Managing Cybersecurity Concerns Under Budgetary Constraints

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[COVID-19]
VACCINE RESEARCH 0034 - 234


Closed due to
CORONAVIRUS


GET ME OUT OF HERE

March 2020

- "Unprecedented Shift"
  - Over 60% of Americans are working from home during the crisis
- Companies have extended WFH orders through 2020
- 74% of CEOs expect some permanent shift

Zillow VISA

Attempting to Work

- Non-traditional work environment
  - Lack of structured schedule
  - Traditional management techniques
- Remote access onboarding
  - New devices or BYOD
  - Rural Internet issues

Attempting to Work

- Cross-training roles
  - Managing segregation of duties
- Added security requirements
  - No longer one network to protect
  - Security layers translate to home network

Flexibility But Within Boundaries

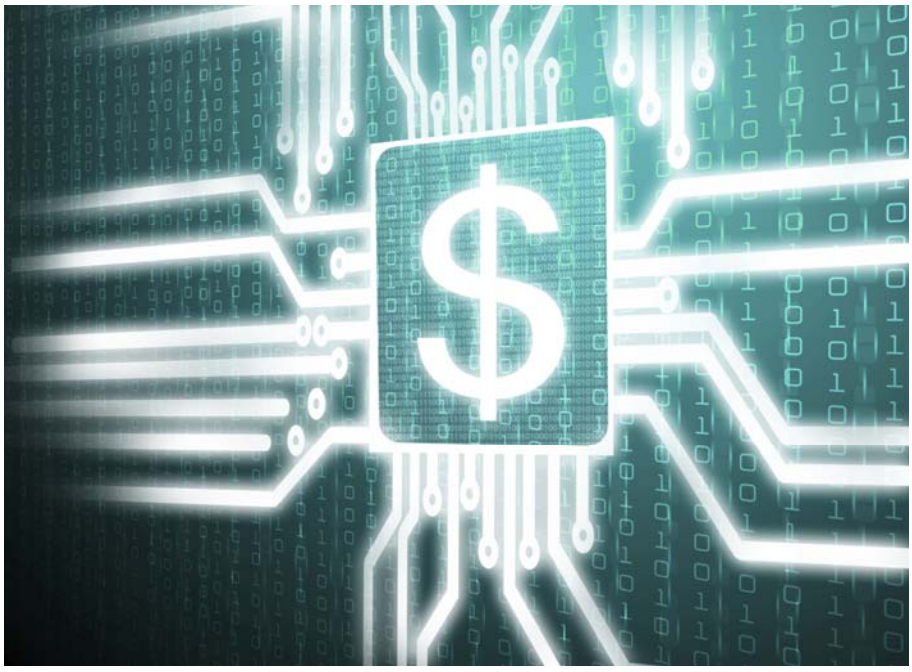
- Technology, processes, and culture should be considered
- Should include everyone: executive management to entry-level employees
- Practical and moral support should be provided to ensure success for onsite and WFH employees

All-Inclusive Collaboration

- Employees need tools to be effective
- Understand your existing products and services
  - Ineffective tools and applications hinder performance
  - Adds frustration and stress
- Consider your audience – employee vs. constituent

All-Inclusive Collaboration

- Communication becomes key
  - More than necessary, but becomes second nature
  - Numerous methods
  - Ends up being less intrusive
- Isolation becomes a valid issue
  - Lack of casual interchanges

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Cyber attack
orld's leaders meet to-
day to discuss global
nd terrorism is

Security Concerns

- Third-party vendors
- Organization responsibilities
- End-user assistance

Third-Party Vendors

- New vendors
  - Risk assessment
  - Contract review
  - Approval procedures
- Existing vendor relationships
  - Periodic oversight procedures
  - Utilizing existing resources

Emergency Vendor Considerations

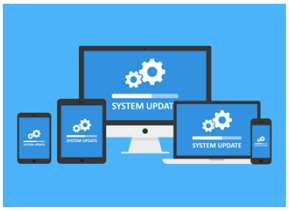
- Pull and review System and Organization Controls (SOC) reports
- Review any contracts
- Research what others have implemented
  - Hardening controls
  - Proper implementation procedures
  - Possible mistakes

Existing Vendor Resources

- Use existing vendor relationships
  - Managed service providers
  - Accounting platforms
  - Donor management, CRMs, etc.

