MIS761 Cyber Security Strategies

Dept. of Information Systems & Business Analytics

Deakin Business School

Week 6 – Australian Laws and Regulations for Cyber Security





-Understanding Privacy - Your Rights

Privacy as a Fundamental Human Right:

- Privacy supports freedom of association, thought, and expression, and protects against discrimination.
- Definitions of privacy vary globally and personally but generally encompass:
 - Freedom from interference or intrusion.
 - Control over who accesses and uses personal information.
 - The ability to associate freely with others.

What Constitutes Personal Information:

- Personal information is any data that can identify an individual, such as:
 - Name, address, phone number, or date of birth.
 - Sensitive information like racial origin, political views, or health records.
 - Digital identifiers like IP addresses, voice prints, and biometric data.
- Sensitive information is subject to stricter privacy protections.

Privacy Act -Privacy in the Digital Age

Managing Your Online Presence:

- Social media platforms facilitate sharing of personal content like messages, photos, and videos.
- Information shared online can be accessed widely, sometimes beyond intended audiences.
- Even with privacy settings, complete control over shared content is challenging; it may persist in archived forms.

Your Rights Rights and Responsibilities Under the Privacy Act:

- The Privacy Act 1988 safeguards personal information shared on platforms with significant operations in Australia (e.g., Facebook, LinkedIn).
- If your information is posted without consent, you can request removal from the platform or seek assistance from the Office of the eSafety Commissioner for online abuse or cyberbullying issues.
- However, the Act does not cover individuals acting privately, though other laws like copyright or defamation might apply.

| If you're concerned about | Contact | |
|--|---|--|
| Your personal information being mishandled | The OAIC | |
| A data breach | See <u>Data Breach Support and Resources</u> | |
| An Australian child being cyberbullied | The Office of the eSafety Commissioner ThinkUKnow | |
| An adult experiencing cyber abuse | The Office of the eSafety Commissioner | |
| An intimate image or video of you has been shared or someone is threatening to share it without your consent | The Office of the eSafety Commissioner | |
| Illegal and harmful content | The Office of the eSafety Commissioner | |
| Having been defamed | A lawyer | |
| Protecting yourself online | The Office of the eSafety Commissioner The Australian Cyber Security Centre | |
| Serious harassment | The police | |

https://www.oaic.gov.au/privacy/your-privacy-rights/social-media-and-online-privacy/social-media

Privacy Act -Rights and Responsibilities

Your Rights Under the Privacy Act:

- **Informed Consent:** You have the right to know why your personal information is collected, how it will be used, and to whom it may be disclosed.
- Access and Control: You can request access to your personal data, correct inaccuracies, and opt-out
 of unwanted direct marketing.
- Anonymous Interactions: In some cases, you may choose not to identify yourself or use a pseudonym.
- **Complaints:** If you believe your data has been mishandled, you can file a complaint against organizations covered by the Privacy Act.

Responsibilities Under the Privacy Act:

- Covered Entities: The Act applies to Australian Government agencies and organizations with an annual turnover of more than \$3 million, including large corporations and specific small businesses.
- Non-Covered Entities: State or territory government agencies, public schools, universities (except private ones), media organizations engaged in journalism, and individuals acting personally are generally not covered by the Act.

Small Business Exemptions:

- **General Exemption:** Most small businesses with a turnover of \$3 million or less are exempt unless they voluntarily optin, handle sensitive data, or meet specific criteria (e.g., health service providers, businesses trading in personal information).
- Australian Link Requirement: The Act only applies to small businesses with a significant connection to Australia, such as being incorporated or conducting business within the country.
- Consent for Exemption: Small businesses can exempt themselves by obtaining consent from individuals to collect or disclose their personal data.
- **Special Cases:** Some small businesses, such as credit reporting bodies or those handling government contracts, are covered regardless of turnover.

Privacy Act -Australian Privacy Principles (APPs)

- Foundation of Privacy Protection: The APPs form the core framework within the Privacy Act 1988, guiding how organizations and agencies handle personal information.
- Flexibility and Adaptability: As principles-based and technology-neutral laws, the APPs allow entities to customize their practices to suit their specific business models and the evolving technological landscape.
- Structure of the APPs: The APPs are designed to cover all stages of personal information management and are grouped into five key parts:
 - Part 1: Consideration of Privacy (APPs 1 and 2) Focuses on the governance and management of personal information.
 - Part 2: Collection of Information (APPs 3, 4, and 5) Outlines rules for collecting personal data, including obtaining consent and notifying individuals.
 - Part 3: Dealing with Information (APPs 6, 7, 8, and 9) Governs how personal information can be used, disclosed, and transferred.
 - Part 4: Integrity of Information (APPs 10 and 11) Ensures the accuracy, completeness, and security of personal data.
 - Part 5: Access and Correction (APPs 12 and 13) Provides individuals with rights to access and correct their personal information.
- Consequences of Non-Compliance: Breaching any APP is considered an interference with an individual's privacy, potentially leading to regulatory action and penalties.

