Session 6B
Assuring IT Security – Keeping cyber safe

Presented by

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ASSURING IT SECURITY
KEEPING CYBER SAFE
NOVEMBER 2017

BROKEN HILL
CITY COUNCIL

AUSTRALIA'S FIRST
HERITAGE LISTED CITY

About Broken Hill …….

- **Largest Regional Centre in the Western half of NSW**

- **Population of 18,517**

- **City Area of 179km2 - borders Unincorporated Area of NSW, Central Darling Shire & Wentworth Shire**

- **Close to SA border. Midway between QLD & Victorian borders**

- **1147km from Sydney**

- **550km from Adelaide**

- **Operates on Central Australian Time**

- **Strong cultural & historical connections with South Australia**

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- **Line of Lode has proven to be one of the largest silver, lead, zinc deposits in the world - 130 years of mining. Since 1883.**

- **Formation of BHP Billiton by Charles Rasp & the Syndicate of 7**

- **60 feature films (Mad Max, world renowned artists, national heritage & tourism**

- **Australia's First National Heritage Listed City – January 2015**

- **300,000 plus tourists visit per year**

- **Mining, Health Services, Rural, Education & Government Service Centre**

- **Solar Farm, Wind Farm - AGL**

# Broken Hill – IMPACT OF MINING – SOUTHERN END

Broken Hill – IMPACT OF MINING – CENTRAL & NORTH

About Broken Hill CITY COUNCIL

- **Mayor & 9 Councillors**
- **200 Employees – restructure in 2015**
- **Far West Initiative (8 western NSW Councils)**
- **Services include: Airport, Buildings & Property, Regional Aquatic Centre, Cemetery, Environmental Management, Town Planning & Building, Waste Management, Cultural Services including Mining Museum & Regional Art Gallery (Sully's), Tourist Centre, Library, Parks & Recreational Facilities**
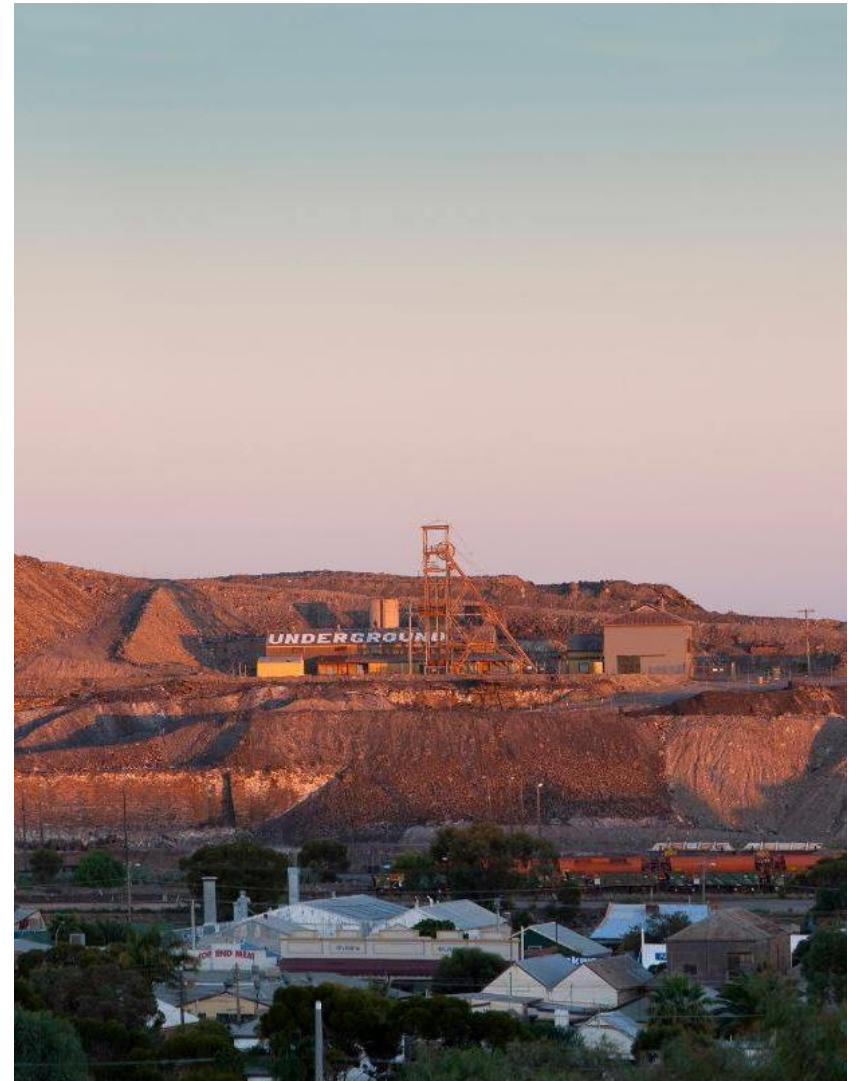
Broken Hill CITY COUNCIL

