What is data management?

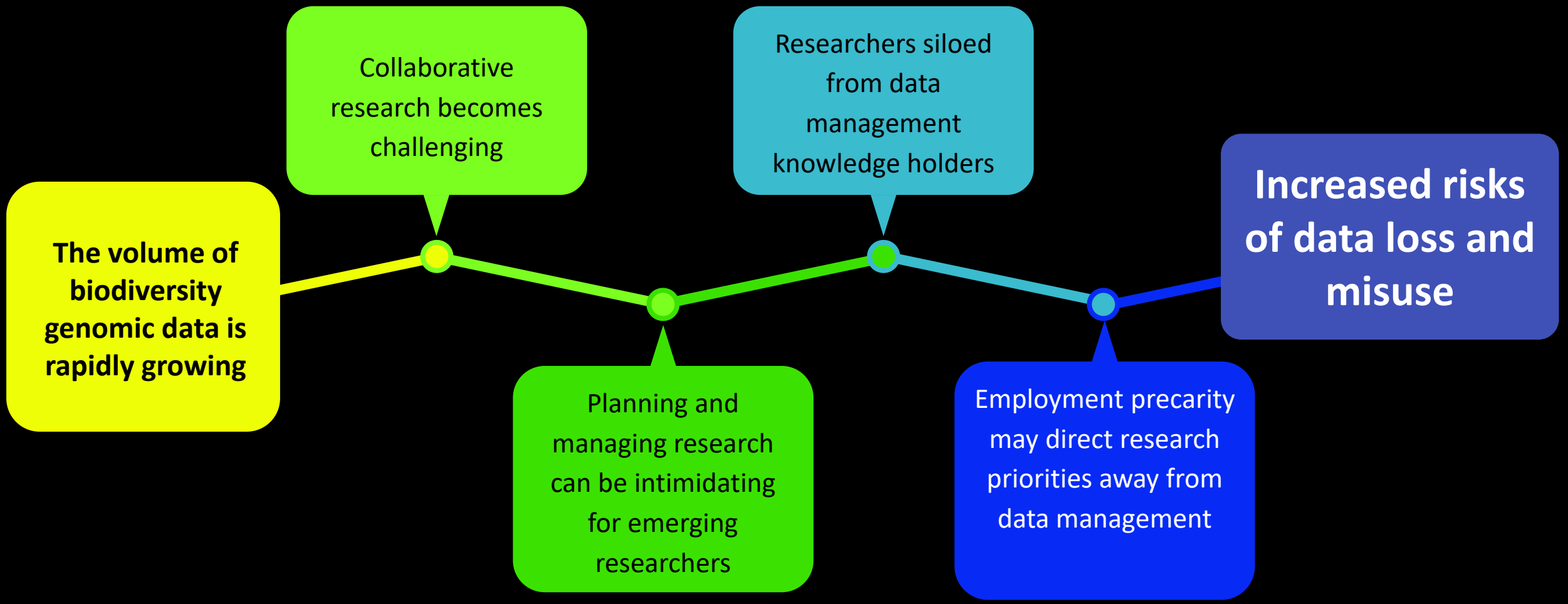
The processes and practices associated with the documentation and storage of and access to data and associated metadata throughout the research lifecycle.

