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VisNET:
The role of online networking & collaboration in closing the gender gap in academic STEM

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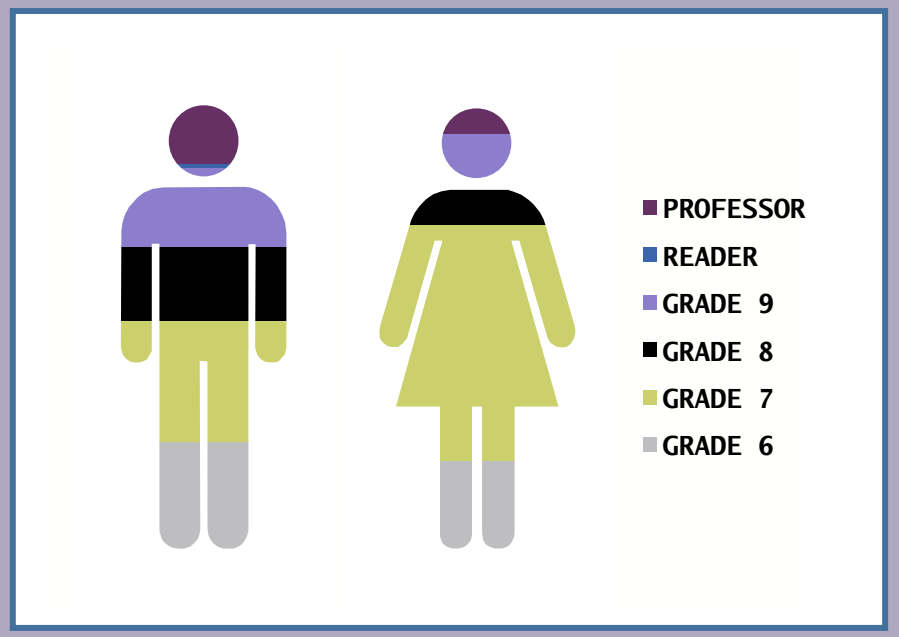
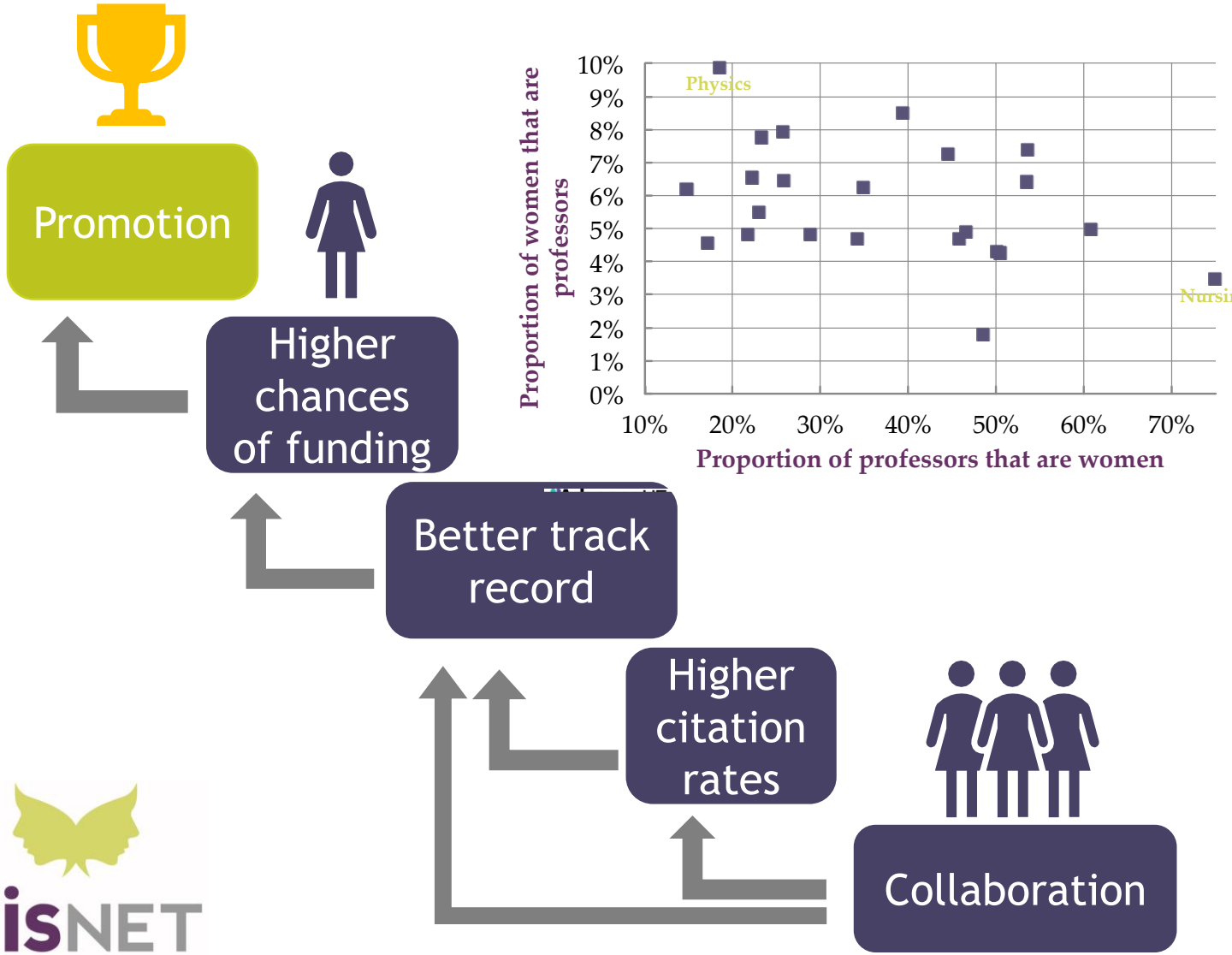
There is a gender attainment gap in STEM