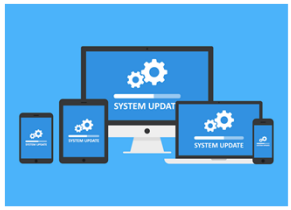
Device Management

- Centralized system
  - All devices receive latest updates or definition files
  - Remediate issues
- Manual process
- Limit access
  - Application and browser add-ons
  - Avoid sharing devices



Device Management

- Personal Devices
  - Update and secure across home network
    - Patch and anti-malware management
  - Router, streaming devices, voice assistants, appliances, smart home devices
  - Obsolete software



Mobile Devices

- Inherent threats for devices
- Establish Acceptable Use Policy (AUP)
- Maintain inventory, regardless of ownership
- Enforce restrictions
  - Passwords/biometrics
  - Encryption
  - Remote wipe

Mobile Devices

- Consider mobile device management (MDM) software
- Establish data removal procedures
- Cloud data restrictions

IoT Devices

- Inventory devices in use
- Layered security controls
  - Strong passwords
  - Evaluate data and analytics sharing
  - Patching procedures
  - Disable features
  - Segmented network

Password Security

- Numbers, characters, symbols
- Avoid common words
- Change often, and when compromised
- # of characters (8…12…??)

Password Security

- 7 characters – 0.29 milliseconds
- 8 characters – 5 hours
- 9 characters – 5 days
- 10 characters – 4 months
- 11 characters – 1 decade
- 12 characters – 2 centuries

Password Security

- Unique and private passwords
  - Password manager?
- Business ≠ Personal
- Account lockout and inactivity threshold
- Biometrics
- Layered security

Multi-Factor Authentication

- Critical for all cloud applications
  - Remote access
  - Email
  - AWS/Azure
- Consider IP address, time, and day restrictions
- Mobile devices, email message, tokens

Encryption

- All connections should be protected
- Data sent and received
  - In transit
  - At rest

User Provisioning and Access

- Minimum rights for users
- Review regularly
  - Job transfers
  - No longer needed

Wi-Fi Networks

- Use properly secured Wi-Fi
  - Work and home
  - Be wary of public Wi-Fi
  - Use a VPN
  - Mobile hotspots

Wi-Fi Networks

- Encrypt network appropriately (at least WPA2)
- Secure password for access
- Guest network for non-business system

Limit Application Programming Interface (API)

- Allows applications to communicate with each other
- Enhances functionality of cloud apps
- Bridges internal network resources with cloud apps
- Can introduce new risks due to elevated privilege of APIs

Consider Data Loss Prevention (DLP)

- Preventing end users from sharing critical data outside of the intended use
  - Downloading data from the cloud
  - Using cloud apps to share critical data

Data Retention Periods

- Large amounts of data may be stored
- Limit impact if data or systems are compromised
- Evaluate and establish removal process

Shadow IT

- Apps or devices that are utilized without IT knowledge
  - Personal or mobile devices
- Rogue cloud services
  - Personal email, document scanning, cloud storage
- Appropriate authorization procedures

Training

- All employees should participate
- Methods will vary — webinar, email, newsletters, etc.
- Review policies and procedures
- Real-world examples
- Build culture of awareness
- Establish Incident Response Plan

Key Takeaways

- New threats to consider that weren't on our radar 12 months ago
- Loss of reputation can be significant
- Maintain adequate security controls
  - Provide critical tools for users
  - Doesn't have to be expensive!

Thanks!

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