Climate Action Survey Results 2021

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For any queries please contact:
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Climate Action

UNIVERSITY OF BATH

Context

First Annual Climate Action Survey.

Climate Action rather than Sustainability.

Whole institution and materiality based approach.

Two aims:

1. Create baseline to measure progress
2. Inform decision making.

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The Survey

72 page survey randomised to 15-20 min.

39% response rate from staff.

11% response rate from students.

Good representation across all demographics.

Responses are not always deepest green.

Responses are representative.

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Content

Footprint: Energy, Purchasing, Diet, Travel, Investment.

Directing Research

Embedding Education

Staff knowledge and empowerment

Perception of University response

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Concern & Empowerment

Climate Change and Biodiversity loss are of far greater concern to all, and are the issues they want the University to focus on.

All feel action on COVID has been sufficient, but are unsure re Biodiversity and Climate change.

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Self-perception and Efficacy

Staff more than students believe their actions to be slightly less than sufficient.

Staff generally neither agree or disagree on feeling empowered to suggest change, or that they have the skills and knowledge to know which change to make.

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Embedding Education

Overwhelming (>98%) support for climate education.

Student responses include:

- a mandatory credit bearing unit
- Climate being embedded within all degree courses
- or both of the above

Staff mirror this trend with some appetite (13%) for climate as an organising principle in all degrees

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Education

Knowledge

We asked about the understanding of climate change, Net Zero, Carbon footprint, Carbon offsetting, and University plans.

All claimed moderate-good understanding of each topic except University plans.

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Education

Knowledge

We asked them to rank food, travel modes, lifestyle components and University components in terms of carbon footprint.

Food ranking reasonably good

Travel ranking reasonably good.

Lifestyle ranking moderate. Could be improved.

University footprint poorly understood.

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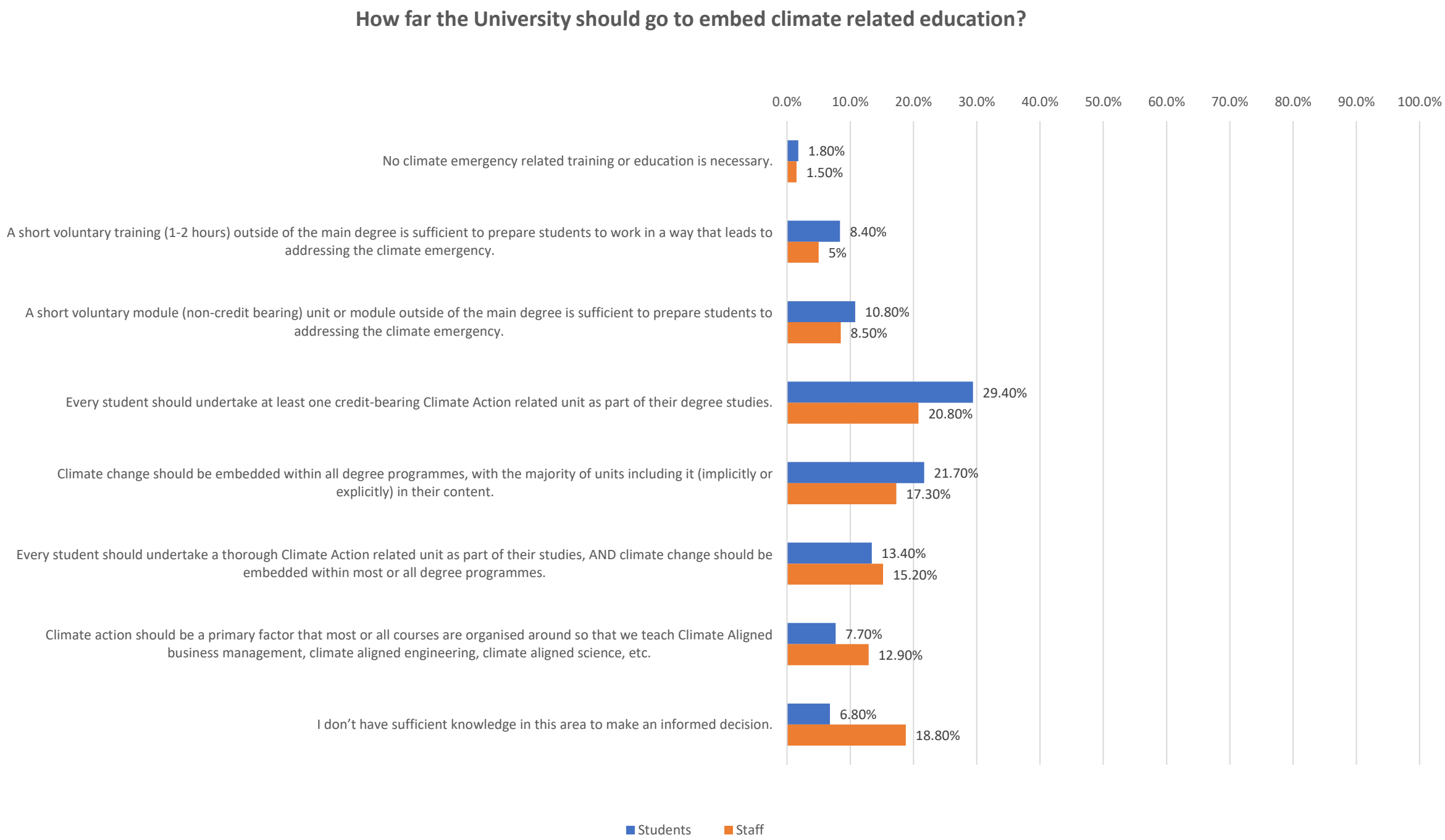
Education


