



# Disruption in Three Phases

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# Reminder

- Volcanic Ash
- Workington after the Floods
- Winter Weather December 2010

# Volcanic Ash

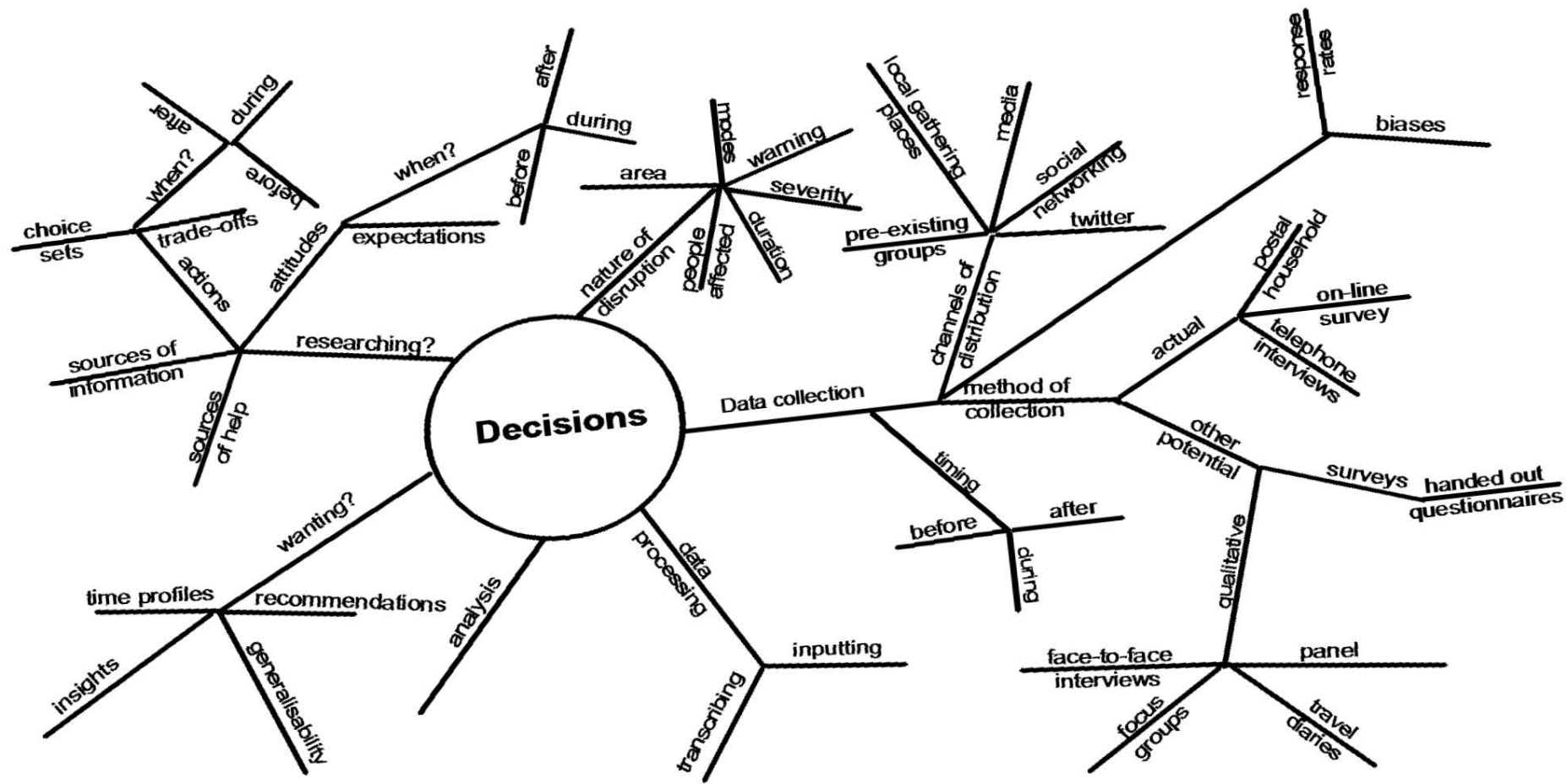
- On-line survey
- 507 responses
- Questions about
  - choice of mode
  - Journey being undertaken
  - Stage disrupted
  - Who contacted, how, how helpful
  - Strategies
  - Costs: time, money, inconvenience
  - What could have been done better/was done well
  - Social demographics
- Open questions throughout

