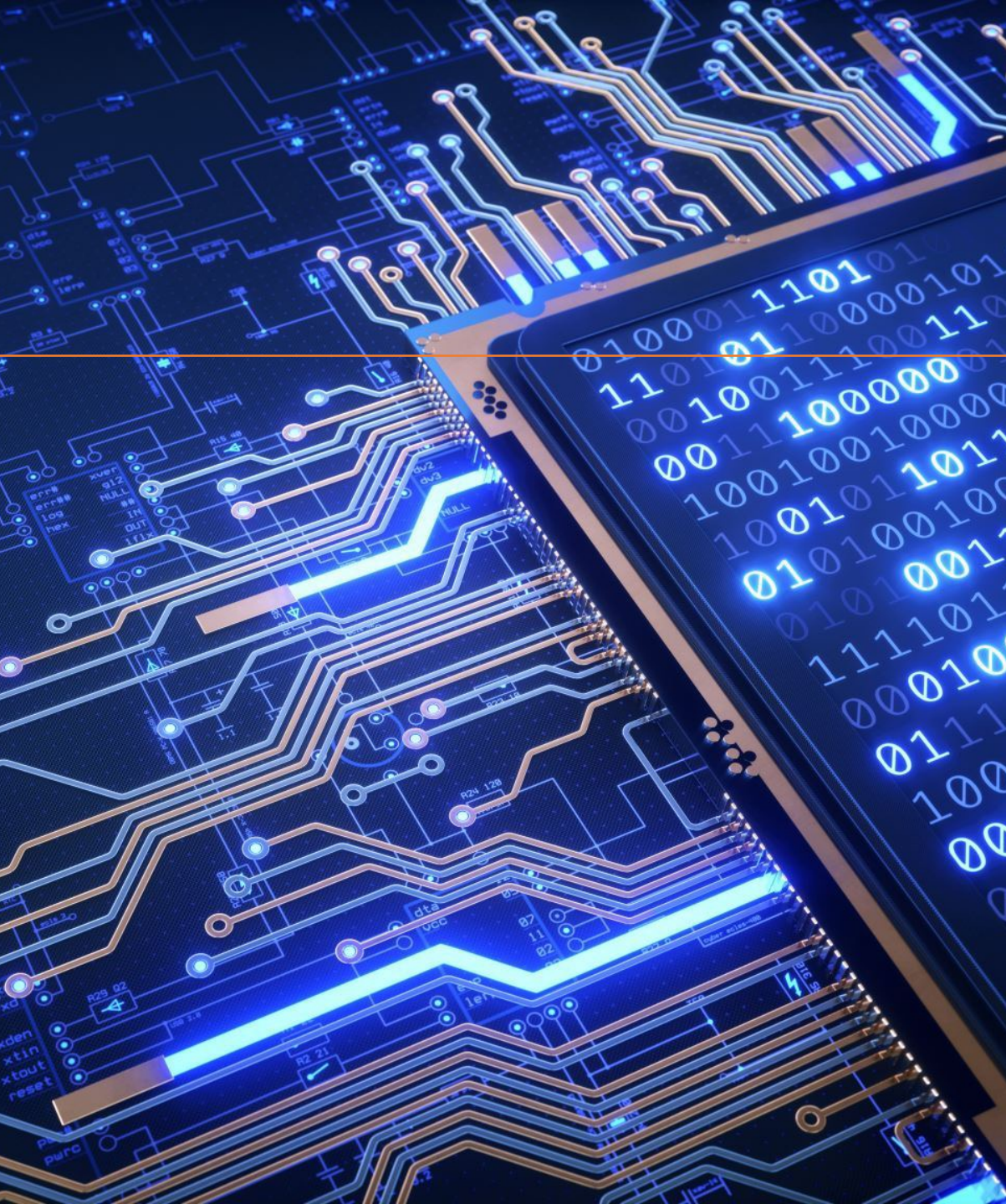




# B108 Data Governance, Security and Ethics

GH1019657





# AGENDA

---

- INTRODUCTION
- ISSUES
- SECURITY ASSESSMENT
- ASSESSMENT FINDINGS
- SECURITY PLANS
- RECOMMENDATIONS &
- IMPLEMENTATION PLANS
- CONCLUSION

---

# INTRODUCTION

---

Fortified online shop is a leading e-commerce organization with a wide geographic presence. We specialize in selling a diverse range of products and handle a substantial volume of sensitive customer information.



