



School of Chemistry and Physics  
Astrophysics Research Group

# A Framework for Preserving Aboriginal Astronomy in SEQ

QUT Astrophysics Research Group

Carmen Isabel Martinez Harris, Michael Cowley



## Acknowledgement of Country

We acknowledge the Turrbal and Yugara peoples, as the First Nations owners of the lands from which we join you today. We pay respect to their Elders, lores, customs and creation spirits. We recognise that these lands have always been places of teaching, research and learning. We also acknowledge the important role that Aboriginal and Torres Strait Islander people play within our community. We extend our respect to Elders and Traditional Owners of all the lands from which each of you is joining.

# Missing Voices in Astronomy



**Where do our astronomy stories begin?**

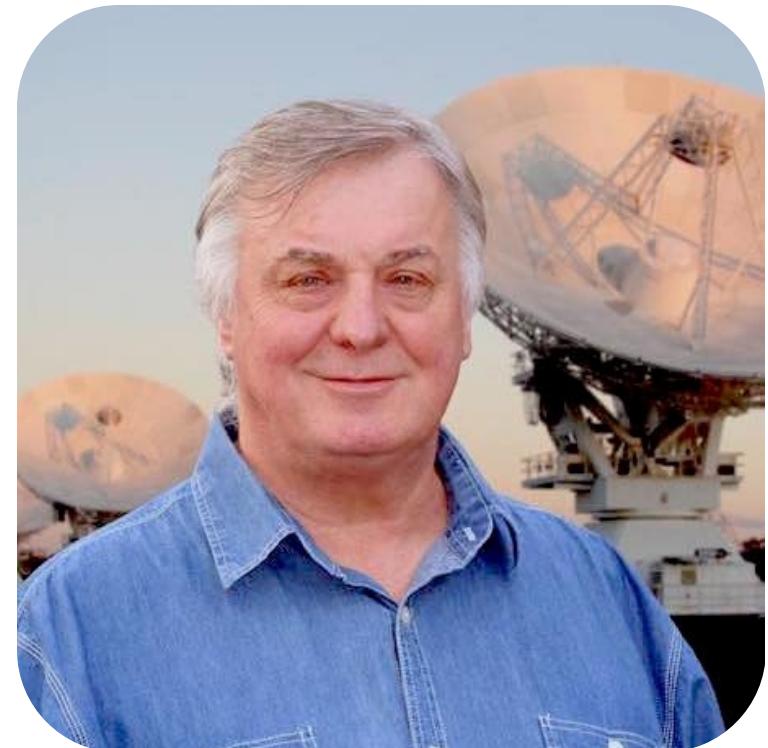
**Whose knowledge is missing?**

**Why exclude 60,000+ years of  
Indigenous Sky Knowledge?**

# Standing on Shoulders

The Researchers and Educators who Inspired this Framework

**PROF  
RAY NORRIS**



**A/PROF  
DUANE HAMACHER**



**PETER SWANTON**  
*Gamilaraay-Yuwaalyaay Man*



**DR KIRSTEN BANKS**  
*Wiradjuri Woman*



# Science is Shaped by Culture

## How Questions, Values, and People Shape Discovery

- What we ask, value, and record in science is always shaped by culture.
- Knowledge grows stronger when diverse voices contribute and are respected.
- Indigenous science is built on thousands of years of observation and connection to Country.
- Embracing multiple ways of knowing makes science more robust, inclusive, and relevant.



*Aboriginal students Jeffrey Walker and Cheyenne Proctor participating in astronomy activities at Lake Tyers, Victoria, 2018.*

