Set Theory Relationship Mapping (STRM)

Reference Document : **Secure Controls Framework (SCF) version 2024.4**
Focal Document: **SEC Cybersecurity Rule (2023)**
Focal Document URL: **https://www.sec.gov/files/rules/final/2023/33-11216.pdf**
STRM URL: **https://securecontrolsframework.com/content/strm/scf-strm-sec-cybersecurity-rule.pdf**

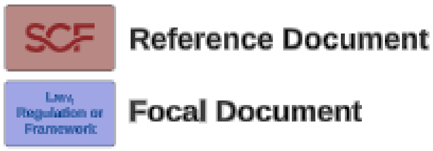
Set Theory Relationship Mapping (STRM) is well-suited for mapping between sets of elements that exist in two distinct concepts that are mostly the same as each other (e.g., cybersecurity & data privacy requirements). STRM also allows the strength of the mapping to be captured.

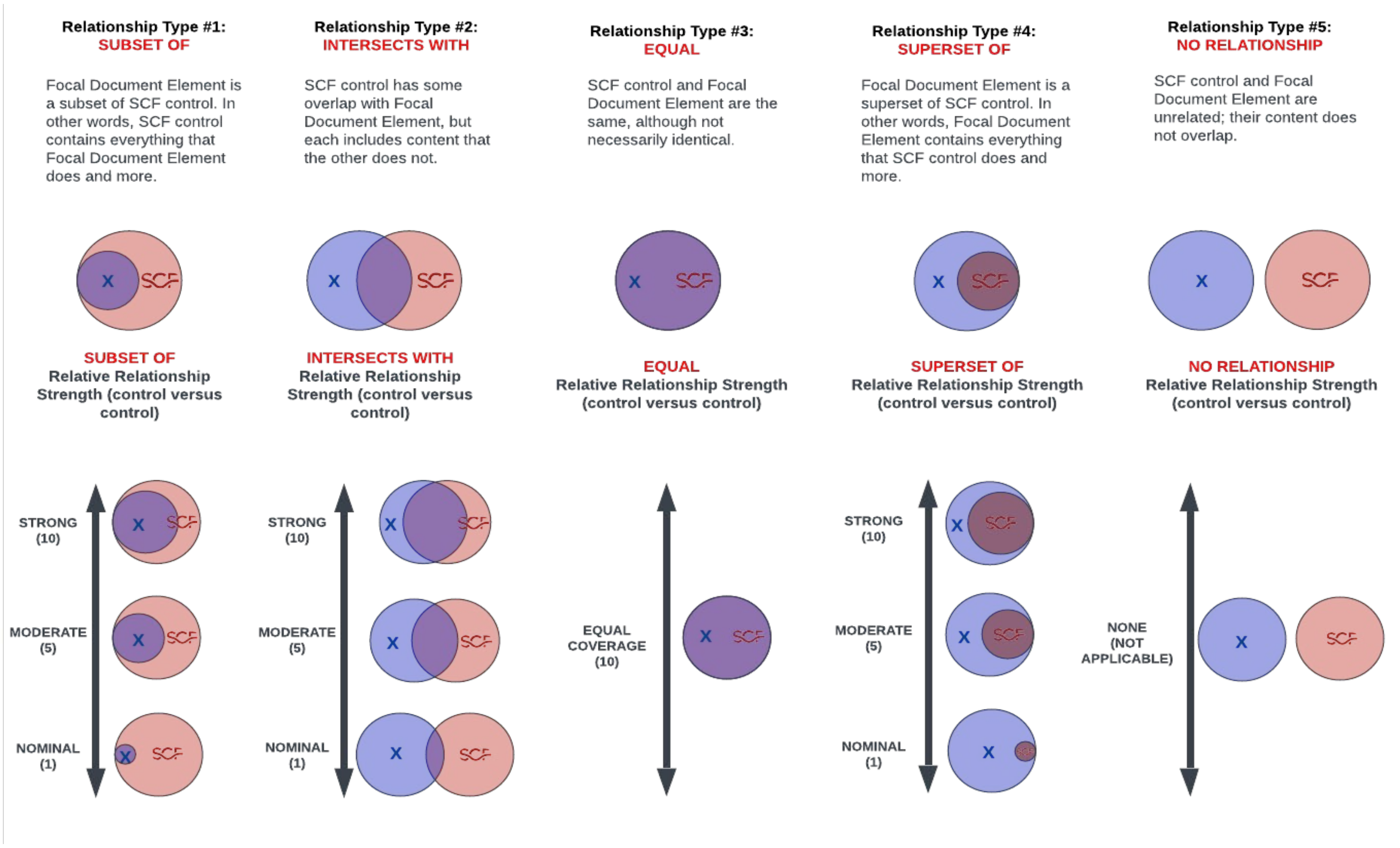
STRM relies on a justification for the relationship claim. There are three (3) options for the rationale, which is a high-level context within which the two concepts are related:

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**




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 #	Focal Document Element (FDE) Description	STRM Rationale	STRM Relationship	SCF Control	SCF #	Secure Controls Framework (SCF) Control Description	Strength of Relationship (optional)	Notes (optional)
17 CFR 229.105(a)	Where appropriate, provide under the caption "Risk Factors" a discussion of the material factors that make an investment in the registrant or offering speculative or risky. This discussion must be organized logically with relevant headings and each risk factor should be set forth under a subcaption that adequately describes the risk. The presentation of risks that could apply generically to any registrant or any offering is discouraged, but to the extent generic risk factors are presented, disclose them at the end of the risk factor section under the caption "General Risk Factors."	Functional	intersects with	Materiality Determination	GOV-16	Mechanisms exist to define materiality threshold criteria capable of designating an incident as material to the organization.	5	
		Functional	intersects with	Material Risks	GOV-16.1	Mechanisms exist to define criteria necessary to designate a risk as a material risk.	5	
		Functional	intersects with	Material Threats	GOV-16.2	Mechanisms exist to define criteria necessary to designate a threat as a material threat.	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 Framing	RSK-01.1	Mechanisms exist to identify: (1) Assumptions affecting risk assessments, risk response and risk monitoring; (2) Constraints affecting risk assessments, risk response and risk monitoring; (3) The organizational risk tolerance; and (4) Priorities, benefits and trade-offs considered by the organization for managing risk.	5	
		Functional	intersects with	Risk-Based Security Categorization	RSK-02	Mechanisms exist to categorize systems and data in accordance with applicable laws, regulations and contractual obligations that: (1) Document the security categorization results (including supporting rationale) in the security plan for systems; and (2) Ensure the security categorization decision is reviewed and approved by the asset owner.	5	
		Functional	intersects with	Risk Catalog	RSK-03.1	Mechanisms exist to develop and keep current a catalog of applicable risks associated with the organization's business operations and technologies in use.	5	
		Functional	intersects with	Risk Register	RSK-04.1	Mechanisms exist to maintain a risk register that facilitates monitoring and reporting of risks.	5	