How far the University should go to embed climate related education?
0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%
80.0%
90.0%
100.0%
No climate emergency related training or education is necessary.
1.80%
1.50%
A short voluntary training (1-2 hours) outside of the main degree is sufficient to prepare students to work in a way that leads to addressing the climate emergency.
8.40%
5%
A short voluntary module (non-credit bearing) unit or module outside of the main degree is sufficient to prepare students to addressing the climate emergency.
10.80%
8.50%
Every student should undertake at least one credit-bearing Climate Action related unit as part of their degree studies.
29.40%
20.80%
Climate change should be embedded within all degree programmes, with the majority of units including it (implicitly or explicitly) in their content.
21.70%
17.30%
Every student should undertake a thorough Climate Action related unit as part of their studies, AND climate change should be embedded within most or all degree programmes.
13.40%
15.20%
Climate action should be a primary factor that most or all courses are organised around so that we teach Climate Aligned business management, climate aligned engineering, climate aligned science, etc.
7.70%
12.90%
I don’t have sufficient knowledge in this area to make an informed decision.
6.80%
18.80%
Students
Staff

Directing Research

4 point scale from no boundaries to incentivising only research focused on climate action whilst preventing research with negative climate impacts.

Staff and student responses centre around moderate boundaries rewarding research focused on the climate emergency. (11/19/40/14%)

