



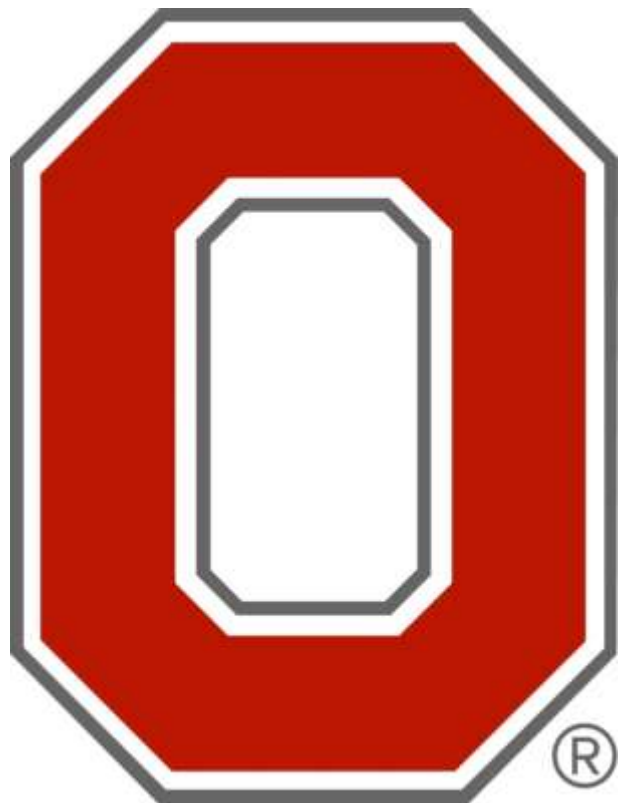
# ISE<sup>®</sup> CENTRAL EXECUTIVE FORUM

*Nominee Showcase Presentation*

The Ohio State University  
Strategies for Winning Enterprise-wide Support for Your Security Initiatives  
Helen Patton  
Chief Information Security Officer



# Company Overview



## LAND-GRANT MISSION

OHIO STATE IS A LEADER IN DEFINING THE MODERN LAND-GRANT MISSION, WHICH CONNECTS THE UNIVERSITY AND COMMUNITY TO EXPAND KNOWLEDGE, EDUCATE FIRST-CLASS THINKERS, SOLVE PRESSING PROBLEMS AND ASSURE ACCESS TO HIGHER EDUCATION.

- 14 COLLEGES
- 175 UNDERGRADUATE MAJORS
- 133 MASTER'S DEGREE PROGRAMS
- 112 DOCTORAL DEGREE PROGRAMS
- 7 PROFESSIONAL DEGREE PROGRAMS
- 2,000+ STUDY ABROAD STUDENTS EACH YEAR
- 800+ COURSES WITH INTERNATIONAL CONTENT
- 600+ FOREIGN LANGUAGE COURSES
- 100+ STUDY ABROAD PROGRAMS
- 30 LANGUAGES TAUGHT AT OHIO STATE
- 14th AMONG U.S. UNIVERSITIES FOR THE NUMBER OF STUDENTS STUDYING ABROAD



5th

Among U.S. public university libraries in the Association of Research Libraries Library Investment Index

13,000

Daily visitors to the Thompson Library

500,000+

Electronic books

5,600,000+

Views of full-text electronic articles annually

7,000,000+

Volumes

9,000,000+

Searches of our electronic databases annually

3rd

Among all universities for industry-sponsored research, according to the National Science Foundation

760

Active research partnerships with businesses located in 40 states across the nation

\$934M

Expenditures for research and development (FY12)

\$470M

Federal awards for research (FY12)

\$101M

Expenditures for industry-sponsored research (FY12)





# Presentation Overview

- Where we started: Information Security at OSU
- Information Risk Management Framework Project
  - Intended outcomes
  - Framework Elements
  - Delivery Elements
  - Actual Outcomes
- Don't try this at home: Lessons Learned/Best Practices





