ACIC 2025 – INFORMATION GOVERNANCE IMPLEMENTATION MODEL: INFORMATION LIFECYCLE

Using a Unified Information and Data Lifecycle to Harmonize Concepts Across Information and Data Governance

IGIM DOMAIN: INFORMATION LIFECYCLE

AGENDA

1. Realized a problem
2. Had a dream
3. Put a band together
4. Wrote a song
5. Hit the road - ARMA

This is our story

Source:

IMAGINE...

POWER IN INFORMATION, CONFIDENCE IN DATA

Your systems seamlessly manage both **information and data**, empowering users with confidence to **access, use, and maximize their value**.

We identified gaps in **information management (IM) lifecycles** and unified efforts with the **data community**—bringing consensus, alignment, and a shared vision for the future.

Together we produced a tool aimed at transforming complexity into clarity?

HELLO I AM...

If your presenters stood on each other shoulders, they be as tall as a male giraffe.

- 17' 2" tall (or 5.2 meters) avg height of a male giraffe is between 16 to 18 feet.

Fun Stats: 90 combined years in IM at 13 unique GC departments.

- Essential point: We are coming from the IM perspective

THE SITUATION

Politics

- First appearance of a Chief Data Officer: 2016
- A rise of a Data Discipline as seen by over 2000 positions now including "data" in their job title

Methods

- *Library and Archives of Canada's* Information lifecycle is the primary method followed by Information management in the GC.
  - Paper/Analog lifecycle outdated
- Those developing data guidance leverage various professional data life cycle model – aka no consensus for a data LC by GC departments.
  - Effect Certain life cycles would focus on certain aspects and leave out others.

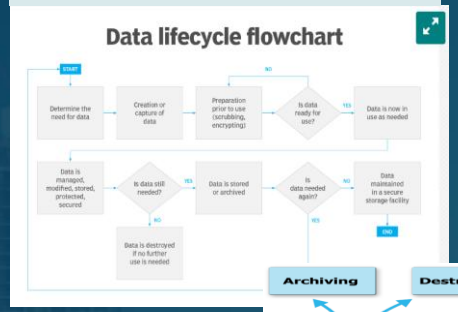
Convergence

- 2024 - New Chief Data Officer position defined for GC departments. Position now governs Information and Data Governance along with Data Analysts
- Community of Practice for all professionals in Data and Information now creating job working groups to focus on joint methods, problems and solutions.

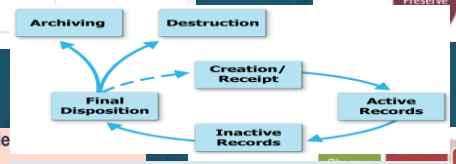
Source:

THE COMPLICATION

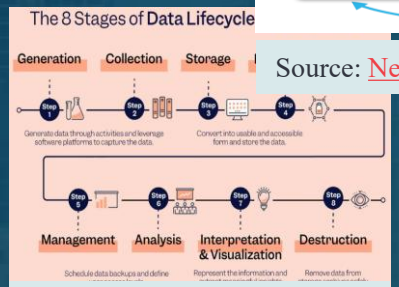
Source: TechTarget



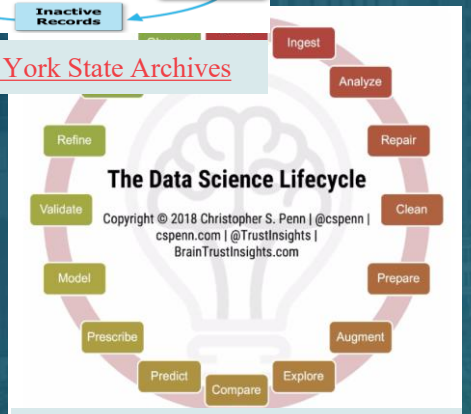
Source: UArizona



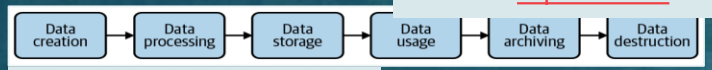
Source: New York State Archives



Source: Scilife



Source: cspenn.com



Source: O'Reilly

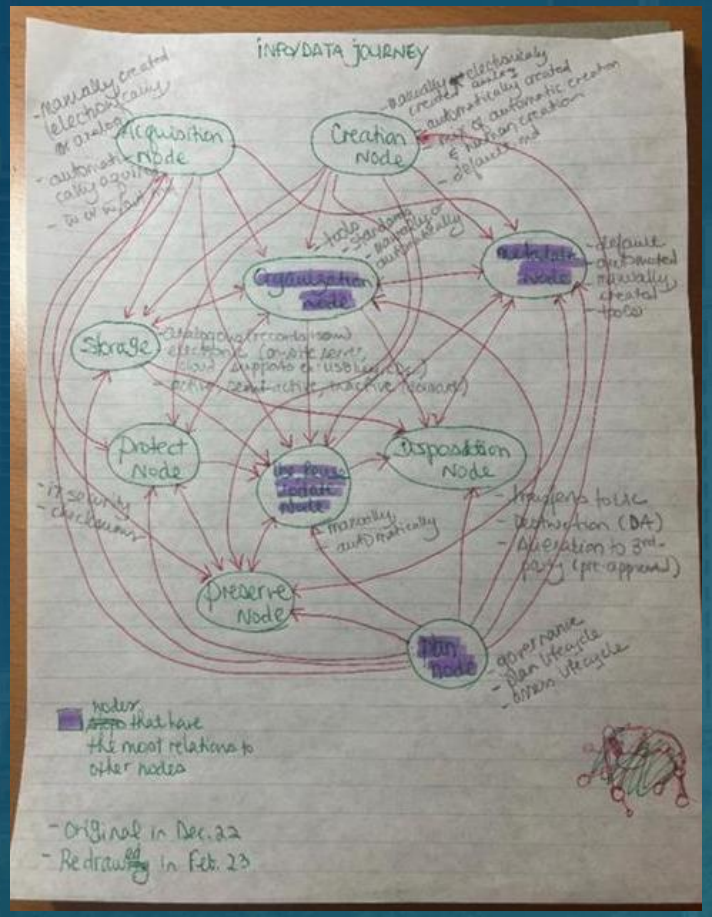
Consolidating into one approach:

