



**Sensitive Data Breach:  
Not If, But When**

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## Session Objectives

- Discuss why it's "Not if, but when" when it comes to a data breach in higher education.
- Highlight the risk mitigation value of knowing what sensitive institutional information assets you have, where they are and why you need to know.
- Offer methods of identifying and monitoring sensitive information, including leveraging partners and using tools such as PIAs and RDSPs.
- Provide an example of managing information flow: onboarding and departing faculty.

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**But first, about ~~me~~ you...**



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**What exactly does  
“Not if, but when,”  
mean?**

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## Breach: Not If, When... No Industry Immune

Category	# of Breaches	% of Breaches	# of Records	% of Records
Bank/Cred/Fin	18	3.5%	20,000	0.2%
Business	285	55.2%	7,494,791	80.6%
Educational	68	13.2%	41,448	0.4%
Gov/Military	27	5.2%	188,933	2.0%
Med/Healthcare	118	22.9%	1,548,027	16.7%
<b>TOTALS</b>	<b>516</b>	<b>100.0%</b>	<b>9,293,199</b>	<b>100.0%</b>

- As of April 26<sup>th</sup> 2017, Data Breach Report, Identify Theft Resource Center

## No Industry Immune – All Are Vulnerable

**The  
threats  
are real.**

**The risks  
are high.**

## Increasingly today, we have two identities:

A Physical Self



An Information Self

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## And our information identities are in harm's way...



Source: World Surf League, www.worldsurfleague.com

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## More Risk Factors = More Privacy Risk

### Innovations in Technology

- Exponential Increases
- Both for Good and Bad
- Fast Outpacing Laws

### Information Explosion

- Status Quo is not an Option
- Internet of Things, Big Data

## More Risk Factors (cont'd.)

### Digital Dependence

- Dependence on eCommerce
- Commodification of Privacy
- Lack of Awareness or Use of Security Controls

### Ever-Evolving Laws, Regs, Standards

- Federal, State and Local
- EU, Canada, Other Countries
- PCI DSS

## More Risk Factors (cont'd.)

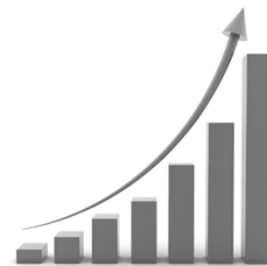
### Breach and ID Theft

- Not If, But When; No Industry Immune
- Stolen Personal Info = \$\$\$
- Cyber Threats are Growing

### Reputational Harm

- Stakeholder Expectations
- Risk Landscape is Ever-Changing
- Brand Management/"Court of Public Opinion"

**By 2019, data breach costs are expected to reach \$2.1 trillion!**



Lori Widmer, "10 Most Expensive Data Breaches," *Life Health Pro*, June 18, 2015

### Unique Challenges for Higher Education:

Create, access, transmit and store large volumes of highly sensitive information.

Repositories of valuable intellectual property.

Privacy and IT security budgets are limited.

IT is often decentralized.

Regulatory defense, fines and penalties divert resources from the mission.

Academic freedom and culture pose challenges to protections.

There are 100s of privacy laws and regulations – federal, state, local, global.

Many impact higher education.

Compliance is critical for mitigating risk.

## Applicable Laws, Regulations, Standards, Etc.

- FERPA
- HIPAA/HITECH
- GLBA
- NC IDTPA
- Section 5 of FTC Act
- PCI DSS
- FISMA
- NIST 800-53; 800-171
- Common Rule
- COPPA
- FCRA
- FACTA/Red Flags Rules
- ADA
- OMB Circular A-130
- Privacy Act of 1974
- EU GDPR, and more...

**The steps to  
mitigating risk...**





# IDENTIFY YOUR INFORMATION ASSET LANDSCAPE



Um, excuse me, do what?!