Broken Hill CITY COUNCIL INFORMATION SERVICES

- **Information Technology, Records & Geographical Information Systems**
- **In house data Centre – 5 physical servers, HP EVA4400 Storage Array**
- **Optic Fibre leased solution between 8 sites (New Telstra link & NBN)**
- **DR site**
- **Helpdesk – Request Tracker**
- **Communications (IP phone upgrade)**
- **Multiple software applications (Civica Authority, MapInfo, TRIM, InfoCouncil, Office 365, Windows 10, Infinity POS, Big Tin Can HUB, Cambron, Reflect, PowerBudget)**

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Broken Hill CITY COUNCIL INFORMATION SERVICES

- **Digital Strategy**
- **Smart Cities Framework**
- **ICT Strategy (review & update)**
- **IT Governance Framework (review & update)**
- **Civic Centre Upgrade – Audio Visual upgrade including Wi fi, Video conferencing, streaming, lighting, blinds, sound, projection and multi function spaces**
- **Public Wi fi – 14 access points – airport, Argent & Patton Streets**
- **Smart Parking**
- **CCTV**
- **Smart Lighting**
- **City Archives – Digitization**
- **Library Technology Upgrade**

BHCC Assuring IT Security
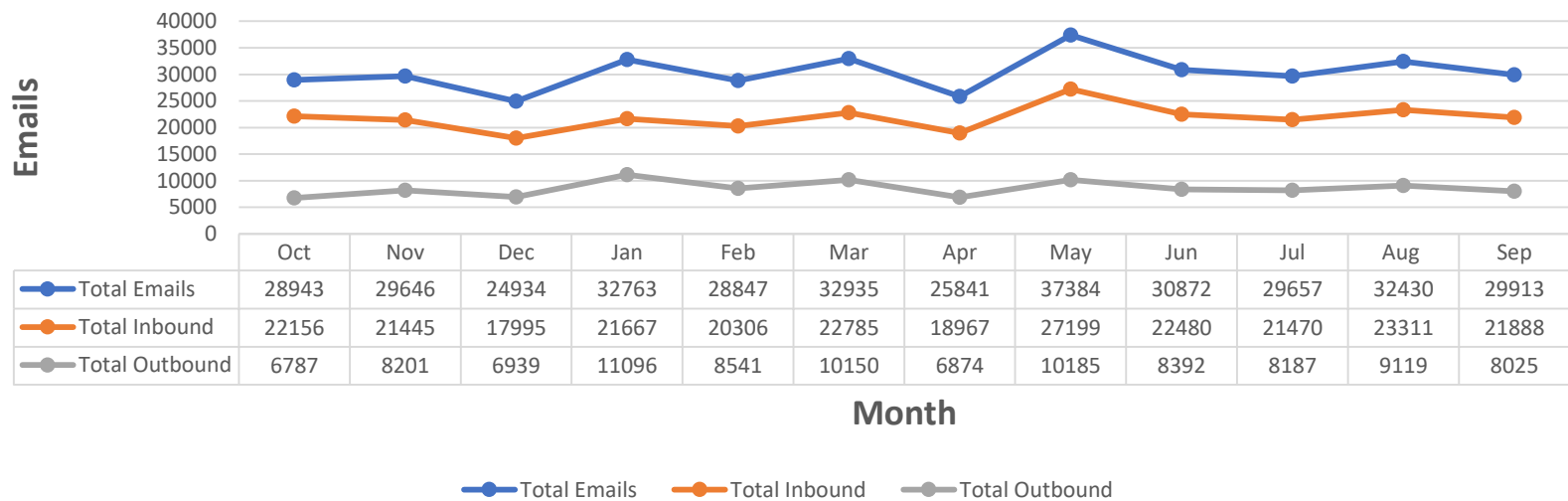
The Challenge:

Implementing Cyber security or information technology security strategies & techniques to protect Council computers, networks, connected devices, programs and data from unauthorized access.