- No single lifecycle fit both professions simultaneously
- Conflicting definitions for the same terms

For clients, the distinction is less important however, for the practitioner, the way we life cycle (manage) both is much different.

Source: *** need to cite source

THE RESPONSE



What we set out to do:
Create a unified life cycle for information and data: graphic and explanation text

Why do we need this?
Our world has changed, and we need to change with it. IM risks getting left behind if we don't accommodate and partner with 'data' professionals.

Source: *** need to cite source

THE BAND

Group mandate

- Define unified life cycle model
- Show data and info journey in their ‘life’

Participation level:

79 Departments

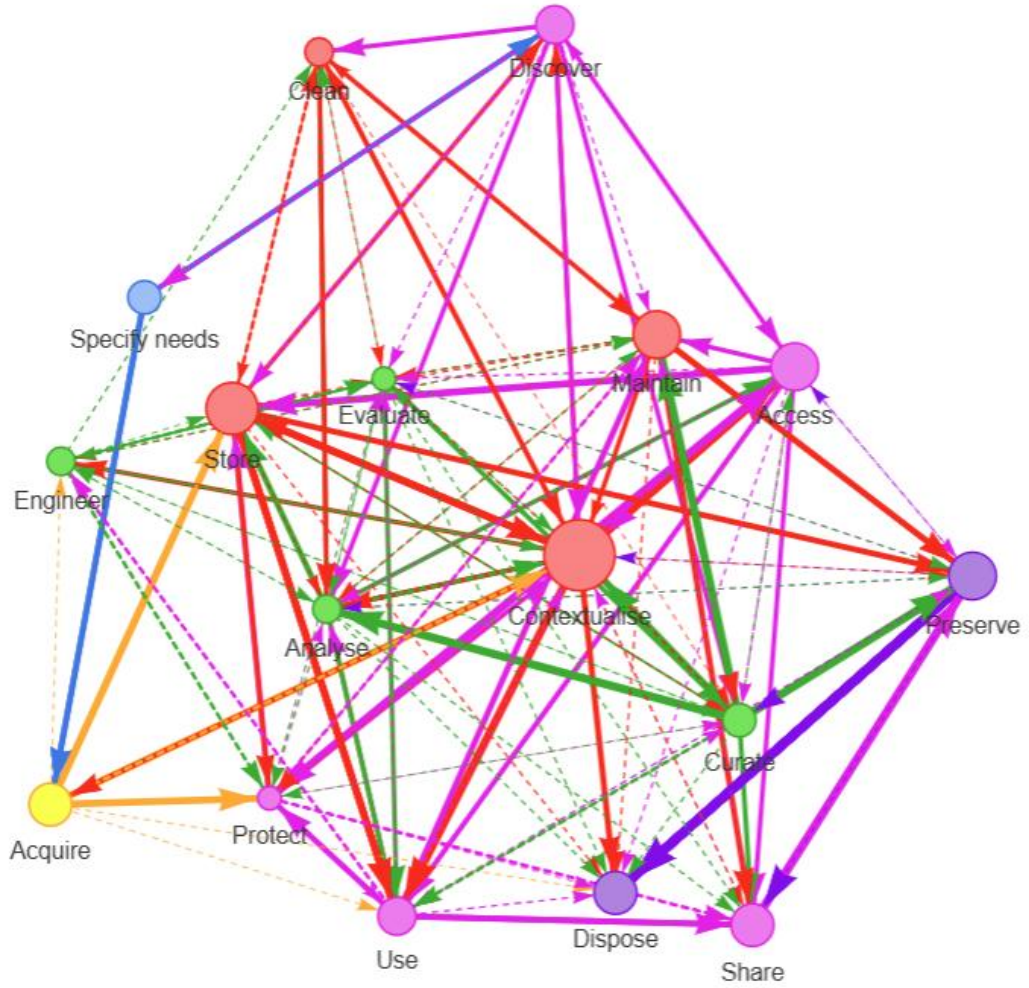
(almost 3/4rds of GC Dpts)

Source:

THE MUSIC

Define	the elements of the life cycle
Test	examples of information and data journeys
Refine	the life cycle and definitions
Communicate	through guides and tools
Apply	throughout the Government of Canada

UNIFIED LIFECYCLE FOR INFORMATION AND DATA (ULC-ID)



kirbyjf.shinyapps.io/User_Generated_Lifecycle2/

Source:

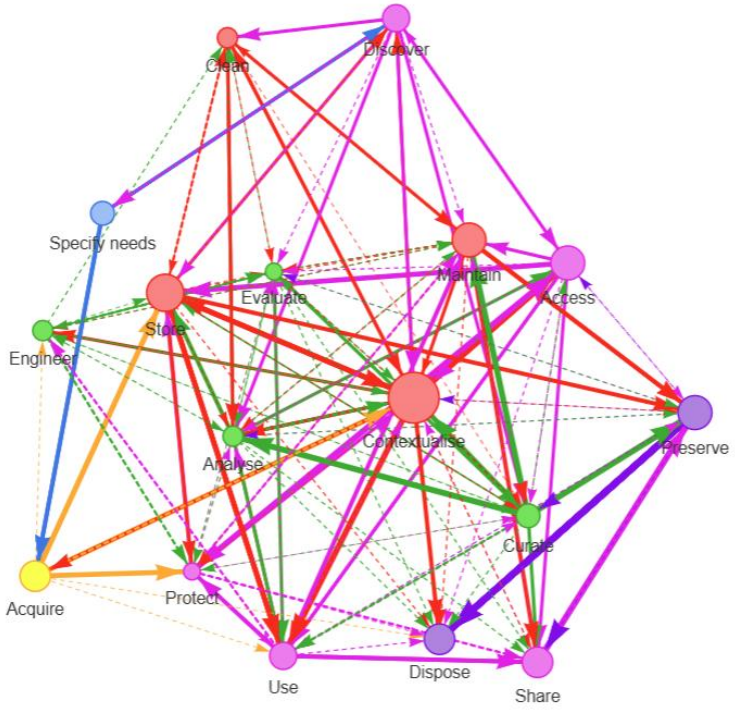
LIFE CYCLE NODES

- Specify needs
- Acquire
- Store
- Contextualise
- Clean
- Maintain
- Engineer
- Analyse
- Curate

- Evaluate
- Discover
- Access
- Use
- Share
- Protect
- Preserve
- Dispose

Source:

LIFE CYCLE FAMILY GROUPINGS



Initiation

- Specify needs

Acquisition

- Acquire

Configuration

- Store
- Contextualize
- Clean
- Maintain

Processing

- Engineer
- Analyse
- Curate
- Evaluate
-

Leveraging

- Discover
- Access
- Use
- Share
- Protect

Disposition

- Preserve
- Dispose

Source:

PAGE 1: NODE DEFINITIONS

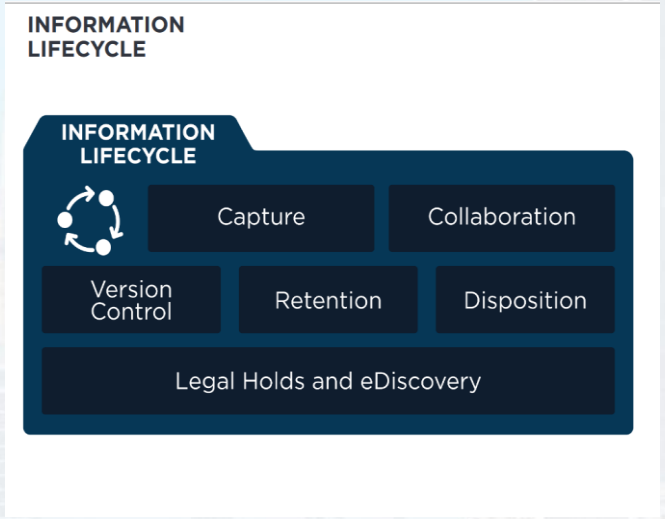
Node	Definition
Specify needs	Specify the needs and develop the design for a particular information or data acquisition or creation process.
Acquire	Create, generate, extract, capture, enter, collect, receive, transfer, or ingest information or data physically or electronically.
Store	Place information or ingest data into a location or repository.
Contextualise	Capture metadata about the circumstances, conditions, or environment in which the information or data was acquired or is currently being used.
Clean	Prepare information or data for analysis.
Maintain	Manage the availability and integrity of information and data so that they can be accessed and understood over time.
Engineer	Develop and construct data products and services, and integrate them into systems and business processes.
Analyse	Explore and interpret information or data, and prepare final outputs.

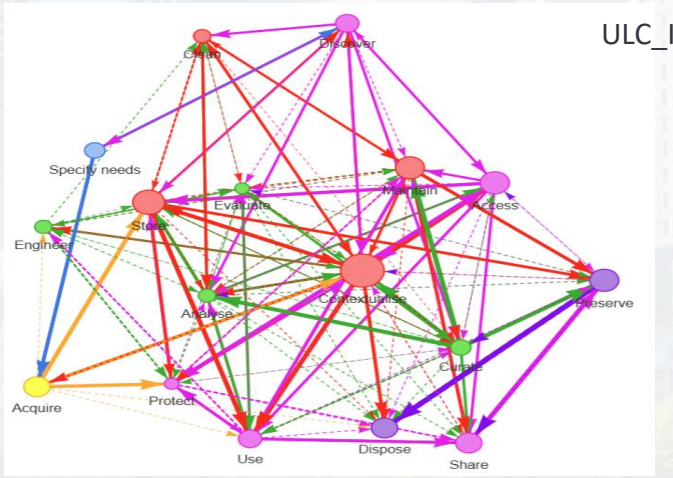
Source:

PAGE 2: NODE DEFINITIONS

Node	Definition
Curate	Continuously enrich or update information or data to keep it fit for purpose (business need).
Evaluate	Assess the success of the information or data output, based on the expectations articulated in the Specify Needs node.
Discover	Seek and identify relevant information or data within a repository.
Access	Enable or restrict permissions for individuals or systems to view, update, delete, or to otherwise use or manipulate specific information or data at various stages of their life cycles.
Use	Employ, reuse, or repurpose existing information or data with the appropriate methods to achieve a goal, such as to support an organization's objectives, operations, or decision making.
Share	Make information or data available for reuse outside the originator's control.
Protect	Protect the confidentiality, availability, and integrity of information or data.
Preserve	Ensure the authenticity, reliability, usability, and integrity of information or data in the long term, using appropriate processes and practices, and according to business needs or legal obligations.
Dispose	Provide for the end-of-use and end-of-life of information and data in an organization.