- Notifiable Data Breaches (NDB) scheme

- **Mandatory Notification:** Entities must notify individuals and the Commissioner about data breaches likely to cause serious harm. This requirement has been in place since February 22, 2018.
- **Covered Entities:** The NDB scheme applies to entities already obligated under the Privacy Act to secure personal information. Exempt entities under the Privacy Act are also exempt from the NDB scheme.

When to Report a Data Breach:

- If an organization suspects a breach, it must quickly evaluate the incident to determine if it qualifies as an eligible data breach likely to cause serious harm.
- Eligible Data Breach Criteria:
 - **Unauthorized Access/Disclosure:** Personal information is accessed or disclosed without authorization, or is lost.
 - **Potential for Serious Harm:** The breach is likely to result in serious harm to individuals.
 - No Remedial Prevention: The entity cannot mitigate the risk of harm through immediate corrective action.

- Notifiable Data Breaches (NDB) scheme

| Whom | When | How | What |
|----------------------|--|--|--|
| OAIC | Entities must prepare and give a copy of the statement to the Commissioner as soon as practicable after becoming aware of the eligible data breach | The OAIC has an <u>online form</u> for entities to lodge all eligible date breach statements under section 26WK of the Privacy Act. | ✓ your organisation or agency's name and contact details ✓ a description of the data breach ✓ the kinds of information involved ✓ recommendations about the steps individuals should take in response to the data breach. |
| Affected individuals | Entities must notify individuals as soon as practicable after completing the statement prepared for notifying the Commissioner | Three Options: Notify All Individuals Notify Only Those at Risk Publish Notification Uploading the statement alone isn't enough. Actively share the breach details to reach those at risk. Make the statement easy to find. Keep it on the website for at least 6 months (Recommended). | |

- Case Study: 2022 Medibank Data Breach
- Incident Summary: In October 2022, Medibank experienced a significant data breach due to a ransomware attack by the REvil group, affecting 9.7 million customers. Medibank refused to pay a \$10 million ransom, leading to the exposure of sensitive personal data on the dark web.
- Legal and Regulatory Response:
 - OAIC Lawsuit: The Office of the Australian Information Commissioner (OAIC) filed a lawsuit against Medibank, accusing it of failing to protect customer data as required under APP 11.1.
 - "if an APP entity holds personal information, the entity must take such steps as are reasonable in the circumstances to protect the information: from misuse, interference and loss; and from unauthorised access, modification or disclosure".
 - Potential Penalties: Medibank could face penalties up to \$2.22 million per breach under Section 13G of the Privacy Act 1988.

- Case Study: 2022 Medibank Data Breach

Key Events Leading to the Breach:

- Initial Vulnerability: Before August 2022, a third-party contractor was granted extensive admin access to Medibank's network. The contractor's login credentials were saved on his browser and later synced to his personal computer, creating a significant security risk.
- Credential Theft: In early August, a hacker stole these credentials through malware, giving them access to most of Medibank's systems, including critical management consoles and databases.

Timeline of the Attack:

- Unauthorized Access: On 12 August, the hacker tested their access to Medibank's Microsoft Exchange server, and by 23 August, they accessed the network via the company's VPN, which lacked multifactor authentication.
- Security Alerts Ignored: Medibank's security software detected the intrusion on 24-25 August, but the
 alerts were not properly escalated or investigated, allowing the hacker to remain undetected for over a
 month.

Impact of the Breach:

- Data Exfiltration: From 25 August to 13 October 2022, the hacker extracted 520 GB of sensitive data, including personal and health information of nearly 10 million customers.
- **Delayed Response:** Medibank only became aware of the data breach in mid-October, days before the hacker publicly demanded a ransom and eventually released the stolen data on the dark web.

Allegations by the Australian Information Commissioner:

Inadequate Cybersecurity Measures: The AIC claims that Medibank failed to adequately protect the
personal information it held, citing insufficient investment in cybersecurity resources and poor
management of information security risks.