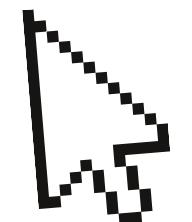
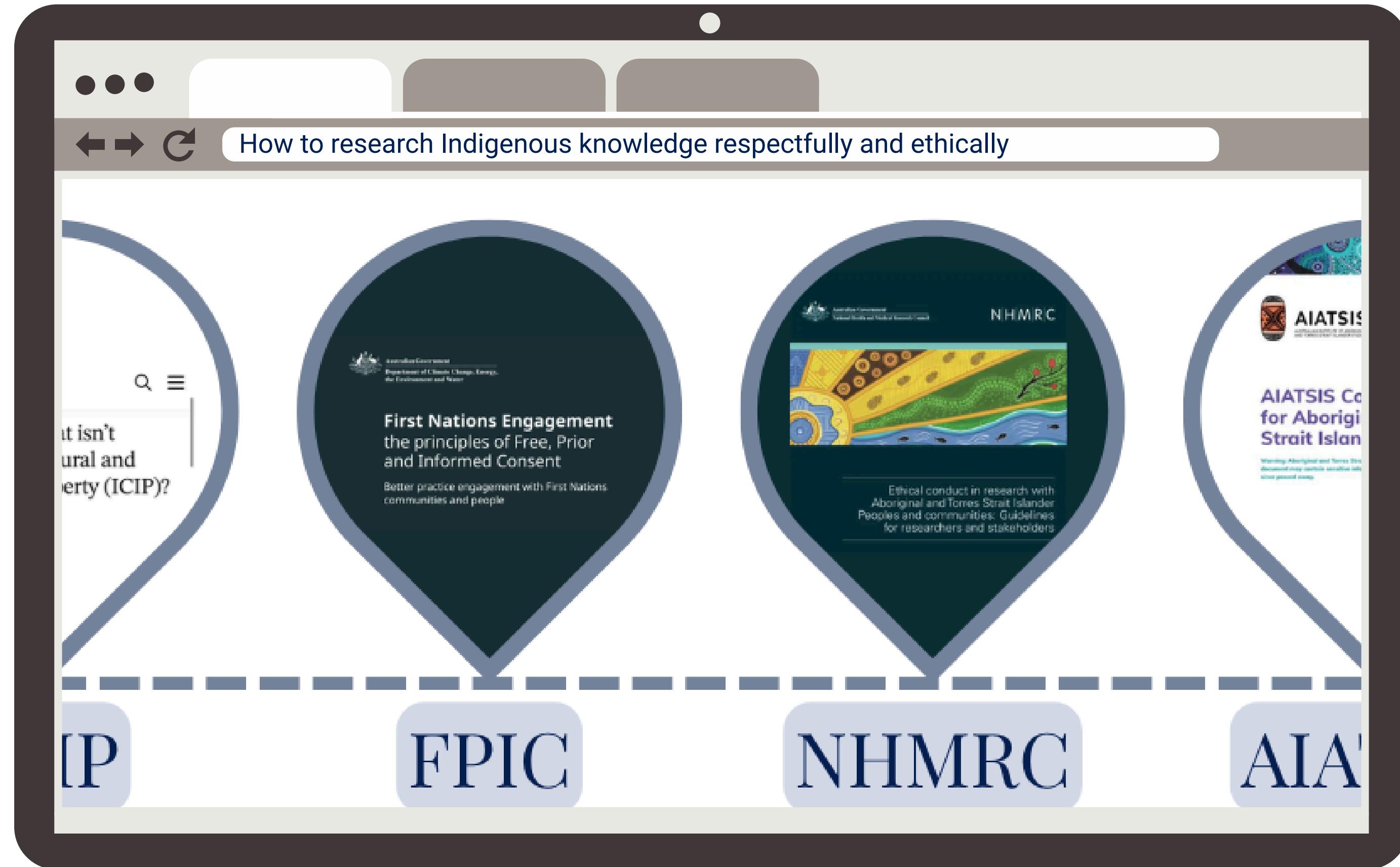


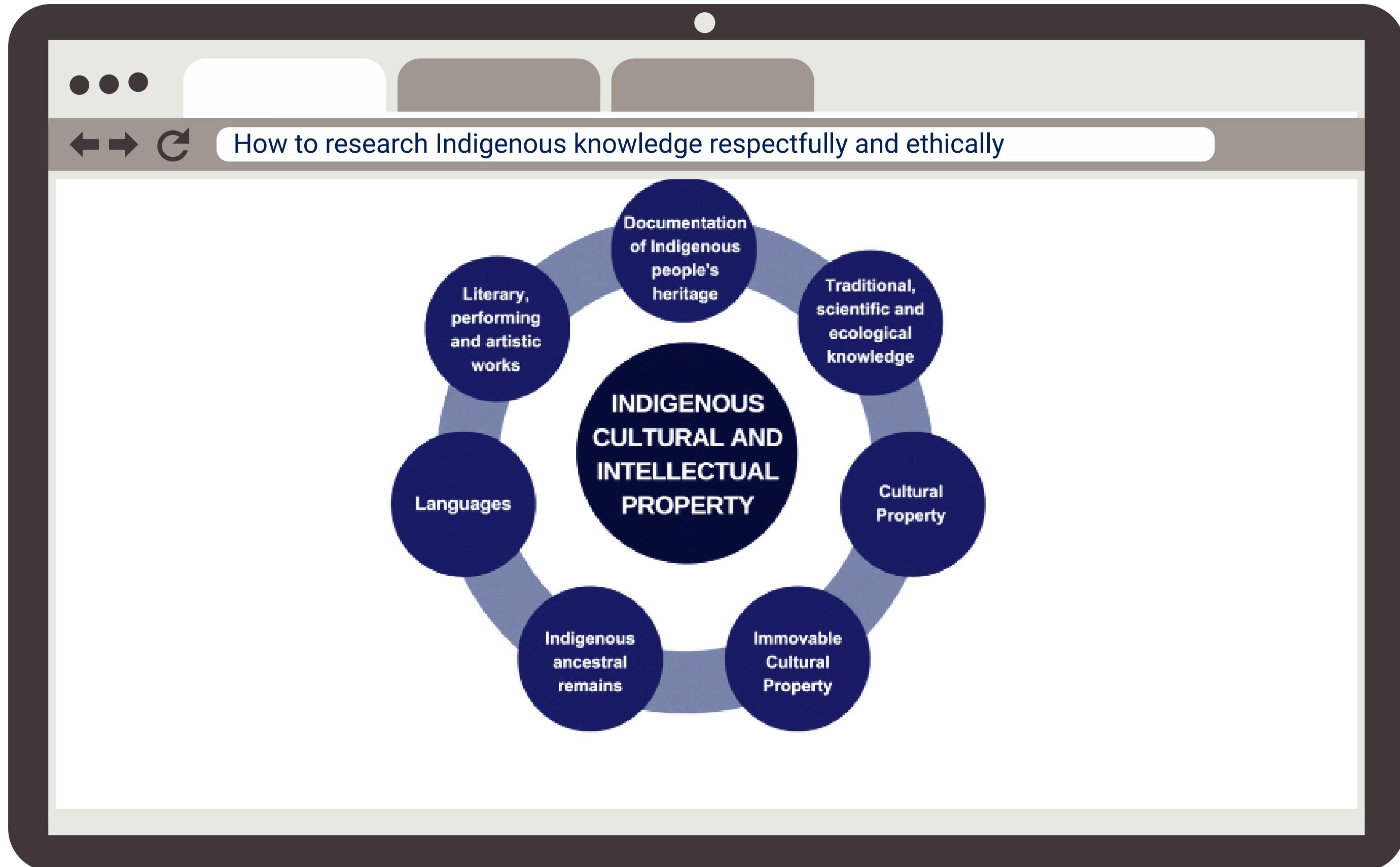
David R Horton (creator), © AIATSIS, 1996. No reproduction without permission.

