**Protocol (L2)**

* **Roles**
  + Facilitator: Guides the process and asks scripted questions.
  + Note-taker: Records choices and reasons.
  + Participant(s): Completes the travel decision task.
* **Timing (~12 minutes)**
  + 2 min: Introduction & consent
  + 3 min: First task (prototype without carbon emissions)
  + 3 min: Second task (prototype with carbon emissions)
  + 4 min: Discussion & debrief
* **Script (Facilitator)**
  + “Please look at this route screen. Which mode of travel would you choose?”
  + “Can you tell me why you made that choice?”
  + “Now here is a version with carbon emissions displayed. Please choose again.”
  + “What influenced your decision this time? Was it time, cost, or carbon emissions?”
* **Artefacts**
  + Record of both choices
  + Notes/recordings of reasoning
  + Sticky notes with key factors
* **Analysis Plan**
  + Compare travel choices before and after visualization
  + Identify most frequently cited reasons (time, cost, carbon)
  + Summarise the influence of carbon visibility

**Protocol (L4)**

* **Roles**
  + Facilitator: Presents the future scenario and guides the Futures Wheel activity.
  + Note-taker: Records diagrams and discussion points.
  + Participants: Brainstorm and discuss impacts.
* **Timing (~15 minutes)**
  + 3 min: Introduce scenario and explain Futures Wheel
  + 8 min: Group fills in Futures Wheel (direct and indirect impacts)
  + 4 min: Discuss positive, negative, and rebound effects
* **Script (Facilitator)**
  + “Please imagine that six months from now, every map app shows carbon emissions.”
  + “Write down the most direct impacts you can think of, then expand to indirect impacts.”
  + “Now, discuss: which impacts are positive, which could be risks, and could there be a rebound effect?”
  + “Let’s summarise your key findings.”
* **Artefacts**
  + Futures Wheel diagrams
  + Discussion notes / sticky notes
* **Analysis Plan**
  + Compare diagrams across groups to find recurring impacts
  + Thematic analysis of positive vs. negative themes
  + Extract insights for long-term systemic impact