DATA GOVERNANCE AND MANAGEMENT TOOLKIT

Data Governance Framework

SGIGs Community Well-being Tools Project

The Community Well-being Tools Project is an initiative of the Data Steering Committee (DSC). The DSC is comprised of Self-Governing Indigenous Government (SGIG) representatives and was formed to support SGIGs in building their data governance and management capacity. Since 2018, the DSC has overseen data capacity-building initiatives for the SGIGs, including an online toolkit

The DSC is building upon this previous work by developing a suite of tools to support SGIGs in understanding and reporting on community well-being:

Tool	Description
DATA CAPACITY ASSESSMENT	Support SGIGs navigating the toolkit by highlighting relevant components of those tools to an assessment of an SGIGs' readiness, capacity, and objectives
DATA GOVERNANCE FRAMEWORK	Overarching framework describing and providing guidance with respect to the component parts of a data governance program
CONCEPTUAL WELL-BEING FRAMEWORK	Starting point Well-being Framework with guidance on specific customization options
FACILITATION TOOL	Guided steps for an optional process to create a customized Conceptual Well-being Framework
INDICATOR GUIDE & RECOMMENDED INDICATORS	A list of well-being indicators aligned within the Conceptual Well-being Framework with guidance about indicator selection and customization
DATA COLLECTION AND ANALYSIS	Options and recommendations for data collection and for creating and reporting statistics
DATA VISUALIZATION DASHBOARD	Interactive platform for reporting indicator-affiliated statistics organized around the customized Well-being Framework
WORKPLAN AND COSTING GUIDANCE	Milestones and budget guidelines for implementing these tools

Table of contents

About this tool

Data governance is the system and structure through which the benefits of data can directly and consistently contribute to effective, efficient, and responsive governance, from planning to policy development to programming and operational decisions. A data governance program:

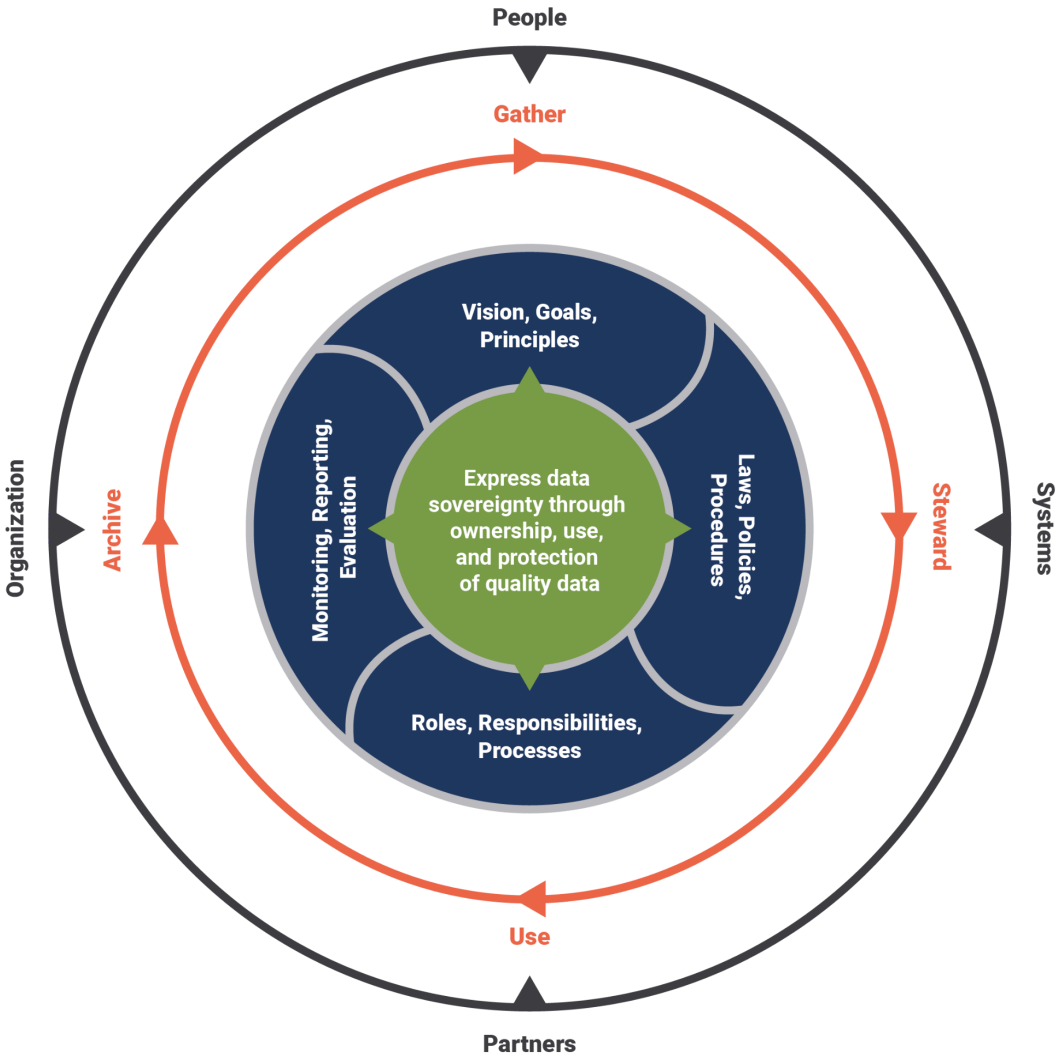
- ensures that data are understood, trusted and used appropriately;
- supports the people who collect, manage and use data to understand how those data add value to their work and the SGIG's overall objectives; and
- allows SGIGs to minimize risks around the data they hold, while leveraging the maximum benefit from it.

In other words, an effective data governance program empowers SGIGs to harness the power of data to inform advocacy, decision-making, and investment while also protecting collective and individual rights to privacy and confidentiality.

This Framework is intended to support SGIGs to continuously improve their data governance programs, recognizing that no government or organization has a perfect data governance program – data governance is about continuous improvement, not how to get everything "right" all at once. While drawing upon the best practices and available expertise in data governance worldwide, this Framework is also designed to maintain the uniqueness of Indigenous governments, rooted in the right of Indigenous data sovereignty and responsive to the unique contexts of Indigenous peoples and governments. It will be an evergreen document, updated through time in recognition of the evolving field of data governance among Indigenous governments and beyond.

This Framework is organized around a visual of an overall data governance program, highlighting the various component parts and their interrelationships. Each component part of this Framework is defined, its importance explained, and key considerations and strategies to address those considerations described. Scenarios are used throughout to bring data governance to life.

Overview of the framework



This visual depicts the various factors or aspects involved in a data governance program. The diagram is presented using circles, layers, and arrows to represent the highly interconnected nature of its concepts and component parts. It is reminiscent of a drum which represents balance and equality, wholeness and connection.

At the centre of the diagram is the **core purpose** of an SGIG's data governance program: to *express data sovereignty through ownership, use, and protection of quality data*. Arrows radiate from this core purpose statement, illustrating its importance as a touchstone that grounds all aspects of a data governance program.

The four quadrants surrounding the centre of the program represent the **core components** of a data governance program:

- *Vision, Goals, Principles*: Establishing the overarching thought leadership and guidance for data governance, specifically through a clear strategic statement describing the desired future state of data governance, a set of high-level statements describing how that future state will be achieved, and the key cross-cutting factors that guide data governance decision-making.

- *Laws, Policies, Procedures*: Articulating the "rules" of data governance – the expectations and requirements that describe how the purposes, vision, goals, and principles of a data governance program are defined and are to be carried out.

- *Roles, Responsibilities, Processes*: Describing the personnel and patterns that support accountability for data governance, such as the responsibilities of key staff positions, and any working structure (e.g. committee) empowered to make decisions related to data.

- *Monitoring, Reporting, Evaluation*: Defining how it is known that the data governance program is working and what needs to be strengthened, such as through establishing and reporting against metrics and processes and acting upon results to achieve improvement.

The arrows surrounding the core components of a data governance program represent the **data life cycle**. All data will be at some stage in this data life cycle, and possibly in multiple stages at once (for example, stewarding data would be taking place as data are also being gathered or used). All four components of a data governance program should consider and provide for all four stages of the data life cycle:

- *Gather*: Acquiring data, such as through surveys or primary data collection, or through repatriating data held by others.

- *Steward*: Holding and caretaking data, including security and confidentiality.

- *Use*: Working with data to answer questions, inform decisions, and measure progress.

- *Archive*: Disposing or permanently preserving data.