Source:





Initiation | Acquisition | Configuration

Processing | Leveraging | Disposition

Source: ARMA Information Governance Implementation Model v. 2 arma.org/igim

WHAT ABOUT THE ARMA INFORMATION LIFECYCLE?

Similarities

- Compatible terminology

Additional features of the Unified Lifecyle:

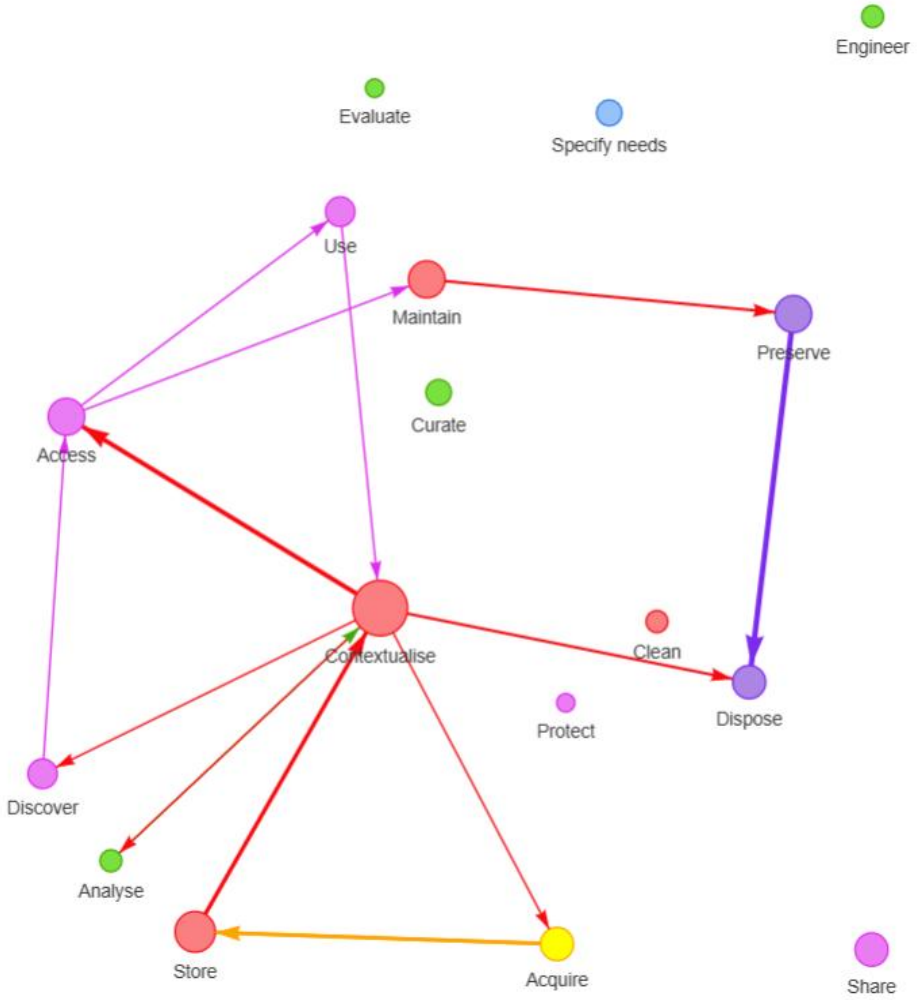
- Nodes to accommodate data needs
- Multiple, non-sequential paths