This map attempts to represent the language, social or nation groups of Indigenous Australia. It shows only the general locations of larger groupings of people which may include clans, dialects or individual languages in a group. It used published resources from the eighteenth century – 1994 and is not intended to be exact, nor the boundaries fixed. **It is not suitable for native title or other land claims.**









How to research Indigenous knowledge respectfully and ethically

Google

How to research Indigenous knowledge respectfully and ethically

AI Mode All Images Shopping Videos News Short videos More Tools

 Stellarium Web  
<https://stellarium-web.org> ::

**Stellarium Web Online Star Map**

Stellarium Web is a planetarium running in your web browser. It shows a realistic star map, just like what you see with the naked eye, binoculars or a ...

 Stellarium Astronomy Software  
<https://stellarium.org> ::

**Stellarium Astronomy Software**

Stellarium is a free, open-source planetarium showing a realistic 3D sky, with over 600,000 stars, 80,000 deep-sky objects, and a realistic Milky Way.

[Stellarium 25.2](#) [Stellarium 25.1](#) [Stellarium 24.1](#) [Stellarium 24.3](#)

 Apple  
<https://apps.apple.com/app/stellarium-mobile-star-map> ::

**Stellarium Mobile - Star Map - App Store - Apple**

Stellarium Mobile is a planetarium app that shows exactly what you see when you look up at the stars. Identify stars, constellations, planets, comets, ...