The outer circle represents four **internal and external factors** that shape (for example, enable or constrain the success of) the operation and performance of a data governance program. These are:

- *People*: The success of any and all aspects of a data governance program rests upon the actions of individual people and their knowledge, buy-in, and competencies/skills.

- *Systems*: The efficiency and effectiveness of a data governance program can be enhanced by proactive planning, and design and implementation of technology solutions and routine processes and workflows.

- *Organization*: Organizational culture - customarily strongly associated with the views and behaviour of organizational leadership - drives the perceived value and relative priority of data within an organization and the priorities and norms for a data governance program within and across the SGIG.

- *Partners*: A data governance program can be interrelated with organizations such as academic institutions, or federal, provincial, or territorial governments which have data belonging or of interest to the SGIG. This relationship may be codified through protocols or information-sharing agreements.

Arrows directed inward from this ring are illustrative of how critical this internal and external context is in shaping, informing, enabling, and constraining all other aspects of the data governance program.

Although the diagram represents a comprehensive picture of data governance, an SGIG can focus on different aspects of the diagram at different times, depending on their needs, priorities, and capacity. It is easy to "overbuild" a data governance program by investing more time and resources than necessary, which tends to mystify, impede, and

limit the use of data. Instead, many choices can be made about what is "good enough" to meet legal, ethical, and technical requirements. It is essential to scale a data governance program to the SGIG's unique setting and circumstances. *No government or organization has a perfect data governance program – this framework supports continuous improvement, not how to get everything "right" all at once.*

Essentially, this visual is a conceptual starting point that must be adapted to present needs, realities, preferences, and norms. A data governance framework and program is more successful when adjusted to reflect the terms and approaches that resonate with the SGIG's culture -- socially and organizationally.

Purpose of a data governance program

As represented in the centre of the framework diagram, a **core purpose** of a data governance program common across the SGIGs is to *express data sovereignty through ownership, use, and protection of quality data*. This statement – composed of carefully selected terms – names the critical features that should be woven throughout all aspects of the program:

- Data sovereignty: The rights of SGIGs to own, take care of, and make decisions about data.
- Data ownership: The inherent and treaty rights of SGIGs to own, control, access and possess (OCAP®) all data and information on their population and territory.
- Data use: The active and culturally-relevant governance and management of data, from collection through analysis, reporting, dissemination and archiving.
- Data quality: Definitions, understandings, and mechanisms to consistently translate data and information into meaningful, accurate and relevant knowledge.

- Data protection: The value and management of data as an asset. Data and the privacy of individuals are secured, and protected from unauthorized use and inappropriate destruction.

Like all governments, SGIGs require reliable data to help them make informed decisions, allocate resources, set priorities, and be accountable to their members. Data governance and management programs can contribute to these governance functions by generating and tracking consistent, accurate data needed to understand community needs and guide decision-making. These activities are all expressions of data sovereignty. In other words, data sovereignty, articulated through the governance and management of data, empowers SGIGs to put data to work for the benefit of their peoples, and to determine their own needs and paths towards greater economic and social well-being.

Components of a data governance program

Core components of a data governance program refer to the foundational understandings that contribute to the effective and coordinated functioning of a data governance program within a SGIG. These component parts work together and form the operating system that enables the governance of data in a consistent manner.

Vision, goals, principles

What is this?

- The overarching thought leadership and guidance for data governance, specifically through a clear strategic statement describing the desired future state of data governance, a set of high-level statements describing how that future state will be achieved, and the key cross-cutting factors that guide data governance decision-making.

Why is this relevant?

- Vision, goals, and principles capture the very essence of the SGIG's beliefs and strategy for the governance and management of data. They provide guidance to all involved by enshrining key cultural values about data, and endorse pathways to achieve desired improvements in data governance and management.

What do we need to consider?

- ☐ Data are often considered mysterious or highly technical, and data management can be regarded by many as an onerous activity. Additionally, the value of data to leadership, decision-makers, and staff is often not understood. Therefore, consider:
  - Finding ways to engage and involve leadership, decision-makers, and staff in the process of developing vision, goals, and principles.
  - Promoting the vision, goals, and principles through internal communications, staff sessions, and other information-sharing mechanisms within the organization.
  - Drafting the vision, goals, and principles, in clear, concise, compelling, and culturally relevant ways.
  - Identifying and working with influential thought leaders within the organization to increase the understanding of the importance of data.
  - Keeping the vision, goals, and principles alive by referencing these in any applicable briefings, meetings, and related contexts.
- ☐ It can be confusing to have multiple vision statements, strategies, and principles within a single SGIG or organization. Therefore, consider:
  - Cascading the data vision, goals, and principles from any established SGIG strategic or comprehensive plan.
  - Embedding data as a priority area within the SGIG's strategic or comprehensive plan.
  - Utilizing different terms to differentiate from any existing organizational vision, goals, and principles (e.g. "mission, objectives, and values").
- ☐ There is a long history of Indigenous peoples and governments advocating and developing policy around data sovereignty, and increasing recognition and affirmation of data sovereignty as an Indigenous human right. Therefore, consider:

- Drawing upon established work, such as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the First Nations Information Governance Centre, and the British Columbia First Nations Data Governance Initiative to inform development of vision, goals, and principles.
- Embedding key aspects of data sovereignty in data governance vision, goals, and principles, including concepts such as:
  - Authority: SGIG empowerment through control of data including creation, development, stewardship, analysis, dissemination, and physical and virtual storage.
  - Worldview: Describing the need for cultural knowledge and context surrounding data.
  - Obligations: Balancing collective and individual rights, benefits, and potential harms, and maintaining accountability throughout the data life cycle to all affected parties (individuals, community, SGIG, partners), including through informed consent.
  - Partnerships: Considering connections with other Indigenous and non-Indigenous communities and governments to share resources and work toward common goals.
  - Guardianship: Appropriate storage and transference of data and knowledge; inclusion of ethical protocols protecting both individual and collective interests which underpin collection, access and use of SGIG data.[1,2]

What does "good" look like?

- ☐ Data vision, goals, and principles are in place, endorsed by leadership, understood by senior management, and informed by existing work on Indigenous data sovereignty and data governance.
- ☐ There is a strong commitment from leadership and senior management who actively promote and identify resources to advance the data vision, goals, and principles.

[1] https://www.health.govt.nz/system/files/documents/pages/20201207-te-whatu-equity-report.pdf
[2] https://www.maiamnayriwingara.org/key-principles

Scenario

The Sulingituk Government has endorsed the following vision, goals, and principles for data, and ensured that these are reinforced in its strategic plan. To support the continued development of a data-driven organizational culture, these key elements form part of employee orientation, and all briefing note templates require presentation of relevant data, and where applicable, how the work aligns with or advances the data vision, goals, and principles.

Our **vision** is: Sulingituk Government governs and protects all of our data and information wherever it resides, enabling data's full potential as a strategic asset to better understand and actionably support the needs, priorities, and plans of our Members, Government, and partners.

Our **goals** are:

- Increase our data holdings that align with and advance our strategic goals and worldview.
- Promote the active use of data in decision-making and accountability at all levels.
- Create and maintain practical data governance and management policies and processes that effectively balance active data use with privacy and confidentiality for Sulingituk members and sacred knowledge.

The **principles** that guide our decisions and actions are:

- Our Government governs all our data, regardless of where it is stored.
- All analyses and publications will be culturally appropriate and reflect our worldview.
- Data will have an actionable benefit for the well being of our Government and members.
- Data are treated in a secure and protective manner regardless of where they are stored.
- Our Government will promote the creation, maintenance, disclosure and storage of data within its own environments whenever feasible.
- Our Government will protect the privacy of individual members.

- Data will be of quality – accurate, reliable, clear, comparable, timely and coherent.

For more information

- On how vision, principles and objectives fit into a data governance plan
- On visioning

Laws, policies, procedures

What is this?

- Describing the "rules" of data governance: the purposes, vision, goals, and principles of a data governance program and the accountabilities for carrying them out, including for protection of the inherent sensitivity of data that describe persons, intellectual property, and other sacred or important knowledge. These rules are enacted by way of laws (which, for the SGIGs' include both their own laws, coordinated with any applicable federal and provincial laws), regulation, policy, and procedure.

Why is this relevant?

- Good data governance, encoded in laws, policies and procedures supports the active use of meaningful data, while ensuring it is secured against misuse, interference, loss or unauthorized access, modification or release. It does this by describing the key principles and parameters for decision making about data, as well as the key responsibilities and process expectations to bring those principles into practice.

What do we need to consider?