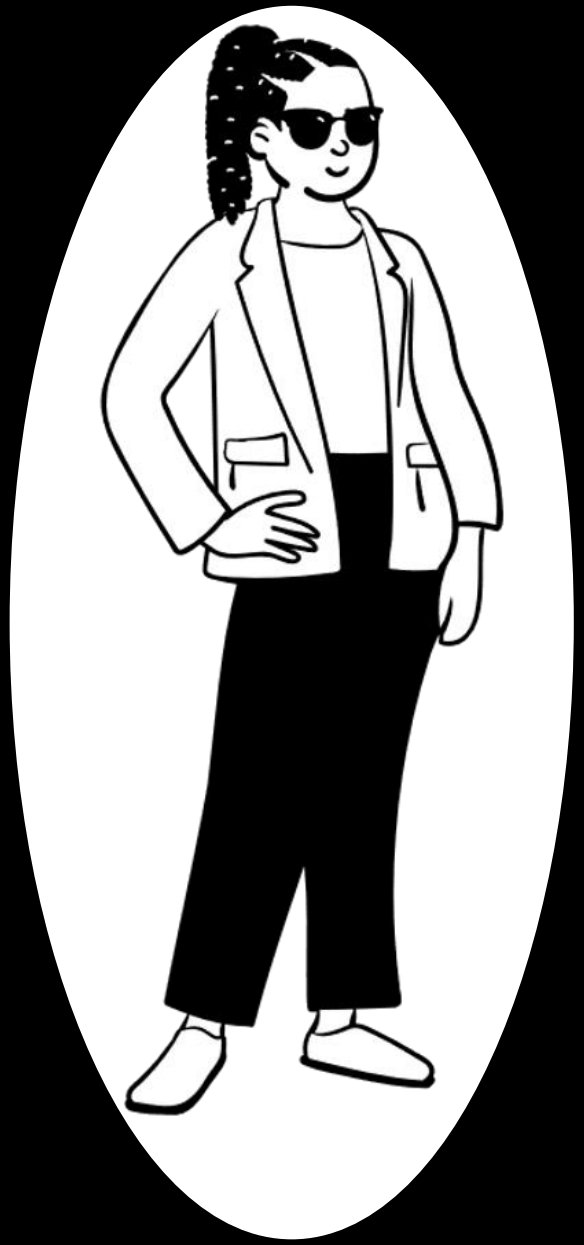
Be FAIR and CARE

- FAIR data principles largely provide technical guidance

- CARE data principles provide guidance on engaging with Indigenous data

The challenge



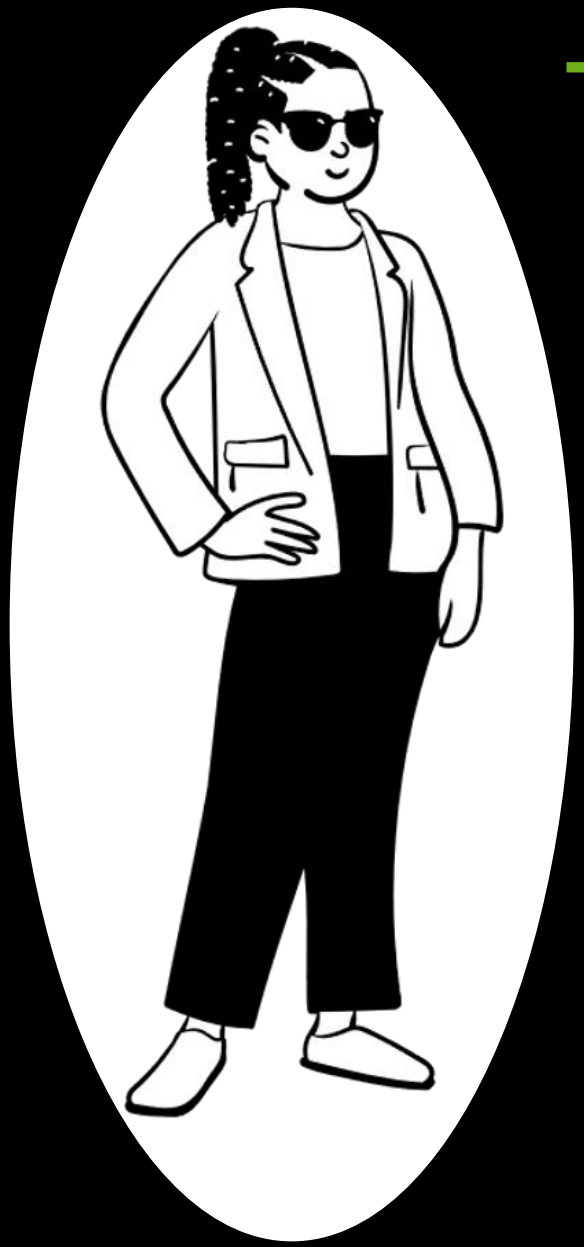


Taylor Smith

PhD student

New to biodiversity genomics

Taonga species genomics



Taylor Smith's data management needs

Controlled data access to facilitate IDsov & uphold FAIR/CARE Guiding Principles

Support to determine computing needs

Information to guide development of a project-specific DMP

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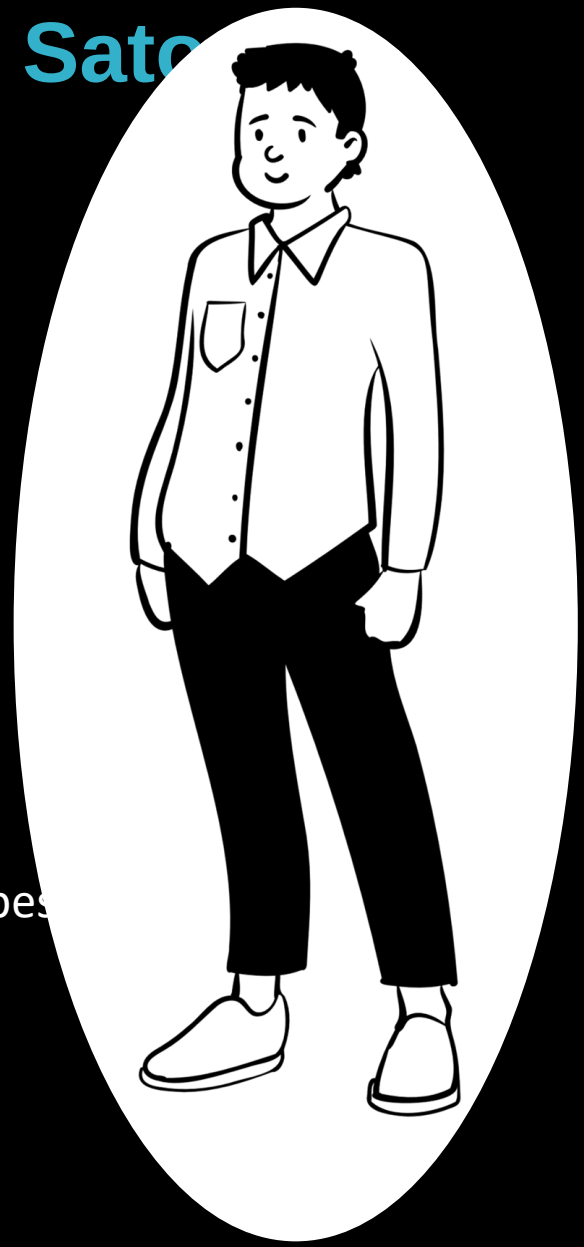
Dr Atsushi Sato

Postdoctoral researcher

Juggling several collaborative projects

