Contents

PREFACE		xii
ABOUT THE	Author	xvi
CHAPTER 1	INTRODUCTION	1
	Why Are Current Implementations of Cybersecurity	
	Frameworks Effective in Identifying, Monitoring and	
	Responding to Cybersecurity Threats?	2
	What Factors Are Used by an Organisation When Investing	
	in Cybersecurity Controls?	2
	What Decision-Making Mechanisms Are Organisations	
	Using When Evaluating Different Security Measures Prior	
	to Implementation?	2
	Measuring the Effectiveness of Implemented Frameworks	4
	Risk Level	4
	Importance of Decision-Makers	5
	Why Should Organisations Implement Secure Measures	
	to Meet Privacy Laws and Government Regulations?	5
	Countering Identity Takeover Incidents	9
	Data Protection	16
CHAPTER 2	PRIVACY LAWS	19
	Canada	19
	Principle 1: Accountability	20
	Principle 2: Identifying Purposes	20
	Principle 3: Consent	20
	Principle 4: Limiting Collection	20
	Principle 5: Limiting Use, Disclosure and Retention	21

	Principle 6: Accuracy	21
	Principle 7: Safeguards	21
	Principle 8: Openness	21
	Principle 9: Individual Access	21
	Principle 10: Challenging Compliance	21
	The United States	22
	Children's Online Privacy Protection Act ("COPPA")	23
	Australia	23
	Health Service Providers	24
	Health and Medical Research	25
	Privacy Breach Reports	26
	Personal Information at Issue	27
	Privacy by Design	28
	Data Governance	31
		31
	Minimisation of PII	32
	Shared Management of PII	33
	Appendix A: The Personal Information Protection and	0.4
	Electronic Documents Act (PIPEDA) Self-Assessment Tool	34
	Appendix B: Personal Health Information Protection Act	19_
	(PHIPA) Checklist	47
	Appendix C: The Health Insurance Portability and	
	Accountability Act (HIPAA)	
	JOURNAL – HIPAA Compliance Checklist	52
	Note	53
CHAPTER 3	DATA PROTECTION	54
	E-Commerce	54
	Types of Reported Breaches	55
	Data Protection	57
	Scope, Penalties and Key Definitions	61
	Legal Terms	61
	Data Protection Principles	61
	Accountability	62
	Data Security	63
	Data Protection by Design and by Default	63
	Processing Data	63
	Consent	63
	Data Protection Officers	64
	An Individual's Privacy Rights	64
CHAPTER 4	THIRD-PARTY RISK MANAGEMENT	72
O I I A I L I A		12
	Government Regulations: Third-Party Risk Management Requirements	72
	Governance	
	Accountability	73
		73
	Third-Party Risk Management Framework (TPRMF)	74
	Management of Third-Party Risk	15

	Risk-Based Approach	76
	Risk Identification and Assessment	77
	Risk Management and Mitigation	80
	Monitoring and Reporting	84
	Special Arrangements	86
	Standardised Contracts	86
	No Written Contract	86
	Digital Operational Resilience Act (DORA)	86
	ICT Risk Management	87
	ICT Third-Party Risk Management	87
	Digital Operational Resilience Testing	87
	Information Sharing	87
	Tillorination onaring	0,
CHAPTER 5	TECHNOLOGY AND CYBER RISK	88
	Technology and Cyber Risk in Third-Party Arrangements	88
	Clear Roles and Responsibilities Are Established for	
	Technology and Cyber Controls	88
	Third Parties Comply with the Organisation's	
	Technology and Cyber Standards	88
	Cloud-Specific Requirements Are Established	89
	Cloud Portability Is Considered	89
	Governance and Risk Management	89
	Accountability and Organisational Structure	89
	Technology and Cyber Strategy	90
	RMF Is Well-Aligned and Continuously Improved	91
	Technology Operations and Resilience	92
	Technology Architecture	92
	Technology Project Management	94
	System Development Life Cycle	94
	Change and Release Management	95
	Patch Management	96
	Incident and Problem Management	96
	Technology Service Measurement and Monitoring	97
	D. D	98
	Cyber Security	99
	Confidentiality, Integrity and Availability of Technology	,,
	Assets Is Maintained	100
	Identify	100
	Defend	100
	Detect	
		105
	Continuous, Centralised Security Logging to Support	105
	Investigations Page 1 Page 2 d I age	105
	Respond, Recover and Learn	106
CHAPTER 6	GOVERNANCE	108
	Guiding Principles of Corporate Governance	108
	Enterprise Risk Management Framework	110
	Internal Environment	110

