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ANNUAL UPDATE - IT RISK MANAGEMENT 2014 Feb 20

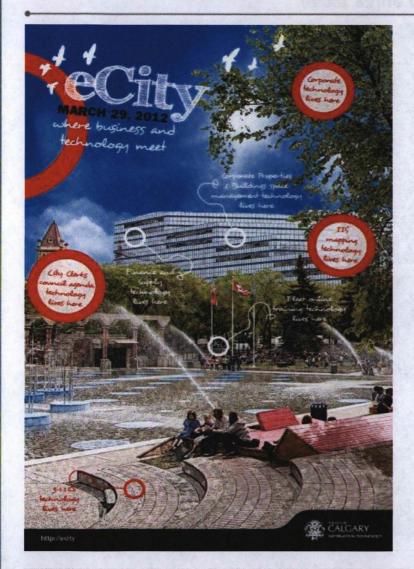


Annual Update - IT Risk Management:

- 1. Overview
- 2. Vulnerabilities
- 3. People & Process
- 4. Trends & Case Studies

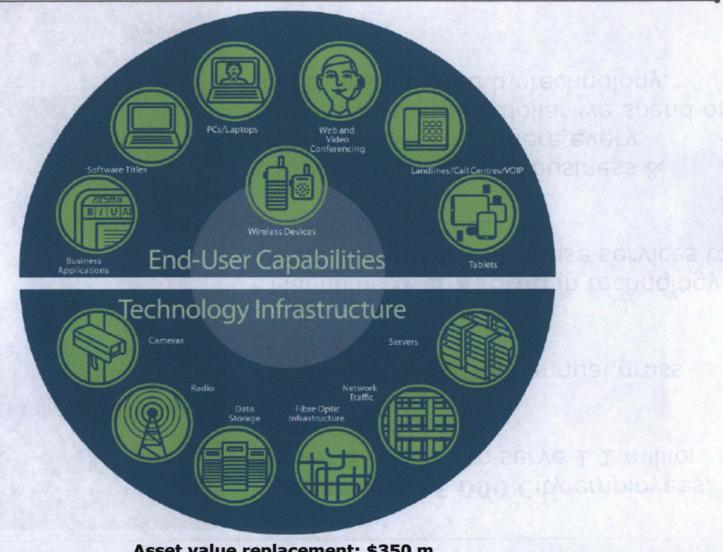
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CITY IT LIVES EVERYWHERE



- Connecting 15,000 City employees, at over 325 sites to serve 1.1 million citizens 24/7/365
- Approaching \$100M annual gross expenditures.
- Managing over \$350m in technology assets and provide in-house services to 30 lines of business.
- Supporting over 400 business & enterprise systems where every Corporate asset and dollar we spend or collect is supported by technology.

THE CITY OF CALGARY - TECHNOLOGY LANDSCAPE



Asset value replacement: \$350 m

ASSET INVENTORY

Asset Type	Replacement Value
Desktop (PC & Monitors)	\$12.9m
Laptops	\$5.8m
Printers	\$3.0m
Storage	\$16.5m
Data Centre/Environmentals	\$12.5m
Network	\$15.5m
Servers	\$10.9m
Cabling & Conduit (Fibre &Copper)	\$28.4m
Voice Systems	\$6.9m
Software	\$208.4m

CRITICAL SYSTEMS (SAMPLE)

Application Name	Business Unit
911 CAD Dispatch	Public Safety Communications
311 CSR	Customer Service & Communication
Imobile Map Data	Fire
LIMS Lab Information Management	Water Resources/Water Services/Parks
OWAM - Work Order Management	Water Resources/Water Services/Parks
Access Calgary IVR	Calgary Transit
Trapeze	Calgary Transit
Hansen	Roads
Hazmat Gas Detection	Roads
FICA (CoC Cash Processing System)	Finance & Supply
Lenel On-Guard System	Corporate Security
C-Web/ www.calgary.ca	Customer Service & Communication / IT
Peoplesoft Human Capital Management (HCM)	All
Microsoft Exchange	All

BUSINESS SYSTEM MANAGEMENT

MSPS Time Tracking

- Time tracking by hour (includes contract employees)
- Utilized to calculate application costs throughout application lifecycle, which are considered in capital decision making.

Application Inventory

- 480 applications supported by IT
- Includes BU owner and support information in Enterprise Help Desk.

Support Documents Up-to-date attributes and version and support documentation with details on application architecture for all critical systems.