17 CFR 229.105(b)	Concisely explain how each risk affects the registrant or the securities being offered. If the discussion is longer than 15 pages, include in the forepart of the prospectus or annual report, as applicable, a series of concise, bulleted or numbered statements that is no more than two pages summarizing the principal factors that make an investment in the registrant or offering speculative or risky. If the risk factor discussion is included in a registration statement, it must immediately follow the summary section required by § 229.503 (Item 503 of Regulation S–K). If you do not include a summary section, the risk factor section must immediately follow the cover page of the prospectus or the pricing information section that immediately follows the cover page. Pricing information means price and price-related information that you may omit from the prospectus in an effective registration statement based on Rule 430A (§ 230.430A of this chapter). The registrant must furnish this information in plain English. See § 230.421(d) of Regulation C of this chapter.	Functional	intersects with	Materiality Determination	GOV-16	Mechanisms exist to define materiality threshold criteria capable of designating an incident as material to the organization.	5	
		Functional	intersects with	Material Risks	GOV-16.1	Mechanisms exist to define criteria necessary to designate a risk as a material risk.	5	
		Functional	intersects with	Material Threats	GOV-16.2	Mechanisms exist to define criteria necessary to designate a threat as a material threat.	5	
		Functional	subset of	Cybersecurity & Data Privacy Status Reporting	GOV-17	Mechanisms exist to submit status reporting of the organization's cybersecurity and/or data privacy program to applicable statutory and/or regulatory authorities, as required.	10	
		Functional	intersects with	Risk-Based Security Categorization	RSK-02	Mechanisms exist to categorize systems and data in accordance with applicable laws, regulations and contractual obligations that: (1) Document the security categorization results (including supporting rationale) in the security plan for systems; and (2) Ensure the security categorization decision is reviewed and approved by the asset owner.	5	
		Functional	intersects with	Risk Catalog	RSK-03.1	Mechanisms exist to develop and keep current a catalog of applicable risks associated with the organization's business operations and technologies in use.	5	
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17 CFR 229.106(a)	Definitions. For purposes of this section: Cybersecurity incident means an unauthorized occurrence, or a series of related unauthorized occurrences, on or conducted through a registrant's information systems that jeopardizes the confidentiality, integrity, or availability of a registrant's information systems or any information residing therein. Cybersecurity threat means any potential unauthorized occurrence on or conducted through a registrant's information systems that may result in adverse effects on the confidentiality, integrity, or availability of a registrant's information systems or any information residing therein. Information systems means electronic information resources, owned or used by the registrant, including	Functional	intersects with	Materiality Determination	GOV-16	Mechanisms exist to define materiality threshold criteria capable of designating an incident as material to the organization.	5	
		Functional	intersects with	Material Threats	GOV-16.2	Mechanisms exist to define criteria necessary to designate a threat as a material threat.	5	
		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	Threat Analysis	THR-10	Mechanisms exist to identify, assess, prioritize and document the potential impact(s) and likelihood(s) of applicable internal and external threats.	5	
17 CFR 229.106(b)	Risk management and strategy.	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
17 CFR 229.106(b)(1)	Describe the registrant's processes, if any, for assessing, identifying, and managing material risks from cybersecurity threats in sufficient detail for a reasonable investor to understand those processes. In providing such disclosure, a registrant should address, as applicable, the following non-exclusive list of disclosure items:	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 Framing	RSK-01.1	Mechanisms exist to identify: (1) Assumptions affecting risk assessments, risk response and risk monitoring; (2) Constraints affecting risk assessments, risk response and risk monitoring; (3) The organizational risk tolerance; and (4) Priorities, benefits and trade-offs considered by the organization for managing risk.	5	