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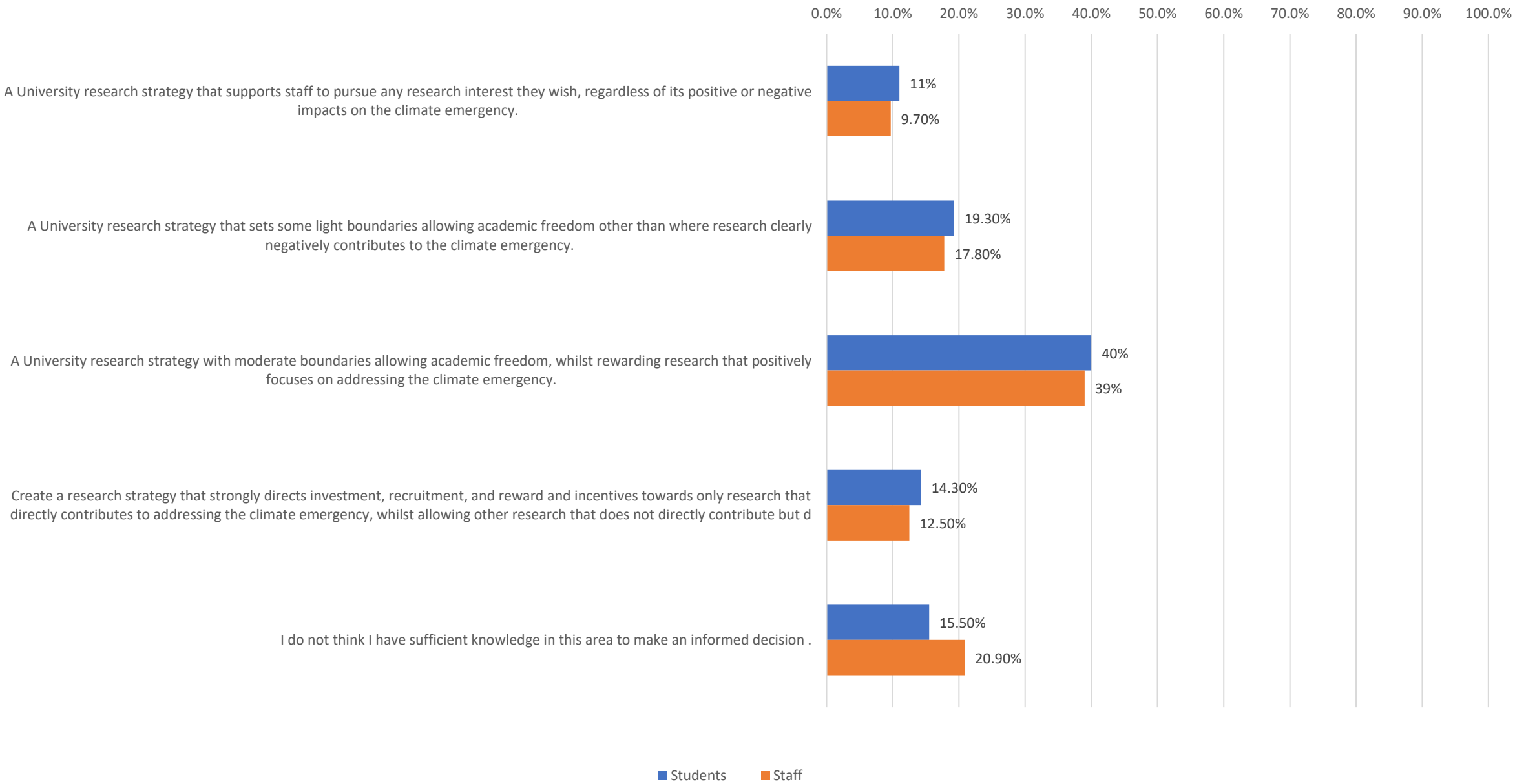
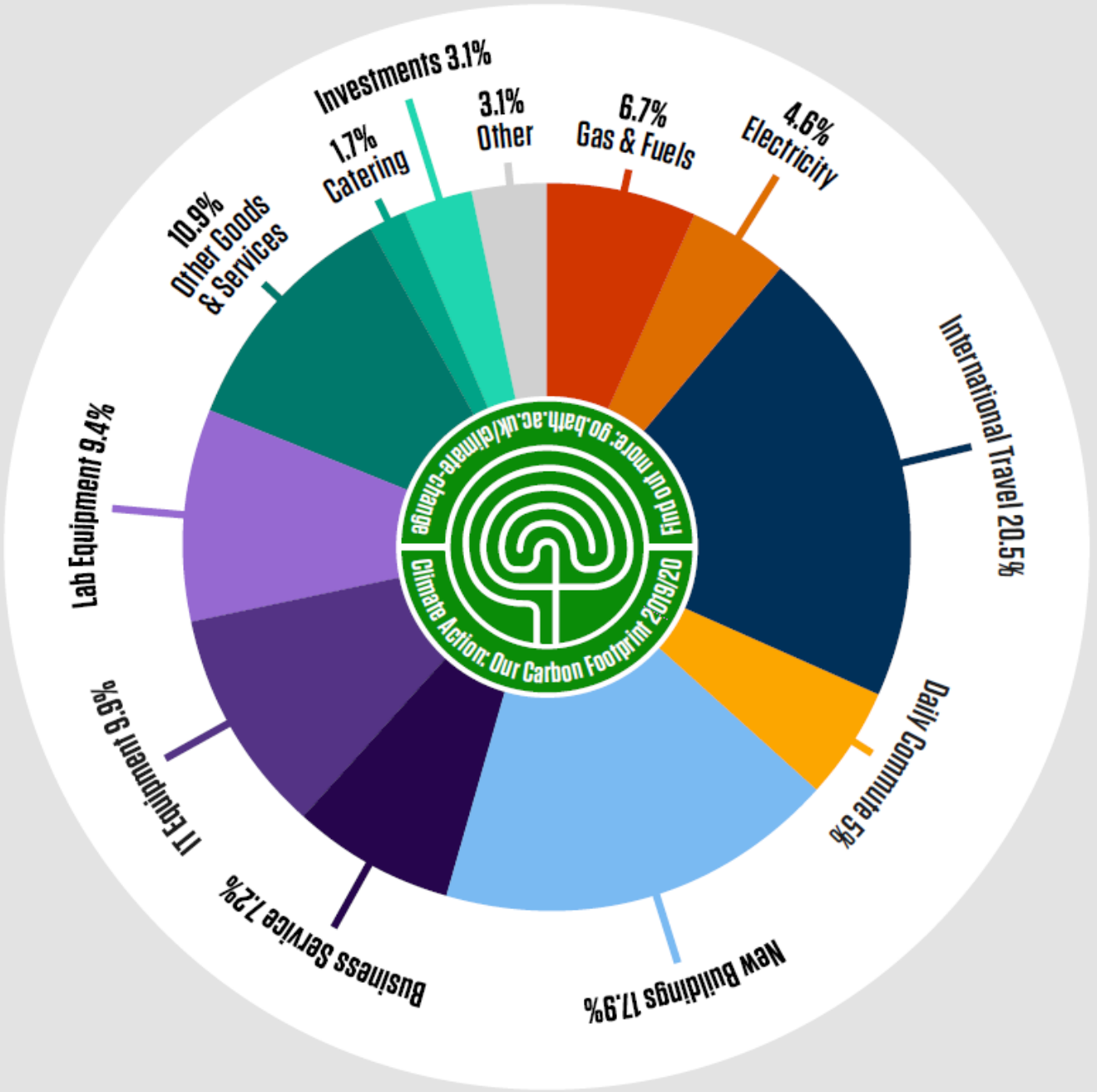
Research

