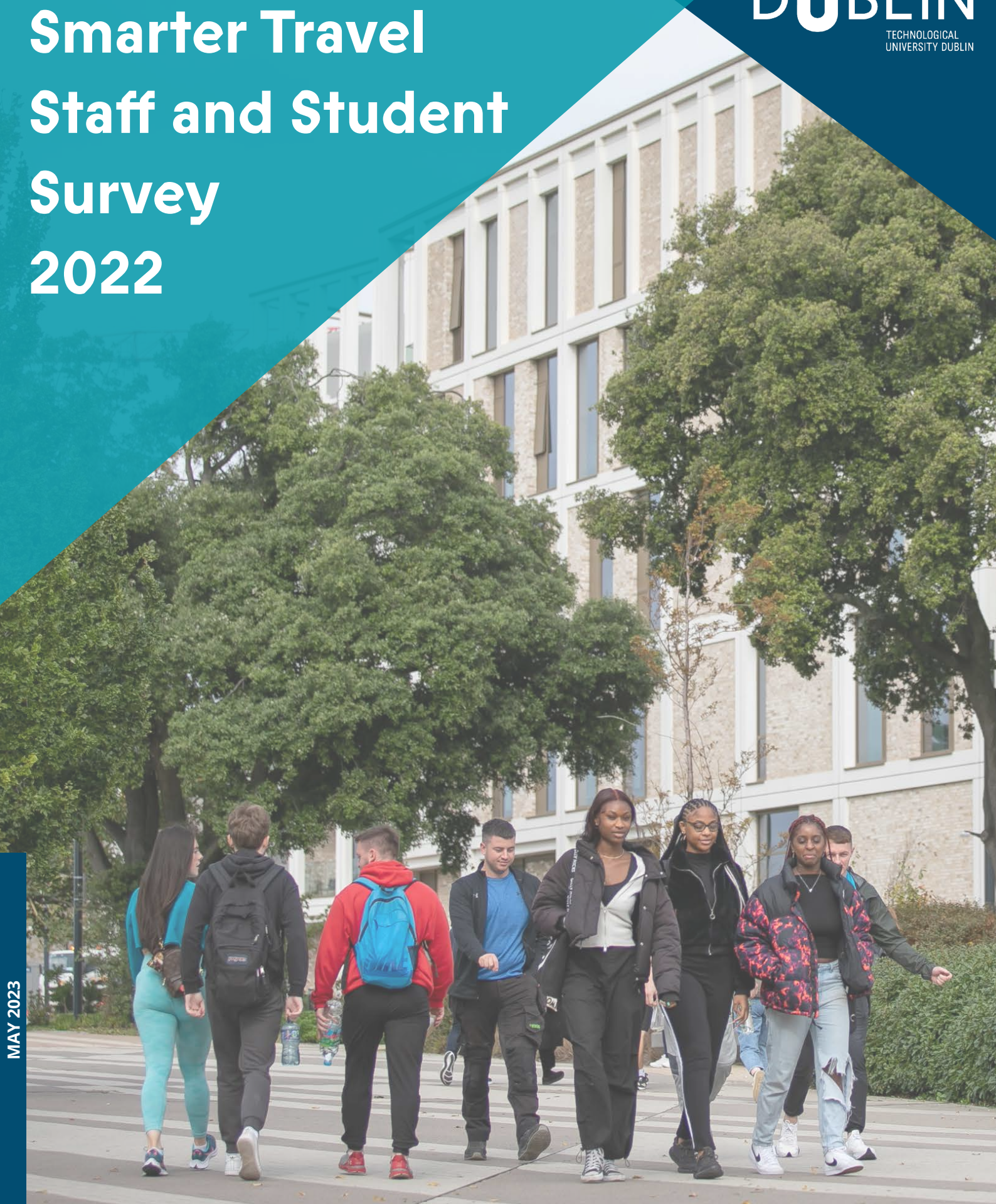


TU Dublin TFI NTA Smarter Travel Staff and Student Survey 2022

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CONTENTS

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Introduction and context	4
Engagement	5
Response rate	6
How we travel	8
Distance travelled	12
Distance as a proxy for active travel potential	16
Tallaght	16
Blanchardstown	18
Grangegorman, Aungier Street and Bolton Street	20
Time of arrival and departure from campus	22
Reasons for mode choice	23
Parking	24
Interest in behaviour change intervention	24
Physical activity	26
E-scooters	26
Next steps with the data	27

Introduction and context

Transport for Ireland (TFI) Smarter Travel Behaviour Change Programme is a national voluntary programme which supports third-level educational institutions and workplaces to implement voluntary travel plans. These plans focus on promoting and encouraging students and staff to sustainably and actively commute to campus. The National Transport Authority (NTA) Smarter Travel Survey is an integral tool that is used in this process. In 2022 TU Dublin was given the opportunity to input into a revised survey design that could better inform our needs as we plan towards being carbon neutral by 2040. With three campuses across five locations, each with different geographical contexts, there was a need for the survey to capture the diverse needs of those travelling to each. In addition, under the Public Sector Mandate for Climate Action TU Dublin has a responsibility to develop a Sustainable Mobility Plan to reduce scope 3 carbon emissions, which constitute a substantial portion of TU Dublin's carbon footprint. Any such plan requires that we take a University-wide approach to our transport and mobility supporting actions. The TU Dublin Sustainability Office worked in conjunction with the NTA to distribute and analyse the survey in order to inform a University overview of requirements. This report outlines the key findings.



Engagement

Raising awareness of the survey with TU Dublin students and staff in advance, and during the data capture was key to achieving a successful response rate. A dynamic and well-resourced engagement campaign ran between November 7-25th, 2022 and was later extended to run to November 30th. To develop University-wide awareness of the value of survey participation, support was sought from Class Representatives, Heads of Schools, Programme Chairs, Marketing and Communications Departments and the Students Union.

42 sustainable travel themed prizes with a total value of €3,400 were heavily promoted to encourage participation in the survey. These included two vouchers for a sustainable hotel, five Iarnród Éireann train vouchers, 25 credited LEAP cards and 10 Patagonia vouchers. The 25 LEAP cards were awarded half-way through the data capture. This strategy sought to garner excitement about the survey and to generate word-of-mouth endorsement among the student and staff body. Below is the timeline and strategy for the Smarter Travel engagement campaign.

- A page was developed on the TU Dublin website to host the survey link
- Three 'all student and staff' emails were sent from the Office of the VP for Sustainability
- Announcements were made via an internal staff and student newsletter, and virtual learning platforms (VLE)
- 90 social media posts were published, achieving 90k 'Impressions'
- Supported by Faculty Deans, class announcements were made by teaching staff and Class Reps
- User-generated content (UGC) made by students and staff positively endorsed the value of survey participation. Six videos were made, which achieved 76k video hits
- Branded promotion featured on digital platforms, including videos on-digital screens, signatures on staff emails and screen savers for all student-facing PC screens
- 12 Student Ambassadors disseminated 1,800 flyers to students at all campus locations

Response rate

The overall response rate for the survey was 20%, a substantial increase from the 8% response rate (18% staff and 7% students) achieved in the last TU Dublin Smarter Campus Survey undertaken in 2019. This increase is attributed to the engagement strategy conducted by the Sustainability Office. TU Dublin's response rate has been noted by the NTA as the highest ever achieved since the programme's initiation.

Speaking of the high response rate achieved by TU Dublin, Jennifer Kavanagh of the Smarter Travel Team, NTA, said:

"TU Dublin's Smarter Travel survey was a huge success with an outstanding response rate to show for it. We will be showcasing their creative promotional campaign as best practice for other Smarter Travel campuses and workplaces across Ireland".

The survey received 5,291 responses. A low response rate to the question categorising students and staff (n=4433) led to fewer responses categorised in the table outlining campus-specific response rates (Table 1). For data presentation, the city centre campuses have been grouped as trip types, and contexts were comparable for these sites. The high staff response to the survey across all campuses is informative as these trip patterns and behaviours will generally occur for a longer duration than student trips which will be for the duration of their studies. Both cohorts are important to consider as each has distinct characteristics concerning trip decision determinants such as residential location, trip affordability, time and access to a car. The University has a responsibility to facilitate as many sustainable trips as possible for both students and staff, the former group being at a formative life stage where habits created at this stage of their lives will influence how they travel in the future.