- ☐ Starting out with, or prioritizing, law and policy development for those components of data governance and management that pose the greatest risk for the SGIG. Typically, these are those associated with data privacy and data security.

- ☐ Developing training, education, change management, and/or communications alongside any new policies, to promote SGIG staff and leadership understanding of, and compliance with, the applicable laws and policies.
- ☐ When developing law, policies, and procedures, considering all phases of the data life cycle – do the principles, processes, accountabilities, requirements, and measures embedded in the policy apply to the gathering, stewardship, use, dissemination/reporting and archiving of data?
- ☐ Messaging core aspects of the law and policy in simple ways – for example, that the organization will prioritize the minimization of collection of personal information; that data are only collected if they are going to be used; and, that only those who need access to personal data should have that access.
- ☐ Identifying expertise that will advise on the interpretation and implementation of policies and procedures and can conduct risk assessments, such as when accessing sensitive information (who, how, when).
- ☐ Ensuring policies and procedures are aligned with operational areas of the organization, such as the routine collection of information and data in the delivery of health and social services.

What does "good" look like?

The following is a comprehensive list of issues and considerations that can be covered in data-related law, policy, and procedure. All items may not be appropriate to each SGIG, and will depend on need, maturity, and priority within data governance and management. It is also important to ensure that these laws, policies, and procedures are consistent with your vision, goals, and principles, and compliant with any applicable federal and provincial privacy legislation.

- ☐ Data governance operations: How program decisions, issues, and other operational items are recorded and stored; criteria describing a critical data issue and the steps to resolve it.
- ☐ Inventory management: When data are collected (e.g. data calendar), how it is described (e.g. data dictionary), and how it is stored and maintained (e.g. data inventory).
- ☐ Data collection: How data are prepared and added to the SGIG data repository, including timeline and resources required. This policy can include the process of how changes are made to data collection, and any required training.

- ☐ Data quality: How the SGIG will ensure that data are accurate, complete, timely and relevant to stakeholder needs. This policy can include validating data and processes to report errors.
- ☐ Data use priorities: The SGIG's intended use of data to drive the prioritization of data products, such as dashboards, reports and infographics as well as the response to external data requests.
- ☐ Data access: What data that employees/users can and cannot access. This will be user specific, and can also specify the level of detail (e.g. raw data, aggregated data, and/or rates).
- ☐ Data requests: Submission of internal and external data requests, which include the information requested in the submission as well as its review, approval/disapproval, and completion of the data request.
- ☐ Data matching: Guidelines and procedures for matching or linking data from different sources (e.g. SGIG census and program data).
- ☐ Data sharing agreements: How the SGIG establishes, maintains and enforces data sharing agreements.
- ☐ Data release and reporting: How data and data products are released both internally and to external partners. These processes include validation and approval by delegated staff, which will ensure that the reports are in compliance with SGIG and provincial data privacy laws, and adhere to SGIG's standard for reporting.
- ☐ Data privacy & confidentiality, and data security: Information privacy, including processes for the secure transmittal, storage and release of data.
- ☐ Data refresh: How and how often data are updated in the data system.
- ☐ Data retention and destruction: Maintaining, archiving and destroying data to meet legal and SGIG requirements.
- ☐ Data incident response: Definition of a data breach or incident, and how the SGIG will address the breach, from reporting through remediation and post-incident evaluation.

Scenario

The Sulingituk Government has an existing set of laws governing freedom of information and privacy and confidentiality. At this point in time, they would like to

also ensure that they have policy guidance in place for a census project they aim to undertake and for any future similar data collection activities.

The Sulingituk Government Freedom of Information Law[3] informs members what their information rights are with their data which are held by their government, and how to exercise these rights.

Sections include:

- Terminology definitions, purpose and scope.
- How to make a request: e.g. method, detail required, provision of copies.
- Duty of the SGIG to assist applicants and respond to their requests.
- Time limit for a response.
- Content of the response to the applicant, such as the existence of the requested record, if the applicant is entitled to access, and if so, where, when and how access will be given, refusals of access including criteria and reasons for this refusal.
- How access will be given: including accessing copies and/or viewing a record.
- Extending the time limit for a response: length of extension, acceptable reasons for an extension.
- Routine disclosure of records: obligation of the SGIG to make certain information publicly available, e.g. those records that could reasonably be expected to be of general interest.
- Exceptions to disclosure.
- Information which must be disclosed in the public interest, such as public health risks or environmental harm.

The Sulingituk Government Collection, Protection, Retention, Use and Disclosure of Personal Information Law[4] aligns with their data sovereignty principles and meets, at least, the minimum requirements from external governments (provincial and federal) regarding the protection and disclosure of personal information.

[3] Tsawwassen First Nation. 2009. *Freedom of Information and Protection of Privacy Act.*

[4] Tsawwassen First Nation. 2009. *Freedom of Information and Protection of Privacy Act; and* Skwxwú7mesh Úxwumixw. Undated. *Eshilhíkw'iws Chet (We Are All Related) Policy*

Sections include:

- Terminology definitions, purpose and scope including advancing data sovereignty and data governance, ensuring confidentiality, integrity, comparability and availability of data, protection of privacy, compliance with governance, legal and regulatory requirements, and addressing SGIG needs for planning, decisions-making etc.
- Purpose for which personal information may be collected: e.g. SGIG authorization, law enforcement, program or service operation, and/or public events such as ceremonies, sports, public information sessions etc.
- Processes to ensure appropriate oversight of data, including data requests and data interpretation.
- How personal information is to be collected: directly from the person, through medical treatment, or via applications such as for bursaries.
- How persons will be informed about information collection including its use.
- Quality measures: accuracy, corrections to information.
- Protection of personal information, processes in the event of unauthorized disclosure.
- Use of personal information: purpose.
- Scope of permitted disclosure.
- Right of individuals to access their personal information.
- Review and complaint process.

The Sulingituk Government Census Data Collection Policy. Consistent with the foregoing laws, the Sulingituk Government developed a policy related specifically to its census project. This policy details:

- Purpose:
  - Uphold data sovereignty and data governance, regardless of custodianship.
  - Respect, represent and uphold Sulingituk's world view, values, culture and language.
  - Ensure that the project answers identifiable questions, achieves stated objectives, and meets planning needs.
  - Ensure that the project is of actionable and collective benefit to members.

    - Ensure the confidentiality, integrity, comparability and availability of information collected.
    - Strengthen internal capacity to undertake primary data projects.
    - Ensure that the management of information is in compliance with governance, legal and regulatory requirements.
- Scope: The policy applies throughout the full life cycle of the census project, including:
    - Establishment and implementation of review and decision-making processes for requests for Sulingituk personally identifiable information.
    - Production, collection, storage, and safeguarding of Sulingituk personally identifiable information.
    - Cleaning and analysis of census data, including analyzing comparisons to, and validation of, census data using the Sulingituk membership list.
    - Development and implementation of strategy, methods, and products for reporting of census data.
    - Reporting and knowledge transfer of census data to Sulingituk council, community membership, and other audiences.
    - Protocols and standards for protection of Sulingituk personally identifiable information.
    - Retention and disposition of Sulingituk personally identifiable information.
    - Planning for potential future rounds of collection of census data.
- Policy Statements:
    - The project is endorsed by the Sulingituk Government's strategic plan.
    - Collaboration occurs internally and externally to identify primary data objectives. that can advance Sulingituk Government's interests and build mutually beneficial partnerships.
    - Project activities, including the work of staff, are subject to Sulingituk Government's confidentiality policies.
    - The census project team has appropriate training and orientation to carry out the project management and oversight.

- A committee was established with representation by directors or designates from all departments involved in the project. The committee's mandate includes;
  - Alignment with UNDRIP, OCAP®, principles of free, informed and prior consent, relevant Sulingituk Government policies, and census primary data objectives,
  - Terms and conditions of the census project, including relevant contracts with external parties.
  - Culturally-based, strengths-based and trauma-informed approaches to data collection and analysis, as necessary.
  - Contextualization and attribution of census findings to root causes.
  - Vetting and approval of questionnaire and reports prior to release.
  - Resolution of issues through the delivery of the census project
  - Review of requests from external parties for access to confidential data, and recommendations to leadership for approval/disapproval.

For more information

- On applicable legislation
- On data security and privacy

Roles, responsibilities, processes

What is this?

- Closely aligned with policies and procedures are the roles, responsibilities and processes that describe how data governance is expressed, including responsibilities of key positions and personnel, and potentially, a committee structure empowered to make governance-related decisions on the SGIG's data initiatives.