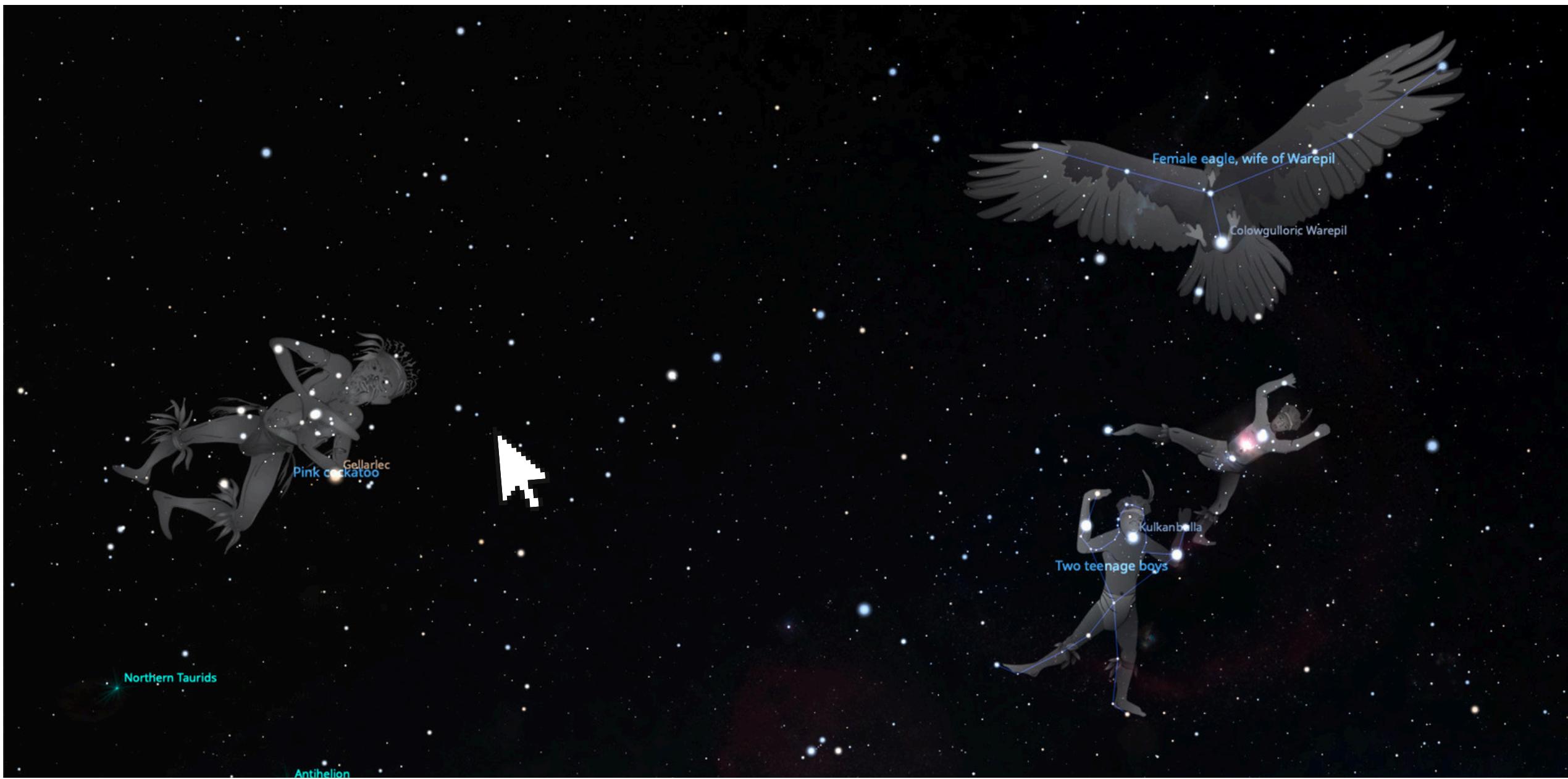
4.8 ★★★★★ (35,707) · Free · iOS · Educational

See results about

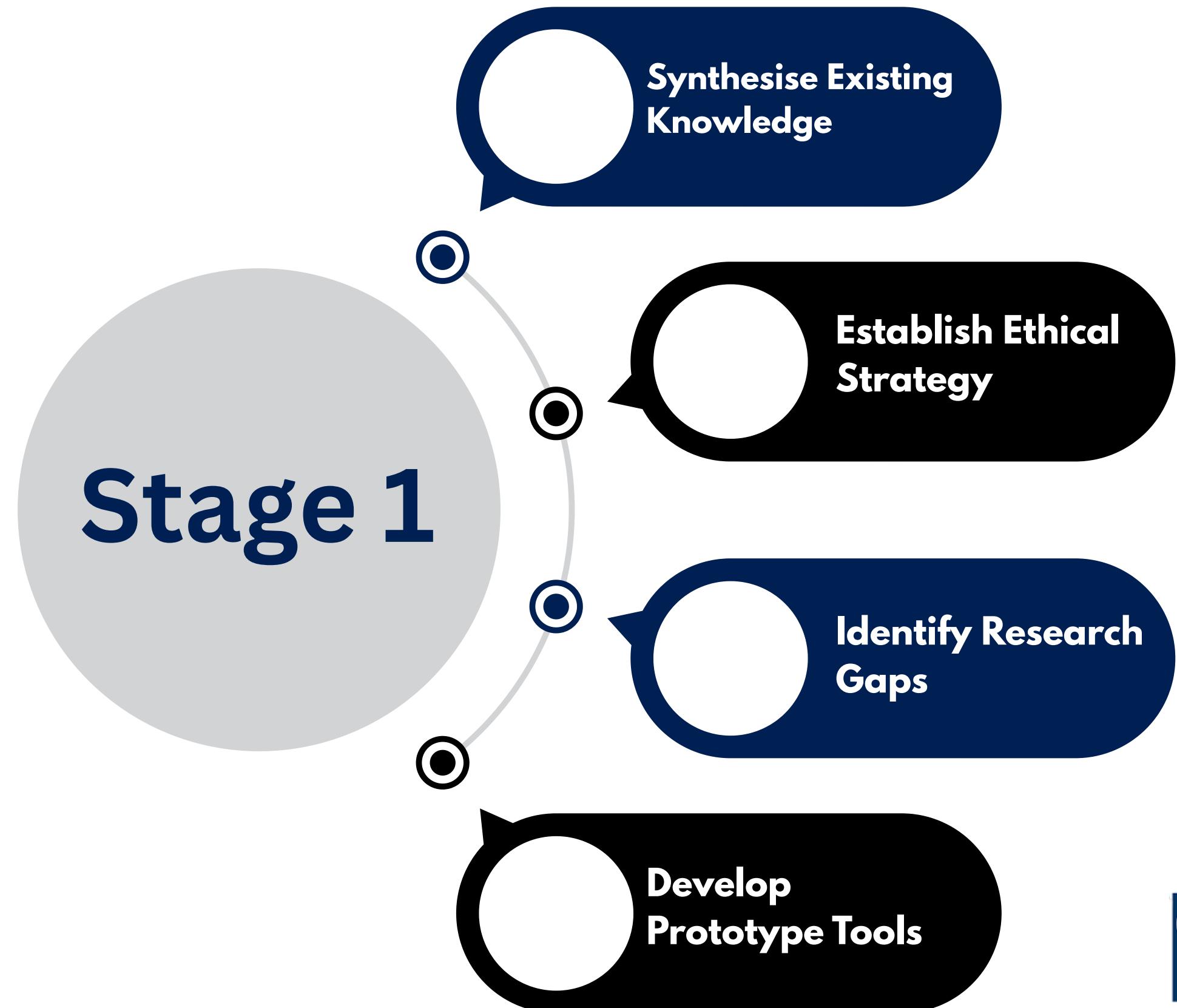
 Stellarium  
A stellarium is a three-dimensional map of the ...