Common Language around Risk	110	
Risk Management Steering Committee		
Objective Setting		
ERM Methodology	112	
Risk Appetite	112	
Risk Tolerance	112	
Event Identification	112	
Risk Assessment	113	
Quantitative Risk Assessment	113	
Risk Calculation	113	
Qualitative Risk Assessment	113	
Risk Response	114	
Control Activities	114	
Risk Identification	114	
Risk Prioritisation	115	
Risk Mitigation Plans	115	
Information and Communication	115	
Monitoring	115	
Risk Monitoring and Reporting	116	
Scenario Planning and Stress Testing	116	
Step 1: Brainstorm Future Scenarios	116	
Step 2: Identify Trends and Driving Forces	116	
Step 3: Create a Scenario Planning Template	117	
Step 4: Develop a Scenario	117	
Step 5: Evaluate a Scenario	117	
Scenario Analysis	117	
Step 6: Update Strategies and Policies Accordingly		
Operational Risk Management	119	
Information Security Aspects of Operational Risk	120	
Cybersecurity Risk Assessment Process	120	
Risk Identification	120	
Identification of Assets	121	
Identification of Threats	121	
Identification of Existing Controls	121	
Identification of Existing Controls Identification of Vulnerabilities	121	
	122	
Identification of Consequences Expressing and Measuring Diele		
Expressing and Measuring Risk	122	
Risk Analysis Diele Evoluction and Occasion	123	
Risk Evaluation and Quantification	123	
Risk Mitigation Planning and Verification	124	
Risk Treatment	124	
Risk Modification	124	
Risk Transfer Diel- A: 1	124	
Risk Avoidance	124	
Risk Acceptance	125	
Risk Remediation	125	

18.

	Risk Communication	125
	Risk Monitoring and Review	125
	Loss Event Management	125
	Security Metrics	125
	Key Performance Indicators	126
	Key Risk Indicators	127
	Risk Culture and Risk Behaviours	127
491	The solution of the solution o	
CHAPTER 7	CYBERSECURITY RISK MANAGEMENT	
	FRAMEWORK	129
	Cyber Risk Investment Model	129
	Technology Landscape	130
	Data Classification	130
	Risk Management Practices	130
	Cost-Benefit Analysis for Cybersecurity Measures	
	Business Objectives	131
	Cybersecurity Risk Management Framework	131
	Risk Assessment Process	133
	Threat Modelling	134
	Risk Prioritisation: Assess the Inherent Risk	138
	Assess the Internal Controls	139
	Determine the Organisational Risk Appetite	144
	Risk Mitigation Strategy	145
CHAPTER 8	CASE STUDY #1: CHIME LIVE	148
	Questions	150
	Solution: Chime Live	150
	Executive Summary	150
	Business Impact and Risk	151
	Objective and Scope	152
	Results	152
	Recommendations	153
	Risk Assessment	153
	Privacy Laws	153
	Standard Operating Procedures	154
	PII Elements	154
	Privacy Compliance Analysis	156
	Business Driven Risk Assessment - Qualitative	
	Inherent Risk	158
	Business Driven Risk Assessment - Quantitative	
	Inherent Risk	159
	Residual Risk Rating Scale	160
	Internal Control Assessment: Highly Effective	160
	Technical Overview	160
	SOC for Service Organisations: Trust Services	
	Criteria – AWS	161
	Organisation's Risk Appetite	162