



Audit Committee Report - Corporate Security Overview

On June 1, 2017, Corporate Security evolved from a Division within Law to a newly created business unit, which demonstrates the importance The City places on the security of City staff, the Mayor and Members of Council, visitors, information, assets, and infrastructure.

In support of the One Calgary Program and the shift to a service-based view through The City's multi-year plan and budget for 2019-2022, Corporate Security was recently identified as a service line. Corporate Security's service is to "protect The City's employees, information and assets and assist in the provision of public safety." Corporate Security has two functional subservices, cyber security and physical security. Moving forward, these subservices will be further reviewed and organized to better address the deliverables that Corporate Security provides for clients through its strategic and risk management approach outlined in the Bowtie diagram on page two.



In this report, Corporate Security captures the following highlights:

- Strategic and risk management approach
- Maturity model – 2017 and 2018
- Client engagement
- Employee engagement
- Key highlights
- An industry leader

A separate confidential attachment outlines The City's security risks and trends.

Strategic and Risk Management Approach – Bowtie Model

Corporate Security has historically aligned its services along traditional (functional) security categories, namely physical and information security. To better align with service-based budgeting and a more mature model of risk management, Corporate Security will transition its strategic approach and its subservices to reflect a bowtie strategic and risk management approach.

The bowtie model creates a clear differentiation between proactive and reactive risk management. Corporate Security's proactive security services help identify threats prior to an incident occurring. These threats are noted in the first column. The ongoing identification and response to risks is shown in the middle column and the response required if an incident occurs is noted in the third column. After an incident, lessons learned are documented and where possible, changes are made and incorporated into proactive services. Corporate Security is committed to continuous improvement.

Subservices

Threats

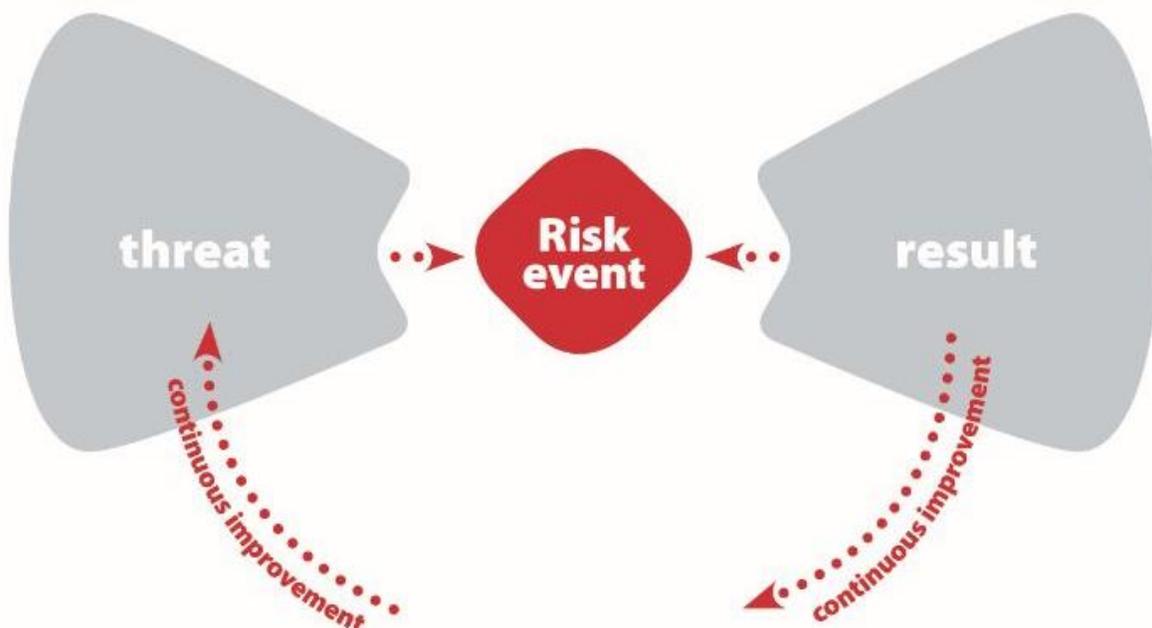
- Assessment and mitigation strategies
- Intelligence
- Technical application and support
- Business support
- Training and education

