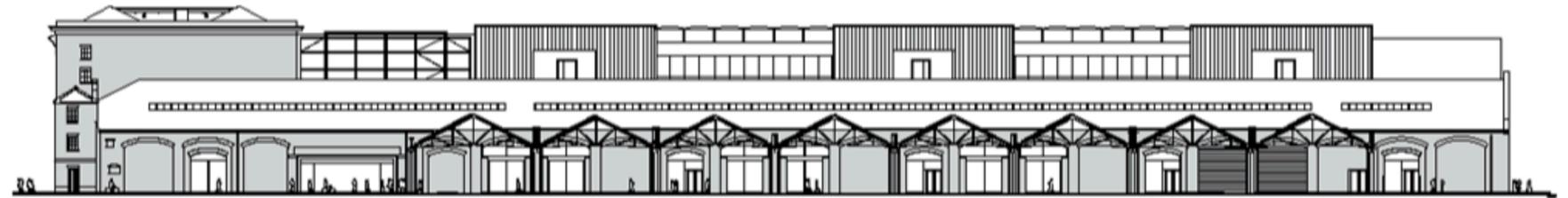


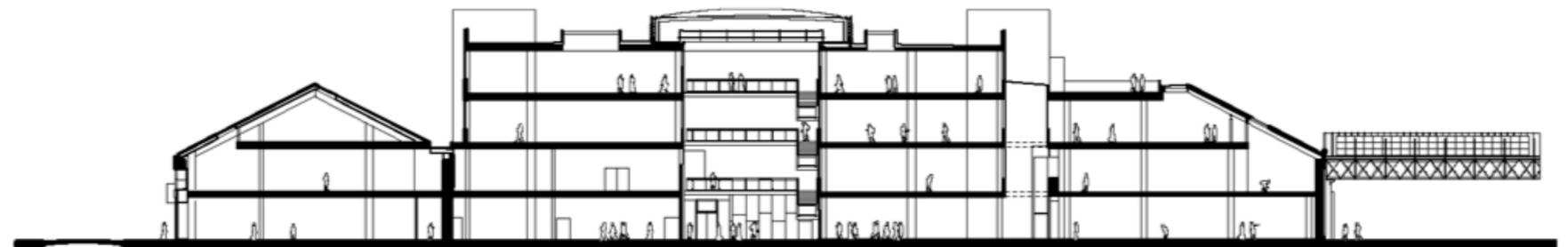
networks

of



depen-

dencies



Our carbon emissions in 2023/24

Emissions in 2023/24 totalled **139,096 tCO₂e** (tonnes of carbon dioxide equivalent) across all 3 scopes. The below chart shows the emissions for each activity that we report on for each year since the 2018/19 baseline year.

Scope	Data	2018/19 Emissions (tCO ₂ e)	2019/20 Emissions (tCO ₂ e)	2020/21 Emissions (tCO ₂ e)	2021/22 Emissions (tCO ₂ e)	2022/23 Emissions (tCO ₂ e)	2023/24 Emissions (tCO ₂ e)
1	Natural Gas	2,824	2,660	2,593	2,517	2,749	2,294
1	Fuel Oil	335	326	299	-	-	-
1	Gas Oil	-	-	-	300	263	205
2	Grid Electricity	4,211	3,086	2,804	2,590	2,877	3,422
2	Purchased heat	-	-	-	-	-	666
3	Supply Chain	58,388	50,162	58,341	43,344	64,223	58,033
3	Staff Commuting	436	302	195	687	747	918
3	Student Commuting	752	677	420	2,056	2,035	2,030
3	Business Travel	1,919	1,072	3	247	882	1,206
3	Travel to Campus	38,000	28,500	29,913	52,508	75,445	70,280
3	Water	45	35	11	15	20	17
3	Wastewater	93	71	20	27	23	21
3	Waste	28	16	14	19	23	7
1	Scope 1	3,159	2,986	2,892	2,817	3,011	2,498
2	Scope 2	4,211	3,086	2,804	2,590	2,877	4,087
3	Scope 3	99,661	80,835	88,918	98,903	143,397	132,511
1+2	Scope 1 + 2	7,370	6,072	5,696	5,407	5,888	6,586
1+2+3	All scopes	107,031	86,907	94,614	104,310	149,286	139,096