Privacy Act - Upcoming Reforms

- End Small Business Exemption: Impact approximately 2.3 million businesses, representing 95% of all Australian businesses
- Rationale for Change:
 - Increased Cyber Risks: Small businesses are increasingly targeted by cybercriminals due to perceived weaker defenses.
 - With the rise of online transactions and cloud computing, even small businesses now pose privacy risks.
 - International Standards: Unlike Australia, major global privacy laws like the GDPR, CCPA, and Canada's PIPEDA do not exempt small businesses from compliance.
 - Aligns with international norms and may facilitate trade with regions like the EU.
- Impact on Small Businesses:
 - New Obligations: Small businesses would need to comply with Australian Privacy Principles, including handling personal data such as IP addresses and device identifiers, conducting privacy audits, and implementing data protection measures.
 - **Compliance Costs:** Adapting to these new requirements could impose significant costs, including training, policy development, and secure data management.
- **Preparing for Change:** Small businesses should start preparing by conducting data inventories, updating privacy policies, ensuring informed consent, and setting up systems for data protection and breach reporting.

- Upcoming Reforms

Other Key Reforms

- Stricter Data Breach Reporting: A proposed 72-hour notification window for reporting eligible data breaches to the regulator.
- Expanded Individual Rights: Introduction of new rights, such as enhanced control over personal data and a "right to be forgotten."
- Children's Online Privacy Code: Development of specific regulations to protect children's data in online services.
- Stronger Enforcement Powers: New penalty tiers and enhanced powers for the privacy regulator to enforce compliance more effectively.

Consumer Data Right (CDR) scheme

Overview of the CDR Scheme:

- **Empowering Consumers:** The Consumer Data Right (CDR) allows individuals and businesses to securely share their data with accredited third parties, giving them greater choice, control, and convenience in managing their information.
- **Sector-by-Sector Rollout:** Initially implemented in banking and energy, the CDR will gradually expand to other sectors, enhancing its value for consumers over time.

Key Features:

- **Opt-In Service:** Participation in the CDR is voluntary. Consumers choose who can access their data, what specific data is shared, and for how long.
- **Enhanced Comparisons:** CDR simplifies product and service comparisons, helping users find better deals, manage finances, and access tailored services with ease.
- **Data Security:** CDR includes strict privacy safeguards, with businesses required to follow rigorous data security standards, ensuring that personal information is handled responsibly.

Consumer Data Right (CDR) scheme

Data Protection and Privacy:

- Accredited Data Recipients: Only businesses accredited by the Australian Competition and Consumer Commission (ACCC) can handle CDR data, ensuring they meet stringent requirements for data security, consent, and privacy protection.
 - IT requirements for data recipients | Consumer Data Right (cdr.gov.au)
- Data Deletion and De-Identification: Consumers can request the deletion or deidentification of their data when it is no longer needed. Businesses must follow strict protocols to ensure data cannot be traced back to individuals.

Benefits for Consumers:

- **Enhanced Choice:** Easily compare products and services, leading to better value and more personalized offerings.
- Control Over Data: You decide who can access your data, what data they can see, and for how long.
- **Secure Data Sharing:** Data is transferred securely, with strong privacy and security measures in place.
- **Time-Saving:** Modern technology streamlines the process of comparing products, reducing the time spent on manual research.
- **Increased Competition:** The CDR fosters innovation and competition, leading to improved products and services.

Consumer Data Right (CDR) scheme -Recent Cases

- Case 1: HSBC Fined for Data Inaccuracies
 - **Issue:** HSBC was fined \$33,000 by the ACCC for failing to provide accurate mortgage rates and credit card balances through the CDR system.
 - Consumer Impact: Incorrect data could mislead consumers, affecting their financial decisions.
 - ACCC's Position: Accurate, up-to-date data is crucial for the effectiveness of the CDR, especially in helping consumers navigate financial choices.

- Case 2: iSignthis Denied CDR Accreditation
 - **Issue:** ACCC refused accreditation to iSignthis due to inadequate data security measures, lack of insurance evidence, and concerns about its suitability as a data recipient.
 - **Significance:** This was the first denial of CDR accreditation, underscoring the ACCC's strict standards for data protection and compliance.

Cybercrime

What is Cybercrime?

- **Definition:** Cybercrime involves criminal activities where a computer or network is integral to or the target of an offense, often affecting individuals' data, reputation, or safety.
- Types of Cybercrime: Includes hacking, cyberbullying, unauthorized data modification, distributed denial of service (DDoS) attacks, online fraud, identity theft, and the non-consensual sharing of intimate images.