Using multiple data types from various sources

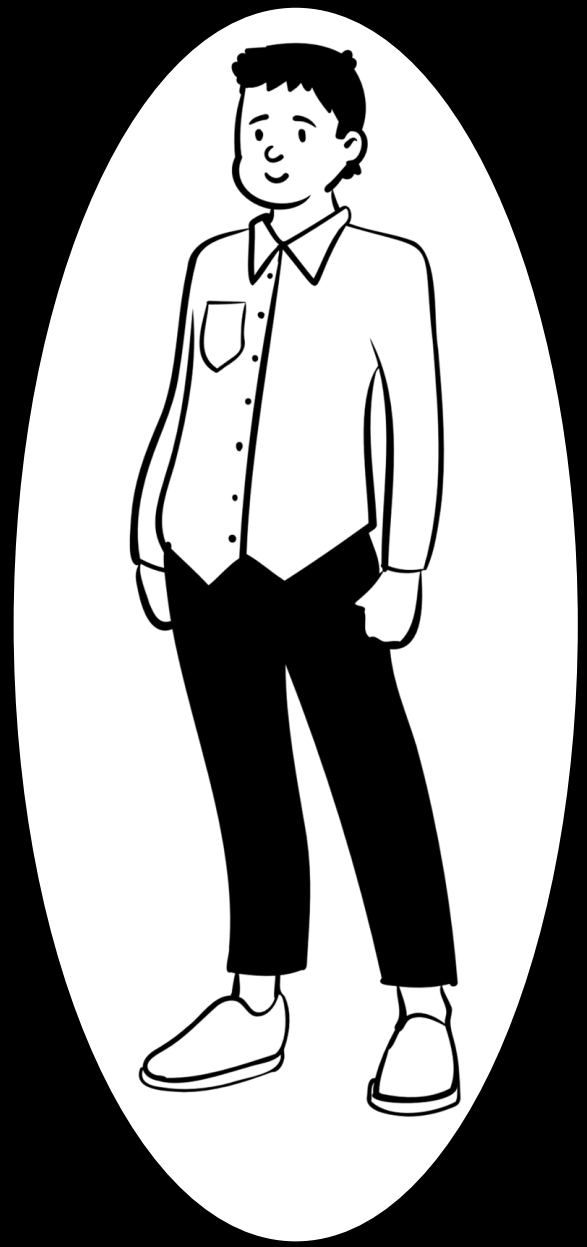


Dr Atsushi Sato's data management needs

Regular & transparent communication with collaborators

Access to fast data transfer to facilitate collaborative research

Access to well-curated existing metadata



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Professor Tehara Nepia

Research team leader

ng with advisors

Building and maintaining relationships with research partners

Facilitating the research

Professor Tehara Nepia's data management needs

Support from eResearch & libraries staff

Oversight over data storage beyond the research life cycle

Transparent communication with research team, research partners, advisors, and consultants

