

College Sample Pty Ltd

Cyber Security Assessment focused on secure handling of PII and Sensitive College Data and ensuring Compliance.

Audience: Board/C Suite/Senior Management



Briefing Intent

- This sample is indicative of the report which you'll receive at the end of an assessment.
- This redacted report is from assessments done on a number of Colleges and Organisations.
- The report provides clarity around the type of user behaviour, data movement and cyber risks that you can expect to be covered during the assessment.

Assessment Scope

The scope of GuardWare Assessment is to assess customer's current security processes and controls (ISMS) based on the following criteria:

- 1. Ability to securely handle sensitive data namely PII information in line with the requirements of Australian Privacy Principals and NDB Scheme.**
- 2. Ability to securely handle commercially sensitive data in line with ISO/IEC 27001, ACSC Essential 8 and ACSC Information Security Manual (ISM) recommendations.**
- 3. Assess current state of IT Security Governance in line with cyber security controls and the ability to handle a data breach.**

Note: Physical security of office environment and equipment is out of scope for this project.

Executive Summary

College faces considerable risk of a Data Breach.

Assessment showcased risky handling of PII data.

The assessment has shown that the College lacks data monitoring controls and faces the risk of losing sensitive IP either due to human error or malicious intent.

During the assessment 2 suspicious activities regarding College IP were also detected which need urgent action.

College lacks full implementation of ACSC ES8 controls. Two of the controls being detected as failing.

The College doesn't have any IT Security Governance processes in place. This further increases the risk of data loss and breach.

College is advised to take immediate actions to rectify the current state of cyber security. A list of recommendations based on their priority is provided at the end of this document.

Monitoring done from 26th
Nov to 13th Dec 2022

158 users monitored on 146
devices

| ISMS Evaluation Criteria | Implementation level | Risk Level (High, Medium, Low) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------------|
| Ability to securely handle sensitive data namely PII information in line with the requirements of Australian Privacy Principals and NDB Scheme. | 20% | High |
| Ability to securely handle commercially sensitive data in line with ISO/IEC 27001, ACSC Essential 8 and ACSC Information Security Manual (ISM) recommendations. | 20% | High |
| Assess current state of IT Security Governance in line with cyber security controls and the ability to handle a privacy breach. | 20% | High |

16 High risk actions detected which require urgent attention

4 Medium risk actions detected

2 suspicious activities detected – Need urgent action

Non-Compliance to ES8 and when handling PII data

Risk Summary

IT Governance Summary

| No | IT Governance Aspect | Implemented/Partial/ Not Implemented | Risk Level (No Risk, Low, Medium, High) |
|----|------------------------------------------------------|-----------------------------------------|--------------------------------------------|
| 1 | Information security policies | Not Implemented | High |
| 2 | Organisation of information security | Partial | Medium |
| 3 | Ensuring responsible use of information assets | Partial | High |
| 4 | Control Access of data (Access control) | Partial | medium |
| 5 | Ensuring data is secure when stored. (Data at rest) | Partial | Low |
| 6 | Monitoring Movement of Data (Data Egress Monitoring) | Not Implemented | High |
| 7 | Supply chain security | Not Implemented | High |
| 7 | Information security incident management | Partial | High |

Data Handling Risk Summary

Monitoring Parameters:

- Only customer owned devices were covered.
- The following types of data were monitored:
 - Sensitive PII data covering TFN, Credit Card, Mobile numbers, Account numbers, Medicare Numbers, Name and Address.
 - Generic College IP Documents
 - General files of any type including source code, images, zip etc
- Monitoring USE CASES included those recommended under ACSC ISM around Insider Threats and Secure handling of PII Data

| | |
|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Monitoring done from 26 th Nov to 13 th Dec 2022 | 158 users monitored on 146 devices |
| 16 High risk actions detected which require urgent attention | 4 Medium risk actions detected |
| 2 suspicious activities detected – Need urgent action | No controls in place to ensure secure handling of Sensitive data |
| No incident detection capability present in the event of a loss or theft of data | Non-Compliance with 2 of ES8 control. App Control and Restrict Admin privileges |

| Use Cases | Technical Control Implemented/Partial/Not Implemented/Failed Control | Risk Level (No Risk, Low, Medium, High) |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------|
| PII and Sensitive College IP transferred using external storage media | | |
| High use of unencrypted USBs. 44 users detected using unencrypted USBs to transfer data. | Technical control not implemented | High |
| High transfer rate. 8 users transferred over 1000 files. | Technical control not implemented | High |
| Outside of normal business hours. High rate of transfers detected outside of normal working hours. | Technical control not implemented | High |
| Transfer of Potential Sensitive Data. <ul style="list-style-type: none"> • Top 8 users detected transferring 1000s of design related files. • Several users transferred files containing potential sensitive data | Technical control not implemented | High |
| Visibility of transfers. Visibility of sensitive data transferred using external media | Technical control not implemented | High |
| Suspicious User Activities | | |
| Suspicious User Activity – User1 - Use of personal emails to send corporate data <ol style="list-style-type: none"> 1. User detected using his personal email to send highly sensitive Intellectual Property marked data to unauthorized 3rd parties. | Technical control not implemented | High |
| Suspicious User Activity – User2 – Data copied by user about to leave the organisation. <ol style="list-style-type: none"> 1. User copied 1000s of design files also printed his CV during the same time. 2. There is evidence he has visited job sites (Indeed) and applied for related engineering jobs around the same time when he copied the files. 3. The files have been copied on unencrypted USBs which most likely are personal. 4. He is also seen accessing and uploading files to personal Google Drive. 5. He belongs to the Engineering User Group. | Technical control not implemented | High |