Why is this relevant?

- Assigning responsibilities to specific positions in the SGIG ensures that data are appropriately governed and managed through its life cycle.

What do we need to consider?

- ☐ A governance structure can be a formal committee, or can rather be a process with clear decision-making authorities vested in certain position(s).
- ☐ Governance structure considerations can include:
    - How large and complex the organization is – for example, a larger organization may require a committee to coordinate everyone's input, whereas a smaller organization with fewer decision-makers may not require a formal committee.
    - The culture of decision-making within the organization – for example, an organization that values consensus decision-making may prefer a committee structure.
    - The importance of timeliness – for example, rapid processing of data access requests may be best addressed through a fewer number of decision-makers who can provide approvals independently, rather than a committee structure involving many people and scheduling considerations.
    - Who needs to be involved in what decisions – for example, it may be important that any use of data with respect to a certain sector (e.g. health, lands, culture) is approved by the appropriate Director or manager within the organization's administration.
    - What scope of budget is available to support ongoing processes – for example, it may be more resource efficient to identify a small number of decision-makers who can provide approvals independently, rather than a committee structure involving additional time and cost.
- ☐ General functions of a data governance structure, such as a committee, can be to:
    - Consolidate the implementation and oversight of data and information governance policies, procedures, systems, practices and standards across the data life cycle.

- Ensure consistency across the organization in application of standards, such as metadata, and in policies related to data collection, access, analysis and reporting.
- Be a focal point for data requests and new indicator development.
- Consolidate expertise in strategic and operational data review.
- Provide a review function for external reporting involving analyzed and reported data.[5]

☐ In some cases, such as data received from external data stewards, there may be others represented or interested in these data (e.g. Indigenous peoples in neighbouring geographic areas, patient interest groups, and health system data stewards). These persons may have different understandings and/or context surrounding these data. A governance structure can create a space for dialogue to build understanding and shared interpretation of the data.

What does "good" look like?

☐ The process is as simple as possible while maintaining fidelity to the SGIG's organizational norms and data governance principles.

☐ The SGIG's leadership has awareness of the importance and components of effective data governance. This assists in securing support for the allocation of resources to support this structure and the overall data program.

☐ Training in the data governance process (e.g. committee terms of reference, data access request process, data access request approval workflow) is provided to all participants at the outset.

☐ Internal communications raise awareness and understanding amongst staff about their ability to access data, and how those data access requests will be addressed.

☐ Trust is built among community members by communicating about how the structure will benefit the community and ensure protection of personal information.

[5] Informed by Canadian Institute for Health Information"s Data and Information Governance Committee Terms of Reference. https://www.cihi.ca/en/data-and-information-governance-committee-terms-of-reference

☐ Clear prioritization procedures are in place to support the data governance committee in focusing its efforts wisely when evaluating data issues of varying impact and scope, and addressing any significant volume of data access requests.

Scenario

The Sulingituk Government is setting up a process for its staff to request access to data from the recent census run among the Sulingituk membership.

Consistent with their policy, the Sulingituk Government developed processes for staff and external partners to request and utilize data from the census. This includes a workflow and associated forms overseen by a data governance committee which coordinates data access requests (DARs), prioritizes these requests, and oversees the management of requests to ensure alignment with policy and appropriate data use.

The data governance committee terms of reference include:

- mandate of the committee
- roles, responsibilities and work of the committee
- where the committee fits into the government's overall governance
- membership
- meeting expectations
- conflict of interest guidelines
- evaluation of committee operations
- consensus and voting
- code of conduct of committee members.[6]

The DAR workflow and forms have considered the following governance considerations:

- Identification of the department with primary responsibility for overseeing the DAR process.

[6] Ontario Chiefs Committee on Health 2014. *Chiefs of Ontario, First Nation Data Governance Committee, Terms of Reference*

- The steps of a DAR workflow, including how DARs are received, preliminary DAR review (assess completeness of information received), in-depth DAR review by the committee guided by a set of criteria, approval to prepare requested data, review/approval of prepared data, and approval of external products using the data.
- The DAR form includes:
    - Requestor information.
    - Purpose of the data.
    - Details on the specifics of the data requested: which census questions are of interest, the format of data requested, date required, populations of interest, and cross tabulations.
    - Alignment with the established review criteria of the DAR committee.
- The review criteria consider the following:
    - Does this request respect, represent and protect Sulingituk's worldview, values, culture and language?
    - Is this request being used to answer relevant questions, meet planning needs, and inform decision making, amongst other key governance functions of Sulingituk?
    - Does this request provide collective benefit to Sulingituk members?
    - Can this request be granted while ensuring the protection of privacy of all individuals whose information is represented in Sulingituk data, including personally identifiable data?
    - Does this request strengthen the internal capacity to undertake and meaningfully benefit from Sulingituk data?
    - Is this request in compliance with the governance, legal and regulatory requirements?
- A spreadsheet was developed for tracking all DAR requests. This is also used in the Sulingituk Government's regular review of performance indicators (see next section "Monitoring, Reporting, Evaluation").

For more information

- On data governance roles

Monitoring, reporting, evaluation

What is this?

- Establishing and reporting against metrics or other measures of the performance of a data governance program in order to provide clear insights into whether data are being managed efficiently, securely and achieving their desired aims, and to determine what may require strengthening.

Why is this relevant?

- A process for ongoing monitoring and evaluation of a data governance program gauges the current state of the program against best practices and established vision, principles, and goals, and answers the question: "is data governance having the results which were intended or are changes necessary in the stewardship of data?" This process thereby supports the refinement of goals, approved policies and procedures, and processes, and ultimately provides accountability to leadership and the community.

What do we need to consider?

- ☐ Identification of performance metrics or conducting an evaluation is feasible when the data governance program is producing tangible information. Is your SGIG managing data assets? Have you set up data management and/or data governance processes or systems? Do you have staff whose work is tied to data governance and management? Does your SGIG have data sharing agreements in place?
- ☐ A smaller number of meaningful measures is the best starting point for this type of work. This foundation can be built upon through time.
- ☐ Performance measurement or evaluation is worth the time and effort invested if there is a commitment, willingness, time, and energy to act upon the results at the present time.

What does "good" look like?

- ☐ Performance indicators have been established and data to inform these indicators are routinely collected. Performance indicators depend on what the SGIG's processes for data governance and management look like but could include things like: data processes are timely; data metrics are incorporated into organizational planning and reporting; staff receive training on their obligations in data governance..
- ☐ Performance indicators are reported on an established schedule to an oversight / decision-making entity representative of the SGIG's responsibilities for data governance. Results of these indicators are acted upon.
- ☐ An evaluation of the current state of data governance is planned. This evaluation can provide many benefits, including ensuring data management and governance are based on best practices and linked to business goals. Evaluation is typically taken at multi-year intervals (e.g. every five years), and takes a broader view than in routine performance measurement.

Scenario

The Sulingituk Government monitors the following performance metrics on a quarterly basis:

- Data Timeliness:
  - Average time (days) to review DARs, from receiving the DAR to approval/rejection
  - Average time (hours) to prepare data for approved DARs
  - Data issue resolution time (from identification of a data issue such as inaccuracies or gaps in data, to resolution)
- Data Access:
  - DAR approval rate (e.g. # approved/#submitted X 100)
- Data Security
  - Number of data breaches (annual)
  - Percentage of high risk data issues that have been identified and mitigated
- Metadata Management

    - Percentage of databases with up to date metadata
- Data Quality
    - Percentage of records that meet established validation rules or criteria

The Sulingituk Government has also adopted an evaluation plan which will assess the following components:

- The degree to which the organization's culture is data-driven and the effectiveness of various measures in place to support a data-driven culture.
- The level of awareness, understanding, and compliance with data governance-related law and policy within the SGIG and in relevant SGIG partnerships, and the effectiveness of various measures in place to support such knowledge and compliance.
- The compliance of technologies, systems, and work processes with legal requirements, particularly those related to privacy and security.
- The effectiveness of data-related organizational structure, roles, and responsibilities, including a match between workforce skills and the SGIG's data capacity needs.
- The effectiveness of data sharing agreements in serving the needs of the SGIG, and advancing its vision and goals in alignment with its principles.
- The effectiveness of the data governance committee, including turnover, succession planning, regular meeting schedule, expedited review and approval processes.

For more information

- On monitoring and reporting

Data life cycle

The **data life cycle** is the ongoing process of collecting, using, storing, transferring, and destroying or permanently archiving data. This process is repeated again and again with different data sets.

