



Information Security Webinar

Part 1



Webinaire sur la sécurité de l'information

Partie 1



Introduction to principles

Introduction aux principes

Overview

- CIA Triad
- Data security
- Evolution of security operations
- Internal and external threats
- Key security controls

Vue d'ensemble

- Triade CID
- Sécurité des données
- Évolution des opérations de sécurité
- Menaces internes et externes
- Principaux contrôles de sécurité



Introduction to principles

Introduction aux principes

Confidentiality, Integrity,
Availability



Confidentialité, Intégrité,
Disponibilité





Introduction to principles

Introduction aux principes

Data security

- Data in transit
- Data at rest
- Data in use

Sécurité des données

- Données en transit
- Données au repos
- Données utilisées



Introduction to principles

Introduction aux principes

Evolution of security operations

Évolution des opérations de sécurité





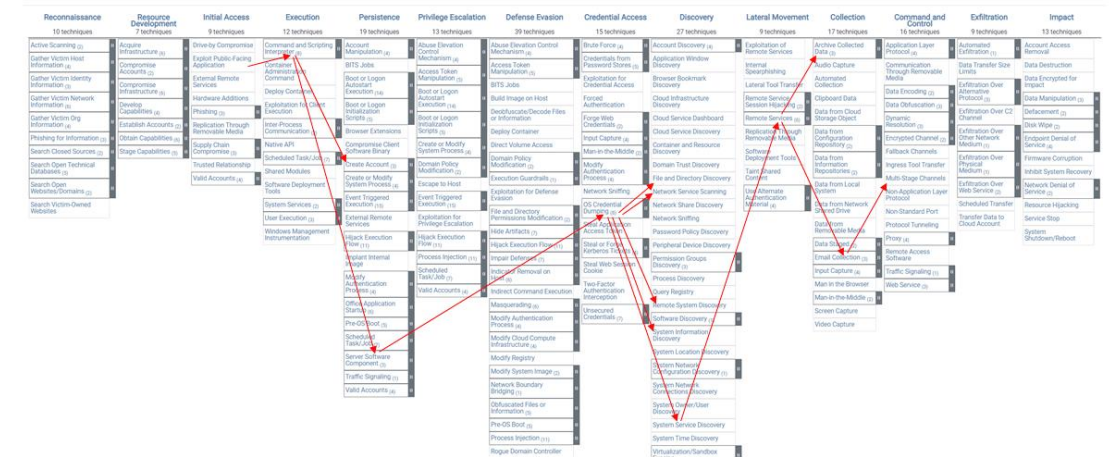
Introduction to principles Introduction aux principes

Tactics, Techniques, Procedures

Tactiques, Techniques, Procédures

Initial Access	Execution	Persistence	Privilege Escalation	Defense Evasion	Credential Access	Discovery	Lateral Movement	Collection	Exfiltration	Impact
5 techniques	1 techniques	5 techniques	2 techniques	7 techniques	5 techniques	12 techniques	3 techniques	4 techniques	1 techniques	6 techniques
Drive-by Compromise Exploit Public-Facing Application Phishing (1) Trusted Relationship Valid Accounts (2)	User Execution (1) Create Account (1) Implant Internal Image Office Application Startup (1) Valid Accounts (2)	Account Manipulation (3) Create Account (1) Valid Accounts (2)	Domain Policy Modification (1) Valid Accounts (2)	Domain Policy Modification (1) Hide Artifacts (1) Impair Defenses (2) Modify Cloud Compute Infrastructure (4) Unused/Unsupported Cloud Regions Use Alternate Authentication Material (2) Valid Accounts (2)	Brute Force (4) Forge Web Credentials (2) Steal Application Access Token Steal Web Session Cookie Unsecured Credentials (2)	Account Discovery (2) Cloud Infrastructure Discovery Cloud Service Dashboard Cloud Service Discovery Cloud Storage Object Discovery Network Service Scanning Password Policy Discovery Permission Groups Discovery (1) Software Discovery (1) System Information Discovery System Location Discovery System Network Connections Discovery	Internal Spearphishing Taint Shared Content Use Alternate Authentication Material (2)	Data from Cloud Storage Object Data from Information Repositories (1) Data Staged (1) Email Collection (2)	Transfer Data to Cloud Account	Data Destruction Data Encrypted for Impact Defacement (1) Endpoint Denial of Service (2) Network Denial of Service (2) Resource Hijacking

MITRE ATT&CK®







Introduction to principles

Introduction aux principes

Internal threats

- Malicious insiders
- Uneducated insiders
- Careless insiders

Menaces internes

- Initiés malveillants
- Initiés incultes
- Initiés négligents



Introduction to principles

Introduction aux principes

External threats

- Nation States
- Hacktivists
- Organized crime
- Individuals
- Organizational adversaries
- 3rd-Parties

