Gearing up towards a gender-equitable cycling future



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Participatory Systems Mapping as a tool to explore the gender gap in cycling

Kassandra Moosbrugger, Prof Cindy Gray, Dr Emma Lawlor, Prof Ria Jason Gill, Prof Ria Dunkley



Context of the project

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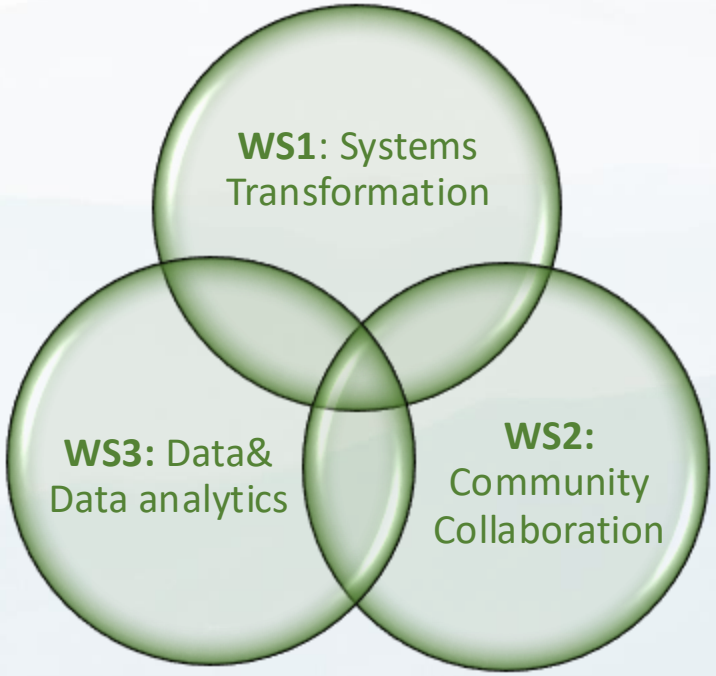
Glasgow **A**s a **L**iving **L**ab **A**ccelerating **N**ovel **T**ransformation



WP1 Climate Resilient Urban Riverscapes

WP2 Social Benefits of Urban Biodiversity

WP3 Regenerating VDL via C-sequestration

WP4 Benefits of active travel & urban mobility

WP5 Clean Energy at Community Scale

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The problem

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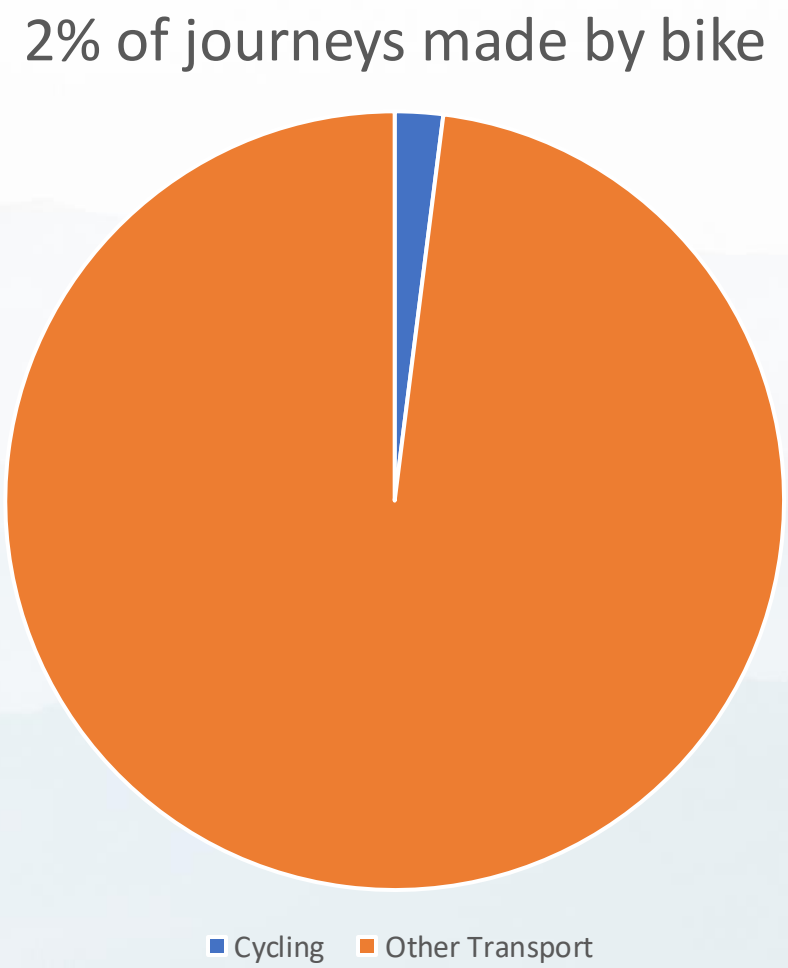
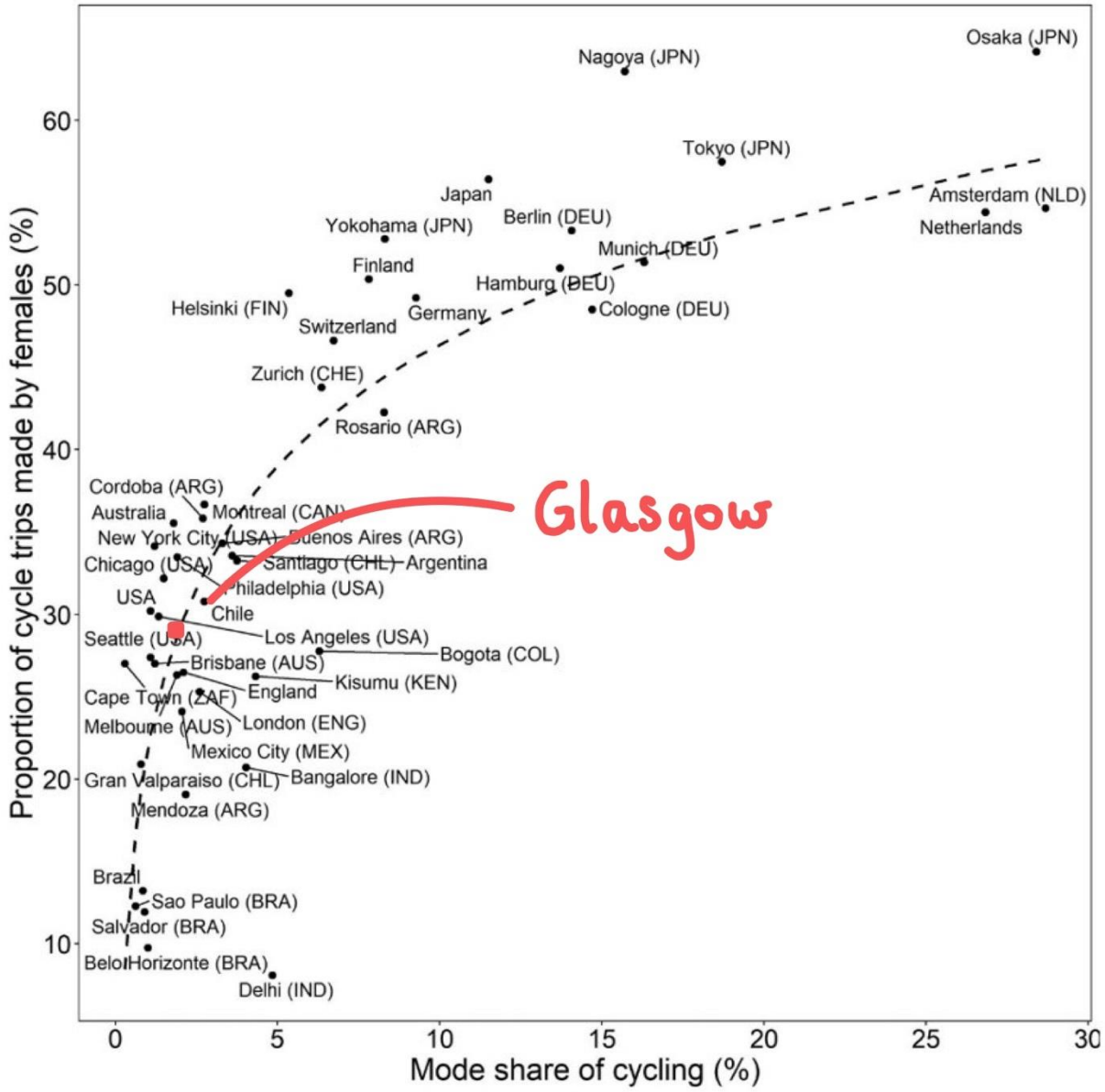
2% mode share