	Staff	Students
Blanchardstown	44% (137)	9% (304)
City	36% (874)	14% (2582)
Tallaght	32% (151)	6% (385)
Total	36% (1162)	12% (3271)

Table 1: Response Rates by Campus and Staff/Student Status

The sample is 44% male, 53% female and 1% non-binary. Other respondents chose not to disclose their gender. The high female response rate is welcome as there is a greater awareness globally of the more complex travel needs and considerations for females, such as safety concerns and their greater caring responsibilities¹. In addition, 10% of respondents reported having a chronic illness or disability affecting their capacity to participate in certain physical activities, which could include walking or cycling for transport. 3% of respondents reported having a chronic illness or disability which affects their capacity to drive. The median age of respondents is under 25. Table 2 outlines the age distribution of the student and staff profiles. While 78% of student respondents were under the age of 25, 88% of the staff that completed the survey were aged between 35 and 65 years.

	Staff	Students
Under 25	1%	78%
25 - 34	10%	13%
35 - 44	25%	5%
45 - 54	37%	3%
55 - 65	26%	1%
Over 65	1%	<1%

Table 2: Age profile of sample

How we travel

There is variability in how students and staff travel to each of our campuses. Unsurprisingly, Grangegorman, Aungier Street and Bolton Street locations have a higher proportion of travel by active modes and rail/light rail than Tallaght and Blanchardstown (Table 3). Across all campuses, when considering all trips to the campus, the highest proportion of trips are by bus. In Tallaght, when private car trips driving alone are combined with shared private vehicle trips, the car becomes the primary mode. 97% of respondents indicated they are located at only one campus; therefore, the data is presented as regular commute patterns to a single campus.

	On Foot	Bike	eBike	Bus	LUAS	Train/DART	TU Dub Shuttle	Driving Alone	Private Car Shared Trip	Motor cycle Scooter	Mostly remote
Tallaght (n=641)	6%	2%	1%	35%	8%	5%	0%	32%	8%	1%	1%
Blanchardstown (n=562)	3%	3%	2%	47%	1%	2%	2%	30%	10%	1%	1%
Grangegorman (n=2266)	11%	7%	1%	38%	13%	17%	0%	9%	3%	0%	1%
Bolton Street (n=944)	9%	9%	1%	38%	11%	19%	0%	9%	3%	0%	0%
Aungier Street (n=792)	9%	5%	0%	45%	8%	19%	0%	9%	2%	0%	2%
City – Other* (n=72)	10%	7%	1%	31%	11%	13%	0%	15%	13%	0%	0%
Total (n=5277)	9%	6%	1%	40%	10%	15%	0%	14%	4%	0%	1%

* City-Other includes smaller campus sites in the city such as Broadstone or Berresford Street. Respondents were not required to give more detail on their location.

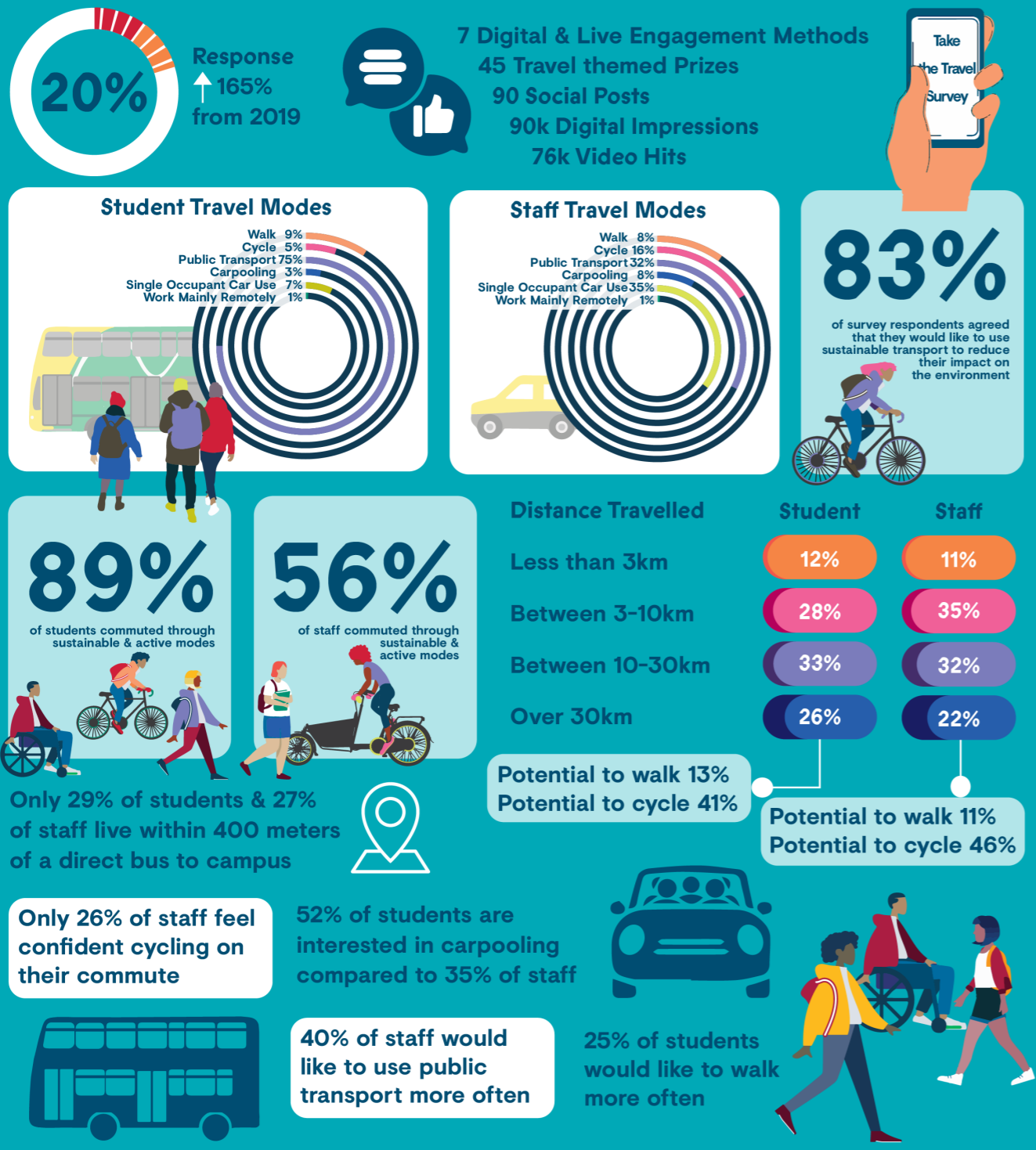
Table 3: Mode distribution by campus location

A more informative pattern emerges when trips are separated out by student/ staff status. There is a clear difference between how students travel to campus, predominately public transport for all campus locations, and how staff travel to campus, predominately by car for Tallaght and Blanchardstown. Staff in Grangegorman, Aungier Street and Bolton Street travel to campus by a variety of modes, with a similar proportion travelling actively (30%), by public transport (39%) and private car (30%). The northside city locations show a higher proportion

of LUAS trips than Aungier Street (Table 3). An impressive 20% of staff trips to Grangegorman, Aungier Street and Bolton Street are by bicycle, including e-bike, which is very high compared to the modal share of trips by bike in the city of 6%². This city percentage is comparable to the proportion of students cycling (5%). Ten per cent of trips crossing the canals are on foot, comparable to the walking trips taken by students and staff.

Overall, 81% of respondents to the survey travel by a sustainable mode to campus; 89% of the students do so compared to 56% of staff. In Tallaght, 55% of survey respondents travel to campus by sustainable modes, 69% of students and 22% of staff. In Blanchardstown, 54% of survey respondents travel to campus by sustainable modes, 74% of students and 13% of staff. In the city centre campuses, 87% of survey respondents travel to campus by sustainable modes, 93% of students and 69% of staff.