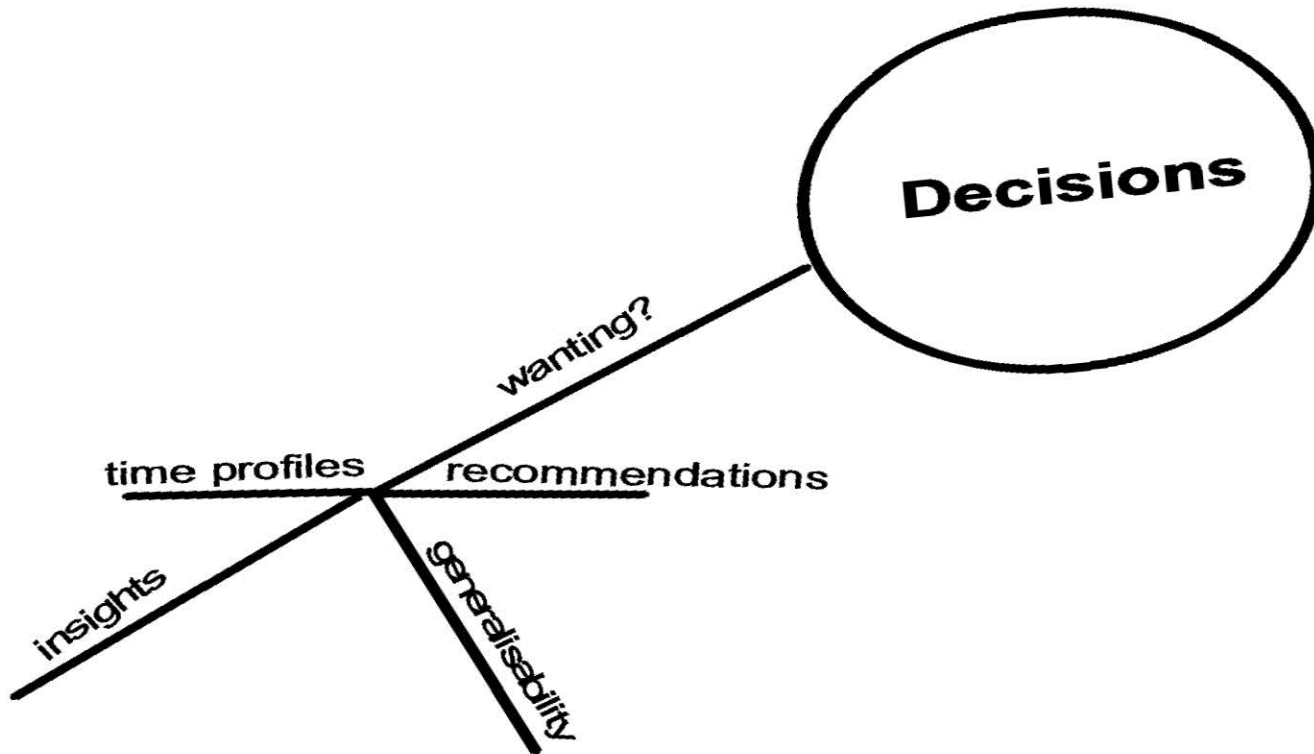
# Workington after the Floods of 2009

- Household postal survey
- Poor response rate
- 276 responses (6.4% to household survey) but 435 people
- Undertaken eight months after bridges lost
- And two months after temporary bridge opened
- Asked about number of weekly trips by purpose, mode, destination for three periods:
  - before floods,
  - When no bridges
  - Once temporary bridge opened
- Supplemented by interviews with residents and stakeholders

