Information Security in the Montana University System

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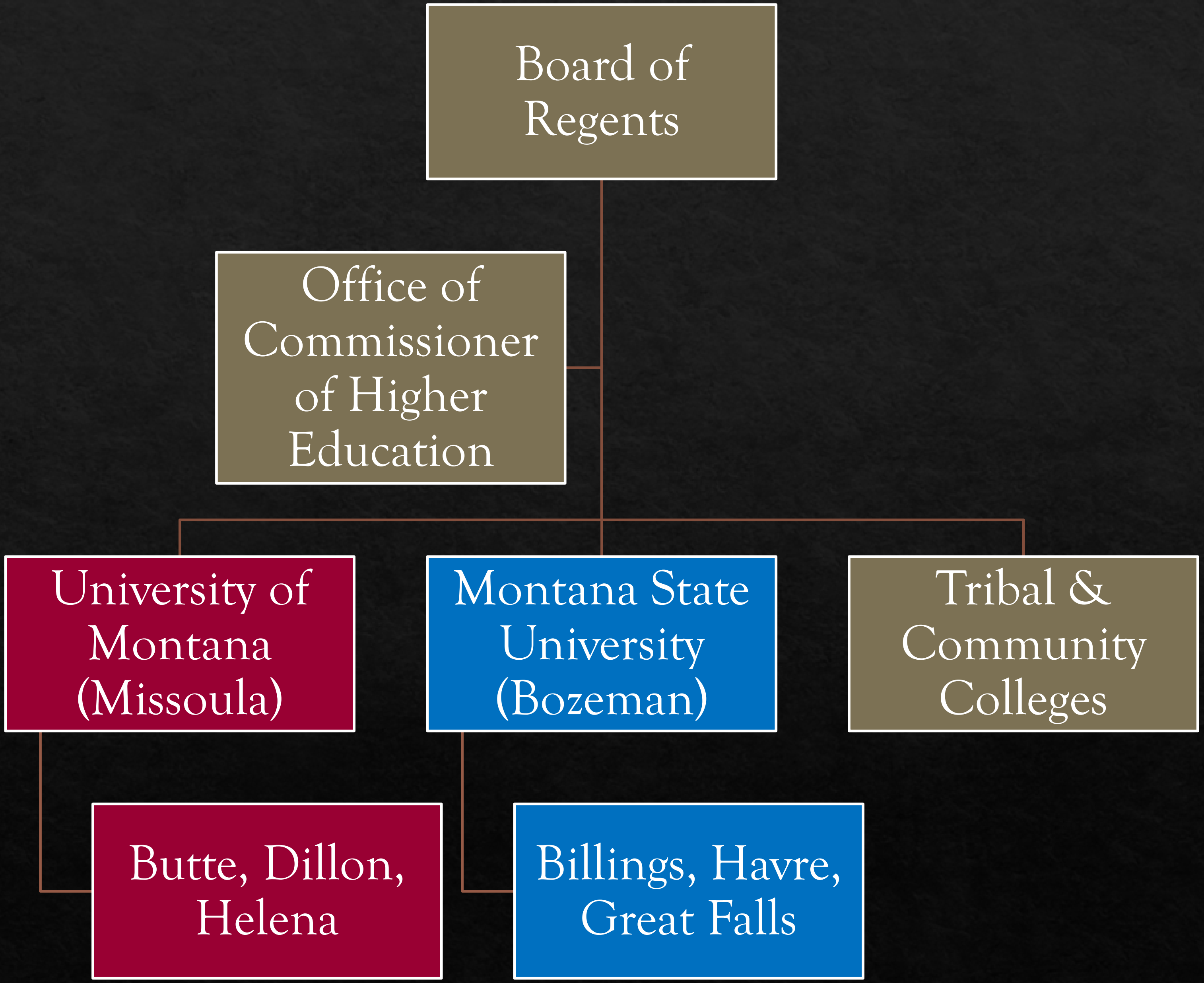
Montana University System

- Two major units within the system (UM & MSU) that include a flagship campus and affiliate campuses
- Governed by the Board
- Administered by OCHE



Board of Regents

Office of Commissioner of Higher Education

University of Montana (Missoula)

Montana State University (Bozeman)

Tribal & Community Colleges

Butte, Dillon, Helena

Billings, Havre, Great Falls

Employee Data

Student Data
FERPA

Intellectual Property

Personal Health Data
HIPAA

Research Data
Federal Certification
based on NIST

Financial Data
Payment Card Industry
Student Financial Aid

Federal Contract Data
Federal Certification
based on NIST

Information Security within Higher Education

Federal Regulations to protect certain types of data

Information Security in Montana

Executive Branch

Governance & Administration

- State Law defines **WHAT** agencies are required to do
- DOA & SITSD determine **WHAT** needs to happen to follow law (Policy)

Management

- Agency determines **HOW** to follow law and policy

Montana Information Technology Act (MITA) excludes University System.