 Planetarium  
A planetarium is a theatre built primarily for presenting ...

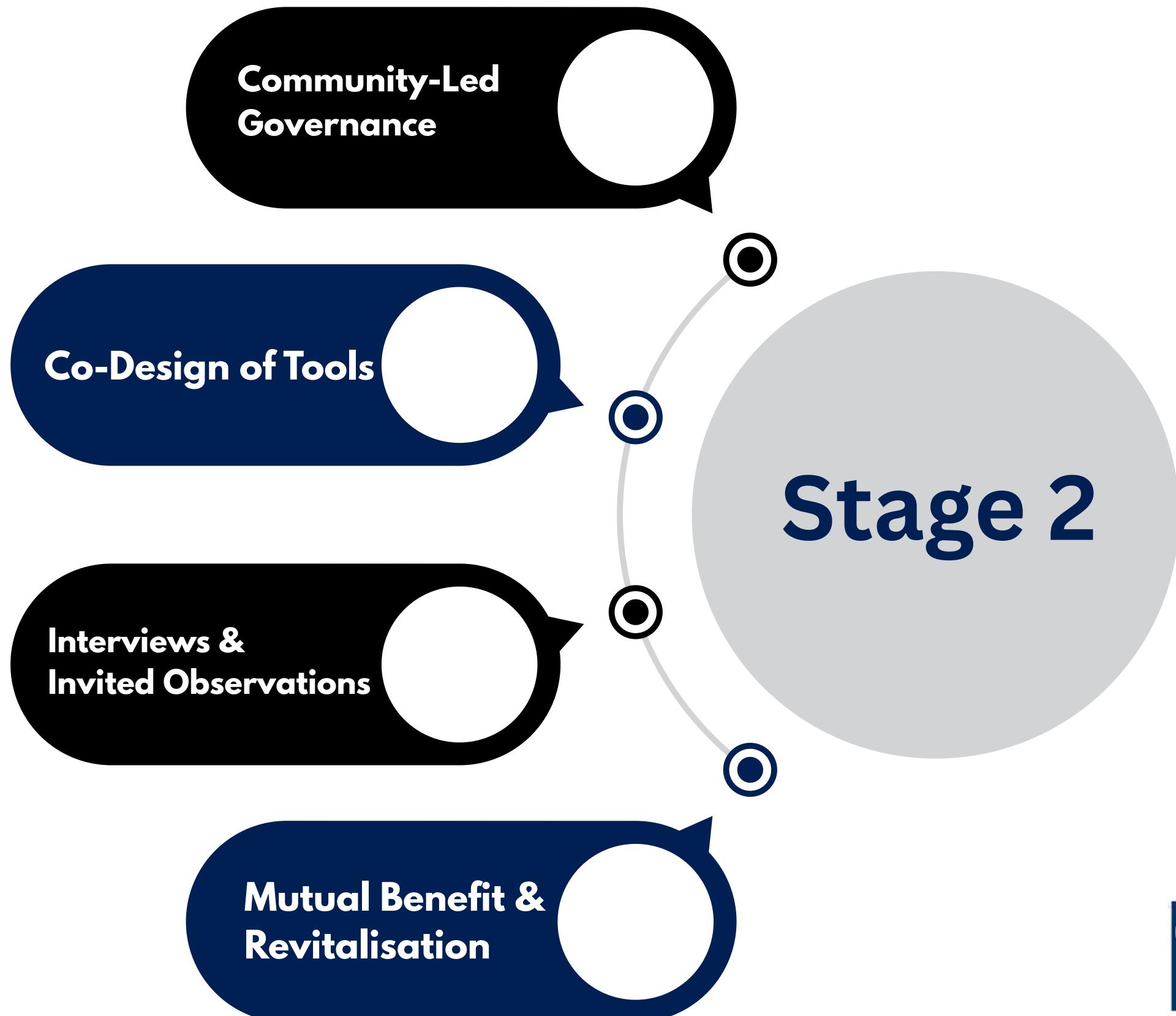
## How to research Indigenous knowledge respectfully and ethically



