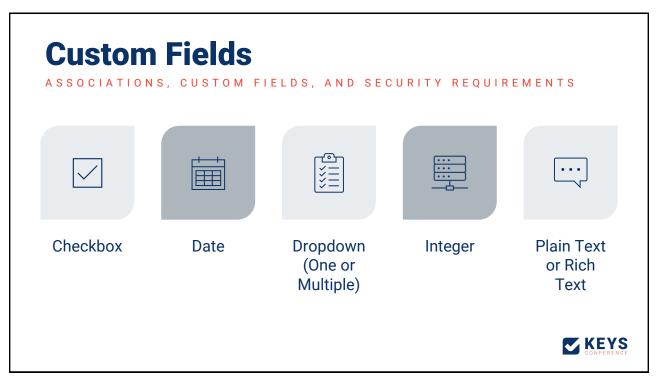
Use Associations to show if the asset contains data that is needed by your organization for business continuity purposes.

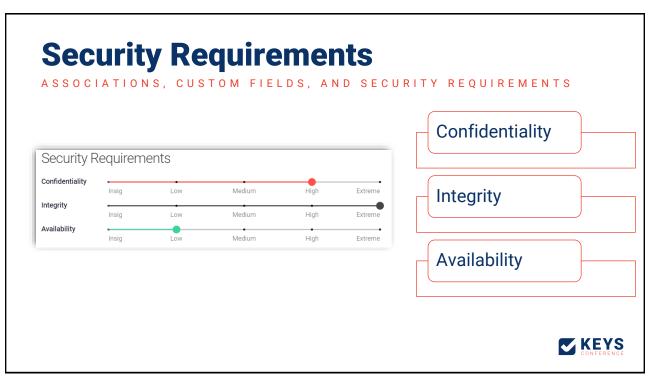


These associations should impact your asset's "Availability" rating









### **Why are Security Requirements important?**

ASSOCIATIONS, CUSTOM FIELDS, AND SECURITY REQUIREMENTS



- Security Requirements rate the importance of your assets.
- At a minimum, do risk assessments over assets with a CIA rating over 75.



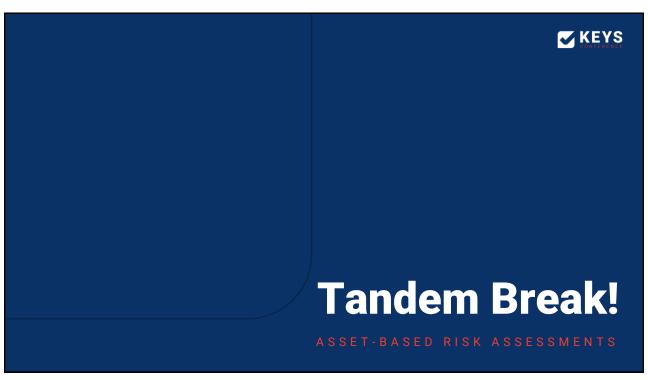
### Why are Security Requirements important?

ASSOCIATIONS, CUSTOM FIELDS, AND SECURITY REQUIREMENTS



- Security Requirements rate the importance of your assets.
- At a minimum, do risk assessments over assets with a CIA rating over 75.







### Risk Assessment Types

Asset-Based Risk Assessments

95

### **What are Risk Assessment Types?**

RISK ASSESSMENT TYPES



"Risk Assessment
Types are templates
that provide an initial
list of threats and
controls based on the
asset for which they
were designed."

Risk Assessment > Assets > Risk Assessment > "+"

Create a New Risk
Assessment

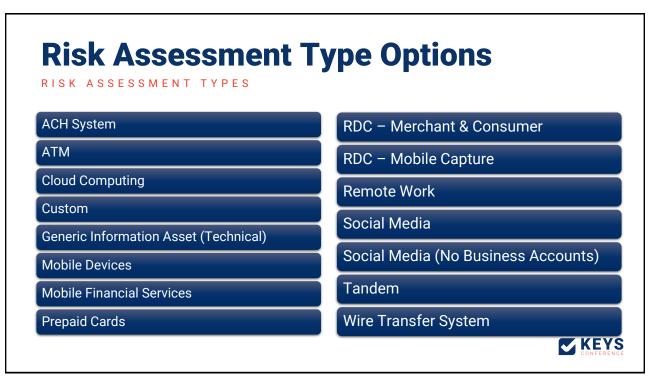
Click the Continue button below to create a new risk assessment for this information asset and open the risk assessment.

