

Scenario-Building in Spitsbergen, Arctic

„Scenarios and futures thinking for impact assessment in a changing climate“

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Svalbard - Spitsbergen



Svalbard - Spitsbergen



Wilderness



Wilderness



Heritage



(Island) Culture



Human Pressure – Coal Mining



Human Pressure - Tourism



Growing and altering population



Climate Change



Socio-Economic Change



Svalbard Villmarkssenter



Eco-tourism scenarios



Scenario implementation

Limitations

Advertising caused critical reactions

Limited local support to grow the model

Cultural aspects: nations, island, communities

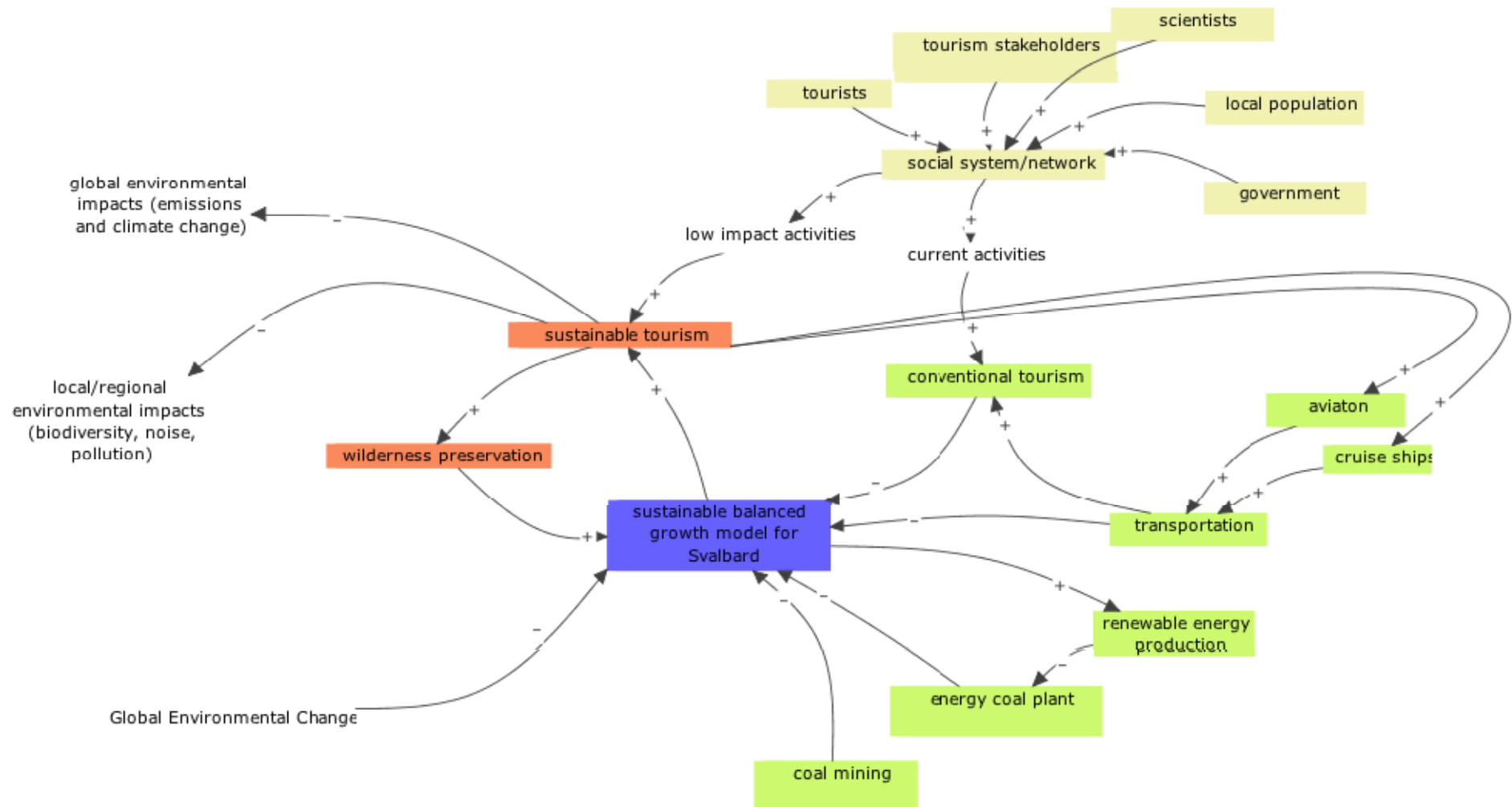
Individual and collective mental models

Complexity

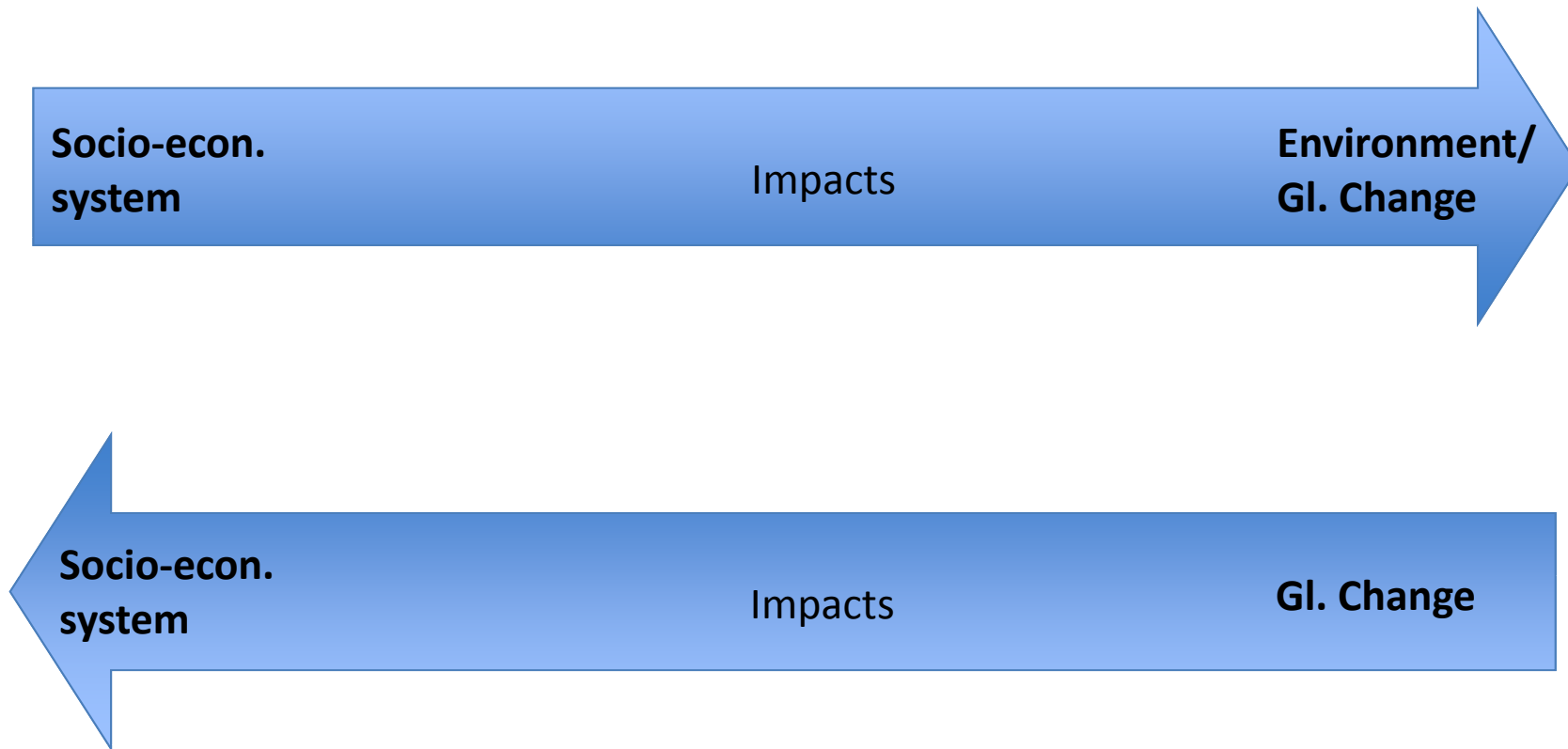
Missing data

- **A science approach needed**
- **Change of angle: find a sustainable model (bottom-up) ≠ implement and sell eco tourism (top-down)**

