Set Theory Relationship Mapping (STRM)

Reference Document : **Secure Controls Framework (SCF) version 2024.2**
Focal Document: **ISO 27002:2022**
Focal Document URL: **https://www.iso.org/standard/75652.html**
STRM URL: **https://content.securecontrolsframework.com/strm/scf-2024-2-iso-27002-2022.pdf**

Set Theory Relationship Mapping (STRM) is well-suited for mapping between sets of elements that exist in two distinct concepts that are mostly the same as each other (e.g., cybersecurity & data privacy requirements). STRM also allows the strength of the mapping to be captured.

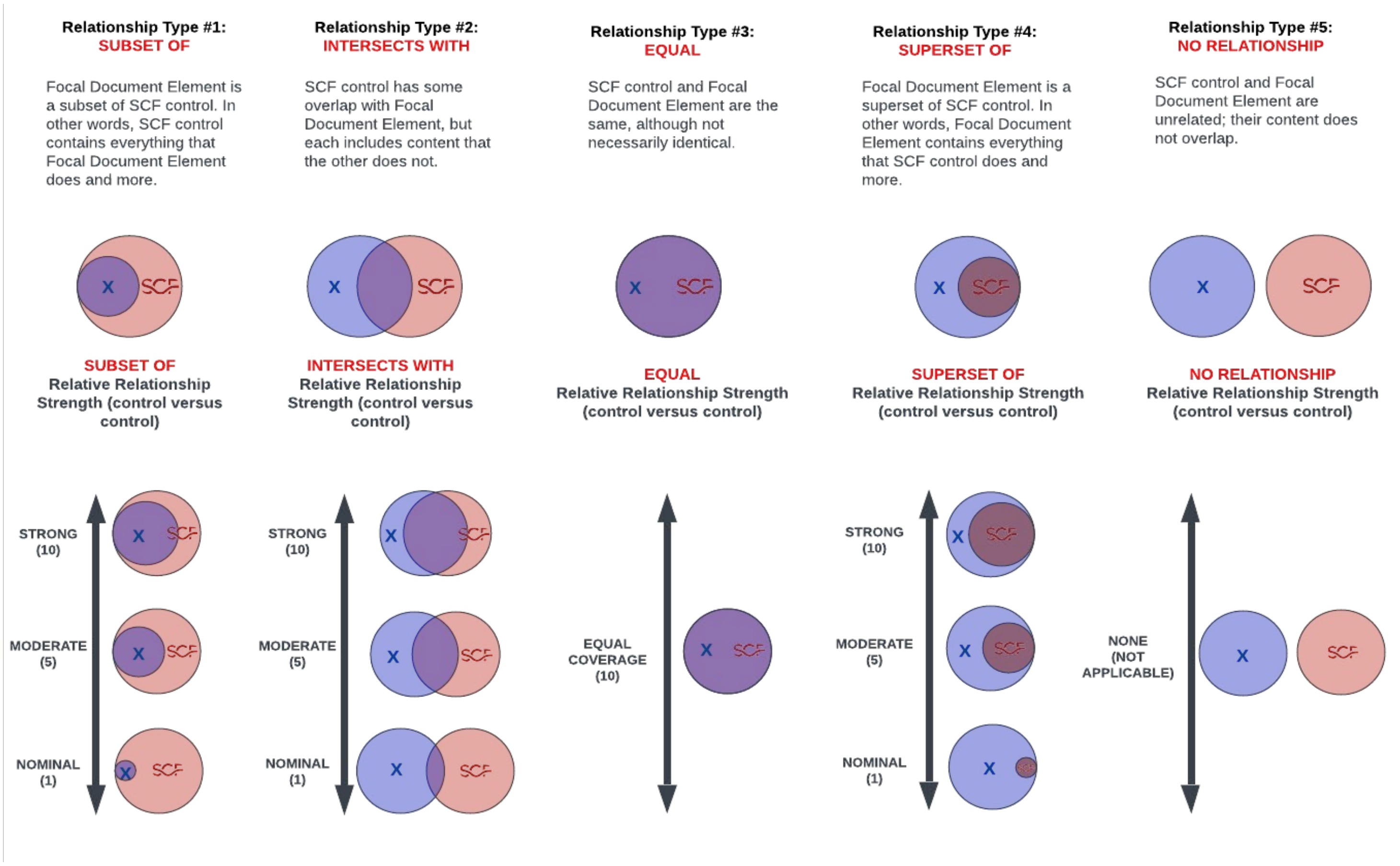
STRM relies on a justification for the relationship claim. There are three (3) options for the rationale, which is a high-level context within which the two concepts are related:

1. **Syntactic**: How similar is the wording that expresses the two concepts? This is a word-for-word analysis of the relationship, not an interpretation of the language.
2. **Semantic**: How similar are the meanings of the two concepts? This involves some interpretation of each concept's language.
3. **Functional**: How similar are the results of executing the two concepts? This involves understanding what will happen if the two concepts are implemented, performed, or otherwise executed.

Based on NIST IR 8477, STRM supports five (5) five relationship types to describe the logical similarity between two distinct concepts:

1. **Subset Of**
2. **Intersects With**
3. **Equal**
4. **Superset Of**
5. **No Relationship**

🟥 SCF — Reference Document
🟦 Law, Regulation or Framework — Focal Document



Relationship Type #1: SUBSET OF

Focal Document Element is a subset of SCF control. In other words, SCF control contains everything that Focal Document Element does and more.

Relationship Type #2: INTERSECTS WITH

SCF control has some overlap with Focal Document Element, but each includes content that the other does not.

Relationship Type #3: EQUAL

SCF control and Focal Document Element are the same, although not necessarily identical.

Relationship Type #4: SUPERSET OF

Focal Document Element is a superset of SCF control. In other words, Focal Document Element contains everything that SCF control does and more.

Relationship Type #5: NO RELATIONSHIP

SCF control and Focal Document Element are unrelated; their content does not overlap.

X
SCF
SUBSET OF Relative Relationship Strength (control versus control)
INTERSECTS WITH Relative Relationship Strength (control versus control)
EQUAL Relative Relationship Strength (control versus control)
SUPERSET OF Relative Relationship Strength (control versus control)
NO RELATIONSHIP Relative Relationship Strength (control versus control)
STRONG (10)
MODERATE (5)
NOMINAL (1)
EQUAL COVERAGE (10)
NONE (NOT APPLICABLE)

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
1.0	Scope	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
2.0	Normative references	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
3.0	Terms, definitions and abbreviated terms	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Standardized Terminology	SEA-02.1	Mechanisms exist to standardize technology and process terminology to reduce confusion amongst groups and departments.	5	
3.1	Terms and definitions	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Standardized Terminology	SEA-02.1	Mechanisms exist to standardize technology and process terminology to reduce confusion amongst groups and departments.	5	
3.2	Abbreviated terms	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Standardized Terminology	SEA-02.1	Mechanisms exist to standardize technology and process terminology to reduce confusion amongst groups and departments.	5	
4.0	Structure of this document	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
4.1	Clauses	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
4.2	Themes and attributes	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
4.3	Control layout	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
5.0	Organizational controls	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
5.1	Policies for information security	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Cybersecurity & Data Protection Governance Program	GOV-01	Mechanisms exist to facilitate the implementation of cybersecurity & data protection governance controls.	10	
			Functional	intersects with	Publishing Cybersecurity & Data Protection Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate cybersecurity & data protection policies, standards and procedures.	5	
			Functional	intersects with	Periodic Review & Update of Cybersecurity & Data Protection Program	GOV-03	Mechanisms exist to review the cybersecurity & data privacy program, including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
			Functional	subset of	Data Privacy Program	PRI-01	Mechanisms exist to facilitate the implementation and operation of data privacy controls.	10	
			Functional	intersects with	Dissemination of Data Privacy Program Information	PRI-01.3	Mechanisms exist to: ▪ Ensure that the public has access to information about organizational data privacy activities and can communicate with its Chief Privacy Officer (CPO) or similar role; ▪ Ensure that organizational data privacy practices are publicly available through organizational websites or document repositories; ▪ Utilize publicly facing email addresses and/or phone lines to enable the public to provide feedback and/or direct questions to data privacy office(s) regarding data privacy practices; and ▪ Inform data subjects when changes are made to the privacy notice and the nature of such changes.	5	
5.2	Information security roles and responsibilities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Assigned Cybersecurity & Data Protection Responsibilities	GOV-04	Mechanisms exist to assign one or more qualified individuals with the mission and resources to centrally-manage, coordinate, develop, implement and maintain an enterprise-wide cybersecurity & data protection program.	5	
			Functional	intersects with	Roles & Responsibilities	HRS-03	Mechanisms exist to define cybersecurity responsibilities for all personnel.	5	
			Functional	intersects with	Roles With Special Protection Measures	HRS-04.1	Mechanisms exist to ensure that individuals accessing a system that stores, transmits or processes information requiring special protection satisfy organization-defined personnel screening criteria.	5	
			Functional	intersects with	Responsible, Accountable, Supportive, Consulted & Informed (RASCI) Matrix	TPM-05.4	Mechanisms exist to document and maintain a Responsible, Accountable, Supportive, Consulted & Informed (RASCI) matrix, or similar documentation, to delineate assignment for cybersecurity & data privacy controls between internal stakeholders and External Service Providers (ESPs).	5	
			Functional	intersects with	Third-Party Personnel Security	TPM-06	Mechanisms exist to control personnel security requirements including security roles and responsibilities for third-party providers.	5	
5.3	Segregation of duties	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Separation of Duties (SoD)	HRS-11	Mechanisms exist to implement and maintain Separation of Duties (SoD) to prevent potential inappropriate activity without collusion.	5	
			Functional	intersects with	Incompatible Roles	HRS-12	Mechanisms exist to avoid incompatible development-specific roles through limiting and reviewing developer privileges to change hardware, software and firmware components within a production/operational environment.	5	
5.4	Management responsibilities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Cybersecurity & Data Protection Governance Program	GOV-01	Mechanisms exist to facilitate the implementation of cybersecurity & data protection governance controls.	10	
			Functional	subset of	Human Resources Security Management	HRS-01	Mechanisms exist to facilitate the implementation of personnel security controls.	10	
			Functional	intersects with	Formal Indoctrination	HRS-04.2	Mechanisms exist to verify that individuals accessing a system processing, storing, or transmitting sensitive information are formally indoctrinated for all the relevant types of information to which they have access on the system.	5	
			Functional	intersects with	Terms of Employment	HRS-05	Mechanisms exist to require all employees and contractors to apply cybersecurity & data privacy principles in their daily work.	5	
			Functional	intersects with	Rules of Behavior	HRS-05.1	Mechanisms exist to define acceptable and unacceptable rules of behavior for the use of technologies, including consequences for unacceptable behavior.	5	
			Functional	intersects with	Social Media & Social Networking Restrictions	HRS-05.2	Mechanisms exist to define rules of behavior that contain explicit restrictions on the use of social media and networking sites, posting information on commercial websites and sharing account information.	5	
			Functional	intersects with	Use of Communications Technology	HRS-05.3	Mechanisms exist to establish usage restrictions and implementation guidance for communications technologies based on the potential to cause damage to systems, if used maliciously.	5	
			Functional	subset of	Cybersecurity & Data Privacy Portfolio Management	PRM-01	Mechanisms exist to facilitate the implementation of cybersecurity & data privacy-related resource planning controls that define a viable plan for achieving cybersecurity & data privacy objectives.	10	
			Functional	intersects with	Cybersecurity & Data Privacy Resource Management	PRM-02	Mechanisms exist to address all capital planning and investment requests, including the resources needed to implement the cybersecurity & data privacy programs and document all exceptions to this requirement.	5	
			Functional	intersects with	Role-Based Cybersecurity & Data Privacy Training	SAT-03	Mechanisms exist to provide role-based cybersecurity & data privacy-related training: ▪ Before authorizing access to the system or performing assigned duties; ▪ When required by system changes; and ▪ Annually thereafter.	5	
5.5	Contact with authorities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Contacts With Authorities	GOV-06	Mechanisms exist to identify and document appropriate contacts with relevant law enforcement and regulatory bodies.	10	
5.6	Contact with special interest groups	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Contacts With Groups & Associations	GOV-07	Mechanisms exist to establish contact with selected groups and associations within the cybersecurity & data privacy communities to: ▪ Facilitate ongoing cybersecurity & data privacy education and training for organizational personnel; ▪ Maintain currency with recommended cybersecurity & data privacy practices, techniques and technologies; and ▪ Share current cybersecurity and/or data privacy-related information including threats, vulnerabilities and incidents.	10	
5.7	Threat intelligence	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Monitoring For Information Disclosure	MON-11	Mechanisms exist to monitor for evidence of unauthorized exfiltration or disclosure of non-public information.	5	
			Functional	intersects with	Monitoring for Indicators of Compromise (IOC)	MON-11.3	Automated mechanisms exist to identify and alert on Indicators of Compromise (IoC).	5	
			Functional	subset of	Threat Intelligence Program	THR-01	Mechanisms exist to implement a threat intelligence program that includes a cross-organization information-sharing capability that can influence the development of the system and security architectures, selection of security solutions, monitoring, threat hunting, response and recovery activities.	10	
			Functional	intersects with	Indicators of Exposure (IOE)	THR-02	Mechanisms exist to develop Indicators of Exposure (IOE) to understand the potential attack vectors that attackers could use to attack the organization.	5	
			Functional	intersects with	Threat Intelligence Feeds	THR-03	Mechanisms exist to maintain situational awareness of evolving threats by leveraging the knowledge of attacker tactics, techniques and procedures to facilitate the implementation of preventative and compensating controls.	5	
			Functional	intersects with	Threat Intelligence Reporting	THR-03.1	Mechanisms exist to utilize external threat intelligence feeds to generate and disseminate organization-specific security alerts, advisories and/or directives.	5	
5.8	Information security in project management	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Cybersecurity & Data Privacy Portfolio Management	PRM-01	Mechanisms exist to facilitate the implementation of cybersecurity & data privacy-related resource planning controls that define a viable plan for achieving cybersecurity & data privacy objectives.	10	
			Functional	intersects with	Cybersecurity & Data Privacy In Project Management	PRM-04	Mechanisms exist to assess cybersecurity & data privacy controls in system project development to determine the extent to which the controls are implemented correctly, operating as intended and producing the desired outcome with respect to meeting the requirements.	5	
			Functional	intersects with	Cybersecurity & Data Privacy Requirements Definition	PRM-05	Mechanisms exist to identify critical system components and functions by performing a criticality analysis for critical systems, system components or services at pre-defined decision points in the Secure Development Life Cycle (SDLC).	5	
			Functional	intersects with	Secure Development Life Cycle (SDLC) Management	PRM-07	Mechanisms exist to ensure changes to systems within the Secure Development Life Cycle (SDLC) are controlled through formal change control procedures.	5	
			Functional	intersects with	Risk Framing	RSK-01.1	Mechanisms exist to identify: ▪ Assumptions affecting risk assessments, risk response and risk monitoring; ▪ Constraints affecting risk assessments, risk response and risk monitoring; ▪ The organizational risk tolerance; and ▪ Priorities, benefits and trade-offs considered by the organization for managing risk.	5	
			Functional	intersects with	Risk Identification	RSK-03	Mechanisms exist to identify and document risks, both internal and external.	5	