The life cycle of data spans a number of stages:

- Gather: Identifying data needs, then acquiring this data, such as through surveys or primary data collection, or through repatriating data held by others.
- Steward: Holding, managing and caretaking data.
- Use: Analyzing data to answer questions, communicating the results of the analysis, using the results to inform decisions, and measure progress.
- Archive: Disposing or permanently preserving data.

All data will be at some stage in this data life cycle, and possibly in multiple stages at once (for example, stewarding data would be taking place as data are also being gathered or used).

Threaded throughout the life cycle are foundational components that support the management of the data life cycle: security and privacy; information technology systems; and data quality.

Gather

What is this?

- Identifying data sources is the entry point into the data life cycle, and involves consideration of what data are needed, where those data can be sourced, and then the collection of those data, whether that be through external data sources (e.g. agreements or data access requests with other organizations which hold the data), internal data sources within the SGIG such as membership or program databases ("administrative data"), or through a new process of collecting data directly ("primary data collection"). This is an ongoing process.

Why is it relevant?

- Thoughtfully gathered data directly influences desired change and decision-making as it is directly connected to the identified priorities and plans of the SGIG. A well-designed data governance program evaluates the purpose and intended use of data before data collection is initiated to ensure that available

resources are allocated wisely and to the greatest benefit, and that the data gathered will serve an actionable purpose. Once the data needs are clear, then the appropriate process of collecting or acquiring data is designed and subsequently initiated.

What do we need to consider?

- ☐ Sourcing and receiving and/or collecting data can be among the largest challenges an SGIG faces, due to barriers to accessing external data sources and the investment (of both time and money) to carry out a data collection process. It is more than likely that senior leadership support will be required in order to approve resources to carry out activities associated with acquiring the new data, and possibly for advocacy to gain access to external data sources.
- ☐ Applying the following criteria can support the refinement and and prioritization of data needs:
    - Relevance: How well does this measure what you are interested in?
    - Feasibility: Do you have the data necessary to produce an accurate estimate (e.g., are there data available on language fluency)?
    - Simplicity: Can this indicator be readily explained and understood by non-technical audiences?
    - Transparency: Are others able to access the methodology and details to understand how this indicator has been constructed?
    - Reliability: Is the data you have and the method you have proposed reliable (e.g., are the assumptions you made reasonable)?
- ☐ There are different forms of data that suit various purposes that an SGIG may have:
    - Quantitative: This data generally results in exact numbers, such as the number of persons requiring home care services, the location and number of particular wildlife species or the number of homes requiring repair/renovation. This type of data lends itself to larger samples, which makes it easier to draw reliable and generalizable conclusions.
    - Qualitative: Qualitative data are non-numerical. Examples include a written record of a program evaluation involving an interview or focus group, open ended responses to survey questions, or audio visual recordings or images. This type of data may be useful, for example, to understand members' emotions and perceptions. Depending on the quantity and content of the

data collected, qualitative analysis can require a different skill set than that needed for quantitative data.

- ☐ A scan of existing data can uncover what data already exists that may be of relevance to the SGIG's data needs. Sources can include federal or provincial governments, other Indigenous communities or organizations, and universities or researchers. Some considerations about external data sources:
    - Will the data provide the level of detail required? For example, if the prevalence of diabetes in the community is needed, will the data available from the provincial health authority provide the actual numbers of individuals with diabetes in various age groups (which could be necessary to understand programmatic needs) or will only the overall prevalence rate be shared?
    - How timely will the data be provided? Raw data requires time for various activities to convert it to a usable form, for example data cleaning to make sure all data are in the same format, transforming data (such as aggregating into age groups) and assessing the data quality. Other time-intensive activities related to externally acquired data can include a data linkage to identify Indigenous data, completing the DAR process, developing an information sharing agreement (if required), and further preparation of the data to meet the specific request.
- ☐ Review how other organizations carry out data collection efforts to inform how you may want (and not want) to proceed. For example, adopting similar questions as those used by others, if they align with the SGIG's needs and interests, could be more efficient and less expensive than creating and validating new ones, and allow comparability with other similar datasets if this is important to the SGIG.
- ☐ The SGIG may have its own internal administrative data sources that can be used to address its data needs. This is highly specific to the systems and processes of each SGIG.

What does "good" look like?

- ☐ The SGIG is able to clearly describe its data needs, and how addressing those data needs will inform its strategic plan and/or operational requirements.
- ☐ The SGIG has identified specific indicators and associated data sources that are tied directly to informing and achieving the SGIG's strategic plan and the operational requirements of its programs and services.

- ☐ The SGIG has available expertise, either staffed or available externally, that can advise on the best approaches to gathering needed data and information.
- ☐ The SGIG has developed a data strategy that:
    - Prioritizes its indicators.
    - Considers data sources, for example:
        - whether external data sources are appropriate for its indicators;
        - whether its administrative data systems are able to be utilized to address its indicators
        - whether any indicators are best met through primary data sources; and
        - whether the data source will provide sufficient data to allow meaningful analysis.
    - Includes informed consent, security and privacy protocols
    - Describes whether comparability with other populations is a key consideration for any of its indicators, and if so, has included appropriate statistical tools to allow for statistically confident analysis.
    - Outlines any plans for any primary data collection projects.
- ☐ The SGIG gathers data in accordance with its strategy and data governance law, policy, and procedure.

Scenario

Before undertaking a census, the Sulingituk Government administration researched existing data sources on topics like housing, employment, food security, and community safety. Significant gaps were found in the level of detail and recency of data needed for evidence-based program planning and to inform the decision makers about community well being.

To get data that are current and sufficiently detailed, the Sulingituk administration decided to conduct a census. Community members received training from FNIGC's Regional Partner organizations to work as fieldworkers (or, alternately, data gatherers or enumerators) whose job it was to administer the surveys in their community and surrounding areas.

Equipped with laptops and customized data collection software, fieldworkers asked members census questions during a set enumeration period. Following strict protocols, they obtained informed consent and protected the privacy of respondents.

The census team checked the collected data for completeness, accuracy, and consistency.

The Data Steward secured the resulting dataset in encrypted storage according to Sulingituk's data governance policies. They followed established protocols so analysts could access data based on intended uses outlined in policies, all part of a data strategy that linked the data governance policies to this data collection exercise.

Going forward, analysts will transform census insights into actions. With previously unavailable information on community well being and priorities, programs and policies can now be data-driven to improve well being.

By gathering primary data guided by needs and principles, Sulingituk advanced data sovereignty and self determination. The census provided vital information missing from existing data to drive change and in the process advanced their own data sovereignty.

For more information

- On acquiring and working with data
- On administrative data and survey design
- On external data sources

Use

What is this?

- Analyzing data to answer questions, communicating the results of the analysis, and using the results to inform decisions and measure progress.

Why is this relevant?

- Data analysis arguably is the most important and sensitive part of the data life cycle. It is at this step that the collected data through external requests and/or primary collection will be examined and transformed into information that will allow the organization, including leadership, to make informed decisions.

What do we need to consider?

- ☐ As described in the Gather phase of the data life cycle, optimally, a data strategy, including the desired statistics or indicators to be developed from the data collected, will predate this Use phase. The data strategy developed early in the process describes the strategic need for data, the purpose for collecting it, the specific indicators to be generated, and therefore the analysis to be undertaken.
- ☐ The appropriate benchmark or data comparators to be used in the data analysis. For example:
    - Is the intent to close some form of wellbeing "gap" between populations? If so, then data will need to be collected from these two populations in a similar manner. Do these populations have different socio economic characteristics? If so, then income, gender, and employment data will be useful in ensuring that the data are interpreted correctly.
    - Is monitoring change over time a desired outcome? If so, then a time series analysis will require multiple sets of data, each collected and analyzed in a similar manner to ensure comparability.
    - Will targets be set to provide context on the progress to achieving intended program or population outcomes? If so, then research regarding an aspirational target (which can be expressed as rate) and which is feasible will be required for all key indicators, and a timeline established from which to measure change.
- ☐ How confidentiality of personal information and community well-being will be protected. Decision points include the minimum cell size for suppressing data,

whether or not suppressed data can still be used to calculate a rate, and how sensitive data (such as premature births or suicide rates) may be released.

