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Security Metrics: Can They Be Effectively Measured Across The Enterprise?

SESSION ID: CISO-W01

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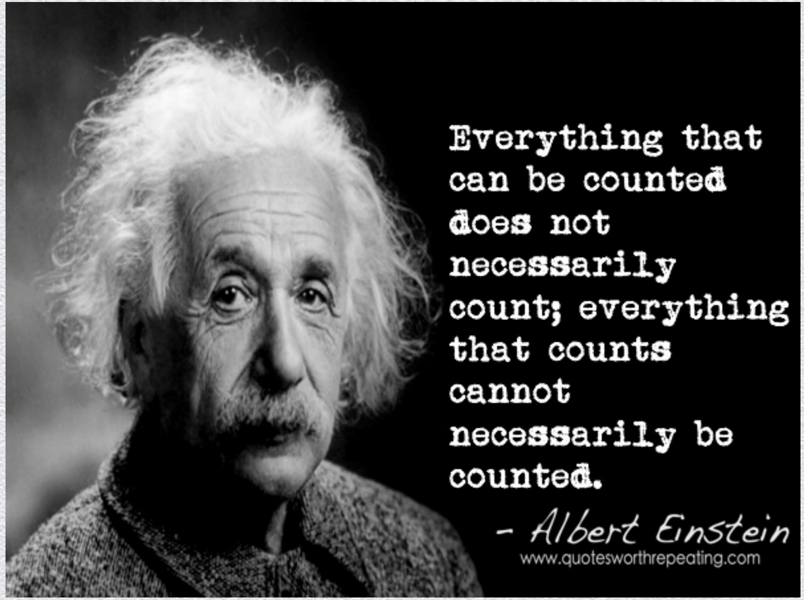
Lies, Damn Lies and Metrics

- We can measure just about anything that we seek to.
- We can use resulting metrics to show us many different things.
- Just because we can measure something doesn't mean we should!
- So, which metrics are truly meaningful and to whom should we show them?



Everything that can be counted does not necessarily count; everything that counts cannot necessarily be counted.

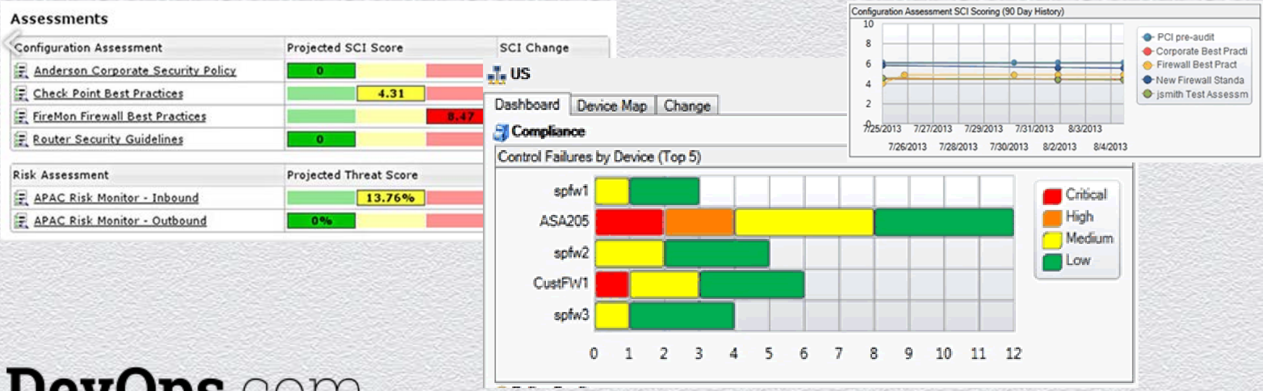
- Albert Einstein

www.quotesworthrepeating.com

What Metrics to Measure

Meaningful Security Metrics?

- The Value of Good Metrics
  - Convey a Clear Picture (Point-in-Time or Historically)
  - Signify Valuable & Actionable Information
  - Provide Support for Business Objective(s)



Assessments

Configuration Assessment	Projected SCI Score	SCI Change
Anderson Corporate Security Policy	0	
Check Point Best Practices	4.31	
FireMon Firewall Best Practices	8.47	
Router Security Guidelines	0	

Risk Assessment	Projected Threat Score
APAC Risk Monitor - Inbound	13.76%
APAC Risk Monitor - Outbound	0%

