Cyber (In)security
A Risk Management Approach to Improve Security Posture and Prioritize Mitigation Efforts

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What is GENEDEGE?

We are the Manufacturing Extension Program of Virginia

An Economic Development unit of the Commonwealth of Virginia

Part of the Department of Commerce / NIST network of Centers across the country (60 centers, 1500 staff nationally)

20 years of success supporting Virginia businesses

Since 2000, the #1 Bottom-Line and Top-Line Impact Producer in the system – over $3.5 Billion of business impact reported

Over 10,500 industrial jobs created / retained

32 staff including two sub-recipient partners, The Manufacturing Technology Center in SW VA and Old Dominion University in Hampton Roads
What Does GENEDGE Do?

- Strategic Innovation and Growth
- Continuous Process Improvement
- Sustainability
- Supply Chain Optimization
- Technology Acceleration
- Export Assistance
- Market Commercialization
What Is “Cybersecurity” Anyway?

Confidentiality

Integrity

Availability

Non-repudiation

Authentication
Security is a Combination of Things

policies

Technology

Behaviors
(social media, email)
What Is Risk?

**Probabilities**

100%

**Outcomes**

**Impact**
Risk Management Framework

- Architecture Description
  - Architecture Reference Models
  - Segment and Solution Architectures
  - Mission and Business Processes
  - Information System Boundaries

- PROCESS OVERVIEW
  - Starting Point

- Step 1
  - CATEGORIZE
  - Information System

- Step 2
  - SELECT
  - Security Controls

- Step 3
  - IMPLEMENT
  - Security Controls

- Step 4
  - ASSESS
  - Security Controls

- Step 5
  - AUTHORIZE
  - Information System

- Step 6
  - MONITOR
  - Security Controls

Organizational Inputs
- Laws, Directives, Policy Guidance
- Strategic Goals and Objectives
- Priorities and Resource Availability
- Supply Chain Considerations

Repeat as necessary
Risk Management Framework

**Categorize** the information system and the information processed, stored, and transmitted by that system based on an impact analysis.

**Select** an initial set of baseline security controls for the information system based on the security categorization; tailoring and supplementing the security control baseline as needed based on an organizational assessment of risk and local conditions.

**Implement** the security controls and describe how the controls are employed within the information system and its environment of operation.

**Assess** the security controls using appropriate assessment procedures to determine the extent to which the controls are implemented correctly, operating as intended, and producing the desired outcome with respect to meeting the security requirements for the system.

**Authorize** information system operation based on a determination of the risk to organizational operations and assets, individuals, other organizations, and the Nation resulting from the operation of the information system and the decision that this risk is acceptable.

**Monitor** the security controls in the information system on an ongoing basis including assessing control effectiveness, documenting changes to the system or its environment of operation, conducting security impact analyses of the associated changes, and reporting the security state of the system to designated organizational officials.
Downloadable Self-Assessment

http://www.genedge.org/cybersecurity-assessment-request
Summary of Support:

- GENEDGE services can help identify your weak spots, decrease the costs of increasing your security
- We work with technical firms to conduct a vulnerability assessment
- Provide you with a gap analysis
- Work with you to prioritize the gaps and target spending to protect “Crown Jewels”
- Help develop an implementation plan to close the gaps
- Provide guidance on completing an Information Security Plan
Thank You For Attending

Contact GENEDGE

To Help Improve Your Security Posture

And Reduce Cyber Risks

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