Note: The new risk assessment will be named the same as this asset.

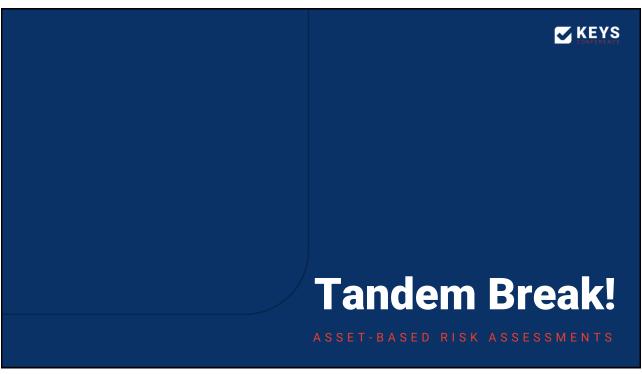
Risk Assessment Type\*

Generic Information Asset (Technical) \*









aa



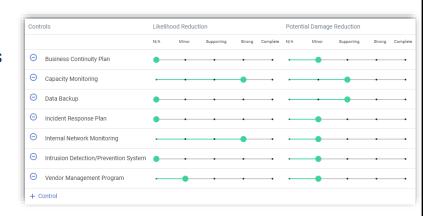




### **What's different about Controls?**

APPLYING THREATS & CONTROLS

- How much does this control <u>reduce</u> <u>the likelihood</u> of this threat from happening?
- How much does this control <u>reduce</u> <u>the potential</u> <u>damage</u> this threat could cause?



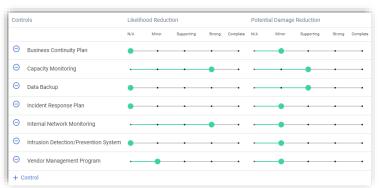


103

### **What are Control Reduction Values?**

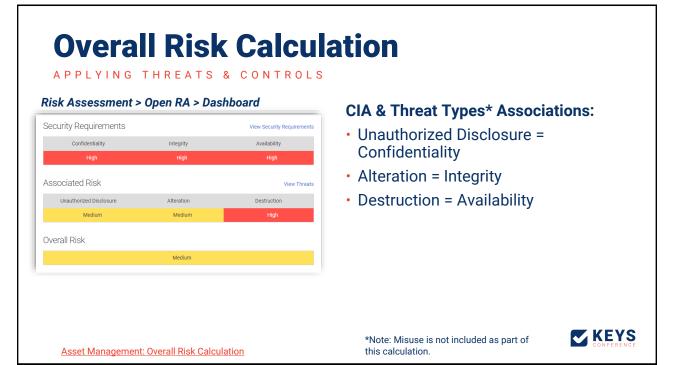
APPLYING THREATS & CONTROLS

- N/A: No effect on reducing risk.
- Minor: Can slightly reduce risk.
- Supporting: Supports other controls to reduce risk.
- Strong: Can greatly reduce risk.
- **Complete:** Practically eliminates the risk on its own.







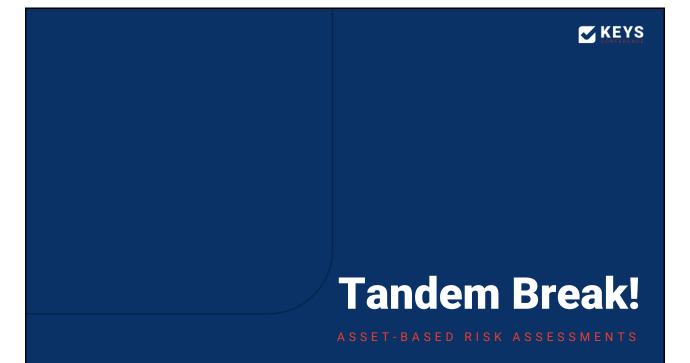


APPLYING THREATS & CONTROLS

### Don't forget your Risk Management Plans in your Asset-Based Risk Assessments!

KEYS CONFERENCE

107





### **Integrations**

Asset-Based Risk Assessments

109

### **Tandem Risk Assessment Integrations**

INTEGRATIONS



Audit Management Standard & Pro



Business Continuity Plan



Incident Management



Policies



Social Media Management



Vendor Management



### **Audit Management**

INTEGRATIONS

### **Audit Management Standard:**

- Allows organizations to create individual "containers" for their testing results.
- Document Findings
- Track Responses
- Associate Controls