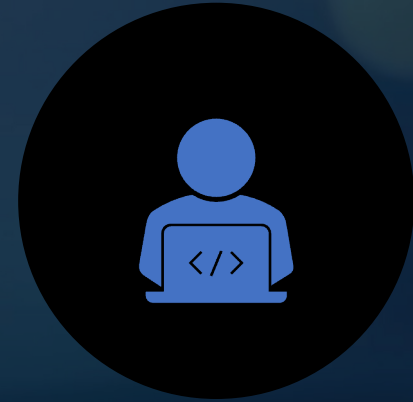
# ISSUES



DATA BREACH AN UNAUTHORIZED  
ACCESS TO CUSTOMER INFORMATION



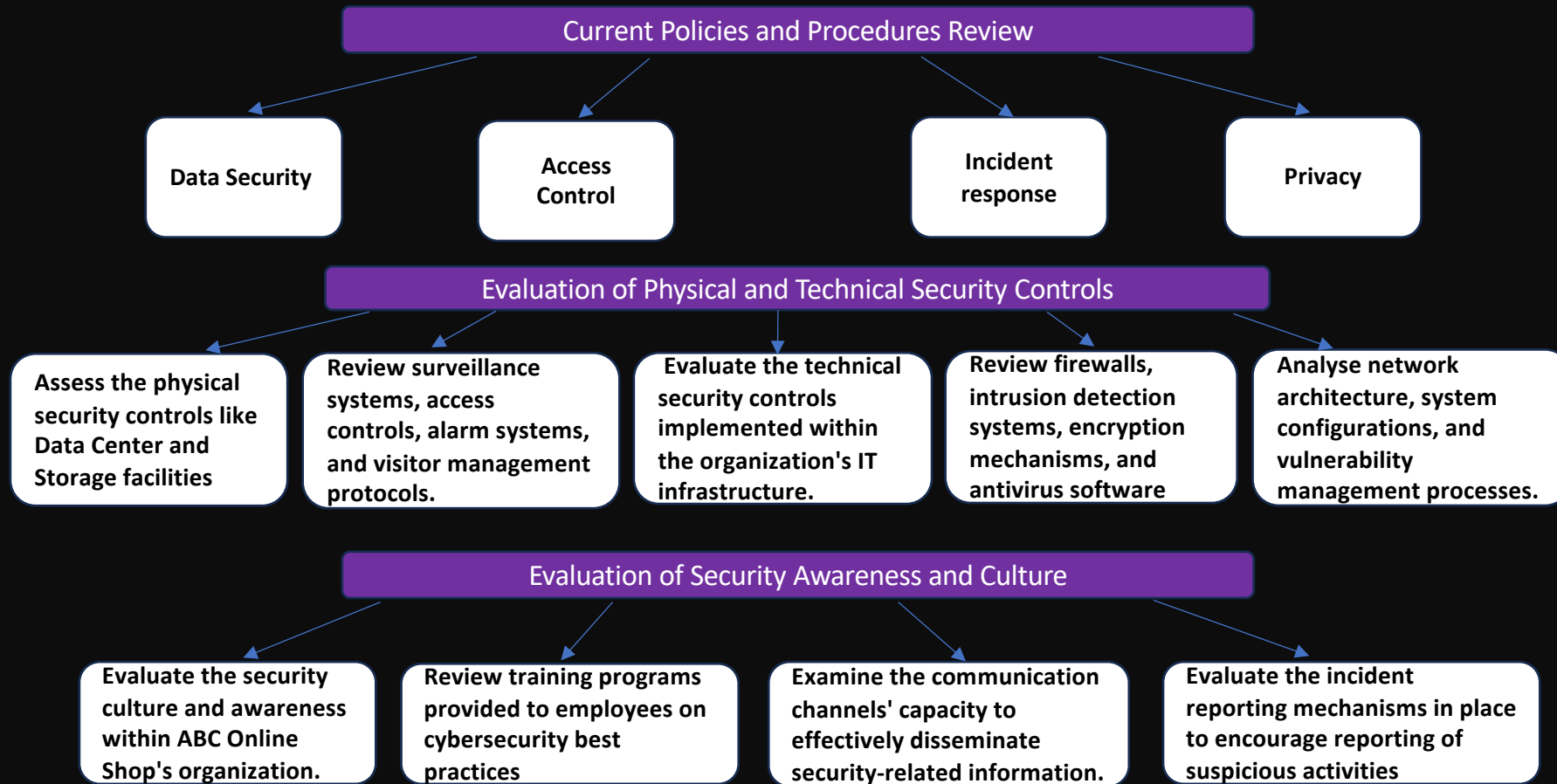
MODIFICATION OF PRODUCT PRICES  
WITHOUT BUSINESS REQUEST,  
RESULTING IN FINANCIAL LOSS