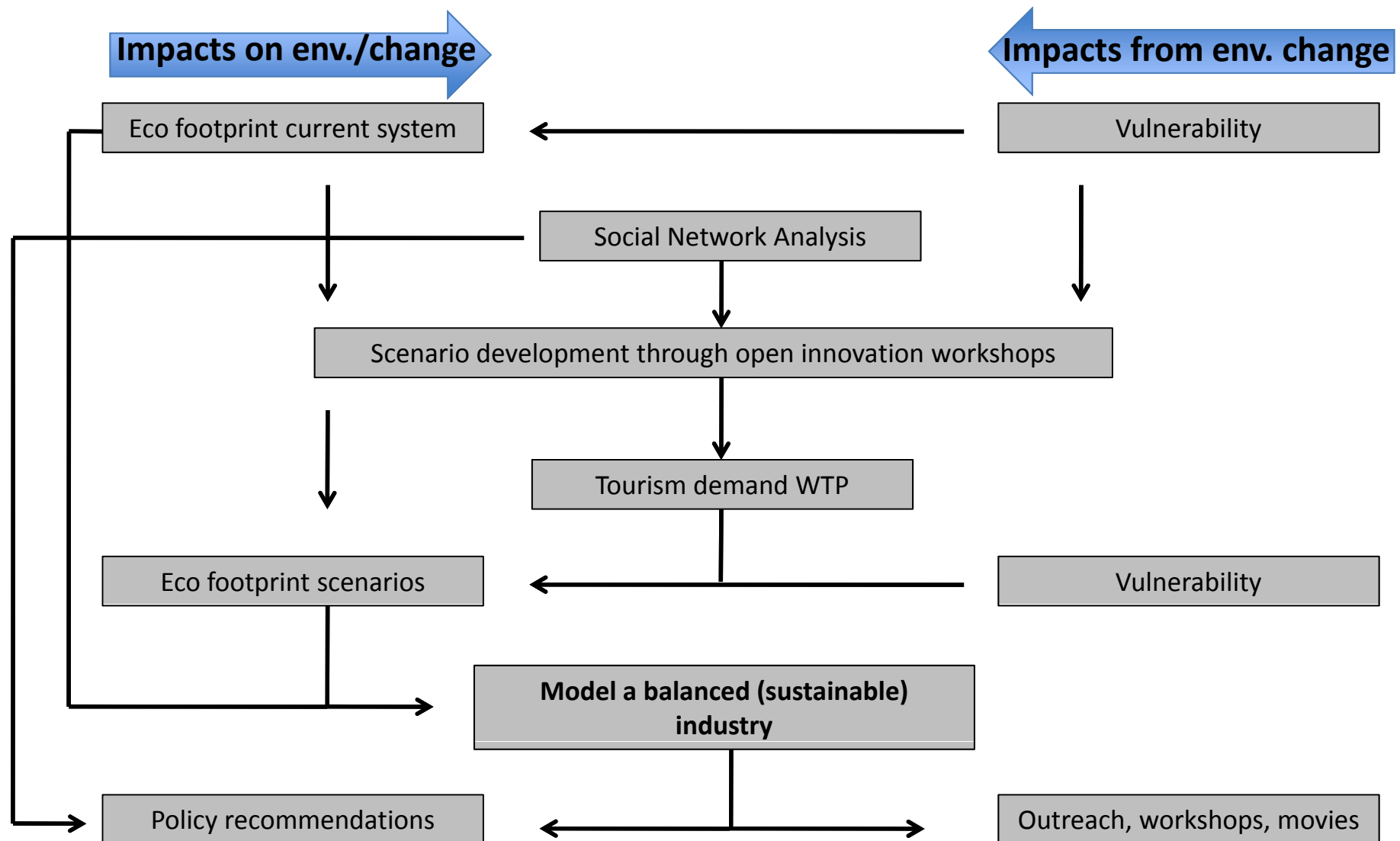
Change of angle: two-way impacts & scenarios



Two-way scenario building



Socio-economic-ecological networks on Svalbard – a model for resilience and sustainable growth – **ResiNet**



Workshop

Comments on ResiNet approach from an IA perspective?
Any suggestions on the sustainability model?



IA - scenario development

1. Gain understanding of who is affected
2. Scope key socio-economic and ecological issues
3. **Forecast** socio-economic changes (> discuss indicators of Arctic Council)
4. **Estimate significance** of predicted changes (> discuss network approach)
5. **Mitigate** negative **changes** and **maximise opportunities** (> new ideas?)
6. **Develop** monitoring plan and **indicators** (> ideas on indicators?)