# Winter weather

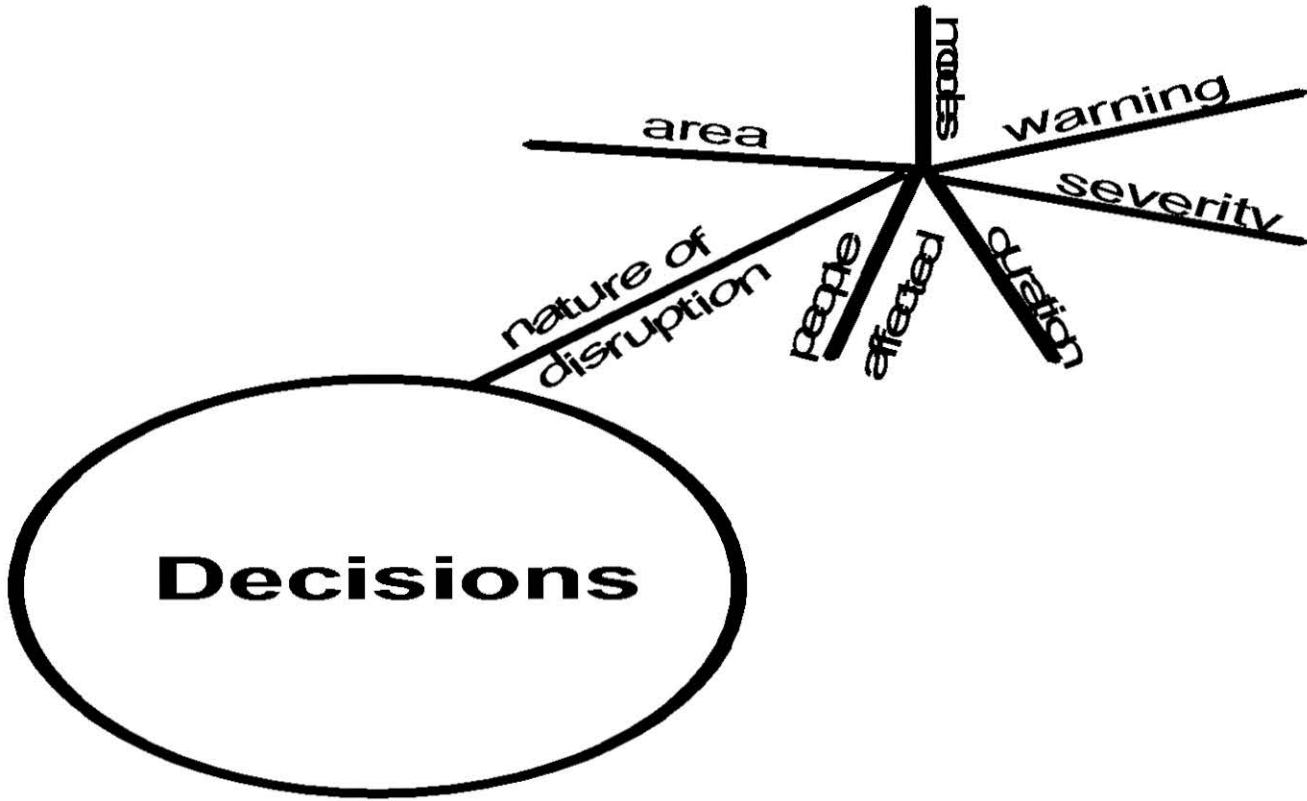
- On-line survey
- 734 responses 804 journeys
- Asked questions about specific journeys
  - Planned: Origin-destination, Mode, Length and duration, Purpose
  - Problem
  - Pre-information
  - Action: Origin-destination, Mode, Length and duration, Purpose
  - Socio-demographics