TU Dublin Smarter Travel Staff & Student Survey 2022



It is difficult to compare the 2019 Smarter Travel Survey beyond noting that there was a high proportion of students travelling by public transport and staff travelling by private car, similar to the general trends noted in the 2022 data (Table 4). This is because we do not have the modal share data for 2019 by campus separated into student and staff trips.

	On Foot	Cycling (inc e-bike)	Public Transport	Private Vehicle	Motorcycle or Scooter
Tallaght Staff (n=150)	6%	5%	11%	78%	0%
Tallaght Students (n=377)	7%	2%	62%	29%	1%
Blanchardstown Staff (n=132)	0%	3%	10%	86%	1%
Blanchardstown Students (n=300)	2%	5%	68%	24%	1%
City Staff (n=867)	10%	20%	39%	30%	1%
City Students (n=2561)	10%	5%	79%	6%	0%
<i>Students total 2022</i>	9%	5%	76%	11%	0%
<i>Staff total 2022</i>	8%	16%	32%	43%	1%
<i>Students total 2019</i>	6%	4%	78%	10%	1%
<i>Staff total 2019</i>	8%	14%	37%	41%	2%

*22% over 90minutes, **25% over 90 minutes, ***11% over 90 minutes

Table 4: Campus mode summary for Staff/ Students including 2019 survey summary

Figure 1: TU Dublin Smarter Travel Staff and Student Survey Key Findings

Distance travelled

How people travel to campus will be influenced by the distances that they have to travel.

There are a variety of contributing factors to these distances, most notably housing availability and affordability and the duration of study and contract duration.

Figures 2 and 3 give an overview of the distances travelled and trip times for the total sample. Table 5 gives a breakdown by campus and by student or staff status. Similar to modal choice, there are distinct differences in the travel requirements between students and staff for all campus locations. Over 17% of the total sample travel over 40km to campus, and 13% travel for more than 90 minutes. This data is not separated by mode, so it does not account for those who may consider this trip time productive if they choose to use this commute time to work on a train or bus.

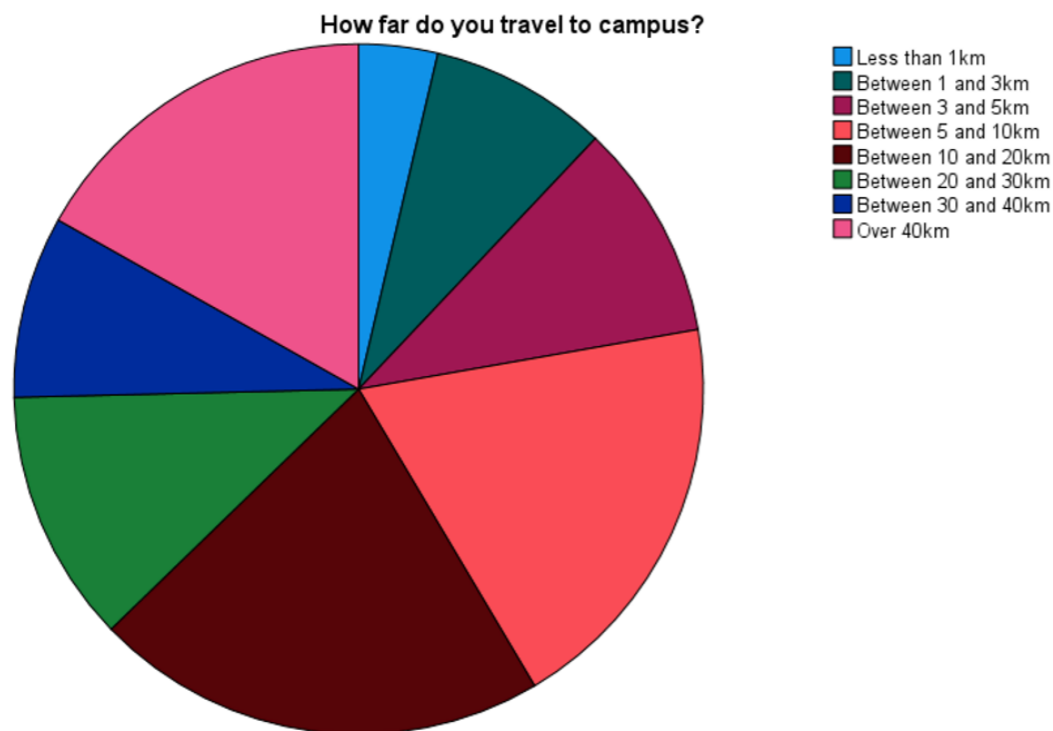


Figure 2: Distance travelled to campus for full sample (n=5291)

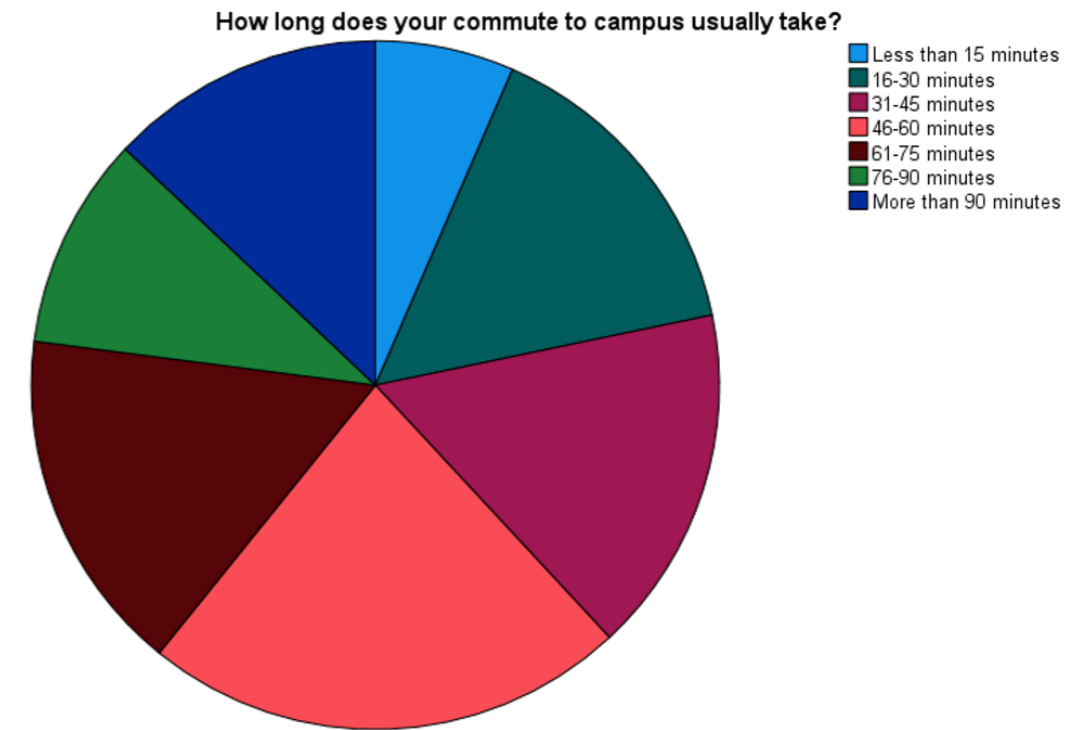


Figure 3: Commute times full sample (n=5291)

When time and distance data is separated by campus and student/ staff status, it is clear that students are travelling further and for longer than staff. Over 20% of students in Tallaght and Blanchardstown commute to campus for longer than 90 minutes (Table 5). Further multilevel statistical analysis is warranted to explore the relationship between mode choice, time, distance and ease of access to public transport. Due to the data being combined for all TU Dublin campuses in the 2019 report, it is difficult to determine if there are differences in commute times between the campus locations. For example, the relocation of the Kevin Street campus to the Grangegorman location may have shortened some student commutes, but students may be commuting longer to other campuses. It is interesting to note that, in general, there is a reduction in travel distance and times for students, and an increase in distance and time for staff. The student trend is different to what has been observed in some other regional campuses, for example, the University of Galway has reported that before 2015, only 28% of students lived further than 5km from campus, whereas in 2022, that figure rose to 49% . The increase in the proportion of staff commuting longer than 90 minutes may reflect remote working practices implemented during the COVID pandemic, and commute trips may be less frequently taken than in 2019.