The Risk:

Risk continues to increase as systems and devices become more connected because potential intruders become more sophisticated in using new technologies and techniques to penetrate networks and systems, attempting to steal Council data, impinge on our privacy, damage the Council brand and remotely take control of Council assets.
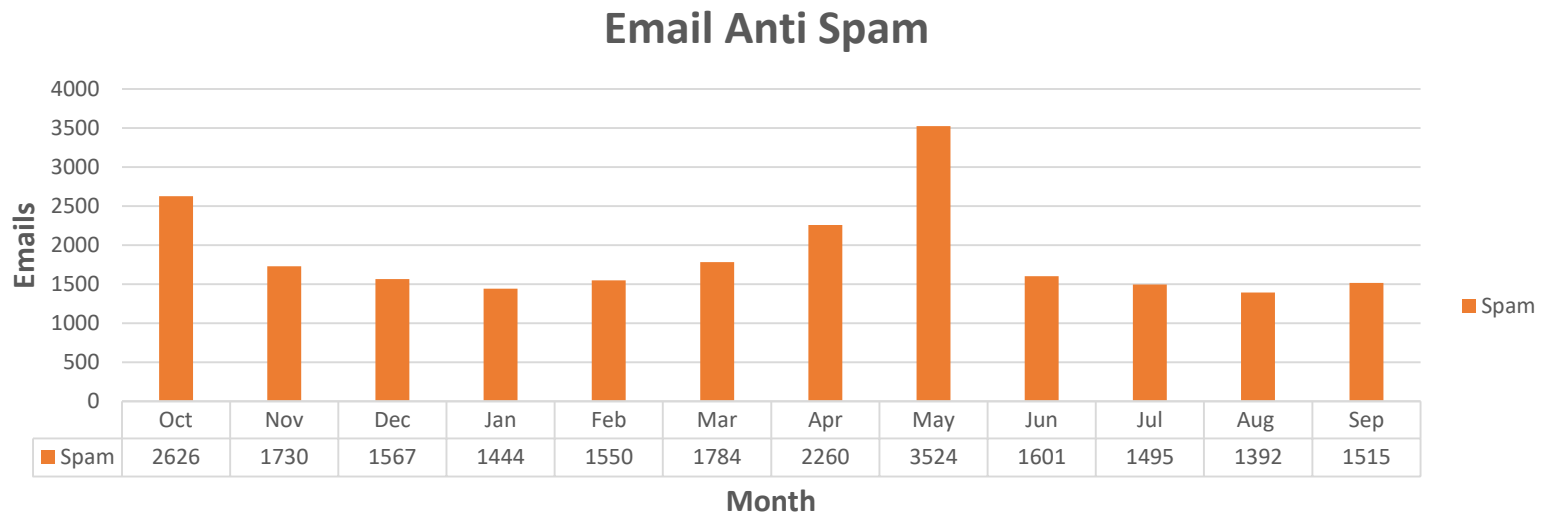
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BHCC Emails Scanned (Total 364,165)

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Total Emails	28943	29646	24934	32763	28847	32935	25841	37384	30872	29657	32430	29913
Total Inbound	22156	21445	17995	21667	20306	22785	18967	27199	22480	21470	23311	21888
Total Outbound	6787	8201	6939	11096	8541	10150	6874	10185	8392	8187	9119	8025