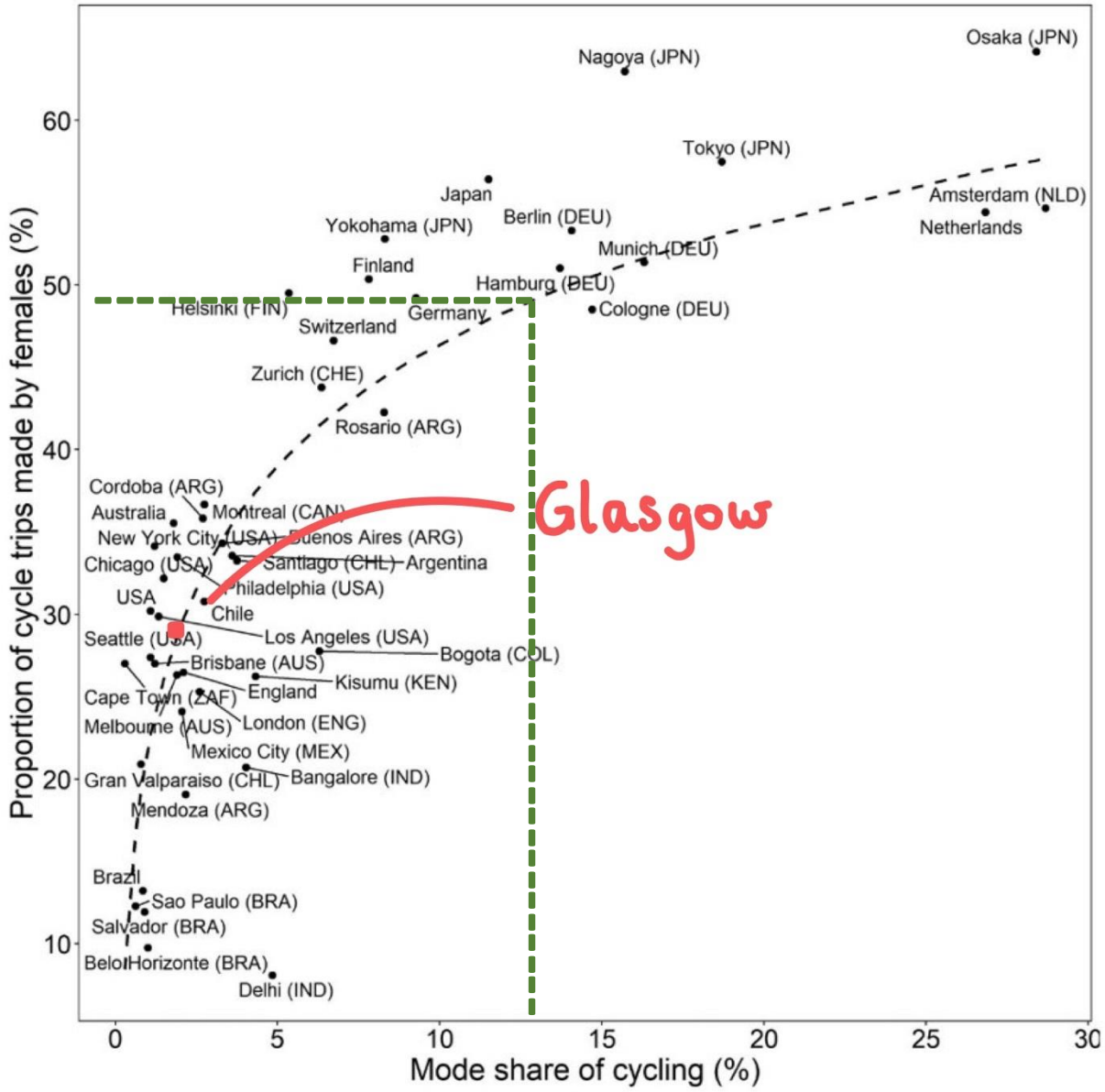


The gender gap in cycling



Adapted from Goel et al., (2022)

Gender parity at 13% mode share



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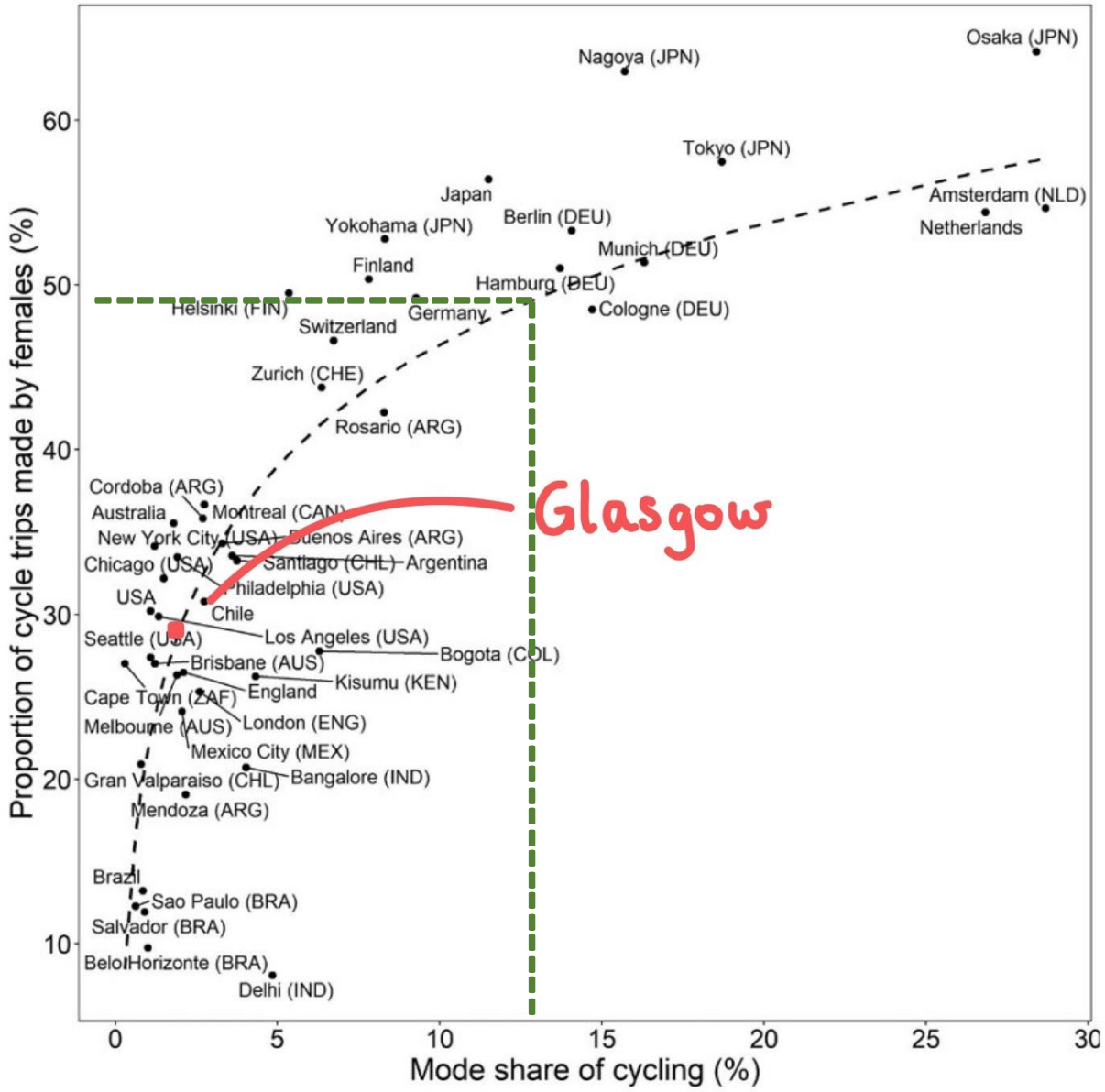
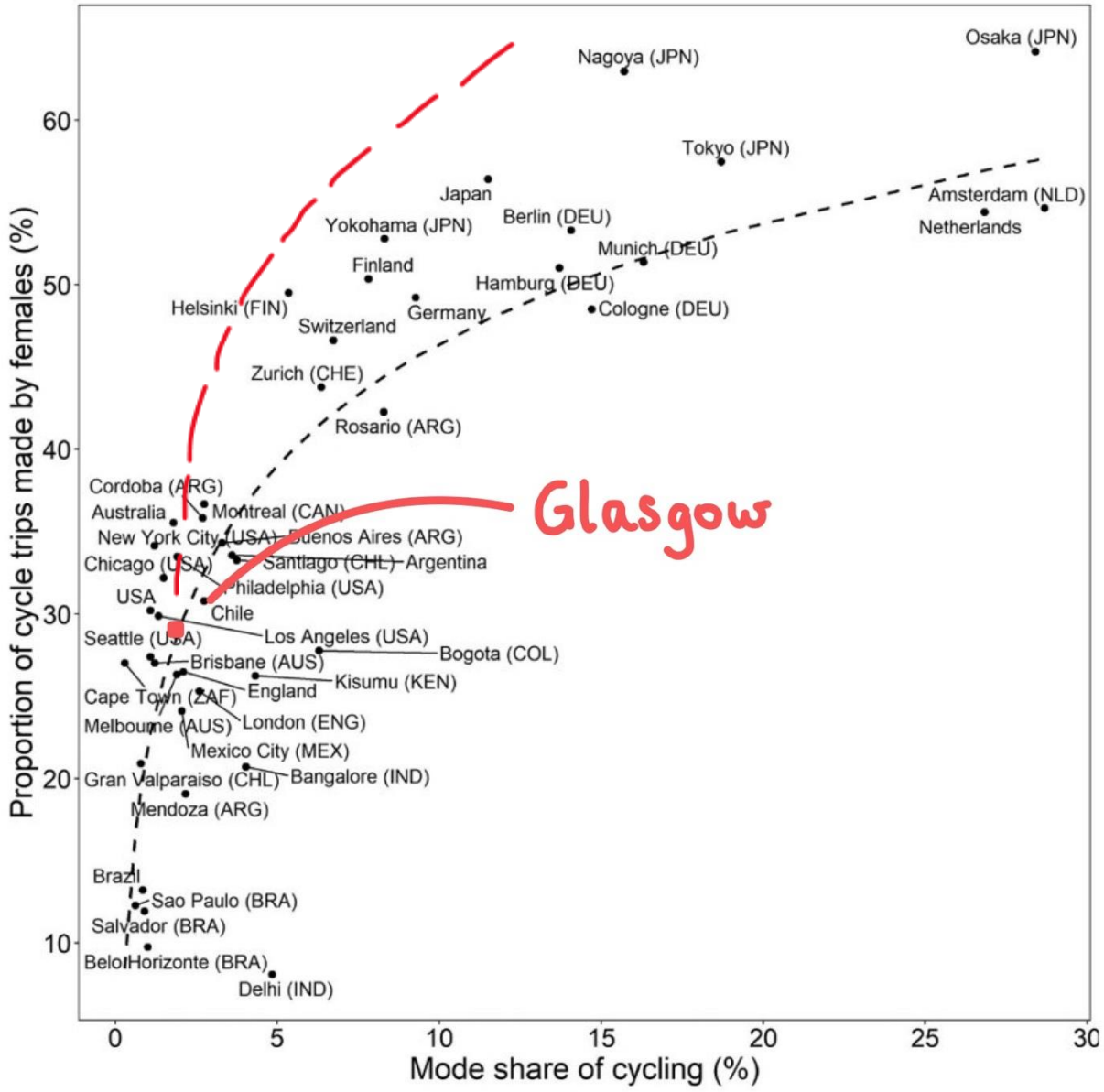