Emissions in 2023/24 by activity and scope (market-based reporting)

Scope 3 emissions – Includes all the other emissions for which we are indirectly responsible, for example buying

Scope	Data	2018/19 Emissions (tCO2e)	2019/20 Emissions (tCO2e)	2020/21 Emissions (tCO2e)	2021/22 Emissions (tCO2e)	2022/23 Emissions (tCO2e)	2023/24 Emissions (tCO2e)
3	Staff Commuting	436	302	195	687	747	918
3	Student Commuting	752	677	420	2,056	2,035	2,030

The data is collected through an annual survey reaching c.1000 students and c.800 staff members.



data grounded in
lived experiences*

*autoethnography

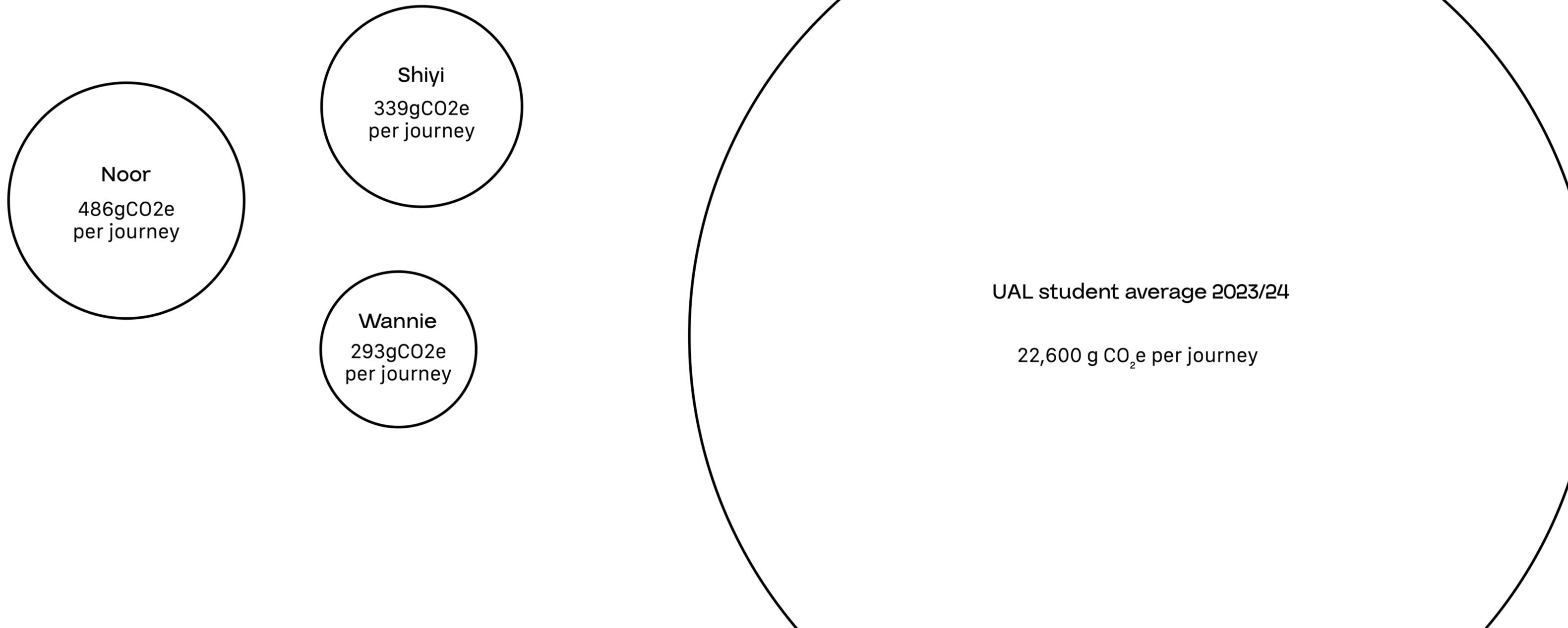
our journeys

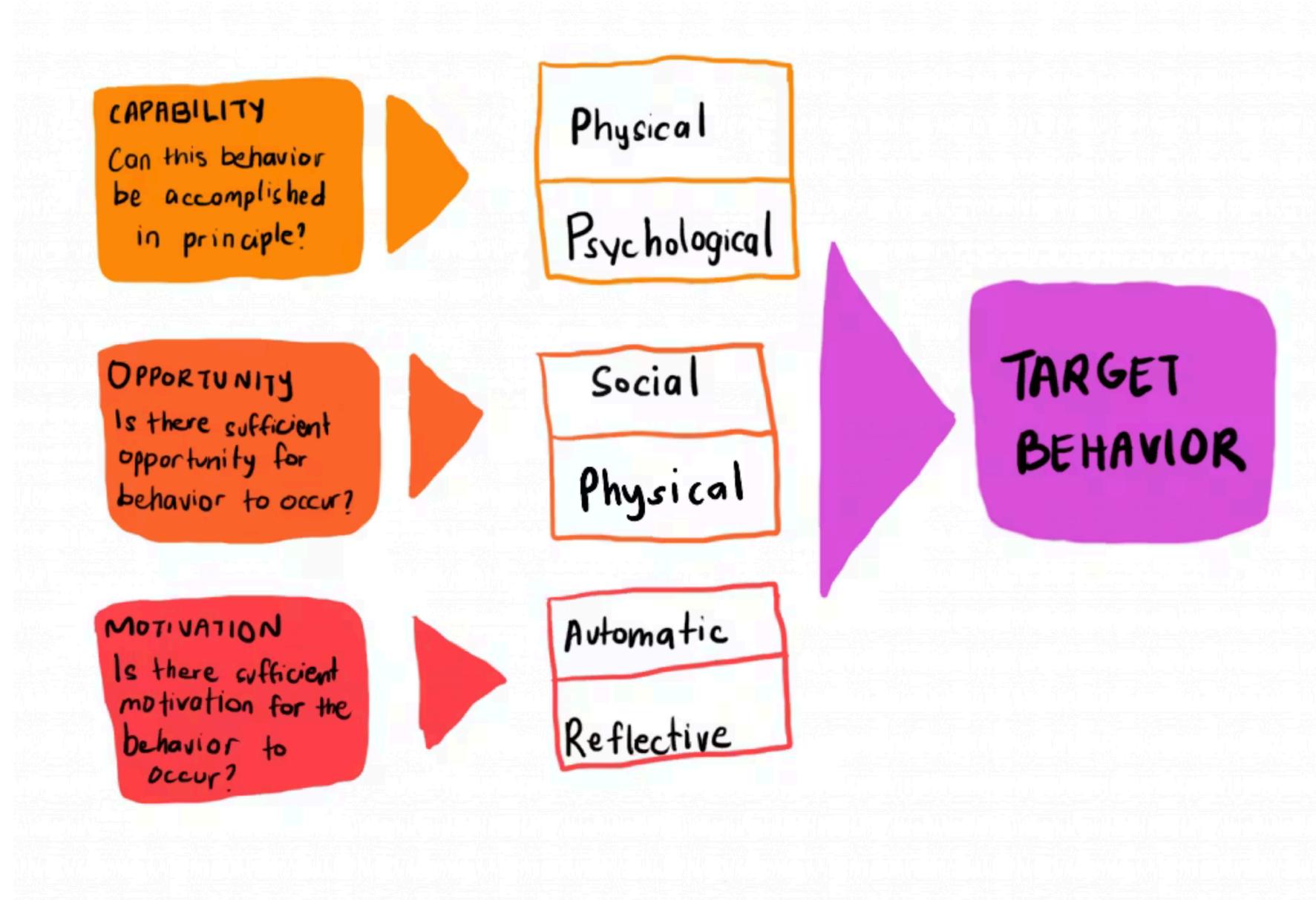
Average trips to and from Uni in a week: 4