WEBSITE DOWNTIME FOR A DAY DUE  
TO HARDWARE FAILURE.

# SECURITY ASSESSMENT

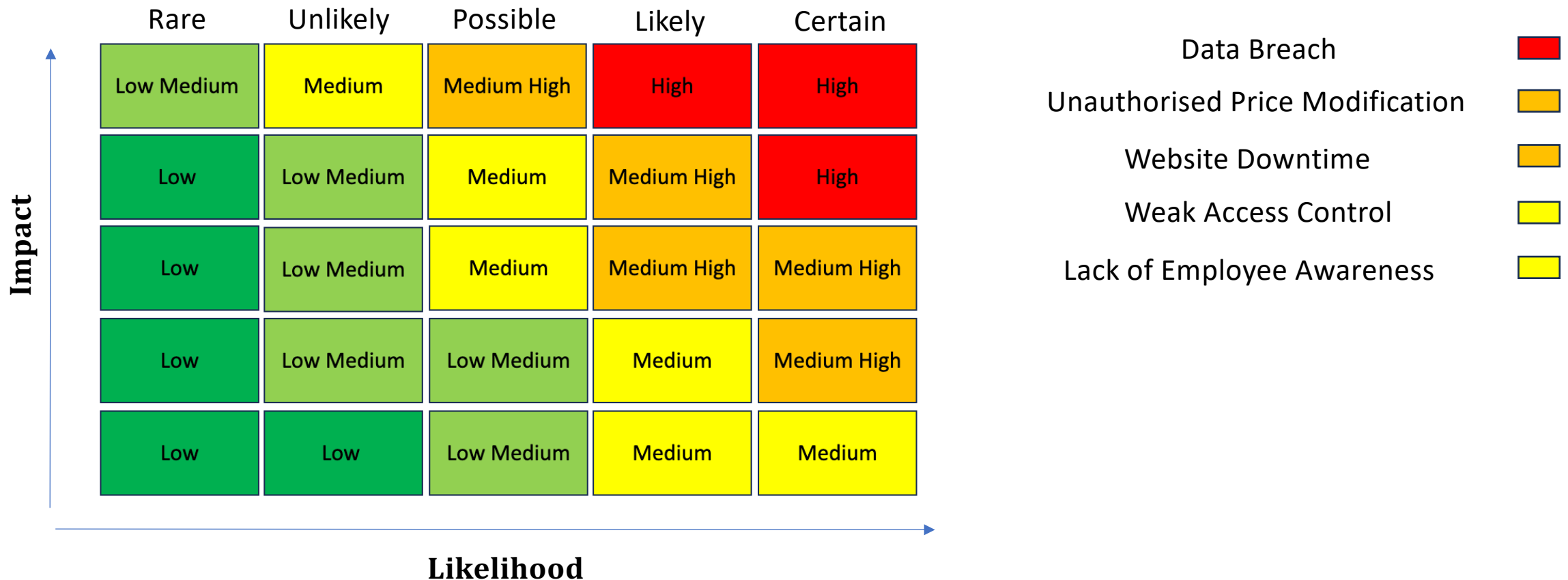
---



# ASSESSMENT FINDINGS

	Data Breach	Unauthorised access to customer information, leading to potential data breaches and privacy concerns.
	Unauthorised Price modification	Instances of unauthorized modification of product prices, resulting in financial loss for the organization.
	Website downtime	Website experienced a day-long downtime due to hardware failure, impacting user experience and business operations.
	Weak Access Control	Identified weaknesses in access controls, such as inadequate authentication mechanisms or excessive user privileges, which can lead to unauthorized access to sensitive data.
	Lack of Employee Awareness	Insufficient employee awareness regarding cybersecurity best practices, potentially leading to social engineering attacks or inadvertent security breaches.