# The Daily Information Tsunami!

Students      Staff  
Faculty      Alumni  
Applicants    Subjects  
Patients      Vendors  
Others



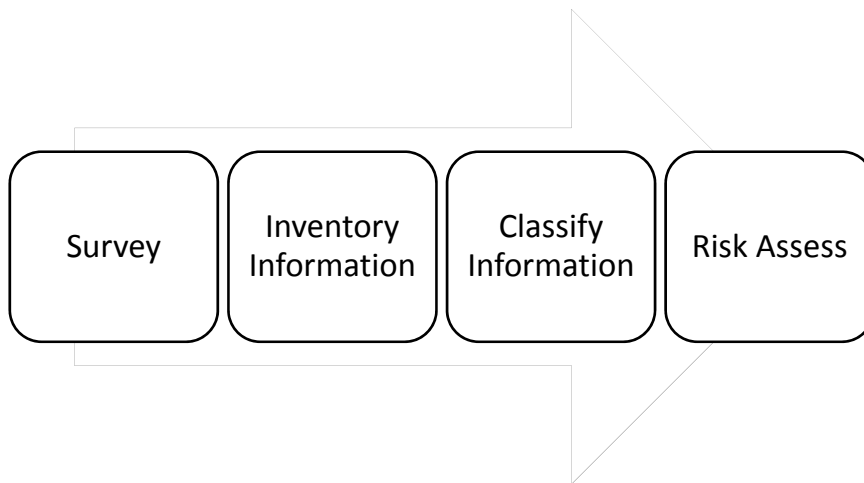
## How!?!



## How!?! (cont'd.)



## Survey • Inventory • Classify • Risk Assess



## Conduct a Privacy Impact Assessment

**A Privacy Impact Assessment, or PIA,** is an analysis of how sensitive information is collected, used, shared and maintained at your institution.

## A Privacy Impact Assessment Identifies

**Who is collecting sensitive information**

**What is collected**

**Why it is collected**

**How it is collected, used, accessed, shared, safeguarded and stored**

## A PIA as a Decision Tool:

Ensure legal, regulatory and institutional policy compliance.

Determine associated risks and effects.

Evaluate protections and alternative processes to mitigate potential privacy risks.

**Does your organization  
currently conduct privacy  
impact assessments or  
otherwise inventory sensitive  
data?**

## The Process

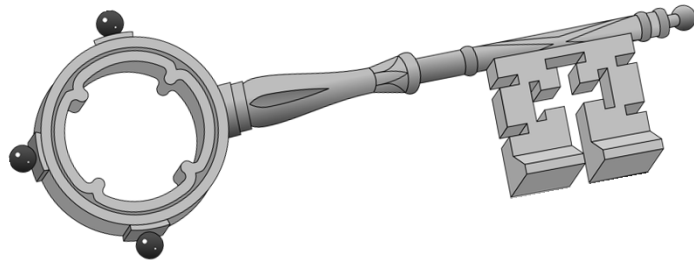
- Identify institutional partners
- Conduct PIAs:
  - Survey the institution for sensitive information
  - Inventory sensitive data and related information asset management practices
  - Risk assess information management
- Identify gaps against compliance requirements
- Engage institutional partners to address gaps