KEY CONCERNS & CONSIDERATIONS

Cyber Security



Information Management



Complexity



Other



Willful Attacks

Viruses

Access controls

Email SPAM

Internet monitoring

Identity & Access Management

Data Volume

FOIP

Information Security Classification Integration

Infrastructure Growth

Upgrades & enhancement

Recovery

Disaster or Loss

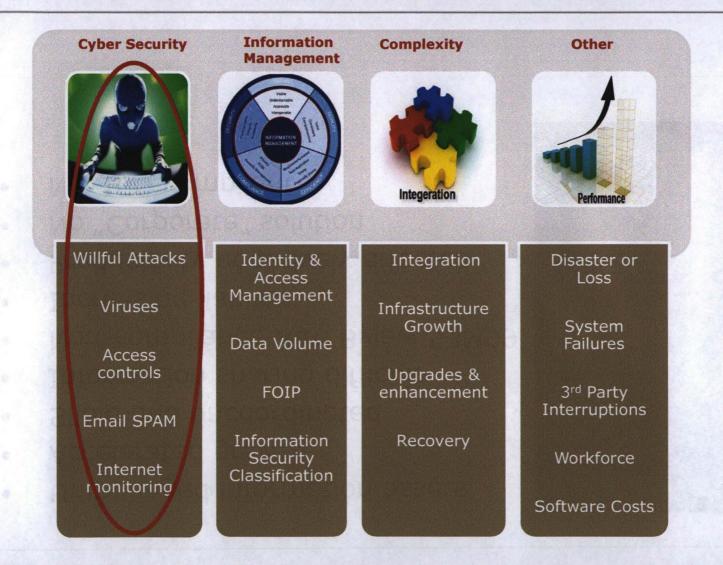
System Failures

3rd Party Interruptions

Workforce

Software Costs

KEY CONCERNS & CONSIDERATIONS

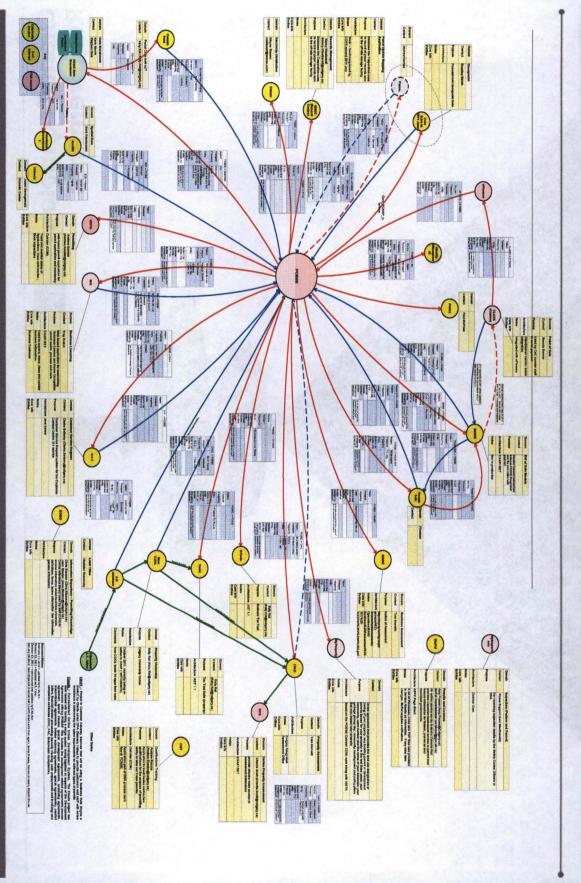


INFORMATION RISKS

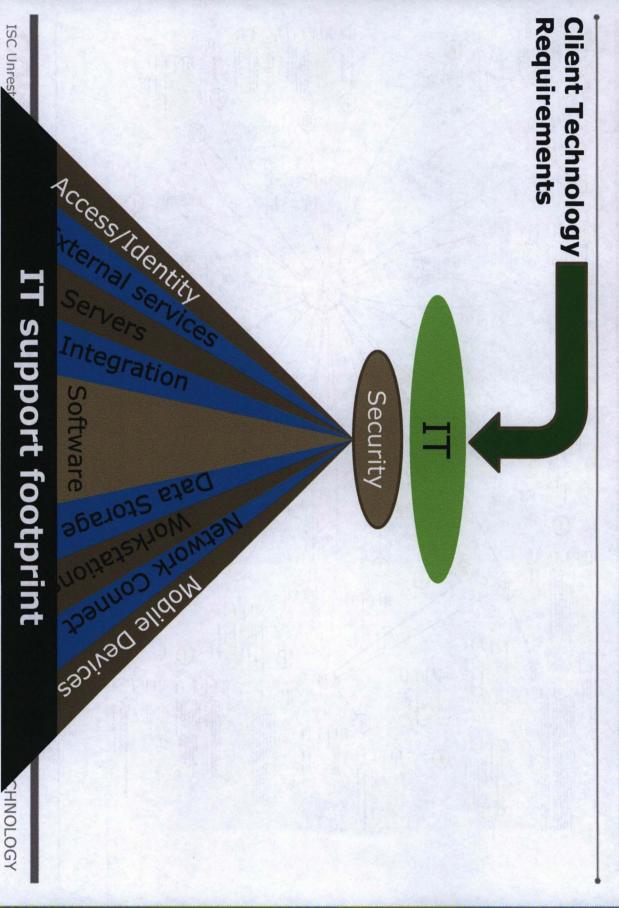
- Unmanaged information assets
- Accelerated growth
- Silo'd and uncoordinated
- Information sharing difficult
- Non-compliance with Bylaw 53M99
- Increasing liability
- Productivity negatively affected
- No "Corporate" solution
- Not ISO compliant



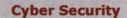
COMPLEXITY - SYSTEMS INTEGRATION



TECHNOLOGY COMPLEXITY



KEY CONCERNS & CONSIDERATIONS





Information Management



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PEOPLE AND PROCESS

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CITY TECHNOLOGY GOVERNANCE MODEL

Who How **Line of Sight** The Priorities & **Finance Committee Audit Committee Community view ALT > \$5M City Manager** Administrative Leadership Team STRATEGIC CTC \$500k -\$5M Corporate view **General Managers** CITO CITO \$100k -\$500k Corporate **Departmental** Technology view **Business Unit Directors** Committee **OPERATIONAL**

Enterprise Architecture

IT Staff

IT Managers

IT Project Board **TECHNICAL**

Technology view

Service Delivery

view

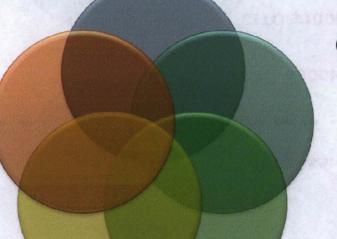
IT Mgr < \$100k

MANAGING THE ENVIRONMENT

Internal & External Audits

External
Consulting
(assessments,
penetration testing)