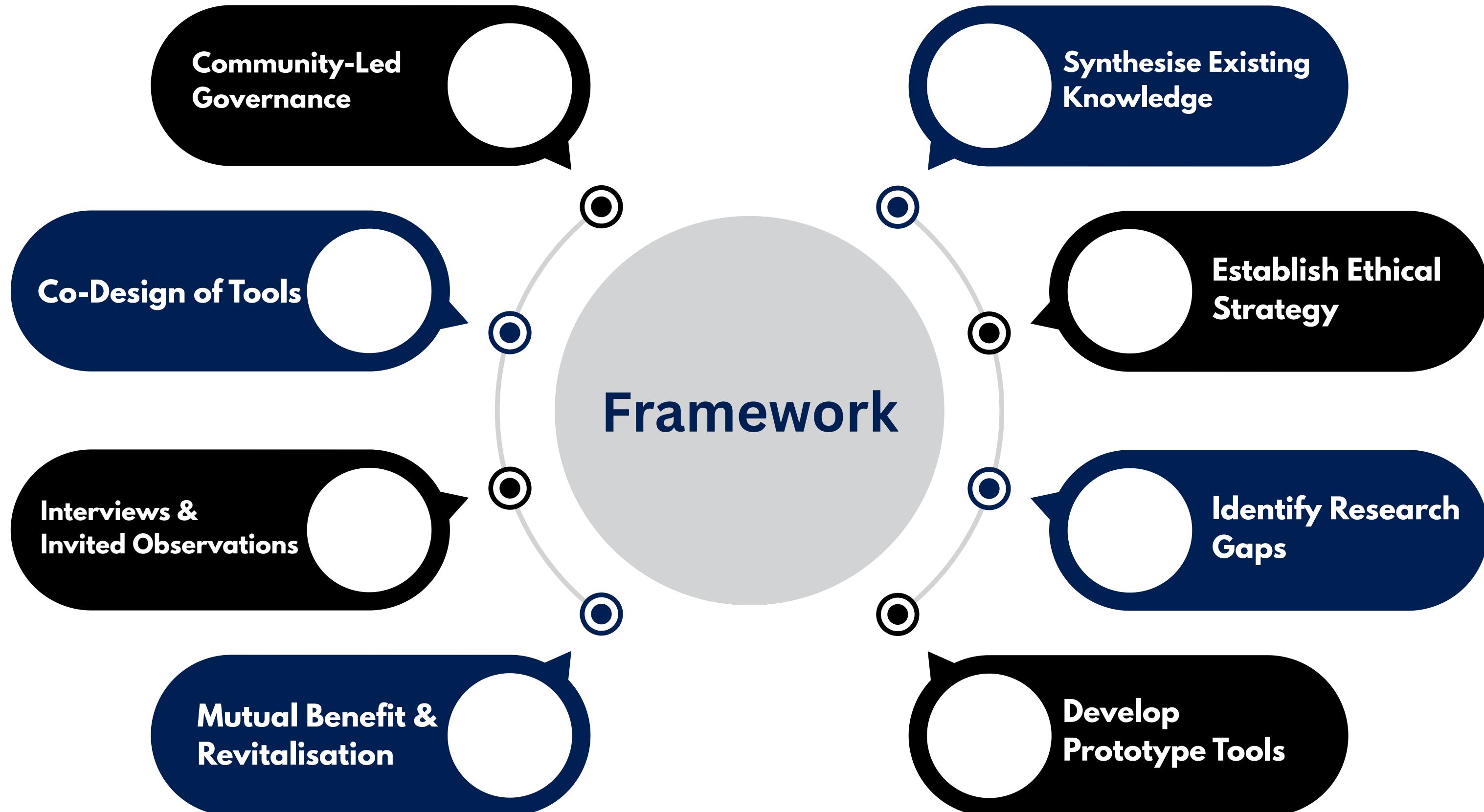
# What We Did (the Framework)