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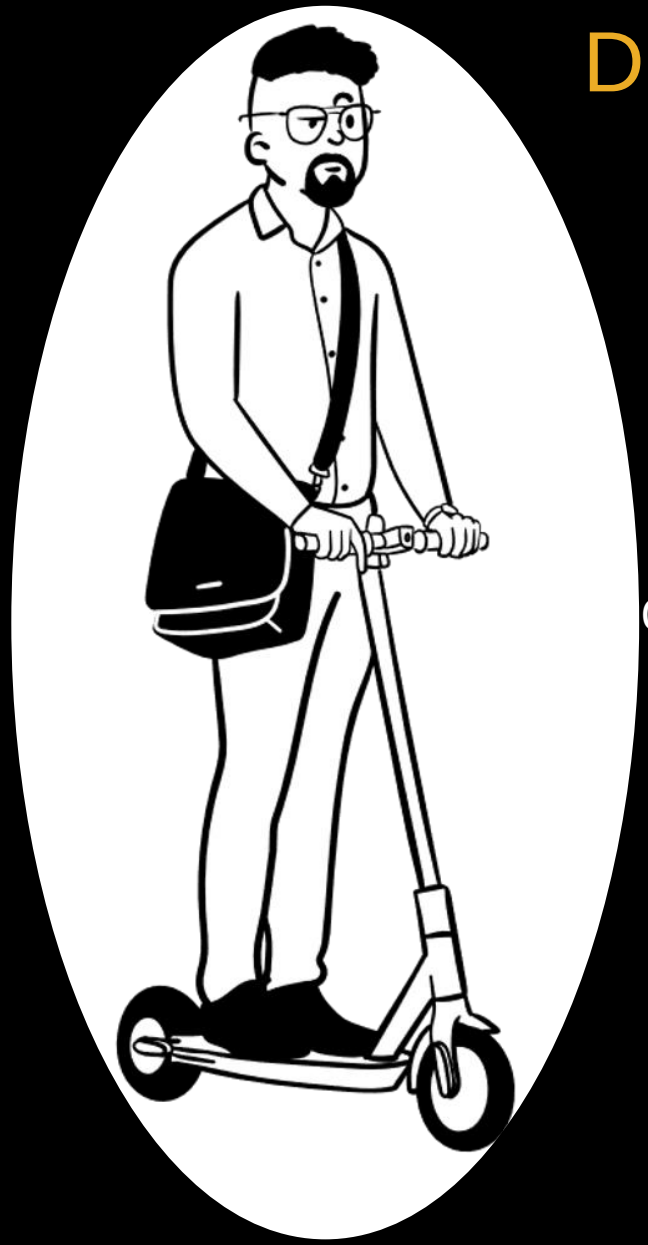
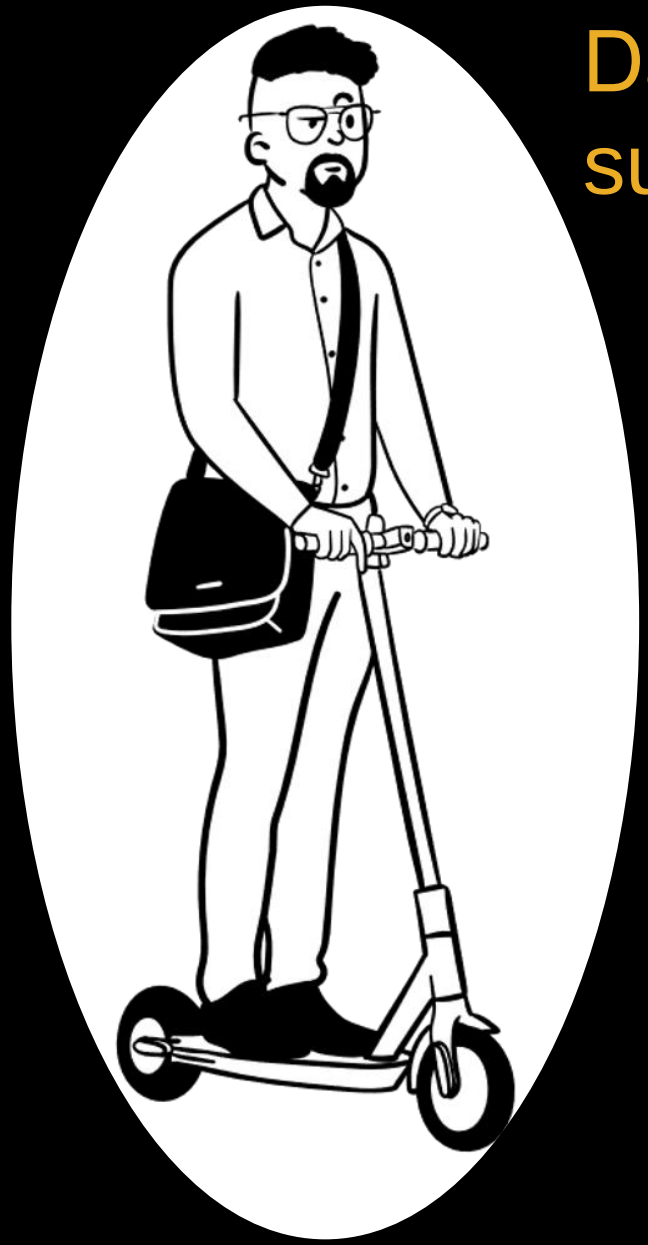
Darryl Baker