Montana University System

Governance & Administration

- State Law defines **WHAT** the MUS is required to do
- Board and OCHE determine **WHAT** needs to happen to follow law (Policy)

Management

- University determines **HOW** to follow law and board policy

However, law requires the Board to ensure state security laws are followed

Scope and Objectives

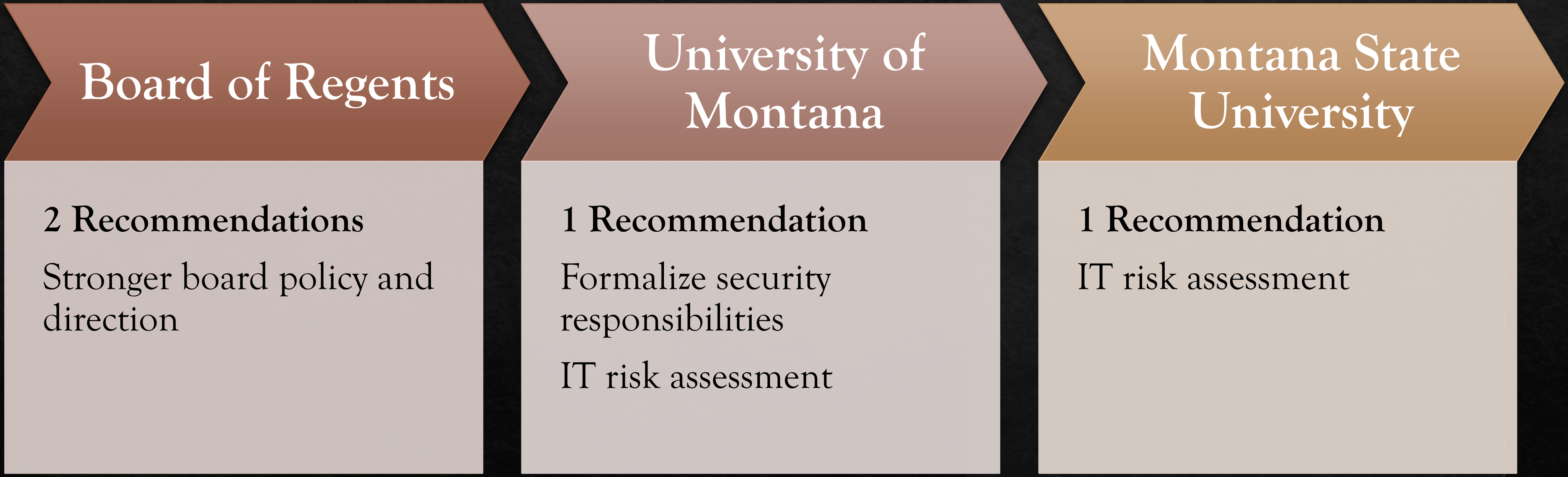
Risk Management procedures at the two major university campuses

- How mature is risk management?
- How is risk management improving the security program?

Security Governance established by the Board and OCHE

- Does it provide guidance?
- Does it create accountability?
- Is there internal review?

Universities need direction & guidance to assess risks and improve security programs