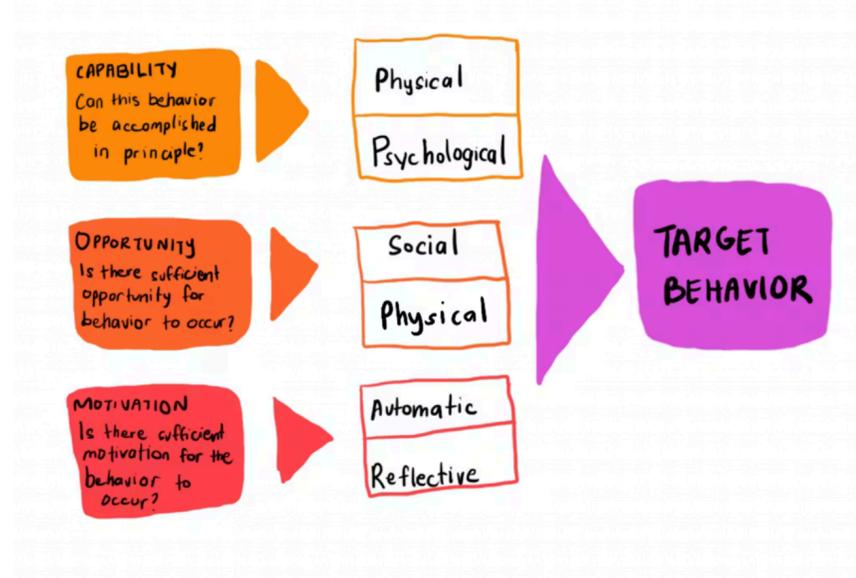


compare to student body average

Is this data accurate?







COM-B Analysis

Capability

I'm physically capable, but scared to ride my bike along the canal

Opportunity

London has bike paths, and a lot of my friends cycle to work, and I have access to the bike shed

Motivation

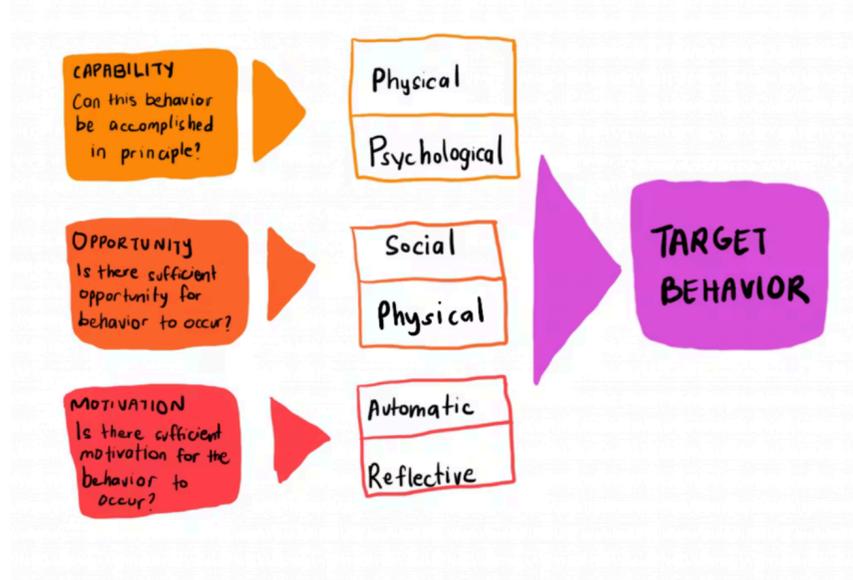
Because of my fear of the canal and roads, riding on the opposite side of the road, the convenient location of the tube, and the fact that I'd need to cycle for over an hour to get to uni, I don't have much motivation



noor

I go to the uni around 2-3x a week on the tube

I take the central line from north acton to oxford circus, change to the victoria line and go to kings cross



COM-B Analysis

Capability

Storing and retrieving bicycles during holidays is a hassle every year.

Opportunity

London has a great cycling community, and you can ride around to see the sights and relax after school.

Motivation

I can't imagine what it would be like to cycle for almost an hour, then study, and then cycle for almost another hour to get home.