# Where We Started

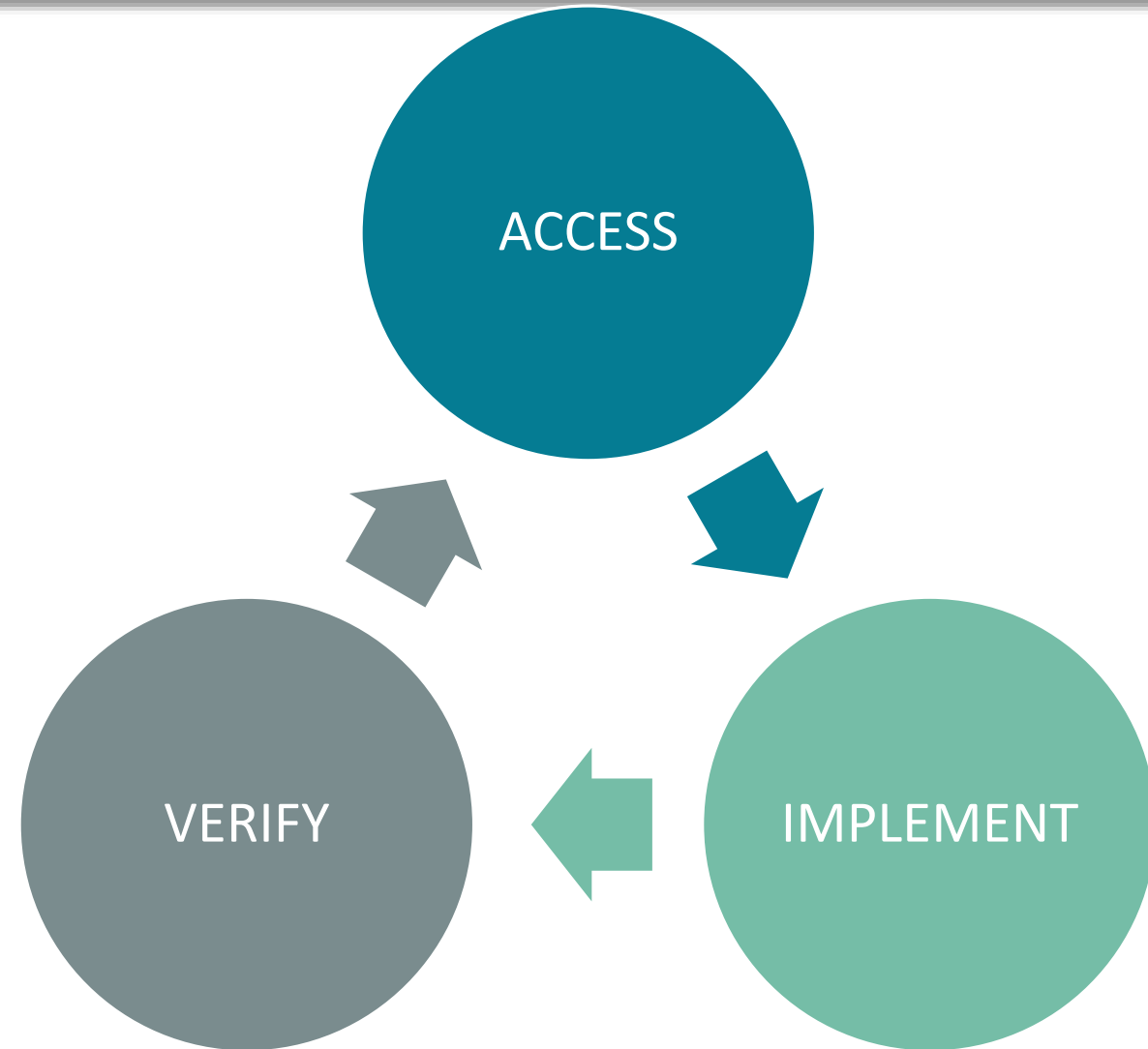
- 64,868** Enrolled Students
- 44,424** Employees
- +500,000** Alumni
- \$57,000** Patients
- \$5B** Budget
- \$3.5B** Endowment
- 1,217** Buildings
  - 6** Campuses
  - 5** Hospitals
  - 4** International Offices
  - 2** Primary Data Centers
  - 1** Airport
  - 1** Golf Course
  - 1** Hotel
  - 1** Nuclear Reactor