	Distance				Time		
	Less than 3km	Between 3 & 10km	Between 10 & 30km	Over 30km	Less than 30 mins	Between 30 and 60 mins	Over 60mins
Tallaght Staff (n=151)	11%	27%	38%	24%	39%	43%	18%
Tallaght Students (n=385)	14%	30%	30%	26%	32%	31%	37%*
Blanchardstown Staff (n=137)	6%	23%	45%	27%	34%	44%	22%
Blanchardstown Students (n=303)	6%	30%	36%	28%	17%	35%	47%**
City Staff (n=872)	12%	38%	29%	21%	28%	39%	33%***
City Students (n=2578)	13%	28%	33%	26%	18%	40%	42%***
<i>Students total 2022</i>	12%	28%	33%	26%	20%	39%	42% <small>(14% >90mins)</small>
<i>Staff total 2022</i>	11%	35%	32%	22%	30%	40%	30% <small>(9% >90mins)</small>
<i>Students total 2019</i>	9%	30%	33%	29%	18%	34%	48% <small>(16% >90mins)</small>
<i>Staff total 2019</i>	8%	40%	33%	18%	29%	44%	26% <small>(7% >90mins)</small>

Table 5: Travel Distance and Time by campus and student/staff



Distance as a proxy for active travel potential

Trip distance is often used as an indicator for a potentially active trip, with up to 3km considered a potential walkable commute and up to 10km considered a potential trip by bike. It is acknowledged that not all these trips may be viable as active travel trips for several reasons, such as the perception of safety and comfort, however, this metric gives a good indication of potential. In this section, each of the three main campus locations is considered in this context.

Tallaght

Total: 13% travel less than 3km, 43% travel less than 10km

Staff: 11% travel less than 3km, 38% travel less than 10km

Students: 14% travel less than 3km, 44% travel less than 10km

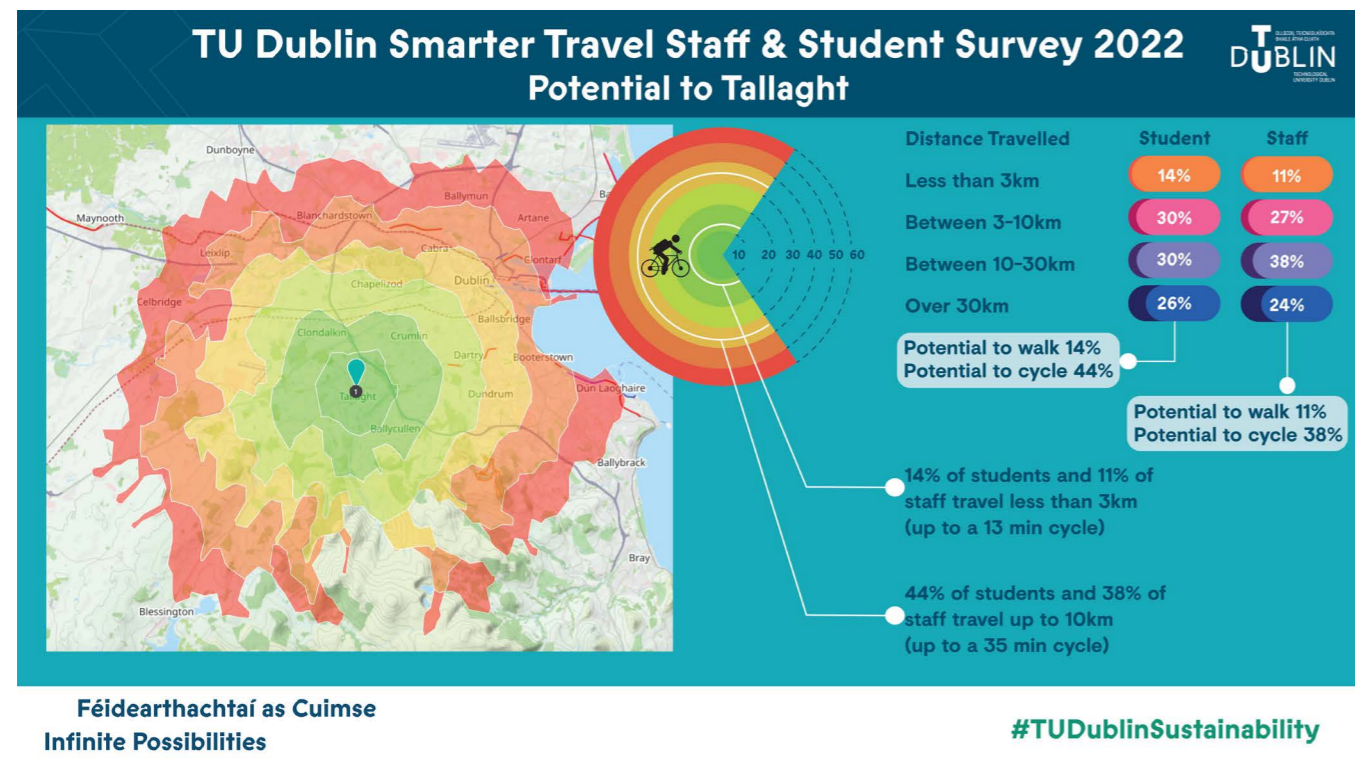
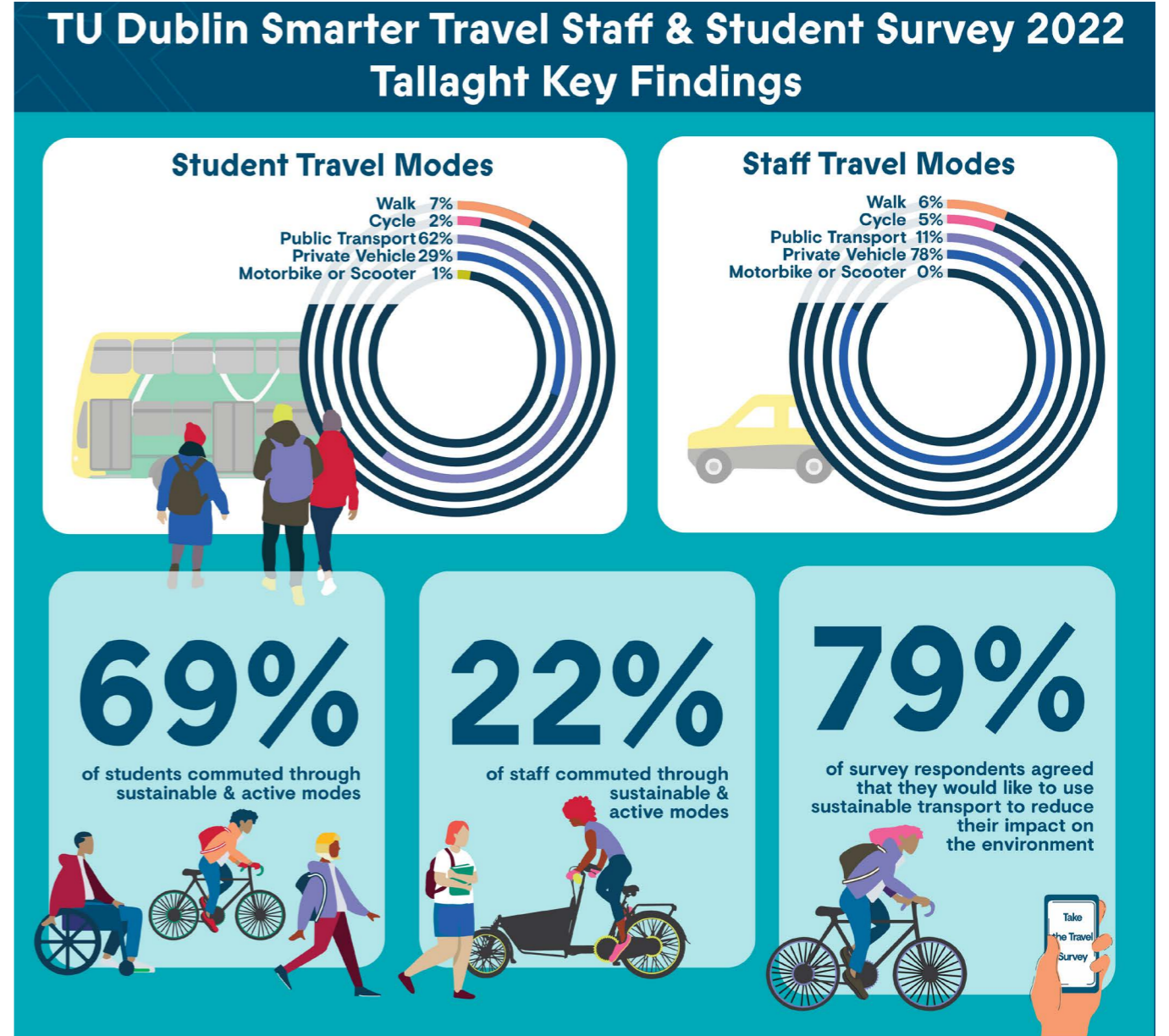