Menaces externes

- États-nations
- Hacktivistes
- Crime organisé
- Particuliers
- Adversaires organisationnels
- 3^{èmes} Parties



Introduction to principles

Introduction aux principes

Attacks

- Data Exfiltration
- Data Alteration
- Data Loss
- Extortion
- Denial of Service
- Sabotage

Attaques

- Exfiltration des données
- Modification des données
- Perte de données
- Extorsion
- Déni de service
- Sabotage



Introduction to principles

Introduction aux principes

Attacks

- Surveillance
- Privacy Breach
- Financial Theft
- Command & Control

Attaques

- La surveillance
- Atteinte à la vie privée
- Vol financier
- Commande et contrôle



Introduction to principles

Introduction aux principes

Key security controls

- People
- Process
- Technology

Principaux contrôles de sécurité

- Les gens
- Processus
- La technologie



Key security controls

Principaux contrôles de sécurité

People

- Training
- Awareness
- Exercises

Les gens

- Formation
- Sensibilisation
- Exercices



Key security controls

Principaux contrôles de sécurité

Process

- Information security management system
- Incident response plan
- Continuous improvement
- Exercises

Processus

- Système de gestion de la sécurité de l'information
- Plan d'intervention en cas d'incident
- Amélioration continue
- Exercices



Key security controls

Principaux contrôles de sécurité

Technology

- Endpoint, Network, Cloud
- Software
- AI
- Quantum
- Exercises

La technologie

- Point de terminaison, réseau, cloud
- Logiciels
- L'IA
- Quantum
- Exercices



Settlement & Integration

Établissement et intégration



Settlement & Integration

Établissement et intégration

Types of sensitive data

- Usernames and passwords
- Communications
- Social media content
- Financial records
- Health records

Types de données sensibles

- Noms d'utilisateur et mots de passe
- Les communications
- Contenu des médias sociaux
- Documents financiers
- Dossiers de santé

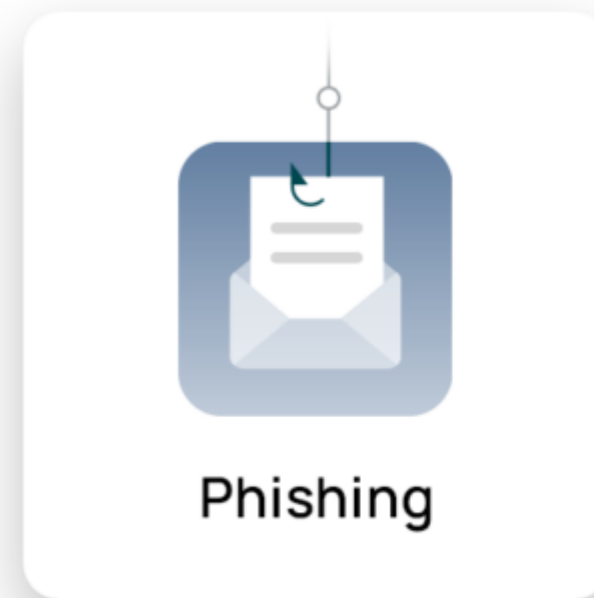


Settlement & Integration

Établissement et intégration

Social engineering

Ingénierie sociale



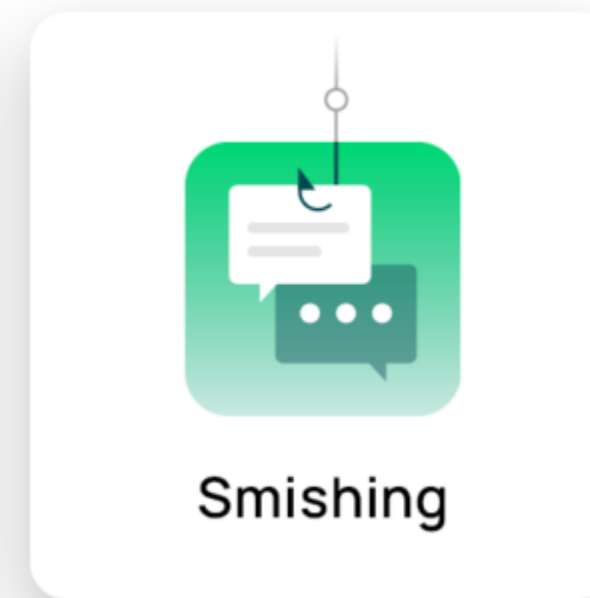
Phishing

Hameçonnage



Vishing

Hameçonnage vocal



Smishing

Hameçonnage par
texto



Introduction to principles

Introduction aux principes

Deepfake

Deepfake





Settlement & Integration

Établissement et intégration

Impacts

- Loss of important documents
- Inability to communicate
- Disqualification
- Theft
- Extortion