# The IRMF Project: Intended Outcomes

- Create a Risk-Aware Culture
- Improve OSU's Risk Posture
- Ensure Management Awareness of issues
- Support the University Mission





# The IRMF Project: Framework Elements

## GOVERNANCE

**Board of Trustees**

**Risk & Audit Committee**

**Security Advisory Board**

**Unit VPs**

## ELEMENTS

**Pragmatic**

Based on standards, simplified, structure for managers, rational

**Prioritize**

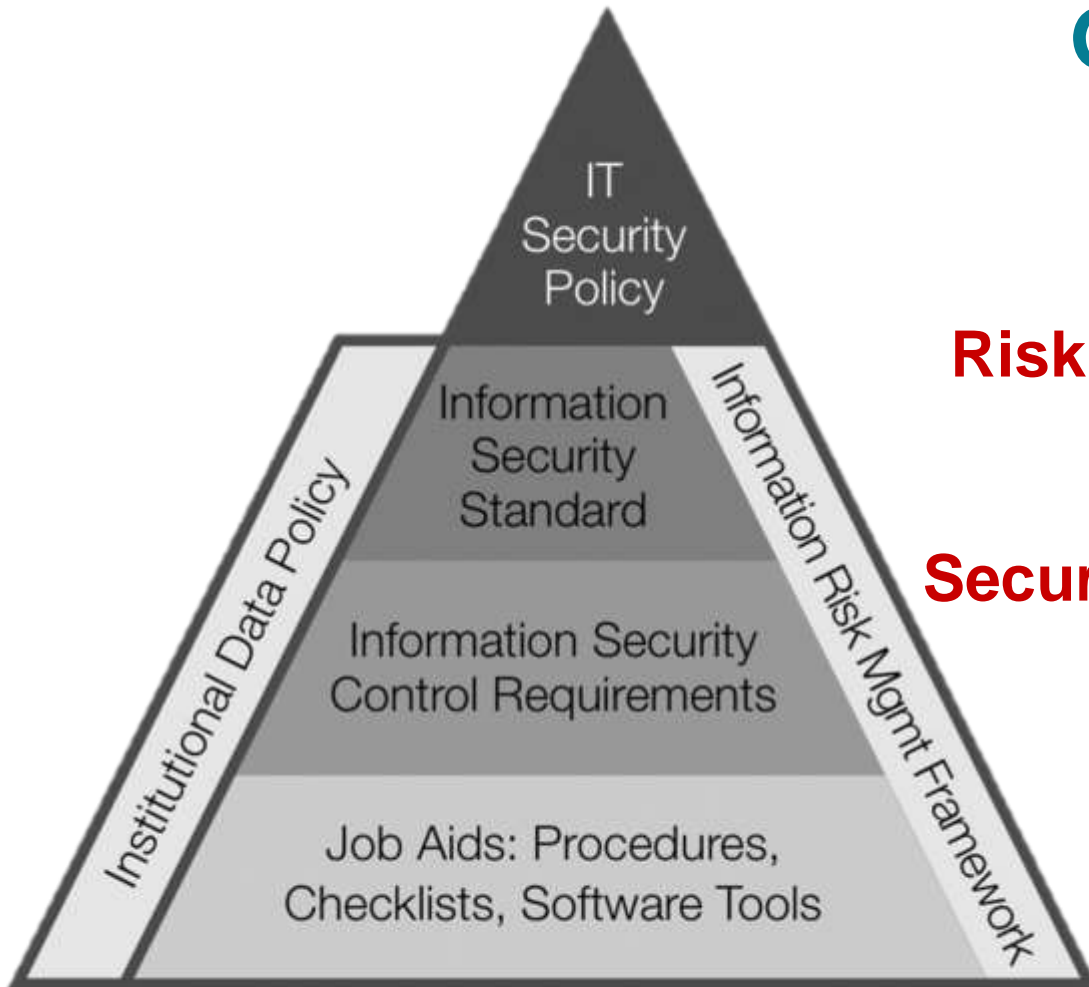
Concrete implementation guidance

**Measured**

30 risk areas x ~160 auditable entities = ~5,000 data points

**Sustainable**

Multi-year implementation plan, scaled for budget/staff





# The IRMF Project: Delivery Elements

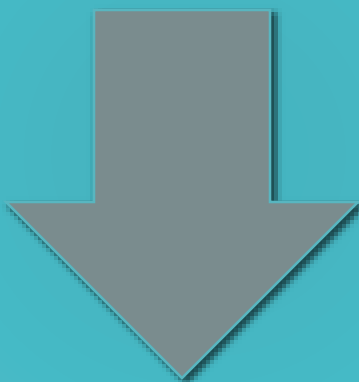
## SURVEY

Spend less time assessing Risk, more time fixing Risk

JUL  
AUG  
SEP  
OCT  
NOV  
DEC  
JAN  
FEB  
MAR  
APR  
MAY  
JUN

### RISK SURVEY

### SECURITY PROGRAM



## IMPROVE

- Unit Strategies
- Unit Predictions
- Barriers to Completion

PRIORITY LEVEL	CMM SCORE					
	0	1	2	3	4	5
P1	H	H	H	M	L	L
P2	H	H	M	L	L	L
P3	H	M	L	L	L	L

### 5 2014 Risk Management Strategy

Risk Management Strategy Sponsors			
Risk Management Entity	Role	Name	Name.#
Warner Brothers	Dean/Vice President	Daffy Duck	
	Senior Fiscal Officer	Bugs Bunny	
	IT Lead	Elmer Fudd	
	Information Security Lead	Wile E. Coyote	

Risk Management Strategy Score Predictions							