| Use Cases | Technical Control Implemented/Partial/Not Implemented/Failed Control | Risk Level (No Risk, Low, Medium, High) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------|
| Corporate Email Analysis – PII Data forwarded by staff to personal emails. | | |
| Customer data forwarded to personal emails by staff. Email detected being forwarded to user own personal email. | Technical control not implemented | Medium |
| Visibility of email forwards. Visibility of what files have been forwarded by users to personal and free emails to ensure they are accounted for. | Technical control not implemented | High |
| Use of Personal Emails | | |
| Use of Personal emails detected. Personal emails have been used to send data. | Technical control not implemented | High |
| Visibility of Personal Email Use. Visibility is required to ensure College data is not being sent out via personal emails. | Technical control not implemented | High |
| Use of Non-Organisational Unauthorised Applications | | |
| <p>Technical Control Circumvented. The users seem to have found a way to install non-organisational applications.</p> <p>Non-Compliance of 2 of the ES8 Controls.</p> <ol style="list-style-type: none"> 1. Restrict administrative privileges 2. Application control | Failed Technical Control | High |
| Visibility of Application Use. Visibility of what applications are being used by users. | Technical control not implemented | High |
| PII data transfers using Cloud Applications and non-organizational websites | | |
| Risky Transfer Application Use. 6 users detected using Dropbox or Google Drive to transfer files. Transfers include potentially sensitive data. | Failed Technical Control | High |
| Risky website Use. 19 users detected using Facebook and potentially transferring data. | Technical control not implemented | High |
| Visibility of transfers. Visibility of sensitive data transferred using APPs and encrypted websites. | Technical control not implemented | High |

| Use Cases | Technical Control Implemented/Partial/Not Implemented/Failed Control | Risk Level (No Risk, Low, Medium, High) |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------|
| Printing of PII Data | | |
| Printing of potential sensitive data. Printing of sensitive data was observed. | Technical control not implemented | Medium |
| Printing use personal Printers. As users are allowed to work from home there is risk of files being printed using home printers. | Technical control not implemented | Medium |
| Visibility of Printing. Visibility of what files have been printed either via organisational or personal printers to ensure they are accounted for. | Technical control not implemented | Medium |
| Access of information | | |
| Authorised Access of sensitive Information. Ensuring authorised users can access files | Implemented | No Risk |
| Access Visibility. Visibility of who is accessing what files | Implemented | No Risk |

Trusted Insider Program monitoring suggestion as per ACSC ISM

Trusted insider program

As a trusted insider's system access and knowledge of business processes often makes them harder to detect, establishing and maintaining a trusted insider program can assist an organisation to detect and respond to trusted insider threats before they occur, or limit damage if they do occur. In doing so, an organisation will likely obtain the most benefit by logging and analysing the following user activities:

1. excessive copying or modification of files
2. unauthorised or excessive use of removable media
3. connecting devices capable of data storage to systems
4. unusual system usage outside of normal business hours
5. excessive data access or printing compared to their peers
6. data transfers to unauthorised cloud services or webmail
7. use of unauthorised Virtual Private Networks, file transfer applications or anonymity networks.

Control: ISM-1625; Revision: 1; Updated: Dec-22; Applicability: All; Essential Eight: N/A

A trusted insider program is developed, implemented and maintained.

Control: ISM-1626; Revision: 0; Updated: Nov-20; Applicability: All; Essential Eight: N/A

Legal advice is sought regarding the development and implementation of a trusted insider program.

Reference: ACSC Information Security Manual.

Mapping to Trusted Insider USE CASEs as per ACSC ISM

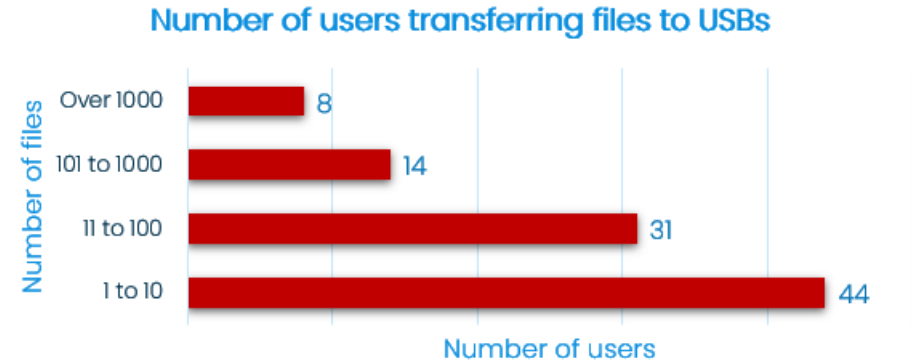
| Recommended Use Cases Under ISM | Detected/Not Detected/Not Tested |
|-------------------------------------------------------------------------------------------------|----------------------------------|
| excessive copying or modification of files | Detected |
| unauthorised or excessive use of removable media | Detected |
| connecting devices capable of data storage to systems | Detected |
| unusual system usage outside of normal business hours | Detected |
| excessive data access or printing compared to their peers | Detected |
| data transfers to unauthorised cloud services or webmail | Detected |
| use of unauthorised Virtual Private Networks, file transfer applications or anonymity networks. | Detected |

Storage Media Analysis

Covers all types of media including phone sync.

PII and Sensitive College Data transfer using external storage media

| Data transfer using external storage media | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------|------|
| High use of unencrypted USBs. 44 users detected using unencrypted USBs to transfer data. | Technical control not implemented | High |
| High transfer rate. 8 users transferred over 1000 files. | Technical control not implemented | High |
| Outside of normal business hours. High rate of transfers detected outside of normal working hours. | Technical control not implemented | High |



The use of USBs may be for legitimate reasons but there are significant risks involved.

Risk. Loss of phone or USBs is a common source of data breach and should be monitored and accounted for.

Risk. Potential Insider risk. Non-compliant with Trusted Insider Program monitoring requirements as per the ISM.

Risk. Compromise of sensitive corporate information. There should be a valid NEED for transferring sensitive corporate information and there should be appropriate visibility to ensure Insider Threat Management and Incident Response in case of loss.