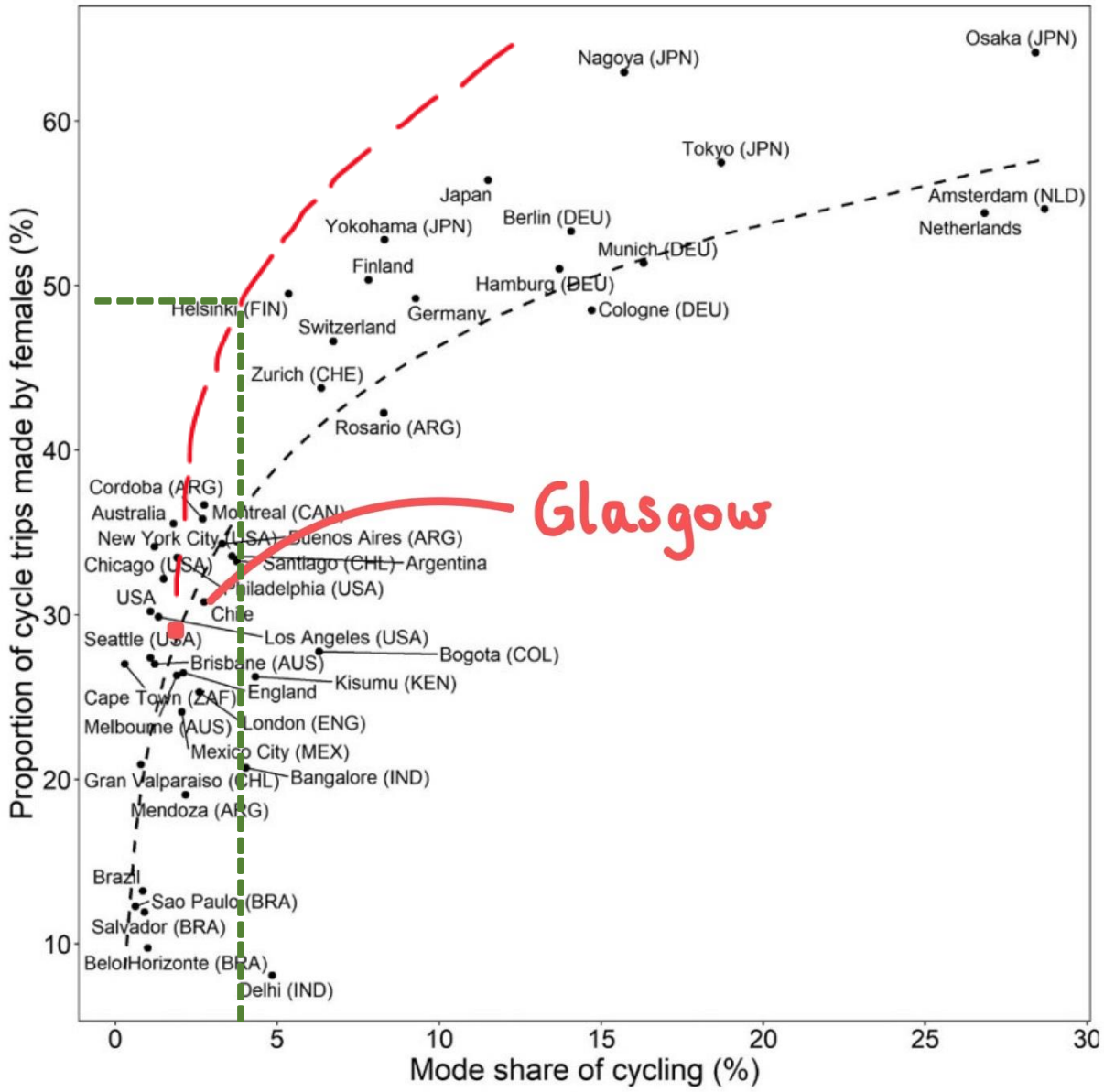
Adapted from Goel et al., (2022)

The desired transition



Adapted from Goel et al., (2022)

Gender parity at lower moder share



Adapted from Goel et al., (2022)

Aim

Understand – Bridge

How can we use Participatory Systems Mapping to

a) Better understand the current barriers and opportunities to women and nonbinary people cycling in Glasgow?
b) Identify leverage points for change? Specific to marginalized genders?

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What is Participatory Systems Mapping?



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More Systems Mapping

+

More understanding of the problem

Data collected – first overview

- April 2025
- 5 Workshops
- 39 participants
- 11 system maps



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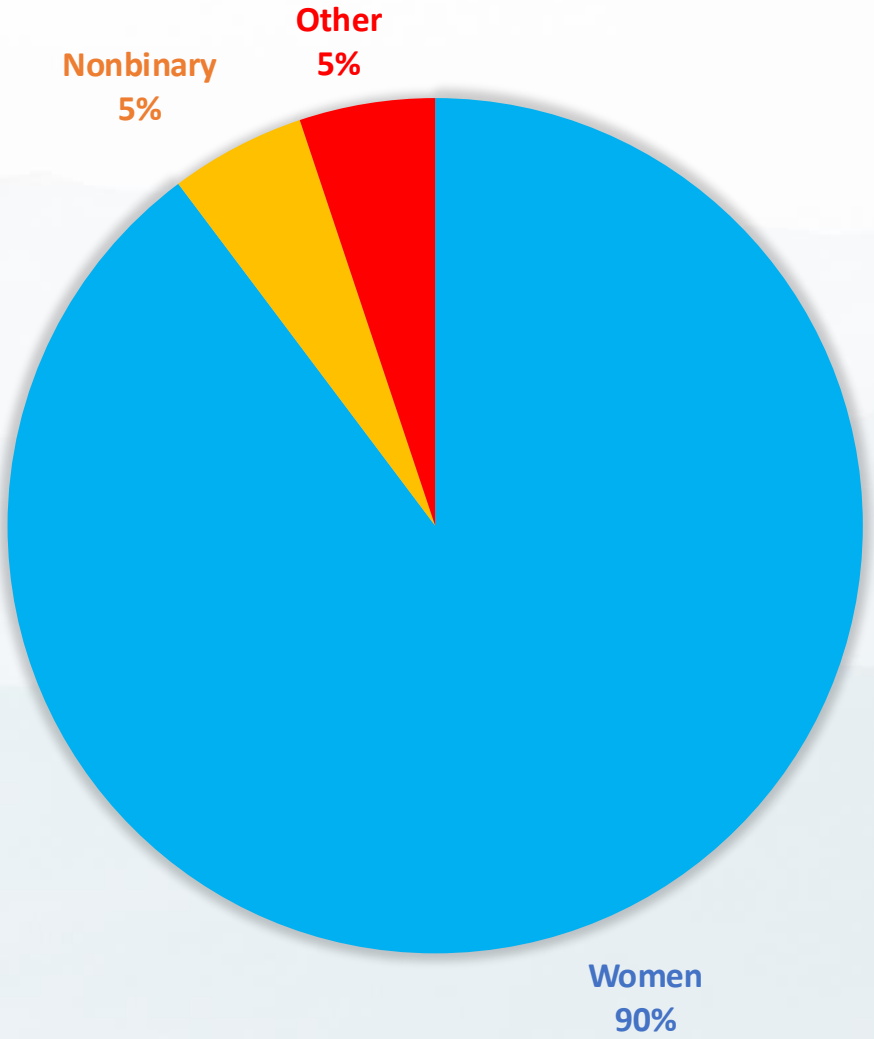
GENDER DISTRIBUTION - PARTICIPANTS