# ASSESSMENT FINDINGS



# SECURITY PLANS INTRODUCTION

## Enhanced Protection

Protect sensitive customer information and safeguard against data breaches and unauthorized access.

## Improved Compliance

Ensure compliance with industry regulations and data protection laws, mitigating legal and regulatory risks.

## Mitigated Financial Loss

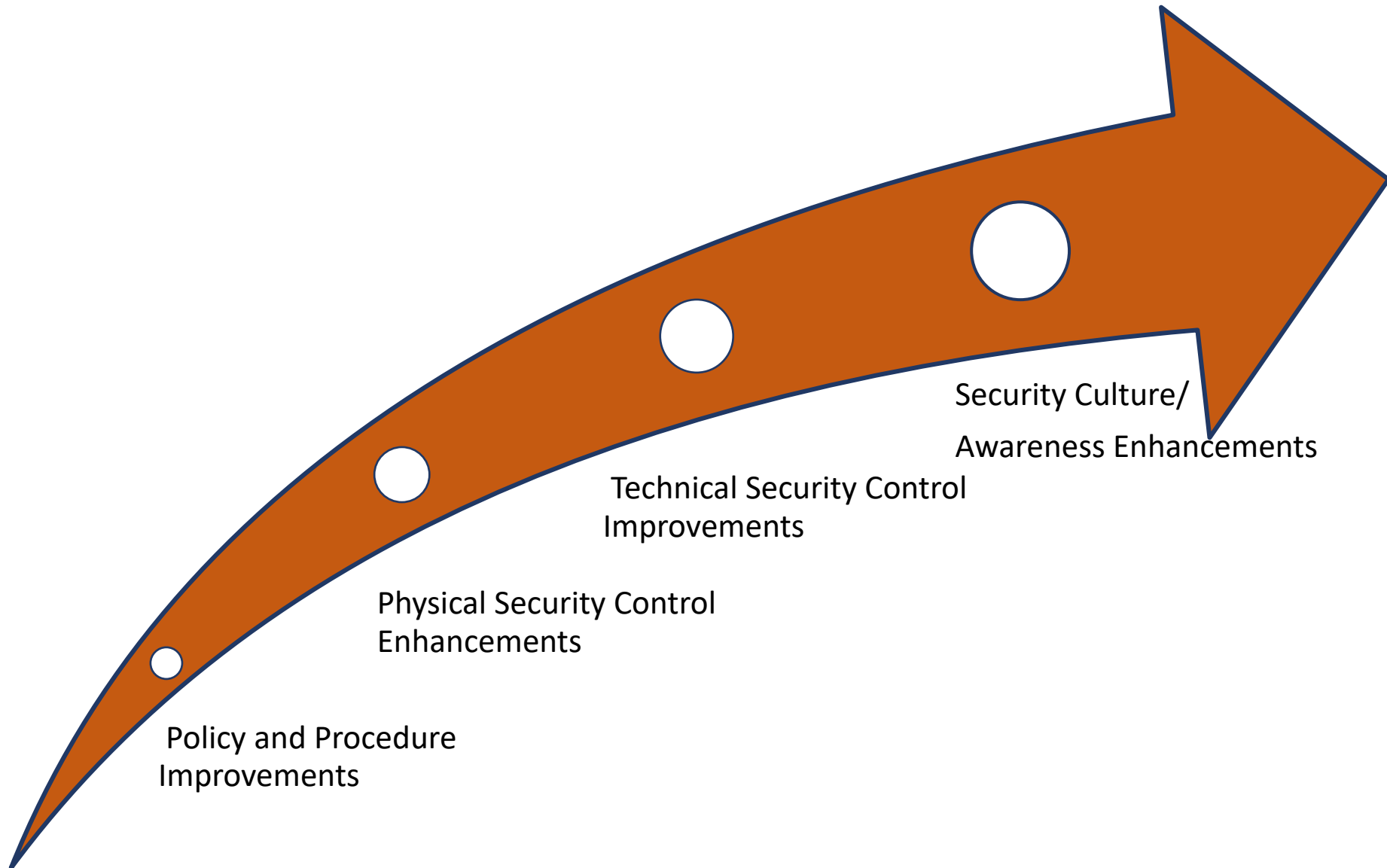
Reduce the risk of financial loss due to unauthorized price modifications and fraudulent activities.