Risk. Use of unencrypted USBs can easily lead to Data loss

| User Name | User Group | Total Events |
|-----------|----------------|--------------|
| xxxxx | Customer Group | 26256 |
| xxxxx | Customer Group | 5221 |
| xxxxx | Customer Group | 4212 |
| xxxxx | Customer Group | 3362 |
| xxxxx | Customer Group | 2326 |
| xxxxx | Customer Group | 2125 |
| xxxxx | Customer Group | 1782 |
| xxxxx | Customer Group | 1506 |
| xxxxx | Customer Group | 9 |
| xxxxx | Customer Group | 5 |
| xxxxx | Customer Group | 4 |
| xxxxx | Customer Group | 3 |
| xxxxx | Customer Group | 2 |
| xxxxx | Customer Group | 2 |

| Hour | Working Day | Non-Working Day |
|---------------|-------------|-----------------|
| 0:00 - 1:00 | 0 | 0 |
| 1:00 - 2:00 | 0 | 0 |
| 2:00 - 3:00 | 0 | 0 |
| 3:00 - 4:00 | 0 | 0 |
| 4:00 - 5:00 | 0 | 0 |
| 5:00 - 6:00 | 0 | 0 |
| 6:00 - 7:00 | 0 | 0 |
| 7:00 - 8:00 | 0 | 0 |
| 8:00 - 9:00 | 562 | 0 |
| 9:00 - 10:00 | 41 | 320 |
| 10:00 - 11:00 | 10 | 8798 |
| 11:00 - 12:00 | 2 | 331 |
| 12:00 - 13:00 | 2221 | 4444 |
| 13:00 - 14:00 | 14 | 2144 |
| 14:00 - 15:00 | 5312 | 0 |
| 15:00 - 16:00 | 18620 | 0 |
| 16:00 - 17:00 | 421 | 0 |
| 17:00 - 18:00 | 2904 | 0 |
| 18:00 - 19:00 | 7563 | 0 |
| 19:00 - 20:00 | 33111 | 0 |
| 20:00 - 21:00 | 7 | 0 |
| 21:00 - 22:00 | 5 | 0 |
| 22:00 - 23:00 | 2 | 0 |
| 23:00 - 24:00 | 2 | 0 |

Movement of Sensitive PII and IP Data using USBs

| Data transfer using external storage media | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------|
| Transfer of Potential Sensitive Data. <ul style="list-style-type: none"> • Top 8 users detected transferring 1000s of design related files. • Several users transferred files containing potential sensitive data | Technical control not implemented | High |
| Visibility of transfers. Visibility of sensitive data transferred using external media | Technical control not implemented | High |

Risk. Without the ability to monitor what is transferred, the College will not even know if data is lost or stolen and will not be able to perform Incident management.

Risk. Potential Insider risk. Non-compliant with Trusted Insider Program monitoring requirements as per the ISM.

Risk. Compromise of sensitive corporate information. There should be a valid NEED for transferring sensitive corporate information and there should be appropriate visibility to ensure Insider Threat Management and Incident Response in case of loss.

Risk. Use of unencrypted USBs can easily lead to Data loss

| | | | |
|------------|----------|-----|-------------------------|
| 08-12-2022 | 7:38:45 | 07 | ██████████_c9.svn-base |
| 08-12-2022 | 7:38:51 | 02 | ██████████_a.svn-base |
| 08-12-2022 | 7:38:54 | 067 | ██████████_89.svn-base |
| 08-12-2022 | 7:38:54 | 06 | ██████████_c.svn-base |
| 08-12-2022 | 7:38:54 | | ██████████_drl |
| 08-12-2022 | 7:38:54 | | ██████████_cmp |
| 08-12-2022 | 7:38:54 | | ██████████_sol |
| 08-12-2022 | 7:38:54 | | ██████████_drd |
| 08-12-2022 | 7:38:54 | | ██████████_cmp |
| 08-12-2022 | 7:38:54 | | ██████████_stc |
| 08-12-2022 | 7:38:54 | | ██████████_oles.txt |
| 08-12-2022 | 7:38:54 | | ██████████_es.txt |
| 08-12-2022 | 7:39:11 | | ██████████_oles.txt |
| 08-12-2022 | 7:39:11 | | ██████████_es.txt |
| | | | |
| 29-11-2022 | 8:21:51 | | ██████████_cad.csv |
| 29-11-2022 | 12:30:21 | | ██████████_nse2.pdf |
| 29-11-2022 | 12:30:21 | | ██████████_pdf |
| 29-11-2022 | 12:30:21 | | ██████████_bom.csv |
| 29-11-2022 | 12:30:21 | | ██████████_cad.csv |
| 29-11-2022 | 12:30:21 | | ██████████_bom.csv |
| 29-11-2022 | 12:30:21 | | ██████████_cad.csv |
| 05-12-2022 | 10:23:43 | | ██████████_csv |
| 05-12-2022 | 10:23:43 | | ██████████_csv |
| | | | |
| 09-12-2022 | 7:48:12 | | ██████████_power.csv |
| 09-12-2022 | 7:48:12 | | ██████████_spectrum.csv |
| 09-12-2022 | 7:48:12 | | ██████████_png |
| 09-12-2022 | 7:48:12 | | ██████████_png |
| 09-12-2022 | 7:48:12 | | ██████████_1.png |
| 09-12-2022 | 7:48:13 | | ██████████_pdf |
| 09-12-2022 | 7:48:13 | | ██████████_csv |
| 09-12-2022 | 7:48:13 | | ██████████_pdf |

User 1

User 2

User 3

Suspicious User Activity

Suspicious User Activity – User1 - Use of personal emails to send corporate data

| Suspicious User Activity | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------|
| <p>Potential Insider Risk.</p> <p>1. User detected using his personal email to send highly sensitive college data to unauthorized 3rd parties.</p> | <p>Technical control not implemented</p> | <p>High</p> |

Use of personal emails is a common occurrence in organisations but needs to be monitored as can lead data leak.