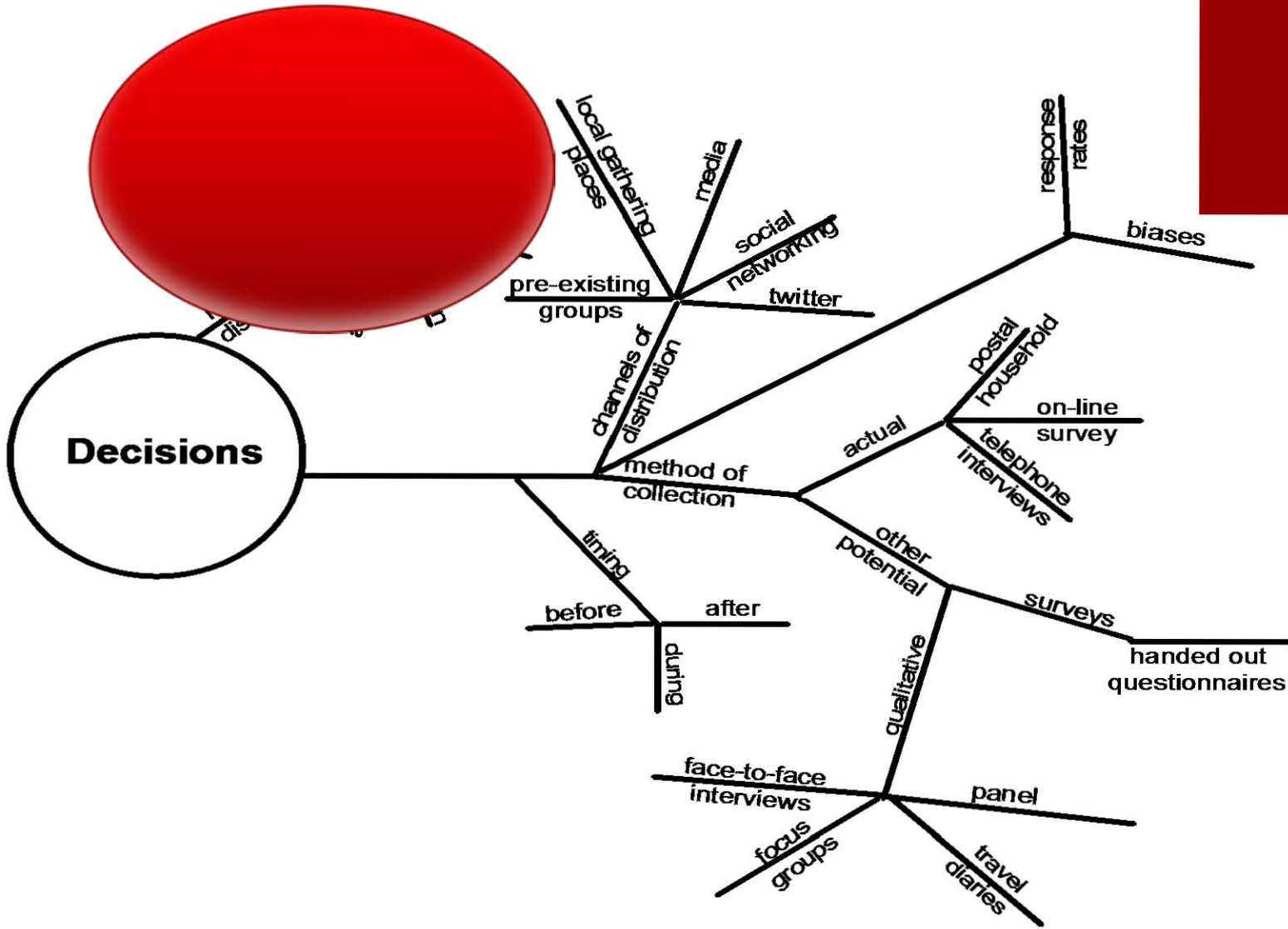










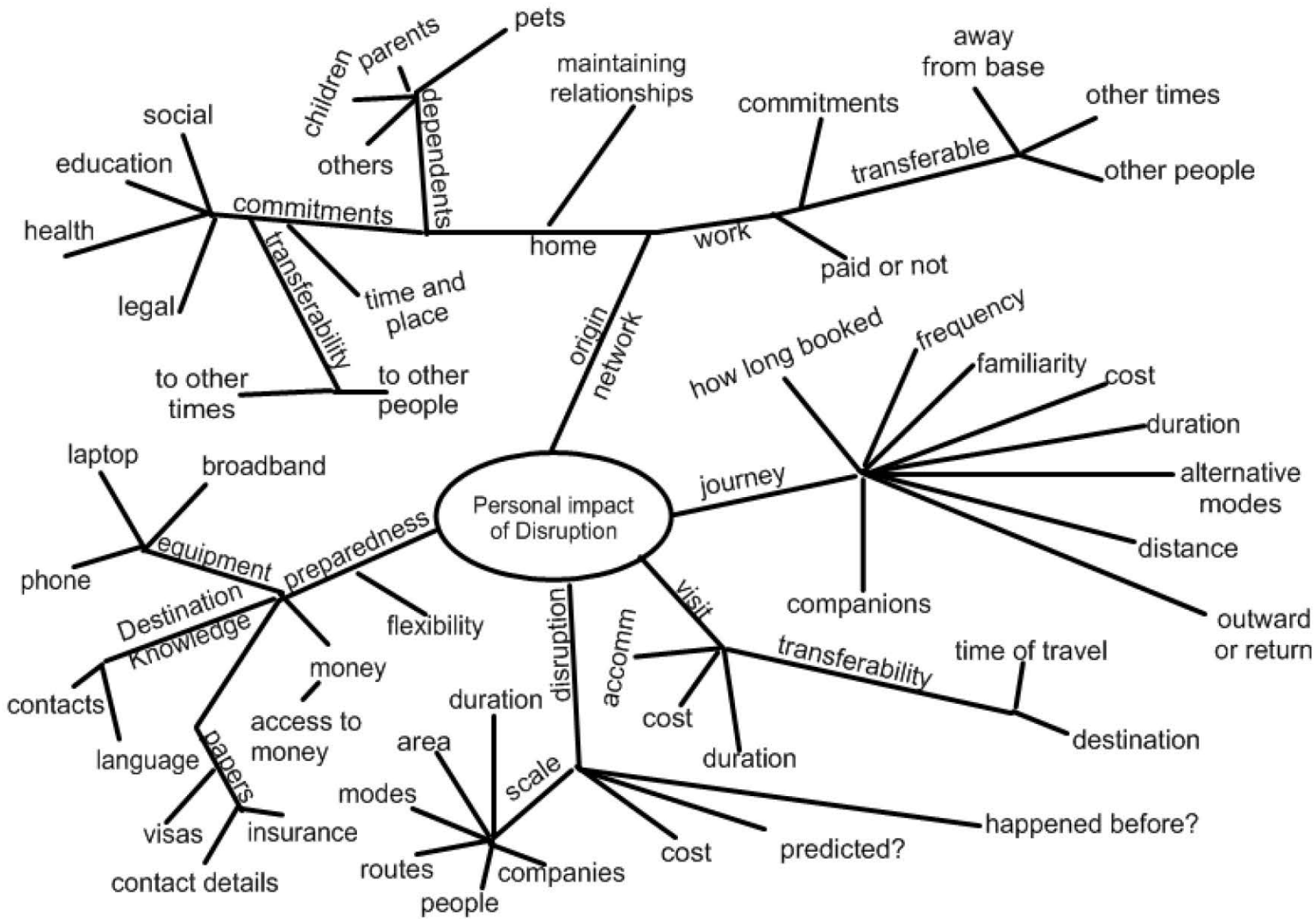


# Dimensions of Disruption

- Normal
  - Baseline: individual or system
- Pre-disruption
  - Warnings: how delivered, received
  - By whom to whom
  - Anticipated duration, severity, coverage ...
- Disruption
  - Area, modes, severity, duration –known?
  - bottlenecks
  - Other activities affected

# Dimensions of Disruption

- Post –Disruption
  - Backlogs
  - Restoration of previous provision
  - ‘permanent’ changes?
    - Personal
    - System
  - Memory



# Units

- People
- Households
- Journeys

# Dimensions of a journey

- Time: start time, end time, duration, frequency
- Space: origin, destination and route
- Information: known, sought
- Cost
- Purpose
- Travellers
- Mode

**All of these can change**

# Other Considerations

- Other activities changed because of cause of disruption
- Extra time spent travelling 'taken' from other activities
- Time not spent travelling spent on other activities
- Same true of money?



# Other Considerations

- Other people's travel impacts on others"
  - Household
  - Colleagues
  - 'external' consumers

# Agency: Power to do otherwise

- Where choice available: trade-offs necessary
  - May vary according to personal circumstances, sensitivities, previous experiences, disposition
- May depend on others
- Where no choice available: resignation/make the most of it

# In Conclusion

- Impossible to be fully comprehensive
  - People affected
  - Journeys
  - Other impacts
  - Life of the impact
- Needs choices of:
  - Units
  - Time period
  - Methods/types of results wanted

# Any Questions?