HOW YOU WILL USE IT – CASE STUDY 1

Play the song the way you want

- Determine the unique life cycle for your information or data assets

Example: Existent HR Data and Information Path

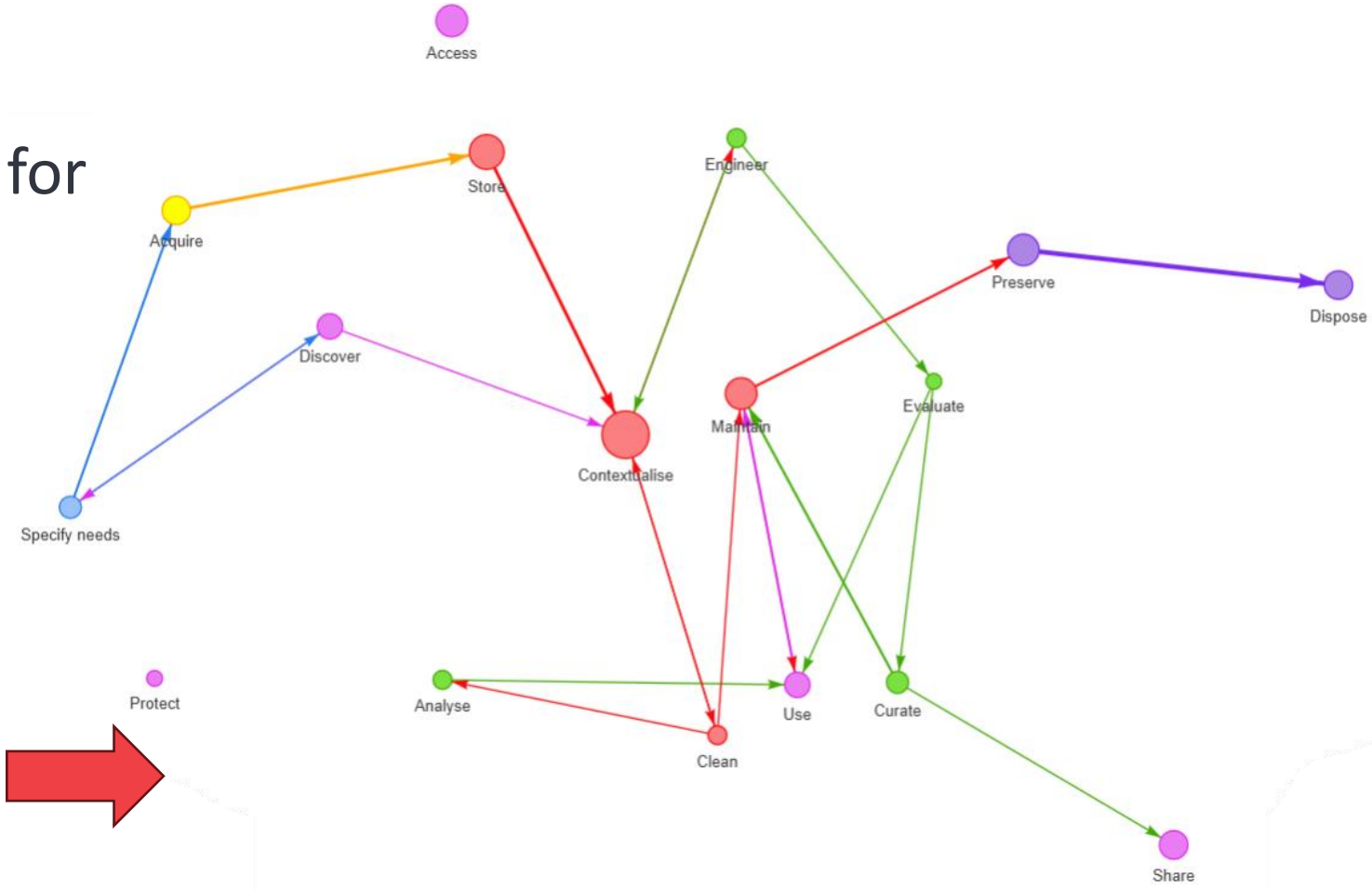


Source:

HOW YOU WILL USE IT – CASE STUDY 2

Play the song the way you want

- Determine the unique life cycle for your information or data assets



Example: New Open Data Asset Path

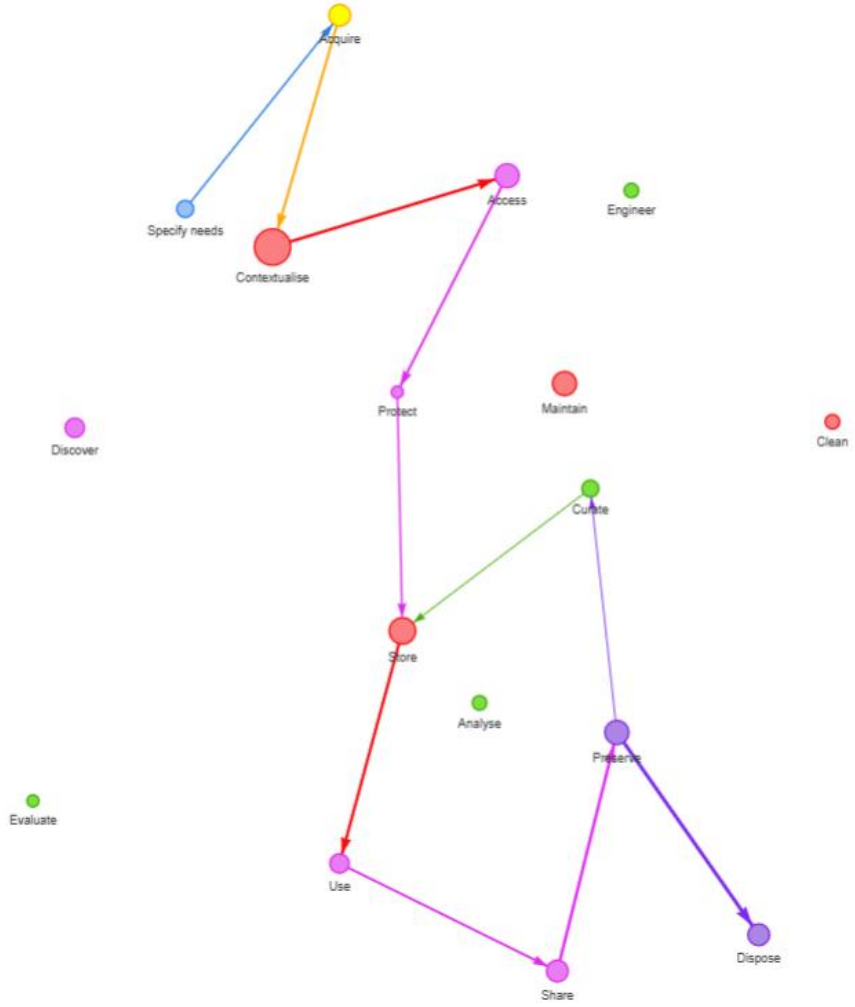
Source:

HOW YOU WILL USE IT – CASE STUDY 3

Play the song the way you want

- Determine the unique life cycle for your information or data assets

Example: Version Control Management for Protected Documents



Source:

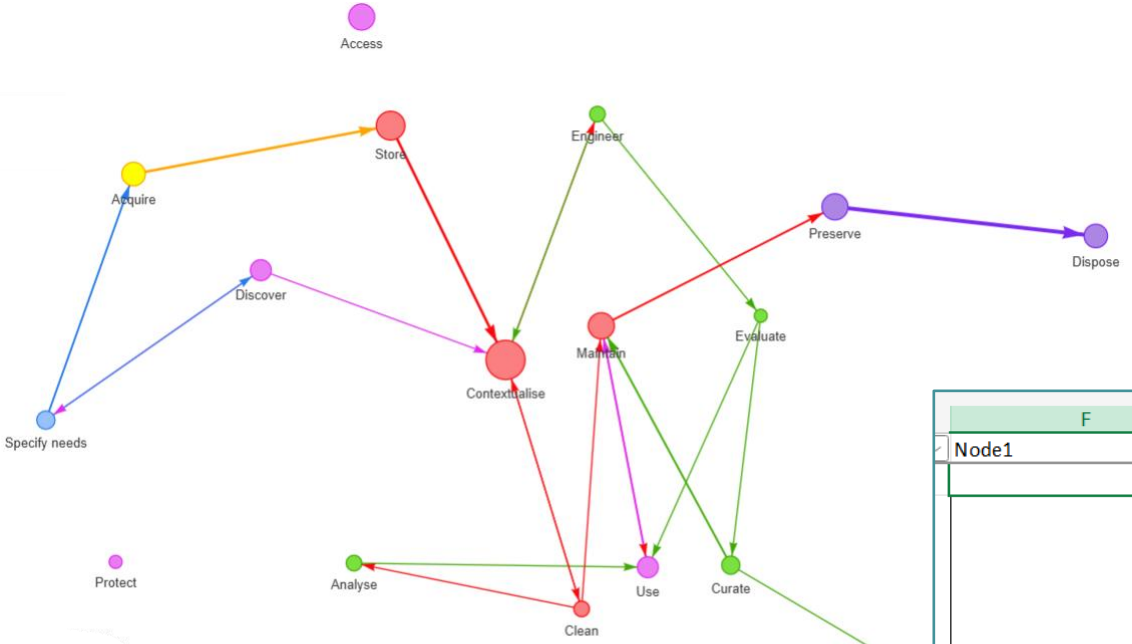
NOW WHAT?

Hit the road and play your song at different gigs: jive it, jazz it, remix it

WITH THIS AUDIENCE….	YOU CAN…
Information and data practitioners	Communicate using a common terminology
Information and data stewards	Understand their roles and responsibilities
Information and data architects	Develop models, capture retention and disposition, create metadata schemes, and establish data lineage, link to solutions design
Business analysts	Define work processes and gather business requirements
Information technology specialists	Perform business intake, plan, design, and configure systems accordingly
Programs and project managers	Plan their activities at the macro level
Data scientists	Plan for data collection
Data producers	Promote data quality and standardised reporting, tell a data story
Senior leaders	Establish information and data joint governance, determine competencies and level of literacy required

Source:

NOW WHAT? JIVE IT

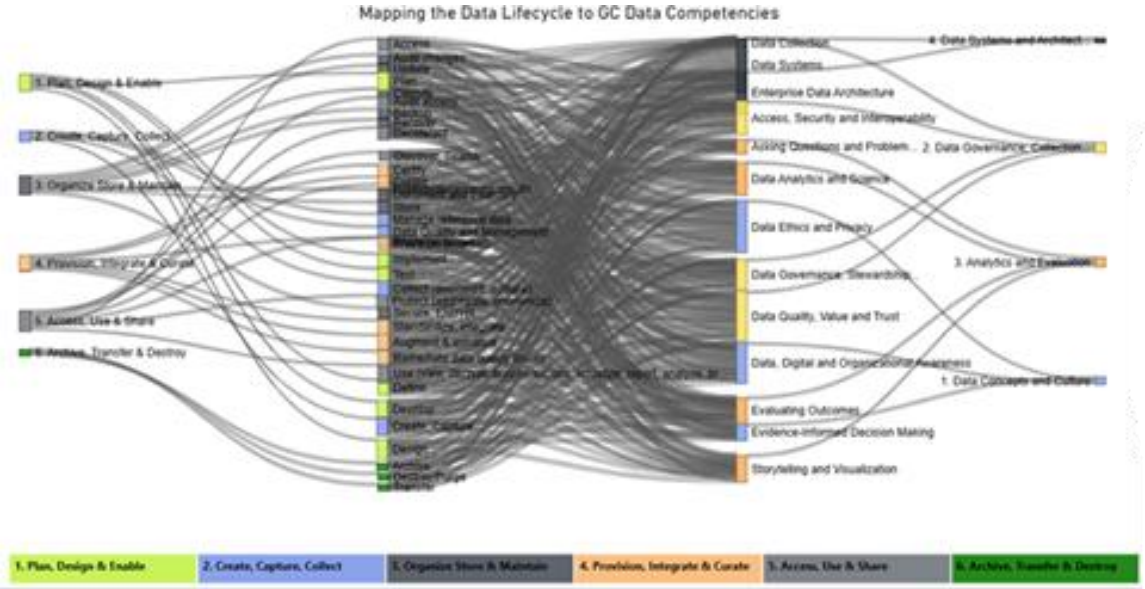


Transforming life cycle nodes into business requirements for systems that manage information and data