Risk: Use of personal emails to exfiltrate data out is consistently reported as one of the keyways data is lost or stolen in organisations and needs to be monitored.

| Email violation detail | Rules Violated | Email Body/File Attachment |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------|
| <p>Review Status : Not Reviewed</p> <p>Violation Date & Time : [REDACTED] 10:26:10</p> <p>Subject : this is the file</p> <p>User Name : [REDACTED]</p> <p>Email Domain Used : www.mail.google.com</p> <p>From : [REDACTED]@gmail.com</p> <p>Recipients : TO: [REDACTED].com CC: BCC:</p> <p>PC Name : [REDACTED]</p> <p>PC Serial Number : [REDACTED]</p> <p>Action : Default</p> <p style="text-align: center;">View complete email</p> | <p>[REDACTED]</p> <p>Document Movements</p> <p>General File Movement</p> | <p>New Design Specs - Copy.docx</p> |
| Detected content in email body / file attachment | | |
| Word | Context | |
| CONFIDENTIAL | [REDACTED] private management confidential [REDACTED] an fam | |
| MANAGEMENT | [REDACTED] systems private management confidential [REDACTED] ken | |

Suspicious User Activity – User2 – Data copied by user about to leave the organisation.

Suspicious User Activity

Potential Insider Risk.

1. User copied 1000s of design files, also printed his CV during the same time.
2. There is evidence he has visited job sites (Indeed) and applied for industry related engineering jobs around the same time when he copied the files.
3. The files have been copied on unencrypted USBs which most likely are personal.
4. He is also seen accessing and uploading files to personal Google Drive.
5. He belongs to the Engineering User Group.

Technical control not implemented

High

Risk. Rapid and frequent transfer of large amounts of College data, the fact that the user is reviewing his CV and is applying for jobs are all tell-tale signs of a potential insider threat in progress.

Risk. The user has personal Dropbox installed meaning he has circumvented College policy.

Print Event List for XXXXX using printer Canon-X53Series

| User Name | User Group Name | PC Name | File Name | Event Date | Event Time | File Path |
|-----------|-----------------|---------|-----------------|------------|------------|----------------------------------------|
| XXXXX | | LAP2u82 | my cv 2022.docx | 02-12-2022 | 13:40:55 | c:\users\XXXX\Downloads\my cv 2022.doc |

Data copied to 2 distinct unencrypted USBs. Early Morning and on Weekend.

| Serial Number | Insertion Date/Time | Removal Date/Time | Number Files |
|---------------|---------------------|---------------------|-----------------------|
| 531455422 | 2022-12-18 22:20:16 | 2022-12-18 00:00:00 | 9685 |
| 531455422 | 2022-12-18 09:47:04 | 2022-12-18 10:20:16 | 6622 |
| 931222212 | 2022-12-25 08:31:19 | 2022-12-25 09:47:04 | 15633 |
| 931222212 | 2022-12-25 19:35:33 | 2022-12-25 20:31:19 | 8952 |

Suspicious User Activity- User 1

Applying for Jobs on Indeed.com the next day.

| Date/Time | Duration | Full URL |
|---------------------|----------|---------------------------------------------|
| 2022/12/03 17:00:00 | 0:05:36 | au.indeed.com/[redacted]edabda9de58bfe0f2ff |
| 2022/12/03 17:30:00 | 0:18:41 | au.indeed.com/[redacted] |
| 2022/12/03 17:00:00 | 0:01:40 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:00:00 | 0:01:30 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:00:00 | 0:01:09 | au.indeed.com/job/[redacted]f |
| 2022/12/03 17:00:00 | 0:01:10 | au.indeed.com/job/[redacted]f |
| 2022/12/03 17:00:00 | 0:00:50 | au.indeed.com/job/[redacted]f |
| 2022/12/03 17:00:00 | 0:00:44 | au.indeed.com/companies/[redacted] |
| 2022/12/03 17:00:00 | 0:00:41 | au.indeed.com/companies/[redacted] |
| 2022/12/03 17:00:00 | 0:00:36 | au.indeed.com/companies/[redacted] |
| 2022/12/03 17:00:00 | 0:00:29 | au.indeed.com/job/[redacted]0 |
| 2022/12/03 17:00:00 | 0:00:26 | au.indeed.com/job/[redacted]6 |
| 2022/12/03 17:00:00 | 0:00:25 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:00:00 | 0:00:23 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:30:00 | 0:00:23 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:00:00 | 0:00:16 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:00:00 | 0:00:13 | au.indeed.com/job/[redacted]77 |
| 2022/12/03 17:00:00 | 0:00:11 | au.indeed.com/job/[redacted]b5 |
| 2022/12/03 17:00:00 | 0:00:11 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:30:00 | 0:00:11 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:00:00 | 0:00:06 | au.indeed.com/job/[redacted]f |
| 2022/12/09 17:30:00 | 0:00:06 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:00:00 | 0:00:04 | au.indeed.com/job/[redacted] |
| 2022/12/03 17:30:00 | 0:00:04 | au.indeed.com/job/[redacted]6 |
| 2022/12/03 17:00:00 | 0:00:03 | au.indeed.com/job/[redacted] |

