RESHAPE THE EXPERIENCE

Cybersecurity – A Risk Based Approach

About Expedient Technology Solutions

MISSION : RESHAPE THE EXPERIENCE

- Founded in 2004, 38 Team Members
- Managed Service Provider
- Cybersecurity and Compliance Services
- Cloud Hosting and Managed Backup

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Strategic vs. Tactical Approach

Strategy defines your long-term goals and how you are planning on achieving them. Strategy gives you the path you need to achieve your mission.

Tactics are generally smaller steps and a shorter-term actions taken. They involve best practices, specific plans, resources, etc.

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Tactical Cybersecurity

- Tactical approach does not look at the entire scope of a mature cybersecurity program, only threats and vulnerabilities.
- Tactical approach does not prioritize defense or recovery based upon criticality of asset or system.
- Tactical approach does not consider laws, regulations, or contractual obligations the organization is required to comply with for cybersecurity or privacy.

Tactical Cybersecurity Examples

- ***CIS Controls*** (https://cisecurity.org) – Prioritized set of actions to protect your organization and data from known cyber-attack vectors.
- ***NIST Cybersecurity Framework*** (https://www.nist.gov/cyberframework) - Voluntary guidance, based on existing standards, guidelines, and practices for organizations to better manage and reduce cybersecurity risk.
- ***Cybersecurity & Infrastructure Security Agency (CISA) Ransomware Guide*** - Best practices and ways to prevent, protect and/or respond to a ransomware attack.

Case Study #1 - Ransomware

Business: Manufacturer

Incident: Network-wide Ransomware Infection

Affect on Business:

- Discovered offsite backups were not functional for 6+ months.
- Software needed to rebuild applications were stored electronically.
- Forced to pay ransom of $75k due to insufficient restore capability.
- Additional costs for investigations, recovery, etc.
- Multiple weeks of business interruption.

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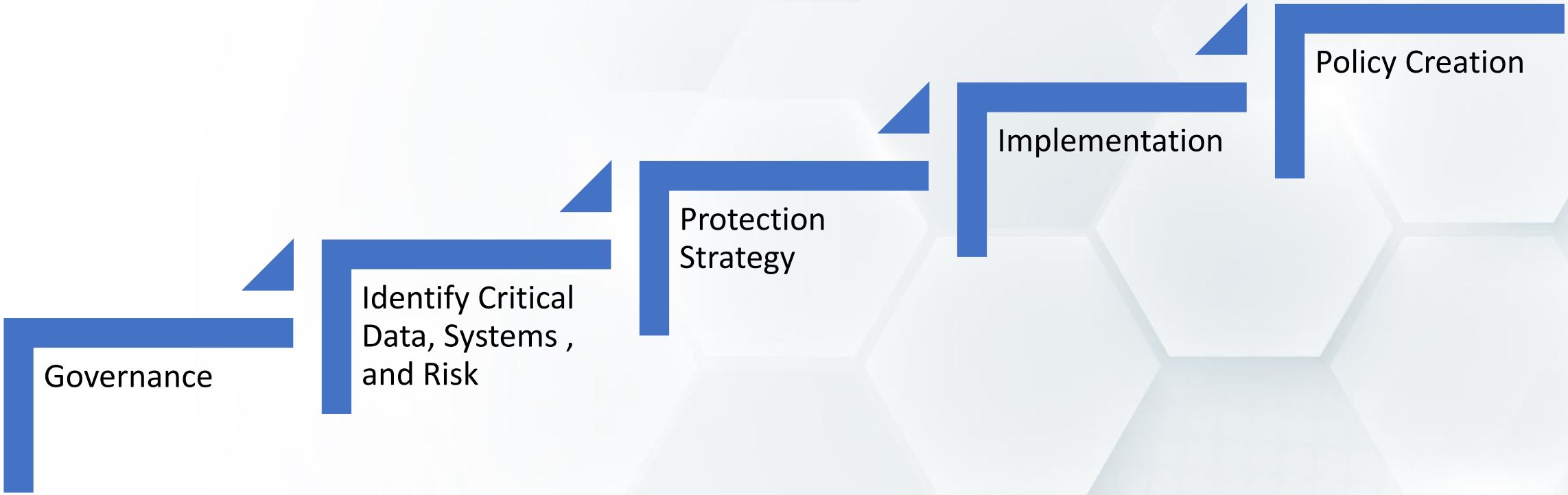

GOVERNANCE

Objective: Establish a governance strategy.