The *Usual* Suspects…

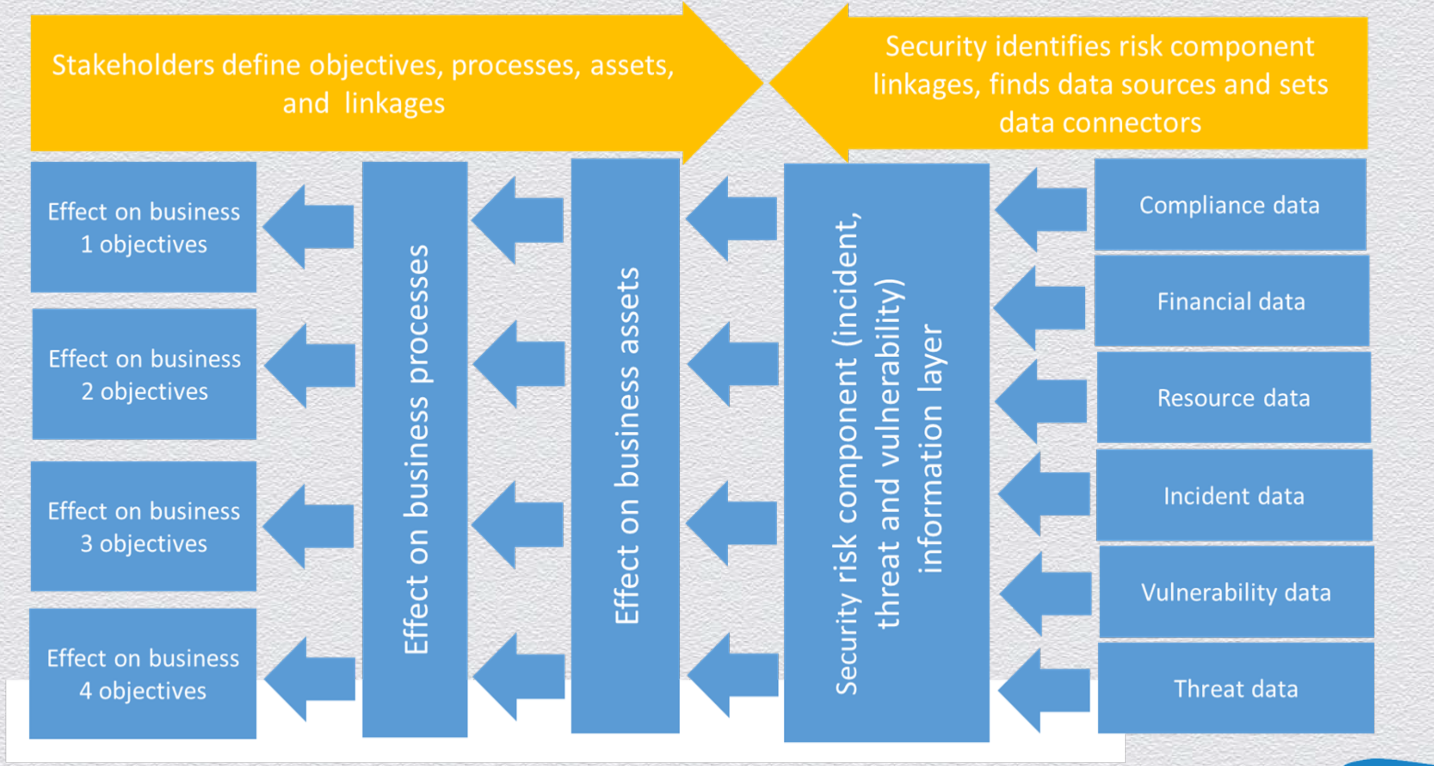
The *Hard* Questions…

- How can Security Effectively Communicate to the Company and Executive Stakeholders?
- Where does Security have a ‘Real’ relation and potential to Impact the Business Objectives?
- Are we aligning the Information Security Program Objectives to the Business Needs?

The *Easy* Answers….

- Demonstrate Effective Management of Prioritized Risks
- Provide a picture of how Business Critical Assets are Impacted
- Provide Accountability for Decisions and help to Justify Security Spend

Metrics that Matter



Stakeholders define objectives, processes, assets, and linkages

Security identifies risk component linkages, finds data sources and sets data connectors