Répercussions

- Perte de documents importants
- Incapacité de communiquer
- Disqualification
- Vol
- Extorsion



Settlement & Integration

Établissement et intégration

In the news

Dans l'actualité

Heartless hackers target grieving mom stealing treasured memories of late son

By **Tomasia DaSilva** · Global News
Posted June 20, 2023 8:57 pm · Updated June 21, 2023 3:28 pm · 3 min read


Global News Hour at 6 Calgary
Grieving mom warns of hackers stealing profile, online memories of late son



Tomasia DaSilva | GLOBAL NEWS

00:18 / 02:41

Press Esc to exit full screen



London Drugs stores closed for a second day in Western Canada due to a cyberattack

BC TODAY ■ 1-800-825-5950 / bctoday@cbc.ca

CBCNEWS



Information Security Webinar

Part 2



Webinaire sur la sécurité de l'information

Partie 2



Part 2

Partie 2

Topics

- Digital security and privacy: laws, regulations, and frameworks.
- Security program management: policies, incident management, and oversight.

Thèmes

- Sécurité et confidentialité numériques : lois, règlements, et cadre.
- Gestion du programme de sécurité : politiques, gestion des incidents, et surveillance.



Frameworks, Regulations, and Laws Cadres, Règlements et Lois



Frameworks, Regulations, and Laws

Cadres, Règlements et Lois

Overview

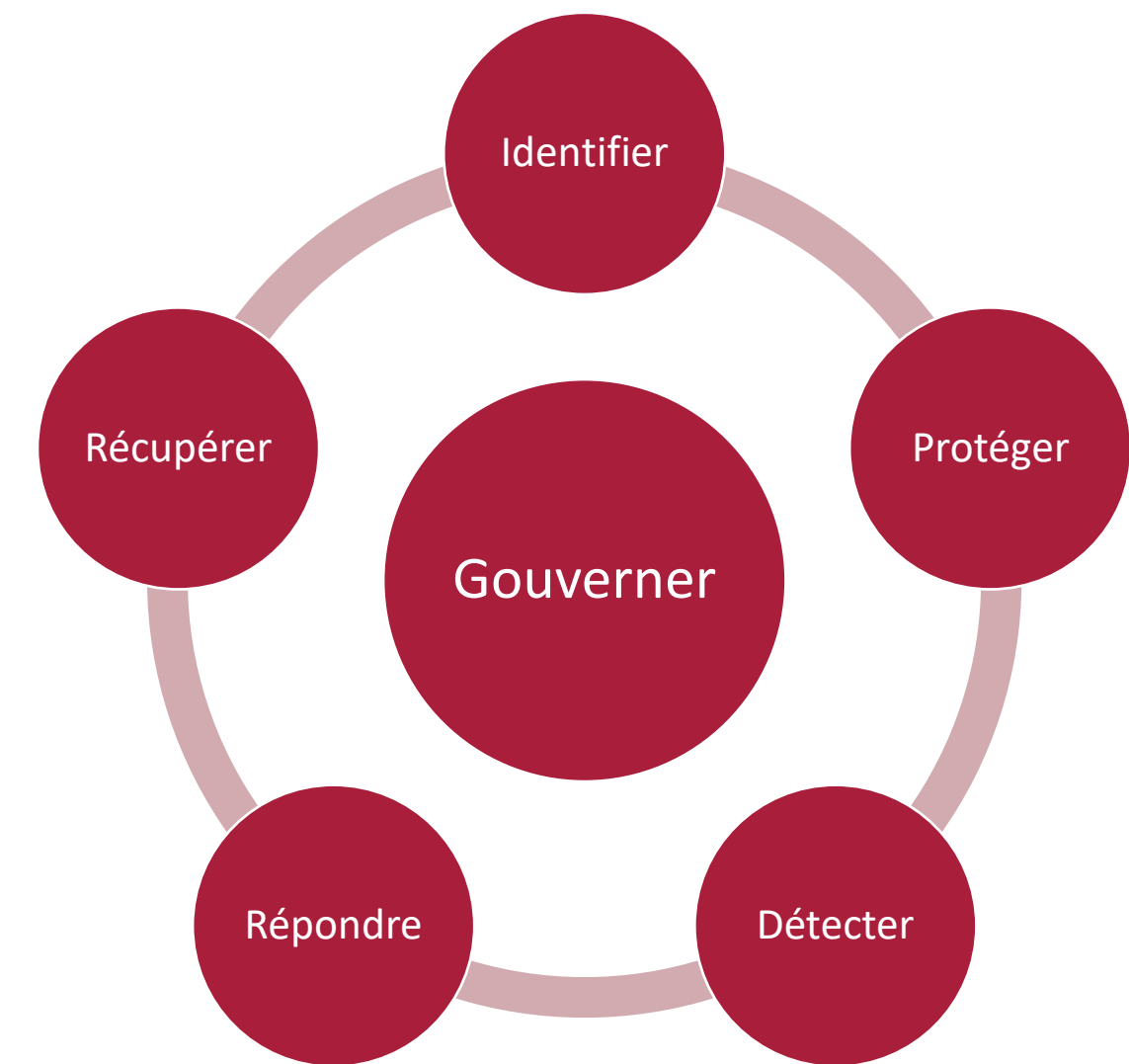
Vue d'ensemble





NIST CSF 2.0

NIST Cadre de cybersécurité 2.0





CASL LCAP

Canada's anti-spam legislation

La Loi canadienne anti-pourriel

The screenshot displays two overlapping pages from the Government of Canada website. The top page is the English version of 'Canada's anti-spam legislation', and the bottom page is the French version, 'La Loi canadienne anti-pourriel'. Both pages feature a dark teal header with the Canadian flag and navigation menus. The English page includes sections for 'What is spam?', 'Report spam', 'Protect your business and comply', and 'Canada's anti-spam legislation resources'. The French page includes sections for 'La Loi canadienne anti-pourriel', 'Signaler un pourriel', 'Nouvelles sur les pourriels', 'Protégez votre entreprise et soyez conforme', 'Comprendre la Loi canadienne anti-pourriel', 'Ressources pour la Loi canadienne anti-pourriel', and 'Qu'est-ce qu'un pourriel?'. The pages are presented within a rounded rectangular frame.



PIPEDA LPRPDE

The Personal Information Protection and Electronic Documents Act

La Loi sur la protection des renseignements personnels et les documents électroniques