- ☐ How the information received from the data analysis will be appropriately interpreted and synthesized so as to embody Indigenous ways of knowing and doing. Communicating about the data and telling its story could require different processes depending on the target audience, whether it be the community, funders (e.g. province or federal departments), or other SGIGs. This step could involve an advisory body composed of Knowledge Keepers or community members with lived experience to help interpret findings, and/or the staff and service providers involved in that particular sector.
- ☐ The specialized skills needed to undertake data analysis. These skills can be developed through recruiting or training the existing workforce, or external expertise be contracted in order to provide the needed analysis, or a blend of these options.
- ☐ The specialized skills needed to ensure the appropriate knowledge translation skills. This expertise is available for the presentation of data and its analysis. Information products include data visualization, report development and verbal delivery of content in ways that have meaning and relevance to the SGIG's culture and norms.

What does "good" look like?

- The SGIG's data strategy includes an analysis plan that describes the specific indicators it intends to produce.
- The SGIG has identified the capacity needed (internally and externally) to support data analysis, interpretation, visualization, and exchange.
- Data analysis is guided by strategic decisions made about:
    - Cell size suppression
    - Comparisons to other populations
    - Comparisons through time
- Interpretation of results involves people with applicable knowledge.
- Data visualization, report development, and sharing of results is done in ways that are understandable and actionable by those represented in the data and those who hold decision-making responsibility associated with those data.

Scenario

The Sulingituk Government recently conducted a census to gather information on the health and wellbeing of its community members. Now that the data has been collected and cleaned, the Sulingituk data analysis team needs to extract insights to inform program and service planning.

The team first refers back to the original data strategy developed at the start of the census project, which outlined the key indicators and metrics to be analyzed, including prevalence of chronic health conditions, access to health services, food security, and housing quality. This ensures the analysis stays focused on the intended uses of the data.

Guided by their data governance policies, the team takes steps to protect privacy and confidentiality in their handling and presentation of the data. They refer to minimum cell size thresholds for any tables or crosstabs set early on and documented in the data strategy, suppressing small counts that could identify individuals. The full raw dataset is stored securely with only the required level of (minimal) access. Only aggregated data are shared in reports and presentations that adhere to the minimum cell size requirements.

As they analyze and interpret the data, the team consults with Knowledge Keepers and community members to provide context on root causes and lived realities behind the statistics. This ensures the findings accurately reflect community needs and priorities.

The results are compiled into a report organized around the key indicators from the data strategy. Infographics and other visualizations are created to communicate insights to leadership, community members, and other audiences. Recommendations are developed based on the analysis to improve programs and services.

Throughout this process, the Sulingituk data team adheres to their data governance policies and Indigenous data sovereignty principles. Their analysis

provides actionable insights while protecting sensitive information and respecting community perspectives.

For more information

- On Indigenous approaches to data and evaluation
- On developing an analysis plan, designing indicators, and tracking change
- On data quality
- On data analysis

Steward

What is this?

- Data stewardship is the management and oversight of data, encompassing activities and practices associated with holding, managing and caretaking data in compliance with applicable law, policy, and procedure – all intended to ensure the quality of data.[7]

Why is this relevant?

- Stewardship ensures that an organization's data are accessible, usable, safe, and trusted. It builds trust in information, a greater understanding of the data needed to make critical business decisions, efficiency and consistency in all data processes (i.e. less time finding data, analyzing it, preparing reports, investigating anomalies and explaining inconsistencies), and more dependable information.

What do we need to consider?

- ☐ The scope of data stewardship is broad, and involves: identifying critical data and allowable values (including their documentation); defining operational procedures that give life to the use, storage, analysis, reporting of and access to data; documenting data sources; establishing thresholds for the quality and

[7] https://www.statcan.gc.ca/en/wtc/data-literacy/catalogue/892000062020013

usability of data; ensuring that standards are in place that can allow data linkages to occur; managing metadata; and, resolving data issues.

- ☐ Typically someone in the organization is identified as the data steward – the main position responsible for where data resides, the level of quality of the data, how data are analyzed, and how the data are protected.
- ☐ Ensuring quality data is an organization-wide responsibility, and spans the entire data life cycle. A checklist for assessing data quality (comprehensively or by random spot checks) may include:
    - ☐ Review formatting - Is data consistently structured and coded? Are formats standardized across sources?
    - ☐ Verify completeness - Are there any missing values or gaps?
    - ☐ Assess plausibility - Do statistics and facts align with broader understanding?
    - ☐ Check calculations - Are derived values using the right methods?
    - ☐ Validate timeliness - Are dates and timestamps current and sensible?
    - ☐ Confirm expectedness - Does the data match expectations and known benchmarks?
    - ☐ Check anomalies or changes in information where this might not be expected - Are there extreme differences from that reported in previous analyses.
    - ☐ Identify values that are not valid - are there obvious entries that were meant for a different question or where the question wasn't well understood?
    - ☐ Confirm accuracy - Does data reflect ground truth and known sources?
    - ☐ Confirm that all red flags and errors were identified and fixed before data are submitted or approved.
    - ☐ Confirm that information in reports matches the original documents.
    - ☐ Determine if the information was recorded by someone with direct knowledge.
- ☐ Stewardship involves both management of individual datasets as well as management of metadata (or the "data about data"). Managing metadata promotes efficiency, accuracy and timeliness of data-related functions in the organization by ensuring consistency and comparability across all data.
- ☐ The world of data, data sources, and data service providers is constantly growing and evolving. This growth can provide opportunities for organizations to tap into

or collect new data, but at the same time brings a focus on privacy and security issues related to personal or proprietary information. Organizations are expecting better, more relevant and timely data to aid their decision making. Indigenous governments and their members expect that their data are protected and their rights to data governance are upheld.

What does "good" look like?

- ☐ Measurable standards and expectations guide the monitoring of data quality.
- ☐ Data quality requirements are relevant to the data that the organization needs at an operational level. For example, a data quality standard may define a single source of truth across all data sets that describes membership lists in the organization.
- ☐ Checklists, spot checks, metrics and audits are used to continuously improve data quality and exercise effective data stewardship.
- ☐ Staff with specific data responsibilities are trained in data quality assessment and monitoring, as well as metadata creation and maintenance.
- ☐ The organization as a whole has an understanding of the role of a data steward and their responsibilities to support data and metadata quality.
- ☐ A holistic approach, whereby multiple areas of data management are assessed, is employed to understand and remediate data quality issues.
- ☐ Metadata are appropriately created and managed, including data definitions, purposes and locations.
- ☐ A metadata template standard ensures consistency and embeds quality, particularly for the most commonly used data elements. This may describe conventions to guide definition, formatting (e.g. how to display a date or a name), context (e.g. purpose, how the data was created), if and when the data was revised, where the data are stored, and how to access. Examples of common data elements that may be included in a metadata standard include population counts, membership records, and traditional nomenclature (e.g. place names) as well as operational data such as users of various SGIG services.

Scenario

In the Sulingituk Government census project, in accordance with established policy and procedure, the Data Steward is a core contributor to the census team. The leadership responsibilities of the Data Steward are described in the project charter as follows:

- Providing final approval of the data collection methodology, instruments and procedures
- Accountability to ensure quality in data cleaning, interpretation, and reporting
- Monitoring access to data and assuring privacy and confidentiality
- Approving the consent process for participation in the census
- Validating the accuracy of public communication about the data's use, and privacy and confidentiality
- Approving metadata classification, including the major areas of data collection (e.g. population demographics, employment, disability, measures of community and individual wellbeing, and education); variable definitions, classification and descriptions of associated values; location of variables; date of creation.
- Developing and implementing the data access request process for the census data.
- Providing for long-term storage of census data.

During the initial data cleaning process, the Steward discovered a number of records with missing or invalid values for certain variables. This presented a data quality issue that could skew analysis if unaddressed.

Following data governance protocols, the Steward led an investigation to determine the root cause. It was found that one of the census field workers had inadvertently skipped certain questions during some interviews.

To mitigate this issue, the Steward oversaw a secondary validation process to flag all incomplete records for follow up. Affected participants were re-contacted to fill in missing responses wherever possible. Where data remained missing, appropriate notation was added in the metadata.

Through identifying this anomaly and guiding the resolution process, the Steward fulfilled their duty to uphold data quality and integrity standards throughout the census project lifecycle. Their oversight helped ensure maximum accuracy and usability of the data asset.

For more information

- On data quality
- On data and standards
- On data stewardship

Archive

What is this?

- Data archiving is the process of relocating data that is no longer actively used to a separate storage device for long-term retention or permanently disposing of these data in a safe manner. Typically, these are older data that remain important to the organization or must be retained for future reference or regulatory compliance reasons.

Why is this relevant?