### **Audit Management Pro:**

- Allows organizations to create control verifications and organize their testing procedures into work programs.
- Create Control Evidence & Request List Items
- Document Findings
- Associate Controls



111

### How do I enable this integration? INTEGRATIONS **Audit Management:** Risk Assessment: Core Processing - Settings Edit 2022 (Auditee) IT/GLBA Audit General Settings Information Asset Audit Details Access Groups Custom Levels Audit Ratings Advanced Options ✓ Enable Audit Association ③ ✓ Verification ② Guidance Residual Risk ② ✓ Approval ② Additional guidance can be added to the master list through the **Guidance** settings page. Risk Assessment Association ② 12 CFR Part 364 Appendix B (Interagency Guidelines Establishing Information Security Standards) Gramm-Leach-Bliley Act, Title V, Subtitle A, Section 501(b) KEYS

### How does this work on the ABRA side?

INTEGRATIONS

### **Asset-Based Risk Assessment**





113

### How does this work on the Audit side?

INTEGRATIONS

### **Open Audit > Controls**





# How does this work on the Audit side? INTEGRATIONS Open Audit > Controls Finding Finding Finding ITGLBA.22 Annual SAT has not been updated since 2019. + Finding + Previous Finding Risk Assessment Controls Control Control Employee Security Awareness Training + Control

115



### **BCP & Vendor Management**

### INTEGRATIONS

- Associate Software, Systems/Equipment, Third-Party Services
- Shows Related Business Process & Vendor Service Info

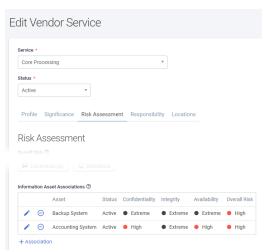




117

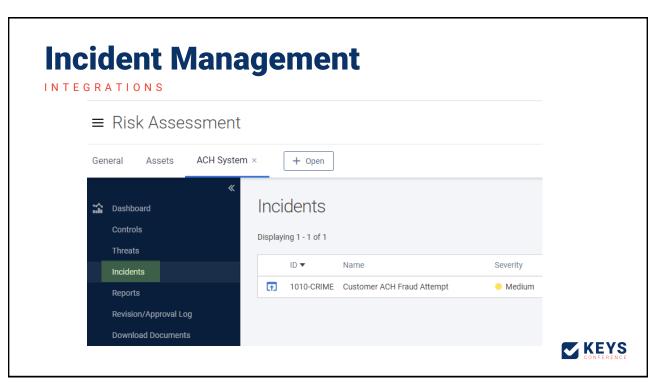
### **Vendor Management Perspective**

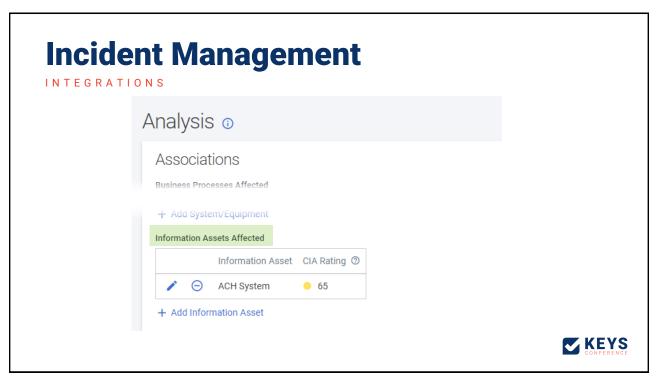
### INTEGRATIONS



- Associate Asset within Vendor Service > Risk Assessment
- · Displays:
  - Asset Status
    - CIA Information
    - Overall Risk