## Strengthened Security Culture

Foster a security-conscious culture among employees, reducing the risk of human-related vulnerabilities and enhancing overall security.

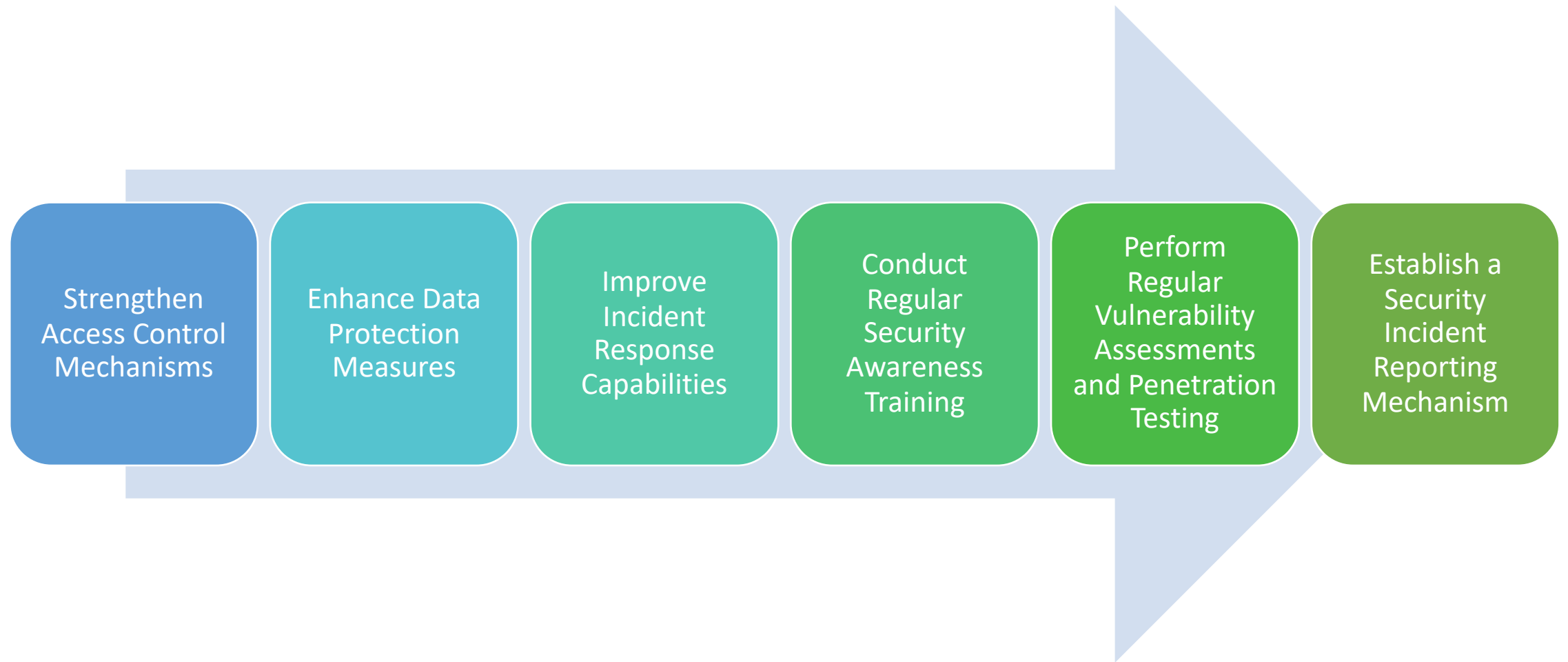


# SECURITY PLAN



# RECOMMENDATIONS

---



# SECURITY CONTROLS

---

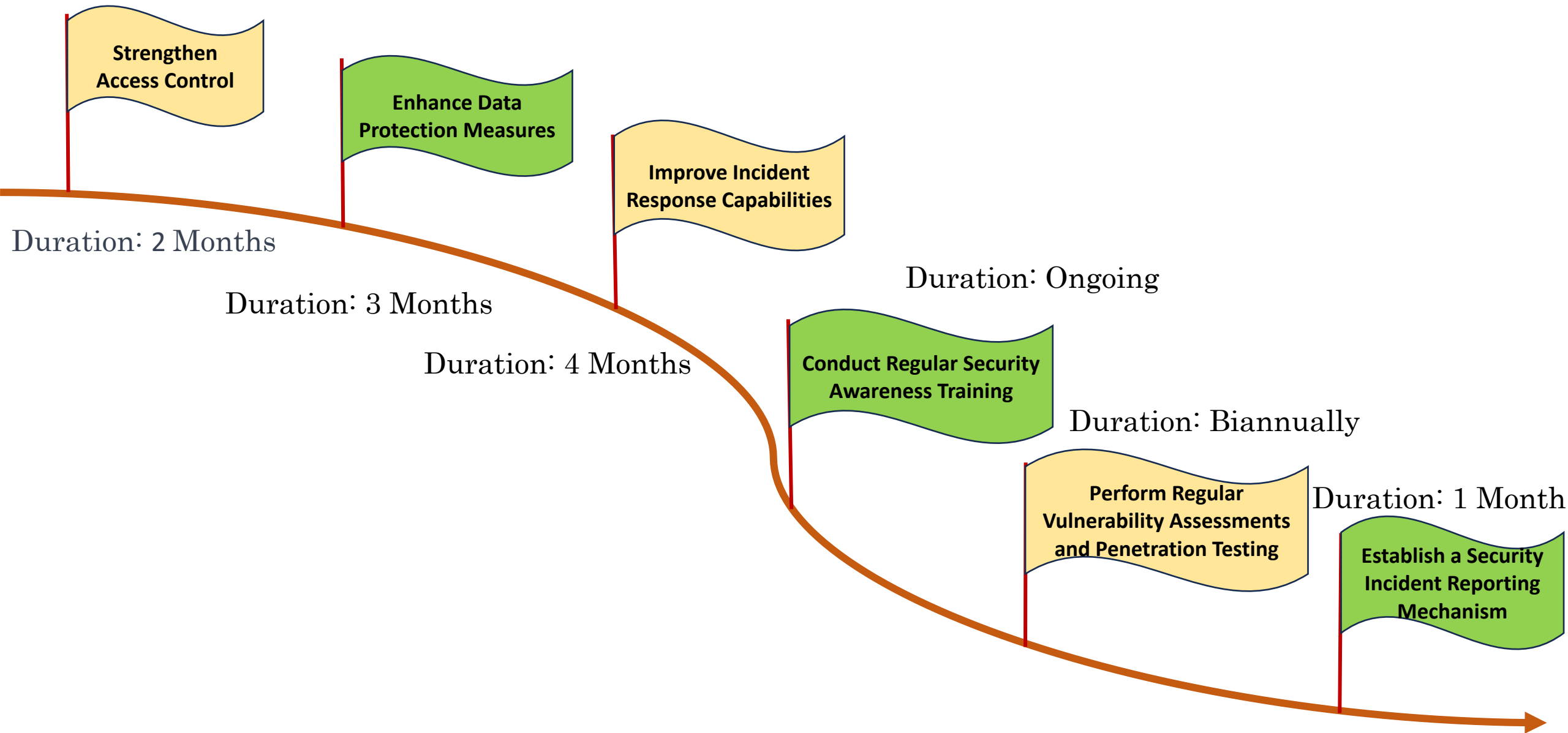
	Multi-Factor Authentication (MFA)	Role-Based Access Control (RBAC)
Define	A technique of user authentication that requests multiple factors, such as a password and a special code sent to their registered email or mobile phone.	A technique for giving people distinct roles and permissions based on the demands of their jobs.
Benefits	Adds an extra layer of security & reduce the risk of unauthorized access	Reduces the risk of unauthorized access or unintentional data disclosure by ensuring that people only have access to the resources and information required for their tasks.
Example	Authenticator apps, SMS codes, or Hardware tokens	Roles such as admin, manager, and regular user.