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			Functional	intersects with	Risk Assessment	RSK-04	Mechanisms exist to conduct recurring assessments of risk that includes the likelihood and magnitude of harm, from unauthorized access, use, disclosure, disruption, modification or destruction of the organization's systems and data.	5	
			Functional	intersects with	Risk Remediation	RSK-06	Mechanisms exist to remediate risks to an acceptable level.	5	
			Functional	intersects with	Risk Response	RSK-06.1	Mechanisms exist to respond to findings from cybersecurity & data privacy assessments, incidents and audits to ensure proper remediation has been performed.	5	
			Functional	intersects with	Alignment With Enterprise Architecture	SEA-02	Mechanisms exist to develop an enterprise architecture, aligned with industry-recognized leading practices, with consideration for cybersecurity & data privacy principles that addresses risk to organizational operations, assets, individuals, other organizations.	5	
5.9	Inventory of information and other associated assets	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Asset-Service Dependencies	AST-01.1	Mechanisms exist to identify and assess the security of technology assets that support more than one critical business function.	5	
			Functional	intersects with	Stakeholder Identification & Involvement	AST-01.2	Mechanisms exist to identify and involve pertinent stakeholders of critical systems, applications and services to support the ongoing secure management of those assets.	5	
			Functional	intersects with	Asset Inventories	AST-02	Mechanisms exist to perform inventories of technology assets that: ▪ Accurately reflects the current systems, applications and services in use; ▪ Identifies authorized software products, including business justification details; ▪ Is at the level of granularity deemed necessary for tracking and reporting; ▪ Includes organization-defined information deemed necessary to achieve effective property accountability; and ▪ Is available for review and audit by designated organizational personnel.	5	
			Functional	intersects with	Data Action Mapping	AST-02.8	Mechanisms exist to create and maintain a map of technology assets where sensitive/regulated data is stored, transmitted or processed.	5	
			Functional	intersects with	Asset Ownership Assignment	AST-03	Mechanisms exist to ensure asset ownership responsibilities are assigned, tracked and managed at a team, individual, or responsible organization level to establish a common understanding of requirements for asset protection.	5	
			Functional	intersects with	Accountability Information	AST-03.1	Mechanisms exist to include capturing the name, position and/or role of individuals responsible/accountable for administering assets as part of the technology asset inventory process.	5	
			Functional	intersects with	Network Diagrams & Data Flow Diagrams (DFDs)	AST-04	Mechanisms exist to maintain network architecture diagrams that: ▪ Contain sufficient detail to assess the security of the network's architecture; ▪ Reflect the current architecture of the network environment; and ▪ Document all sensitive/regulated data flows.	5	
			Functional	subset of	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	10	
			Functional	intersects with	Data & Asset Classification	DCH-02	Mechanisms exist to ensure data and assets are categorized in accordance with applicable statutory, regulatory and contractual requirements.	5	
			Functional	intersects with	Inventory of Personal Data	PRI-05.5	Mechanisms exist to establish, maintain and update an inventory that contains a listing of all programs and systems identified as collecting, using, maintaining, or sharing Personal Data (PD).	5	
			Functional	intersects with	Cybersecurity & Data Privacy Requirements Definition	PRM-05	Mechanisms exist to identify critical system components and functions by performing a criticality analysis for critical systems, system components or services at pre-defined decision points in the Secure Development Life Cycle (SDLC).	5	
5.10	Acceptable use of information and other associated assets	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	5	
			Functional	intersects with	Media Marking	DCH-04	Mechanisms exist to mark media in accordance with data protection requirements so that personnel are alerted to distribution limitations, handling caveats and applicable security requirements.	5	
			Functional	intersects with	Custodians	DCH-07.1	Mechanisms exist to identify custodians throughout the transport of digital or non-digital media.	5	
			Functional	intersects with	Rules of Behavior	HRS-05.1	Mechanisms exist to define acceptable and unacceptable rules of behavior for the use of technologies, including consequences for unacceptable behavior.	5	
			Functional	intersects with	Social Media & Social Networking Restrictions	HRS-05.2	Mechanisms exist to define rules of behavior that contain explicit restrictions on the use of social media and networking sites, posting information on commercial websites and sharing account information.	5	
			Functional	intersects with	Use of Communications Technology	HRS-05.3	Mechanisms exist to establish usage restrictions and implementation guidance for communications technologies based on the potential to cause damage to systems, if used maliciously.	5	
			Functional	intersects with	Access Agreements	HRS-06	Mechanisms exist to require internal and third-party users to sign appropriate access agreements prior to being granted access.	5	
5.11	Return of assets	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Return of Assets	AST-10	Mechanisms exist to ensure that employees and third-party users return all organizational assets in their possession upon termination of employment, contract or agreement.	10	
5.12	Classification of information	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Asset Scope Classification	AST-04.1	Mechanisms exist to determine cybersecurity & data privacy control applicability by identifying, assigning and documenting the appropriate asset scope categorization for all systems, applications, services and personnel (internal and third-parties).	5	
			Functional	subset of	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	10	
			Functional	intersects with	Data & Asset Classification	DCH-02	Mechanisms exist to ensure data and assets are categorized in accordance with applicable statutory, regulatory and contractual requirements.	5	
			Functional	intersects with	Data Governance	GOV-10	Mechanisms exist to facilitate data governance to oversee the organization's policies, standards and procedures so that sensitive/regulated data is effectively managed and maintained in accordance with applicable statutory, regulatory and contractual obligations.	5	
5.13	Labelling of information	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Media Marking	DCH-04	Mechanisms exist to mark media in accordance with data protection requirements so that personnel are alerted to distribution limitations, handling caveats and applicable security requirements.	10	
5.14	Information transfer	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Transmission Confidentiality	CRY-03	Cryptographic mechanisms exist to protect the confidentiality of data being transmitted.	5	
			Functional	intersects with	Media Transportation	DCH-07	Mechanisms exist to protect and control digital and non-digital media during transport outside of controlled areas using appropriate security measures.	5	
			Functional	intersects with	Custodians	DCH-07.1	Mechanisms exist to identify custodians throughout the transport of digital or non-digital media.	5	
			Functional	intersects with	Information Sharing	DCH-14	Mechanisms exist to utilize a process to assist users in making information sharing decisions to ensure data is appropriately protected.	5	
			Functional	intersects with	Ad-Hoc Transfers	DCH-17	Mechanisms exist to secure ad-hoc exchanges of large digital files with internal or external parties.	5	
			Functional	intersects with	Terms of Employment	HRS-05	Mechanisms exist to require all employees and contractors to apply cybersecurity & data privacy principles in their daily work.	5	
			Functional	intersects with	Rules of Behavior	HRS-05.1	Mechanisms exist to define acceptable and unacceptable rules of behavior for the use of technologies, including consequences for unacceptable behavior.	5	
			Functional	intersects with	Access Agreements	HRS-06	Mechanisms exist to require internal and third-party users to sign appropriate access agreements prior to being granted access.	5	
			Functional	intersects with	Confidentiality Agreements	HRS-06.1	Mechanisms exist to require Non-Disclosure Agreements (NDAs) or similar confidentiality agreements that reflect the needs to protect data and operational details, or both employees and third-parties.	5	
			Functional	subset of	Network Security Controls (NSC)	NET-01	Mechanisms exist to develop, govern & update procedures to facilitate the implementation of Network Security Controls (NSC).	10	
			Functional	intersects with	Data Flow Enforcement – Access Control Lists (ACLs)	NET-04	Mechanisms exist to design, implement and review firewall and router configurations to restrict connections between untrusted networks and internal systems.	5	
			Functional	intersects with	Deny Traffic by Default & Allow Traffic by Exception	NET-04.1	Mechanisms exist to configure firewall and router configurations to deny network traffic by default and allow network traffic by exception (e.g., deny all, permit by exception).	5	
			Functional	intersects with	Electronic Messaging	NET-13	Mechanisms exist to protect the confidentiality, integrity and availability of electronic messaging communications.	5	
			Functional	intersects with	DNS & Content Filtering	NET-18	Mechanisms exist to force Internet-bound network traffic through a proxy device (e.g., Policy Enforcement Point (PEP)) for URL content filtering and DNS filtering to limit a user's ability to connect to dangerous or prohibited Internet sites.	5	
			Functional	intersects with	Physical & Environmental Protections	PES-01	Mechanisms exist to facilitate the operation of physical and environmental protection controls.	5	
5.15	Access control	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Identity & Access Management (IAM)	IAC-01	Mechanisms exist to facilitate the implementation of identification and access management controls.	10	
			Functional	intersects with	Identification & Authentication for Organizational Users	IAC-02	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) organizational users and processes acting on behalf of organizational users.	5	
			Functional	intersects with	Role-Based Access Control (RBAC)	IAC-08	Mechanisms exist to enforce a Role-Based Access Control (RBAC) policy over users and resources that applies need-to-know and fine-grained access control for sensitive/regulated data access.	5	
			Functional	intersects with	Account Management	IAC-15	Mechanisms exist to proactively govern account management of individual, group, system, service, application, guest and temporary accounts.	5	
			Functional	intersects with	Privileged Account Management (PAM)	IAC-16	Mechanisms exist to restrict and control privileged access rights for users and services.	5	
			Functional	intersects with	Periodic Review of Account Privileges	IAC-17	Mechanisms exist to periodically-review the privileges assigned to individuals and service accounts to validate the need for such privileges and reassign or remove unnecessary privileges, as necessary.	5	
			Functional	intersects with	Least Privilege	IAC-21	Mechanisms exist to utilize the concept of least privilege, allowing only authorized access to processes necessary to accomplish assigned tasks in accordance with organizational business functions.	5	
			Functional	subset of	Physical & Environmental Protections	PES-01	Mechanisms exist to facilitate the operation of physical and environmental protection controls.	10	