## To Further Mitigate Risk and Protect the Institution



**Monitor What Comes In, Goes Out and Stays**

**Communication is the**



**to Effective Compliance**

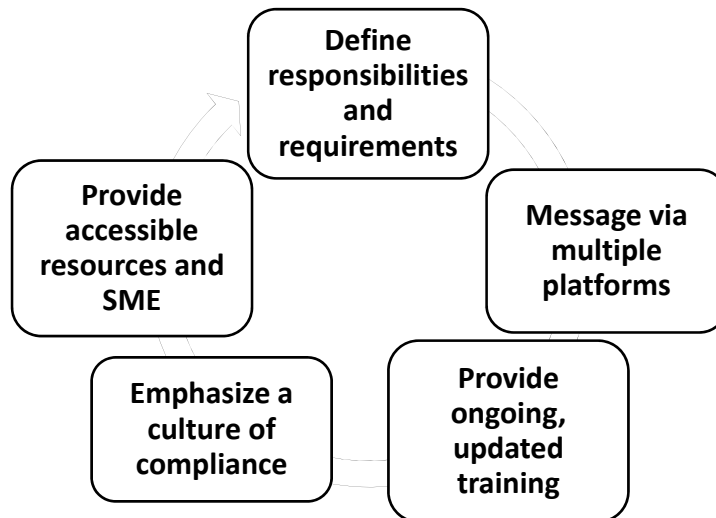
**Ensure everyone gets  
the message!**



# How do you communicate?

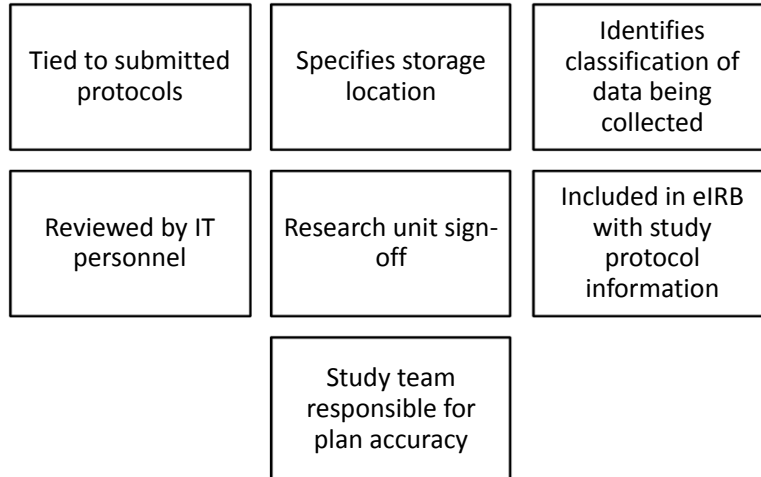


## 'To Do' List:





## Duke's Research Data Storage Plans (RDSP)



## Example Monitoring Tools:

### Data Loss Prevention®

- Monitors sensitive information, such as PHI and financial information, that leaves the institution.
- Auto-encrypts.

### FairWarning®

- Privacy software tool that audits EHR and billing access to identify and mitigate impermissible access and disclosures of protected health information.

**To Secure Protected Health Information...**

**... Encryption is the key!**

**Protect It** Store or Sync files containing PHI ....  
Only use Duke's shared network or *Duke Box* secure cloud storage.

**Encrypt It** All *portable devices* storing PHI should be *configured for encryption*: thumb drives, USB hard drives, cell phones, tablets.

**Sync It** All *smartphones & tablets* accessing PHI *must sync* with Duke's Exchange email service to ensure encryption.

For information on securely configuring mobile devices:  
Email: [iso@mc.duke.edu](mailto:iso@mc.duke.edu)  
Visit: [security.duke.edu/secure-your-devices/mobile-devices](http://security.duke.edu/secure-your-devices/mobile-devices)



## Activities to Monitor

- Collection and use of PHI without subject authorization and/or a HIPAA waiver.
- Storing research data, especially ePHI, on unencrypted computers and/or portable devices.
- Storing research data in non-institutionally approved and/or managed locations.

## Activities to Monitor (cont'd.)

- Retention of Social Security numbers in subject files without an authorized exception.
- Missing ICFs, source documents or other documents containing PHI.
- Failing to adhere to the minimum necessary standard.
- Improper disposal and/or destruction of PHI.

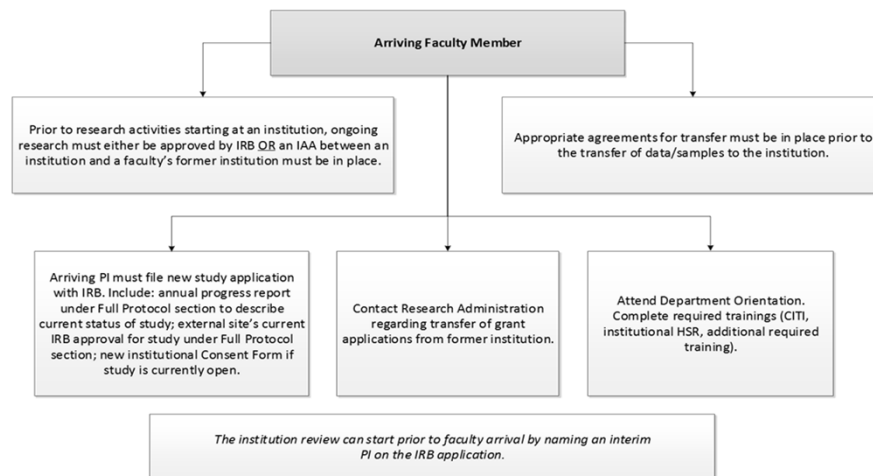
## Activities to Monitor (cont'd.)