Figure 4: TU Dublin Smarter Travel Staff and Student Survey Potential to Tallaght



Féidearthachtaí as Cuimse Infinite Possibilities #TUDublinSustainability

Figure 5: TU Dublin Smarter Travel Staff and Student Survey Tallaght Key Findings

Currently, 9% of students and staff are travelling actively, which gives us a potential increase of 34% of people walking or cycling, with a 4% possible increase in walking. The greatest potential is in increasing cycling. It is important to note that 11% of staff and 62% of students travel by public transport, including an active component, usually walking, to the trip. Working with local authorities and the NTA to improve the key routes to the campus, such as South Dublin County Council's Dublin 24 Rapid Implementation Cycle Network⁴ project, and improving the walking and cycling infrastructure within the campus can enhance the experience for commuters and increase the numbers travelling actively or using public transport.

4. [Dublin 24 Rapid Implementation Cycle Network - SDCC](#)

Blanchardstown

Total: 6% travel less than 3km, 34% travel less than 10km

Staff: 6% travel less than 3km, 28% travel less than 10km

Students: 6% travel less than 3km, 36% travel less than 10km

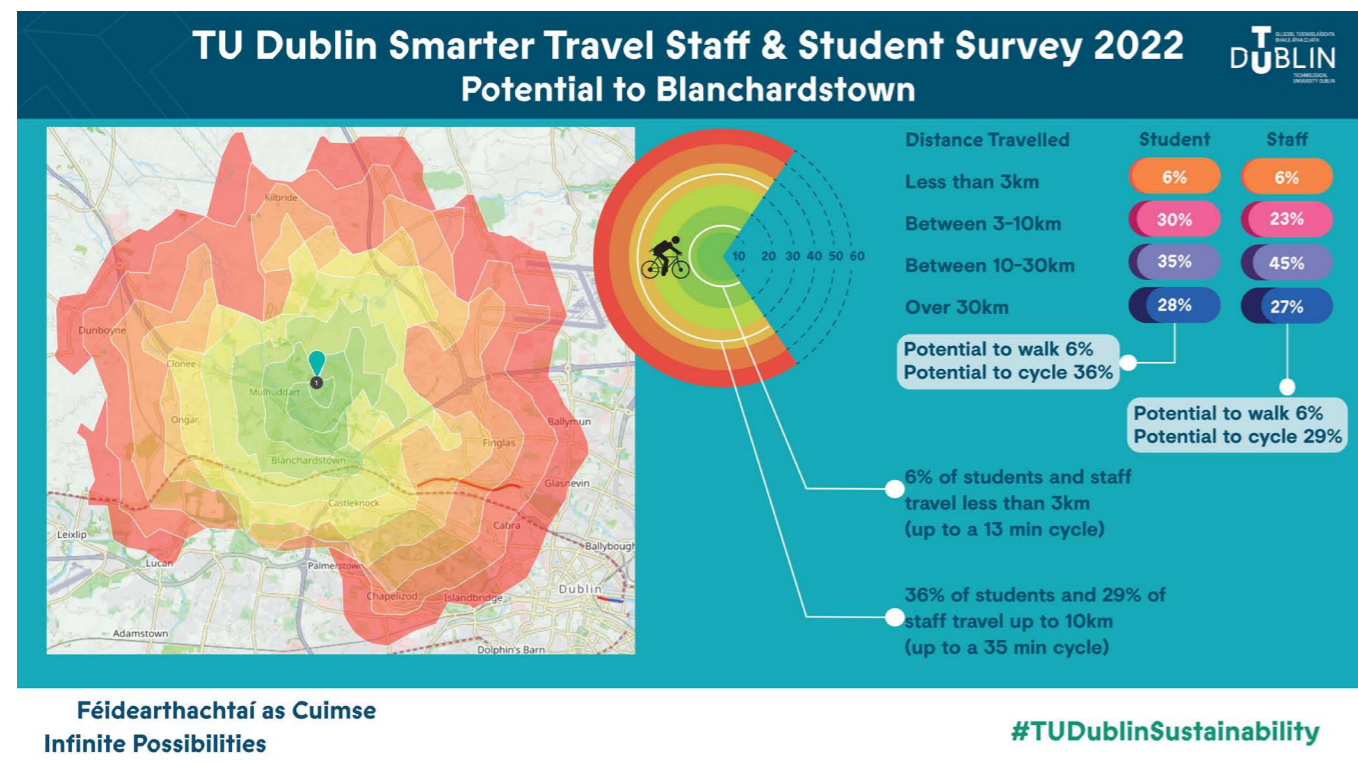


Figure 6: TU Dublin Smarter Travel Staff and Student Survey Potential to Blanchardstown

Currently, 6% of those travelling to Blanchardstown are doing so actively. Currently, no staff, and only 2% of students walk to the campus, which gives us a potential overall increase of people walking of 5%. There is currently a cycle modal share of 4% with potential to increase this up to 34%. Staff cycling rates are at only 3%, with 5% of students cycling to campus. Public transport modal share is also high for the Blanchardstown campus among students (68%) but comparably low for staff (10%). As an area still undergoing development, the environs of the Blanchardstown campus hold great potential for engagement with Fingal County Council and nearby business and sports campuses to improve key routes and permeable linkages within the area.