Legal Framework in Australia:

- Comprehensive Legislation: Cybercrime is addressed under the Criminal Code Act 1995, with laws criminalizing unauthorized data access, telecommunication misuse, and the distribution of malicious software.
- **State and Territory Laws:** Complementary laws exist across states and territories, covering additional cybercrime-related offenses and enhancing the national legal framework.

Key Developments:

- Cybercrime Act 2001: Modernized computer-related offenses and updated search powers to adapt to technological advancements.
- International Cooperation: Australia is a signatory to the Council of Europe's Convention on Cybercrime, ensuring international collaboration in combating cybercrime.

Reporting and Support:

- **Incident Reporting:** Victims of cybercrime can report incidents to the <u>Australian Cyber Security Centre</u> or seek support from <u>IDCARE</u>.
- **Victim Protection:** The eSafety Commissioner provides resources and support for victims, particularly in cases of non-consensual sharing of intimate images.

Online Safety Act 2021 (eSafety)

Strengthening Online Safety:

- **Modernized Legislation:** The Online Safety Act 2021 enhances Australia's laws to address the evolving threats in the digital world, expanding protections for both adults and children.
- Expanded eSafety Powers: The Act empowers eSafety to take significant actions against online harm, positioning Australia as a global leader in online safety.

Key Changes in the Act:

- Adult Cyber Abuse Scheme: Introduces a world-first scheme to address online abuse targeting adults
- **Broadened Cyberbullying Coverage:** Extends protections for children beyond social media to other online platforms.
- Image-Based Abuse Updates: Strengthens measures to remove nonconsensual intimate images or videos shared online.
- Blocking Harmful Content: Internet service providers can be required to block access to content depicting violent acts like terrorism.

Online Safety Act 2021 (eSafety)

Basic Online Safety Expectations:

- Increased Accountability: Online service providers must proactively protect users from harmful content and conduct, with new civil penalties for non-compliance.
- Transparency and Reporting: Providers are required to report on their safety practices, with eSafety empowered to publish compliance statements and name non-compliant services.

Mandatory Industry Codes:

- Applicability Across Sectors: New industry codes apply to various segments, including social media, messaging services, search engines, and app distribution platforms.
- Content Detection and Removal: Providers must detect and remove illegal content, such as child sexual abuse material and terrorism-related content, and protect children from age-inappropriate material.
- **Enforcement Mechanisms:** Codes are enforceable through civil penalties and injunctions, ensuring compliance and a safer online environment.

Safety by Design Initiative:

- **Proactive Safety Measures:** Encourages embedding safety into the design and development of online products, anticipating risks before they arise.
- Focus on Positive Online Experiences: Aims to create a safer, more responsible online environment by fostering accountability and prioritizing user safety from the outset.

Online Safety Act 2021 (eSafety)

- Recent Enforcement Cases

- Case 1: Social Media Platform X Fined for Non-Compliance
 - **Issue:** X (formerly Twitter) was fined \$610,500 by the eSafety Commission for failing to cooperate in a probe into anti-child-abuse practices.
 - Lack of Transparency: X did not provide sufficient information about its trust and safety measures, raising concerns about its ability to protect against child sexual exploitation.
 - Consequences: X faces further penalties if it fails to pay the fine, with potential civil proceedings that could increase the financial penalty to up to \$780,000 per day.

- Case 2: Deepfake Pornography and Contempt of Court
 - **Issue:** Antonio Rotondo sued for creating and distributing deepfake pornography of Australian women, including public figures.
 - **Serious Charges:** Rotondo violated court orders by continuing to distribute images and was fined \$25,000 for contempt.
 - Potential Consequences: Rotondo is facing additional charges, including creating obscene publications involving minors, marking a significant legal precedent in prosecuting deepfake crimes.

Regulations on telemarketing and e-marketing

Key Legislation:

- **Do Not Call Register Act 2006 & Regulations 2017:** Governs the Do Not Call Register, enabling individuals to opt out of unsolicited telemarketing calls.
- **Telecommunications Standards:** Includes the Telemarketing and Research Calls Industry Standard 2017 and Fax Marketing Industry Standard 2021, setting rules for telemarketing practices.
- Spam Act 2003 & Regulations 2021: Regulates the sending of commercial electronic messages, prohibiting unsolicited spam without consent.

Telemarketing Calls:

- **Definition:** Any call with a purpose of promoting, advertising, or offering goods, services, or solicitations, including robocalls and automated messages.
- **Compliance:** Calls must adhere to regulations, especially if they involve commercial content, and require consent if targeting numbers on the Do Not Call Register.