GRADE OF ACADEMIC STAFF IN ENGINEERING
University Of Glasgow (2016)

And networks & collaboration are important for promotion



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Data Collection

Year 1 (June, 2019)-

Motivational interviews

- Research climate
- Conference attendance
- Work-life balance
- Collaboration

- **Survey**
- **Social network maps**
- **Digital footprint**

Year 2 (End 2019/ Start 2020)

Survey

- **Social network maps**
- **Digital footprint**
- **Collaboration Event feedback**

Time point 3 (End 2020/ Start 2021)

Motivational interviews

- **Survey**
- **Social network maps**
- **Digital footprint**

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Barriers to Networking and Collaboration

Perceived barriers

- Low confidence connecting with senior academic staff
  - Imposter syndrome
- Travel for parents & those with health conditions
- Poor work-life balance – networking vs time

Hidden barriers

- STEM understanding of networks
  - Filling knowledge gaps
  - Subject silos
  - Hierarchy

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Participants

30 women STEM Early Career Researchers at

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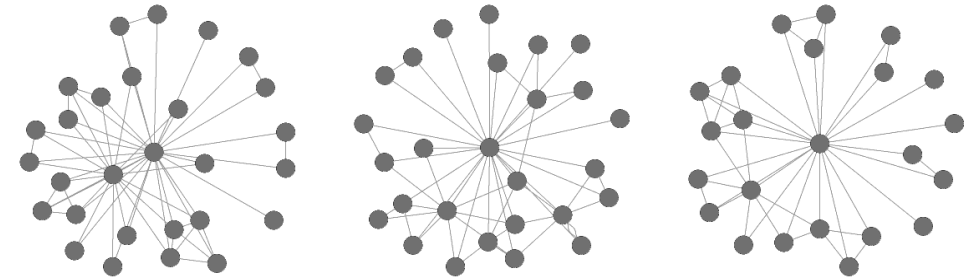
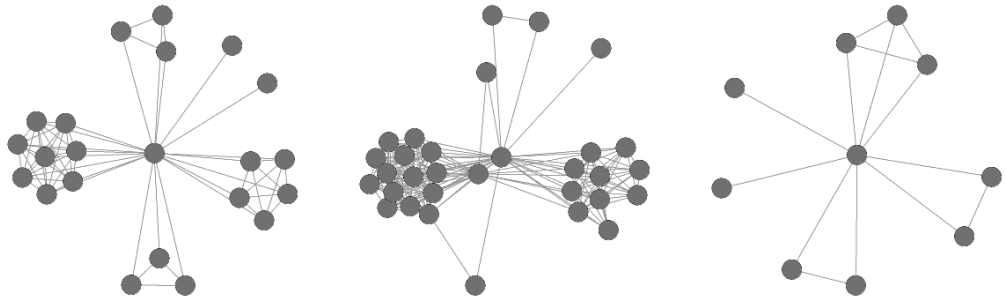
Longitudinal Mixed Methods

