Cyber Security: The 800 Pound Gorilla in the Room

Konrad Fellmann – Worldwide Director Information Security
INTRO

Konrad Fellmann

WW Director, Information Security at Cubic Transportation Systems

• Responsible for security and compliance for customer services
• Managing security operations for operational environments
• Consulting and supporting customers who use our systems
THE 800 POUND GORILLA

• Value of security

• Commitment

• Expensive

• Compliance vs Security

• Compliance and audit time/cost trending up
  – Increasingly more strict

• Enterprise versus operations differences
TRENDS

• Systems more connected
  – Mobile, ecommerce, integration APIs, cloud

• Compliance costs increasing
  – Privacy, State/Federal laws, PCI

• Public perception and trust

• Threats and risks change constantly
RECENT EVENTS

Target to Settle Claims Over Data Breach
Retailer to pay Visa issuers up to $67 million, is working with MasterCard on similar deal

Home Depot To Pay $13M To End Consumers' Breach Claims

ASHLEY MADISON
Life is short. Have an affair.

CUBIC Transportation Systems
FACTS AND FIGURES

**Data Breach Incidents - By Type**

**2015 DATA BREACH INVESTIGATIONS REPORT**

<table>
<thead>
<tr>
<th>RECORDS</th>
<th>PREDICTION (LOWER)</th>
<th>AVERAGE (LOWER)</th>
<th>EXPECTED</th>
<th>AVERAGE (UPPER)</th>
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**US study at a glance**

- 62 companies participated
- $6.5 million is the average total cost of data breach
- 11% increase in total cost of data breach
- $217 is the average cost per lost or stolen record
- 8% increase in cost per lost or stolen record
THREATS, BAD GUYS, RISKS
WHERE ARE BAD GUYS COMING FROM?
WHAT ABOUT THE CLOUD?

• Apply the same concepts as on prem
• Look for third-party audits
FRAUD

• Internal
  – Collusion, monitoring usage, ensuring proper reconciliation

• External
  – Payment fraud, detecting patterns across environments

• Combating
  – Data analytics, internal controls, business rules
  – Key is ability to detect and react quickly
BEST PRACTICES AND CAPABILITIES

Cyber Security

- Governance, risk and compliance
- 24/7 security monitoring
- IT service management
- Centralization of resources
- Limit data retention
- Defense in depth
- Access management
- Change management
- Vulnerability management

Defense in depth
Limit data retention
Centralization of resources
IT service management
24/7 security monitoring
Governance, risk and compliance
Access management
Change management
Vulnerability management
COSTS OF SECURITY

INSOURCE

• Pros
  – Full control
  – You know exactly where everything is and how it’s done

• Cons
  – Expensive
  – Proper resources
  – May not be a core strength

OUTSOURCE

• Pros
  – Economies of scale
  – Focus on your business
  – Liability transfer
  – Reduce compliance costs

• Cons
  – Still reputational risk
  – May lose transparency
  – Requires trust
TAMING THE GORILLA

• Security is hard and will not get easier

• Multiple approaches, build a good team or transfer the tasks/liability to someone that does it for a living

• Find specialists you are comfortable working with
An integrated system that is scalable to include other agencies

Offers a new range of convenience for MTA customers

Contactless bankcards and mobile ticketing

Available for all modes of transportation

Thank You!