The screenshot displays the website of the Office of the Privacy Commissioner of Canada. The top navigation bar includes links for 'For individuals', 'For businesses', 'For federal institutions', 'Report a concern', 'OPC actions and decisions', and 'About the OPC'. The main content area is titled 'The Personal Information Protection and Electronic Documents Act (PIPEDA)'. Below this, there are sections for 'PIPEDA requirements in brief', 'Which privacy law applies?', and 'Legislative reform'. A 'Features' section highlights the 'Privacy Guide for Businesses' with a thumbnail image. The right-hand side of the page features a section for 'La Loi sur la protection des renseignements personnels et les documents électroniques (LPRPDE)', which includes sub-sections for 'En bref : les obligations prévues par la LPRPDE', 'Principes relatifs à l'équité dans le traitement de l'information', and 'Lois et règlements associés'. At the bottom, there is an 'En vedette' section with three featured items: 'Guide sur la protection de la vie privée à l'intention des entreprises', '10 conseils de protection de la vie privée pour les entreprises', and 'Protégez la vie privée de vos clients [vidéo]'. The website is available in both English and French.



CPCSC PCCC

Canadian program for cyber security certification

Programme canadien de certification en cybersécurité

The screenshot displays two versions of a webpage from the Government of Canada. The top version is in English, titled "Cyber security certification for defence suppliers in Canada". It includes a breadcrumb trail: "National Security and Defence > National security > Security screening > Security requirements for contracting with the Government of Canada". The main heading is "Cyber security certification for defence suppliers in Canada". Below the heading, it says "Explore upcoming cyber security req contracts. The requirements help to". A "MENU" dropdown is visible. A list of links under "On this page" includes: "About upcoming changes", "Overview of program", "Certification levels", "Benefits for Canada", "Benefits for suppliers", "Timing of upcoming requiremen", "Contact us", "Resources for suppliers", and "Related links".

The bottom version is in French, titled "Certification des fournisseurs du secteur de la défense au Canada concernant la cybersécurité". It includes a breadcrumb trail: "Sécurité nationale et défense > Sécurité nationale > Filtrage de sécurité > Exigences de sécurité des contrats du gouvernement du Canada". The main heading is "Certification des fournisseurs du secteur de la défense au Canada concernant la cybersécurité". Below the heading, it says "Renseignez-vous sur les nouvelles exigences en matière de cybersécurité qui s'appliqueront aux fournisseurs qui soumissionnent les contrats de défense du gouvernement du Canada ou y travaillent. Ces exigences visent à protéger les réseaux, les systèmes et les applications contre les cyberactivités malveillantes." A "MENU" dropdown is visible. A list of links under "Sur cette page" includes: "À propos des changements à venir", "Aperçu du programme", "Niveaux de certification", "Avantages pour le Canada", "Avantages pour les fournisseurs", "Calendrier de la mise en œuvre des exigences à venir", "Communiquez avec nous", "Ressources pour les fournisseurs", and "Liens connexes".