Research: which policy approach do you feel is most appropriate for the University?




Investments 3.1%
3.1% Other
6.7% Gas & Fuels
4.6% Electricity
1.7% Catering
10.9% Other Goods & Services
International Travel 20.5%
Lab Equipment 9.4%
Daily Commute 5%
IT Equipment 9.9%
Business Service 7.2%
New Buildings 17.9%
Climate Action: Our Carbon Footprint 2019/20
Find out more: go.bath.ac.uk/climate-change

Footprint

Building - Summary

<1% believe we should follow the cheapest building standard.

42% of students and 40% of staff think we should spend 20% extra on building to low carbon standards

29% of students and 41% of staff suggest we should build to exemplar standards regardless of cost or not build at all.

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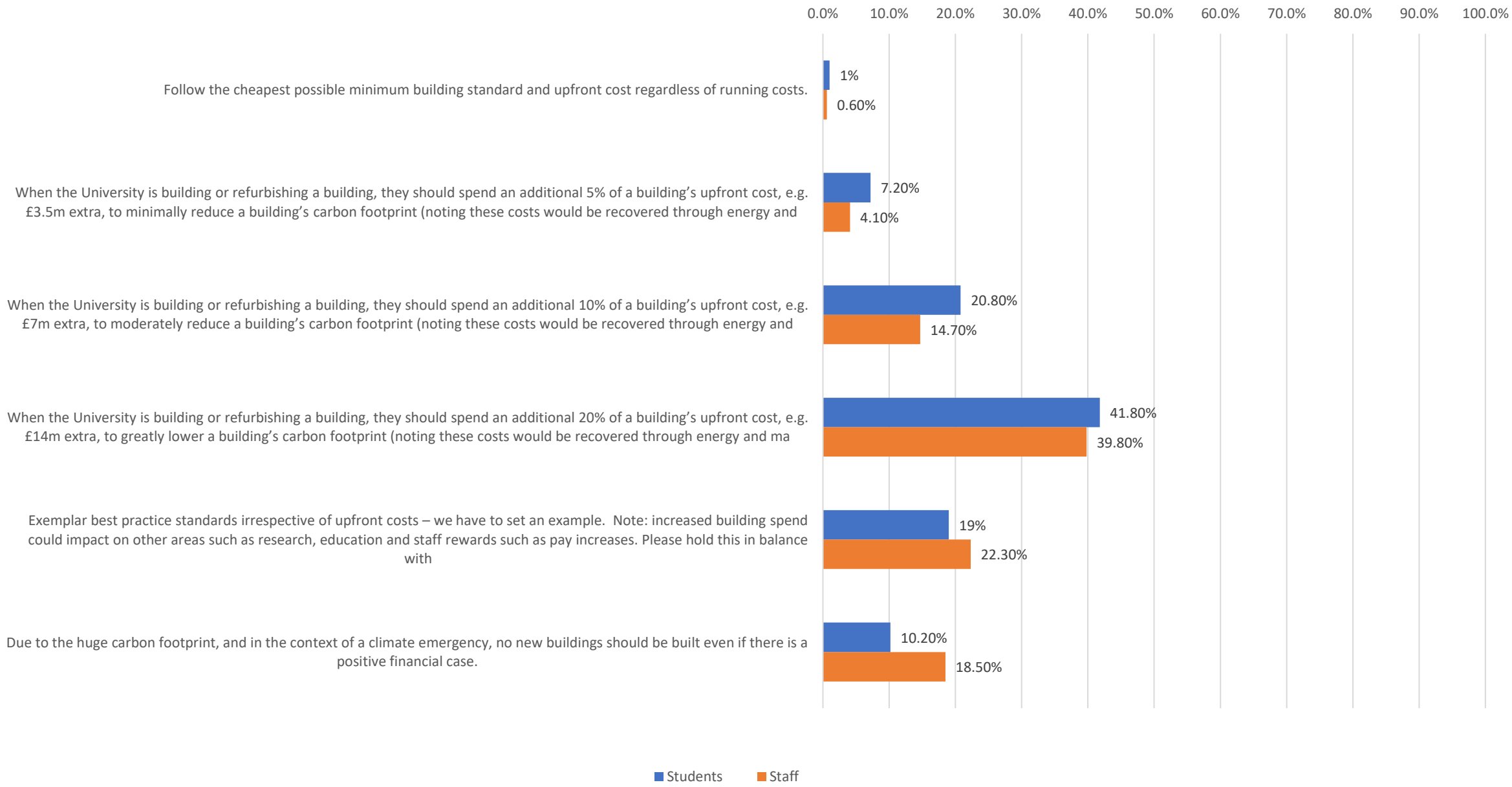
Buildings: which policy approach do you feel is most appropriate for the University?



Energy - Summary

The majority are open to changing personal behaviour to save energy.

<6% believe we should select the cheapest possible energy tariff.

44% of staff and 46% of students believe we should spend 1%-2% of surplus to ensure additionality.

38% of staff and 33% of student believe we should follow exemplar best practice on energy contracts regardless of cost.