TU Dublin Smarter Travel Staff & Student Survey 2022 Blanchardstown Key Findings

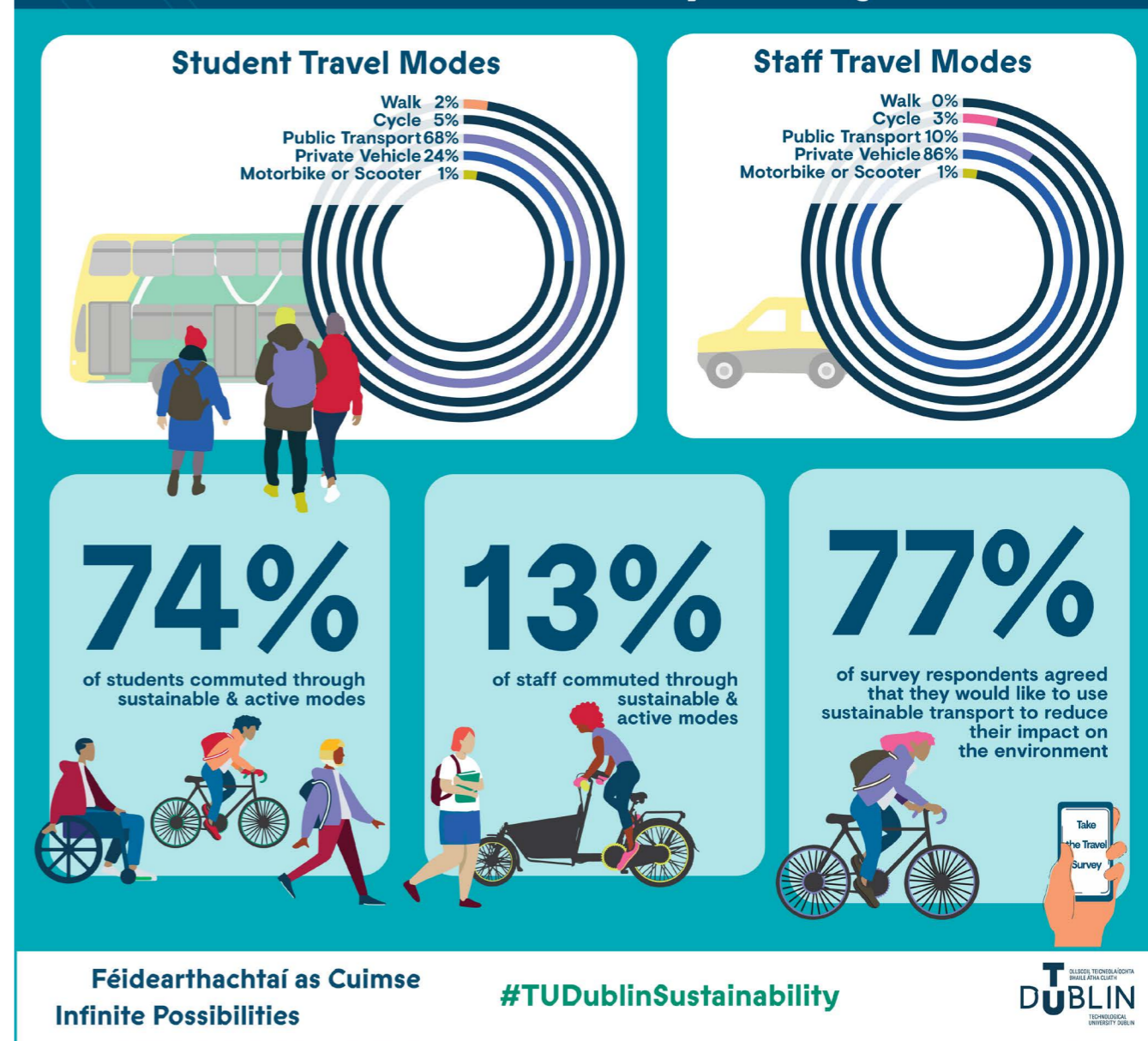


Figure 7: TU Dublin Smarter Travel Staff and Student Survey Blanchardstown Key Findings

Several walking and cycling infrastructure projects are under development in the vicinity of the campus that have potential to connect to the campus, such as the Tolka Greenway, Grand Canal Greenway and the Bus Connects Route 5, which will have segregated cycle tracks.

Grangegorman, Aungier Street and Bolton Street

Total: 13% travel less than 3km, 43% travel less than 10km

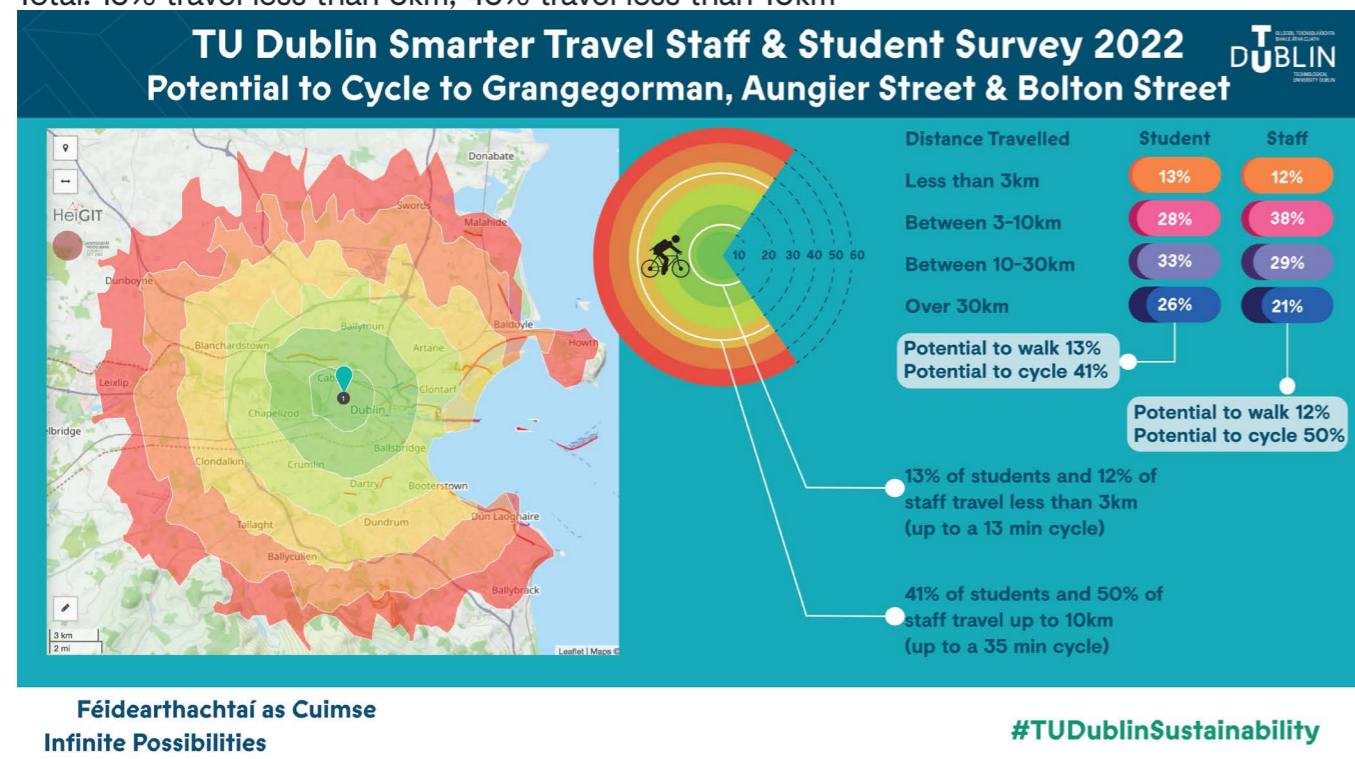


Figure 8: TU Dublin Smarter Travel Staff and Student Survey Potential to Grangegorman, Aungier Street and Bolton Street

Currently, 18% of those travelling to Grangegorman, Aungier Street and Bolton Street are travelling actively, which gives us a potential increase of 25% of people walking or cycling, with a 3% potential increase in walking.. The greatest potential is in increasing cycling, although the current number of staff cycling to these locations (20%) is well above the average of those travelling into the City Centre. It is important to note that 39% of staff and 79% of students travel by public transport, which also includes an active component, usually walking, to the trip.

TU Dublin Smarter Travel Staff & Student Survey 2022 Grangegorman, Aungier Street & Bolton Street Key Findings