Additional sections in the French version include "About upcoming char" (beginning at the end of 2024, suppli become certified under the Canadia efforts to strengthen cyber security), "Canadian Program for Cyber Ser" (Public Services and Procurement Cai through participation CPCSC's Requi development and implementation of The REI is scheduled to close on June Information - Tender Notice), "Overview of program" (Once in place, the CPCSC will aim to: protect federal contractual infor), "À propos des changements à venir" (À compter de la fin de 2024, les fournisseurs qui souhaitent soumissionner certains contrats de défense du gouvernement du Canada ou y travailler devront détenir une certification du programme canadien de certification en cybersécurité (PCCC). Le PCCC viendra compléter les efforts que nous déployons pour renforcer la cybersécurité. Il le fera en resserrant la sécurité du processus de passation des contrats du gouvernement fédéral.), and "Demande de Renseignements du Programme Canadien de Certification en Cyber Sécurité Maintenant Disponible sur CanadaAchats" (Services publics et Approvisionnement Canada (SPAC) invite les experts de l'industrie à contribuer à leurs idées et commentaires en participant à la Demande de Renseignements (DDR) du Programme Canadien de Certification en Cyber Sécurité (PCCS). Vos rétroactions peuvent influencer significativement le développement et la mise en œuvre du programme, renforçant ainsi notre cyber sécurité industrielle nationale. La DDR est prévue de se clôturer le 28 juin 2024. Lien vers CanadaAchats : Demande de Renseignements Programme canadien de certification en cybersécurité - Avis d'appel d'offres).



ISO 27001 : 2022

Information Security Management System (ISMS)

- Policies
- Procedures
- Standards
- Guidelines

Système de gestion de la sécurité de l'information (SGSI)

- Politiques
- Procédures
- Normes
- Lignes directrices



HIPA

The Health Information Protection Act

La loi sur la protection des renseignements personnels

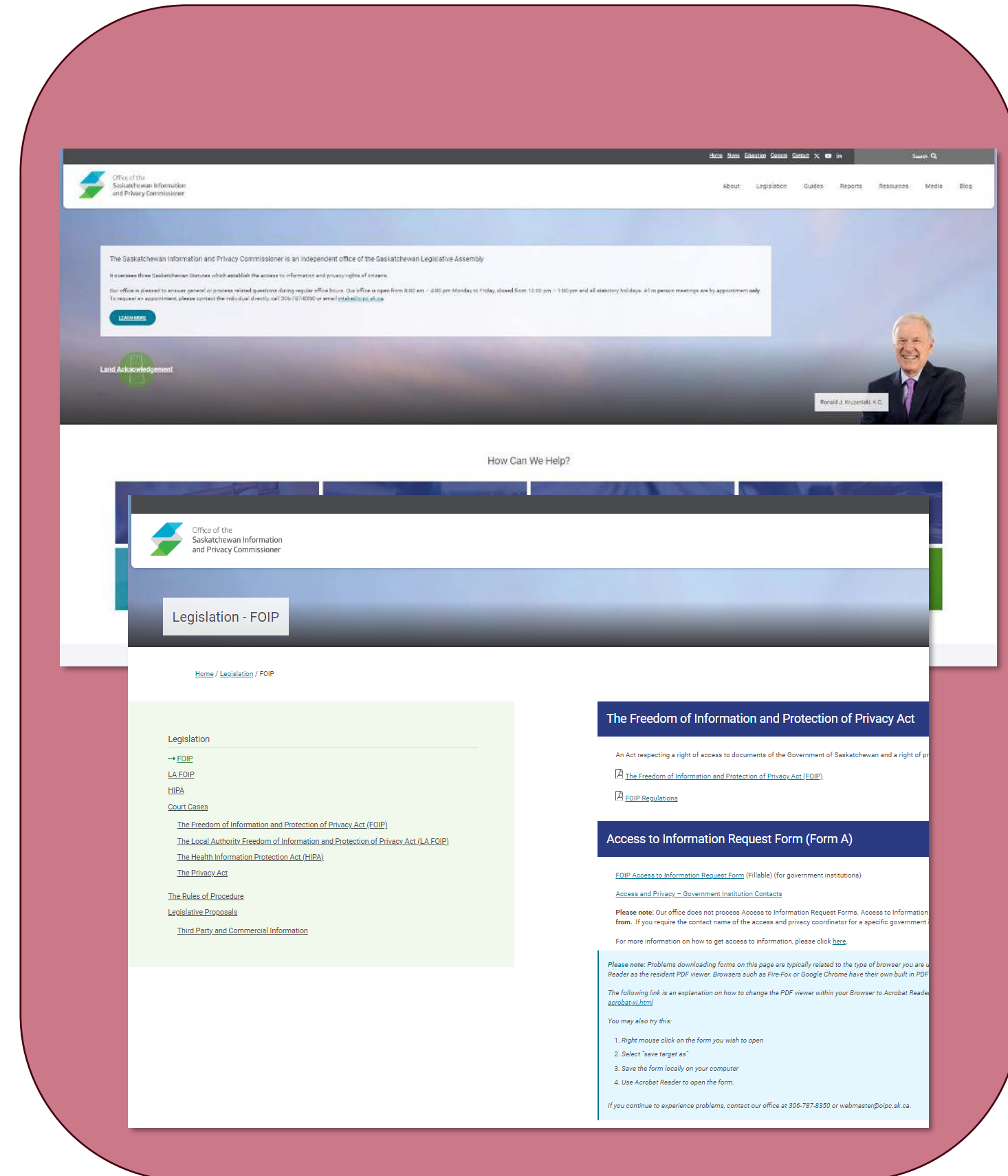
The screenshot shows the Saskatchewan Government website. The page title is "Your Personal Health Information and Privacy". The main content area features the title "The Health Information Protection Act" in a large, bold font. Below the title, there is a section titled "Chapter H-0.021* of the Statutes of Saskatchewan, 1999" with a list of amendments. A "NOTE" box at the bottom of the page states: "This consolidation is not official. Amendments have been incorporated for convenience of reference and the original statutes and regulations should be consulted for all purposes of interpretation and application of the law. In order to preserve the integrity of the original statutes and regulations, errors that may have appeared are reproduced in this consolidation."