		Functional	intersects with	Risk Tolerance	RSK-01.3	Mechanisms exist to define organizational risk tolerance, the specified range of acceptable results.	5	
		Functional	intersects with	Risk Threshold	RSK-01.4	Mechanisms exist to define organizational risk threshold, the level of risk exposure above which risks are addressed and below which risks may be accepted.	5	
		Functional	intersects with	Risk Appetite	RSK-01.5	Mechanisms exist to define organizational risk appetite, the degree of uncertainty the organization is willing to accept in anticipation of a reward.	5	
		Functional	intersects with	Impact-Level Prioritization	RSK-02.1	Mechanisms exist to prioritize the impact level for systems, applications and/or services to prevent potential disruptions.	5	
		Functional	intersects with	Risk Identification	RSK-03	Mechanisms exist to identify and document risks, both internal and external.	5	
		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 Ranking	RSK-05	Mechanisms exist to identify and assign a risk ranking to newly discovered security vulnerabilities that is based on industry-recognized practices.	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	
17 CFR 229.106(b)(1)(i)	Whether and how any such processes have been integrated into the registrant's overall risk management system or processes;	Functional	intersects with	Operationalizing Cybersecurity & Data Protection Practices	GOV-15	Mechanisms exist to compel data and/or process owners to operationalize cybersecurity & data privacy practices for each system, application and/or service under their control.	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 Framing	RSK-01.1	Mechanisms exist to identify: (1) Assumptions affecting risk assessments, risk response and risk monitoring; (2) Constraints affecting risk assessments, risk response and risk monitoring; (3) The organizational risk tolerance; and (4) Priorities, benefits and trade-offs considered by the organization for managing risk.	5	
		Functional	intersects with	Risk Tolerance	RSK-01.3	Mechanisms exist to define organizational risk tolerance, the specified range of acceptable results.	5	
		Functional	intersects with	Risk Threshold	RSK-01.4	Mechanisms exist to define organizational risk threshold, the level of risk exposure above which risks are addressed and below which risks may be accepted.	5	
		Functional	intersects with	Risk Appetite	RSK-01.5	Mechanisms exist to define organizational risk appetite, the degree of uncertainty the organization is willing to accept in anticipation of a reward.	5	
		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	
17 CFR 229.106(b)(1)(ii)	Whether the registrant engages assessors, consultants, auditors, or other third parties in connection with any such processes; and	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	Competency Requirements for Security-Related Positions	HRS-03.2	Mechanisms exist to ensure that all security-related positions are staffed by qualified individuals who have the necessary skill set.	5	

FDE #	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	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	
17 CFR 229.106(b)(1)(iii)	Whether the registrant has processes to oversee and identify such risks from cybersecurity threats associated with its use of any third-party service provider.	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	Steering Committee & Program Oversight	GOV-01.1	Mechanisms exist to coordinate cybersecurity, data protection and business alignment through a steering committee or advisory board, comprised of key cybersecurity, data privacy and business executives, which meets formally and on a regular basis.	5	