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			Functional	intersects with	Physical Access Authorizations	PES-02	Physical access control mechanisms exist to maintain a current list of personnel with authorized access to organizational facilities (except for those areas within the facility officially designated as publicly accessible).	5	
			Functional	intersects with	Role-Based Physical Access	PES-02.1	Physical access control mechanisms exist to authorize physical access to facilities based on the position or role of the individual.	5	
			Functional	intersects with	Physical Access Control	PES-03	Physical access control mechanisms exist to enforce physical access authorizations for all physical access points (including designated entry/exit points) to facilities (excluding those areas within the facility officially designated as publicly accessible).	5	
			Functional	intersects with	Physical Security of Offices, Rooms & Facilities	PES-04	Mechanisms exist to identify systems, equipment and respective operating environments that require limited physical access so that appropriate physical access controls are designed and implemented for offices, rooms and facilities.	5	
			Functional	intersects with	Working in Secure Areas	PES-04.1	Physical security mechanisms exist to allow only authorized personnel access to secure areas.	5	
5.16	Identity management	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Identification & Authentication for Non-Organizational Users	IAC-03	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) third-party users and processes that provide services to the organization.	5	
			Functional	intersects with	Identification & Authentication for Devices	IAC-04	Mechanisms exist to uniquely identify and centrally Authenticate, Authorize and Audit (AAA) devices before establishing a connection using bidirectional authentication that is cryptographically- based and replay resistant.	5	
			Functional	intersects with	Identification & Authentication for Third Party Systems & Services	IAC-05	Mechanisms exist to identify and authenticate third-party systems and services.	5	
			Functional	intersects with	User Provisioning & De-Provisioning	IAC-07	Mechanisms exist to utilize a formal user registration and de-registration process that governs the assignment of access rights.	5	
			Functional	intersects with	Identifier Management (User Names)	IAC-09	Mechanisms exist to govern naming standards for usernames and systems.	5	
			Functional	intersects with	User Identity (ID) Management	IAC-09.1	Mechanisms exist to ensure proper user identification management for non-consumer users and administrators.	5	
			Functional	intersects with	Cross-Organization Management	IAC-09.4	Mechanisms exist to coordinate username identifiers with external organizations for cross-organization management of identifiers.	5	
			Functional	intersects with	Account Management	IAC-15	Mechanisms exist to proactively govern account management of individual, group, system, service, application, guest and temporary accounts.	5	
			Functional	intersects with	Disable Inactive Accounts	IAC-15.3	Automated mechanisms exist to disable inactive accounts after an organization-defined time period.	5	
			Functional	intersects with	Restrictions on Shared Groups / Accounts	IAC-15.5	Mechanisms exist to authorize the use of shared/group accounts only under certain organization-defined conditions.	5	
5.17	Authentication information	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Authenticator Management	IAC-10	Mechanisms exist to securely manage authenticators for users and devices.	5	
			Functional	intersects with	Password-Based Authentication	IAC-10.1	Mechanisms exist to enforce complexity, length and lifespan considerations to ensure strong criteria for password-based authentication.	5	
			Functional	intersects with	Password Managers	IAC-10.11	Mechanisms exist to protect and store passwords via a password manager tool.	5	
			Functional	intersects with	Protection of Authenticators	IAC-10.5	Mechanisms exist to protect authenticators commensurate with the sensitivity of the information to which use of the authenticator permits access.	5	
			Functional	intersects with	Vendor-Supplied Defaults	IAC-10.8	Mechanisms exist to ensure vendor-supplied defaults are changed as part of the installation process.	5	
			Functional	intersects with	User Responsibilities for Account Management	IAC-18	Mechanisms exist to compel users to follow accepted practices in the use of authentication mechanisms (e.g., passwords, passphrases, physical or logical security tokens, smart cards, certificates, etc.).	5	
5.18	Access rights	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Separation of Duties (SoD)	HRS-11	Mechanisms exist to implement and maintain Separation of Duties (SoD) to prevent potential inappropriate activity without collusion.	5	
			Functional	subset of	Identity & Access Management (IAM)	IAC-01	Mechanisms exist to facilitate the implementation of identification and access management controls.	10	
			Functional	intersects with	User Provisioning & De-Provisioning	IAC-07	Mechanisms exist to utilize a formal user registration and de-registration process that governs the assignment of access rights.	5	
			Functional	intersects with	Change of Roles & Duties	IAC-07.1	Mechanisms exist to revoke user access rights following changes in personnel roles and duties, if no longer necessary or permitted.	5	
			Functional	intersects with	Termination of Employment	IAC-07.2	Mechanisms exist to revoke user access rights in a timely manner, upon termination of employment or contract.	5	
			Functional	intersects with	Authenticator Management	IAC-10	Mechanisms exist to securely manage authenticators for users and devices.	5	
			Functional	intersects with	Password Managers	IAC-10.11	Mechanisms exist to protect and store passwords via a password manager tool.	5	
			Functional	intersects with	Account Management	IAC-15	Mechanisms exist to proactively govern account management of individual, group, system, service, application, guest and temporary accounts.	5	
			Functional	intersects with	Automated System Account Management (Directory Services)	IAC-15.1	Automated mechanisms exist to support the management of system accounts (e.g., directory services).	5	
			Functional	intersects with	Removal of Temporary / Emergency Accounts	IAC-15.2	Automated mechanisms exist to disable or remove temporary and emergency accounts after an organization-defined time period for each type of account.	5	
			Functional	intersects with	Privileged Account Management (PAM)	IAC-16	Mechanisms exist to restrict and control privileged access rights for users and services.	5	
			Functional	intersects with	Privileged Account Inventories	IAC-16.1	Mechanisms exist to inventory all privileged accounts and validate that each person with elevated privileges is authorized by the appropriate level of organizational management.	5	
			Functional	intersects with	Periodic Review of Account Privileges	IAC-17	Mechanisms exist to periodically-review the privileges assigned to individuals and service accounts to validate the need for such privileges and reassign or remove unnecessary privileges, as necessary.	5	
			Functional	intersects with	Credential Sharing	IAC-19	Mechanisms exist to prevent the sharing of generic IDs, passwords or other generic authentication methods.	5	
			Functional	intersects with	Access Enforcement	IAC-20	Mechanisms exist to enforce Logical Access Control (LAC) permissions that conform to the principle of "least privilege."	5	
			Functional	intersects with	Access To Sensitive / Regulated Data	IAC-20.1	Mechanisms exist to limit access to sensitive/regulated data to only those individuals whose job requires such access.	5	
			Functional	intersects with	Database Access	IAC-20.2	Mechanisms exist to restrict access to databases containing sensitive/regulated data to only necessary services or those individuals whose job requires such access.	5	
			Functional	intersects with	Use of Privileged Utility Programs	IAC-20.3	Mechanisms exist to restrict and tightly control utility programs that are capable of overriding system and application controls.	5	
			Functional	intersects with	Least Privilege	IAC-21	Mechanisms exist to utilize the concept of least privilege, allowing only authorized access to processes necessary to accomplish assigned tasks in accordance with organizational business functions.	5	
			Functional	intersects with	Privileged Accounts	IAC-21.3	Mechanisms exist to restrict the assignment of privileged accounts to organization-defined personnel or roles without management approval.	5	
			Functional	subset of	Physical & Environmental Protections	PES-01	Mechanisms exist to facilitate the operation of physical and environmental protection controls.	10	
			Functional	intersects with	Physical Access Authorizations	PES-02	Physical access control mechanisms exist to maintain a current list of personnel with authorized access to organizational facilities (except for those areas within the facility officially designated as publicly accessible).	5	
			Functional	intersects with	Role-Based Physical Access	PES-02.1	Physical access control mechanisms exist to authorize physical access to facilities based on the position or role of the individual.	5	
			Functional	intersects with	Physical Access Control	PES-03	Physical access control mechanisms exist to enforce physical access authorizations for all physical access points (including designated entry/exit points) to facilities (excluding those areas within the facility officially designated as publicly accessible).	5	
5.19	Information security in supplier relationships	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Third-Party Management	TPM-01	Mechanisms exist to facilitate the implementation of third-party management controls.	10	
			Functional	intersects with	Third-Party Inventories	TPM-01.1	Mechanisms exist to maintain a current, accurate and complete list of External Service Providers (ESPs) that can potentially impact the Confidentiality, Integrity, Availability and/or Safety (CIAS) of the organization's systems, applications, services and data.	5	
			Functional	intersects with	Third-Party Criticality Assessments	TPM-02	Mechanisms exist to identify, prioritize and assess suppliers and partners of critical systems, components and services using a supply chain risk assessment process relative to their importance in supporting the delivery of high-value services.	5	
			Functional	intersects with	Supply Chain Protection	TPM-03	Mechanisms exist to evaluate security risks associated with the services and product supply chain.	5	
			Functional	intersects with	Limit Potential Harm	TPM-03.2	Mechanisms exist to utilize security safeguards to limit harm from potential adversaries who identify and target the organization's supply chain.	5	
			Functional	intersects with	Processes To Address Weaknesses or Deficiencies	TPM-03.3	Mechanisms exist to address identified weaknesses or deficiencies in the security of the supply chain	5	
			Functional	intersects with	Third-Party Services	TPM-04	Mechanisms exist to mitigate the risks associated with third-party access to the organization’s systems and data.	5	
			Functional	intersects with	Third-Party Risk Assessments & Approvals	TPM-04.1	Mechanisms exist to conduct a risk assessment prior to the acquisition or outsourcing of technology-related services.	5	
			Functional	intersects with	Conflict of Interests	TPM-04.3	Mechanisms exist to ensure that the interests of external service providers are consistent with and reflect organizational interests.	5	
			Functional	intersects with	Third-Party Contract Requirements	TPM-05	Mechanisms exist to require contractual requirements for cybersecurity & data privacy requirements with third-parties, reflecting the organization’s needs to protect its systems, processes and data.	5	
			Functional	intersects with	Third-Party Personnel Security	TPM-06	Mechanisms exist to control personnel security requirements including security roles and responsibilities for third-party providers.	5	
			Functional	intersects with	Review of Third-Party Services	TPM-08	Mechanisms exist to monitor, regularly review and audit External Service Providers (ESPs) for compliance with established contractual requirements for cybersecurity & data privacy controls.	5	
			Functional	intersects with	Third-Party Deficiency Remediation	TPM-09	Mechanisms exist to address weaknesses or deficiencies in supply chain elements identified during independent or organizational assessments of such elements.	5	

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			Functional	intersects with	Third-Party Incident Response & Recovery Capabilities	TPM-11	Mechanisms exist to ensure response/recovery planning and testing are conducted with critical suppliers/providers.	5	
5.20	Addressing information security within supplier agreements	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Supply Chain Coordination	IRO-10.4	Mechanisms exist to provide cybersecurity & data privacy incident information to the provider of the product or service and other organizations involved in the supply chain for systems or system components related to the incident.	5	
			Functional	subset of	Third-Party Management	TPM-01	Mechanisms exist to facilitate the implementation of third-party management controls.	10	
			Functional	intersects with	Limit Potential Harm	TPM-03.2	Mechanisms exist to utilize security safeguards to limit harm from potential adversaries who identify and target the organization's supply chain.	5	
			Functional	intersects with	Third-Party Contract Requirements	TPM-05	Mechanisms exist to require contractual requirements for cybersecurity & data privacy requirements with third-parties, reflecting the organization's needs to protect its systems, processes and data.	5	
			Functional	intersects with	Review of Third-Party Services	TPM-08	Mechanisms exist to monitor, regularly review and audit External Service Providers (ESPs) for compliance with established contractual requirements for cybersecurity & data privacy controls.	5	
			Functional	intersects with	Managing Changes To Third-Party Services	TPM-10	Mechanisms exist to control changes to services by suppliers, taking into account the criticality of business information, systems and processes that are in scope by the third-party.	5	
5.21	Managing information security in the ICT supply chain	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Provenance	AST-03.2	Mechanisms exist to track the origin, development, ownership, location and changes to systems, system components and associated data.	5	
			Functional	subset of	Information Assurance (IA) Operations	IAO-01	Mechanisms exist to facilitate the implementation of cybersecurity & data privacy assessment and authorization controls.	10	
			Functional	intersects with	Assessments	IAO-02	Mechanisms exist to formally assess the cybersecurity & data privacy controls in systems, applications and services through Information Assurance Program (IAP) activities to determine the extent to which the controls are implemented correctly, operating as intended and producing the desired outcome with respect to meeting expected requirements.	5	
			Functional	intersects with	Specialized Assessments	IAO-02.2	Mechanisms exist to conduct specialized assessments for: ▪ Statutory, regulatory and contractual compliance obligations; ▪ Monitoring capabilities; ▪ Mobile devices; ▪ Databases; ▪ Application security; ▪ Embedded technologies (e.g., IoT, OT, etc.); ▪ Vulnerability management; ▪ Malicious code; ▪ Insider threats and ▪ Performance/load testing.	5	
			Functional	intersects with	Supply Chain Risk Management (SCRM) Plan	RSK-09	Mechanisms exist to develop a plan for Supply Chain Risk Management (SCRM) associated with the development, acquisition, maintenance and disposal of systems, system components and services, including documenting selected mitigating actions and monitoring performance against those plans.	5	
			Functional	intersects with	Supply Chain Protection	TPM-03	Mechanisms exist to evaluate security risks associated with the services and product supply chain.	5	
			Functional	intersects with	Acquisition Strategies, Tools & Methods	TPM-03.1	Mechanisms exist to utilize tailored acquisition strategies, contract tools and procurement methods for the purchase of unique systems, system components or services.	5	
			Functional	intersects with	Third-Party Processing, Storage and Service Locations	TPM-04.4	Mechanisms exist to restrict the location of information processing/storage based on business requirements.	5	
			Functional	intersects with	Third-Party Contract Requirements	TPM-05	Mechanisms exist to require contractual requirements for cybersecurity & data privacy requirements with third-parties, reflecting the organization's needs to protect its systems, processes and data.	5	
			Functional	intersects with	Security Compromise Notification Agreements	TPM-05.1	Mechanisms exist to compel External Service Providers (ESPs) to provide notification of actual or potential compromises in the supply chain that can potentially affect or have adversely affected systems, applications and/or services that the organization utilizes.	5	
5.22	Monitoring, review and change management of supplier services	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Supply Chain Protection	TPM-03	Mechanisms exist to evaluate security risks associated with the services and product supply chain.	5	
			Functional	intersects with	Acquisition Strategies, Tools & Methods	TPM-03.1	Mechanisms exist to utilize tailored acquisition strategies, contract tools and procurement methods for the purchase of unique systems, system components or services.	5	
			Functional	intersects with	Processes To Address Weaknesses or Deficiencies	TPM-03.3	Mechanisms exist to address identified weaknesses or deficiencies in the security of the supply chain	5	
			Functional	intersects with	Review of Third-Party Services	TPM-08	Mechanisms exist to monitor, regularly review and audit External Service Providers (ESPs) for compliance with established contractual requirements for cybersecurity & data privacy controls.	5	
			Functional	intersects with	Managing Changes To Third-Party Services	TPM-10	Mechanisms exist to control changes to services by suppliers, taking into account the criticality of business information, systems and processes that are in scope by the third-party.	5	
5.23	Information security for use of cloud services	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Cloud Services	CLD-01	Mechanisms exist to facilitate the implementation of cloud management controls to ensure cloud instances are secure and in-line with industry practices.	10	
			Functional	intersects with	Cloud Security Architecture	CLD-02	Mechanisms exist to ensure the cloud security architecture supports the organization's technology strategy to securely design, configure and maintain cloud employments.	5	
			Functional	intersects with	Application & Program Interface (API) Security	CLD-04	Mechanisms exist to ensure support for secure interoperability between components with Application & Program Interfaces (APIs).	5	
			Functional	intersects with	Multi-Tenant Environments	CLD-06	Mechanisms exist to ensure multi-tenant owned or managed assets (physical and virtual) are designed and governed such that provider and customer (tenant) user access is appropriately segmented from other tenant users.	5	
			Functional	intersects with	Customer Responsibility Matrix (CRM)	CLD-06.1	Mechanisms exist to formally document a Customer Responsibility Matrix (CRM), delineating assigned responsibilities for controls between the Cloud Service Provider (CSP) and its customers.	5	
			Functional	intersects with	Geolocation Requirements for Processing, Storage and Service Locations	CLD-09	Mechanisms exist to control the location of cloud processing/storage based on business requirements that includes statutory, regulatory and contractual obligations.	5	
			Functional	intersects with	Assessments	IAO-02	Mechanisms exist to formally assess the cybersecurity & data privacy controls in systems, applications and services through Information Assurance Program (IAP) activities to determine the extent to which the controls are implemented correctly, operating as intended and producing the desired outcome with respect to meeting expected requirements.	5	
			Functional	intersects with	Specialized Assessments	IAO-02.2	Mechanisms exist to conduct specialized assessments for: ▪ Statutory, regulatory and contractual compliance obligations; ▪ Monitoring capabilities; ▪ Mobile devices; ▪ Databases; ▪ Application security; ▪ Embedded technologies (e.g., IoT, OT, etc.); ▪ Vulnerability management; ▪ Malicious code; ▪ Insider threats and ▪ Performance/load testing.	5	
			Functional	intersects with	Responsible, Accountable, Supportive, Consulted & Informed (RASCI) Matrix	TPM-05.4	Mechanisms exist to document and maintain a Responsible, Accountable, Supportive, Consulted & Informed (RASCI) matrix, or similar documentation, to delineate assignment for cybersecurity & data privacy controls between internal stakeholders and External Service Providers (ESPs).	5	
5.24	Information security incident management planning and preparation	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Incident Response Operations	IRO-01	Mechanisms exist to implement and govern processes and documentation to facilitate an organization-wide response capability for cybersecurity & data privacy-related incidents.	10	
			Functional	intersects with	Incident Handling	IRO-02	Mechanisms exist to cover the preparation, automated detection or intake of incident reporting, analysis, containment, eradication and recovery.	5	
			Functional	intersects with	Incident Response Plan (IRP)	IRO-04	Mechanisms exist to maintain and make available a current and viable Incident Response Plan (IRP) to all stakeholders.	5	
			Functional	intersects with	Root Cause Analysis (RCA) & Lessons Learned	IRO-13	Mechanisms exist to incorporate lessons learned from analyzing and resolving cybersecurity & data privacy incidents to reduce the likelihood or impact of future incidents.	5	
5.25	Assessment and decision on information security events	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Incident Handling	IRO-02	Mechanisms exist to cover the preparation, automated detection or intake of incident reporting, analysis, containment, eradication and recovery.	5	
			Functional	intersects with	Data Breach	IRO-04.1	Mechanisms exist to address data breaches, or other incidents involving the unauthorized disclosure of sensitive or regulated data, according to applicable laws, regulations and contractual obligations.	5	
			Functional	intersects with	Integrated Security Incident Response Team (ISIRT)	IRO-07	Mechanisms exist to establish an integrated team of cybersecurity, IT and business function representatives that are capable of addressing cybersecurity & data privacy incident response operations.	5	
			Functional	intersects with	Situational Awareness For Incidents	IRO-09	Mechanisms exist to document, monitor and report the status of cybersecurity & data privacy incidents to internal stakeholders all the way through the resolution of the incident.	5	
5.26	Response to information security incidents	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Incident Handling	IRO-02	Mechanisms exist to cover the preparation, automated detection or intake of incident reporting, analysis, containment, eradication and recovery.	5	
			Functional	intersects with	Incident Response Plan (IRP)	IRO-04	Mechanisms exist to maintain and make available a current and viable Incident Response Plan (IRP) to all stakeholders.	5	
			Functional	intersects with	Integrated Security Incident Response Team (ISIRT)	IRO-07	Mechanisms exist to establish an integrated team of cybersecurity, IT and business function representatives that are capable of addressing cybersecurity & data privacy incident response operations.	5	