E-Marketing:

- **Definition:** Includes emails, SMS, and instant messages with commercial intent, such as promoting goods or services.
- Consent Requirement: Express consent must be obtained before sending e-marketing messages, including to businesses, to comply with the Spam Act.

Regulations on telemarketing and e-marketing

Consent Types:

- **Express Consent:** Direct, explicit permission from the recipient, such as signing up for a newsletter or ticking a box online.
- Inferred Consent: Based on an existing relationship and reasonable expectation of receiving related marketing, though less reliable than express consent.

Do Not Call Register:

- **Purpose:** A secure database where consumers can register their numbers to avoid unsolicited telemarketing calls. Over half of active numbers in Australia are registered.
- Compliance for Businesses: Telemarketers must check their call lists against the register within 30 days and avoid contacting registered numbers to prevent penalties.

Spam Act Compliance:

- **Unsolicited Messages:** Prohibits sending unrequested commercial messages. Businesses must obtain either express or inferred consent.
- Sender Identification: Messages must clearly identify the sender and provide accurate contact information.
- Unsubscribe Requirements: Every commercial message must include a functional and straightforward unsubscribe option that remains active for at least 30 days.

Penalties and Enforcement:

- **Compliance Monitoring:** The Australian Communications and Media Authority (ACMA) monitors and enforces compliance, using tools like warnings, investigations, and penalties.
- **Risks of Noncompliance:** Businesses that violate these regulations may face significant fines and reputational damage.

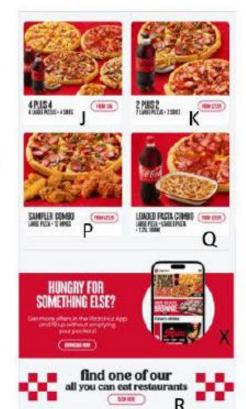
Regulations on telemarketing and e-marketing -Pizza Hut Australia - Spam Act Violation

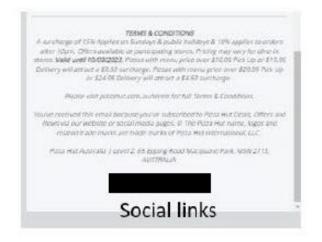
Example 1:

From: Pizza Hut Australia <desla@desla.pizzahut.com.su>
Subject: Start your week with your favorite food delivered to your doorstep!







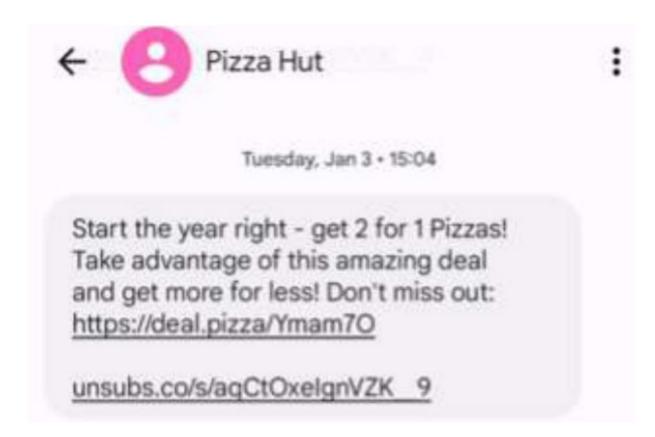


Regulations on telemarketing and e-marketing -Pizza Hut Australia - Spam Act Violation

- Massive Non-Compliance: Pizza Hut Australia was fined over \$2.5 million for sending more than 10 million marketing messages in four months, with nearly half lacking an unsubscribe option.
- **Consent Issues:** Over 5.9 million messages were sent to individuals who either had not given consent or had withdrawn it, violating the Spam Act's consent requirements.
- **Ignored Warnings:** ACMA had issued 15 compliance alerts regarding 39 consumer complaints before launching a formal investigation.
- Consequences and Remediation:
 - **Penalty and Undertaking:** In addition to the fine, Pizza Hut must appoint an independent consultant to review and improve its compliance practices and report regularly to ACMA over the next three years.
 - **Company Response:** Pizza Hut attributed the issue to a system error and has committed to rectifying its marketing practices to meet legal and customer expectations.