Relate it **to two-way impact assessment**: impacts and alternatives

> World cafe in small groups / plenary presentation and discussion?

Ecological cc Impacts

Ozone and Ultraviolet Radiation

Cryosphere and Hydrology

Arctic Tundra and Polar Desert Ecosystems

Freshwater Ecosystems and Fisheries

Marine Systems

Principles of Conserving the Arctic's Biodiversity

Source: Arctic Climate Impact Assessment report (Arctic Council)

Socio-economic cc impacts

Management and Conservation of Wildlife in a Changing Arctic Environment

Hunting, Herding, Fishing and Gathering: Indigenous Peoples and Renewable Resource Use in the Arctic

Fisheries and Aquaculture

Forests, Land Management, and Agriculture

Human Health

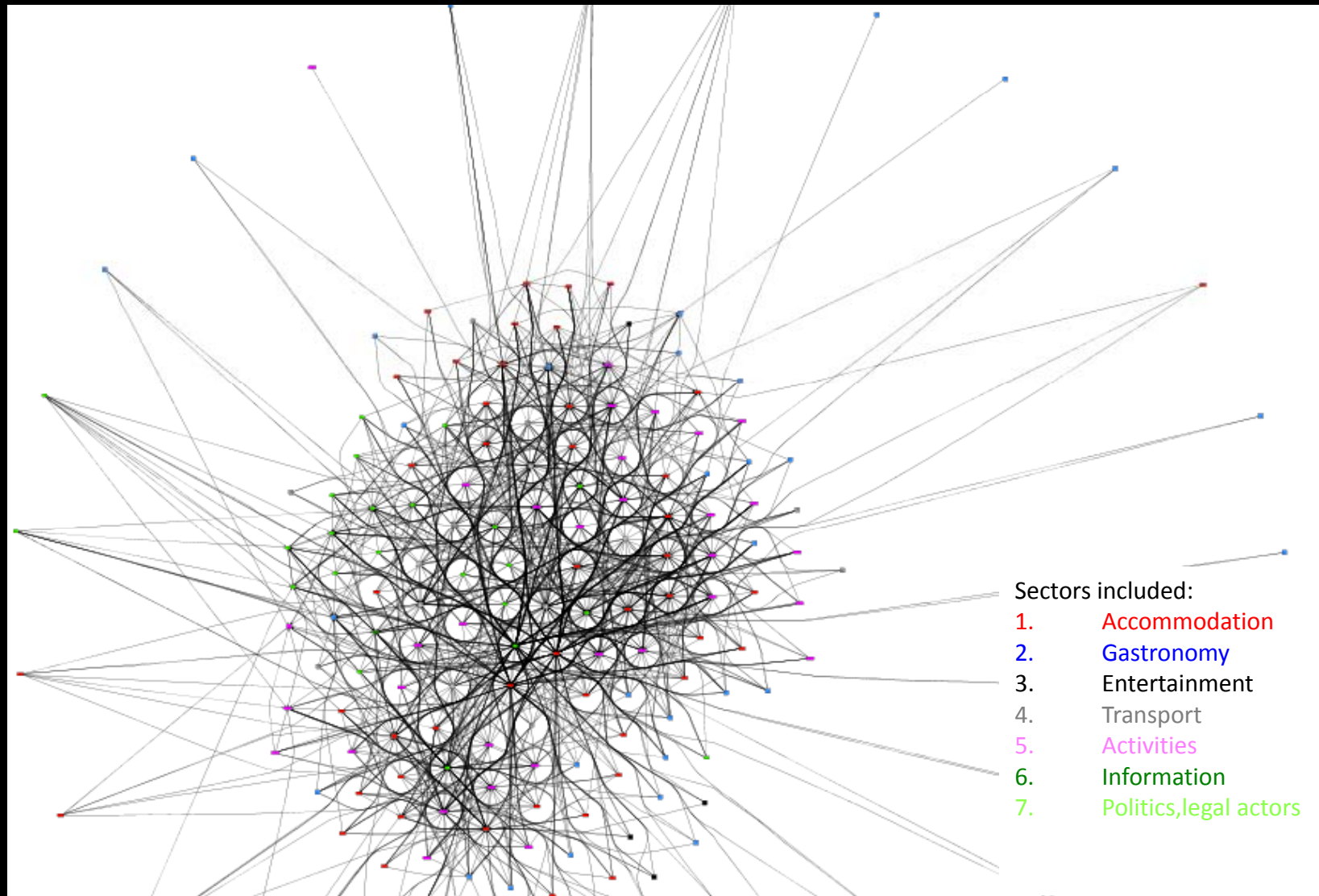
Infrastructure: Buildings, Support Systems, and Industrial Facilities