Risks

- Security operations, monitoring and response

Results

- Investigations
- Cyber incident response

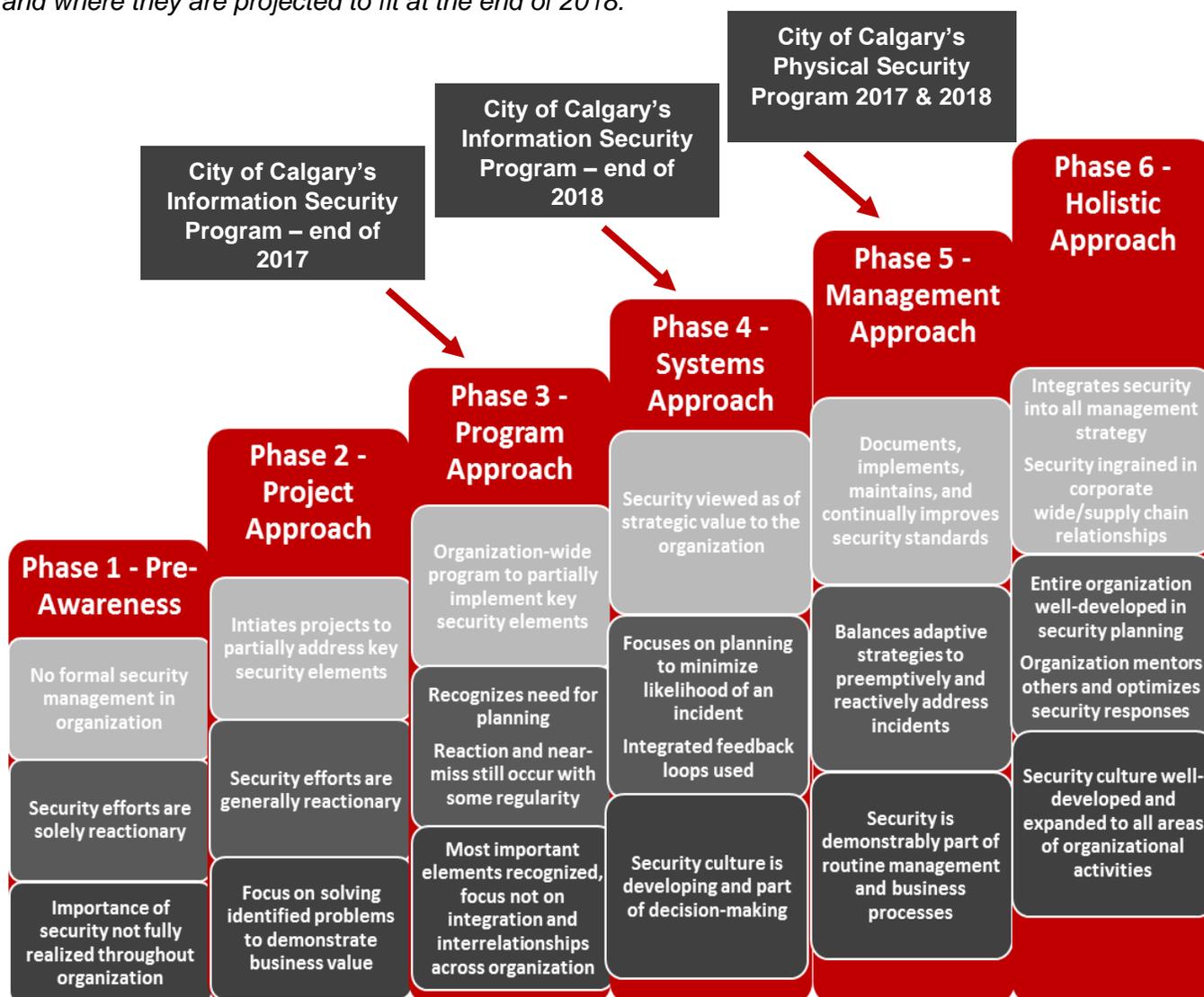


Corporate Security's Maturity Model - end of 2017

Corporate Security uses the Organizational Resilience Maturity Model developed by the American National Standards Institute and American Society for Industrial Security International (ASIS) to benchmark its progress in delivering a proactive, preventative and intelligence-based security program. The model depicts the maturity level of Corporate Security's functional subservices, information security and physical security, within the model's six phases.

At the end of 2017, information security had moved further into phase three (compared to 2016 when it was at the end of phase two and the beginning of phase three), while physical security remained consistent. Increased cyber risk required intentional focus, planning and resources, while physical security's subservices were already well developed. Based upon risk and needs assessments, Corporate Security prioritized maturity growth for cyber security subservices in 2017.

This model depicts where the two subservices fit within the maturity model at the end of 2017 and where they are projected to fit at the end of 2018.



Corporate Security engages its clients

In 2017, Corporate Security engaged an external research company to conduct a client satisfaction survey among its internal clients. Over 450 City Dept ID owners, which are managers, supervisors and leaders within The City, completed the survey and