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			Functional	intersects with	Chain of Custody & Forensics	IRO-08	Mechanisms exist to perform digital forensics and maintain the integrity of the chain of custody, in accordance with applicable laws, regulations and industry-recognized secure practices.	5	
5.27	Learning from information security incidents	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Root Cause Analysis (RCA) & Lessons Learned	IRO-13	Mechanisms exist to incorporate lessons learned from analyzing and resolving cybersecurity & data privacy incidents to reduce the likelihood or impact of future incidents.	10	
5.28	Collection of evidence	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Chain of Custody & Forensics	IRO-08	Mechanisms exist to perform digital forensics and maintain the integrity of the chain of custody, in accordance with applicable laws, regulations and industry-recognized secure practices.	10	
5.29	Information security during disruption	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Business Continuity Management System (BCMS)	BCD-01	Mechanisms exist to facilitate the implementation of contingency planning controls to help ensure resilient assets and services (e.g., Continuity of Operations Plan (COOP) or Business Continuity & Disaster Recovery (BC/DR) playbooks).	10	
			Functional	intersects with	Coordinate with Related Plans	BCD-01.1	Mechanisms exist to coordinate contingency plan development with internal and external elements responsible for related plans.	5	
			Functional	intersects with	Coordinate With External Service Providers	BCD-01.2	Mechanisms exist to coordinate internal contingency plans with the contingency plans of external service providers to ensure that contingency requirements can be satisfied.	5	
			Functional	intersects with	Contingency Plan Testing & Exercises	BCD-04	Mechanisms exist to conduct tests and/or exercises to evaluate the contingency plan's effectiveness and the organization's readiness to execute the plan.	5	
			Functional	intersects with	Incident Response Training	IRO-05	Mechanisms exist to train personnel in their incident response roles and responsibilities.	5	
			Functional	intersects with	Coordination with Related Plans	IRO-06.1	Mechanisms exist to coordinate incident response testing with organizational elements responsible for related plans.	5	
			Functional	intersects with	Coordination With External Providers	IRO-11.2	Mechanisms exist to establish a direct, cooperative relationship between the organization's incident response capability and external service providers.	5	
5.30	ICT readiness for business continuity	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Asset Governance	AST-01	Mechanisms exist to facilitate an IT Asset Management (ITAM) program to implement and manage asset management controls.	5	
			Functional	intersects with	Asset-Service Dependencies	AST-01.1	Mechanisms exist to identify and assess the security of technology assets that support more than one critical business function.	5	
			Functional	subset of	Business Continuity Management System (BCMS)	BCD-01	Mechanisms exist to facilitate the implementation of contingency planning controls to help ensure resilient assets and services (e.g., Continuity of Operations Plan (COOP) or Business Continuity & Disaster Recovery (BC/DR) playbooks).	10	
			Functional	intersects with	Coordinate with Related Plans	BCD-01.1	Mechanisms exist to coordinate contingency plan development with internal and external elements responsible for related plans.	5	
			Functional	intersects with	Coordinate With External Service Providers	BCD-01.2	Mechanisms exist to coordinate internal contingency plans with the contingency plans of external service providers to ensure that contingency requirements can be satisfied.	5	
			Functional	intersects with	Contingency Plan Testing & Exercises	BCD-04	Mechanisms exist to conduct tests and/or exercises to evaluate the contingency plan's effectiveness and the organization's readiness to execute the plan.	5	
			Functional	intersects with	Incident Response Testing	IRO-06	Mechanisms exist to formally test incident response capabilities through realistic exercises to determine the operational effectiveness of those capabilities.	5	
			Functional	intersects with	Business Impact Analysis (BIA)	RSK-08	Mechanisms exist to conduct a Business Impact Analysis (BIA) to identify and assess cybersecurity and data protection risks.	5	
5.31	Legal, statutory, regulatory and contractual requirements	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Asset Governance	AST-01	Mechanisms exist to facilitate an IT Asset Management (ITAM) program to implement and manage asset management controls.	5	
			Functional	subset of	Statutory, Regulatory & Contractual Compliance	CPL-01	Mechanisms exist to facilitate the identification and implementation of relevant statutory, regulatory and contractual controls.	10	
			Functional	intersects with	Cybersecurity & Data Protection Controls Oversight	CPL-02	Mechanisms exist to provide a cybersecurity & data protection controls oversight function that reports to the organization's executive leadership.	5	
			Functional	intersects with	Export-Controlled Cryptography	CRY-01.2	Mechanisms exist to address the exporting of cryptographic technologies in compliance with relevant statutory and regulatory requirements.	5	
			Functional	intersects with	Data Privacy Requirements for Contractors & Service Providers	PRI-07.1	Mechanisms exist to include data privacy requirements in contracts and other acquisition-related documents that establish data privacy roles and responsibilities for contractors and service providers.	5	
			Functional	intersects with	Third-Party Contract Requirements	TPM-05	Mechanisms exist to require contractual requirements for cybersecurity & data privacy requirements with third-parties, reflecting the organization's needs to protect its systems, processes and data.	5	
5.32	Intellectual property rights	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Software Licensing Restrictions	AST-02.7	Mechanisms exist to protect Intellectual Property (IP) rights with software licensing restrictions.	10	
5.33	Protection of records	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	10	
			Functional	intersects with	Media & Data Retention	DCH-18	Mechanisms exist to retain media and data in accordance with applicable statutory, regulatory and contractual obligations.	5	
			Functional	intersects with	Choice & Consent	PRI-03	Mechanisms exist to authorize the processing of their Personal Data (PD) prior to its collection that: ▪ Uses plain language and provide examples to illustrate the potential data privacy risks of the authorization; and ▪ Provides a means for users to decline the authorization.	5	
			Functional	intersects with	Restrict Collection To Identified Purpose	PRI-04	Mechanisms exist to collect Personal Data (PD) only for the purposes identified in the data privacy notice and includes protections against collecting PD from minors without appropriate parental, or legal guardian, consent.	5	
			Functional	intersects with	Personal Data Retention & Disposal	PRI-05	Mechanisms exist to: ▪ Retain Personal Data (PD), including metadata, for an organization-defined time period to fulfill the purpose(s) identified in the notice or as required by law; ▪ Dispose of, destroys, erases, and/or anonymizes the PD, regardless of the method of storage; and ▪ Use organization-defined techniques or methods to ensure secure deletion or destruction of PD (including originals, copies and archived records).	5	
			Functional	intersects with	Internal Use of Personal Data For Testing, Training and Research	PRI-05.1	Mechanisms exist to address the use of Personal Data (PD) for internal testing, training and research that: ▪ Takes measures to limit or minimize the amount of PD used for internal testing, training and research purposes; and ▪ Authorizes the use of PD when such information is required for internal testing, training and research.	5	
			Functional	intersects with	Usage Restrictions of Sensitive Personal Data	PRI-05.4	Mechanisms exist to restrict the use of Personal Data (PD) to only the authorized purpose(s) consistent with applicable laws, regulations and in data privacy notices.	5	
			Functional	intersects with	Information Sharing With Third Parties	PRI-07	Mechanisms exist to disclose Personal Data (PD) to third-parties only for the purposes identified in the data privacy notice and with the implicit or explicit consent of the data subject.	5	
			Functional	intersects with	Data Privacy Requirements for Contractors & Service Providers	PRI-07.1	Mechanisms exist to include data privacy requirements in contracts and other acquisition-related documents that establish data privacy roles and responsibilities for contractors and service providers.	5	
			Functional	intersects with	Data Protection Impact Assessment (DPIA)	RSK-10	Mechanisms exist to conduct a Data Protection Impact Assessment (DPIA) on systems, applications and services that store, process and/or transmit Personal Data (PD) to identify and remediate reasonably-expected risks.	5	
5.34	Privacy and protection of PII	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Data Privacy Program	PRI-01	Mechanisms exist to facilitate the implementation and operation of data privacy controls.	10	
			Functional	intersects with	Security of Personal Data	PRI-01.6	Mechanisms exist to ensure Personal Data (PD) is protected by security safeguards that are sufficient and appropriately scoped to protect the confidentiality and integrity of the PD.	5	
			Functional	intersects with	Data Privacy Notice	PRI-02	Mechanisms exist to: ▪ Make data privacy notice(s) available to individuals upon first interacting with an organization and subsequently as necessary; ▪ Ensures that data privacy notices are clear and easy-to-understand, expressing information about Personal Data (PD) processing in plain language that meets all legal obligations; ▪ Defines the scope of PD processing activities, including the geographic locations and third-party recipients that process the PD within the scope of the data privacy notice; ▪ Content of the privacy notice is periodically reviewed and updates made as necessary; and ▪ Prior versions of the privacy notice are retained in accordance with data retention requirements.	5	
			Functional	intersects with	Purpose Specification	PRI-02.1	Mechanisms exist to identify and document the purpose(s) for which Personal Data (PD) is collected, used, maintained and shared in its data privacy notices.	5	
5.35	Independent review of information security	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Internal Audit Function	CPL-02.1	Mechanisms exist to implement an internal audit function that is capable of providing senior organization management with insights into the appropriateness of the organization's technology and information governance processes.	5	
			Functional	intersects with	Cybersecurity & Data Protection Assessments	CPL-03	Mechanisms exist to ensure managers regularly review the processes and documented procedures within their area of responsibility to adhere to appropriate cybersecurity & data protection policies, standards and other applicable requirements.	5	
			Functional	intersects with	Independent Assessors	CPL-03.1	Mechanisms exist to utilize independent assessors to evaluate cybersecurity & data protection controls at planned intervals or when the system, service or project undergoes significant changes.	5	
			Functional	intersects with	Functional Review Of Cybersecurity & Data Protection Controls	CPL-03.2	Mechanisms exist to regularly review technology assets for adherence to the organization's cybersecurity & data protection policies and standards.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
			Functional	intersects with	Audit Activities	CPL-04	Mechanisms exist to thoughtfully plan audits by including input from operational risk and compliance partners to minimize the impact of audit-related activities on business operations.	5	
5.36	Compliance with policies, rules and standards for information security	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Cybersecurity & Data Protection Controls Oversight	CPL-02	Mechanisms exist to provide a cybersecurity & data protection controls oversight function that reports to the organization's executive leadership.	5	
			Functional	intersects with	Cybersecurity & Data Protection Assessments	CPL-03	Mechanisms exist to ensure managers regularly review the processes and documented procedures within their area of responsibility to adhere to appropriate cybersecurity & data protection policies, standards and other applicable requirements.	5	
			Functional	intersects with	Functional Review Of Cybersecurity & Data Protection Controls	CPL-03.2	Mechanisms exist to regularly review technology assets for adherence to the organization’s cybersecurity & data protection policies and standards.	5	
			Functional	intersects with	Testing, Training & Monitoring	PRI-08	Mechanisms exist to conduct cybersecurity & data privacy testing, training and monitoring activities	5	
5.37	Documented operating procedures	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Cybersecurity & Data Protection Governance Program	GOV-01	Mechanisms exist to facilitate the implementation of cybersecurity & data protection governance controls.	10	
			Functional	intersects with	Publishing Cybersecurity & Data Protection Documentation	GOV-02	Mechanisms exist to establish, maintain and disseminate cybersecurity & data protection policies, standards and procedures.	5	
			Functional	intersects with	Periodic Review & Update of Cybersecurity & Data Protection Program	GOV-03	Mechanisms exist to review the cybersecurity & data privacy program, including policies, standards and procedures, at planned intervals or if significant changes occur to ensure their continuing suitability, adequacy and effectiveness.	5	
			Functional	subset of	Operations Security	OPS-01	Mechanisms exist to facilitate the implementation of operational security controls.	10	
			Functional	equal	Standardized Operating Procedures (SOP)	OPS-01.1	Mechanisms exist to identify and document Standardized Operating Procedures (SOP), or similar documentation, to enable the proper execution of day-to-day / assigned tasks.	10	
			Functional	intersects with	Service Delivery (Business Process Support)	OPS-03	Mechanisms exist to define supporting business processes and implement appropriate governance and service management to ensure appropriate planning, delivery and support of the organization's technology capabilities supporting business functions, workforce, and/or customers based on industry-recognized standards to achieve the specific goals of the process area.	5	
6.0	People controls	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
6.1	Screening	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Personnel Screening	HRS-04	Mechanisms exist to manage personnel security risk by screening individuals prior to authorizing access.	5	
			Functional	intersects with	Roles With Special Protection Measures	HRS-04.1	Mechanisms exist to ensure that individuals accessing a system that stores, transmits or processes information requiring special protection satisfy organization-defined personnel screening criteria.	5	
6.2	Terms and conditions of employment	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Terms of Employment	HRS-05	Mechanisms exist to require all employees and contractors to apply cybersecurity & data privacy principles in their daily work.	5	
			Functional	intersects with	Rules of Behavior	HRS-05.1	Mechanisms exist to define acceptable and unacceptable rules of behavior for the use of technologies, including consequences for unacceptable behavior.	5	
			Functional	intersects with	Social Media & Social Networking Restrictions	HRS-05.2	Mechanisms exist to define rules of behavior that contain explicit restrictions on the use of social media and networking sites, posting information on commercial websites and sharing account information.	5	
			Functional	intersects with	Use of Communications Technology	HRS-05.3	Mechanisms exist to establish usage restrictions and implementation guidance for communications technologies based on the potential to cause damage to systems, if used maliciously.	5	
			Functional	intersects with	Use of Mobile Devices	HRS-05.5	Mechanisms exist to manage business risks associated with permitting mobile device access to organizational resources.	5	
6.3	Information security awareness, education and training	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Cybersecurity & Data Privacy-Minded Workforce	SAT-01	Mechanisms exist to facilitate the implementation of security workforce development and awareness controls.	10	
			Functional	intersects with	Cybersecurity & Data Privacy Awareness Training	SAT-02	Mechanisms exist to provide all employees and contractors appropriate awareness education and training that is relevant for their job function.	5	
			Functional	intersects with	Role-Based Cybersecurity & Data Privacy Training	SAT-03	Mechanisms exist to provide role-based cybersecurity & data privacy-related training: ▪ Before authorizing access to the system or performing assigned duties; ▪ When required by system changes; and ▪ Annually thereafter.	5	
6.4	Disciplinary process	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Personnel Sanctions	HRS-07	Mechanisms exist to sanction personnel failing to comply with established security policies, standards and procedures.	5	
			Functional	intersects with	Workplace Investigations	HRS-07.1	Mechanisms exist to conduct employee misconduct investigations when there is reasonable assurance that a policy has been violated.	5	
6.5	Responsibilities after termination or change of employment	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Personnel Transfer	HRS-08	Mechanisms exist to adjust logical and physical access authorizations to systems and facilities upon personnel reassignment or transfer, in a timely manner.	5	
			Functional	intersects with	Personnel Termination	HRS-09	Mechanisms exist to govern the termination of individual employment.	5	
			Functional	intersects with	Post-Employment Requirements	HRS-09.3	Mechanisms exist to govern former employee behavior by notifying terminated individuals of applicable, legally binding post-employment requirements for the protection of organizational information.	5	
6.6	Confidentiality or non-disclosure agreements	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Confidentiality Agreements	HRS-06.1	Mechanisms exist to require Non-Disclosure Agreements (NDAs) or similar confidentiality agreements that reflect the needs to protect data and operational details, or both employees and third-parties.	5	
			Functional	intersects with	Third-Party Contract Requirements	TPM-05	Mechanisms exist to require contractual requirements for cybersecurity & data privacy requirements with third-parties, reflecting the organization’s needs to protect its systems, processes and data.	5	
6.7	Remote working	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Remote Access	NET-14	Mechanisms exist to define, control and review organization-approved, secure remote access methods.	5	
			Functional	intersects with	Work From Anywhere (WFA) - Telecommuting Security	NET-14.5	Mechanisms exist to define secure telecommuting practices and govern remote access to systems and data for remote workers.	5	
6.8	Information security event reporting	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Cybersecurity & Data Protection Controls Oversight	CPL-02	Mechanisms exist to provide a cybersecurity & data protection controls oversight function that reports to the organization's executive leadership.	5	
			Functional	intersects with	Incident Handling	IRO-02	Mechanisms exist to cover the preparation, automated detection or intake of incident reporting, analysis, containment, eradication and recovery.	5	
			Functional	intersects with	Incident Stakeholder Reporting	IRO-10	Mechanisms exist to timely-report incidents to applicable: ▪ Internal stakeholders; ▪ Affected clients & third-parties; and ▪ Regulatory authorities.	5	
			Functional	intersects with	Central Review & Analysis	MON-02.2	Automated mechanisms exist to centrally collect, review and analyze audit records from multiple sources.	5	
			Functional	intersects with	Monitoring Reporting	MON-06	Mechanisms exist to provide an event log report generation capability to aid in detecting and assessing anomalous activities.	5	
7.0	Physical controls	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
7.1	Physical security perimeters	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Physical & Environmental Protections	PES-01	Mechanisms exist to facilitate the operation of physical and environmental protection controls.	10	
			Functional	intersects with	Physical Access Authorizations	PES-02	Physical access control mechanisms exist to maintain a current list of personnel with authorized access to organizational facilities (except for those areas within the facility officially designated as publicly accessible).	5	
			Functional	intersects with	Physical Access Control	PES-03	Physical access control mechanisms exist to enforce physical access authorizations for all physical access points (including designated entry/exit points) to facilities (excluding those areas within the facility officially designated as publicly accessible).	5	
			Functional	intersects with	Controlled Ingress & Egress Points	PES-03.1	Physical access control mechanisms exist to limit and monitor physical access through controlled ingress and egress points.	5	
			Functional	intersects with	Physical Security of Offices, Rooms & Facilities	PES-04	Mechanisms exist to identify systems, equipment and respective operating environments that require limited physical access so that appropriate physical access controls are designed and implemented for offices, rooms and facilities.	5	
7.2	Physical entry	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Controlled Ingress & Egress Points	PES-03.1	Physical access control mechanisms exist to limit and monitor physical access through controlled ingress and egress points.	5	
			Functional	intersects with	Physical Access Logs	PES-03.3	Physical access control mechanisms generate a log entry for each access attempt through controlled ingress and egress points.	5	
			Functional	intersects with	Working in Secure Areas	PES-04.1	Physical security mechanisms exist to allow only authorized personnel access to secure areas.	5	
			Functional	intersects with	Visitor Control	PES-06	Physical access control mechanisms exist to identify, authorize and monitor visitors before allowing access to the facility (other than areas designated as publicly accessible).	5	
			Functional	intersects with	Delivery & Removal	PES-10	Physical security mechanisms exist to isolate information processing facilities from points such as delivery and loading areas and other points to avoid unauthorized access.	5	
7.3	Securing offices, rooms and facilities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Physical Security of Offices, Rooms & Facilities	PES-04	Mechanisms exist to identify systems, equipment and respective operating environments that require limited physical access so that appropriate physical access controls are designed and implemented for offices, rooms and facilities.	5	
			Functional	intersects with	Working in Secure Areas	PES-04.1	Physical security mechanisms exist to allow only authorized personnel access to secure areas.	5	
			Functional	intersects with	Equipment Siting & Protection	PES-12	Physical security mechanisms exist to locate system components within the facility to minimize potential damage from physical and environmental hazards and to minimize the opportunity for unauthorized access.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