		Functional	intersects with	Status Reporting To Governing Body	GOV-01.2	Mechanisms exist to provide governance oversight reporting and recommendations to those entrusted to make executive decisions about matters considered material to the organization’s cybersecurity & data protection program.	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	Third-Party Management	TPM-01	Mechanisms exist to facilitate the implementation of third-party management controls.	10	
		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	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	
17 CFR 229.106(b)(2)	Describe whether any risks from cybersecurity threats, including as a result of any previous cybersecurity incidents, have materially affected or are reasonably likely to materially affect the registrant, including its business strategy, results of operations, or financial condition and if so, how.	Functional	subset of	Materiality Determination	GOV-16	Mechanisms exist to define materiality threshold criteria capable of designating an incident as material to the organization.	10	
		Functional	intersects with	Material Risks	GOV-16.1	Mechanisms exist to define criteria necessary to designate a risk as a material risk.	5	
		Functional	intersects with	Material Threats	GOV-16.2	Mechanisms exist to define criteria necessary to designate a threat as a material threat.	5	
17 CFR 229.106(c)	Governance	Functional	no relationship	N/A	N/A	N/A	N/A	No requirements to map to.
17 CFR 229.106(c)(1)	Describe the board of directors' oversight of risks from cybersecurity threats. If applicable, identify any board committee or subcommittee responsible for the oversight of risks from cybersecurity threats and describe the processes by which the board or such committee is informed about such risks.	Functional	subset of	Steering Committee & Program Oversight	GOV-01.1	Mechanisms exist to coordinate cybersecurity, data protection and business alignment through a steering committee or advisory board, comprised of key cybersecurity, data privacy and business executives, which meets formally and on a regular basis.	10	
		Functional	intersects with	Status Reporting To Governing Body	GOV-01.2	Mechanisms exist to provide governance oversight reporting and recommendations to those entrusted to make executive decisions about matters considered material to the organization’s cybersecurity & data protection program.	5	
		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	Stakeholder Accountability Structure	GOV-04.1	Mechanisms exist to enforce an accountability structure so that appropriate teams and individuals are empowered, responsible and trained for mapping, measuring and managing data and technology-related risks.	5	
		Functional	intersects with	Authoritative Chain of Command	GOV-04.2	Mechanisms exist to establish an authoritative chain of command with clear lines of communication to remove ambiguity from individuals and teams related to managing data and technology-related risks.	5	
17 CFR 229.106(c)(2)	Describe management's role in assessing and managing the registrant's material risks from cybersecurity threats. In providing such disclosure, a registrant should address, as applicable, the following non-exclusive list of disclosure items:	Functional	intersects with	Steering Committee & Program Oversight	GOV-01.1	Mechanisms exist to coordinate cybersecurity, data protection and business alignment through a steering committee or advisory board, comprised of key cybersecurity, data privacy and business executives, which meets formally and on a regular basis.	5	
		Functional	subset of	Materiality Determination	GOV-16	Mechanisms exist to define materiality threshold criteria capable of designating an incident as material to the organization.	10	
17 CFR 229.106(c)(2)(i)	Whether and which management positions or committees are responsible for assessing and managing such risks, and the relevant expertise of such persons or members in such detail as necessary to fully describe the nature of the expertise;	Functional	subset of	Steering Committee & Program Oversight	GOV-01.1	Mechanisms exist to coordinate cybersecurity, data protection and business alignment through a steering committee or advisory board, comprised of key cybersecurity, data privacy and business executives, which meets formally and on a regular basis.	10	