Board of Regents

2 Recommendations

Stronger board policy and direction

University of Montana

1 Recommendation

Formalize security responsibilities

IT risk assessment

Montana State University

1 Recommendation

IT risk assessment

Risk Management is More than Assessing Risks

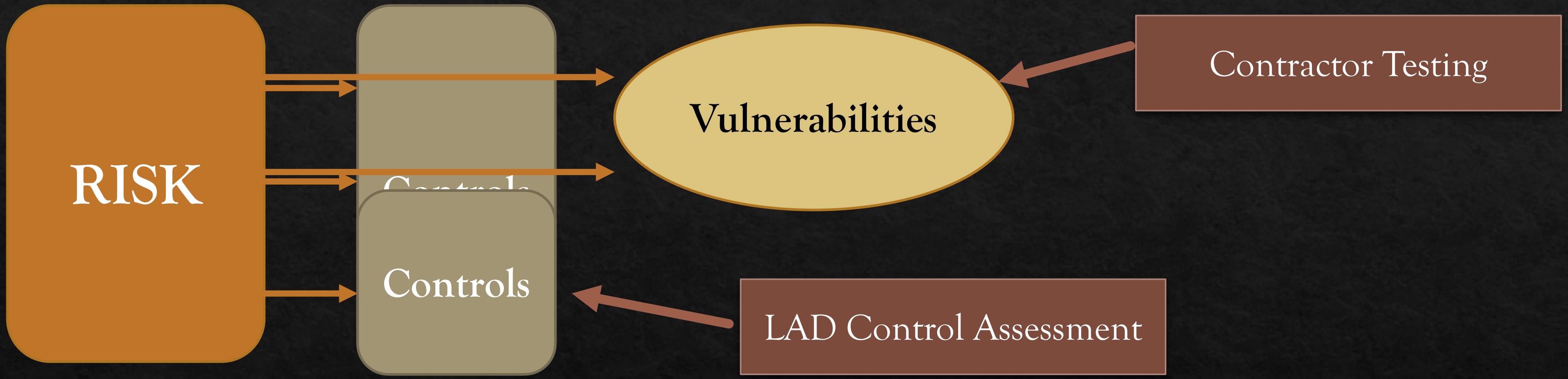
WHAT IS THE STRATEGY?

WHAT ARE THE CURRENT RISKS?

WHAT SHOULD WE DO?

IS THAT WORKING?

Audit Methodologies


RISK

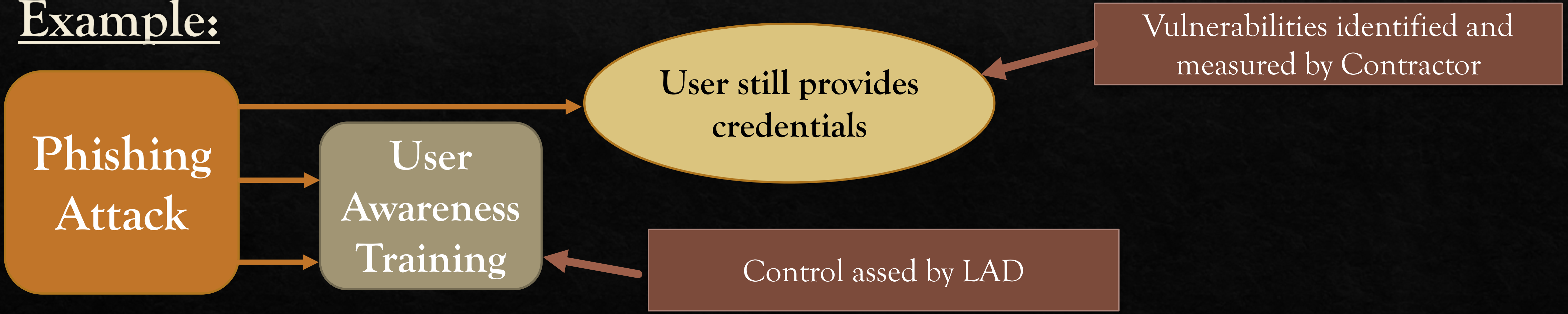
Controls

Vulnerabilities

Contractor Testing

LAD Control Assessment

Example:


Phishing Attack

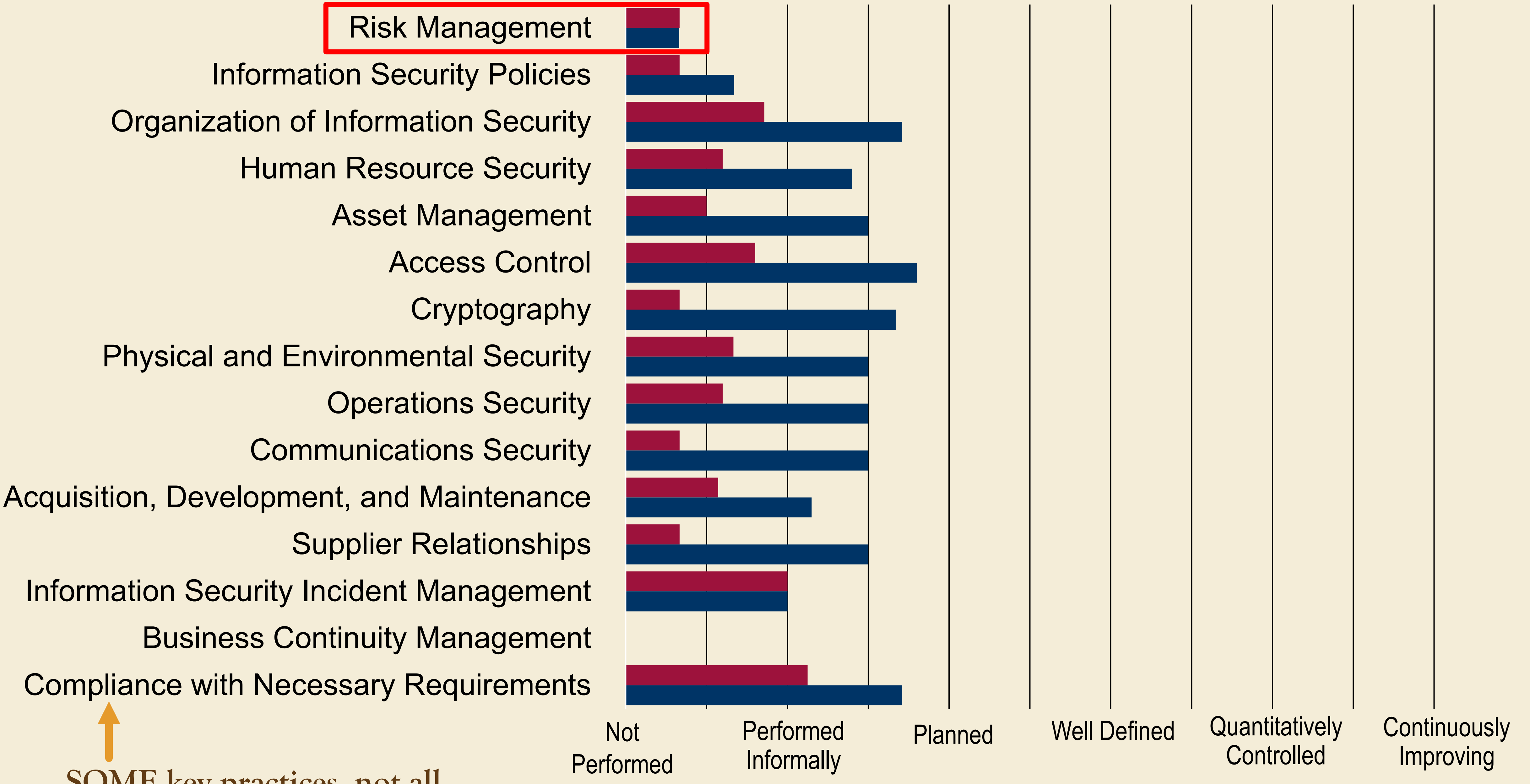
User Awareness Training

User still provides credentials

Vulnerabilities identified and measured by Contractor

Control assed by LAD

LAD Assessment Results for University of Montana & Montana State University



SOME key practices, not all

Each Campus Faces Risks without Improvement

The effects of the current security programs are starting to happen and more have the potential of occurring without action