7.4	Physical security monitoring	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Physical Access Control	PES-03	Physical access control mechanisms exist to enforce physical access authorizations for all physical access points (including designated entry/exit points) to facilities (excluding those areas within the facility officially designated as publicly accessible).	5	
			Functional	intersects with	Monitoring Physical Access	PES-05	Physical access control mechanisms exist to monitor for, detect and respond to physical security incidents.	5	
			Functional	intersects with	Intrusion Alarms / Surveillance Equipment	PES-05.1	Physical access control mechanisms exist to monitor physical intrusion alarms and surveillance equipment.	5	
			Functional	intersects with	Monitoring Physical Access To Information Systems	PES-05.2	Facility security mechanisms exist to monitor physical access to critical information systems or sensitive/regulated data, in addition to the physical access monitoring of the facility.	5	
7.5	Protecting against physical and environmental threats	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Physical & Environmental Protections	PES-01	Mechanisms exist to facilitate the operation of physical and environmental protection controls.	10	
			Functional	intersects with	Physical Security of Offices, Rooms & Facilities	PES-04	Mechanisms exist to identify systems, equipment and respective operating environments that require limited physical access so that appropriate physical access controls are designed and implemented for offices, rooms and facilities.	5	
			Functional	intersects with	Equipment Siting & Protection	PES-12	Physical security mechanisms exist to locate system components within the facility to minimize potential damage from physical and environmental hazards and to minimize the opportunity for unauthorized access.	5	
			Functional	subset of	Risk Management Program	RSK-01	Mechanisms exist to facilitate the implementation of strategic, operational and tactical risk management controls.	10	
			Functional	intersects with	Risk Assessment	RSK-04	Mechanisms exist to conduct recurring assessments of risk that includes the likelihood and magnitude of harm, from unauthorized access, use, disclosure, disruption, modification or destruction of the organization's systems and data.	5	
7.6	Working in secure areas	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Working in Secure Areas	PES-04.1	Physical security mechanisms exist to allow only authorized personnel access to secure areas.	10	
7.7	Clear desk and clear screen	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Unattended End-User Equipment	AST-06	Mechanisms exist to implement enhanced protection measures for unattended systems to protect against tampering and unauthorized access.	5	
			Functional	subset of	Endpoint Security	END-01	Mechanisms exist to facilitate the implementation of endpoint security controls.	10	
			Functional	intersects with	Physical Security of Offices, Rooms & Facilities	PES-04	Mechanisms exist to identify systems, equipment and respective operating environments that require limited physical access so that appropriate physical access controls are designed and implemented for offices, rooms and facilities.	5	
7.8	Equipment siting and protection	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Equipment Siting & Protection	PES-12	Physical security mechanisms exist to locate system components within the facility to minimize potential damage from physical and environmental hazards and to minimize the opportunity for unauthorized access.	10	
7.9	Security of assets off-premises	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Asset Governance	AST-01	Mechanisms exist to facilitate an IT Asset Management (ITAM) program to implement and manage asset management controls.	10	
			Functional	intersects with	Security of Assets & Media	AST-05	Mechanisms exist to maintain strict control over the internal or external distribution of any kind of sensitive/regulated media.	5	
			Functional	intersects with	Unattended End-User Equipment	AST-06	Mechanisms exist to implement enhanced protection measures for unattended systems to protect against tampering and unauthorized access.	5	
			Functional	intersects with	Tamper Detection	AST-08	Mechanisms exist to periodically inspect systems and system components for Indicators of Compromise (IoC).	5	
			Functional	intersects with	Tamper Protection	AST-15	Mechanisms exist to verify logical configuration settings and the physical integrity of critical technology assets throughout their lifecycle.	5	
			Functional	intersects with	Work From Anywhere (WFA) - Telecommuting Security	NET-14.5	Mechanisms exist to define secure telecommuting practices and govern remote access to systems and data for remote workers.	5	
7.10	Storage media	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Removal of Assets	AST-11	Mechanisms exist to authorize, control and track technology assets entering and exiting organizational facilities.	5	
			Functional	intersects with	Use of Personal Devices	AST-12	Mechanisms exist to restrict the possession and usage of personally-owned technology devices within organization-controlled facilities.	5	
			Functional	subset of	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	10	
			Functional	intersects with	Media Access	DCH-03	Mechanisms exist to control and restrict access to digital and non-digital media to authorized individuals.	5	
			Functional	intersects with	Media Storage	DCH-06	Mechanisms exist to: ▪ Physically control and securely store digital and non-digital media within controlled areas using organization-defined security measures; and ▪ Protect system media until the media are destroyed or sanitized using approved equipment, techniques and procedures.	5	
			Functional	intersects with	Media Transportation	DCH-07	Mechanisms exist to protect and control digital and non-digital media during transport outside of controlled areas using appropriate security measures.	5	
			Functional	intersects with	Encrypting Data In Storage Media	DCH-07.2	Cryptographic mechanisms exist to protect the confidentiality and integrity of information stored on digital media during transport outside of controlled areas.	5	
			Functional	intersects with	Physical Media Disposal	DCH-08	Mechanisms exist to securely dispose of media when it is no longer required, using formal procedures.	5	
			Functional	intersects with	Media Use	DCH-10	Mechanisms exist to restrict the use of types of digital media on systems or system components.	5	
			Functional	intersects with	Limitations on Use	DCH-10.1	Mechanisms exist to restrict the use and distribution of sensitive / regulated data.	5	
			Functional	intersects with	Removable Media Security	DCH-12	Mechanisms exist to restrict removable media in accordance with data handling and acceptable usage parameters.	5	
7.11	Supporting utilities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Supporting Utilities	PES-07	Facility security mechanisms exist to protect power equipment and power cabling for the system from damage and destruction.	5	
			Functional	intersects with	Automatic Voltage Controls	PES-07.1	Facility security mechanisms exist to utilize automatic voltage controls for critical system components.	5	
			Functional	intersects with	Emergency Shutoff	PES-07.2	Facility security mechanisms exist to shut off power in emergency situations by: ▪ Placing emergency shutoff switches or devices in close proximity to systems or system components to facilitate safe and easy access for personnel; and ▪ Protecting emergency power shutoff capability from unauthorized activation.	5	
			Functional	intersects with	Emergency Power	PES-07.3	Facility security mechanisms exist to supply alternate power, capable of maintaining minimally-required operational capability, in the event of an extended loss of the primary power source.	5	
			Functional	intersects with	Emergency Lighting	PES-07.4	Facility security mechanisms exist to utilize and maintain automatic emergency lighting that activates in the event of a power outage or disruption and that covers emergency exits and evacuation routes within the facility.	5	
7.12	Cabling security	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Supporting Utilities	PES-07	Facility security mechanisms exist to protect power equipment and power cabling for the system from damage and destruction.	5	
			Functional	intersects with	Equipment Siting & Protection	PES-12	Physical security mechanisms exist to locate system components within the facility to minimize potential damage from physical and environmental hazards and to minimize the opportunity for unauthorized access.	5	
			Functional	intersects with	Transmission Medium Security	PES-12.1	Physical security mechanisms exist to protect power and telecommunications cabling carrying data or supporting information services from interception, interference or damage.	5	
7.13	Equipment maintenance	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Maintenance Operations	MNT-01	Mechanisms exist to develop, disseminate, review & update procedures to facilitate the implementation of maintenance controls across the enterprise.	10	
			Functional	intersects with	Controlled Maintenance	MNT-02	Mechanisms exist to conduct controlled maintenance activities throughout the lifecycle of the system, application or service.	5	
			Functional	intersects with	Timely Maintenance	MNT-03	Mechanisms exist to obtain maintenance support and/or spare parts for systems within a defined Recovery Time Objective (RTO).	5	
7.14	Secure disposal or re-use of equipment	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Secure Disposal, Destruction or Re-Use of Equipment	AST-09	Mechanisms exist to securely dispose of, destroy or repurpose system components using organization-defined techniques and methods to prevent information being recovered from these components.	10	
8.0	Technological controls	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
8.1	User endpoint devices	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Unattended End-User Equipment	AST-06	Mechanisms exist to implement enhanced protection measures for unattended systems to protect against tampering and unauthorized access.	5	
			Functional	intersects with	Kiosks & Point of Interaction (PoI) Devices	AST-07	Mechanisms exist to appropriately protect devices that capture sensitive/regulated data via direct physical interaction from tampering and substitution.	5	
			Functional	intersects with	Use of Personal Devices	AST-12	Mechanisms exist to restrict the possession and usage of personally-owned technology devices within organization-controlled facilities.	5	
			Functional	subset of	Endpoint Security	END-01	Mechanisms exist to facilitate the implementation of endpoint security controls.	10	
			Functional	intersects with	Endpoint Protection Measures	END-02	Mechanisms exist to protect the confidentiality, integrity, availability and safety of endpoint devices.	5	
			Functional	intersects with	Account Lockout	IAC-22	Mechanisms exist to enforce a limit for consecutive invalid login attempts by a user during an organization-defined time period and automatically locks the account when the maximum number of unsuccessful attempts is exceeded.	5	
			Functional	subset of	Centralized Management Of Mobile Devices	MDM-01	Mechanisms exist to implement and govern Mobile Device Management (MDM) controls.	10	
			Functional	intersects with	Access Control For Mobile Devices	MDM-02	Mechanisms exist to enforce access control requirements for the connection of mobile devices to organizational systems.	5	
			Functional	intersects with	Remote Purging	MDM-05	Mechanisms exist to remotely purge selected information from mobile devices.	5	
8.2	Privileged access rights	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Privileged Account Management (PAM)	IAC-16	Mechanisms exist to restrict and control privileged access rights for users and services.	5	
			Functional	intersects with	Privileged Account Inventories	IAC-16.1	Mechanisms exist to inventory all privileged accounts and validate that each person with elevated privileges is authorized by the appropriate level of organizational management.	5	
			Functional	intersects with	Periodic Review of Account Privileges	IAC-17	Mechanisms exist to periodically-review the privileges assigned to individuals and service accounts to validate the need for such privileges and reassign or remove unnecessary privileges, as necessary.	5	
			Functional	intersects with	Privileged Accounts	IAC-21.3	Mechanisms exist to restrict the assignment of privileged accounts to organization-management approved personnel and/or roles.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
8.3	Information access restriction	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Configuration Management Program	CFG-01	Mechanisms exist to facilitate the implementation of configuration management controls.	10	
			Functional	intersects with	System Hardening Through Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for technology platforms that are consistent with industry-accepted system hardening standards.	5	
			Functional	intersects with	Least Functionality	CFG-03	Mechanisms exist to configure systems to provide only essential capabilities by specifically prohibiting or restricting the use of ports, protocols, and/or services.	5	
			Functional	intersects with	Role-Based Access Control (RBAC)	IAC-08	Mechanisms exist to enforce a Role-Based Access Control (RBAC) policy over users and resources that applies need-to-know and fine-grained access control for sensitive/regulated data access.	5	
			Functional	intersects with	Least Privilege	IAC-21	Mechanisms exist to utilize the concept of least privilege, allowing only authorized access to processes necessary to accomplish assigned tasks in accordance with organizational business functions.	5	
			Functional	intersects with	Data Flow Enforcement – Access Control Lists (ACLs)	NET-04	Mechanisms exist to design, implement and review firewall and router configurations to restrict connections between untrusted networks and internal systems.	5	
8.4	Access to source code	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Access to Program Source Code	TDA-20	Mechanisms exist to limit privileges to change software resident within software libraries.	10	
8.5	Secure authentication	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	System Hardening Through Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for technology platforms that are consistent with industry-accepted system hardening standards.	5	
			Functional	subset of	Endpoint Security	END-01	Mechanisms exist to facilitate the implementation of endpoint security controls.	10	
			Functional	intersects with	Endpoint Protection Measures	END-02	Mechanisms exist to protect the confidentiality, integrity, availability and safety of endpoint devices.	5	
			Functional	intersects with	Trusted Path	END-09	Mechanisms exist to establish a trusted communications path between the user and the security functions of the operating system.	5	
			Functional	intersects with	Secure Log-On Procedures	SEA-17	Mechanisms exist to utilize a trusted communications path between the user and the security functions of the system.	5	
8.6	Capacity management	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Capacity & Performance Management	CAP-01	Mechanisms exist to facilitate the implementation of capacity management controls to ensure optimal system performance to meet expected and anticipated future capacity requirements.	10	
			Functional	intersects with	Capacity Planning	CAP-03	Mechanisms exist to conduct capacity planning so that necessary capacity for information processing, telecommunications and environmental support will exist during contingency operations.	5	
8.7	Protection against malware	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Malicious Code Protection (Anti-Malware)	END-04	Mechanisms exist to utilize antimalware technologies to detect and eradicate malicious code.	5	
			Functional	intersects with	Automatic Antimalware Signature Updates	END-04.1	Mechanisms exist to automatically update antimalware technologies, including signature definitions.	5	
8.8	Management of technical vulnerabilities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Periodic Review	CFG-03.1	Mechanisms exist to periodically review system configurations to identify and disable unnecessary and/or non-secure functions, ports, protocols and services.	5	
			Functional	intersects with	Cybersecurity & Data Protection Controls Oversight	CPL-02	Mechanisms exist to provide a cybersecurity & data protection controls oversight function that reports to the organization's executive leadership.	5	
			Functional	intersects with	Functional Review Of Cybersecurity & Data Protection Controls	CPL-03.2	Mechanisms exist to regularly review technology assets for adherence to the organization’s cybersecurity & data protection policies and standards.	5	
			Functional	intersects with	Vulnerabilities Related To Incidents	IRO-10.3	Mechanisms exist to report system vulnerabilities associated with reported cybersecurity & data privacy incidents to organization-defined personnel or roles.	5	
			Functional	intersects with	Testing, Training & Monitoring	PRI-08	Mechanisms exist to conduct cybersecurity & data privacy testing, training and monitoring activities	5	
			Functional	subset of	Vulnerability & Patch Management Program (VPMP)	VPM-01	Mechanisms exist to facilitate the implementation and monitoring of vulnerability management controls.	10	
			Functional	intersects with	Attack Surface Scope	VPM-01.1	Mechanisms exist to define and manage the scope for its attack surface management activities.	5	
			Functional	intersects with	Vulnerability Remediation Process	VPM-02	Mechanisms exist to ensure that vulnerabilities are properly identified, tracked and remediated.	5	
			Functional	intersects with	Vulnerability Ranking	VPM-03	Mechanisms exist to identify and assign a risk ranking to newly discovered security vulnerabilities using reputable outside sources for security vulnerability information.	5	
			Functional	intersects with	Software & Firmware Patching	VPM-05	Mechanisms exist to conduct software patching for all deployed operating systems, applications and firmware.	5	
			Functional	intersects with	Vulnerability Scanning	VPM-06	Mechanisms exist to detect vulnerabilities and configuration errors by routine vulnerability scanning of systems and applications.	5	
8.9	Configuration management	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Configuration Management Database (CMDB)	AST-02.9	Mechanisms exist to maintain a current list of approved technologies (hardware and software).	10	
			Functional	subset of	Configuration Management Program	CFG-01	Mechanisms exist to facilitate the implementation of configuration management controls.	10	
			Functional	intersects with	Assignment of Responsibility	CFG-01.1	Mechanisms exist to implement a segregation of duties for configuration management that prevents developers from performing production configuration management duties.	5	
			Functional	intersects with	System Hardening Through Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for technology platforms that are consistent with industry-accepted system hardening standards.	5	
			Functional	intersects with	Reviews & Updates	CFG-02.1	Mechanisms exist to review and update baseline configurations: ▪ At least annually; ▪ When required due to so; or ▪ As part of system component installations and upgrades.	5	
			Functional	intersects with	Least Functionality	CFG-03	Mechanisms exist to configure systems to provide only essential capabilities by specifically prohibiting or restricting the use of ports, protocols, and/or services.	5	
8.10	Information deletion	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Secure Disposal, Destruction or Re-Use of Equipment	AST-09	Mechanisms exist to securely dispose of, destroy or repurpose system components using organization-defined techniques and methods to prevent information being recovered from these components.	5	
			Functional	intersects with	Physical Media Disposal	DCH-08	Mechanisms exist to securely dispose of media when it is no longer required, using formal procedures.	5	
			Functional	intersects with	System Media Sanitization	DCH-09	Mechanisms exist to sanitize system media with the strength and integrity commensurate with the classification or sensitivity of the information prior to disposal, release out of organizational control or release for reuse.	5	
			Functional	intersects with	System Media Sanitization Documentation	DCH-09.1	Mechanisms exist to supervise, track, document and verify system media sanitization and disposal actions.	5	
			Functional	intersects with	Sanitization of Personal Data (PD)	DCH-09.3	Mechanisms exist to facilitate the sanitization of Personal Data (PD).	5	
			Functional	intersects with	Media & Data Retention	DCH-18	Mechanisms exist to retain media and data in accordance with applicable statutory, regulatory and contractual obligations.	5	
			Functional	intersects with	Information Disposal	DCH-21	Mechanisms exist to securely dispose of, destroy or erase information.	5	
			Functional	intersects with	Personal Data Retention & Disposal	PRI-05	Mechanisms exist to: ▪ Retain Personal Data (PD), including metadata, for an organization-defined time period to fulfill the purpose(s) identified in the notice or as required by law; ▪ Dispose of, destroys, erases, and/or anonymizes the PD, regardless of the method of storage; and ▪ Use organization-defined techniques or methods to ensure secure deletion or destruction of PD (including originals, copies and archived records).	5	
8.11	Data masking	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Masking Displayed Data	DCH-03.2	Mechanisms exist to apply data masking to sensitive/regulated information that is displayed or printed.	5	
			Functional	intersects with	Removal, Masking, Encryption, Hashing or Replacement of Direct Identifiers	DCH-23.4	Mechanisms exist to remove, mask, encrypt, hash or replace direct identifiers in a dataset.	5	
			Functional	intersects with	Data Masking	PRI-05.3	Mechanisms exist to mask sensitive/regulated data through data anonymization, pseudonymization, redaction or de-identification.	5	
8.12	Data leakage prevention	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Configuration Management Program	CFG-01	Mechanisms exist to facilitate the implementation of configuration management controls.	5	
			Functional	intersects with	System Hardening Through Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for technology platforms that are consistent with industry-accepted system hardening standards.	5	
			Functional	intersects with	Configure Systems, Components or Services for High-Risk Areas	CFG-02.5	Mechanisms exist to configure systems utilized in high-risk areas with more restrictive baseline configurations.	5	
			Functional	intersects with	Least Functionality	CFG-03	Mechanisms exist to configure systems to provide only essential capabilities by specifically prohibiting or restricting the use of ports, protocols, and/or services.	5	
			Functional	intersects with	Data Protection	DCH-01	Mechanisms exist to facilitate the implementation of data protection controls.	5	
			Functional	intersects with	Least Privilege	IAC-21	Mechanisms exist to utilize the concept of least privilege, allowing only authorized access to processes necessary to accomplish assigned tasks in accordance with organizational business functions.	5	
			Functional	intersects with	Network Security Controls (NSC)	NET-01	Mechanisms exist to develop, govern & update procedures to facilitate the implementation of Network Security Controls (NSC).	5	
			Functional	intersects with	Prevent Discovery of Internal Information	NET-03.3	Mechanisms exist to prevent the public disclosure of internal network information.	5	
			Functional	intersects with	Prevent Unauthorized Exfiltration	NET-03.5	Automated mechanisms exist to prevent the unauthorized exfiltration of sensitive/regulated data across managed interfaces.	5	