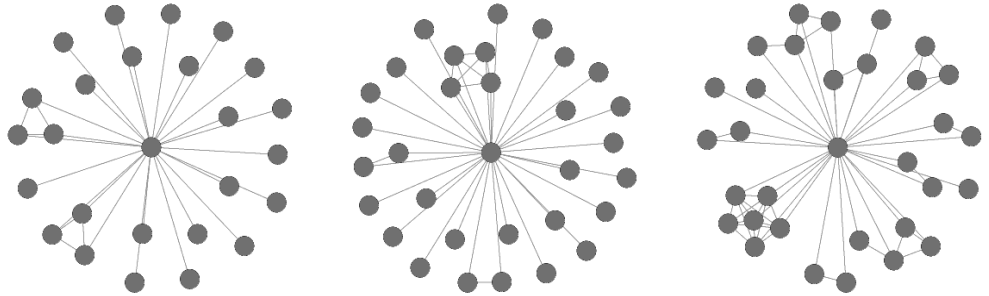
Incl. Ego Nets @ 3 time points



A. reliance on manager's networks



B. Clustering in lab/group



C. Many unconnected individuals

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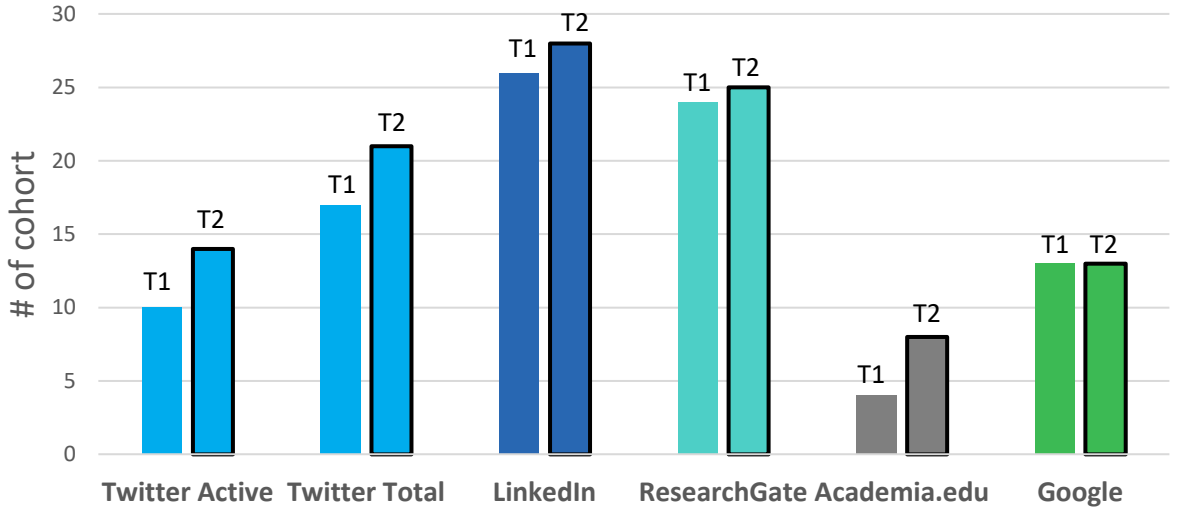
Time 2 Findings

- Networks
  - Size sig. increase
  - Density sig. decrease
  - Subject Siloing
  - Hierarchy – networking up
- Increased activity on digital tools
  - Including more up to date
- Increased confidence in self & use of tools to develop their online presence