provided meaningful feedback that Corporate Security will use as a baseline to address what is working well and address opportunities for improvement in its service delivery. Ninety-one per cent of survey respondents were satisfied or very satisfied with the services they receive from Corporate Security.

Overall satisfaction is high among those who use Corporate Security's Services

"Overall satisfaction is high, and while usage of the majority of services is low, satisfaction among users is relatively high."

91% are satisfied with CS services (39% are very satisfied)



top reason for satisfaction: fast/efficient service

30%

Top 3 services used	Past - Year Usage*	Total Satisfied**
ID/access card issuance and replacement	81%	94%
Access door or card reader repair	43%	84%
Security guard services - facility	43%	85%

*usage of other services ranges from 7% to 39% of Dept ID owners

**satisfaction with other services ranges from 64% to 88%



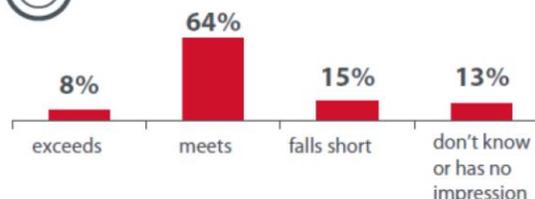
Satisfaction across Services

Most are satisfied with the ability to access information and services from Corporate Security

90%



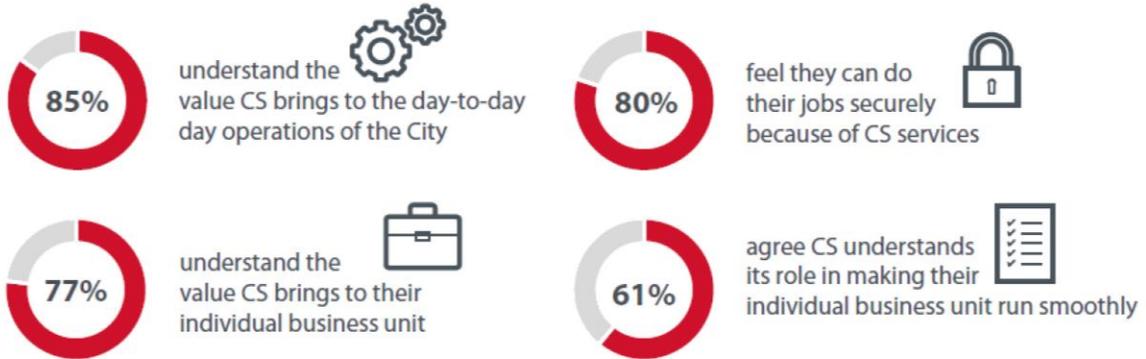
Meeting Performance Expectations



While awareness and satisfaction is high regarding some of Corporate Security's subservices, it is essential that City staff at all levels become aware of most, if not all, of the subservices that Corporate Security provides. An increase in both awareness and use of other subservices will help to reduce security risks and ultimately, the number of incidents that occur.