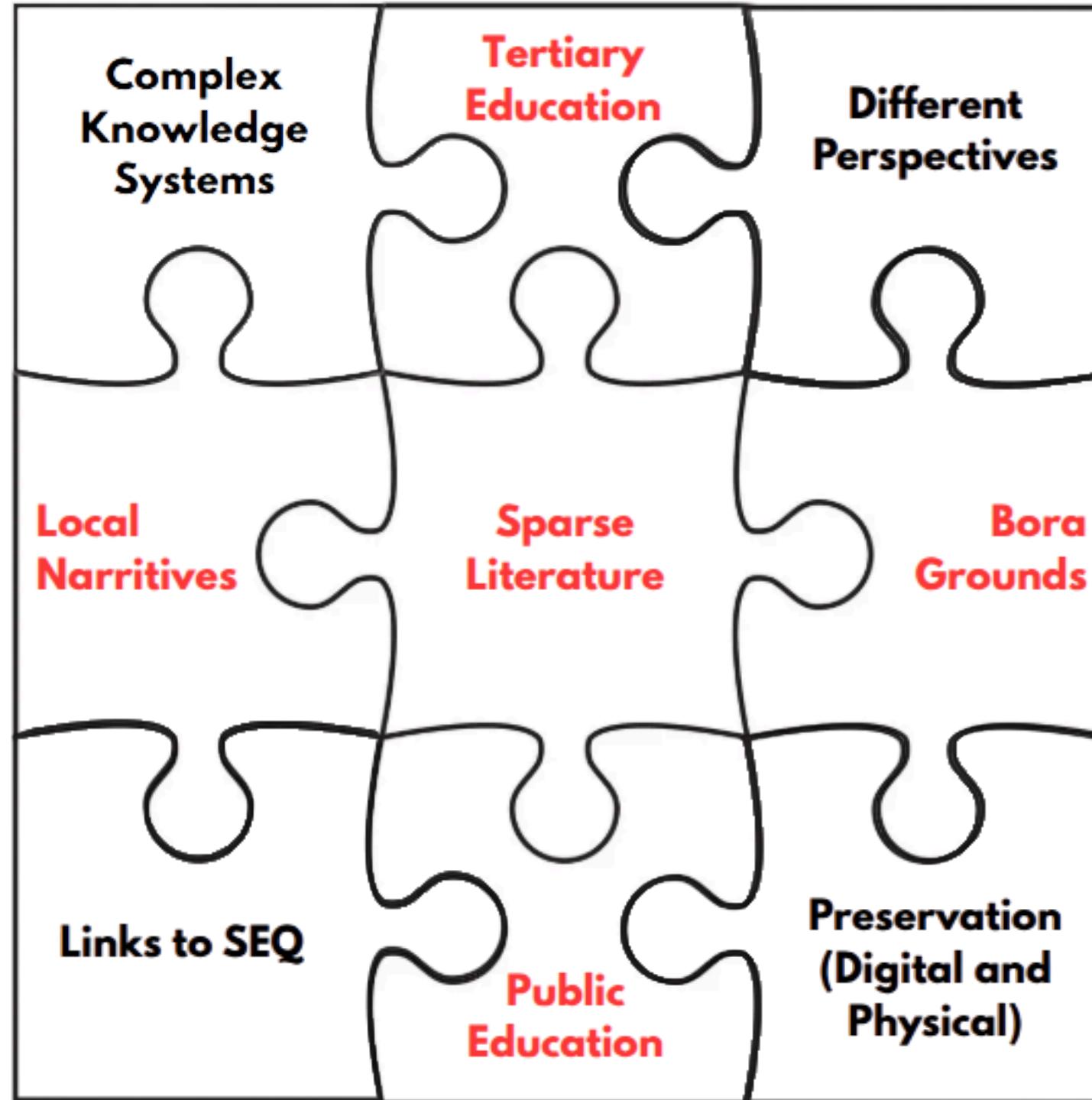
# What We Did (the Framework)



