Managing Cyber-Security in a Smart City

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San Francisco’s Threat Landscape

- Highly technical constituency
- Proud Leader in Open Government and Open Data
- Shrinking budgets and staff reductions
- Increased demands for new technologies
- Highly mobile workforce
- Hacktivism and Structured Attacks
- CCSF has averaged 100,000 malware hits on our Intrusion Protection Systems everyday since January 1, 2012
- October 2012 CCSF Departments reported 6 major email phishing scams
Smart and Secure City

- Balancing act between collecting data and keeping personally identifiable information (PII) secure
- Adopting leading edge technologies and concepts requires careful management of:
  - **People**
    - Manage staff and set clear expectations
  - **Process**
    - Define clear policies and create a culture of governance
  - **Technology**
    - Be thoughtful of technologies selected
  - **Security**
    - Maintain a culture that is Security Aware and considers security at every phase
    - Security should be a business enabler
Open Data

- CCSF has released 200+ datasets and shared 100+ applications
- Cloud based Socrata platform allows data from many sources and share data in different formats
- Three-step process to ensure sensitive data is not disclosed publicly:
  1. Reviewed by Department heads
  2. Reviewed by Chief Data Coordinator
  3. Reviewed by City Attorney

“Data sets that contain personally identifiable information or represent potential breaches to security or privacy should be flagged for potential exclusion from DataSF”

Examples:
- Crime Data is released with no identifiable information
- DPW datasets do not release such as critical infrastructure or exact location of manholes
“Cloud First Policy”

- City-wide adoption of virtualization
- Requires every application, server and storage system to be “cloud-ready”
- Consolidating 20 data centers and server rooms
- $2mil in cost savings
- Provides resiliency and increases Disaster Recovery capabilities
- Streamlined management of cloud environments increases security and availability
- Cloud solution providers are rigorously reviewed for meeting City’s Security Requirements including:
  - SAS 70 Audit Report Review
  - FIPS 140-2 and FISMA Compliance
  - Meets Security recommended Cloud Security Alliance
  - HIPPA Compliant
  - Provide 5 Government Sector references

  - Virtual server protection
  - Cloud integration capabilities
  - Increased Security
Open311 API

A Collaborative Model and Open Standard for Civic Issue Tracking

- Report and Track non-emergency issues in public spaces
  - Potholes, vandalism, garbage, etc
- Asynchronous, many-to-many issue tracking vs. 311 Call Center
  - Enhances engagement and collaboration with citizenry
- Worked with cities, nonprofits and developers from across US to create interoperable international standard
- 30 cities use Open311

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