- Archiving has a number of benefits including reducing the cost of primary storage of data by freeing up this higher-cost space. When data are operational, the needed technical storage must ensure read/write/analysis capabilities. When data are archived, a less costly, low performance, high capacity storage medium, such as hard drives, tape or optimal devices, is appropriate.
- Archive storage also reduces the volume of data that must be backed up. Removing infrequently accessed data from the backup dataset improves backup and restores performance.
- Disposing of records eliminates the costs, liabilities, and responsibilities associated with holding unnecessary data.

What do we need to consider?

- ☐ A distinction should be made between data archives and data backups, the latter which are copies of data which can be quickly restored in the situations where the primary data are lost, corrupted or deleted. Therefore, data backups are part of a data recovery mechanism, whereas data archives fulfill a regulatory, cultural, organizational or historical need to retain data.
- ☐ Data archiving also consolidates data for easy access in case of an audit. Optimally, data archives are indexed and have search capabilities, so files can be located and retrieved. They are in a secure location, which is distinct from the primary storage used by the organization.
- ☐ The archival process may be automated using archiving software where aging data are moved to the archives according to a data archival policy set by the data steward. This policy may also include specific retention requirements for each type of data. This software can automatically purge data from the archives once it has exceeded the lifespan mandated by the SGIG's data retention policy.
- ☐ Archiving includes all electronically stored information, including communication data stored in:
    - Email (with attachments)
    - Social media channels (Facebook, Twitter, Instagram etc.)
    - Internal and external collaboration platforms (Teams, Zoom, Slack, Meet etc.)
    - Instant messaging platforms (e.g. WhatsApp)
    - Mobile calls, voicemail and text messages
    - Websites
- ☐ Email and chat records contain information on the operation of the organization, and they also include information that can be used as evidence in various kinds of legal cases. A comprehensive data retention approach can address the scattered nature of this information which could be located in various servers and devices, including personal devices of staff.[8]

[8] https://jatheon.com/blog/data-archiving-benefits/

What does "good" look like?

- ☐ A data retention policy, which addresses the appropriate legislative requirements for each data set, is in place and overseen by the data steward. Consistent with this policy, the data steward provides governance-related direction on the following topics:
    - The location of the archive (e.g. online, such as cloud or network storage, or offline, such as on tape).
    - The retention length of various databases.
    - The extent of archiving of communications data.
    - How information is to be deleted/moved from personal devices.
    - How data are to be destroyed and how that destruction is documented.

Scenario

The data steward in Sulingituk Government has developed a data retention policy for all census materials. As it was determined that the census material has historical value, the raw collected data will have indefinite electronic storage as plain csv text, with five year reviews to assess the stability of the data and the appropriateness of format being used, and to determine the most cost effective and dependable method of storage at that point in time. Sulingituk Government has opted for cloud storage for the short term, as it provides a remotely located storage medium with redundancy back ups. Options for consideration relating to a long term solution include archival-grade optical discs or tape storage. Products of the census data (e.g. reports and analyses) and communication information relating to census activities have been integrated into the Sulingituk Government's general data retention policy.

For more information

- On archiving and data storage

Internal and external factors

This section describes four key **internal and external** factors that shape (for example, enable or constrain the success of) the operation and performance of a data governance program. These factors include people involved in data governance, information systems to facilitate data management and governance, organizational culture surrounding data, and external data partners.

People

What is this?

- People refers to the organizational structure, roles, and responsibilities of those involved in data governance, including those who own, collect, store, manage, and use data.

Why is this relevant?

- The success of any and all aspects of a data governance program rests upon the actions of individual people and their knowledge, buy-in, and competencies/skills.

What do we need to consider?

- ☐ Clear roles and responsibilities are needed for those involved in data governance, including those responsible for collecting, storing, and using data. This will help ensure that everyone understands their role and can effectively contribute to the data governance effort. These roles include:
    - Executive: The SGIG's leadership team which drives and directs the data governance initiative, and which has overall accountability for the success of data governance.
    - Strategic: A data governance committee/body which considers the financial, human resource and other (e.g. regulatory) implications of data governance and management. These are decision makers with oversight responsibility for data, including developing and implementing data governance processes, and managing risk. In a smaller government, this may be a single person; in larger governments, it may be a committee that

includes senior managers from various departments responsible for socioeconomic outcomes.

- Tactical: This can include the data steward(s), each which are accountable for the data within their own purview, and the privacy officer, who is responsible for evaluating data usage against privacy regulations, collaborating with legal advisors, and responding to concerns from members about how their personal information is being collected and used.
- Operational: Data custodians who regularly process data within their domain, and have a vested interest in how the data are managed.
- Secretariat: A data strategy and governance manager who is responsible for implementing data governance policies and direction, and assists all members of the data governance structure as appropriate.[9]
- Subject Matter Experts: There may be supporting positions within the government, staffed by persons who are subject matter experts, who have a deep understanding of the data, and/or how they are created, used, transmitted and stored within the organization.

☐ In a small government, one person may have to take on multiple functions (including that which may be undertaken by committees in larger administrations), while some functions can be contracted out. In a larger government, it may be possible to hire staff for each of the required functions.

What does "good" look like?

☐ Data governance roles are clearly described, in place, and understood.

Scenario

The Sulingituk Government has integrated data governance into their overall organizational structure. Data governance and associated decision making flow through a committee structure with secretariat functions through the office of the Chief Information Officer. This office also manages centralized data functions,

[9] https://www.ibm.com/blog/a-step-by-step-guide-to-setting-up-a-data-governance-program/

including required hardware and software for data management, and data storage, retention and archiving.

- An Executive Data Committee is made up of the Chief Administrative Officer, Chief Information Officer, and Chief Operating Officer who collectively adjudicate and approve recommendations from a Data Advisory Committee.
- A Data Advisory Committee is chaired by the Chief Information Officer, and has membership from departmental Directors (who steward the data at a departmental level), legal counsel, privacy officer, and the manager of the data and analytics team. This Committee's mandate includes review and recommendations to the Executive Data Committee (for approval/disapproval) regarding new data collection initiatives and DAR submissions, taking into account resource utilization, community benefit, legislative compliance, privacy considerations, feasibility and economic impact. This Committee is a forum for new data initiatives of interest to Sulingituk Government, and also oversees data archival decisions.
- A staff-wide Data Network meets bimonthly and serves as a form to discuss technical issues, new approaches to data analysis and data management, and provide in depth review as directed by the Data Advisory Committee on selected topics.

For more information

- On staffing
- On training

Systems

What is this?

- The efficiency and effectiveness of a data governance program can be enhanced by proactive planning, and through the design and implementation of technology solutions and routine processes and workflows.

Why is this relevant?

- A technological approach to managing data is an enabler of data governance through the automation of practices, from data monitoring and management to data security and privacy protection. Tools can make routine processes more efficient and accurate, such as in data cleaning and validation by controlling and removing human error which could lead to false or duplicated information, and automating manual, time-consuming tasks that would otherwise require personnel to carry out.

What do we need to consider?

- ☐ Gather detailed requirements before selecting a system, so that a systems solution is chosen that best addresses requirements within budget parameters.
- ☐ Choose technology that enables people and processes, rather than systems that impose large and inconvenient shifts in the organization.
- ☐ Ensure that the technology meets data sovereignty, privacy, and security standards.
- ☐ Select systems that support data quality assessment and the integration of metadata.
- ☐ Select systems and technology which can be implemented across the SGIG, thereby breaking down programmatic silos and allowing interoperability. This will encourage the development of standard formats for data and processes.

What does "good" look like?

- ☐ Secure buy-in from the staff who will be using these technological systems by providing information on the system's value to the SGIG and to staff work processes, and involving them in describing the problem a system should solve, and the implementation planning.
- ☐ Provide sufficient training, documentation and technical support – within a change management model – to support the implementation of systems.
- ☐ Anticipate future data-related needs, as well as any expected changes to regulations or other factors that could impact the life expectancy and usability of the desired technology.

Scenario

As part of its data governance program, the Sulingituk Government wanted to implement new technology solutions to help automate data management processes and enforce security protocols.

The data governance committee gathered requirements from departments across the organization to identify priority needs and pain points. Common pain points included manual data entry, duplicate records, and inability to link data sources. Common requirements included the ability to automatically generate metadata, map data lineage, enforce access controls, validate data quality, eliminate redundant data, integrate with existing systems, provide auditing capabilities, automate workflows, and facilitate collaboration.

With leadership approval, the committee researched potential systems using the requirements as evaluation criteria. A data cataloging platform was selected that provided automation around metadata, standardization, data lineage mapping, and role-based access control.