Email Analysis

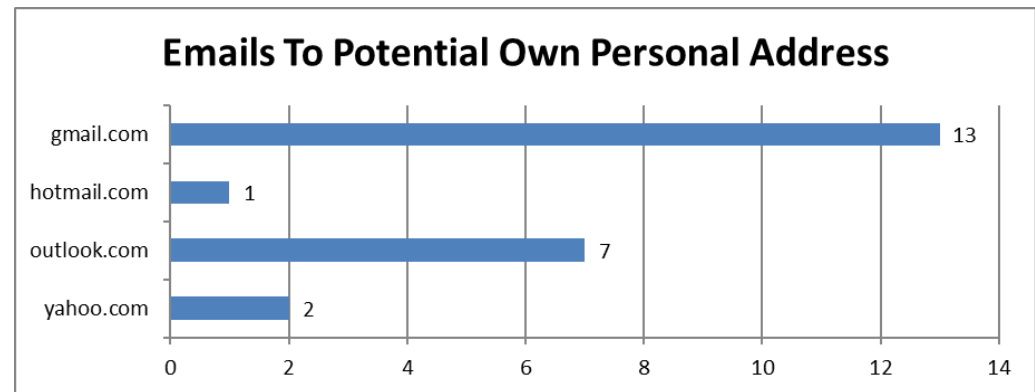
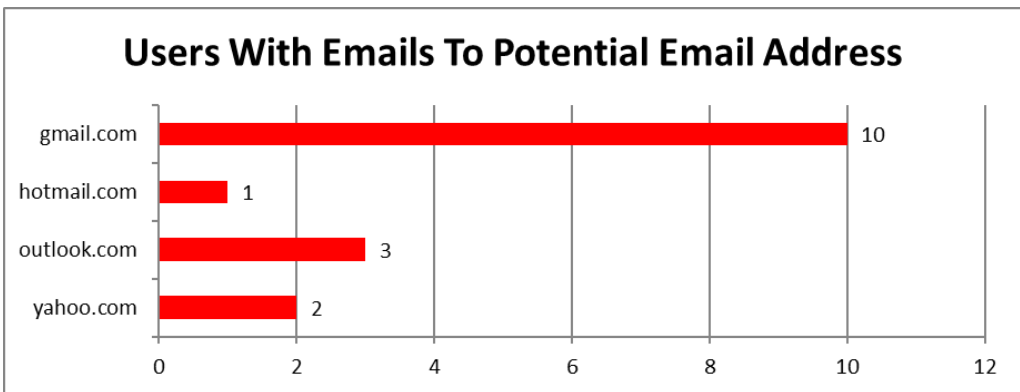
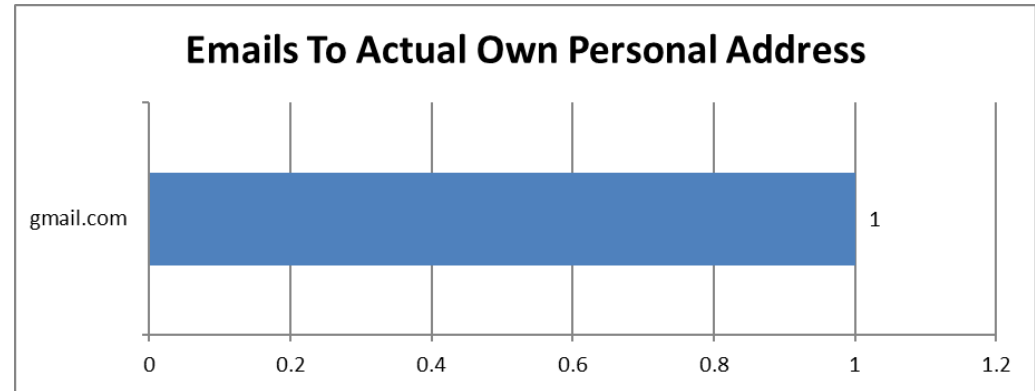
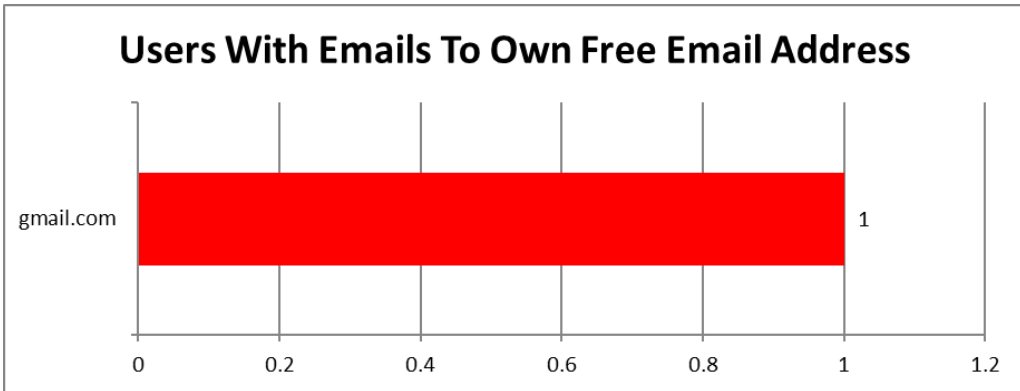
Covers both Corporate and Personal Email transactions.

Customer data forwarded to personal emails

| Corporate Email Analysis | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------|
| Customer data forwarded to personal emails by staff. Email detected being forwarded to user own personal email. | Technical control not implemented | Medium |
| Visibility of email forwards. Visibility of what files have been forwarded by users to personal and free emails to ensure they are accounted for. | Technical control not implemented | High |

Forwarding emails to personal and other free emails is a common cause of leakage and non-compliance

Risk: Forwarding corporate information to personal emails leads to information creep. The action needs to be checked in the event sensitive information is forwarded to free emails.

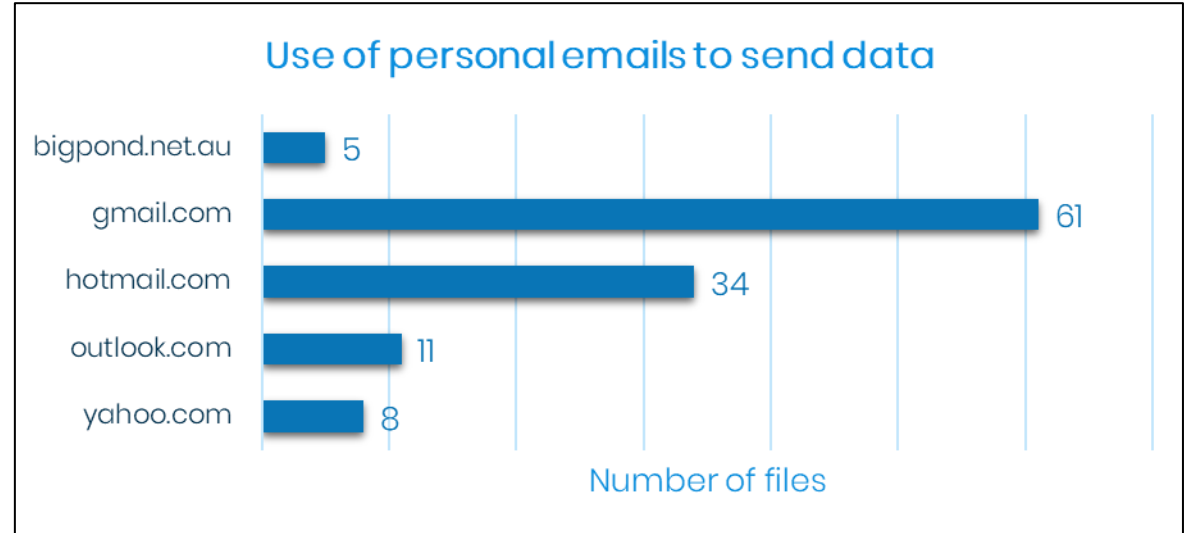


Use of personal emails to send data

| Use of Personal Emails | | |
|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------|
| Use of Personal emails to send corporate data detected. Personal emails have been used to send corporate data. | Technical control not implemented | High |
| Visibility of Personal Email Use. Visibility is required to ensure College data is not being sent out via personal emails. | Technical control not implemented | High |