# RECOMMENDED SOLUTIONS

Problems / Risks	Solutions
Data Breach	Strengthen Access Control Mechanisms
Unauthorised Price Modification	Enhance Data Protection Measures
Website Downtime	Improve Incident Response Capabilities
Weak Access Control	Conduct Regular Security Awareness Training
Lack of Employee Awareness	Regularly conduct penetration tests and vulnerability assessments and establish a Security Incident Reporting Mechanism

# IMPLEMENTATION PLANS



# CONCLUSION

---



RECAP OF THE KEY  
POINTS



EMPHASIZE THE  
BENEFITS



CALL TO ACTION



---

Thank you

---

# REFERENCES

---

- Brooks, R. and Brooks, R. (no date) 'The CIA triangle and its real-world application', The CIA Triad and Real-World Examples. Available at: <https://blog.netwrix.com/2019/03/26/the-cia-triad-and-its-real-world-application/> (Accessed: 12 June 2023).
- National Institute of Standards and Technology (no date) 'NIST Special Publication 800-53, Revision 5', [Online]. Available at: <https://csrc.nist.gov/publications/detail/sp/800-53/rev-5/final> (Accessed: 12 June 2023).
- PurpleSec (no date) 'Security Controls', [Online]. Available at: <https://purplesec.us/security-controls/> (Accessed: 12 June 2023).
- Almasry, S. (2019) 'Equifax agrees to pay at least \$575 million in fines and penalties over 2017 breach', CNN, 22 July. Available at: <https://edition.cnn.com/2019/07/22/tech/equifax-hack-ftc/index.html> (Accessed: 12 June 2023).
- BBC News (2020) 'Amazon AWS outage affects Roku, Adobe and thousands more', BBC News, 26 November. Available at: <https://www.bbc.com/news/technology-54931873> (Accessed: 12 June 2023).
- Lomas, N. (2017) 'An internet-connected washer-dryer has been found to be part of a spam botnet', TechCrunch, 28 February. Available at: <https://techcrunch.com/2017/02/28/amazon-aws-s3-outage-is-breaking-things-for-a-lot-of-websites-and-apps/?guccounter=1> (Accessed: 12 June 2023).
- BBC News (2016) 'Yahoo hack: What you need to know', BBC News, 15 December. Available at: <https://www.bbc.com/news/world-us-canada-38324527> (Accessed: 12 June 2023).
- KnowledgeHut (no date) 'Cyber Security Plans: A Comprehensive Guide', [Online]. Available at: <https://www.knowledgehut.com/blog/security/cyber-security-plans> (Accessed: 12 June 2023).
- National Institute of Standards and Technology (1995) 'An Introduction to Computer Security: The NIST Handbook', [Online]. Available at: <https://csrc.nist.gov/publications/detail/sp/800-12/archive/1995-10-02> (Accessed: 12 June 2023).
- National Institute of Standards and Technology (2006) 'An Introduction to Information Security', [Online]. Available at: <https://nvlpubs.nist.gov/nistpubs/legacy/sp/nistspecialpublication800-100.pdf> (Accessed: 12 June 2023).
- OneLogin (no date) 'What Is Multi-Factor Authentication (MFA)?', [Online]. Available at: <https://www.onelogin.com/learn/what-is-mfa> (Accessed: 12 June 2023).
- Digital Guardian (no date) 'What Is Role-Based Access Control (RBAC)? Examples, Benefits, and More', [Online]. Available at: <https://www.digitalguardian.com/blog/what-role-based-access-control-rbac-examples-benefits-and-more> (Accessed: 12 June 2023).



### Assessment Submission Form

<b>Student Number</b> (If this is group work, please include the student numbers of all group participants)	GH1019657
<b>Assessment Title</b>	Individual Final Presentation
<b>Module Code</b>	B108
<b>Module Title</b>	Data Governance, Security and Ethics
<b>Module Tutor</b>	Prof. Alireza Mahmoudi
<b>Date Submitted</b>	28.06.2023

#### Declaration of Authorship

I declare that all material in this assessment is my own work except where there is clear acknowledgement and appropriate reference to the work of others.

I fully understand that the unacknowledged inclusion of another person's writings or ideas or works in this work may be considered plagiarism and that, should a formal investigation process confirms the allegation, I would be subject to the penalties associated with plagiarism, as per GISMA Business School, University of Applied Sciences' regulations for academic misconduct.

Signed.....

A handwritten signature in blue ink, appearing to be "Alireza Mahmoudi", is written over the signature line.

..... Date .....

28.06.2023