Cyber Security Risk Calculation
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BIO

25+ years in business and IT

• Manufacturing, analytics, financial, and critical infrastructure
• Local and global workforce
• Sales and marketing
• Small business owner

Women in Technology, Wisconsin

• Founding member

Bucket List items and Other Fun Facts
Our Differentiating Values

We recognize that our hard-earned success is rooted in our people-first culture, and our unstoppable will to stand by our values and beliefs.

US Venture Open

U.S. Venture funds and hosts the annual U.S. Venture Open charity golf outing.
Our Goal

Build a sustainable program that balances the need to protect with the needs to run our business
Cyber Risk Management
There is no such thing as perfect protection

The Opportunity

How to Answer:
“What is our cyber risk?”

And

Build Out the Information Security Strategy and Investment based upon leading indicators of risk
Controls vs Security
*Risk cannot be quantified solely on control maturity*

- The struggle is real
  - A large volume of frameworks with really good controls
  - But does control maturity equal cyber risk?

- Started using the metrics we could gather...

- Switched to GQM model

![Email Traffic Diagram]

- Total Email: 17,498,332
- Blocked Email: 10,186,717
- Delivered Email: 7,331,615
- Malicious Email Caught by Endpoint Protection: 164
Quantifying Risk
Created a quantitative method to prioritize cyber security initiatives

Found nothing in the industry that appropriately quantifies our risk

Most do not take into account

- dynamic nature of user behavior
- dynamic nature of threats
**Cyber Security Risk Calculation**

Our focus for this talk is on **Probability**

- Measurement of team members behaviors, both “at risk” and “champion”.
- Combination of both behaviors create the overall probability score.

*Important note: ‘Behaviors’ in this context are not always ones that can be changed. Sometimes the behavior is driven by the role in the organization. NO JUDGING your people!*
Current People Behavior Measures

Malware Detected by Firewall

Training Completion Rates

In Business Percent Clicked and Percent Reported

Malware Detected by Antimalware Tool: Grouped by Business and Type
Cyber Risk Dashboard

Division A
207

Division B
351

Division C
48

Division D
525

Division E
38

Cyber Risk Score = Digital Dependency x Vulnerability Score x Current Threat Profile x Probability

Critical Business Asset Vulnerability Score

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<thead>
<tr>
<th>Alert Level</th>
<th>Business</th>
<th>Vuln Score</th>
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Threat Level

- LOW
- GUARDED
- ELEVATED
- HIGH
- SEVERE

Threat Notes
Crypto-mining malware attempts. Slight uptick in phishing attacks.

Probability Factor: People

Digital Dependency

- Reputation
- Productivity
- Financial

Artificial Stats for Presentation
It’s Your Turn
Start by Measuring Your People’s Behavior

1. Centralize your Statistics
2. Start Trending, Look for Patterns
3. Don’t wait for Perfection
4. Determine Company Behaviors
5. Understand Your Company’s Appetite for Risk
Thank you!