Use of personal emails is a common occurrence in organisations but needs to be monitored as can lead to data leaks.

Risk: Use of personal emails to exfiltrate data out is consistently reported as one of the key ways data is lost or stolen in organisations and needs to be monitored.



Use of Non-Organisational Unauthorised Applications

Non-Compliance of 2 of the ES8 Controls.

1. Restrict administrative privileges
2. Application control

Installation and Use of Non-organisational applications

| Data transfer using non-corporate applications | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|------|
| <p>Technical Control Circumvented. The users seem to have found a way to install non-organisational applications.</p> <p>Non-Compliance of 2 of the ES8 Controls.</p> <ol style="list-style-type: none"> 1. Restrict administrative privileges 2. Application control | Failed Technical Control | High |
| <p>Visibility of Application Use. Visibility of what applications are being used by users.</p> | Technical control not implemented | High |

| Software Name | Vendor | Number of PCs with Software Present | Number of PCs with Software Usage | Total Usage Duration |
|---------------|-------------------|-------------------------------------|-----------------------------------|----------------------|
| MESSENGER.EXE | Facebook Inc. | 5 | 3 | 1:15:00 |
| TELEGRAM.EXE | Telegram | 5 | 2 | 0:41:40 |
| WHATSAPP.EXE | WhatsApp | 6 | 2 | 0:17:30 |
| FILEZILLA.EXE | FileZilla Project | 1 | 1 | 0:08:41 |
| DROPBOX.EXE | Dropbox, Inc. | 8 | | |
| OPERA.EXE | Opera Software | 2 | | |

The use of personal applications without proper authorization and vetting may be for legitimate reasons, but there are significant risks involved.

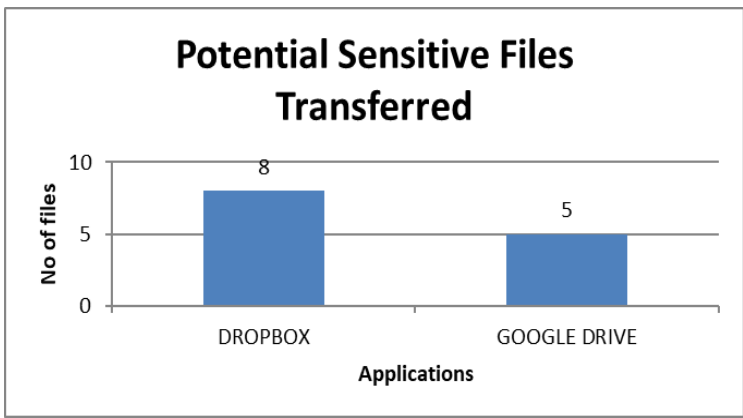
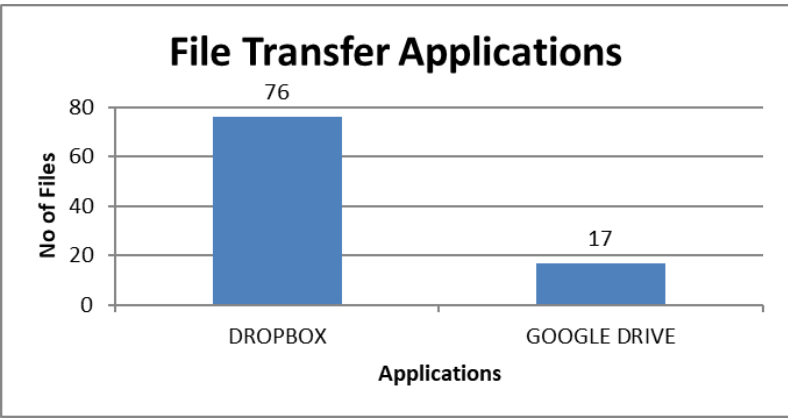
Risk. Standard users should not have admin rights to install applications. It can result in malware infection and highlights that the current controls are failing to implement 2 of the ES8 Controls.

1. Restrict administrative privileges
2. Application control.

Data transfer using Non-Corporate Data sharing Apps and Websites

PII data transfers using Cloud Applications

| Data transfer using non-corporate applications | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------|
| Risky Transfer Application Use. 6 users detected using Dropbox or Google Drive to transfer files. Transfers include potential sensitive data. | Failed Technical Control | High |
| Visibility of transfers. Visibility of sensitive data transferred using external media | Technical control not implemented | High |



| User Name | User Group | Total Events |
|-----------|--------------|-----------------------|
| xxxxxx | Client Group | 34443 |
| xxxxxx | Client Group | 1722 |
| xxxxxx | Client Group | 1428 |
| xxxxxx | Client Group | 17 |

The use of personal cloud services and applications may be for legitimate reasons, but there are significant risks involved.

Risk. Unauthorized access by former staff members. Information stored in personal cloud account remains with its user after he leaves a College and therefore can result in a breach as per NDB Scheme.