Node1	Node2	Node3	Node4	Node5	Node6
Survey Plan - Plan where to sample, where to collect the data, and perform pre-survey testing and calibration on the equipment (CTD). Instrument specialist ensures CTD is functioning proporerly and sends the calibration file to the Data Analyst before commencing survey.	**Collect** - CTD is deployed at specific stations indetified in survey plan to gather information (water column profile).	**Acquire** - Download the RAW data files from the CTD and store them on regional shared drive. RAW data files are accessed from shared drive for further processing. All RAW data is **archived**.	**Process** - Data is processed to a specific processing level (Level 0, level 1, level 2) for prepartion of reseach-ready data. Processing varies amongs the regions and some manual editing of the CTD profile is performed to remove suspect data points etc. Processed data is **archived.**	**Publish/Share** the data to water property site (main site where the reigional data is published). Also publish some of the data to the Canadian Integrated Ocean Observing System (CIOOS) Pacific.	

Source:

NOW WHAT? JAZZ IT



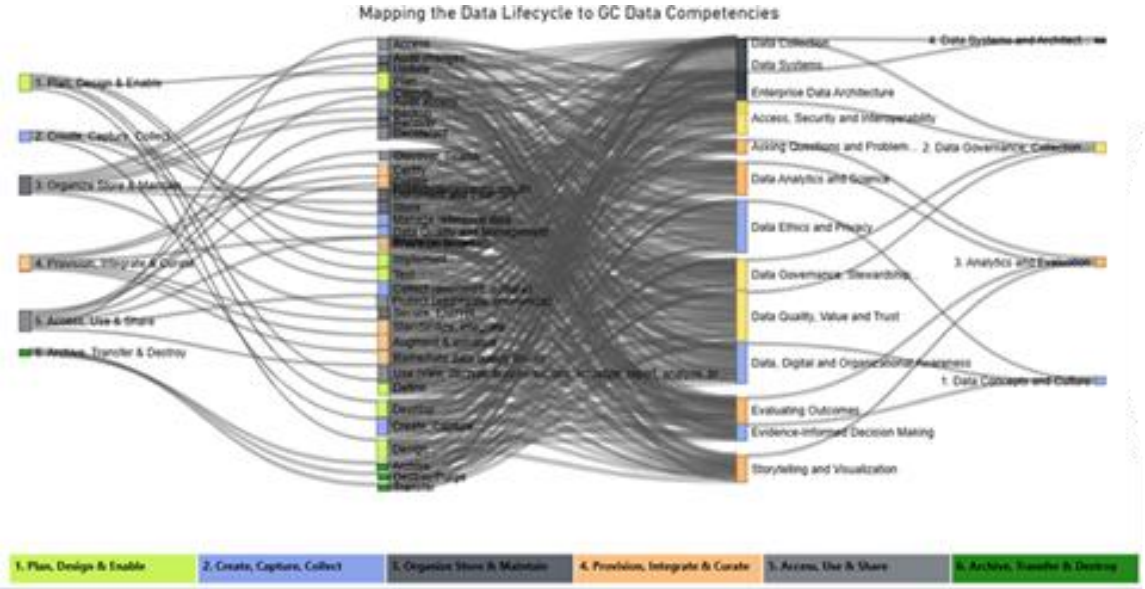
ULC-ID

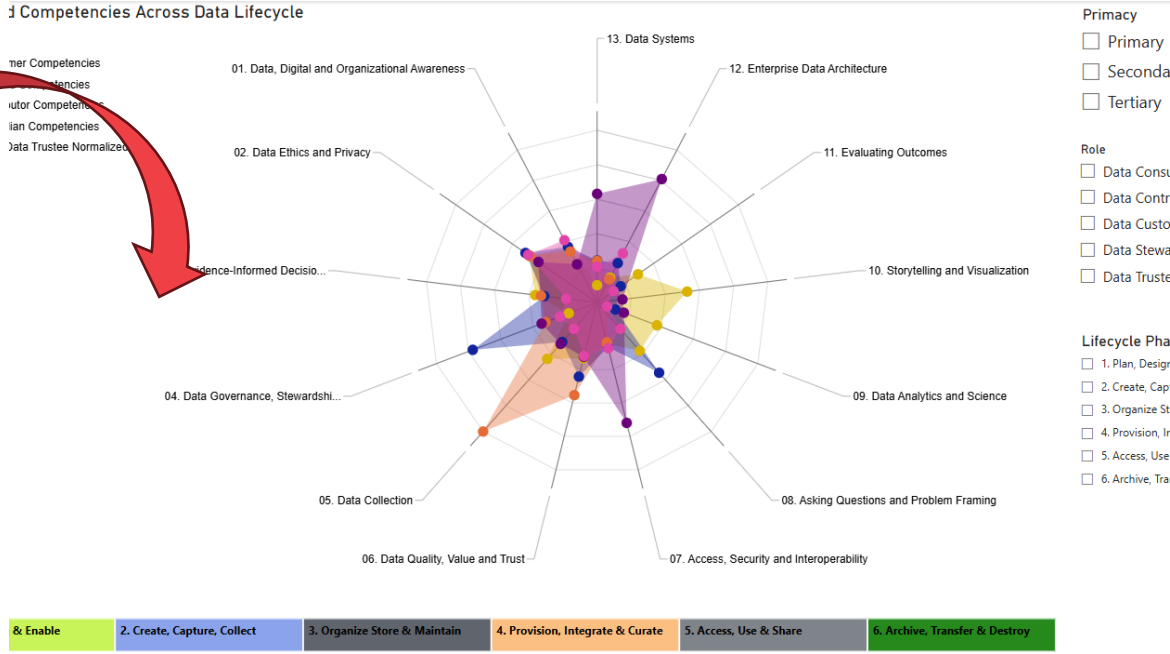
Initiation	Acquisition	Configuration
Processing	Leveraging	Disposition