SK FIPPA

Freedom of Information and Protection of Privacy Act

La loi sur la protection des renseignements personnels





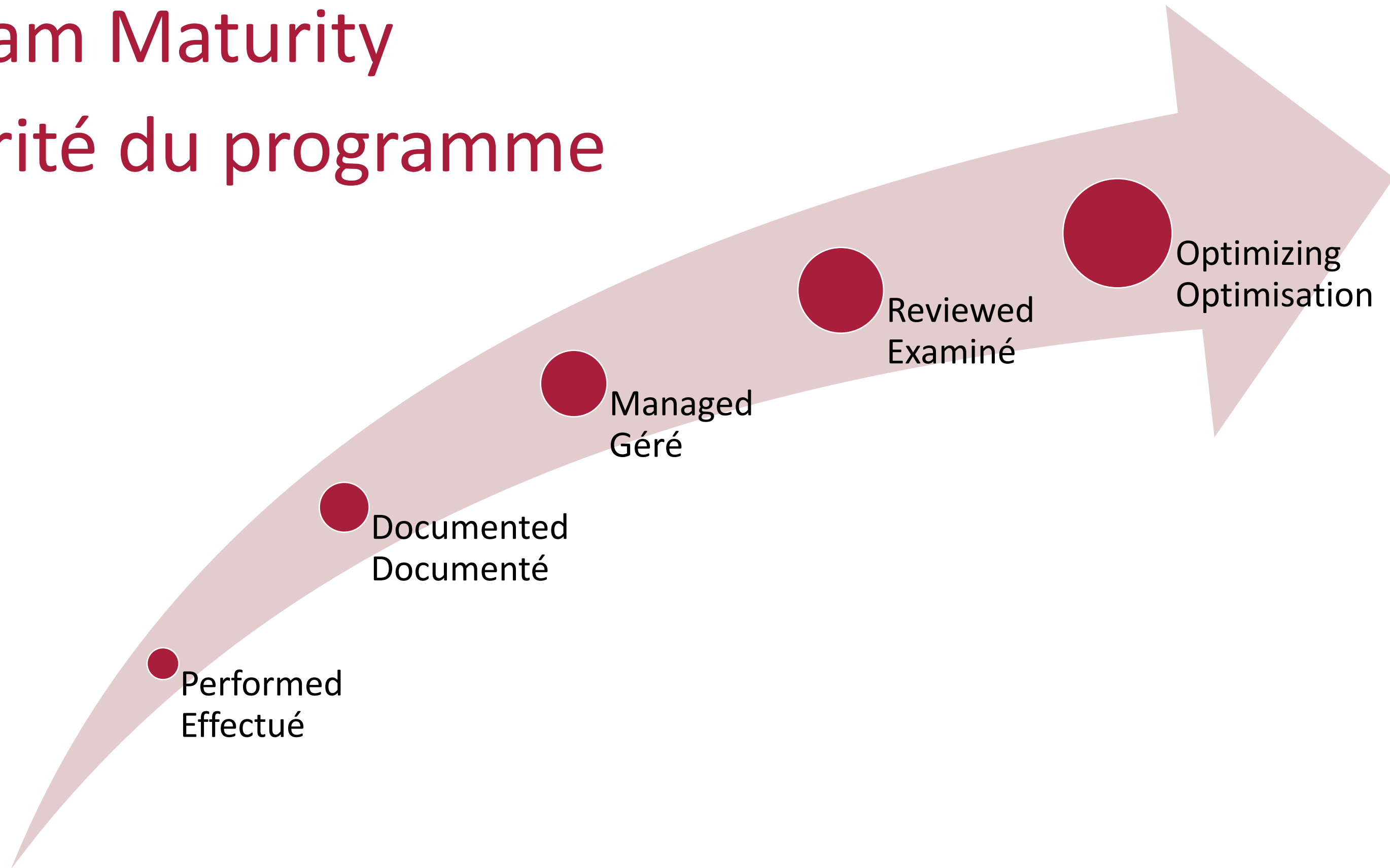
Data Security Policies

Politiques de sécurité des données



Program Maturity

Maturité du programme