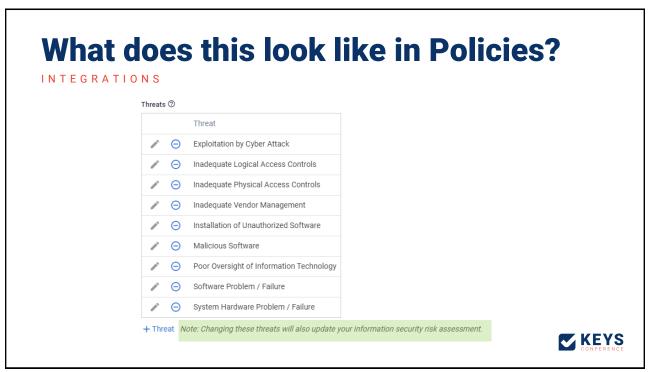


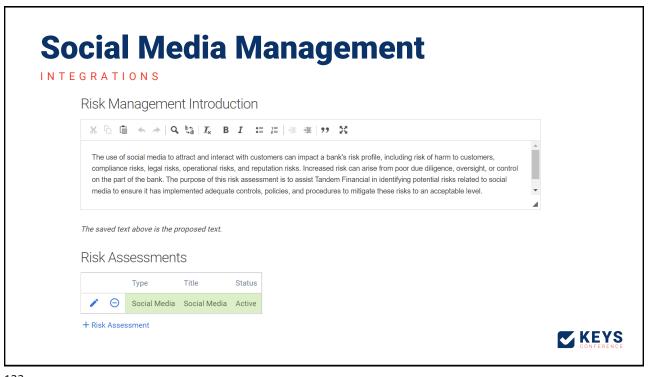


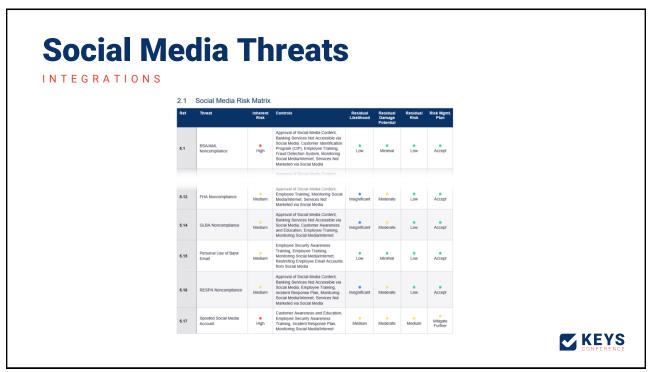


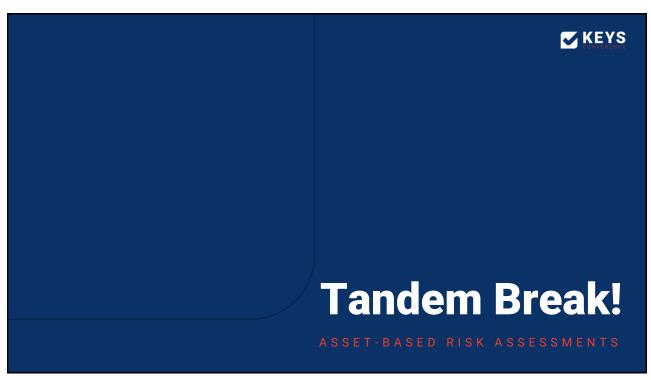
### **Policies** INTEGRATIONS Controls ③ Information S Control These are the policies and o controls will be assigned to o the Acceptable Use of Information Assets Policy proposed threats where app our own to take advantage of the defau Access Control Policy Employee Security Awareness Training Policy Θ Incident Management Policy Controls referenced by at le Displaying 1 - 53 of 53 Mobile Devices Policy Remote Work Policy Acceptable Use of Removable Media and Data Transfer Policy Access Control Po Reporting of Security Violations Policy Administrators Pol Asset Managemer Security Testing Policy ATM Security Police KEYS + Control

121









### Recap

ASSET-BASED RISK ASSESSMENTS

- Managing Assets & Documenting Additional Information
- Risk Assessment Types
- Applying Threats & Controls
- Control Reduction Values
- Using Integrations