City employees believe Corporate Security delivers value

“Dept ID owners believe Corporate Security delivers value to their business unit and the Corporation as a whole.”



In conjunction with One Calgary, Corporate Security is looking at ways to continuously improve its service delivery and ensure it is adding value to its clients. In some cases, Corporate Security has dedicated security staff to work directly with clients in their business units. Corporate Security has also developed a subservices catalogue which is now being rolled out to clients. The goal of this engagement with key City clients is to help ensure their security needs are met, risks are identified and managed and clients are better able to meet their business objectives.



Corporate Security focuses on employee engagement

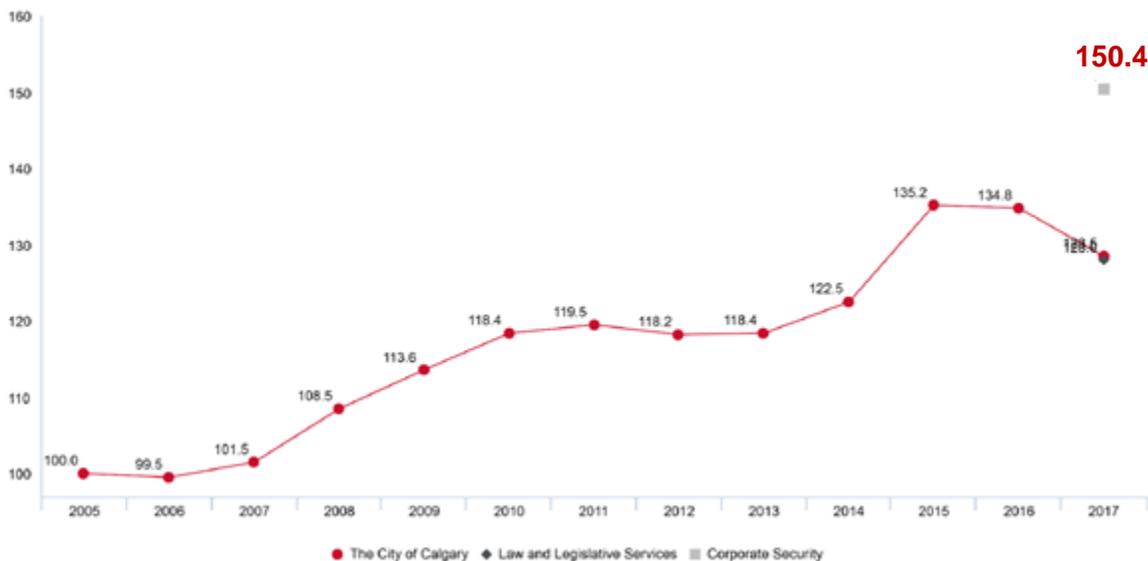
In 2017, Corporate Security formalized their employee engagement efforts and developed the Corporate Security Engagement Committee (CSEC). CSEC focused on four priority areas:

- Relationships
- Recognition
- Leadership
- Communication

A mentorship program was also developed through CSEC to provide mentees with the opportunity to meet one-on-one with a colleague and receive career guidance. CSEC's efforts have assisted Corporate Security in maintaining its high employee engagement score which, over the long term, will contribute to staff retention, improved service delivery due to the retention of expertise and overall employee satisfaction. A new committee for 2018 has been established and will continue to build upon these efforts.

Corporate Security employee engagement scores

The Corporate Security employee satisfaction index is sitting at a high score of 150.4, well above The City's overall score.



Through its focus on employee engagement, Corporate Security recruits and retains a robust and high-performing workforce. This helps to create stability within, and reduce turnover among, staff. It also reduces risk by retaining the expertise and knowledge of team members over a longer period.