Before rollout, committee members held information sessions for staff to explain the purpose and value of the new system. Hands-on training was provided to end users. Tutorials and quick-reference guides were created as additional support materials.

IT technicians worked to integrate the data catalog with existing backends and databases using APIs. Careful testing was conducted to ensure no disruption of daily operations.

As the system went live, technical support staff were available to assist users and help resolve any issues. A feedback mechanism allowed users to identify new requirements for system enhancement over time.

In the first year, metrics showed faster staff productivity related to data tasks, fewer reported issues with duplicate data, and quicker access to data lineage information. The system implementation empowered staff to focus less on manual processes and more on extracting value from governed data.

Through stakeholder engagement, change management, and careful rollout, the new data catalog system advanced Sulingituk's data governance aims around quality, security, integrity and usability. Ongoing refinement continues to optimize results and user adoption.

For more information

- On information technology systems
- On managing change

Organization

What is this?

- Organizational culture is customarily strongly associated with the views and behaviour of leadership. This organizational mindset will drive the perceived value and relative priority of data within an organization, and the priorities and norms for a data governance program within and across the SGIG.

Why is this relevant?

- For data governance efforts to be effective, a “data-driven” mindset fostered among staff supports the conscious integration and management of data as needed to fulfill their roles, and the need and relevance of data to an effective and progressive government.

What do we need to consider?

- ☐ Staff need a foundational level of understanding about data governance, including their responsibilities to ensure privacy, confidentiality, security, and

quality, and the connection of data and data governance to the SGIG's vision and objectives.

- ☐ A data-driven culture can be prompted in positive ways, by celebrating achievement of targets, rewarding good data governance practice, and strong messaging and support from leadership for data-related investments and strategies.
- ☐ A structured change management process involving information-sharing, dialogue, onboarding, and training – all considering different learning styles and organizational dynamics – helps to support all leadership and staff to understand, adopt, and maintain laws, policies, procedures, and practices.
- ☐ Opportunities for collaboration and input from all staff on organization-wide data governance initiatives are implemented. For example, consider a community of practice for staff focused on continuous improvement of data governance processes and which champions data governance initiatives across the organization.

What does "good" look like?

- ☐ The organization shares a mindset that data are a strategic asset.
- ☐ Use and presentation of data is embedded in decision-making processes (committees, meetings, briefing note templates).
- ☐ Senior leadership demonstrates the importance of data in decision making in their strategic messaging, decision-making, and investments.
- ☐ Training, onboarding, and reference material are available and promoted to staff, focusing on day-to-day data management practices.
- ☐ Communications clearly link the data with the SGIG's vision and objectives.
- ☐ Data successes are celebrated individually and collectively, and show how data (through data stories and/or performance metrics) have supported the fulfillment of organizational objectives, and ultimately community wellbeing.
- ☐ There is common knowledge amongst staff of their responsibilities in data quality, privacy, security, and confidentiality, and where to access data when needed, due to regular internal communications, periodic training, and onboarding processes.
- ☐ A consistent change management method is in place and utilized whenever new laws, policies, procedures or practices are introduced.

Scenario

In the Sulingituk Government, the process of onboarding a new employee starts with recruitment and extends through the first day, first week and first few months of employment. All phases of onboarding provide opportunities to highlight the importance of data in the organization, and to demonstrate the integration of data sovereignty principles and data governance processes throughout all departments. Some of the key measures taken throughout this process include:

- All job descriptions include the position's responsibilities with respect to data, with reference made to relevant organizational policies and procedures.
- If an interview is part of the recruitment process, the questions posed to the candidate include ones relevant to data-related duties (if applicable). For candidates who would be working directly with data or its products (analyses, reports, etc.), a scenario question is asked that seeks to evaluate their knowledge of the application of data governance principles.
- Letters of offer have a preamble that speaks to the organization's vision, including the expression of data sovereignty and data governance. Applicable requirements to comply with data governance policy and procedure are referenced. If data-related duties are in the letter of offer, these are clearly articulated.
- A new employee information package includes copies of all policies relevant to their position, and at a minimum include the policy on privacy and confidentiality of personal information.
- Onboarding includes a module on the importance of data to the organization and how this is reflected in the employee's scope of work.
- As the employee settles in, key performance indicators are established for the employee, and include both qualitative and quantitative measures which provide a personal example of the use of data within the organization.
- Annual refresher training is held in privacy and confidentiality, and emphasizes the Government's commitment to a data-driven culture.

For more information

- On visioning

Partners

What is this?

- SGIGs may find it advantageous to partner with organizations such as academic institutions, or federal, provincial, or territorial governments to operationalize data sovereignty and fulfill their data governance vision and objectives.

Why is this relevant?

- The SGIG vision for data sovereignty may include governing data about their members held by other institutions or governments, and which can only be accessed through formal relationships. It may also be advantageous for an SGIG to partner with a research or academic organization to advance its goals and/or capacity, for example by accessing external expertise, such as in survey development or advanced statistical analysis.

What do we need to consider?

- ☐ In the situation where another entity holds data which includes data belonging to, or of interest, to the SGIG, accessing this information will typically require a lengthy multi-step process involving:
  - Initial exploratory discussions
  - Completion of a data access request
  - Development of an information sharing agreement or another protocol agreement
  - Preparation of data to meet the request parameters
- ☐ External partners holding SGIG data may not have a sufficient understanding of Indigenous data sovereignty and the responsibility this brings to them in their relationship with SGIGs. It may be necessary to prepare basic communications materials that can be shared with external partners which communicate the

SGIG's data vision, goals, and principles, and summarize its self-governance rights, including data sovereignty.

- ☐ Some data governance relationships can be informal, such as inter-institutional connections with Statistics Canada, whereas others may benefit from the formality of a data sharing agreement.
- ☐ Negotiating an overarching agreement (e.g. Memorandum of Understanding, protocol, information-sharing agreement) may be useful for ongoing partnerships. This agreement may describe matters such as:
    - The SGIG's data vision, goals, principles, and self-governance rights.
    - Processes for the SGIG to have input into how that partner entity may be interpreting Indigenous data of interest or belonging to the SGIG.
    - Approval processes relating to sharing or publishing Indigenous data of interest or belonging to the SGIG.
    - Any goals related to the SGIG resuming direct possession of their data.
    - Any commitments to mutual capacity development.
- ☐ Partners may be open to including Indigenous-specific considerations in their internal use of this data, for example, to better understand the impacts of societal, institutional and individual anti-Indigenous discrimination on the data which they hold.

What does "good" look like?

- ☐ The SGIG accesses and governs relevant data from external partners in a timely and meaningful way.
- ☐ Partnership tables or overarching agreements on data sharing are in place with key partners and help expedite the process of acquiring needed data, and establish governance of the SGIG in the partner's use and publication of data.
- ☐ The SGIG increases its capacity and advances its goals through partnerships.
- ☐ External partners understand the importance of data to the SGIG, and their rights to data.

Scenario

The Sulingituk Government is interested in furthering their knowledge of the health of their members. Given that a large part of Sulingituk health centre's resources are directed to caring for adults who have chronic conditions, they want to better understand the demographic patterns of various conditions more closely, so that they can design programs and services to age groups within the adult population. The type of data required is collected by their province/territory's government.

That provincial/territorial government has developed a data request process for external parties. It has instituted Indigenous data governance processes and procedures, and implemented Indigenous data governance principles spanning ethics, community engagement, capacity building, and Indigenous perspectives of knowing which imbue methodological approaches to research and analysis.

This data request requires the sharing of membership information by the Sulingituk Government to conduct a data linkage with the provincial/territorial government database. In order to formalize this partnership between Sulingituk and MOH, an information sharing agreement was developed, and included the following sections:

- Preamble
- Definitions
- Objectives
- Information / Data to be Shared
- Use of information / Data
- Information / Data Sharing Mechanism
- Data Ownership
- Publication and Dissemination
- Confidentiality and Security
- Information Retention and Disposal
- Intellectual Property
- Duration and Renewal
- End / Termination of Agreement

Due to the existing provincial privacy laws related to information sharing, the data provided by provincial/territorial government is aggregate, with numbers suppressed if the count is below 5, or the population being described is less than 20 (for example, a count of 4 persons aged 25-34 years with diabetes would be suppressed, or a count of 10 persons also would be suppressed if the total population of 25-34 year olds was less than 20). In some cases, this practice has required Sulingituk data to be aggregated into larger population groups to avoid suppression of results.

For more information

- On data sharing contracts and agreements
- On how to make a data request