Risk Area	Priority	Risk Area Description	Baseline	PY 0	PY 1 *	PY 2 *	PY 3 *
MGT1	P1	Information risk management	3	4	4	4	4
MGT3	P1	Compliance management	4	4	4	4	4
DAT1	P1	Institutional data-related risk	1	1	2	3	4
DAT2	P1	Information access control-related risk	2	3	3	3	4
IT1	P1	Disaster-related risk	0	1	2	3	4
IT2	P1	Infrastructure-related risk	2	3	3	3	4
IT3	P1	Network-related risk	1	1	2	3	4
IT4	P1	Server-related risk	1	2	3	4	4
IT5	P1	Identity-related risk	2	2	3	4	4
IT6	P1	Malicious software risk	4	2	4	4	4
IT7	P1	Application-related risk	1	3	2	4	4
MGT2	P2	Information security management	1	3	2	3	3
LEG1	P2	Legal and regulatory compliance risk	1	1	2	3	3
BUS1	P2	Finance system-related risk	4	4	4	4	4
HR1	P2	Employment risk	3	3	3	3	3
FAC1	P2	Site-related physical risk	2	2	2	3	3
FAC2	P2	Workspace-related physical risk	1	1	1	2	3
IT8	P2	Development process-related risk	0	2	0	2	3
IT9	P2	Vendor management risk	1	2	1	2	3
IT10	P2	Client-related risk	0	3	2	3	3
IT11	P2	Mobile worker-related risk	2	4	3	3	3
IT12	P2	Message service-related risk	0	3	2	3	3
IT13	P2	Web application-related risk	0	4	0	2	3
IT14	P2	Security incident management risk	3	4	3	3	3
IT15	P2	Storage media-related risk	0	2	0	2	3
IT16	P2	User-related risk	1	1	2	3	3
IT17	P2	Information asset management risk	0	2	2	3	3
MGT4	P3	Business continuity management risk	0	1	0	2	2
PUR1	P3	Contract management risk	1	1	1	1	2
IT18	P3	Software license management risk	2	2	2	2	2