2017 Corporate Security highlights

Managing the rekeying of 10,000 Calgary Housing Company (CHC) locks a unique collaboration

Managing the rekeying of more than 10,000 locks for CHC properties in 2017 serves as a tremendous example of collaboration across The City. The rekeying was made necessary when information and equipment to make keys was stolen along with the van of one of CHC's contractors.

To address this situation, Corporate Security managed the rekeying of 10,707 residential locks at 6,668 homes within 30 days. An additional 1,663 non-residential units (mechanical rooms, resource rooms, offices, garages, commercial spaces, etc.) were rekeyed in another 28 days. As a result of CHC, Corporate Security and other business units' quick response to an urgent situation, there were no reported safety or security incidents linked to the stolen equipment.



Corporate Security brings City security standards to Calgary's new central library

Calgary's new central library opened in November. Corporate Security provided a designated security resource to the Calgary Public Library throughout the construction of the library to ensure that once open, the library would be as safe and secure as possible. Corporate Security was involved in various security measures ranging from reviewing access control and video management systems installed in the new library to working with the library's Occupational Health & Safety team to develop building evacuation plans and associated training.

Corporate Security also worked with other civic partners (including Arts Commons, the Calgary Convention Centre and the Calgary Parking Authority) on various projects intended to make life better every day for Calgarians.

Corporate Security continues to be an industry leader

The City of Calgary's Corporate Security business unit continues to be a leader in the security industry. Corporate Security has been contacted by other municipalities across Canada for information to develop their security programs. The business unit continues to seek out and develop innovative and new paradigms for delivering security services.

Corporate Security Service Line Corporate Security’s service is to protect The City’s employees, the Mayor and Members of Council, citizens and visitors, and information and assets, and assist in the provision of public safety. Corporate Security has two functional subservices, cyber security and physical security. Corporate Security’s main areas of focus include risk analysis and threat assessments, security plan development and implementation, protection of information, security operations, education and training for employees on security-related issues, policies and procedures, and internal investigations from allegations of policy breaches, fraud and criminal activity.

Who are our customers

City staff, the Mayor and Members of Council, the citizens of Calgary and visitors

Lead: Corporate Security **Key Partners:** Information Technology, Facility Management, Law, City Clerks, City business units, the Administrative Leadership Team, the Senior Management Team, the Mayor and Members of Council

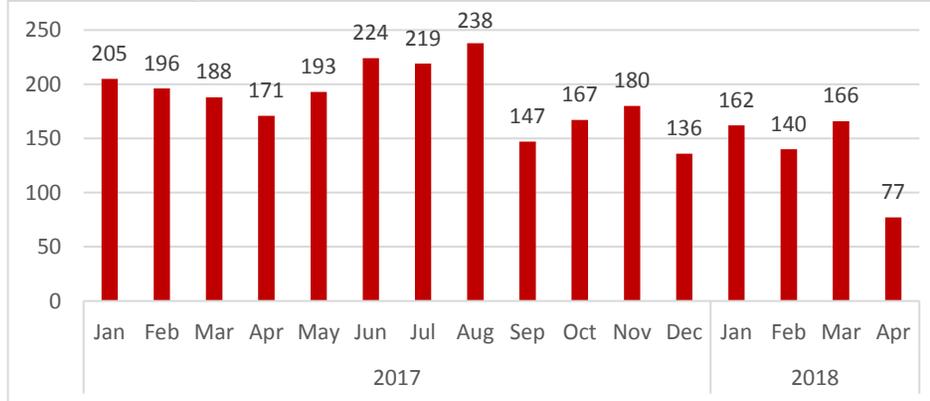
Headline performance measures

1. (a) Number of incidents; (b) Reported total losses to public assets due to criminal activity
2. Cyber threats blocked.