Climate Change in the Context of Multiple Stressors and Resilience

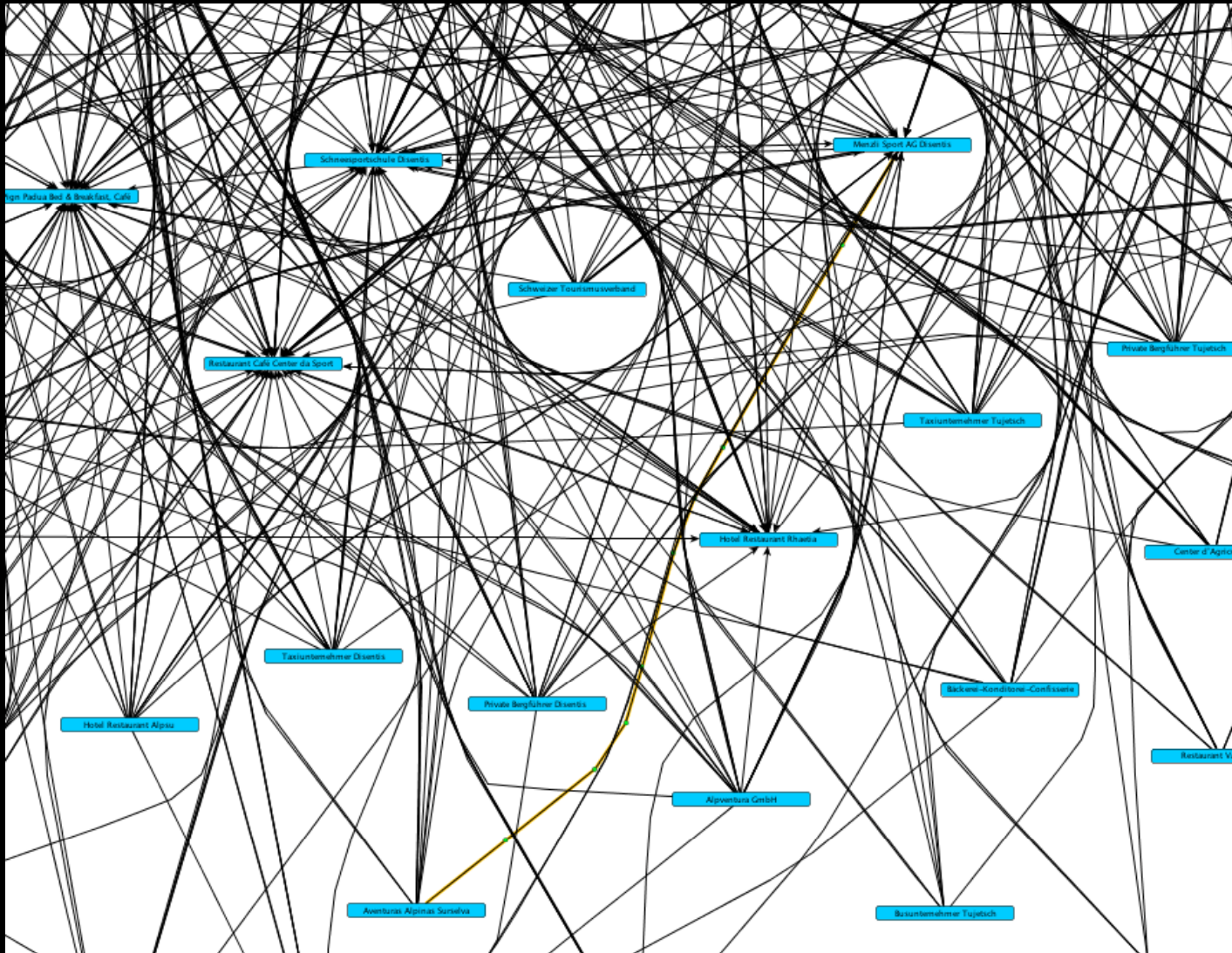
Tourism

Source: Arctic Climate Impact Assessment report (Arctic Council)