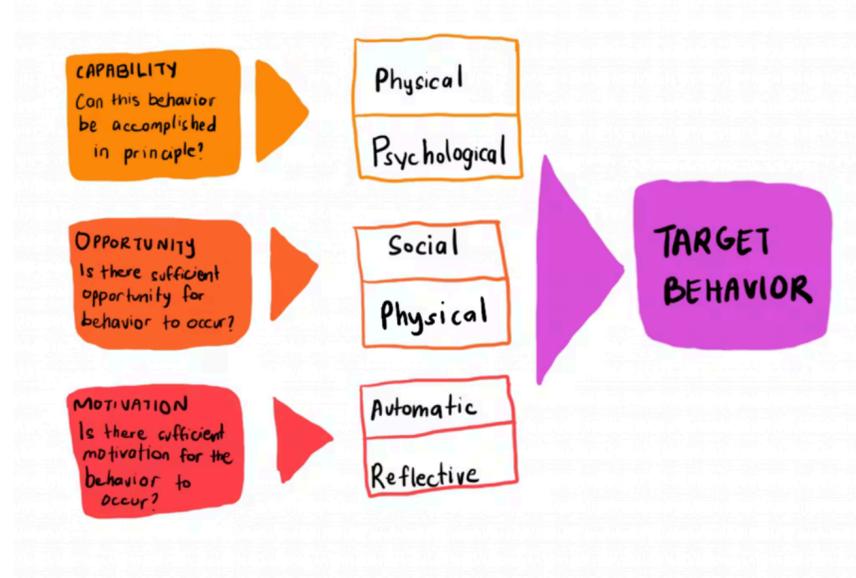


shiyi

I go to the uni around 2x a week on the tube

I take the victoria line from blackhorse lane and to kings cross





COM-B Analysis

Capability

I am physically capable of cycling, but the distance to campus is too far to make it realistic as a daily option.

Opportunity

There are limited alternative transport options near where I live.

There isn't another convenient bus route nearby, so the Tube is essentially the only reliable way for me to reach campus.

Motivation

Because the journey is long, cycling would take over an hour and require a lot of physical effort before class.

The convenience and predictability of the Tube, combined with the lack of other nearby transport options, means I don't feel motivated to cycle.