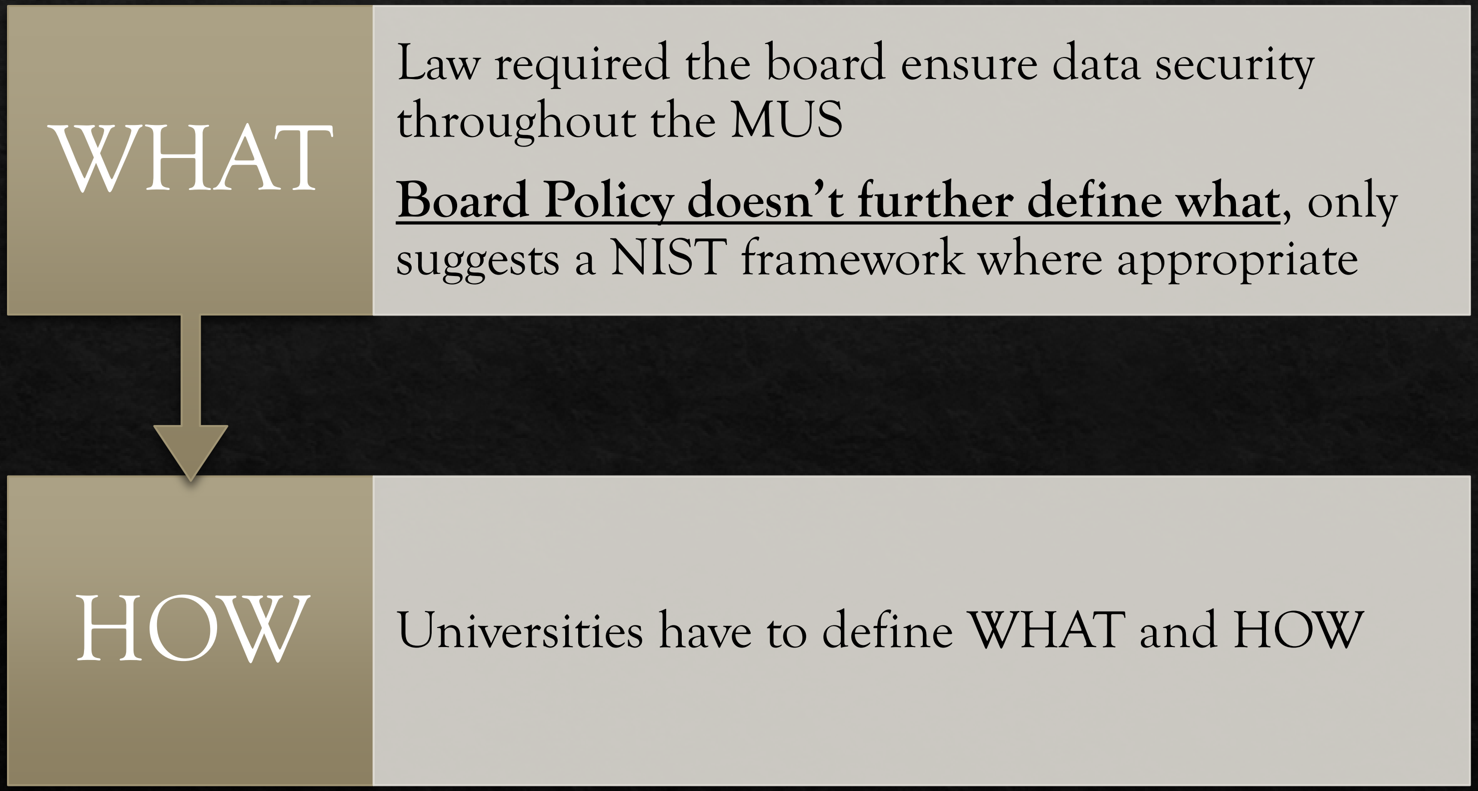
What we see now…

- Increased costs for insurance
- Future funding challenges
- Federal Non-Compliance

What else could happen?

- Security Incidents
- Service disruptions

Frameworks are Needed to Guide Security Programs



WHAT

Law required the board ensure data security throughout the MUS

Board Policy doesn't further define what, only suggests a NIST framework where appropriate

HOW

Universities have to define WHAT and HOW

Recommendation 1

Board Policy:

- ✓ Adopt a framework or set of frameworks
- ✓ Reviewed continuously
- ✓ Coordinated effort

Each University Has to Maintain Their Security Program

University of Montana

- Staffing challenges
- Role and responsibility definition
- IT risk management is informal

Recommendation 2

✓ Formalize security staff responsibilities

✓ Complete a comprehensive IT risk assessment to develop strategies and budgets to make progress