Risk Management Entity average: 1.4 2.4 2.1 2.9 3.3

B1 score average: 1.0 2.4 2.0 2.5 4

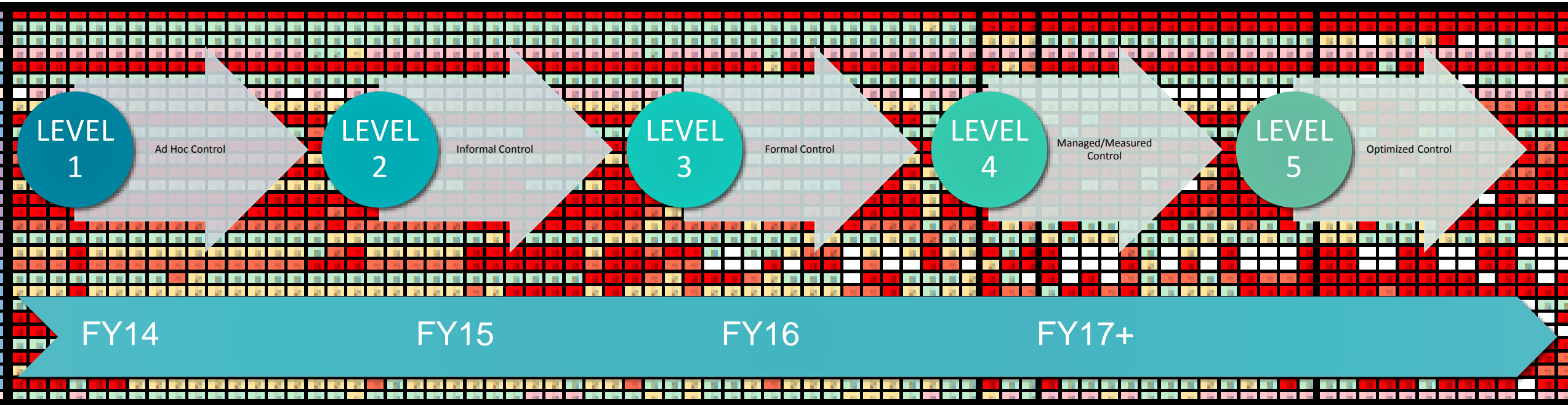




# The IRMF Project: Delivery Elements

## QUESTIONS

- Current state?
- Speed of Improvement?







# The IRMF Project: Actual Outcomes

## RISK AWARE CULTURE

136 Representatives from over 25 units participated in creation of the Control Requirements document

Increase in unit-driven security support requests

## MANAGEMENT AWARENESS

All surveys and strategies signed by unit heads, finance officers and security liaisons

CISO invitation to unit leadership meetings to discuss results

Bi-annual presentation to Board to discuss progress

## OSU RISK POSTURE

Risk scores increased by 10% in first year of program

“Pre-assessment cleanup” occurred in all participating units

## SUPPORT MISSION

Enabling public/private research with compliance to Security Standards

Identification of fraudulent activities by units

Sharing Information Everywhere – Securely!





# Lessons Learned/Best Practices

## COMMUNICATIONS

- Talk and listen to a LOT of people
- Get buy-in by making them the authors
- Prompt results for survey – instant gratification

## FRAMEWORK ELEMENTS

- Designed program to allow for unit ownership with institutional visibility
- Linked framework to Institutional Data Policy: Restricted Data = More Security
- Light-weight survey, executed quickly
- Reporting: Comparisons without “Naming-and-Shaming”

## ACCOUNTABILITY

- Gave units choice to participate – with consequences
- Align financial resources to strategies
- Made unit decisions transparent to Board

