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Enterprise Roles

510 - Data Security and Privacy: Legal, Policy, and Enterprise Issues
University of Michigan School of Information
Week 8
Enterprise Security Approach

- Multidisciplinary responsibility
  - Managerial
  - Operational
  - Technical
  - Legal

- Avoid stovepipe view
Figure 1-3: Input into an Enterprise Security Program

- Operating environment and operational criteria
- Culture and management policies and procedures
- Business plan and strategic goals
- Info on data, applications, networks and critical digital assets
- Legal requirements
- Info on interconnection points and interfaces
- Cybercrime considerations
- Assessments and findings from previous reviews/audits
- Public relations and crisis communications information
- Business continuity and recovery requirements
- Standards, best practices, guidance
- Technological considerations

ROI and financial information

Enterprise Security Program
- Security Plan
- Security Policies
- Security Procedures

From Roadmap to an Enterprise Security Program

CC: BY NC SA 2010 – Don M. Blumenthal
Elements

- Risk management
- Security plan
  - Procedures
  - Controls
- Implementation
- Audit
Challenges

- Educate constituencies
  - Need for enterprise approach
  - Interests and requirements of other groups
- Identify and develop processes
- Develop cross-department links
- Foster team approach
- Address turf problems
  - Question knowledge
  - Question skills
  - Question understanding
Elements

- Networks
- Applications
- Information
  - Digital
  - Analog
P6STN1

- People
- Products
- Plants
- Processes
- Policies
- Procedures

- Systems
- Technology
- Networks
- Information

Evaluate all with multidisciplinary approach
The Process

- Security Plan
  - Strategic document
- Security Policies
  - Broad statements that account for management’s risk tolerance and expectations
- Security Procedures
  - Actual steps in the security process
- Controls
  - Standards for each element
Development Stages

- Governance
- Security Integration and Operations
- Implementation and Evaluation
- Capital Planning and Investment Controls
Governance

- Risk management decision makers
- Operational management staff
  - Cross-organizational teams
- Inventory assets
- Establish ownership
- Catalogue compliance requirements
- Threat and risk assessments and reviews
- Risk management categorization
  - Criteria: confidentiality, integrity, availability
Security Integration/Ops

- ID standards, best practices, system specific requirements
- Determine controls needed
- Set performance metrics
  - Implementation
  - Efficiency
  - Effectiveness
  - Impact
- Set contingency and continuity plans
Security Integration/Ops -2

- Develop security plan
  - Business operations and strategic goals
  - Management goals and organization culture
  - Legal compliance
  - System architecture
- Develop policies
- Develop procedures
Policies

- Framework for decisions
- Elements
  - Internal policy
  - Compliance and monitoring discussion
  - Enforcement mechanism
- Levels
  - Organizational
  - Functional
  - Computing
  - Baseline
Procedures

- Take policies to day-to-day operations level
- “How-to”
- Detailed
Controls

- Evaluation criteria
- Provide basis for security assessment
- Description of item and statement of goal
- May be flexible
Implementation and Evaluation

- Hands on; documentation and security management software not enough
- Training
  - Vary by responsibilities
  - Mechanism to compel
- Test and evaluate
  - Implementation, efficiency, effectiveness, impact
- Identify weaknesses and have correction mechanism
Capital Planning & Investment Controls

- Make security part of processes
- ROI
Security Programs
Security Plan Norms

- Must be consistent with
  - Business operations
  - Legal compliance framework
  - Management goals
  - Organizational culture
  - Systems architecture
Security Plan Organization

- Boards of Directors
- Senior management
- Internal management
- Operational staff
Internal Management

- Business unit managers
- HR
- Legal
- Financial
- Technical
- Security
- PR
Assessment

- Includes Gap Analysis
- Analyze environment and assess risks and vulnerabilities
- Assess potential for problem
- Identify solutions or countermeasures
  - Appropriate and cost effective safeguards
Risk Assessment Strategies

- Avoid
- Mitigate
- Accept
- Transfer/Insure
IT Risk Managers

- Comparatively new concept
- Core of any approach, even if term not used
- Often taken from financial auditors and analysts
Common Flaws

- Failure to focus on value of information and business reputation
- Fix as little as possible and not follow up
- Assign untrained people and not give them instruction
- Ignoring problems
- Using surface solutions
Change Management

- Another relatively new concept
- Can help with many problems
- Systematic way to introduce and manage change
- Procedures for introducing and implementing
- Audit trail to trace problems back
Classification

- Gives framework for setting risk priorities
- Seems straightforward
  - Can be complicated
  - Often not done in systematic way
- Flexible process
- Must examine data life cycle
  - Create, access, use, modify, store
- Similar approach for applications and systems
Policies

- Components of plan
- Frameworks for decisions
- Place to add standards, guidelines, best practices
- Four levels
  - Corporate
  - Functional
  - Computing
  - Security baseline
Procedures

- Put into effect
Review

- At least annually for:
  - Effectiveness
  - Compliance
  - Vulnerability