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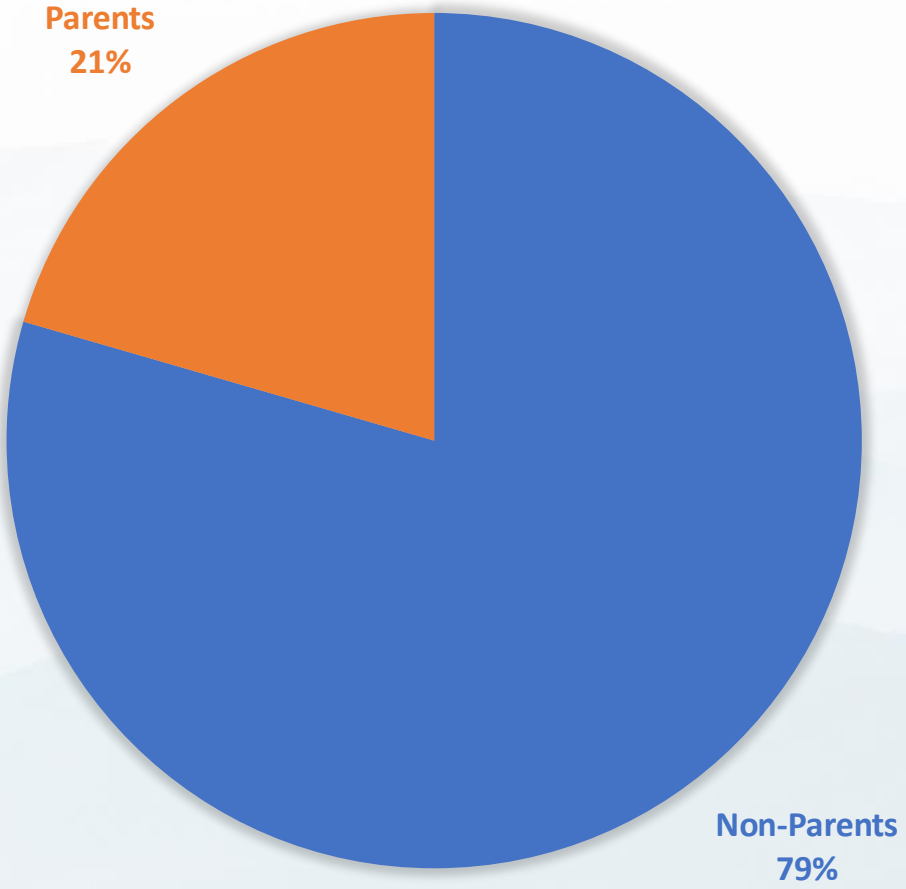
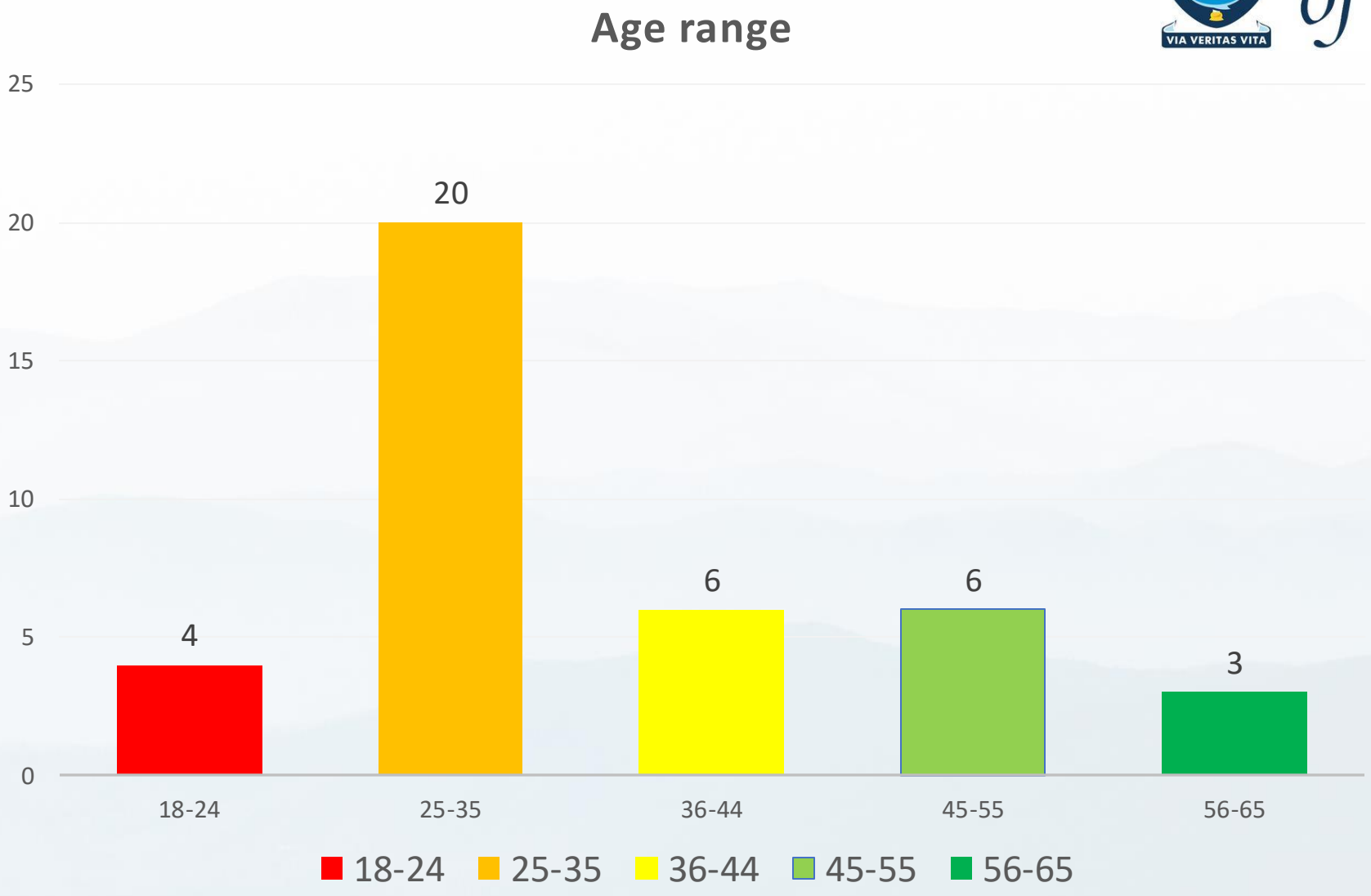
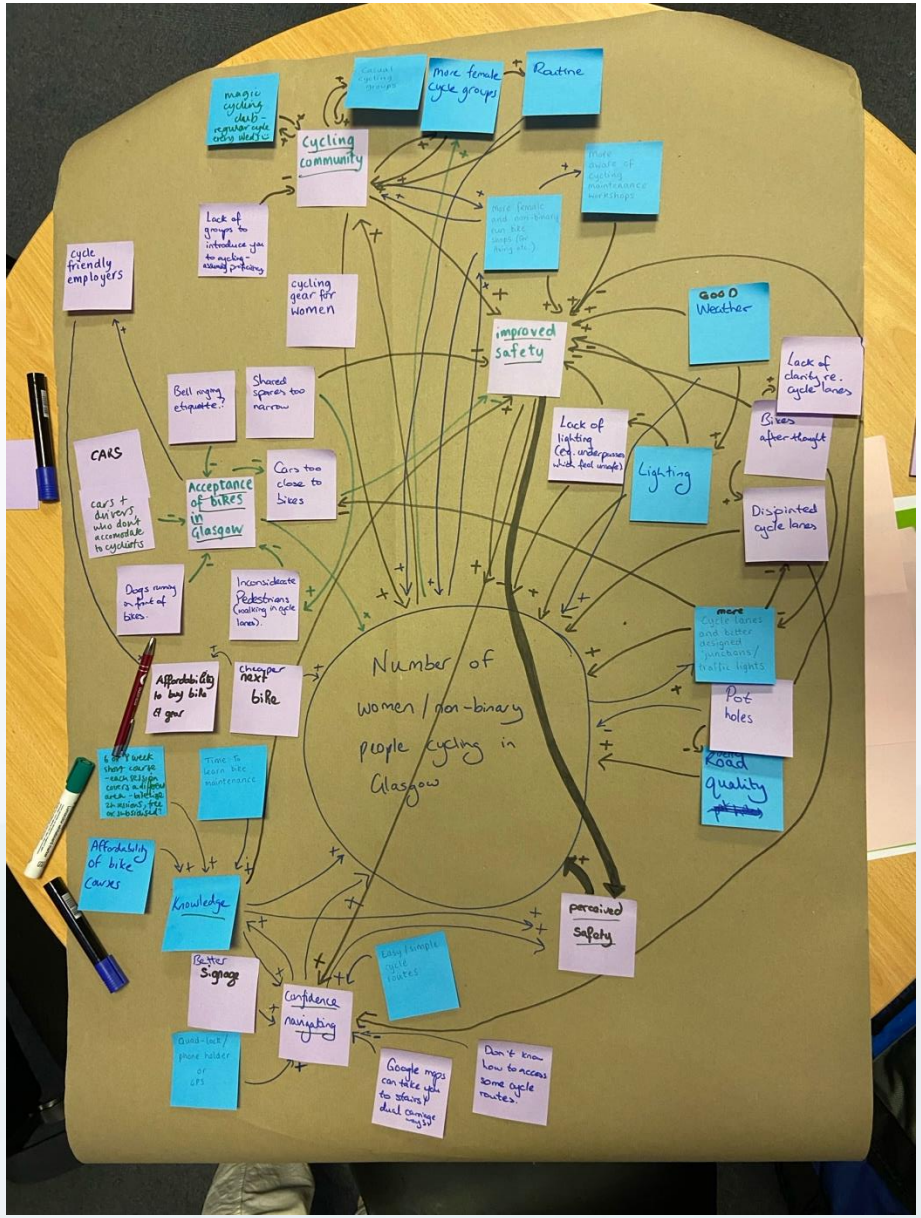
PARENTS AMONGST THE PARTICIPANTS




Age range
25
20
15
10
5
0
20
4
6
6
3
18-24
25-35
36-44
45-55
56-65
18-24
25-35
36-44
45-55
56-65