Figure 6: Digital Tools Usage T1 to T2



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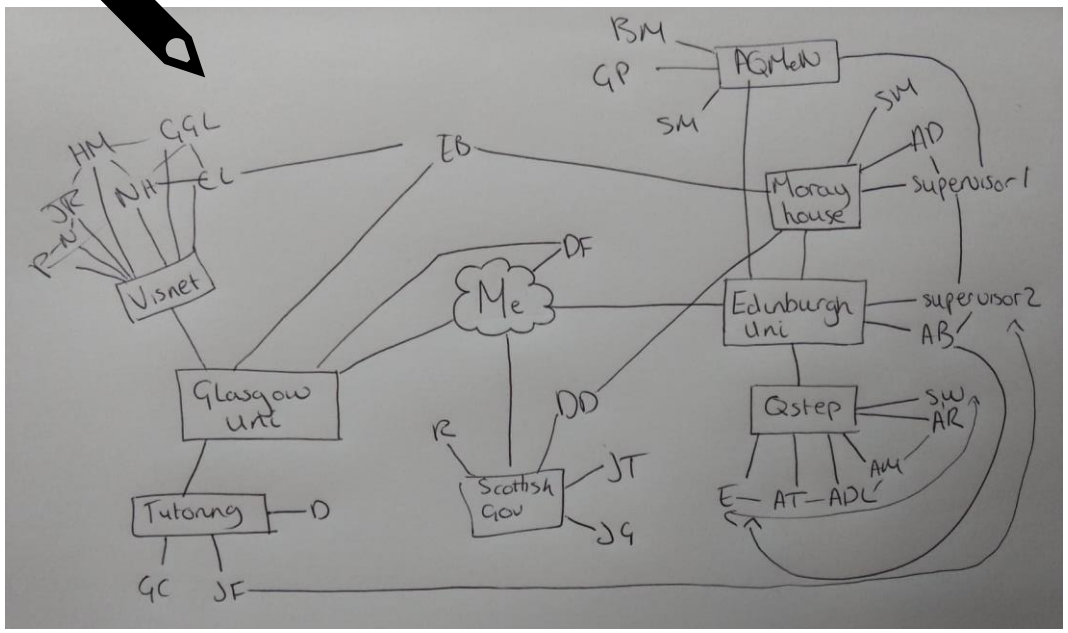
How can YOU overcome these barriers?

Thinking strategically!...



*This was my network back in Nov 2019!

- Draw & Audit your network
  - Breadth: Strong relationships with a diverse range of contacts
  - Connectivity/brokerage: the capacity to link or bridge across people and groups that wouldn't otherwise connect
  - Dynamism: A dynamic set of extended ties that evolves as you evolve

(Ibarra, 2015)

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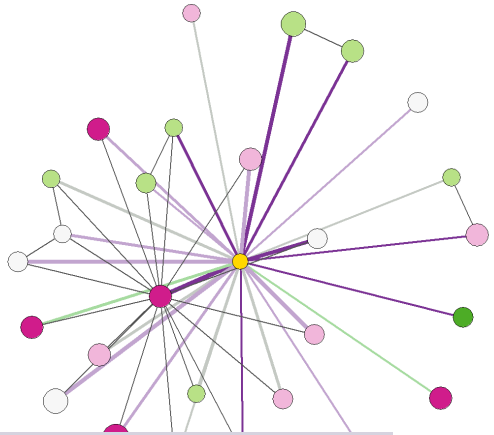
Breadth

- Women tend to have less broad international networks

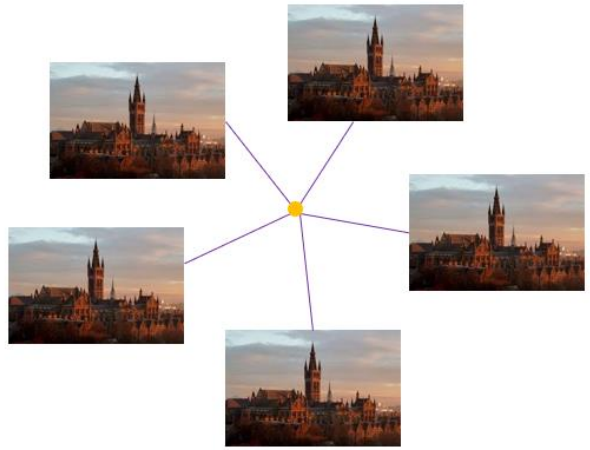


Relying on the networks of others

…some pot holes

- We like to think of ourselv
- Don't rule people out
  - Seniority
  - Academic vs Support s
  - Across fields

"Brokers are the ones who connect people from different groups and who have access to non-redundant information that the members of other groups are not aware of. As a result, brokers are in an advantageous position." (Schoen et al, 2018)



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Making use of online networking and collaboration

- Break down barriers
  - Physical distance
  - Discipline
  - The hierarchy!
- Reduce time
- They are there when you are not
- Informal
- Different platforms for different information
- Give it a bash!

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