Effect on business 1 objectives

Effect on business 2 objectives

Effect on business 3 objectives

Effect on business 4 objectives

Effect on business processes

Effect on business assets

Security risk component (incident, threat and vulnerability) information layer

Compliance data

Financial data

Resource data

Incident data

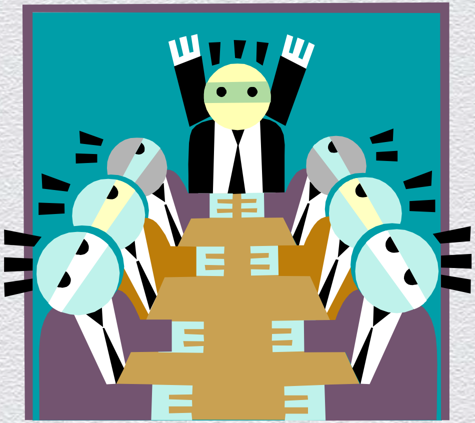
Vulnerability data

Threat data

What Metrics Matter to Others

C-Levels and Board Members

- Current State of Security
- Current Risk Posture and Changes Over Time
  - (Previous 4 Quarters at Minimum)
- Security Initiative Performance
- Regulatory Compliance Reports/Updates
  - (PCI DSS, SSAE16, FFIEC, HIPPA, FISMA)
- Benchmark Reports
- Budget Performance



Management Metrics

- Trend Analysis Data (Periodic), Security Posture Trends
- Vulnerability Management/Patch Reporting, Vulnerabilities By Severity Levels (High, Medium, Low, Informational), Emerging Network Threats
- Incident Response Times, Associates/Contractors That Have Completed Information Security Policy Training, Asset Criticality & Sensitivity,
- Total $ Invested in Security Initiatives and Current Status, Audit Compliance and Findings
- Total % of Systems Patched, % Compliance with Security Policies (Patch/Password/Vulnerability), % of Risk Accepted Threats

Engineers/Support Teams

- Detail info on Threats, Top/Emerging Exploits, Top Present Vulnerabilities, Top Source Attackers (Egress -> Ingress), Top Destinations Attacked (Egress -> Ingress), Top Source Attackers (Ingress -> Egress), Top Destinations Attacked (Ingress -> Egress)
- Potential Virus Outbreaks, # Accounts Created (Unix and Windows), Accounts Deleted (Unix and Windows), # Successful / Failed Logins, # Incidents Investigated, # Failed Use of Privilege, # Files Accessed on Servers, # Security Event Logs, # Severe Security Events, % Time Devices Were Actively Logging by Day, Type and Severity of Security Incidents, Analyzed vs. Validated Incidents,
- Top 4 Devices by Log Activity, Vulnerability External (Highs/Mediums/Lows), Vulnerability Internal (Highs/Mediums/Lows),
- # Potential Malware Infected Clients (IPs), # Requests to Malware sites, # Blocked Requests to Known Malware Sites, % Servers Patched to Current Patch Level, % Servers Patched w/All Service Packs, AntiVirus Workstation, AntiVirus Server, Availability Security Hardware/Services
- # Accounts Inactive (>= 90 <120), # Accounts w/Passwords That Can't Be Changed, # Accounts Inactive (> 120), # Accounts w/Non-Expiring Passwords, # Locked Out Accounts, # Disable Accounts, # Rogue Aps, SPAM Email