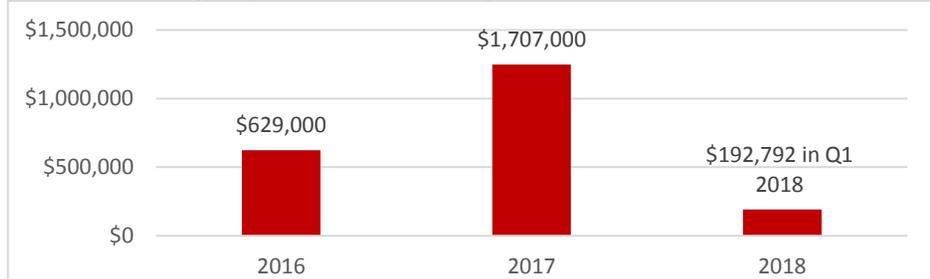
Data development list

1. Increase in reporting of losses to public assets due to educational efforts and improved corporate wide incident and loss data (physical and cyber losses)
2. Improved blocking of malicious web sites (URL), attachments and text messages.

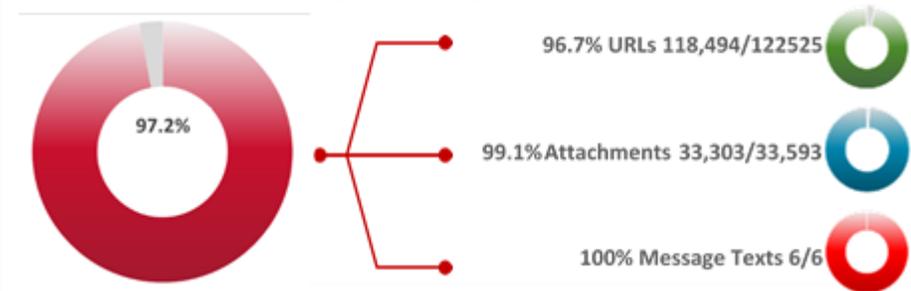
How are we doing? Number of incidents



How are we doing? Reported total losses to public assets



How are we doing? Percentages of messages blocked in 2017



These numbers may be inflated as some messages can contain multiple threat types (e.g., both malicious web addresses (URLs) and a malicious attachment). As a result, some messages may be counted more than once.

Story behind the baseline and emerging risks

1) Corporate Security's Investigation Section is responsible for investigating alleged employee policy breaches and Criminal Code acts against City assets and property. Corporate Security works in conjunction with the Calgary Police Service regarding the latter. In 2017, 2,264 incidents occurred and in the first quarter of 2018, 545 have occurred. More losses due to crime have been reported in recent years due to Corporate Security's heightened efforts to educate business units about the importance of security awareness and reporting losses. It is anticipated that these numbers will continue to grow as employees increasingly report losses resulting in Corporate Security having more accurate data.

In 2017, reported losses net of recoveries was \$1,707,000 representing over a 100% increase in reported losses compared to the \$629,000 reported in 2016.

2) Over the last 12 months, 153,536 malicious messages entered The City of Calgary's email system. Security controls blocked 149,308 (97%) of these. This resulted in 4,228 malicious messages being delivered to intended recipients. It is anticipated that the level of risk associated with cyber threats will remain high given that The City continues to increase its information technology infrastructure and assets and given that the type and number of malicious attacks continues to evolve.

What we propose to do

The organization of Corporate Security's physical and information security services will continue to be refined to better address the deliverables provided to clients through a strategic and risk management approach. Corporate Security will also further examine its cost recovery model while continuing to enhance business value in the security projects it provides. Corporate Security's physical security subservice will continue to develop emergency response plans and procedures, identify and mitigate threats through risk assessments, gather intelligence, and create awareness and education programs to help prepare and respond to physical threats through security measures. Corporate Security is also looking at industry standards for best practices regarding internal controls to address theft and fraud and is comparing those with The City's internal processes.

Corporate Security's information security subservice will continue to focus on mitigating the increasing ransomware threat to City data through improved management of privileged accounts, ensuring that the connection of devices are compliant to The City's security standards and continually monitoring The City's network for threats. It will continue to respond to incidents, support the Freedom of Information and Protection of Privacy office, review legal research, and provide education and awareness for City staff.