- Disclosing PHI without appropriate, executed agreements or without authorization.
- Unencrypted transmission of PHI and/or other sensitive electronic information.
- Use of unapproved, unmanaged copy or fax machines.
- Use of personal email (Gmail, Yahoo, etc.) for institutional business.

## Arriving Faculty

### Things to Consider:

- What are individuals bringing with them?
  - Data (Did subjects consent to transfer of identifiable data?)
  - Samples (level of identification)
  - Equipment (what data may still reside on equipment from another institution)
- Where are they coming from?
  - Domestic
  - International

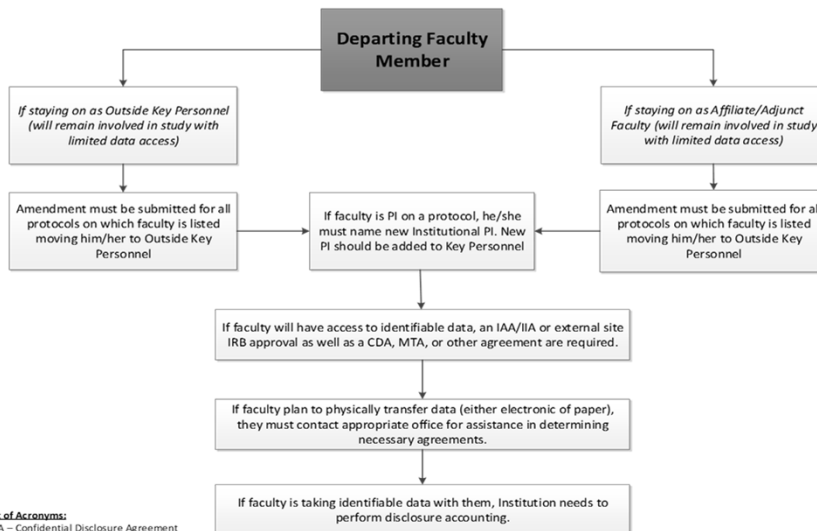


**List of Acronyms:**  
 CITI – Collaborative Institutional Training Initiative  
 HSR – Human Subjects Research  
 IAA – IRB Authorization Agreement  
 IRB – Institutional Review Board  
 PI – Principal Investigator

## Departing Faculty

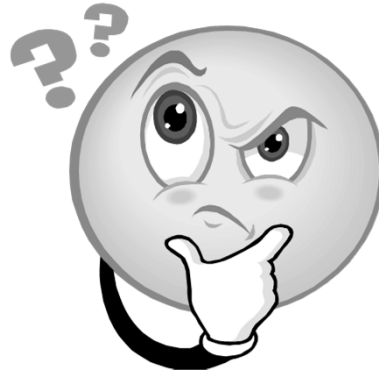
### Things to Consider:

- Ongoing status on the project
- Level of future involvement
- What do they want to take with them?
  - Samples / data / equipment
- Where are they going?
  - Domestic / international



**List of Acronyms:**  
 CDA – Confidential Disclosure Agreement  
 IAA – IRB Authorization Agreement  
 IRB – Institutional Review Board  
 MTA – Material Transfer Agreement  
 PI – Principal Investigator

# Questions?



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- Flow charts adapted from the Duke Department of Community and Family Medicine Faculty Arrival and Departure Flowsheet:  
<https://oarc.duke.edu/sites/default/files/documents/Faculty%20Arrival%20and%20Departure%20Flowchart%20042216.pdf>