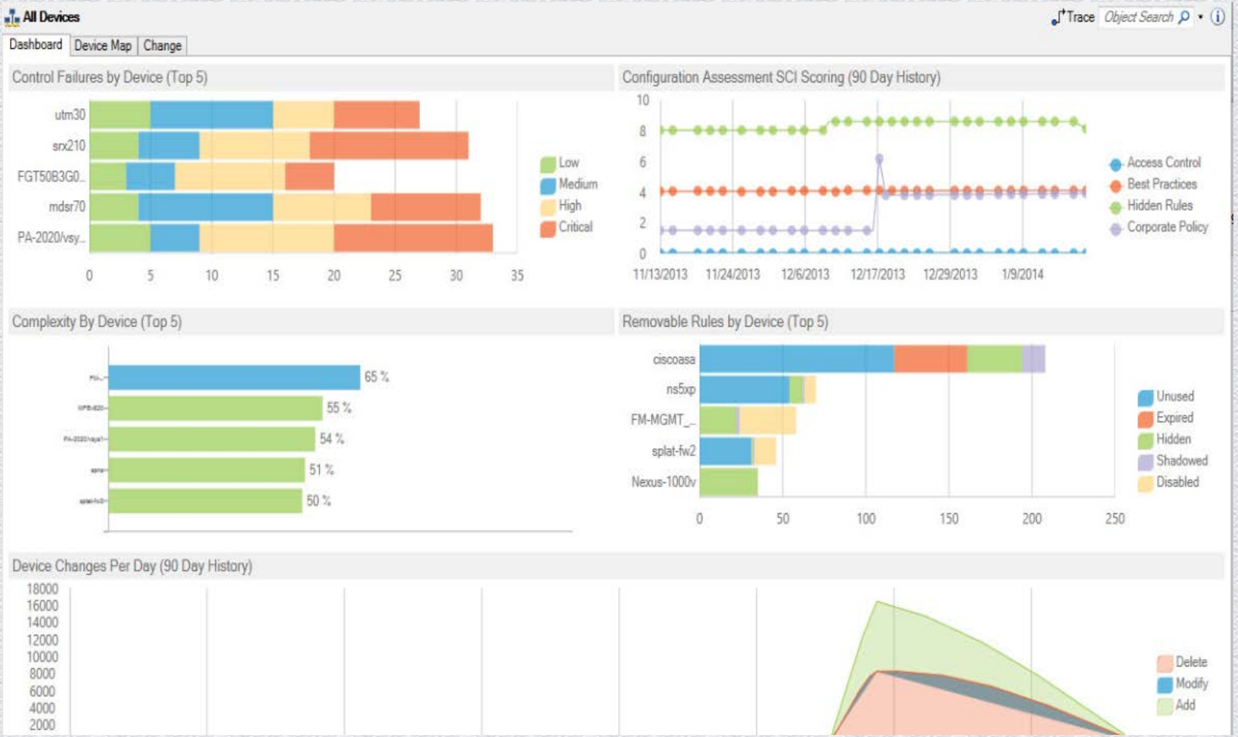
What Matters to Jody as President and a Security Person

What’s wrong with security metrics?

- There is No Industry Agreement on What to Measure
  - Where is the MBA of Security?
- We Measure the Wrong Things
  - We tend to Measure Our “Successes”.
    - Drop logs, IPS Block Events, Failed Logins
- We Measure What We Can’t Control
  - Threats
  - Vulnerabilities

New Ponemon Metrics Survey – Initial Results

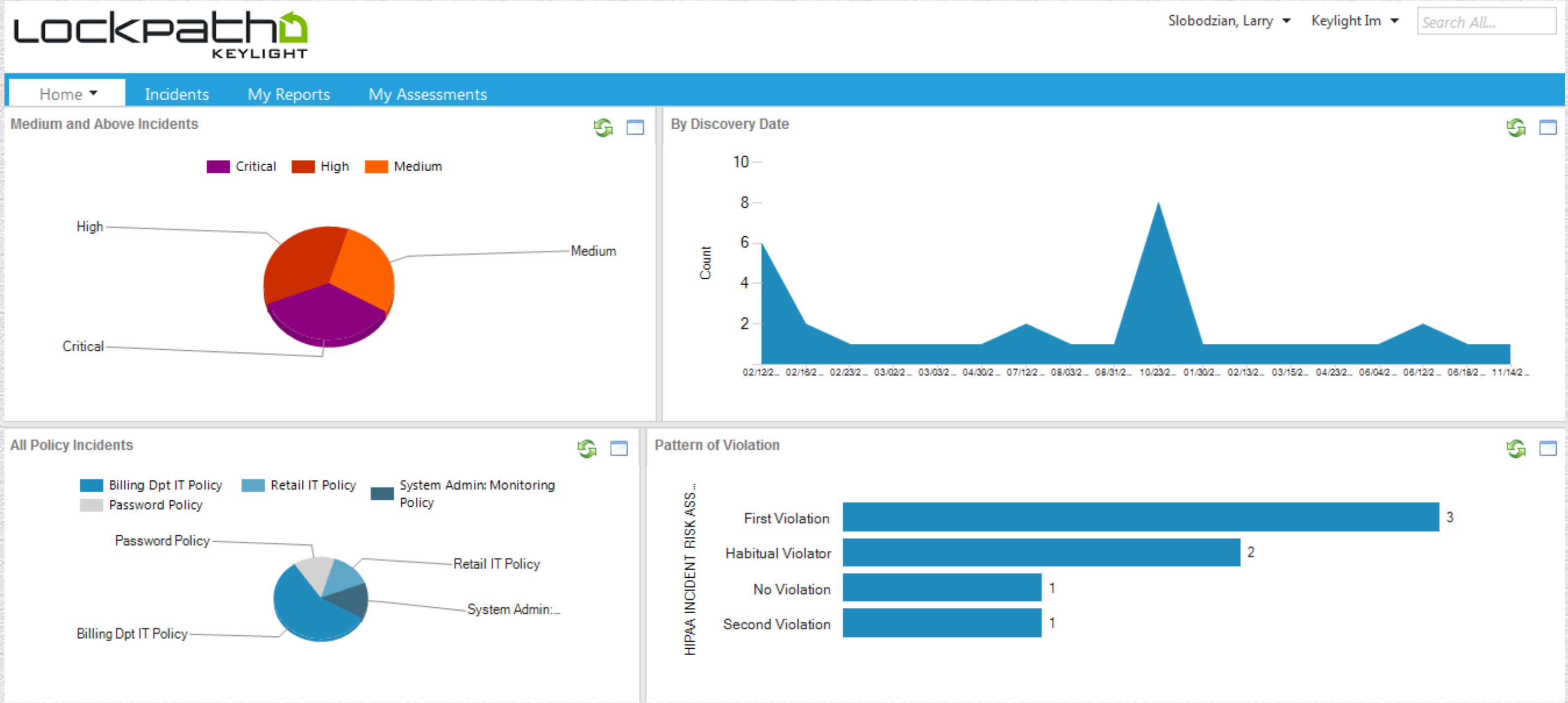
- Over half of all organizations surveyed only report to senior management on security risk when there is serious issue, or never at all!
- > 50% feel that current metrics provide limited value for:
    - Security change
    - IT risk
    - Threat prevention
    - Effectiveness of people/process/tech
- 69% feel current metrics do not align with business objectives