Institutional eResearch Manager



OverseeS compute and data storage needs for diverse research projects

Darryl Baker's needs when supporting researchers



Clarity on the expected data management needs across the research life cycle

Detail on storage needs in order to advise on appropriate tools/services

Background knowledge of national/institutional data management legislation and principles

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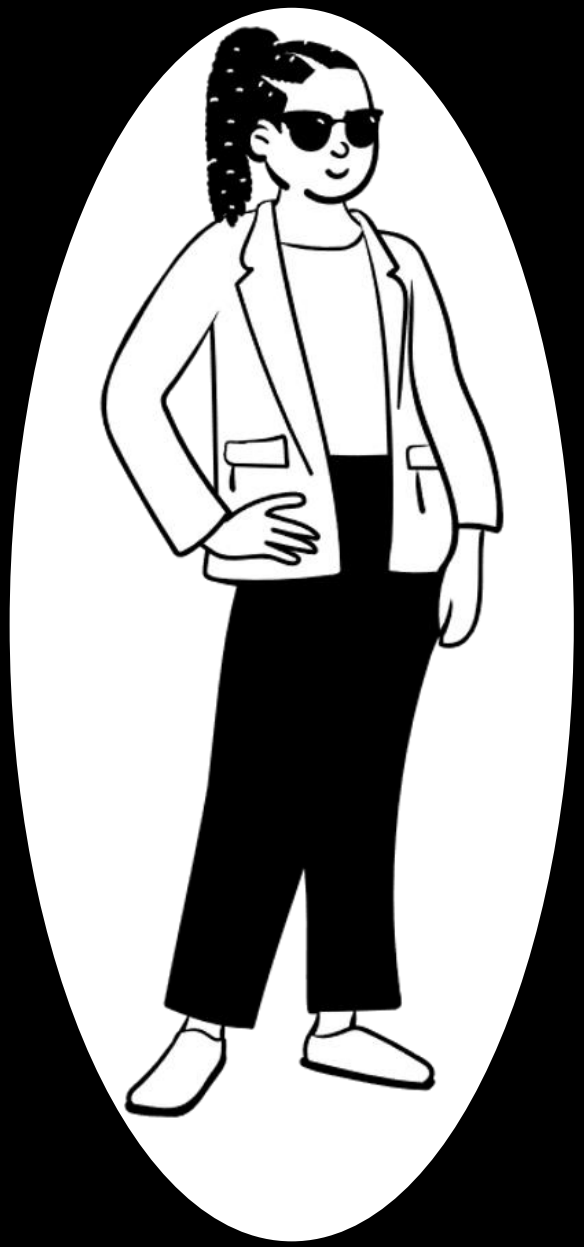
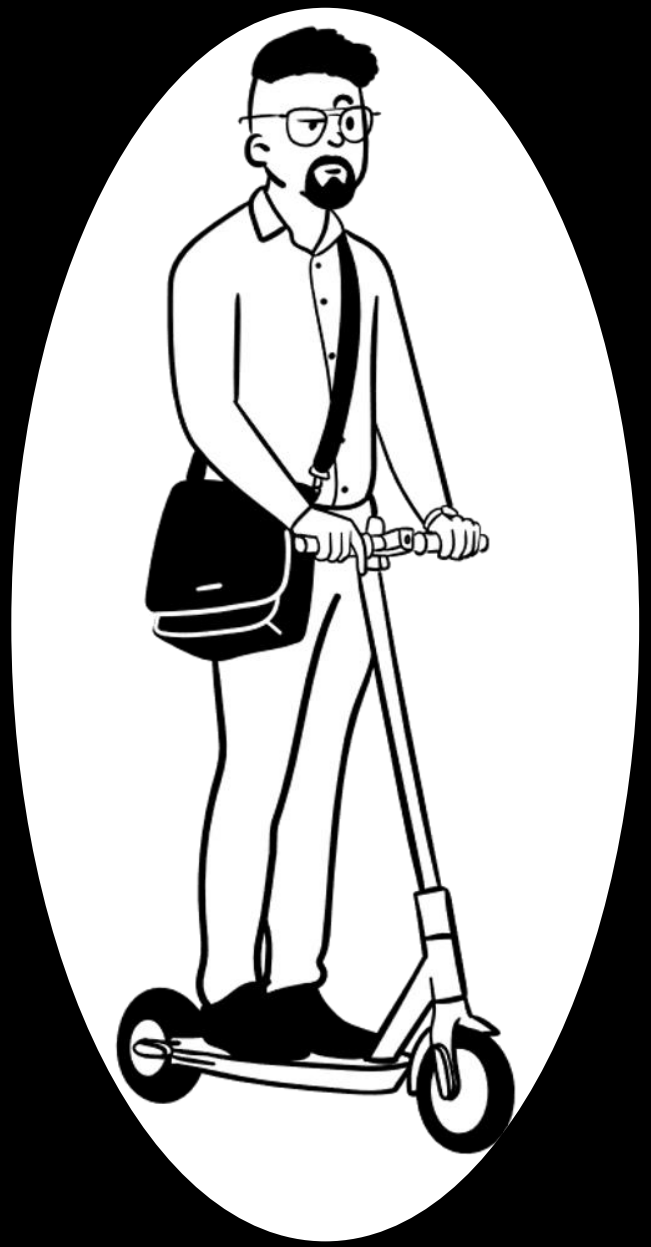
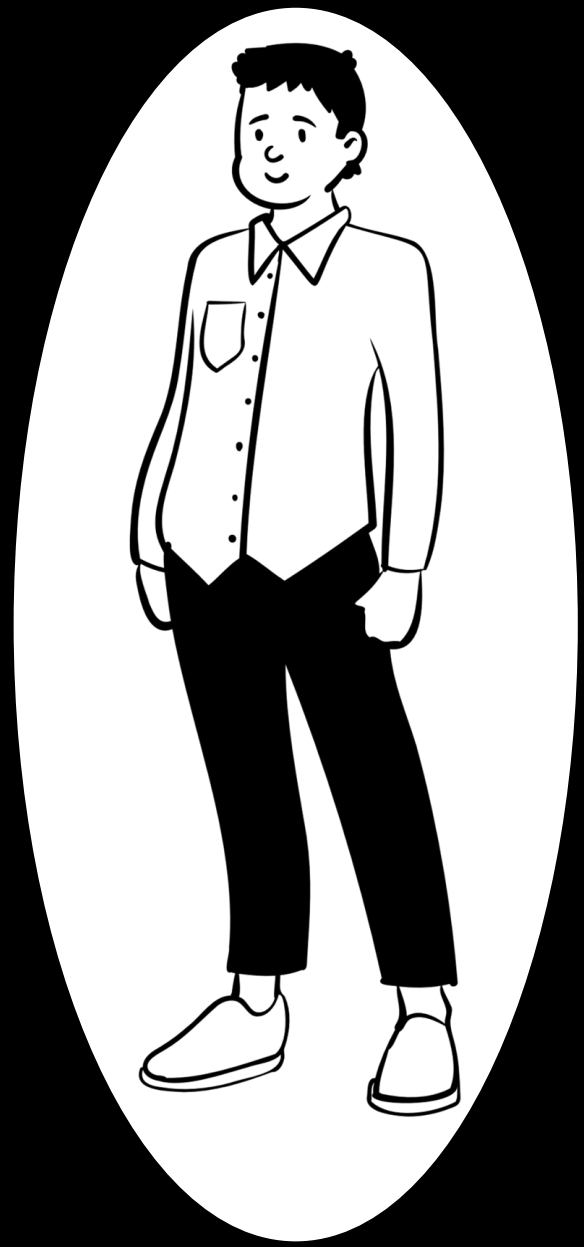
User experience personas