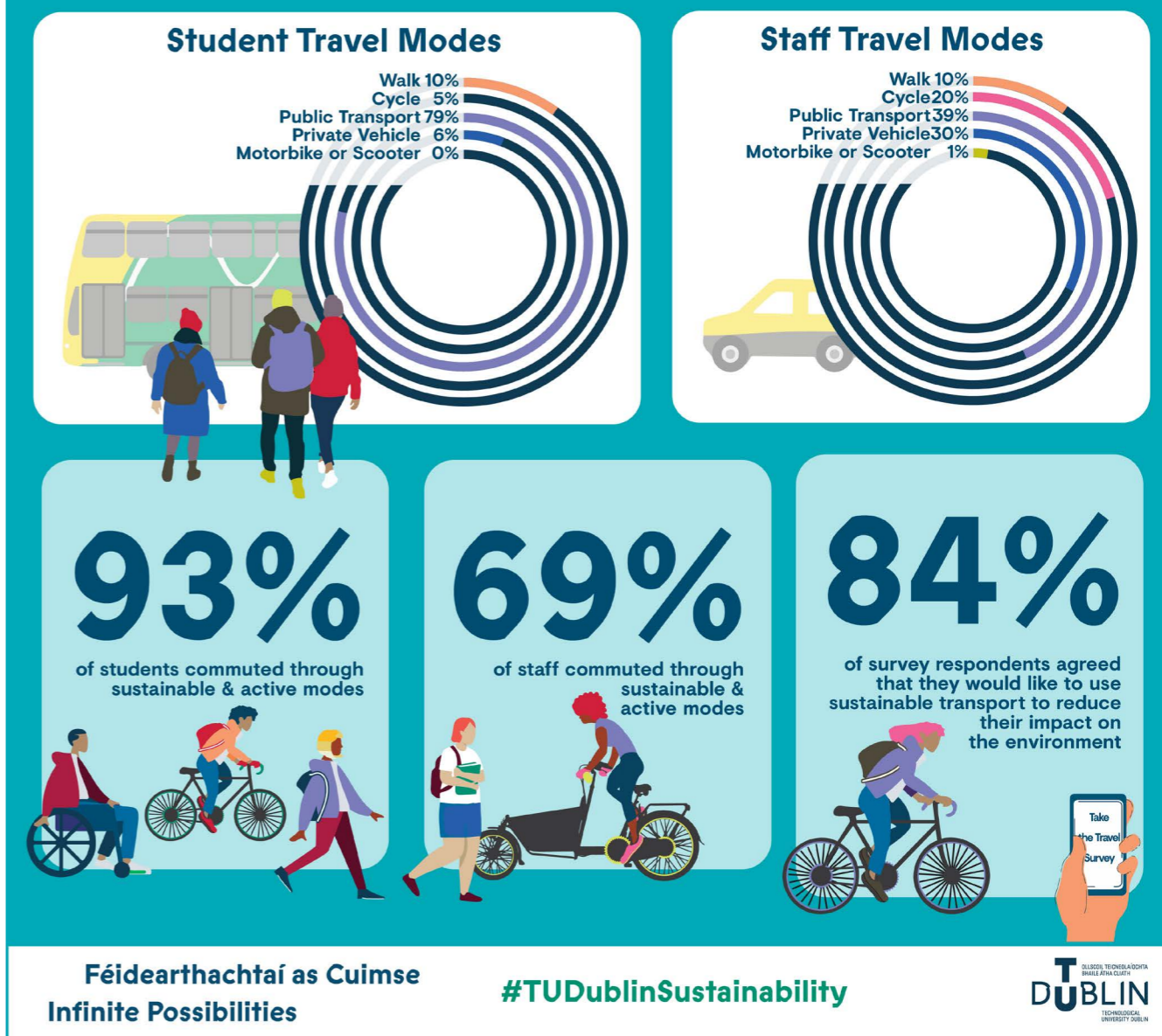
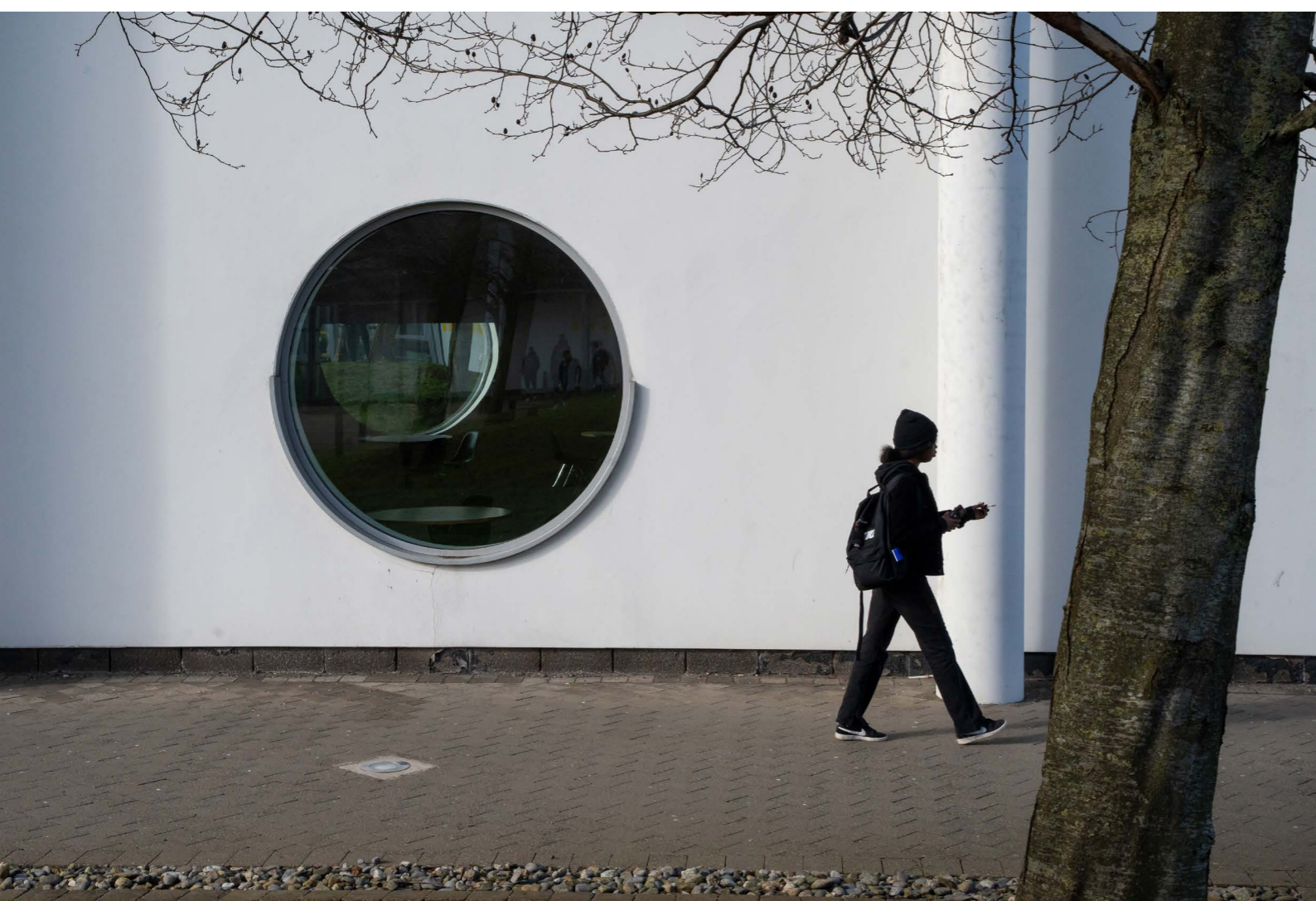


Figure 9: TU Dublin Smarter Travel Staff and Student Survey Grangegorman, Aungier Street and Bolton Street Key Findings

There is potential for an increase in active commuting to all campuses, and investment is warranted to work with students and staff to increase these modal shares. Like the other campus locations, engagement with Dublin City Council and transport agencies to highlight where improvements are needed can greatly improve the potential for more sustainable trips.