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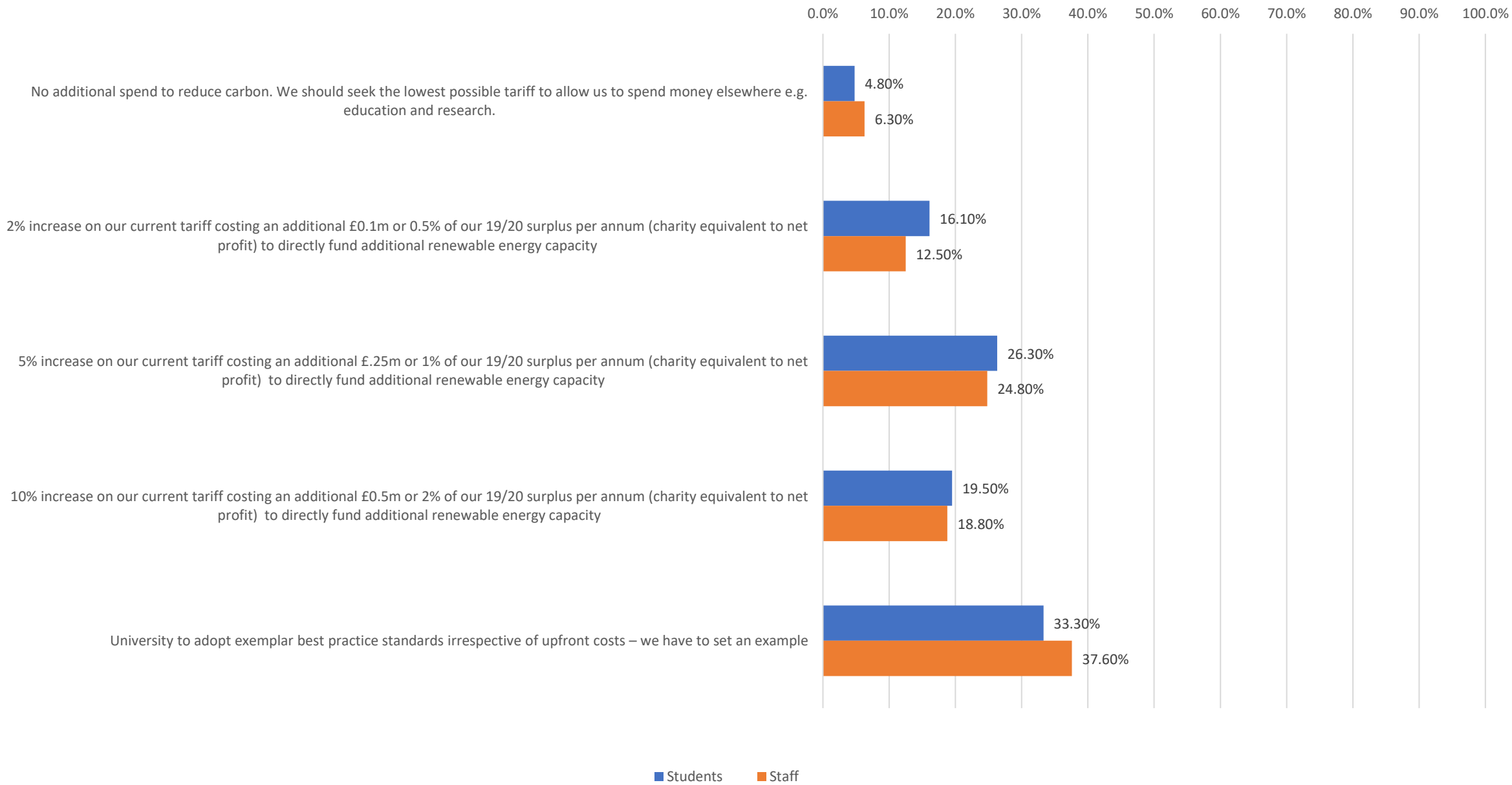
Energy: which policy approach do you feel is most appropriate for the University?



Purchasing – Summary

Current procurement practices do not sufficiently prioritise climate impacts.

99% believe we need change how we procure, and should at least encourage sustainable purchasing.