FDE #	FDE Name	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
			Functional	intersects with	Information Leakage Due To Electromagnetic Signals Emanations	PES-13	Facility security mechanisms exist to protect the system from information leakage due to electromagnetic signals emanations.	5	
			Functional	intersects with	Secure Engineering Principles	SEA-01	Mechanisms exist to facilitate the implementation of industry-recognized cybersecurity & data privacy practices in the specification, design, development, implementation and modification of systems and services.	5	
			Functional	intersects with	Centralized Management of Cybersecurity & Data Privacy Controls	SEA-01.1	Mechanisms exist to centrally-manage the organization-wide management and implementation of cybersecurity & data privacy controls and related processes.	5	
8.13	Information backup	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Data Backups	BCD-11	Mechanisms exist to create recurring backups of data, software and/or system images, as well as verify the integrity of these backups, to ensure the availability of the data to satisfying Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs).	5	
			Functional	intersects with	Testing for Reliability & Integrity	BCD-11.1	Mechanisms exist to routinely test backups that verify the reliability of the backup process, as well as the integrity and availability of the data.	5	
			Functional	intersects with	Separate Storage for Critical Information	BCD-11.2	Mechanisms exist to store backup copies of critical software and other security-related information in a separate facility or in a fire-rated container that is not collocated with the system being backed up.	5	
			Functional	intersects with	Cryptographic Protection	BCD-11.4	Cryptographic mechanisms exist to prevent the unauthorized disclosure and/or modification of backup information.	5	
8.14	Redundancy of information processing facilities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Alternate Storage Site	BCD-08	Mechanisms exist to establish an alternate storage site that includes both the assets and necessary agreements to permit the storage and recovery of system backup information.	5	
			Functional	intersects with	Alternate Processing Site	BCD-09	Mechanisms exist to establish an alternate processing site that provides security measures equivalent to that of the primary site.	5	
			Functional	intersects with	Redundant Secondary System	BCD-11.7	Mechanisms exist to maintain a failover system, which is not collocated with the primary system, application and/or service, which can be activated with little-to-no loss of information or disruption to operations.	5	
8.15	Logging	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Continuous Monitoring	MON-01	Mechanisms exist to facilitate the implementation of enterprise-wide monitoring controls.	10	
			Functional	intersects with	System Generated Alerts	MON-01.4	Mechanisms exist to generate, monitor, correlate and respond to alerts from physical, cybersecurity, data privacy and supply chain activities to achieve integrated situational awareness.	5	
			Functional	intersects with	Centralized Collection of Security Event Logs	MON-02	Mechanisms exist to utilize a Security Incident Event Manager (SIEM) or similar automated tool, to support the centralized collection of security-related event logs.	5	
			Functional	intersects with	Correlate Monitoring Information	MON-02.1	Automated mechanisms exist to correlate both technical and non-technical information from across the enterprise by a Security Incident Event Manager (SIEM) or similar automated tool, to enhance organization-wide situational awareness.	5	
			Functional	intersects with	Central Review & Analysis	MON-02.2	Automated mechanisms exist to centrally collect, review and analyze audit records from multiple sources.	5	
			Functional	intersects with	Content of Event Logs	MON-03	Mechanisms exist to configure systems to produce event logs that contain sufficient information to, at a minimum: ▪ Establish what type of event occurred; ▪ When (date and time) the event occurred; ▪ Where the event occurred; ▪ The source of the event; ▪ The outcome (success or failure) of the event; and ▪ The identity of any user/subject associated with the event.	5	
			Functional	intersects with	Privileged Functions Logging	MON-03.3	Mechanisms exist to log and review the actions of users and/or services with elevated privileges.	5	
			Functional	intersects with	Monitoring Reporting	MON-06	Mechanisms exist to provide an event log report generation capability to aid in detecting and assessing anomalous activities.	5	
			Functional	intersects with	Protection of Event Logs	MON-08	Mechanisms exist to protect event logs and audit tools from unauthorized access, modification and deletion.	5	
8.16	Monitoring activities	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Continuous Monitoring	MON-01	Mechanisms exist to facilitate the implementation of enterprise-wide monitoring controls.	10	
			Functional	intersects with	Intrusion Detection & Prevention Systems (IDS & IPS)	MON-01.1	Mechanisms exist to implement Intrusion Detection / Prevention Systems (IDS / IPS) technologies on critical systems, key network segments and network choke points.	5	
			Functional	intersects with	Automated Tools for Real-Time Analysis	MON-01.2	Mechanisms exist to utilize a Security Incident Event Manager (SIEM), or similar automated tool, to support near real-time analysis and incident escalation.	5	
			Functional	intersects with	Inbound & Outbound Communications Traffic	MON-01.3	Mechanisms exist to continuously monitor inbound and outbound communications traffic for unusual or unauthorized activities or conditions.	5	
			Functional	intersects with	Reviews & Updates	MON-01.8	Mechanisms exist to review event logs on an ongoing basis and escalate incidents in accordance with established timelines and procedures.	5	
			Functional	intersects with	Central Review & Analysis	MON-02.2	Automated mechanisms exist to centrally collect, review and analyze audit records from multiple sources.	5	
8.17	Clock synchronization	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Clock Synchronization	SEA-20	Mechanisms exist to utilize time-synchronization technology to synchronize all critical system clocks.	10	
8.18	Use of privileged utility programs	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Use of Privileged Utility Programs	IAC-20.3	Mechanisms exist to restrict and tightly control utility programs that are capable of overriding system and application controls.	10	
8.19	Installation of software on operational systems	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Change Management Program	CHG-01	Mechanisms exist to facilitate the implementation of a change management program.	10	
			Functional	intersects with	Configuration Change Control	CHG-02	Mechanisms exist to govern the technical configuration change control processes.	5	
			Functional	intersects with	Test, Validate & Document Changes	CHG-02.2	Mechanisms exist to appropriately test and document proposed changes in a non-production environment before changes are implemented in a production environment.	5	
			Functional	intersects with	Prohibit Installation Without Privileged Status	END-03	Automated mechanisms exist to prohibit software installations without explicitly assigned privileged status.	5	
			Functional	intersects with	Governing Access Restriction for Change	END-03.2	Mechanisms exist to define, document, approve and enforce access restrictions associated with changes to systems.	5	
8.20	Networks security	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Network Diagrams & Data Flow Diagrams (DFDs)	AST-04	Mechanisms exist to maintain network architecture diagrams that: ▪ Contain sufficient detail to assess the security of the network's architecture; ▪ Reflect the current architecture of the network environment; and ▪ Document all sensitive/regulated data flows.	5	
			Functional	subset of	Network Security Controls (NSC)	NET-01	Mechanisms exist to develop, govern & update procedures to facilitate the implementation of Network Security Controls (NSC).	10	
			Functional	intersects with	Layered Network Defenses	NET-02	Mechanisms exist to implement security functions as a layered structure that minimizes interactions between layers of the design and avoids any dependence by lower layers on the functionality or correctness of higher layers.	5	
			Functional	intersects with	Boundary Protection	NET-03	Mechanisms exist to monitor and control communications at the external network boundary and at key internal boundaries within the network.	5	
			Functional	intersects with	Data Flow Enforcement – Access Control Lists (ACLs)	NET-04	Mechanisms exist to design, implement and review firewall and router configurations to restrict connections between untrusted networks and internal systems.	5	
			Functional	intersects with	Deny Traffic by Default & Allow Traffic by Exception	NET-04.1	Mechanisms exist to configure firewall and router configurations to deny network traffic by default and allow network traffic by exception (e.g., deny all, permit by exception).	5	
			Functional	intersects with	Network Segmentation (macrosegementation)	NET-06	Mechanisms exist to ensure network architecture utilizes network segmentation to isolate systems, applications and services that protections from other network resources.	5	
			Functional	intersects with	DMZ Networks	NET-08.1	Mechanisms exist to monitor De-Militarized Zone (DMZ) network segments to separate untrusted networks from trusted networks.	5	
8.21	Security of network services	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Network Security Controls (NSC)	NET-01	Mechanisms exist to develop, govern & update procedures to facilitate the implementation of Network Security Controls (NSC).	10	
			Functional	intersects with	Boundary Protection	NET-03	Mechanisms exist to monitor and control communications at the external network boundary and at key internal boundaries within the network.	5	
			Functional	intersects with	Network Intrusion Detection / Prevention Systems (NIDS / NIPS)	NET-08	Mechanisms exist to employ Network Intrusion Detection / Prevention Systems (NIDS/NIPS) to detect and/or prevent intrusions into the network.	5	
			Functional	intersects with	Wireless Networking	NET-15	Mechanisms exist to control authorized wireless usage and monitor for unauthorized wireless access.	5	
			Functional	intersects with	Third-Party Contract Requirements	TPM-05	Mechanisms exist to require contractual requirements for cybersecurity & data privacy requirements with third-parties, reflecting the organization’s needs to protect its systems, processes and data.	5	
			Functional	intersects with	Review of Third-Party Services	TPM-08	Mechanisms exist to monitor, regularly review and audit External Service Providers (ESPs) for compliance with established contractual requirements for cybersecurity & data privacy controls.	5	
8.22	Segregation of networks	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Network Segmentation (macrosegementation)	NET-06	Mechanisms exist to ensure network architecture utilizes network segmentation to isolate systems, applications and services that protections from other network resources.	5	
			Functional	intersects with	Security Management Subnets	NET-06.1	Mechanisms exist to implement security management subnets to isolate security tools and support components from other internal system components by implementing separate subnetworks with managed interfaces to other components of the system.	5	
			Functional	intersects with	Use of Demilitarized Zones (DMZ)	WEB-02	Mechanisms exist to utilize a Demilitarized Zone (DMZ) to restrict inbound traffic to authorized devices on certain services, protocols and ports.	5	
8.23	Web filtering	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	DNS & Content Filtering	NET-18	Mechanisms exist to force Internet-bound network traffic through a proxy device (e.g., Policy Enforcement Point (PEP)) for URL content filtering and DNS filtering to limit a user's ability to connect to dangerous or prohibited Internet sites.	10	
			Functional	subset of	Use of Cryptographic Controls	CRY-01	Mechanisms exist to facilitate the implementation of cryptographic protections controls using known public standards and trusted cryptographic technologies.	10	
			Functional	intersects with	Transmission Confidentiality	CRY-03	Cryptographic mechanisms exist to protect the confidentiality of data being transmitted.	5	