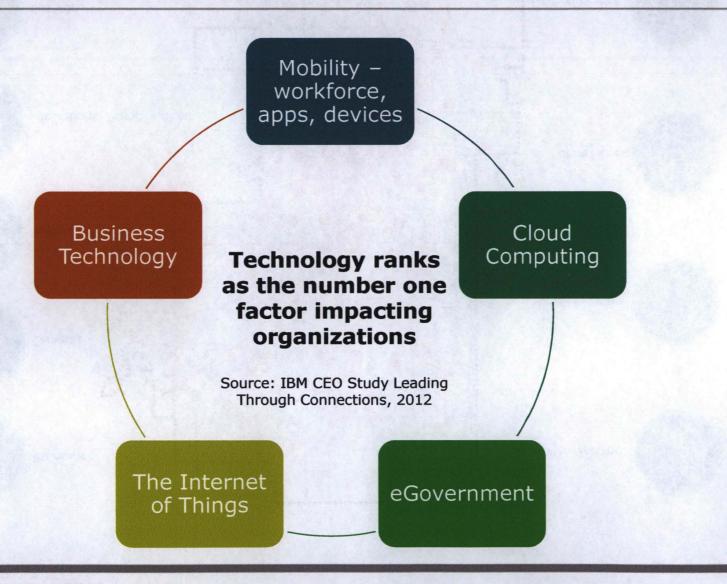
Industry
Benchmarking
& Metrics



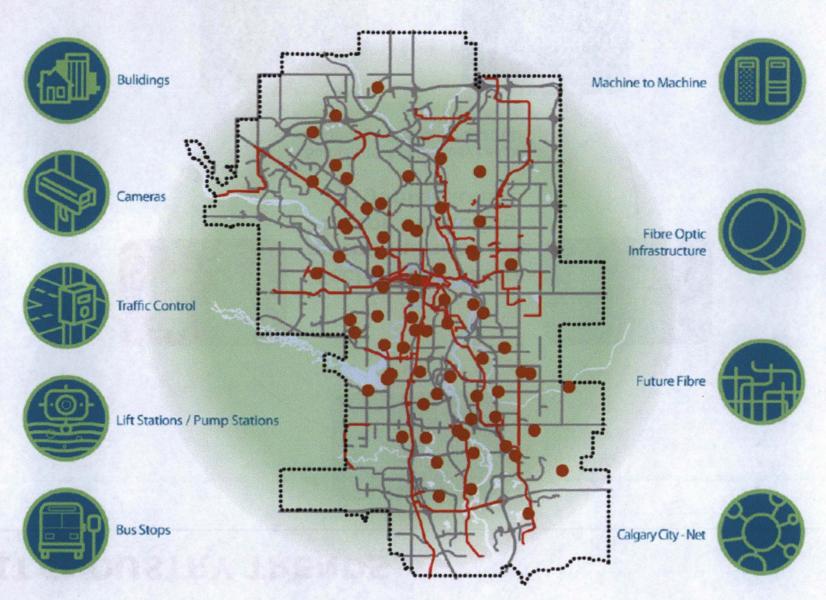
Governance & Reporting

Policies, Standards & Best Practices

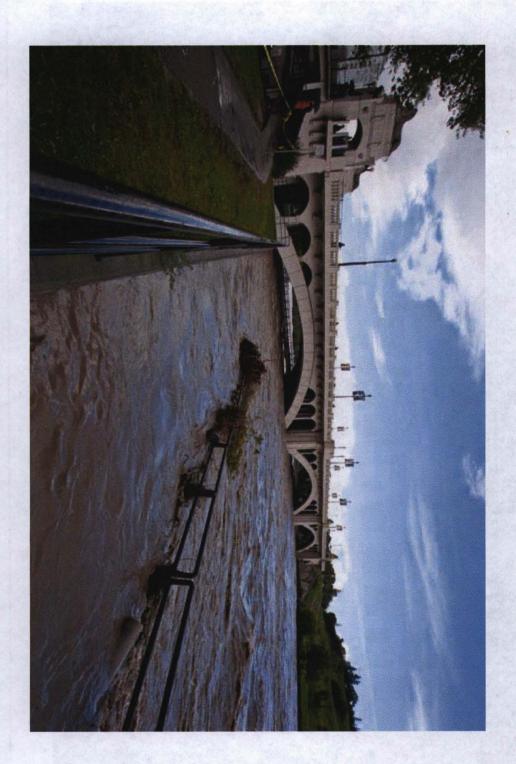
IT INDUSTRY TRENDS



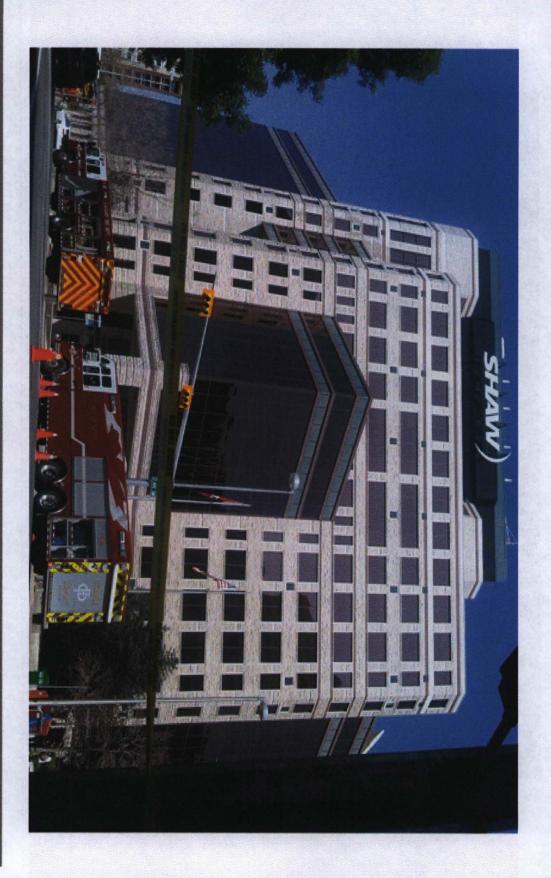
A CONNECTED CITY



CALGARY FLOOD



SHAW COURT FIRE



INTERNAL ERROR



Questions?

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