TASK BREAKDOWN EXAMPLE

Before beginning: Go for a ride on the route

- Become acquainted with your own embodied experience and observant of what you do while cycling
- If doing from the perspective of a specific type of person, have them do steps 1 and 2 of the Task Breakdown with you after a ride

Step 1: Brainstorm

- Lay out sticky notes or numbered task list

1. Get to bike
    a. Walk to bike outside
    b. Unlock bike
2. Get riding
    a. Put lock in basket
    b. Maneuver people on sidewalk
    c. Bring bike down curb to roadbed
    d. Find opening in cars
    e. Pedal, accelerate to fit into traffic flow
3. Ride
    a. Watch for doors of parked cars
    b. Avoid potholes
    c. Brake to a stop for stoplight
    d. Balance standing at stoplight
    e. Accelerate from standing position
    f. Look behind for vehicles behind
    g. Brake, wait for vehicle opening
    h. Hold breath to avoid bus fumes
    i. Accelerate quickly
    j. Maneuver around bus to center of lane
    k. Watch for 2 lanes of merging traffic
    l. Signal with arms
    m. Accelerate and move across lanes
    n. Concentrate avoiding noise stress from elevated subway train overhead screeching
    o. Accelerate rapidly to make the light
4. Arrive at supermarket
    a. Let air in shirt for relief from heat
    b. Signal stop with arm
    c. Come to a stop
    d. Bring bike onto sidewalk
    e. Lock bike

Step 2: Vivid descriptions

Begin riding:
I put my lock in the basket on the back of my bike, aware that I will need to be careful that it does not bounce out if I ride over a large pothole or bump. I walk by people with the bike and bring it down to the roadbed from the sidewalk where I find a gap between the parked cars. I reach my head out as I cannot see oncoming traffic behind the parked cars. I find an opening and hop onto the bike, standing up to pedal quickly and integrate into the traffic flow.

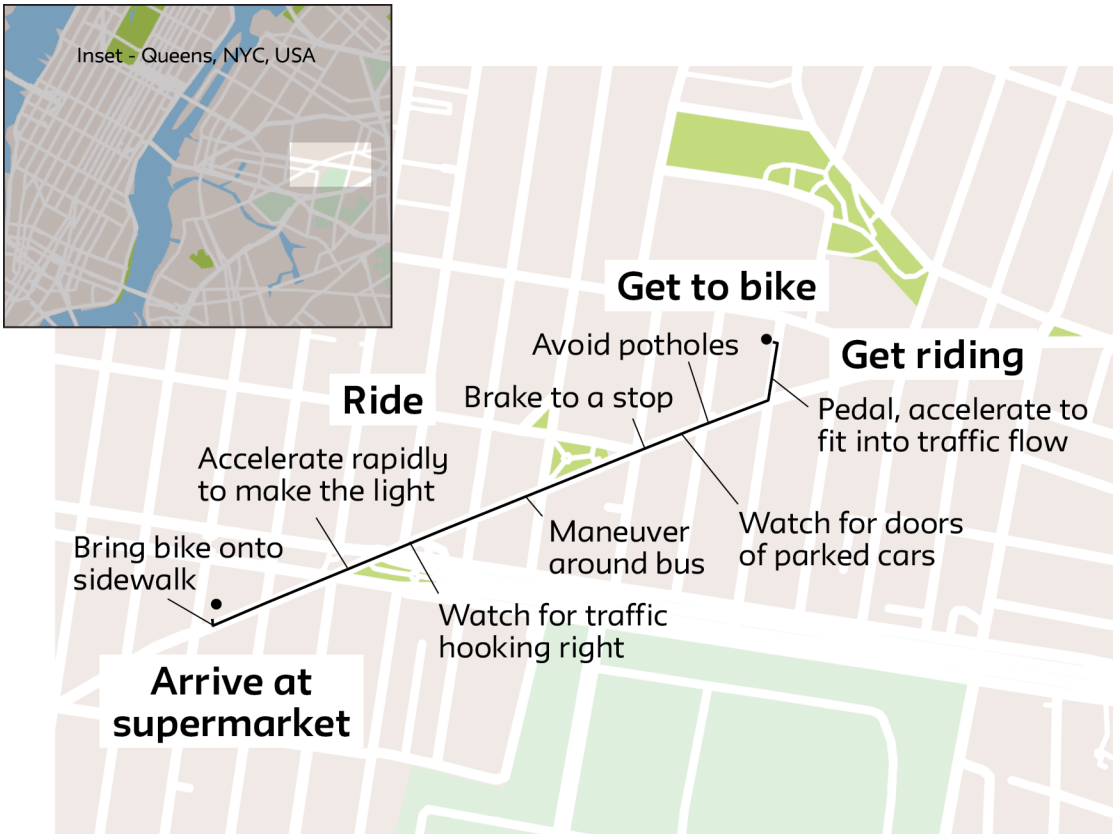
Ride – Major intersection:
As I approach the intersection, I look to my left for a break in the roaring traffic. I have to cross two lanes of traffic hooking right. I reach out with my arm and point left to communicate my movement, and accelerate across the lanes. I flinch from the screeching of the overhead train, but maintain concentration to move through the intersection, relieved as I barely make the light before it turns red.