ISO 27001 : 2022

Information Security Management System (ISMS)

- Policies
- Procedures
- Standards
- Guidelines

Système de gestion de la sécurité de l'information (SGSI)

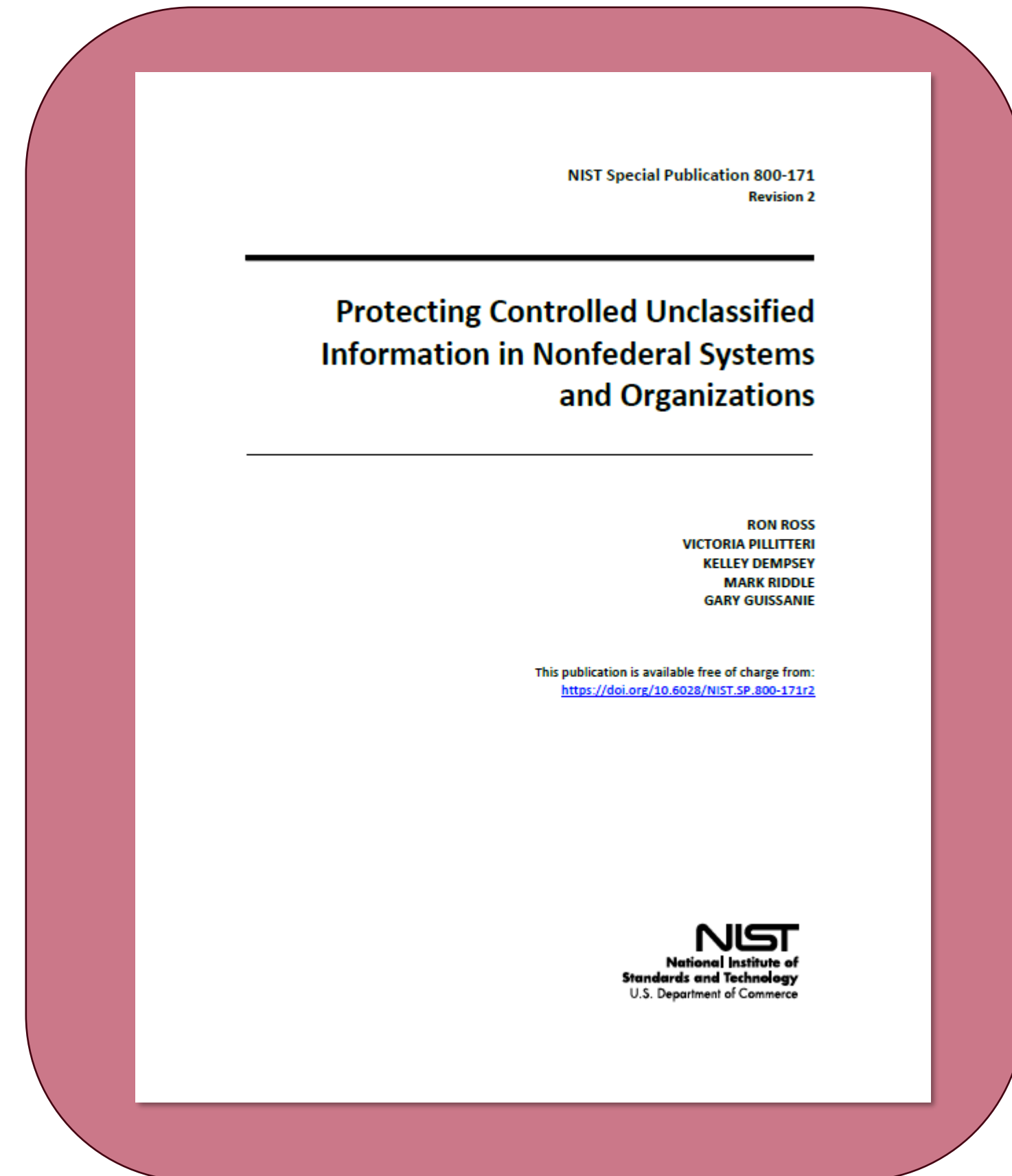
- Politiques
- Procédures
- Normes
- Lignes directrices