Measure Security Posture

Don’t just measure what’s happening or has happened.

***Measure current security posture of what you can control*.**



Measure Your Failures

Measure incidents. By **Severity**, **Policy** and **Category**. Trend your incidents.

What You Should Take Away

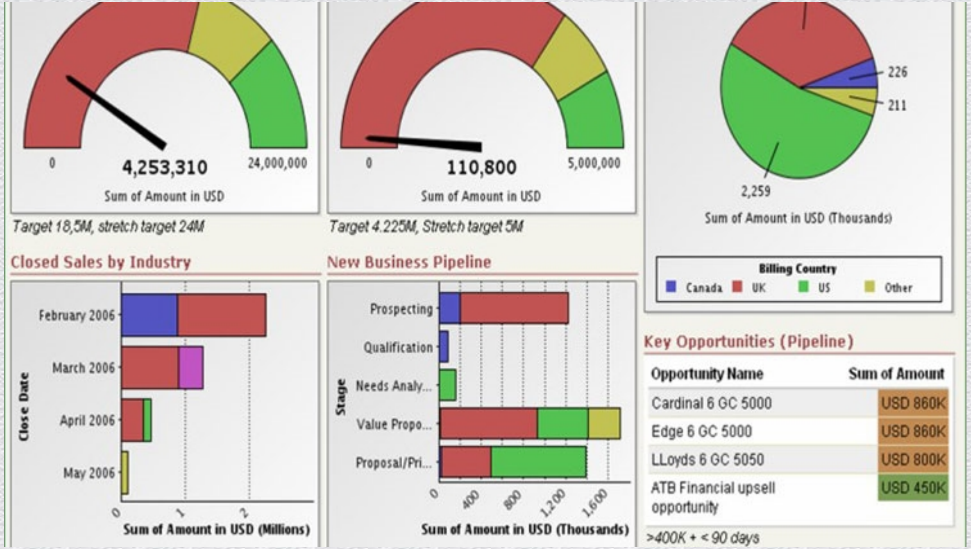
As Soon As You Get Back (0-3 Months)

- Like Ivana did, decide which things you want to measure and report and to which audience (just because you can, doesn't mean you should)
- Meet with various constituents and understand what intelligence is most important to them
- Assess what your current capabilities to measure are
- What tools, services and solutions are you lacking to measure what you need?

Where You Should Be In 6-12 Months

- Practical security metrics program in place
- Delivering whatever intelligence you can ***now***
- Budgeting and implementation approved for solutions
- Quarterly feedback from various teams on metrics
  - Meaningful enough for them?
  - What else they need?
  - What they don't need.

Questions?



Target 18,5M, stretch target 24M

Target 4.225M, Stretch target 5M

Closed Sales by Industry

New Business Pipeline

Key Opportunities (Pipeline)

Opportunity Name	Sum of Amount
Cardinal 6 GC 5000	USD 860K
Edge 6 GC 5000	USD 860K
LLoyds 6 GC 5050	USD 800K
ATB Financial upsell opportunity	USD 450K

>400K + < 90 days

Metrics Can Be Your Best Friend

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