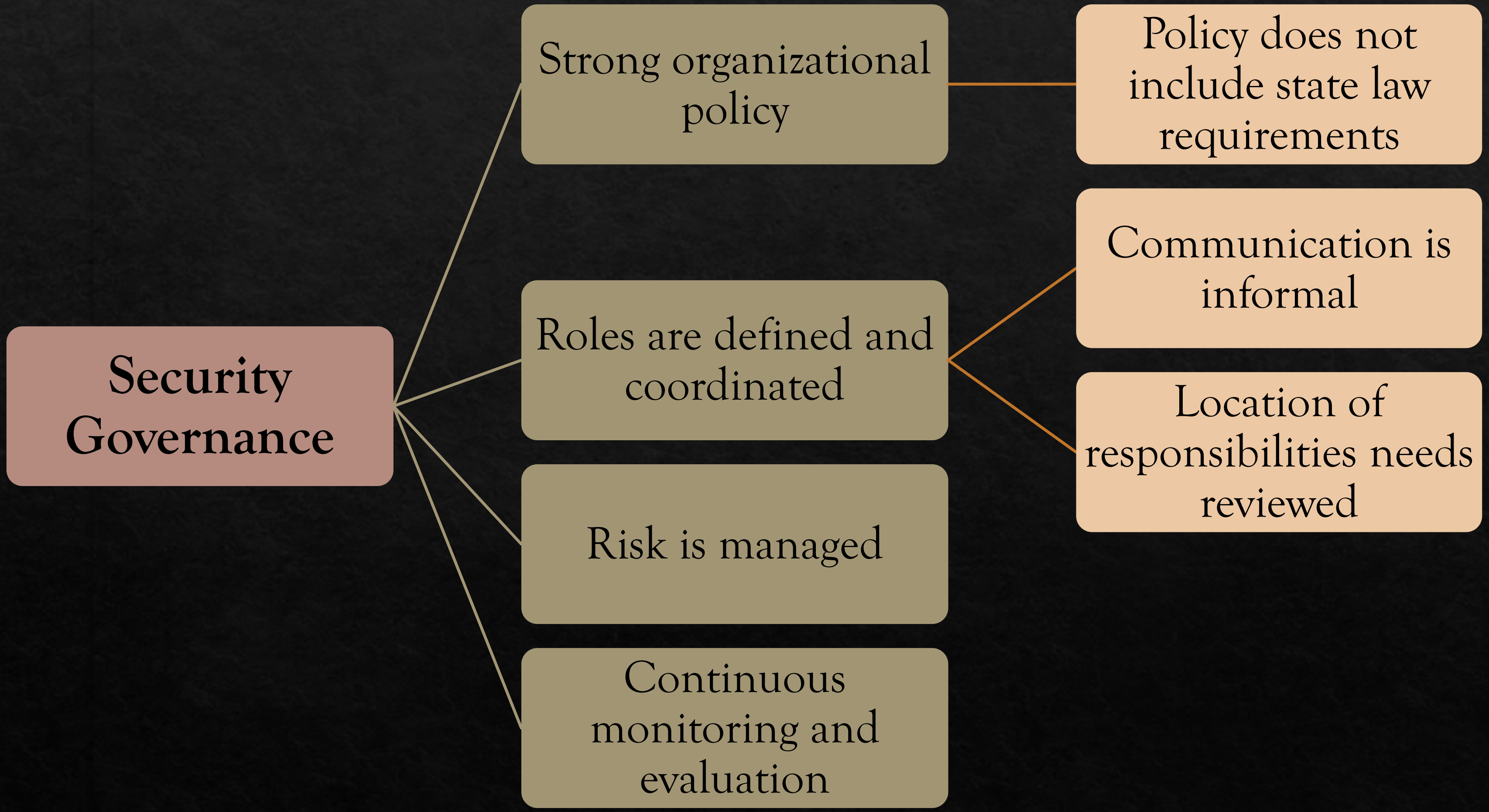
Montana State University

- No formal guidance
- Missing a structured approach
- IT risk assessments have been focused and not continuous

Recommendation 3

✓ Complete a comprehensive IT risk assessment to formalize the approach of the security program

Security Governance


Security Governance
Strong organizational policy
Roles are defined and coordinated
Risk is managed
Continuous monitoring and evaluation
Policy does not include state law requirements
Communication is informal
Location of responsibilities needs reviewed

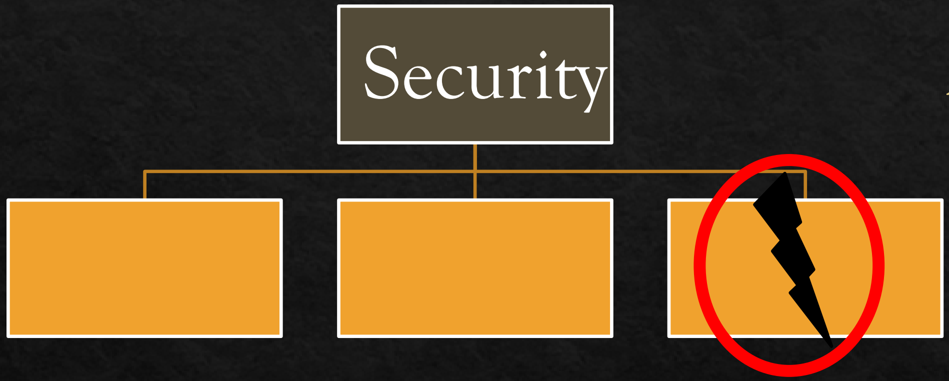
How are these ensured?

Who communicates the need for framework changes?

What's the scope of the risk assessment?