Data collected



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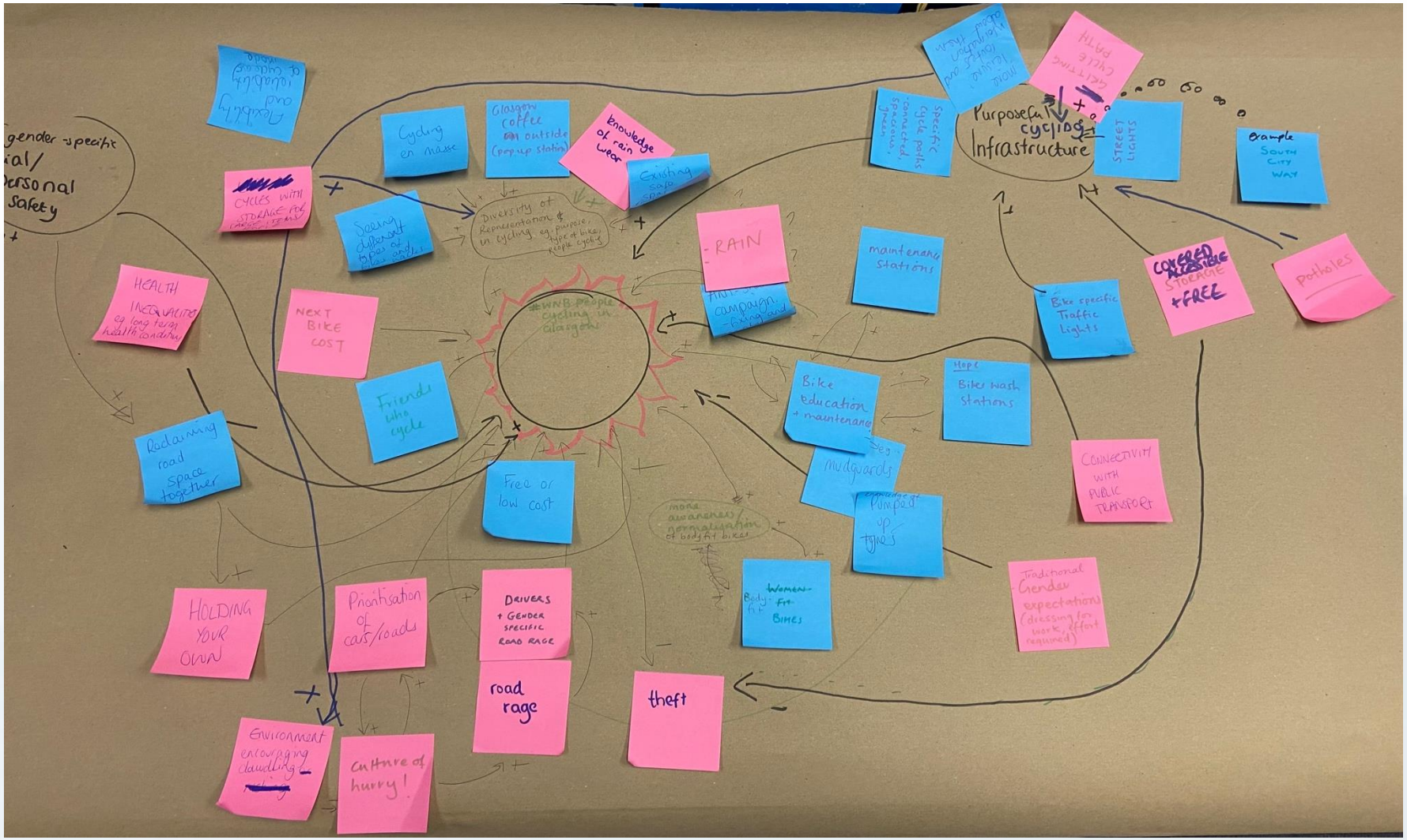
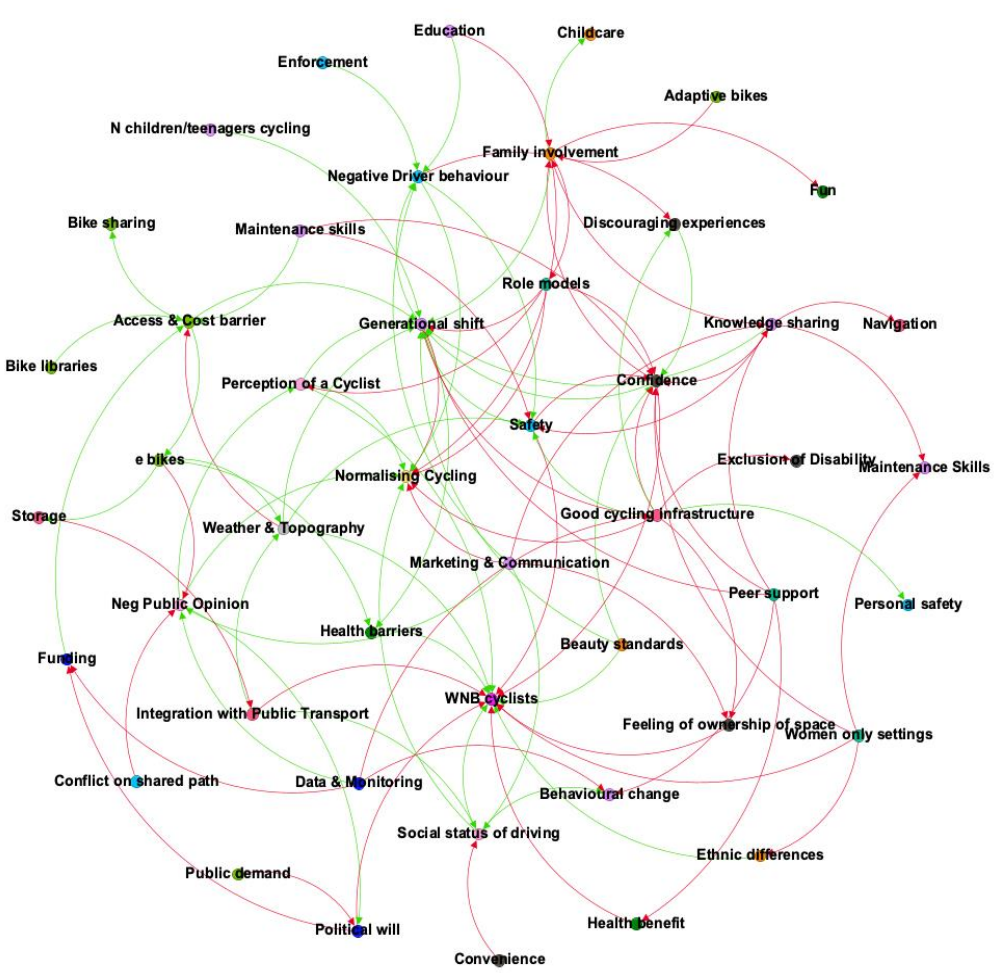
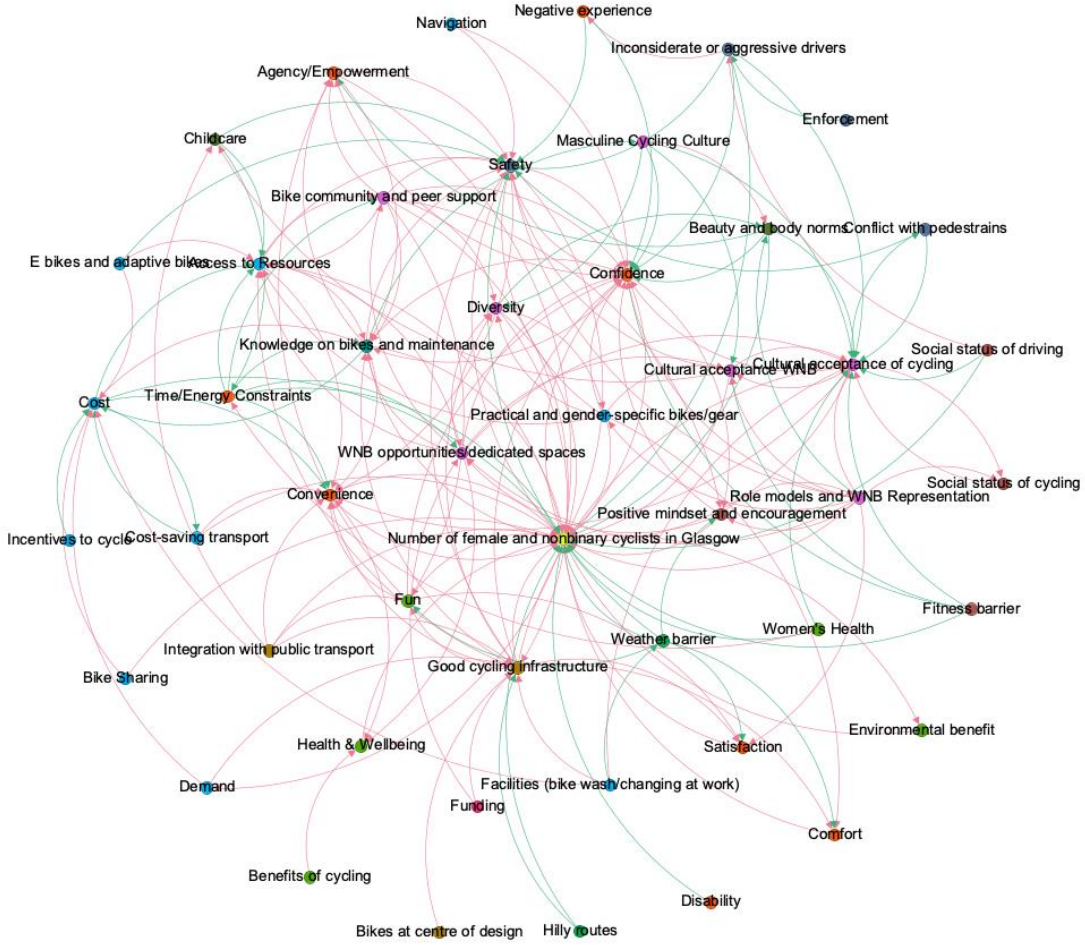