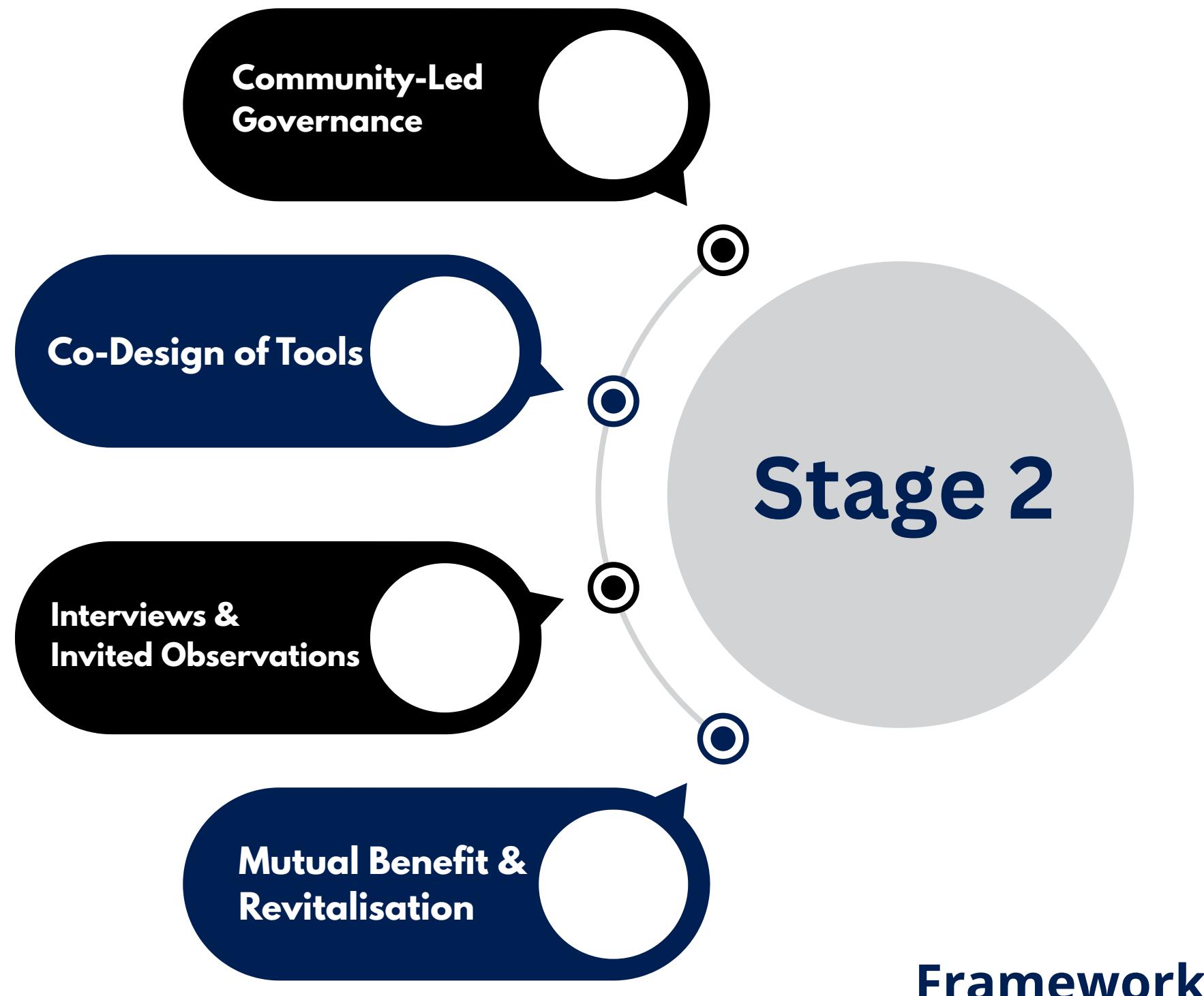
# What We Did (the Framework)



# Key Findings and Identified Gaps



# The Outcome and Next Steps



Documenting and Preserving Knowledge

Semi Structured Interviews

Building Relations

# Thank you!

## A Framework for Preserving Aboriginal Astronomy in South East Queensland

Carmen Isabel Martinez Harris (n11388811)<sup>1</sup>, **Supervisor:** Dr. Michael Cowley<sup>1</sup>

<sup>1</sup> Faculty of Science, School of Chemistry and Physics, Queensland University of Technology (QUT)

---

### Abstract

This project establishes a research framework to explore the preservation, interpretation, and transmission of Aboriginal astronomical knowledge, with a specific focus on the Brisbane and South East Queensland region. The project begins with a comprehensive literature review of celestial navigation, star maps, seasonal calendars, and oral traditions to identify thematic patterns and regional research gaps. Guided by the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS) Code of Ethics and National Health and Medical Research Council (NHMRC) Guidelines, the framework prioritises a culturally safe and collaborative approach. Key ethical considerations addressed include mutual benefit, informed consent, and data sovereignty. The project develops prototype data collection tools, such as semi-structured interview guides and observational checklists, which are designed for respectful engagement and require future co-design with community members. The resulting research proposal provides a rigorous foundation for subsequent ethnographic studies at the Honours, MPhil, or PhD level. Ultimately, this work aims to contribute to cultural preservation, support community-led documentation of celestial knowledge, and foster greater dialogue between Indigenous and Western astronomical perspectives.

---

**Index Terms:** Astronomy, Aboriginal, Indigenous, Framework.

---



Queensland University  
of Technology