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8.24	Use of cryptography	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Transmission Integrity	CRY-04	Cryptographic mechanisms exist to protect the integrity of data being transmitted.	5	
			Functional	intersects with	Encrypting Data At Rest	CRY-05	Cryptographic mechanisms exist to prevent unauthorized disclosure of data at rest.	5	
			Functional	intersects with	Cryptographic Key Management	CRY-09	Mechanisms exist to facilitate cryptographic key management controls to protect the confidentiality, integrity and availability of keys.	5	
			Functional	intersects with	Cryptographic Key Loss or Change	CRY-09.3	Mechanisms exist to ensure the availability of information in the event of the loss of cryptographic keys by individual users.	5	
			Functional	intersects with	Control & Distribution of Cryptographic Keys	CRY-09.4	Mechanisms exist to facilitate the secure distribution of symmetric and asymmetric cryptographic keys using industry recognized key management technology and processes.	5	
8.25	Secure development life cycle	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	System Hardening Through Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for technology platforms that are consistent with industry-accepted system hardening standards.	5	
			Functional	intersects with	Development & Test Environment Configurations	CFG-02.4	Mechanisms exist to manage baseline configurations for development and test environments separately from operational baseline configurations to minimize the risk of unintentional changes.	5	
			Functional	intersects with	Threat Analysis & Flaw Remediation During Development	IAO-04	Mechanisms exist to require system developers and integrators to create and execute a Security Test and Evaluation (ST&E) plan to identify and remediate flaws during development.	5	
			Functional	intersects with	Secure Development Life Cycle (SDLC) Management	PRM-07	Mechanisms exist to ensure changes to systems within the Secure Development Life Cycle (SDLC) are controlled through formal change control procedures.	5	
			Functional	subset of	Technology Development & Acquisition	TDA-01	Mechanisms exist to facilitate the implementation of tailored development and acquisition strategies, contract tools and procurement methods to meet unique business needs.	10	
			Functional	intersects with	Minimum Viable Product (MVP) Security Requirements	TDA-02	Mechanisms exist to ensure risk-based technical and functional specifications are established to define a Minimum Viable Product (MVP).	5	
			Functional	intersects with	Development Methods, Techniques & Processes	TDA-02.3	Mechanisms exist to require software developers to ensure that their software development processes employ industry-recognized secure practices for secure programming, engineering methods, quality control processes and validation techniques to minimize flawed and/or malformed software.	5	
			Functional	intersects with	Secure Coding	TDA-06	Mechanisms exist to develop applications based on secure coding principles.	5	
			Functional	intersects with	Secure Development Environments	TDA-07	Mechanisms exist to maintain a segmented development network to ensure a secure development environment.	5	
			Functional	intersects with	Separation of Development, Testing and Operational Environments	TDA-08	Mechanisms exist to manage separate development, testing and operational environments to reduce the risks of unauthorized access or changes to the operational environment and to ensure no impact to production systems.	5	
			Functional	intersects with	Cybersecurity & Data Privacy Testing Throughout Development	TDA-09	Mechanisms exist to require system developers/integrators consult with cybersecurity & data privacy personnel to: ▪ Create and implement a Security Test and Evaluation (ST&E) plan; ▪ Implement a verifiable flaw remediation process to correct weaknesses and deficiencies identified during the security testing and evaluation process; and ▪ Document the results of the security testing/evaluation and flaw remediation processes.	5	
8.26	Application security requirements	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	System Hardening Through Baseline Configurations	CFG-02	Mechanisms exist to develop, document and maintain secure baseline configurations for technology platforms that are consistent with industry-accepted system hardening standards.	5	
			Functional	intersects with	Application & Program Interface (API) Security	CLD-04	Mechanisms exist to ensure support for secure interoperability between components with Application & Program Interfaces (APIs).	5	
			Functional	intersects with	Use of Cryptographic Controls	CRY-01	Mechanisms exist to facilitate the implementation of cryptographic protections controls using known public standards and trusted cryptographic technologies.	5	
			Functional	intersects with	Transmission Confidentiality	CRY-03	Cryptographic mechanisms exist to protect the confidentiality of data being transmitted.	5	
			Functional	intersects with	Transmission Integrity	CRY-04	Cryptographic mechanisms exist to protect the integrity of data being transmitted.	5	
			Functional	intersects with	Cybersecurity & Data Privacy Requirements Definition	PRM-05	Mechanisms exist to identify critical system components and functions by performing a criticality analysis for critical systems, system components or services at pre-defined decision points in the Secure Development Life Cycle (SDLC).	5	
			Functional	subset of	Secure Engineering Principles	SEA-01	Mechanisms exist to facilitate the implementation of industry-recognized cybersecurity & data privacy practices in the specification, design, development, implementation and modification of systems and services.	10	
			Functional	intersects with	Alignment With Enterprise Architecture	SEA-02	Mechanisms exist to develop an enterprise architecture, aligned with industry-recognized leading practices, with consideration for cybersecurity & data privacy principles that addresses risk to organizational operations, assets, individuals, other organizations.	5	
			Functional	intersects with	Secure Coding	TDA-06	Mechanisms exist to develop applications based on secure coding principles.	5	
8.27	Secure system architecture and engineering principles	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Periodic Review	CFG-03.1	Mechanisms exist to periodically review system configurations to identify and disable unnecessary and/or non-secure functions, ports, protocols and services.	5	
			Functional	equal	Secure Engineering Principles	SEA-01	Mechanisms exist to facilitate the implementation of industry-recognized cybersecurity & data privacy practices in the specification, design, development, implementation and modification of systems and services.	10	
			Functional	intersects with	Developer Architecture & Design	TDA-05	Mechanisms exist to require the developers of systems, system components or services to produce a design specification and security architecture that: ▪ Is consistent with and supportive of the organization’s security architecture which is established within and is an integrated part of the organization’s enterprise architecture; ▪ Accurately and completely describes the required security functionality and the allocation of security controls among physical and logical components; and ▪ Expresses how individual security functions, mechanisms and services work together to provide required security capabilities and a unified approach to protection.	5	
			Functional	intersects with	Secure Coding	TDA-06	Mechanisms exist to develop applications based on secure coding principles.	5	
8.28	Secure coding	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	equal	Secure Coding	TDA-06	Mechanisms exist to develop applications based on secure coding principles.	10	
8.29	Security testing in development and acceptance	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Assessments	IAO-02	Mechanisms exist to formally assess the cybersecurity & data privacy controls in systems, applications and services through Information Assurance Program (IAP) activities to determine the extent to which the controls are implemented correctly, operating as intended and producing the desired outcome with respect to meeting expected requirements.	5	
			Functional	intersects with	Specialized Assessments	IAO-02.2	Mechanisms exist to conduct specialized assessments for: ▪ Statutory, regulatory and contractual compliance obligations; ▪ Monitoring capabilities; ▪ Mobile devices; ▪ Databases; ▪ Application security; ▪ Embedded technologies (e.g., IoT, OT, etc.); ▪ Vulnerability management; ▪ Malicious code; ▪ Insider threats and ▪ Performance/load testing.	5	
			Functional	intersects with	Minimum Viable Product (MVP) Security Requirements	TDA-02	Mechanisms exist to ensure risk-based technical and functional specifications are established to define a Minimum Viable Product (MVP).	5	
			Functional	intersects with	Development Methods, Techniques & Processes	TDA-02.3	Mechanisms exist to require software developers to ensure that their software development processes employ industry-recognized secure practices for secure programming, engineering methods, quality control processes and validation techniques to minimize flawed and/or malformed software.	5	
			Functional	intersects with	Criticality Analysis	TDA-06.1	Mechanisms exist to require the developer of the system, system component or service to perform a criticality analysis at organization-defined decision points in the Secure Development Life Cycle (SDLC).	5	
			Functional	intersects with	Cybersecurity & Data Privacy Testing Throughout Development	TDA-09	Mechanisms exist to require system developers/integrators consult with cybersecurity & data privacy personnel to: ▪ Create and implement a Security Test and Evaluation (ST&E) plan; ▪ Implement a verifiable flaw remediation process to correct weaknesses and deficiencies identified during the security testing and evaluation process; and ▪ Document the results of the security testing/evaluation and flaw remediation processes.	5	
			Functional	intersects with	Supply Chain Risk Management (SCRM) Plan	RSK-09	Mechanisms exist to develop a plan for Supply Chain Risk Management (SCRM) associated with the development, acquisition, maintenance and disposal of systems, system components and services, including documenting selected mitigating actions and monitoring performance against those plans.	5	
			Functional	intersects with	Supply Chain Risk Assessment	RSK-09.1	Mechanisms exist to periodically assess supply chain risks associated with systems, system components and services.	5	
			Functional	subset of	Technology Development & Acquisition	TDA-01	Mechanisms exist to facilitate the implementation of tailored development and acquisition strategies, contract tools and procurement methods to meet unique business needs.	10	
			Functional	intersects with	Minimum Viable Product (MVP) Security Requirements	TDA-02	Mechanisms exist to ensure risk-based technical and functional specifications are established to define a Minimum Viable Product (MVP).	5	