Target Audience: The executive team.

Actions:

- Identify External Program Influences
  - Statutory Cybersecurity and Privacy Requirements (Laws)
  - Regulatory Cybersecurity and Privacy Requirements
  - Contractual Cybersecurity and Privacy Requirements
  - Industry Recognized Practices

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GOVERNANCE

Actions (cont.):

- Identify Internal Program Influences
  - Aligning IT to business strategy
  - Goals and objectives (e.g. customer satisfaction, SLA's, quality metrics, competitive advantage)
  - Budget constraints
  - Corporate policies
- Identify Risk Tolerance

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IDENTIFY CRITICAL DATA, SYSTEMS, AND RISK

Objective: Identify critical data / systems and establish a risk-based protection strategy.

Target Audience: Data / system owners and IT / cyber lead.

Actions:

- Identify Assets
  - Data
  - Personnel
  - Physical Devices
  - Software / Applications
  - External Information Systems
  - Facilities / Locations

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IDENTIFY CRITICAL DATA, SYSTEMS, AND RISK

Actions (cont.):

- Identify Business Environment
  - Role in the supply chain.
  - Suppliers and third parties related to IT
- Development of a Risk Assessment
- Development of a Business Impact Analysis
- Gap Analysis of any Identified External Influences

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Case Study #2 - Ransomware

Business: Multi-Location Services Business

Incident: Network-wide Ransomware Infection

Affect on Business:

- Rebuild of entire server infrastructure, rebuild of all workstations.
- Lost all ERP history and rebuilt the current month from paperwork.
- At least $150k in hard costs.
- Did not pay ransom.

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Risk Assessment Concepts

Process of analyzing potential threats and vulnerabilities to your assets to establish what loss you might expect to incur if certain events happen.

Risk = Threat * Vulnerability

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Risk Assessment Concepts

Quantitative Risk Assessment

Measures risk using monetary amounts, providing the value of expected losses of a specific risk.

- Asset Value
- Frequency of Risk Occurrence
- Probability of Associated Loss

Single Loss Expectancy x Annualized Rate of Occurrence = Annual Loss Expectancy

Risk Assessment Concepts

Qualitative Risk Assessment

Measures risk using opinion-based judgement to determine risk based upon probability and impact. Rating Scale:

- Low – unlikely to occur or impact
- Medium – possible to occur and impact
- High – Likely to occur and impact significantly.

Probability	Harm Severity		
	Minor	Major	Critical
High	High	High	Very High
Medium	Medium	High	Very High
Low	Low	Medium	High

Business Impact Assessment Concepts

- Maximum Tolerable Period of Disruption
- Recovery Time Objective
- Recovery Point Objective
- Dependencies Related to Critical Systems and Functions
- Scenarios Most Likely to Impact Critical Systems and Functions
- Potential Loss from these Scenarios

Business Impact Assessment Concepts

Payroll Example

Dependencies – Internet connectivity, Timekeeping and Accounting Systems, Payroll Provider SaaS Platform

MTPD – 2 Weeks

RTO – 72 Hours

RPO – 24 Hours

Likely Impact Scenarios – Loss of Internet connectivity, payroll provider SaaS platform downtime, timekeeping and accounting systems downtime.

Potential Loss – No attributable financial loss expected. Downstream issues expected if payroll window is missed, and employees are not paid timely.

PROTECTION STRATEGY

- Objective: Develop a strategy to protect assets based upon their classification, priority, and risk.

Target Audience: IT / cyber lead and key team members.

Actions:

- Risk Responses
  - Risk Mitigation
  - Risk Assignment or Transference
  - Risk Acceptance
  - Risk Deterrence
  - Risk Avoidance
- Expense of Responses Justified by the Risks and Impact Shown in the RA / BIA.

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IMPLEMENTATION

Objective: Deploy the controls, solutions, etc. identified to address risks and priorities.

Target Audience: Assigned IT resources.

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POLICY CREATION

Objective: Build out additional policies, plans, etc.

Target Audience: IT / cyber lead and key team members.

Policies, Plans, etc.:

- Vendor Management Program
- Business Continuity Plan
- Disaster Recovery Plan
- Incident Response Plan
- Written Information Security Policy (WISP)
- Standards and Procedures
- Monitoring Objectives and Metrics

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QUESTIONS?

THANK YOU!

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