Month

Source: Symantec Messagelabs

BHCC Assuring IT Security

Email Anti Spam

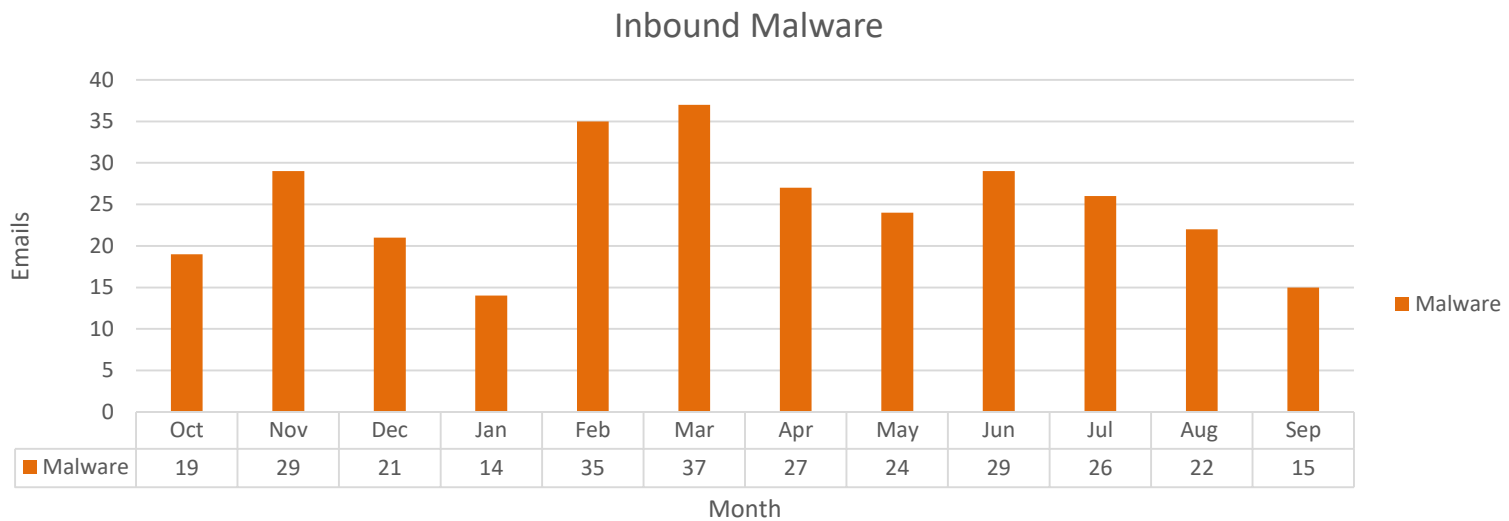| Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Spam	2626	1730	1567	1444	1550	1784	2260	3524	1601	1495	1392	1515

Percentage Email Spam for 12 months = 6.1%   Source: Symantec Messagelabs

Note: WannaCry Ransomeware attack May 2017

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Inbound Malware

Month	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Malware	19	29	21	14	35	37	27	24	29	26	22	15

Percentage Email Malware for 12 months = 5.03%   Source: Symantec Messagelabs

Note: WannaCry Ransomeware attack May 2017

BHCC – PREVENTATIVE MEASURES / MITIGATION STRATEGIES

- **Monitored Backup strategy – Tape, Off-site secure storage, incremental, Veeam Backup & Replication**
- **Virus Protection (Sophos)**
- **Monitor & block web access (Flash, Java and ads)**
- **User Education – induction, toolbox meetings, reminders**
- **Restrict & review administrative privileges**
- **Application patching procedure (review release notes, patch TEST environment, user testing, release**
- **Review & release operating system patches in a timely manner**
- **Complex passwords, forced changes**
- **Application whitelisting. Security practice of restricting systems from running software unless it has been cleared for safe execution**
- **Disable untrusted Microsoft Office macros**
- **Regular reviews of user access (least privilege model)**
- **Starter, Leaver & change in duties procedures**
- **Tested Business Continuity Plan / DR Strategy**

Reference: Australian Government's Information Security Manual

BHCC – THE RISK GROWS – THE ROAD

- **Limited resources including budget**
- **Retaining skilled staff**
- **Tyranny of distance – conferences, meetings, briefings**
- **Demands on staff – system admin, helpdesk, projects**
- **End user awareness – keep reinforcing – be aware & vigilant**
- **Community & Council requests to be connected – ever increasing**