Mini insights



Explore the gender gap





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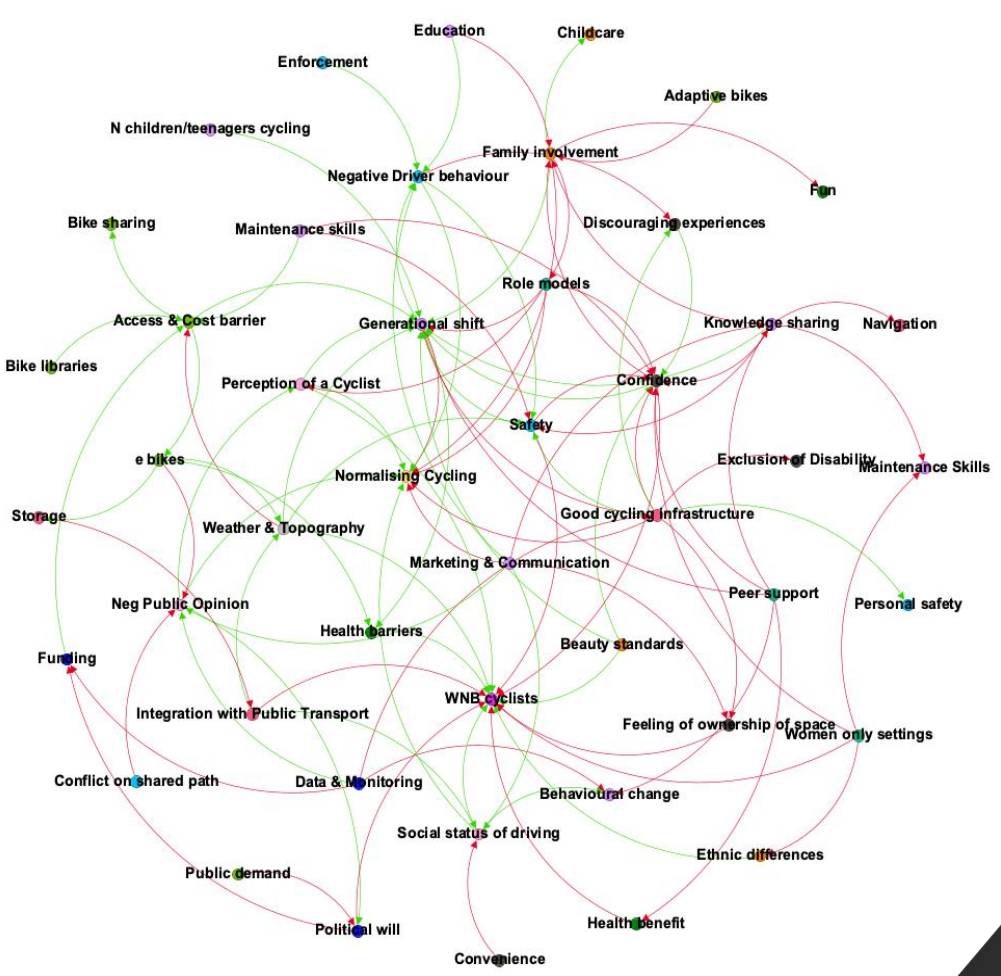
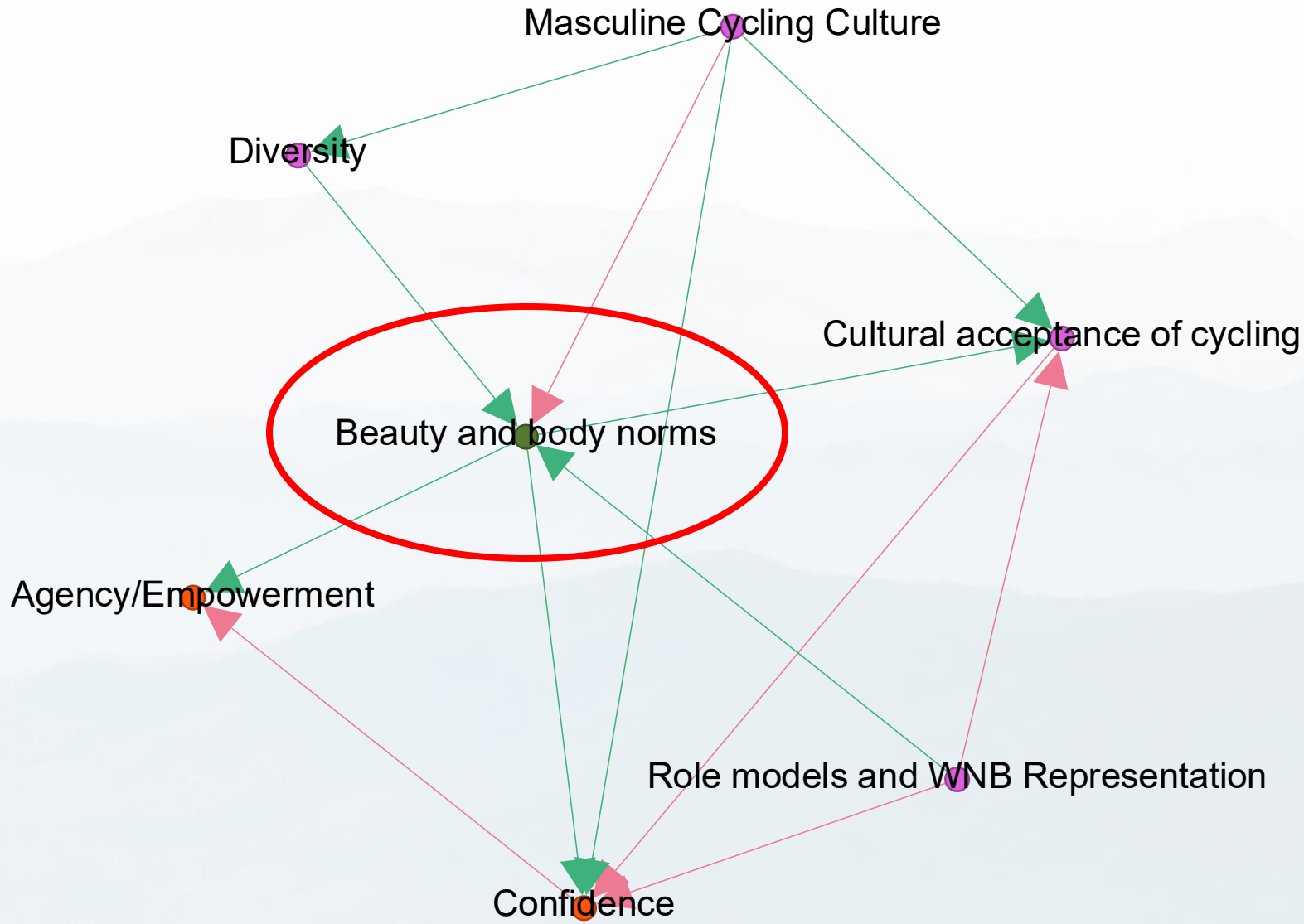




Gender-specific narratives



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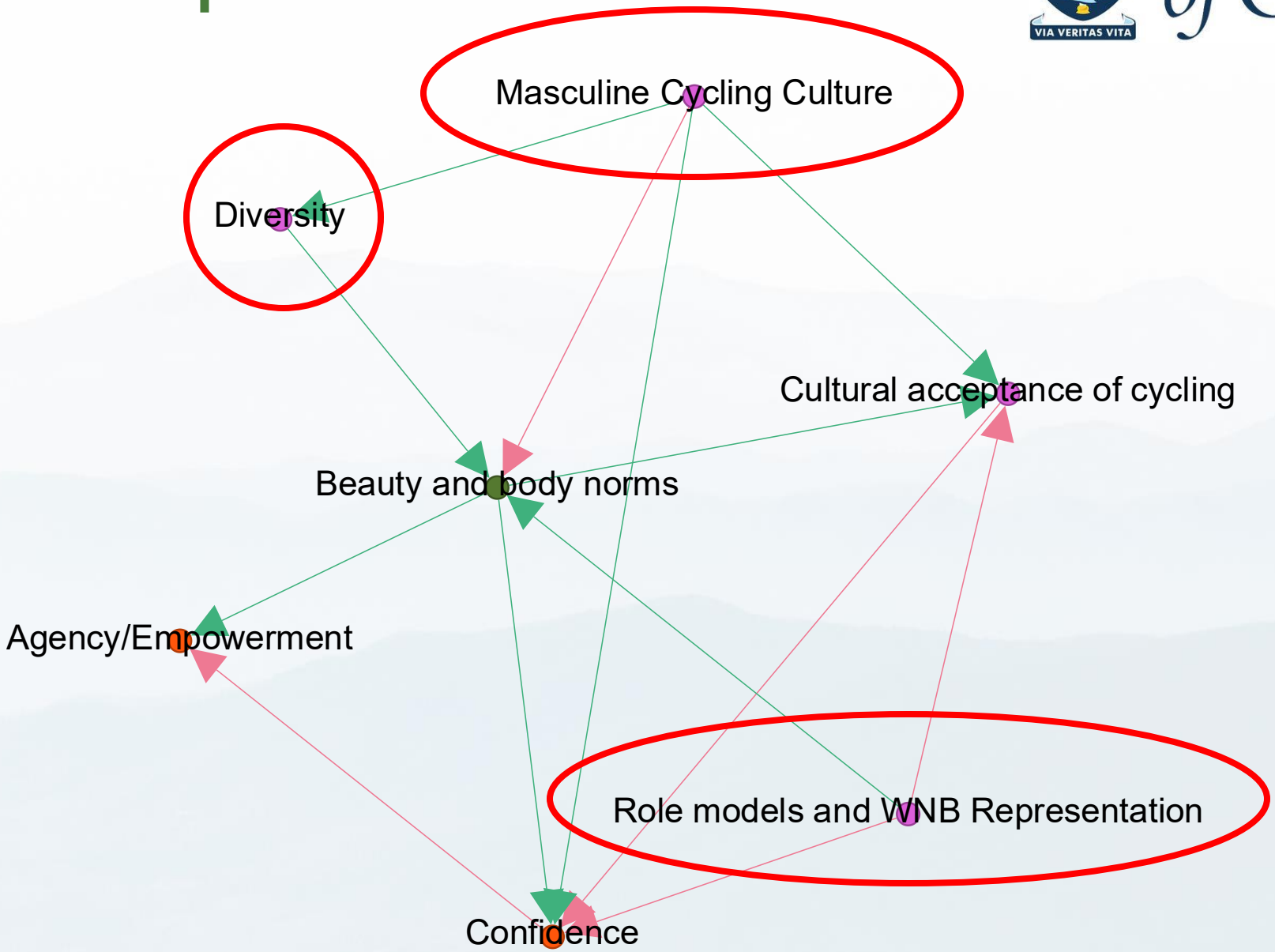