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8.30	Outsourced development	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Developer Architecture & Design	TDA-05	Mechanisms exist to require the developers of systems, system components or services to produce a design specification and security architecture that: ▪ Is consistent with and supportive of the organization’s security architecture which is established within and is an integrated part of the organization’s enterprise architecture; ▪ Accurately and completely describes the required security functionality and the allocation of security controls among physical and logical components; and ▪ Expresses how individual security functions, mechanisms and services work together to provide required security capabilities and a unified approach to protection.	5	
			Functional	intersects with	Secure Coding	TDA-06	Mechanisms exist to develop applications based on secure coding principles.	5	
			Functional	intersects with	Cybersecurity & Data Privacy Testing Throughout Development	TDA-09	Mechanisms exist to require system developers/integrators consult with cybersecurity & data privacy personnel to: ▪ Create and implement a Security Test and Evaluation (ST&E) plan; ▪ Implement a verifiable flaw remediation process to correct weaknesses and deficiencies identified during the security testing and evaluation process; and ▪ Document the results of the security testing/evaluation and flaw remediation processes.	5	
			Functional	intersects with	Developer Configuration Management	TDA-14	Mechanisms exist to require system developers and integrators to perform configuration management during system design, development, implementation and operation.	5	
			Functional	intersects with	Access to Program Source Code	TDA-20	Mechanisms exist to limit privileges to change software resident within software libraries.	5	
			Functional	subset of	Third-Party Management	TPM-01	Mechanisms exist to facilitate the implementation of third-party management controls.	10	
			Functional	intersects with	Supply Chain Protection	TPM-03	Mechanisms exist to evaluate security risks associated with the services and product supply chain.	5	
			Functional	intersects with	Third-Party Services	TPM-04	Mechanisms exist to mitigate the risks associated with third-party access to the organization’s systems and data.	5	
			Functional	intersects with	Third-Party Contract Requirements	TPM-05	Mechanisms exist to require contractual requirements for cybersecurity & data privacy requirements with third-parties, reflecting the organization’s needs to protect its systems, processes and data.	5	
			Functional	intersects with	Third-Party Personnel Security	TPM-06	Mechanisms exist to control personnel security requirements including security roles and responsibilities for third-party providers.	5	
8.31	Separation of development, test and production environments	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	Secure Development Environments	TDA-07	Mechanisms exist to maintain a segmented development network to ensure a secure development environment.	5	
			Functional	intersects with	Separation of Development, Testing and Operational Environments	TDA-08	Mechanisms exist to manage separate development, testing and operational environments to reduce the risks of unauthorized access or changes to the operational environment and to ensure no impact to production systems.	5	
8.32	Change management	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Change Management Program	CHG-01	Mechanisms exist to facilitate the implementation of a change management program.	10	
			Functional	intersects with	Configuration Change Control	CHG-02	Mechanisms exist to govern the technical configuration change control processes.	5	
			Functional	intersects with	Test, Validate & Document Changes	CHG-02.2	Mechanisms exist to appropriately test and document proposed changes in a non-production environment before changes are implemented in a production environment.	5	
			Functional	intersects with	Secure Development Life Cycle (SDLC) Management	PRM-07	Mechanisms exist to ensure changes to systems within the Secure Development Life Cycle (SDLC) are controlled through formal change control procedures.	5	
			Functional	intersects with	Developer Configuration Management	TDA-14	Mechanisms exist to require system developers and integrators to perform configuration management during system design, development, implementation and operation.	5	
8.33	Test information	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	intersects with	De-Identification (Anonymization)	DCH-23	Mechanisms exist to anonymize data by removing Personal Data (PD) from datasets.	5	
			Functional	intersects with	Use of Live Data	TDA-10	Mechanisms exist to approve, document and control the use of live data in development and test environments.	5	
8.34	Protection of information systems during audit testing	Buy a copy of ISO 27002 for control content: https://www.iso.org/standard/75652.html	Functional	subset of	Statutory, Regulatory & Contractual Compliance	CPL-01	Mechanisms exist to facilitate the identification and implementation of relevant statutory, regulatory and contractual controls.	10	
			Functional	intersects with	Cybersecurity & Data Protection Controls Oversight	CPL-02	Mechanisms exist to provide a cybersecurity & data protection controls oversight function that reports to the organization's executive leadership.	5	
			Functional	intersects with	Internal Audit Function	CPL-02.1	Mechanisms exist to implement an internal audit function that is capable of providing senior organization management with insights into the appropriateness of the organization's technology and information governance processes.	5	
			Functional	intersects with	Cybersecurity & Data Protection Assessments	CPL-03	Mechanisms exist to ensure managers regularly review the processes and documented procedures within their area of responsibility to adhere to appropriate cybersecurity & data protection policies, standards and other applicable requirements.	5	
			Functional	intersects with	Audit Activities	CPL-04	Mechanisms exist to thoughtfully plan audits by including input from operational risk and compliance partners to minimize the impact of audit-related activities on business operations.	5	