No Clear "Right Way"

Centralized

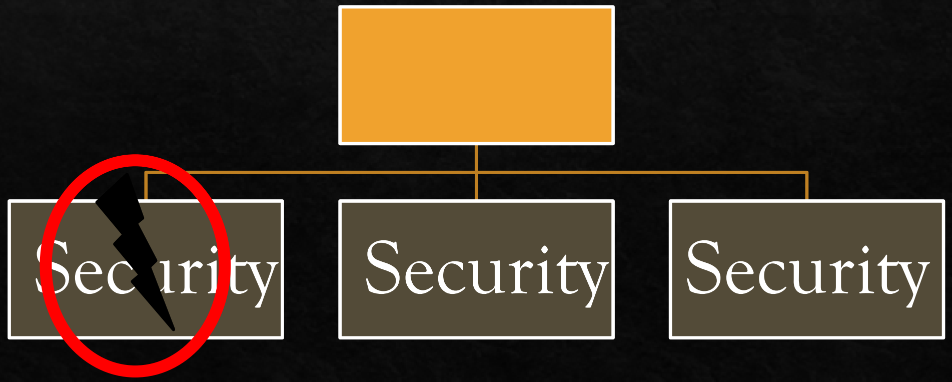


CONSIDERATIONS:

Independent Budgets & Resources

Avoid one-size-fits all

Decentralized



CONSIDERATIONS:

Prevent Silos

Share Information

Security Programs Need Clear Roles & Boundaries

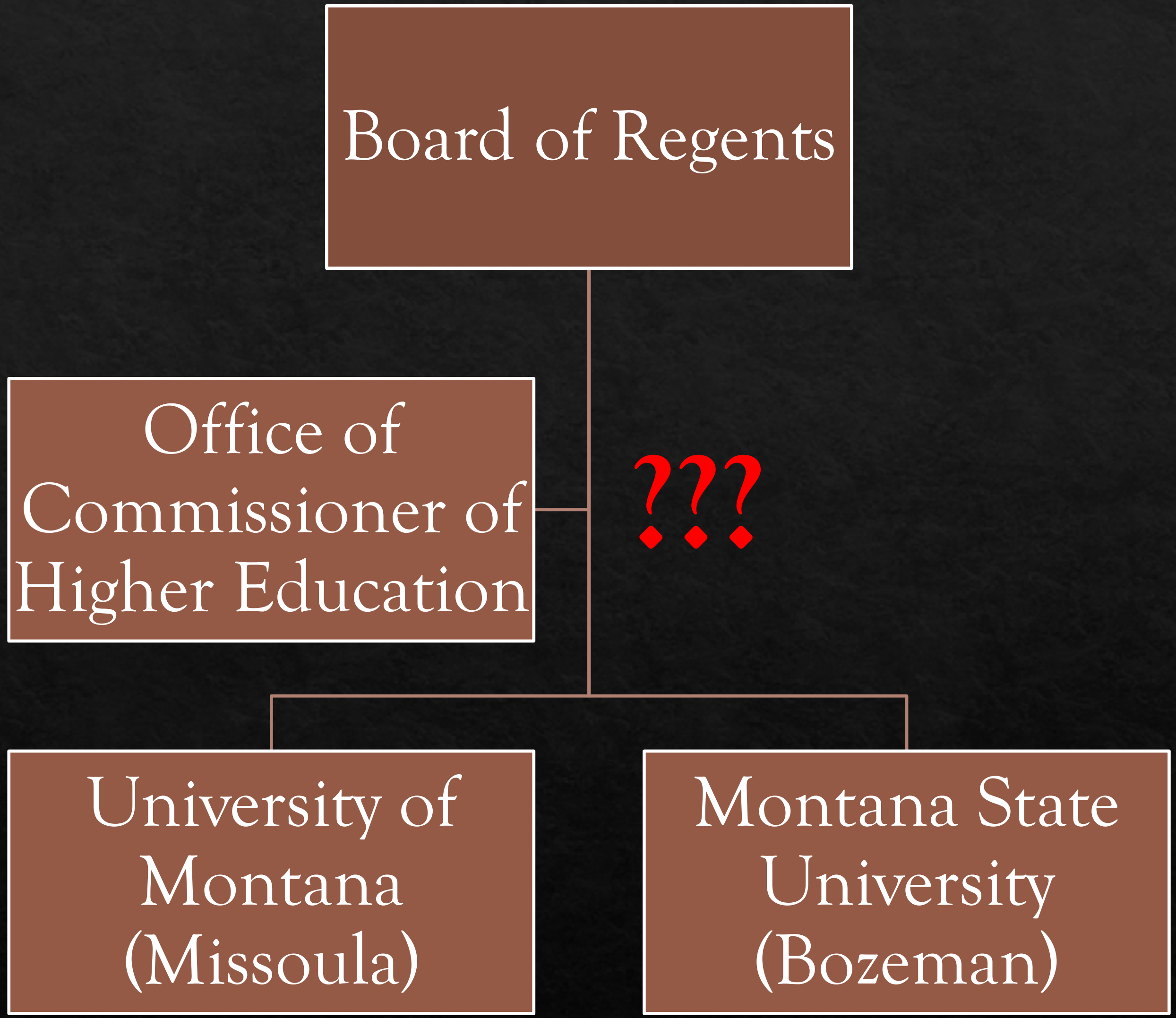
<u>Recommendation 4</u>

✓ Define OCHE's role

✓ Security policy meets state requirements

✓ Roles, Responsibilities, and Authority

✓ Communication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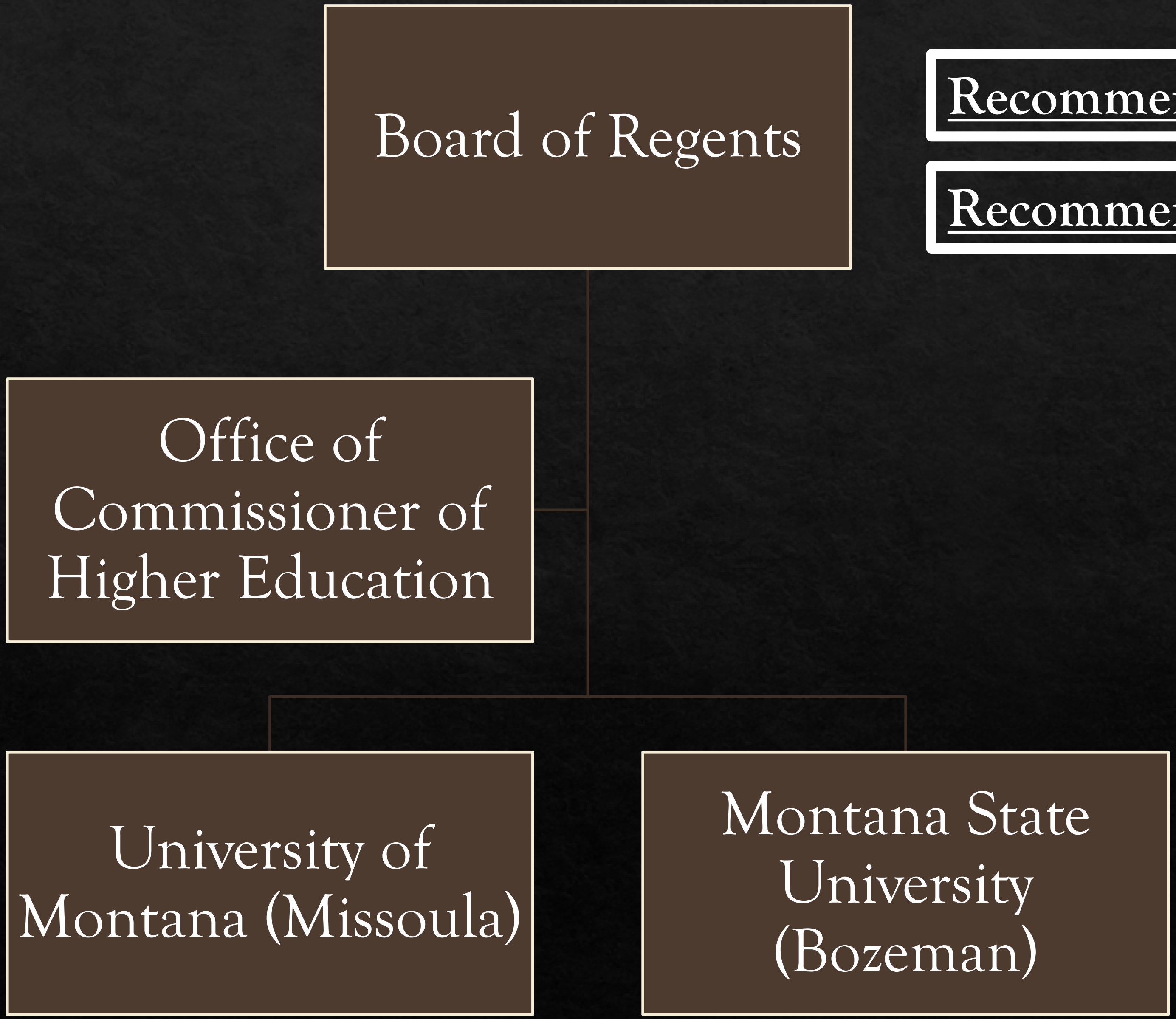
Everyone Plays a Role in Information Security



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Recommendation 4

Recommendation 1

Recommendation 2 & 3