Wan

I go to the uni around 2x a week on the tube

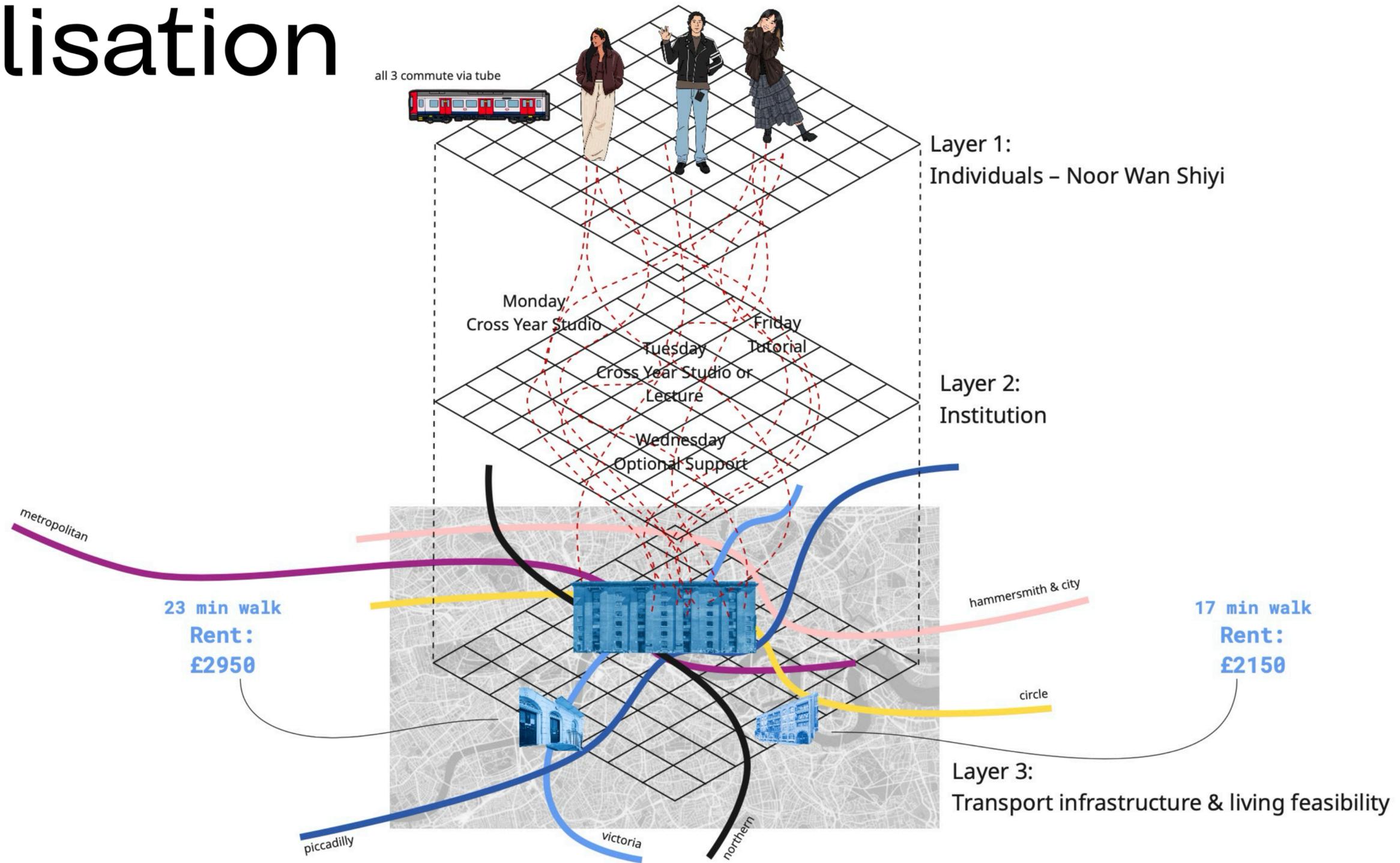
I take the Hammersmith line from wood lane and to kings cross





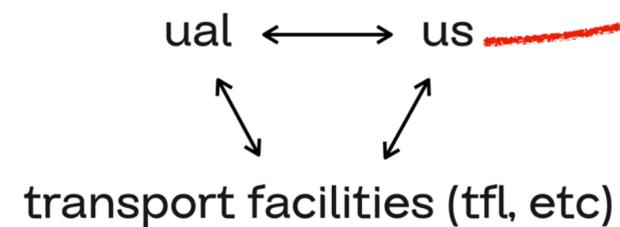
how do we illustrate the nuances
of shared responsibility in the
network of dependencies?

visualisation





How can graphic communication design map complex networks of dependencies, responsibility, and agency?