		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	
17 CFR 229.106(c)(2)(ii)	The processes by which such persons or committees are informed about and monitor the prevention, detection, mitigation, and remediation of cybersecurity incidents; and	Functional	subset of	Status Reporting To Governing Body	GOV-01.2	Mechanisms exist to provide governance oversight reporting and recommendations to those entrusted to make executive decisions about matters considered material to the organization’s cybersecurity & data protection program.	10	
17 CFR 229.106(c)(2)(iii)	Whether such persons or committees report information about such risks to the board of directors or a committee or subcommittee of the board of directors.	Functional	subset of	Steering Committee & Program Oversight	GOV-01.1	Mechanisms exist to coordinate cybersecurity, data protection and business alignment through a steering committee or advisory board, comprised of key cybersecurity, data privacy and business executives, which meets formally and on a regular basis.	10	
		Functional	intersects with	Status Reporting To Governing Body	GOV-01.2	Mechanisms exist to provide governance oversight reporting and recommendations to those entrusted to make executive decisions about matters considered material to the organization’s cybersecurity & data protection program.	5	
17 CFR 229.106(d)	Structured Data Requirement. Provide the information required by this Item in an Interactive Data File in accordance with Rule 405 of Regulation S–T and the EDGAR Filer Manual.	Functional	subset of	Cybersecurity & Data Privacy Status Reporting	GOV-17	Mechanisms exist to submit status reporting of the organization's cybersecurity and/or data privacy program to applicable statutory and/or regulatory authorities, as required.	10	
Form 8-K Item 1.05(a)	If the registrant experiences a cybersecurity incident that is determined by the registrant to be material, describe the material aspects of the nature, scope, and timing of the incident, and the material impact or reasonably likely material impact on the registrant, including its financial condition and results of operations.	Functional	intersects with	Steering Committee & Program Oversight	GOV-01.1	Mechanisms exist to coordinate cybersecurity, data protection and business alignment through a steering committee or advisory board, comprised of key cybersecurity, data privacy and business executives, which meets formally and on a regular basis.	5	
		Functional	intersects with	Materiality Determination	GOV-16	Mechanisms exist to define materiality threshold criteria capable of designating an incident as material to the organization.	5	
		Functional	intersects with	Contacts With Authorities	GOV-06	Mechanisms exist to identify and document appropriate contacts with relevant law enforcement and regulatory bodies.	5	
		Functional	intersects with	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.	5	
		Functional	intersects with	Incident Handling	IRO-02	Mechanisms exist to cover: (1) Preparation; (2) Automated event detection or manual incident report intake; (3) Analysis; (4) Containment; (5) Eradication; and (6) Recovery.	5	
		Functional	intersects with	Incident Classification & Prioritization	IRO-02.4	Mechanisms exist to identify classes of incidents and actions to take to ensure the continuation of organizational missions and business functions.	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	
		Functional	intersects with	Incident Stakeholder Reporting	IRO-10	Mechanisms exist to timely-report incidents to applicable: (1) Internal stakeholders; (2) Affected clients & third-parties; and (3) Regulatory authorities.	5	
		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	