Regulations on telemarketing and e-marketing -Pizza Hut Australia - Spam Act Violation

Example 1:



Rules and Industry Code to Combat Scam Calls and SMS

Strengthening Consumer Protection:

- <u>Telecommunications Service Provider (Customer Identity Authentication) Determination 2022:</u> Introduces multifactor authentication for high-risk transactions like SIM-swap requests and account changes, aimed at preventing identity theft and financial fraud.
- Impact of SIM-Swap Scams: These scams allow fraudsters to take control of a victim's phone number, leading to unauthorized access to online banking and significant financial losses.

Combatting SMS Scams:

- Reducing Scam Calls and Scam Short Messages Industry Code: Requires telcos to identify, trace, and block SMS scams, addressing the rise in such scams, which accounted for 32% of all reported scams in early 2022.
- Industry Collaboration: Developed in partnership with the Communications Alliance, building on the success of the 2020 industry code targeting scam calls.

Results and Enforcement:

- **Proven Effectiveness:** Since the introduction of the scam call reduction code in 2020, telcos have blocked over 549 million scam calls, significantly reducing complaints.
- Ongoing Efforts: Telcos must also provide customers with information on managing and reporting SMS scams, share data on scam messages, and report identified scams to authorities, further tightening protections.

Proposed Legislation:

- <u>SMS Sender ID Register</u>: The Albanese Government is introducing legislation for a new register to combat SMS impersonation scams. This register will allow telcos to verify whether SMS messages sent under a brand name are legitimate, helping to block or warn against fraudulent messages.
- **Pilot and Future Steps:** A pilot register was launched in December 2023 with participation from major brands. The government is reviewing feedback to decide whether the register will be mandatory, as part of a broader strategy to disrupt scam activities.

Recent Compliance Failures in Telecom Industry

Case 1: Symbio's Breach of Scam Rules

- Non-Compliance: Failed to share scam call info promptly with telcos and ACMA.
- Impact: Delayed action against scams; weakened system effectiveness.
- ACMA Warning: Potential penalties up to AUD 250,000 for future breaches.

Case 2: Telstra's SIM-Swap Scam Vulnerability

- **Fine:** \$1,551,000 for inadequate customer ID authentication.
- **Risk:** 168,000 high-risk interactions; exposed customers to SIM-swap fraud.
- Remedial Action: Two-year undertaking; independent review of compliance.

Security of Critical Infrastructure Act 2018

Critical Infrastructure:

- **Broad Definition:** Includes physical facilities, supply chains, IT systems, and communication networks that, if compromised, could significantly harm the nation.
- Interconnected Systems: Failure in one sector (e.g., energy) can cascade, affecting healthcare, transport, and financial services, emphasizing the need for robust security measures.

Purpose of SOCI:

- **Protect Critical Infrastructure:** Ensures resilience and protection of essential assets and services, safeguarding Australia's society, economy, and security.
- **Prevent Cascading Consequences:** Aims to mitigate widespread disruptions and maintain public trust in the government's emergency response capabilities.

Applies to 22 Asset Classes in 11 Sectors:

- Communications, Data Storage, Defence Industry
- Higher Education, Energy, Financial Services
- Food and Grocery, Healthcare, Space Technology
- Transport, Water and Sewerage

Security of Critical Infrastructure Act 2018 - Positive Security Obligations

Register of Critical Infrastructure Assets:

- Requirement: Entities must report ownership, operational, and control information to the government.
- Purpose: Helps the government understand interdependencies and manage risks.
- Confidentiality: Information in the register is protected and not publicly accessible.

Mandatory Cyber Incident Reporting:

- Reporting Timeframes: Critical incidents with significant impacts must be reported within 12 hours; others within 72 hours.
 - Significant Impact: Disruption that materially affects the availability of essential services provided by the critical infrastructure asset.
 - Relevant Impact: Affects the availability, integrity, reliability, or confidentiality of the asset.

Critical Infrastructure Risk Management Program (CIRMP):

- Requirement: Responsible entities must establish and maintain a written CIRMP.
- Objective: Identify and mitigate material risks (physical, cyber, supply chain) to critical infrastructure assets.

Security of Critical Infrastructure Act 2018

Government Assistance Measures:

- Information Gathering: Authorities may direct entities to provide necessary information during incidents.
- Action Directions: Directives to take or refrain from specific actions during emergencies.
- Intervention Requests: Government intervention to manage incidents impacting national security.

Enhanced Cyber Security Obligations (ECSO):

- Applies to Systems of National Significance: Critical systems identified as the most crucial to the nation, due to the cascading consequences that may occur if disrupted
- Key Requirements: Include incident response plans, cyber security exercises, vulnerability assessments, and provision of detailed system information to the government.