Risk. Applications like Dropbox, OneDrive, and Google Drive sync files to any device where a user is logged into these applications. This may include their personal devices or, even worse, those of a different College, which could result in the loss of sensitive information.

| | | | |
|------------|----------|---------|-------------------------------------------------|
| 29-11-2022 | 14:03:28 | DROPBOX | 1231212.docx |
| 29-11-2022 | 14:03:28 | DROPBOX | 1-product comparison-latest- jun 2018 copy.xlsx |
| 29-11-2022 | 14:03:28 | DROPBOX | 1-product comparison-latest- jun 2018.xlsx |
| 29-11-2022 | 14:03:29 | DROPBOX | 1231212_00.docx |
| 29-11-2022 | 14:03:29 | DROPBOX | 1231212_00_11.docx |
| 29-11-2022 | 14:03:29 | DROPBOX | amex2222_3.xls |
| 29-11-2022 | 14:03:29 | DROPBOX | az-100.docx |
| 29-11-2022 | 14:03:30 | DROPBOX | capture.png |
| 29-11-2022 | 14:03:30 | DROPBOX | claim - copy.xls |
| 29-11-2022 | 14:03:43 | DROPBOX | client4.4.0.10 - lc-temora.msi |
| 29-11-2022 | 14:03:56 | DROPBOX | contract form.doc |
| 29-11-2022 | 14:03:56 | DROPBOX | creditcard.docx |
| 29-11-2022 | 14:03:57 | DROPBOX | customer info.xlsx |
| 29-11-2022 | 14:03:57 | DROPBOX | customer_info.docx |
| 29-11-2022 | 14:03:58 | DROPBOX | customer_offer letter.docx |

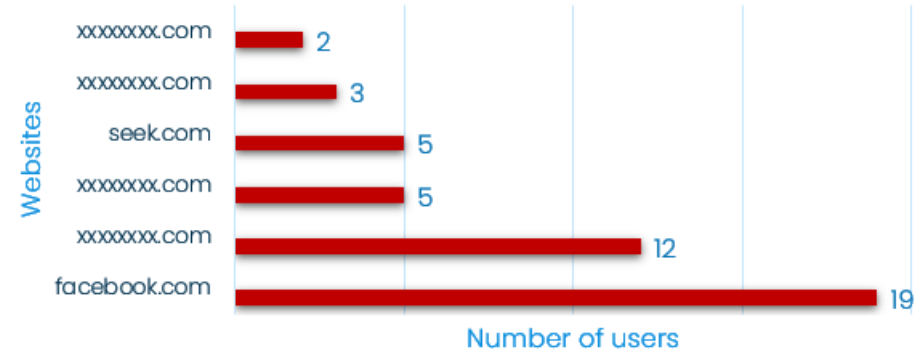
Data transfer using Non-organisational websites

| Data transfer using non-corporate applications | | |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------|-------------|
| Risky website Use. 19 users detected using Facebook and potentially transferring data. | Technical control not implemented | High |
| Visibility of transfers. Visibility of sensitive data transferred using APPs and encrypted websites. | Technical control not implemented | High |

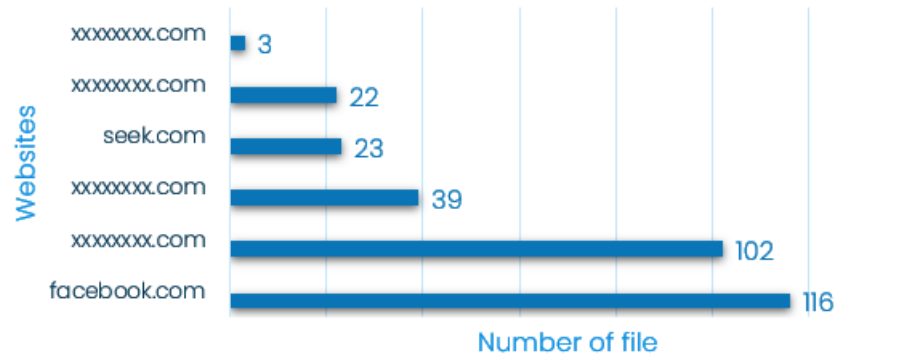
Transferring of files to non-corporate websites may be for legitimate reasons, but there are significant risks involved.

Risk. Can result in a breach if sensitive or PII data is uploaded to non-corporate websites either accidentally or due to malicious intent.

Number of users who transferred to top 6 non-corporate domains



Number of files transferred to top 6 non-corporate domains



Printing Analysis

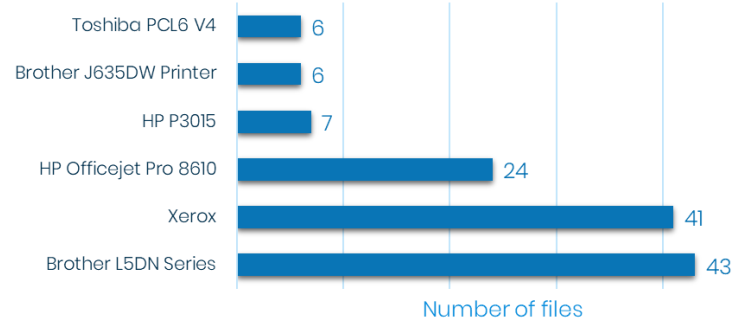
Printing of PII Information

| Printing of Sensitive Data | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|---------------|
| Printing of potential sensitive data. Printing of sensitive data was observed. | Technical control not implemented | Medium |
| Printing use personal Printers. As users are allowed to work from home there is risk of files being printed using home printers. | Technical control not implemented | Medium |
| Visibility of Printing. Visibility of what files have been printed either via organisational or personal printers to ensure they are accounted for. | Technical control not implemented | Medium |

The use of these printers may be for legitimate reasons but can result in a breach.

Risk. According to ACSC Loss of printed information is a common occurrence leading to a data breach. As such printing of material needs to be monitored and controlled. Users should be made responsible for the security of printed materials. All printing events need to be monitored.