NIST SP 800-171 r2

Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations

Protection des informations non classifiées contrôlées dans les systèmes et organisations non fédéraux





Incident Management

Gestion des incidents



Before Avant

Incident Response Plan

- Assess
- Develop
- Educate
- Communicate
- Exercise
- Optimize

Plan d'intervention en cas d'incident

- Évaluer
- Développer
- Éduquer
- Communiquer
- Exercice
- Optimiser



NIST SP 800-61 r2

Cyber Security Incident Handling Guide

Guide de traitement des incidents de cybersécurité

NIST
National Institute of
Standards and Technology
U.S. Department of Commerce

Special Publication 800-61
Revision 2

Computer Security Incident Handling Guide

Recommendations of the National Institute
of Standards and Technology

Paul Cichonski
Tom Millar
Tim Grance
Karen Scarfone

<http://dx.doi.org/10.6028/NIST.SP.800-61r2>



NIST SP 800-61 r2

Cyber Security Incident Handling Guide

Guide de traitement des incidents de cybersécurité

- Handling an Incident
- 3.1 Preparation.....
 - 3.1.1 Preparing to Handle Incidents
 - 3.1.2 Preventing Incidents.....
- 3.2 Detection and Analysis
- 3.2.1 Attack Vectors.....
- 3.2.2 Signs of an Incident.....
- 3.2.3 Sources of Precursors and Indicators.....
- 3.2.4 Incident Analysis
- 3.2.5 Incident Documentation.....
- 3.2.6 Incident Prioritization
- 3.2.7 Incident Notification
- 3.3 Containment, Eradication, and Recovery.....
 - 3.3.1 Chc
 - 3.3.2 Evic
 - 3.3.3 Ider
 - 3.3.4 Era
- 3.4 Post-Inciden.....
 - 3.4.1 Les
 - 3.4.2 Usil
 - 3.4.3 Evic
- 3.5 Incident H.....
- 3.6 Recommen.....

Table 3-5. Incident Handling Checklist

	Action	Completed
Detection and Analysis		
1.	Determine whether an incident has occurred	
1.1	Analyze the precursors and indicators	
1.2	Look for correlating information	
1.3	Perform research (e.g., search engines, knowledge base)	
1.4	As soon as the handler believes an incident has occurred, begin documenting the investigation and gathering evidence	
2.	Prioritize handling the incident based on the relevant factors (functional impact, information impact, recoverability effort, etc.)	
3.	Report the incident to the appropriate internal personnel and external organizations	
Containment, Eradication, and Recovery		
4.	Acquire, preserve, secure, and document evidence	
5.	Contain the incident	
6.	Eradicate the incident	
6.1	Identify and mitigate all vulnerabilities that were exploited	
6.2	Remove malware, inappropriate materials, and other components	
6.3	If more affected hosts are discovered (e.g., new malware infections), repeat the Detection and Analysis steps (1.1, 1.2) to identify all other affected hosts, then contain (5) and eradicate (6) the incident for them	
7.	Recover from the incident	
7.1	Return affected systems to an operationally ready state	
7.2	Confirm that the affected systems are functioning normally	
7.3	If necessary, implement additional monitoring to look for future related activity	
Post-Incident Activity		
8.	Create a follow-up report	
9.	Hold a lessons learned meeting (mandatory for major incidents, optional otherwise)	



During Au cours de

Keys to Success

1. Make a formal declaration
2. Engage stakeholders and partners
3. Follow the plan
4. Document everything

Les clés du succès

1. Faites une déclaration formelle
2. Engagez les partenaires
3. Suivez le plan
4. Documentez tout



After Après

Recovery

- People
- Process
- Technology
- Data
- Reputation

Récupération

- Les gens
- Processus
- La technologie
- Données
- Réputation



Cyber Risk Insurance

Assurance contre les cyberrisques

Challenges

- New, more rigorous requirements
- Limited list of acceptable security partners
- New scrutiny and limitations on payouts

Problèmes

- De nouvelles exigences plus rigoureuses
- Liste limitée de partenaires de sécurité acceptables
- Nouvel examen et limites sur les paiements



Partners for Government Agencies

Partenaires pour les organismes gouvernementaux

CANADIAN CENTRE FOR
CYBER SECURITY

CENTRE CANADIEN POUR LA
CYBERSÉCURITÉ





Thank you.

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