User experience personas

How should we keep track of data processing steps for large volumes of stored data?

How can we balance Western science data access standards with the data sovereignty needs of our Indigenous partners?

How can I embed data management processes in my daily workflows?

How do I implement a cohesive, consistent data management strategy for my research team?

As an emerging biodiversity genomics researcher, how do I begin my data management journey?

How can I balance data analysis with upskilling in data management tools like workflow management and version control?

Do we need to develop bespoke data management tools for our research team?

How do I ensure interoperability across large genomic and environmental data sets?

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FAIR + CARE

Biodiversity Genomics Data Management Hub

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Data Management Plans

Describes the data that will be generated during a research project, and how it will be used, accessed, and stored during the research lifecycle and beyond.

- Data types
- Data formats and standards
- Roles & responsibilities
- Data dissemination
- Data sharing & access
- Archiving & persistence

eResearch and libraries staff

1. Connect with your local Darryl early and often

1. Be prepared to put your project and needs in context

1. Know who's going to be responsible for the data

Helping others help you…

…and helping you help future you!

Data management culture - Be your own leader

You can be a data management champion!

Share learnings and encourage others often

Data management is a practice, not an event

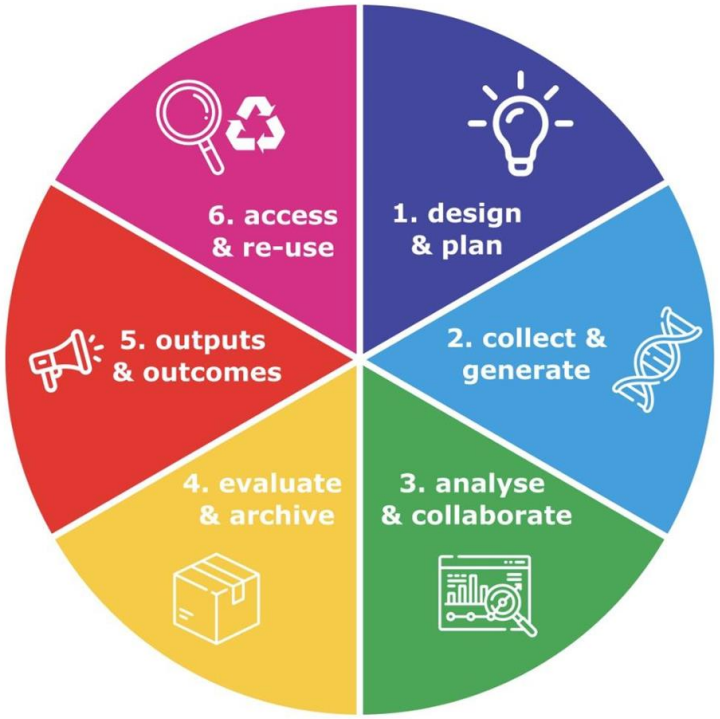
Biodiversity Genomics Data Management Hub

Biodiversity Genomics Data Management Hub

Module overview

Here you can find a series of modules filled with tips and tricks to support you on your data management journey. Use what works, adapt as needed, and leave the rest.

Below we present a simplified overview of the data lifecycle within the broader research lifecycle. Think of this as a roadmap to help navigate your own research journey. Some modules may be more relevant at specific times in the lifecycle than others, but you will likely find that it is essential to consider data management at every step of the research journey.



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Module	Overview
Module 01	Top tips and tricks to make data management easy
Module 02	The ethics and benefits of good data management practices
Module 03	Hot, warm, and cold data storage
Module 04	Helping eResearch and libraries staff help you

Data Management is a journey,
we are all on the path striving toward
best practice