Top 6 Printers – Potential Sensitive File Printed



| Printer Name | Total Events |
|-------------------------------------|--------------|
| \\rbcmon02\...-Office | 25 |
| \\RBCPRN01\...-Office | 22 |
| \\rbcprn01\...Office | 19 |
| \\RBCPRN01\...-Office | 12 |
| D-Accounts | 6 |
| Microsoft Print to PDF | 5 |
| \\rbcmon02\...-Office2 | 5 |
| \\rbcprn01\...-Office | 5 |
| Microsoft Print to PDF | 4 |
| \\rbcprn01\...-Manager Office | 3 |
| Canon TS3300 series | 3 |
| OneNote for Windows 10 | 2 |
| Adobe PDF | 2 |
| \\RBCPRN01\...-Office | 2 |
| I Block Lv2 Toshiba | 2 |
| ...-Admin | 2 |
| HP8A771D (HP Officejet Pro 6830) | 2 |
| \\rbcprn01\...-Office | 1 |
| Adobe PDF | 1 |
| HPBBF063 (HP OfficeJet Pro 8710) | 1 |
| \\RBCPRN01\...-Office | 1 |
| ... | 1 |
| HP000756 (HP Officejet 6600) | 1 |
| Brother HL-1110 series | 1 |
| Adobe PDF | 1 |
| Brother MFC-L3750CDW series Printer | 1 |
| \\RBCPRN01\...-Office | 1 |
| \\rbcprn01\...-Office | 1 |
| Canon MG6200 series Printer XPS | 1 |

Access of files

Access of files

| Access of information | | |
|-----------------------------------------------------------------------------------------------|-------------|---------|
| Authorised Access of sensitive Information. Ensuring authorised users can access files | Implemented | No Risk |
| Access Visibility. Visibility of who is accessing what files | Implemented | No Risk |

The College has visibility and means to validate if authorised users are accessing sensitive data.

DLP File Access Incidents by Rule Name

| Rule Name | Number of | Number of Files |
|-----------------|-----------|-----------------|
| [REDACTED] | 79 | 1086 |
| Document Access | 146 | 19567 |

| File Name | User Name | Date | Time | File Path |
|---------------------------------------|------------|------------|----------|--------------------------------------------------------------------------------|
| mp-23 project brief.doc | [REDACTED] | 29/11/2022 | 12:42:56 | c:\users\User\document\Client Profile\mp-23 project brief.doc |
| ac_id_74 - signed.docx | [REDACTED] | 29/11/2022 | 15:21:49 | c:\users\User\document\Client Profile\ac_id_74 - signed.docx |
| security snippets nov 2022.pdf | [REDACTED] | 29/11/2022 | 9:36:52 | c:\users\User\document\Client Profile\security snippets nov 2022.pdf |
| agreementreconciliation.pdf | [REDACTED] | 29/11/2022 | 11:55:43 | c:\users\User\document\Client Profile\agreementreconciliation.pdf |
| 202208_client.xlsx | [REDACTED] | 29/11/2022 | 10:13:53 | c:\users\User\document\Client Profile\202208_client.xlsx |
| performance report.pdf | [REDACTED] | 29/11/2022 | 11:21:31 | c:\users\User\downloads\performance report.pdf |
| performance report (1).pdf | [REDACTED] | 29/11/2022 | 11:21:39 | c:\users\User\downloads\performance report (1).pdf |
| protect 1st work package costing.xlsx | [REDACTED] | 6/12/2022 | 13:29:50 | c:\users\admin\desktop\demos\project f20\protect 1st work package costing.xlsx |

Recommendation to Reduce Risk

High Priority

The College's users are exhibiting several risky behaviours when dealing with College data. These are putting College IP at serious risk and can easily result in a Breach. There is a need to monitor and control these activities.

Implement a User activity Monitoring, Data Egress/leak Monitoring solution which can monitor and alert "sensitive data" in the following use cases:

- Access of sensitive files
- Transfer using corporate channels like emails and cloud.
- Transfer using any personal online sources like free emails, cloud, and web uploads.
- Transfers using encrypted personal chats like WhatsApp.
- Data shared out directly from cloud shares.
- Printed using corporate and personal printers.
- Transfer using offline sources like USBs, phone sync etc.
- Locate laptops containing Sensitive PII data
- Monitor and control syncing of data using wireless methods like Bluetooth and Mobile Sync apps.
- Ability to monitor when user's circumvent College policy.
- Monitor use of unauthorized College applications.
- Monitor access of risky websites.
- Ability to monitor 24/7 even not connected to corporate network or offline.

Recommendation to Reduce Risk

High Priority

- Implement a staff awareness program around the identified risks. The OAIC's **Guide to Securing Personal Information** sets out expectations that Entities should ensure they foster a privacy and security aware culture, such as through staff training and awareness exercises.

High Priority

- The College is recommended to complete their IT Security Policy. It is recommended that the IT Security policy covers the following areas:

- Privacy Policy
- Acceptable Use Policy
- Authenticity Policy
 - Password Policy
 - MFA Policy
- Access control and Authorisation Policy
- Data Protection Policy
 - Data classification
 - Asset register
 - Protection of assets
- Communication and Data Transfer Policy
 - Email Policy
 - Chat
 - Media transfer
 - Other communication mechanisms.
- Mobile Device Protection and Management Policy
 - Mobile device management
 - Mobile device encryption
- Configuration and Vulnerability Management
 - Patching (which will include OS, and applications)
 - Application Control
 - User application hardening
 - MACRO management
 - AV configuration
- IT equipment Purchase, Deployment and Disposal Policy
- Clean Desk Policy
- Business Continuity Policy
 - Business Continuity Plan.
 - Backup and recovery strategy
- Supplier Management Policy
- User education and awareness policy
- Data Breach Response Plan

Recommendation to Reduce Risk

High Priority

- College should aim to meet a minimum maturity of level 1 for ACSC essential 8 controls. The following essential 8 controls are considered of higher importance:
 - Application control
 - Patch applications
 - Patch Operating System
 - Restrict administrative privileges

Medium Priority

- The following essential 8 controls are considered of medium importance:
 - Backup
 - Configure Microsoft Office macro settings
 - User application hardening

GuardWare offers products designed to keep your data safe and can help implement the recommendations in this report.



Contact Information

Level 13, 465 Victoria Avenue,
Chatswood, Sydney 2067, Australia.

Email: sales@guardware.com

Phone: +61 2 9994 8061