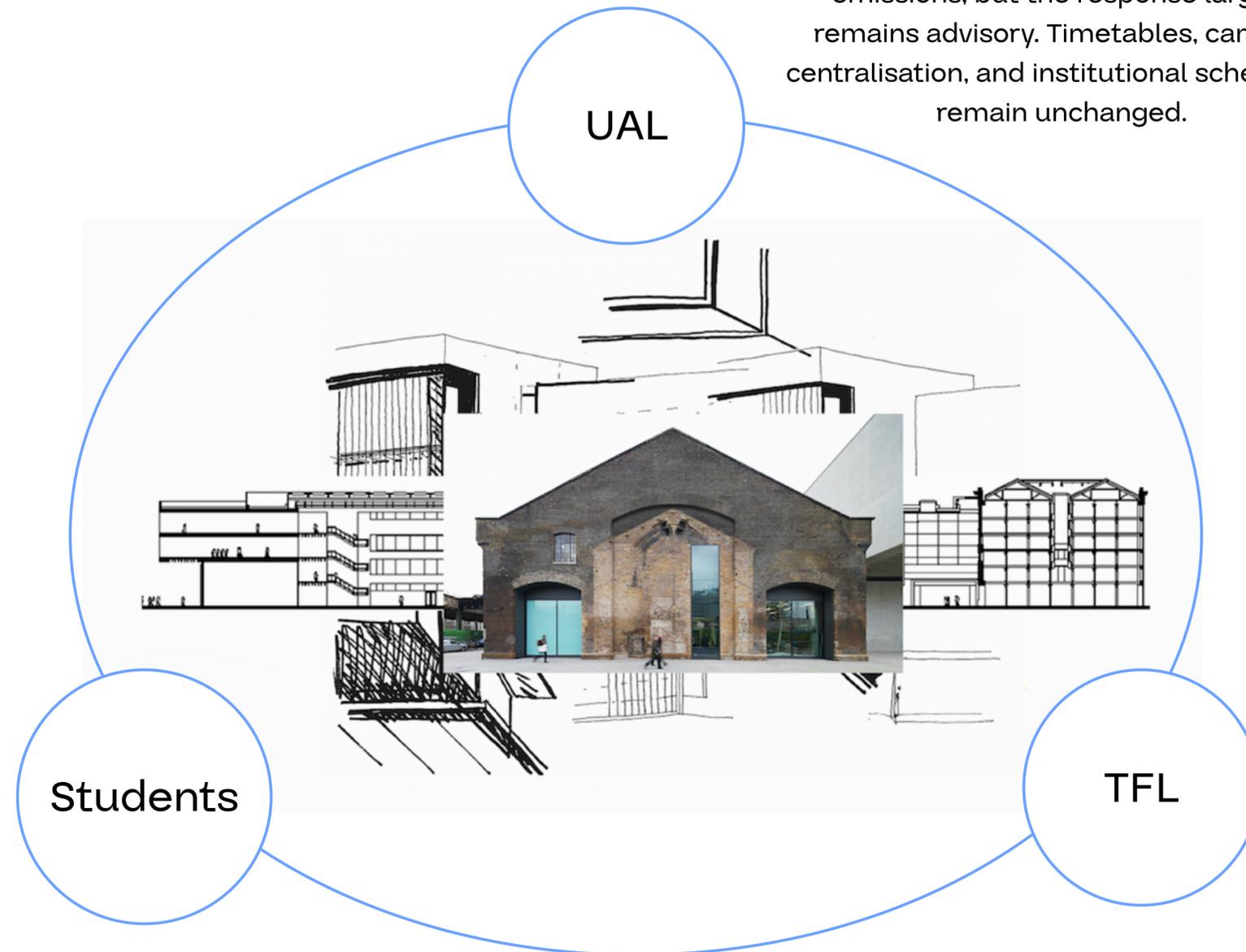
where can we
make changes?
where is
infrastructure
limiting us?



from layers
to conflict

Tensions Within the Network

UAL acknowledges Scope 3 commuting emissions, but the response largely remains advisory. Timetables, campus centralisation, and institutional scheduling remain unchanged.



At the individual level, sustainability is framed as a question of behaviour. Students are encouraged to change how they travel, but the institutional framework that determines commuting frequency remains largely the same.

TfL encourages mobility. It makes travel more affordable and more accessible. Mobility is incentivised, not reduced.

We initially mapped the system as three interconnected layers. But instead of functioning as a coordinated network, we started to see contradictions between them.

Beyond the ABC Model

ABC Model

A — Attitude

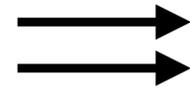
Environmental awareness or concern

B — Behaviour

Actions such as walking, cycling,
reducing travel

C — Choice

The assumption that individuals freely
choose how to act



In our case

Commuting is framed as a matter of
personal choice rather than institutional
structure.

Shove's Critique of the ABC Model

“The popularity of the ABC framework is an indication of the extent to which responsibility for responding to climate change is thought to lie with individuals whose behavioural choices will make the difference. It obscures the extent to which governments sustain unsustainable economic institutions and ways of life, and the extent to which they have a hand in structuring options and possibilities.”
(Shove, 2010)



outcome

Why a film?

① Quantified Responsibility

② Impractical Green Advice

③ Advice Without Support

We want to show each scene focuses on a different dilemma faced by students within the system:

④ Infrastructure Mismatch

⑤ Economic Constraint



reflection



What would change if commuting reduction were treated as a structural design problem rather than an individual moral obligation?