Arrive at supermarket:
A final few cars rush by me. I feel stress getting through the major intersection, and sweat- it is a hot and humid day. I grab the side of my shirt to let in some air. I see the supermarket coming up on my right and reach my arm out to signal I'm coming to a stop. I scan for a parking place, bring my bike onto the sidewalk, and lock it up.

Step 3: Visual representations

Task hierarchy - flowchart diagram:
**Visualization option if you used a numbered list instead of sticky notes in Step 1*

Key steps: map with callouts

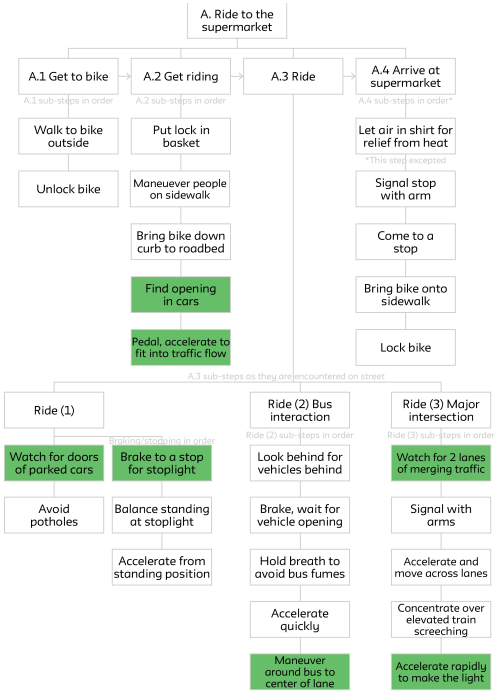


Note: If done with participant(s), get permission for outputs you produce from session

Step 4: Detailed analysis

Table analysis of different tasks by attribute

- *Select sub-tasks that stand out as implementable to analyze in more detail*

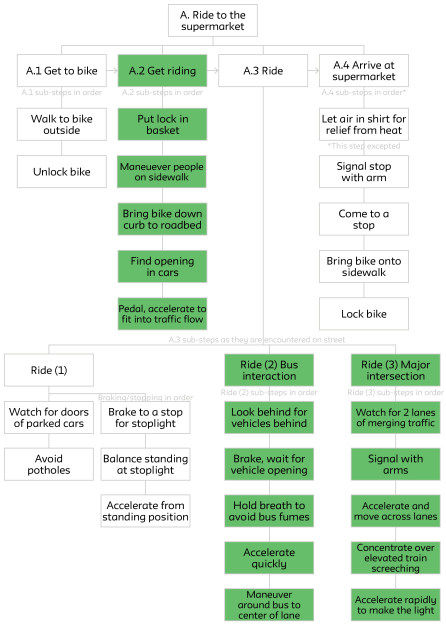


	Cyclist work required					Implementation considerations	
	Physical	Perceptual	Cognitive	Task duration	Task complexity	Ease of change	Trial possible?
Find opening in cars							
Accelerate into traffic							
Watch for car doors							
Brake to a stop							
Maneuver bus							
Watch for merging traffic							
Accelerate to make light							

SAMPLE KEY			
Minimal work Short duration Low complexity Easy to implement Trial possible	Some work	Significant work	Lots of work Long duration High complexity Hard to implement Trial not possible

Consider first the work required by the person cycling and the task's relative duration and complexity. Then think about interventions to address these, and estimate how easy these would be to implement and if a trial is possible.

- *Compare the entirety of higher-level tasks*



		Cyclist work required					Implementation considerations	
		Physical	Perceptual	Cognitive	Task duration	Task complexity	Ease of change	Trial possible?
A.2 Get Riding	Store lock						N/A	N/A
	Maneuver people							
	Bike to roadbed							
	Find opening							
	Pedal, accelerate							
A.3 Ride (2) Bus	Look for vehicles							
	Brake, wait							
	Hold breath							N/A
	Accelerate							
	Maneuver bus							
A.3 Ride (3) Major Inter.	Watch for merging							
	Arm signal							N/A
	Accelerate							
	Concentrate							
	Accelerate							

<u>Optional:</u> comparison across modes

	Work required					
	Physical	Perceptual	Cognitive	Amount of tasks	Overall effort	Total time
Cycling						
Driving a car						
Walking						
Taking public transport						
Shared micro-mobility						

Build out a high level breakdown of the major tasks for each mode on a route. These are the tasks that require significant effort or time. They do not need to focus into the finer-grained experiential aspects to the extent done to understand the cycling experience. These are sample criteria to compare across modes, meant to be tweaked by you.

Download .xls of tables here (with notes on implementation considerations)