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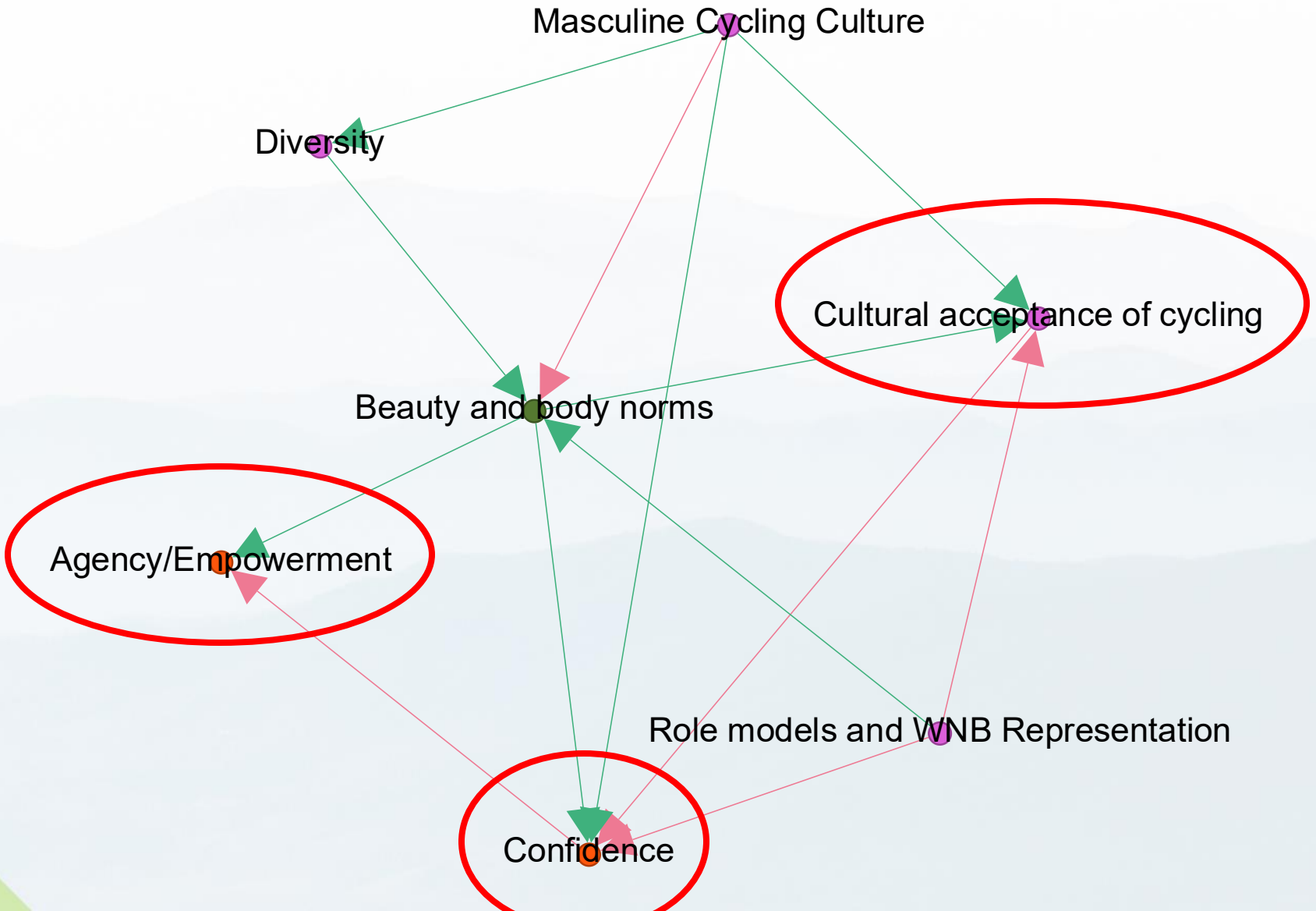
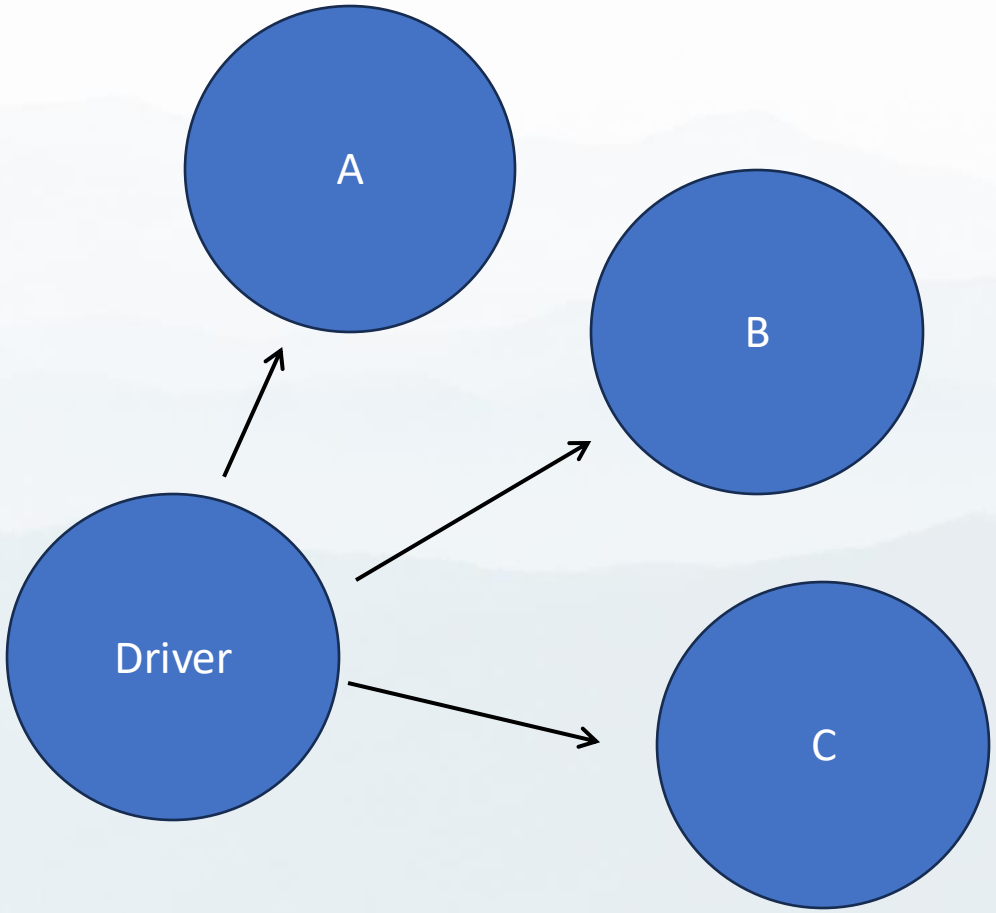


Explore the gender gap

System analysis measures

- Drivers
- Receivers
- Feedback Loops
- Eigenvector
- Centrality



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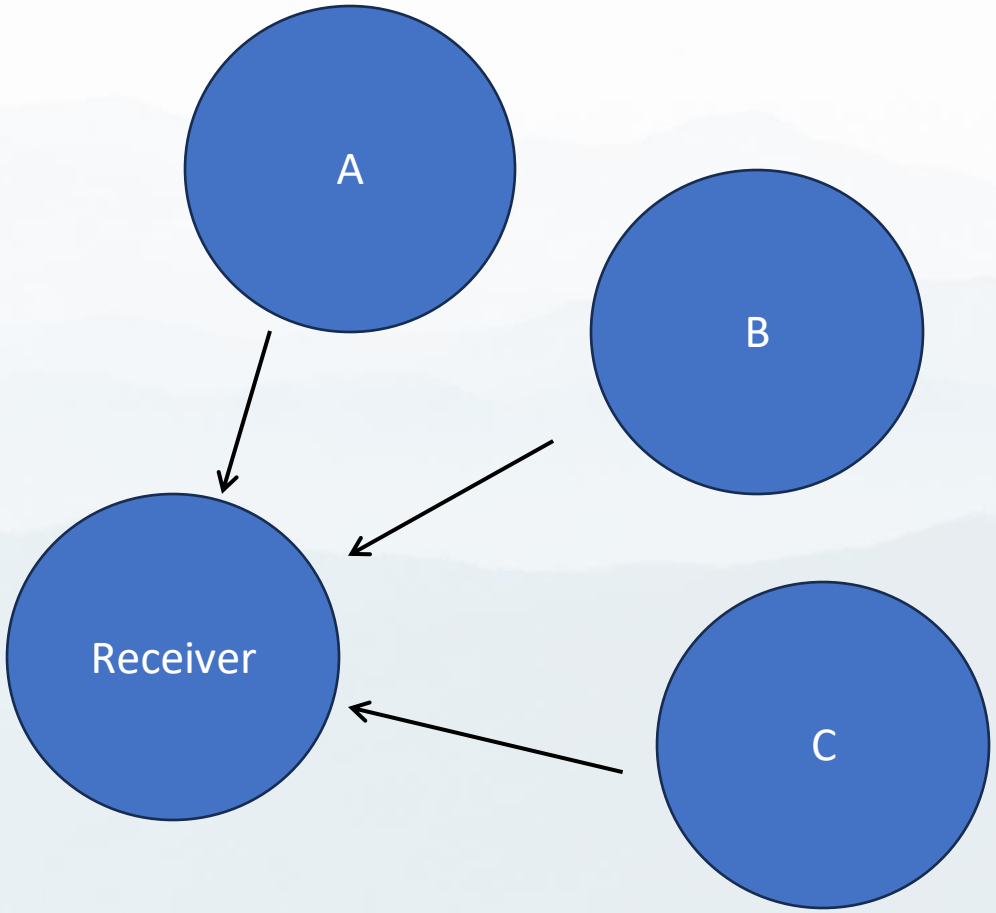

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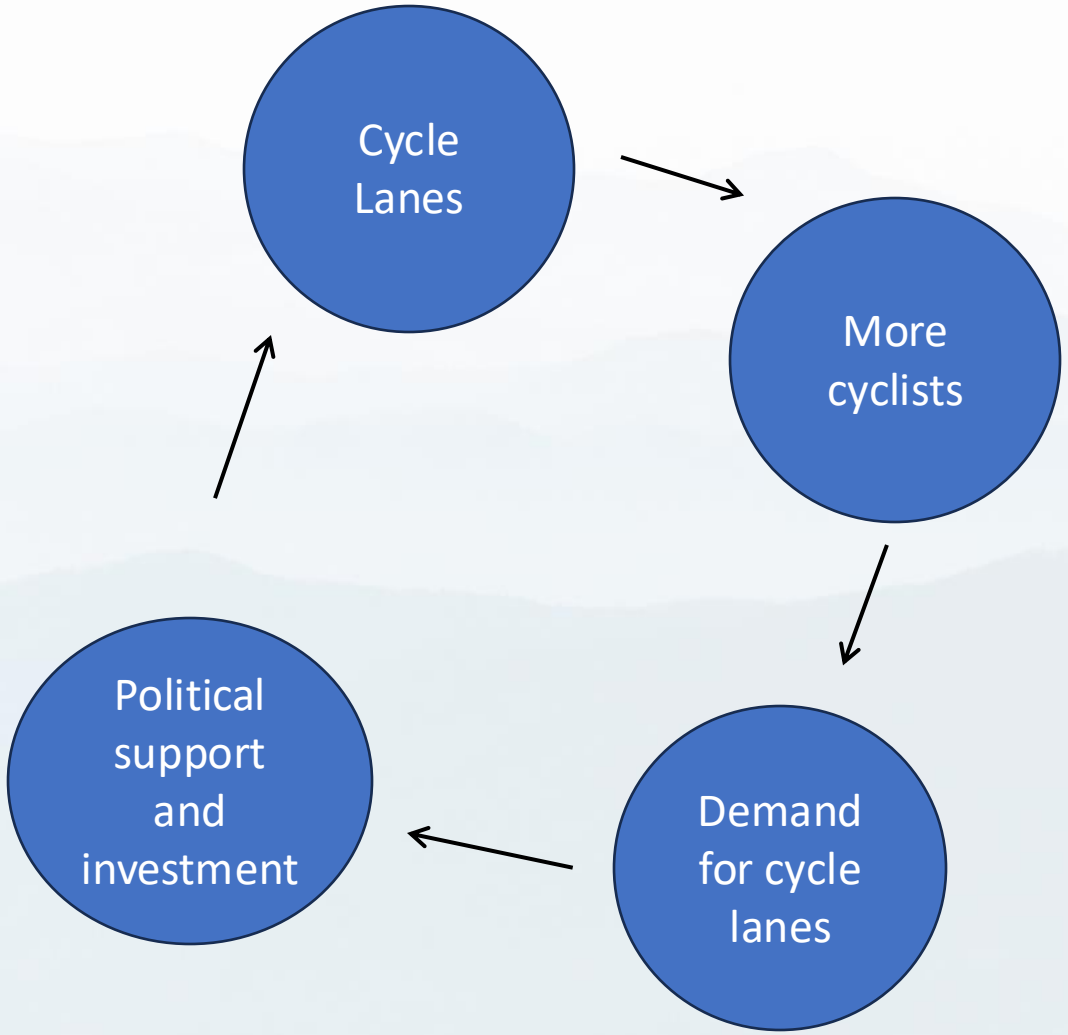