Mapping between the GC Data Competency Framework to data life cycle activities which are in turn mapped to the ULC

Source:

NOW WHAT? REMIX IT



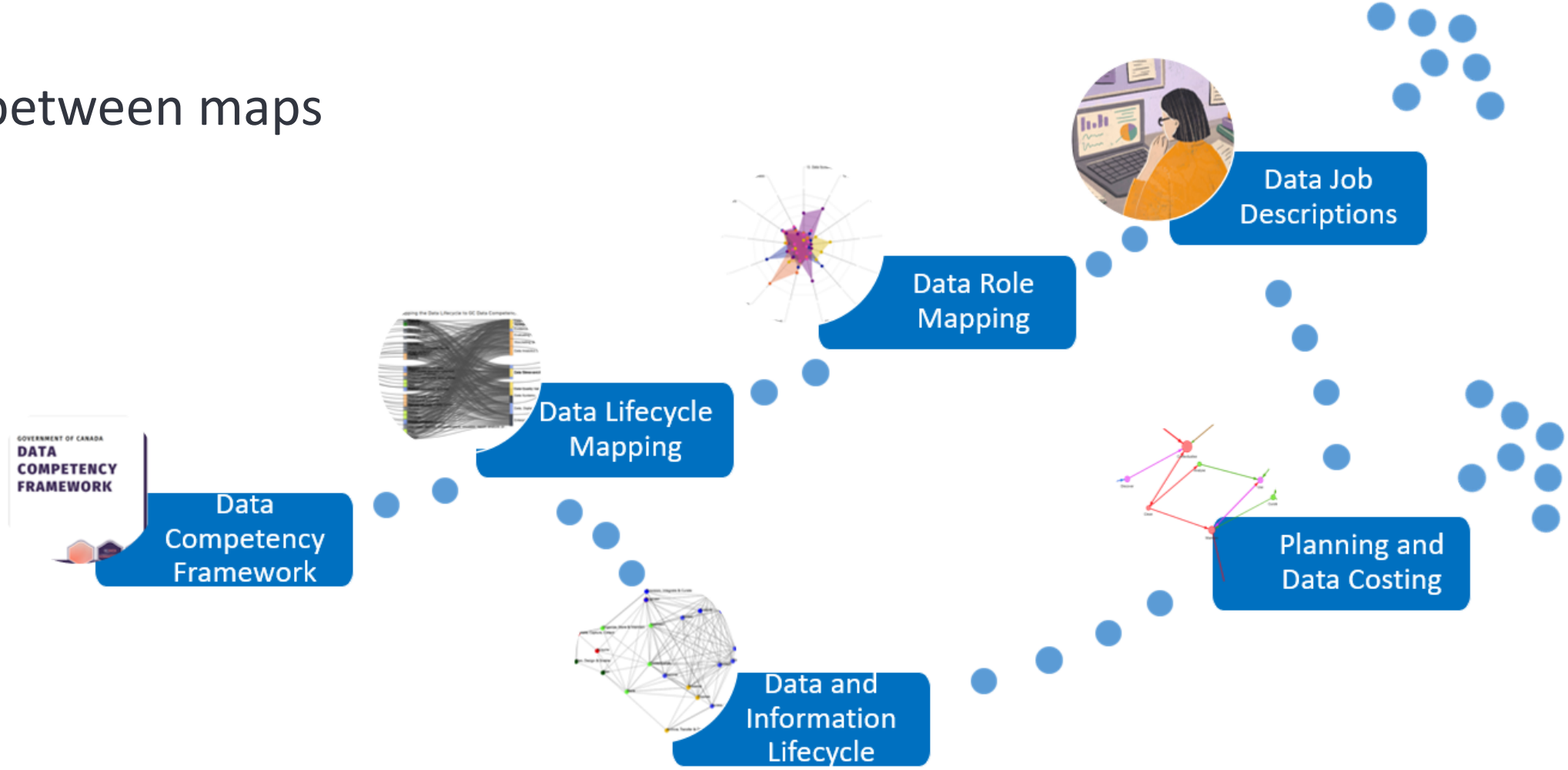


Mapping between the GC Data Competency Framework to data life cycle activities which are in turn mapped to data roles

Source:

NOW WHAT? ALBUM TRILOGY

Links between maps



Source: Credit Julian Kirby , Department of Fisheries and Oceans

QUESTIONS…. DISCUSSION

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