Time of arrival and departure from campus

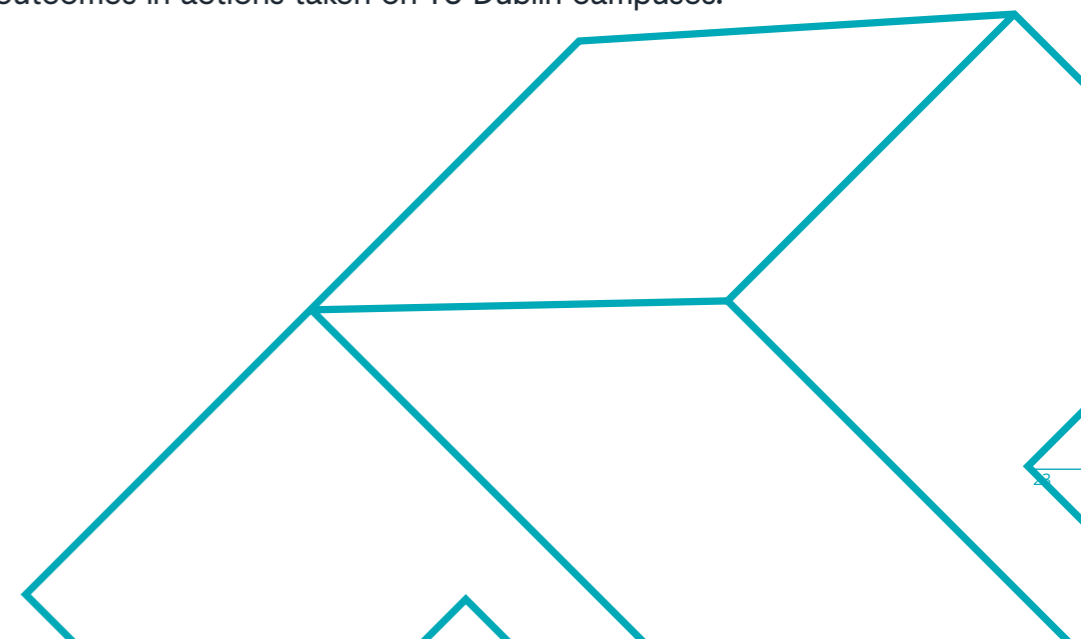
It is usual for travel surveys to collect information on arrival and departure times to campuses. This is to establish if more variability on working hours could alleviate traffic congestion in the vicinity of a campus or to potentially reduce commute times if people have the option to travel off-peak. Given the nature of academic timetables, this is not as relevant for some staff as others, with many student and staff respondents replying with 'depends on my 'timetable' in the comment boxes. In general, arrival and departure times from campus are within the 7:00am to 10:00am morning peak and 16:00 to 19:00 evening peak.



Reasons for mode choice

Across the full sample, the main reasons for mode choice were quickest (36%), lack of an alternative (26%) and cheapest (16%). Those travelling to the Tallaght campus reported a lack of an alternative as the main reason (34%), and similar reasons were reported in Blanchardstown (42%). Quickest was the primary consideration for the city centre sites (38%). When the data was considered by modal choice, walkers chose to do so as it was quickest (41%) and cheapest (23%), and cyclists also chose to do so as it was quickest (50%) and cheapest (10%). Speed was again a factor for public transport (34%), followed by the lack of an alternative (30%) and price (19%). Those that chose to travel by private vehicle reported quickest (37%), lack of alternative (30%), reliability (8%), less stressful (7%) and other commitments (6%) as the top reasons for their modal choice. For most modes, less stressful was selected by approximately 6% except motorcyclists/ scooters (18%, but a smaller sample). Only car drivers had more than 0.5% report 'other commitments' as the main reason for their modal choice.

50% of those that travel to campus by car, report not needing their car during the day, but 33% report sometimes needing their vehicle during the day. 42% of those that travel by car report needing it for pick-ups or drop-offs on their commute, such as the school run or other caring responsibilities. The Sustainability Office will liaise with the EDI Directorate to further investigate the data with a gender/ age/ ability lens, feedback the findings of this analysis to the NTA, and consider the outcomes in actions taken on TU Dublin campuses.



Parking

Of those that travel to campus by car, 78% per cent park on campus, 11% use off-street parking, and the remainder use on-street parking. 53% report always having a space available on campus and 16% say they never have a space available to them. 35% of the total sample, not just those that travel by car, report never having a car space available on campus, and 29% report always having one available. This warrants further investigation by campus and by student/ staff status.

Interest in behaviour change interventions

When embarking on any behaviour change interventions, it is important to consider what people report would help them change their travel behaviours but also to review case studies, research, and evaluation of interventions to inform a strategy. Priority needs to be given to the projects with the greatest potential impacts, notwithstanding the potential for high-impact, low-cost and quick-win projects. For example, in the survey, students and staff were asked which of the following list would encourage them to walk or cycle or interest them if they were available on campus. A recommended action is for the Sustainability Office to work with Campus Planning and Campus and Estates to develop a 'register of opportunities' for projects with the 1greatest potential impact (high risk/high reward), 2-high impact/low cost, 3-quick/easy wins in the final recommendations.

83% of survey respondents agreed or strongly agreed with the statement 'I would like to use sustainable transport to reduce my impact on the 'environment' and 82% of staff would support the introduction of a sustainable transport allowance which would cover walking, cycling, public transport, carpooling and car sharing for business-related trips. However, 15% said they were 'somewhat 'unlikely' to change to more sustainable travel modes. This may be due to a lack of choice or affordability. For example, 19% of the respondents indicated

that they use their car to commute to campus as they have no alternative, and less than 20% of the total sample report feeling confident cycling a bike during their commute. 43% would like to walk more often, 35% would like to cycle more often, and 33% would like to use public transport more often. A sense of personal safety and security is an important influence on travel decisions for 54% of respondents, and 32% of respondents agreed that their commuting decisions change during seasons. 51% agree or strongly agree that they travel the way they do out of habit. All these factors are important considerations when designing interventions and identifying target groups to work with. Further data analysis is warranted to inform decision-making. The most popular potential initiatives from the survey to increase walking or cycling were (% agreement):

initiatives to increase walking or cycling	Total Sample	Cyclists (inc e-bike)	Private Vehicle Users
Incentive scheme for green commuters	36%	59%	29%
Lockers provided or improved	35%	46%	25%
Shower areas increased or improved	32%	49%	32%
Increased security on site	24%	37%	23%
Cycle parking covered and secure	24%	59%	23%
Drying room for gear provided	18%	41%	20%
Cycle parking increased	16%	36%	13%
Green commuters' coffee mornings	16%	15%	7%
A cargo and e-bike rental scheme	13%	15%	10%
An e-bike charging station	11%	14%	12%
A walking route marked out in the local area	10%	7%	9%
Bicycle maintenance classes	10%	35%	7%
A sustainable transport webpage with information & options	10%	12%	8%
Cycle parking moved closer to entrances	9%	19%	8%
Cycle service station	9%	28%	6%
A buddy system	7%	4%	5%
Lunchtime walking group	6%	4%	8%
Cycle training	5%	6%	4%
A 'cyclist's' forum	4%	15%	2%
Information on e-bikes		9%	9%
Information on fold bikes		5%	5%
Not Interested		10%	33%

Table 6: Initiatives to increase walking or cycling

The top six incentives are similar whether respondents travelled to campus by bike or private vehicle. Cyclists also gave a higher ranking to having bicycle maintenance classes and having a cycle service station than those that do not travel by bicycle. However, 33% of those that travel by private vehicle were not interested in these potential initiatives.

Physical activity

Over 80% of survey respondents reported meeting the HSE's physical activity guidelines. This is an impressive result, as the national average is only 46%⁵.

E-Scooters

In the survey, no differentiation was given between scooters and e-scooters, and there was an extremely low reported modal share. However, there are staff/students using e-scooters to travel to campus, so it is recommended that focus groups be held with these users to understand their needs better.



Next steps with the data

The Sustainability Office has worked with the NTA to obtain an anonymised version of the survey dataset that will allow TU Dublin to investigate further campus-specific needs that will inform investment and interventions at these sites. The robust sample size will allow TU Dublin to undertake multilevel statistical analysis, such as the examples outlined in this report. TU Dublin's Sustainability Data Analyst is responsible for the dataset and will work alongside the Sustainability Team to undertake a more detailed analysis.

The data collected in the survey on domestic and international travel was not sufficiently robust to inform meaningful discussion. This observation will be fed back to the NTA, and further consideration will be given to how we can better quantify these trips to also include international, Erasmus and other staff and student cohorts.

A recommendation for future travel surveys is to shorten the survey and include specific questions relating to e-scooter use.

Further investigations will be undertaken on the data with an intersectional lens. For example, what role do gender, caring responsibilities, ability, time spent travelling, and other data items influence travel decisions.

This data gives TU Dublin a robust baseline to monitor the impacts of our transport and mobility interventions and to generate a transport scope 3 emission profile to inform investment decisions. This baseline will also inform and generate greater focused engagement with and funding applications to local authorities and national transport agencies to support TU Dublin in delivering sustainable travel improvements for whole journeys across the national transport system and not only the elements of trips that happen on and between our campuses.