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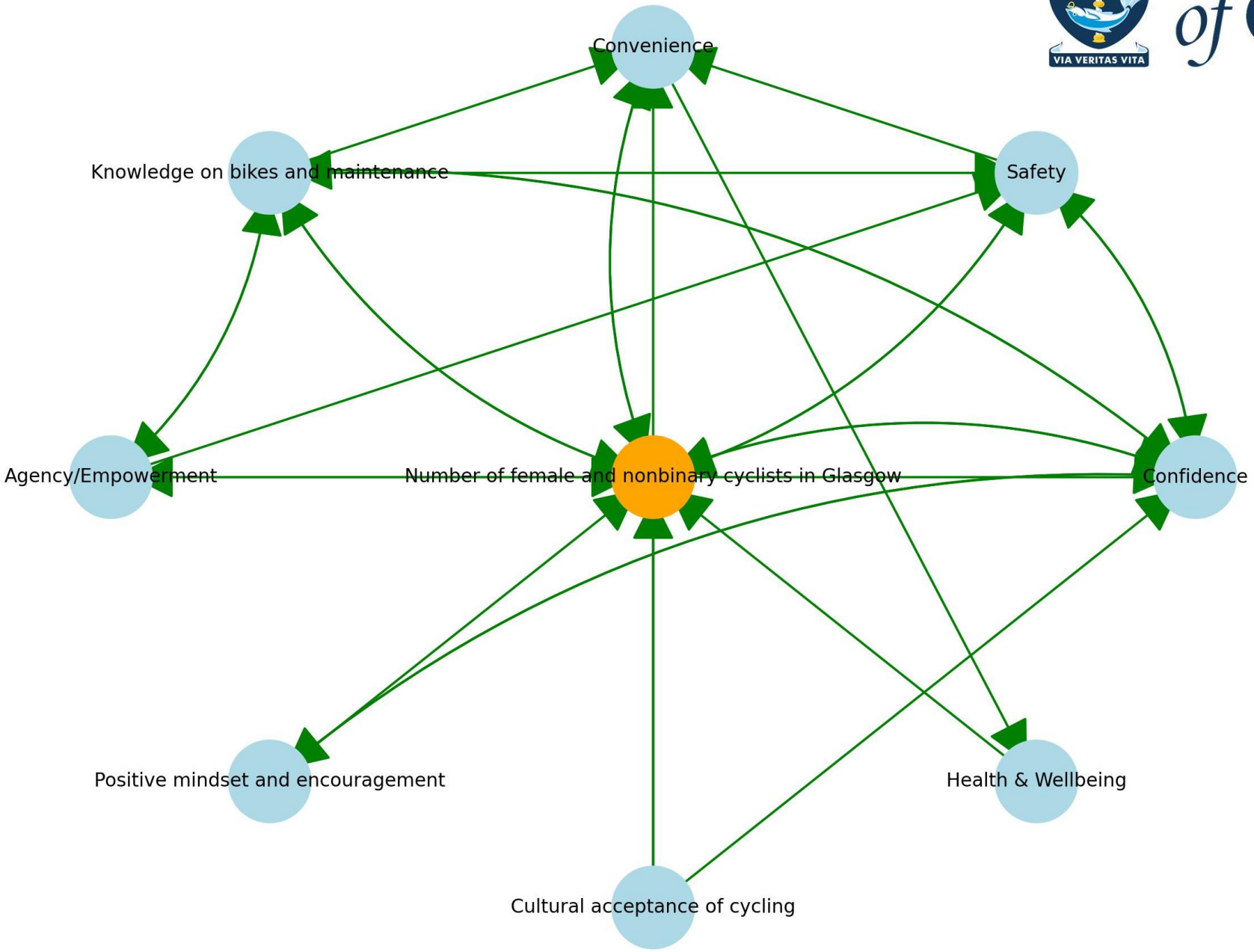
System Map with Top 8 Eigenvector Centralities



Key Lessons

- The Participatory System Maps are only a starting point
- Quantitative vs. Qualitative Data

Limitations

- Complex decision on inclusion/exclusion need to be made
- Simplification for communication purposes
- Co-verification – but only to a certain degree possible

Let's connect!

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THANK YOU FOR LISTENING!

Glasgow as a Living Lab Accelerating Novel Transformation

Delivering a Climate Resilient City through City-University Partnership

Glasgow City Council

Glasgow Centre for Population Health

British Geological Survey

Clyde Mission

Scottish Government Riaghaltas na h-Alba gov.scot

University of Glasgow

GlasgowLife

UNECE

CSIRO

SEPA Scottish Environment Protection Agency Buidheann Dion Àrainneachd na h-Alba

Glasgow Natural History Society

rspb

The Alan Turing Institute

SLR

ITM Integrated Test + Measurement

The Hunterian

Zero Waste Scotland

C40 Cities

Environment Agency

NatureScot

Ramboll

Cycling Scotland

paths for all

STAR Refrigeration

Deloitte.

Korn Ferry

Seven Lochs wetland park

bike for good

sustrans

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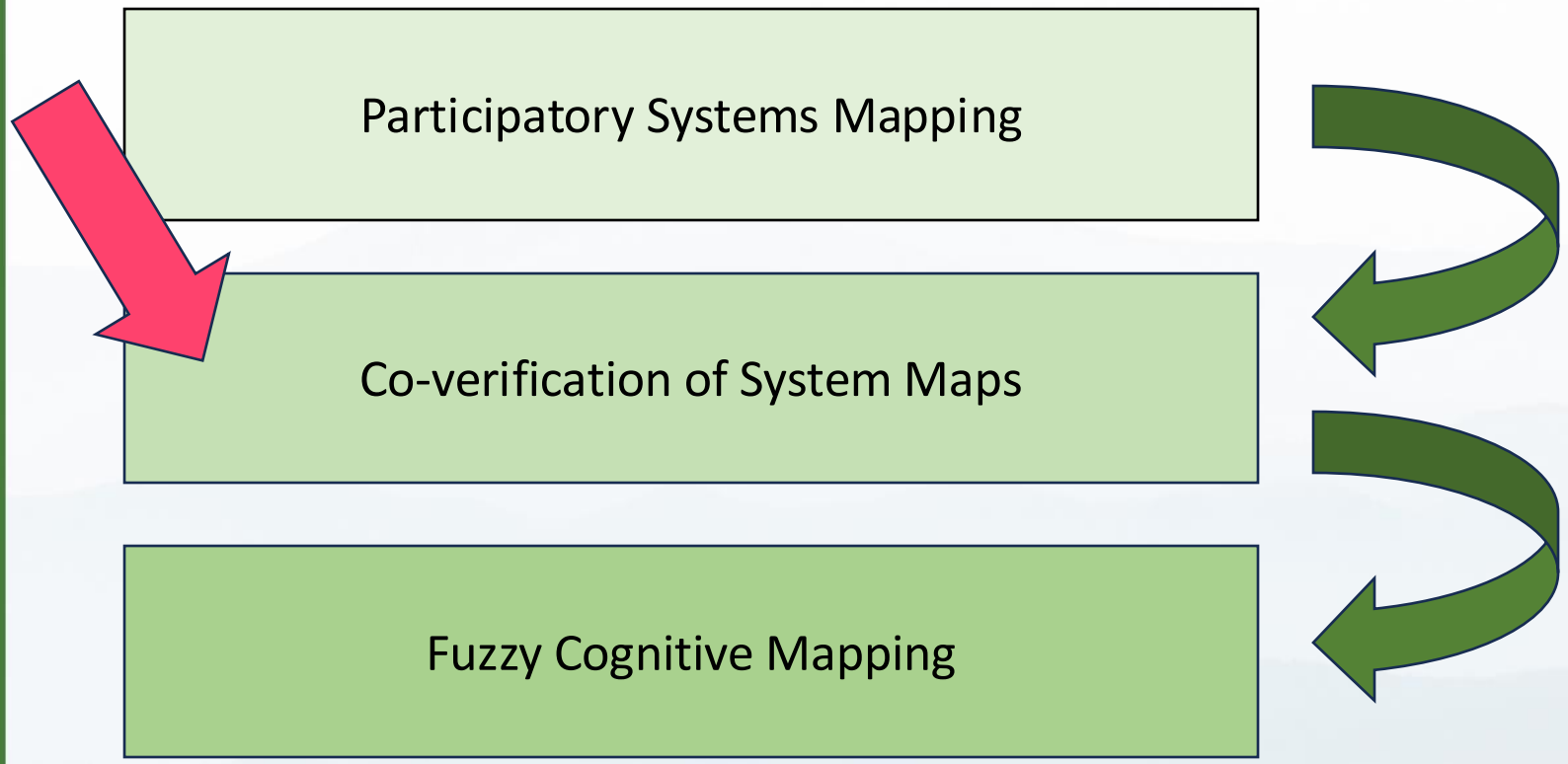
Pernille Søholm (2025)

Next steps


Participatory Systems Mapping
Co-verification of System Maps
Fuzzy Cognitive Mapping