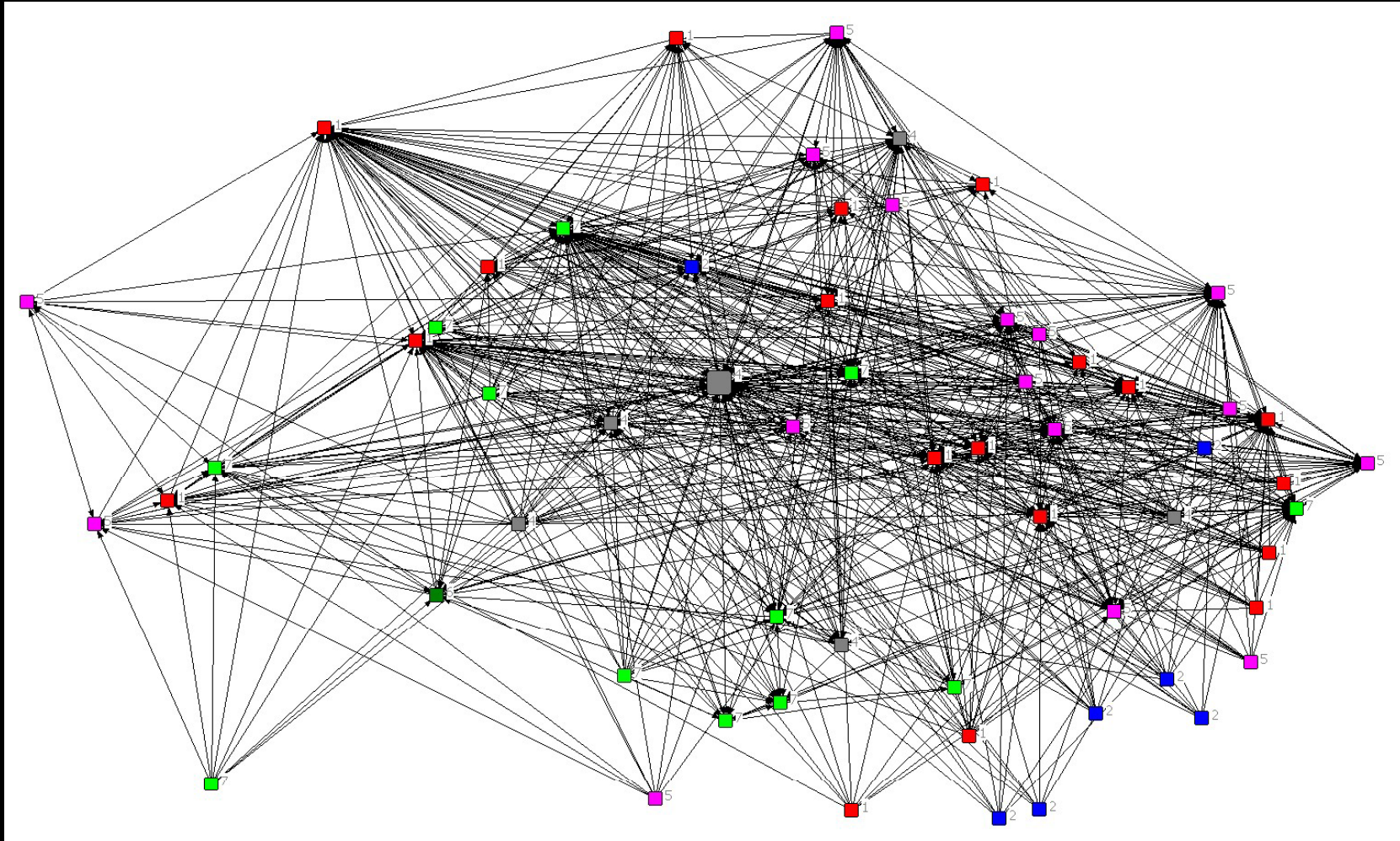
A network approach to tier significance of impacts and find levers of change?



Social Network Analysis (SNA)



Ego-network



Thanks for your input

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