61% of students and 71% of staff believe low sustainability purchases should require management sign off, or the supply chain should meet a minimum sustainability standard.

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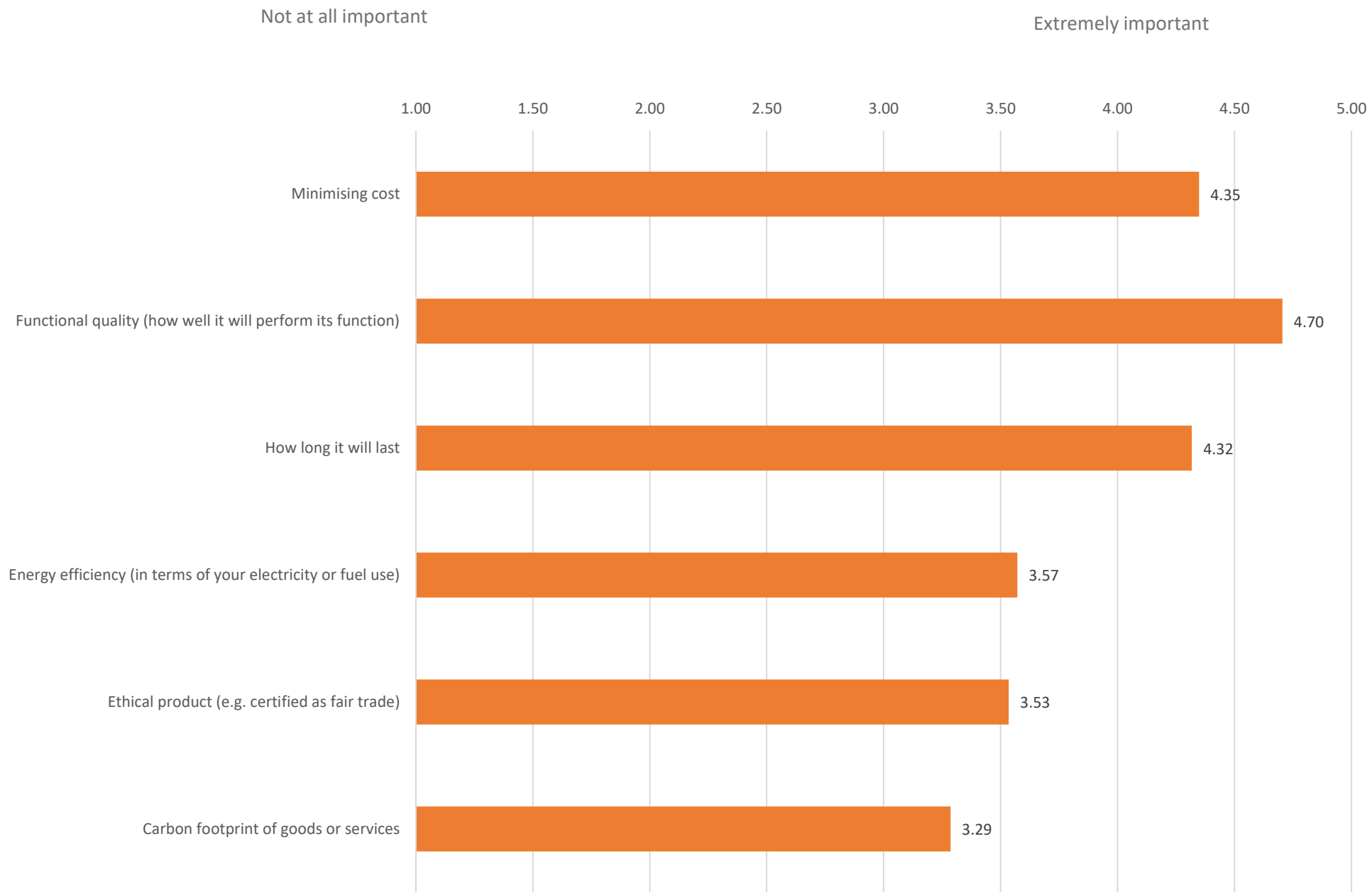
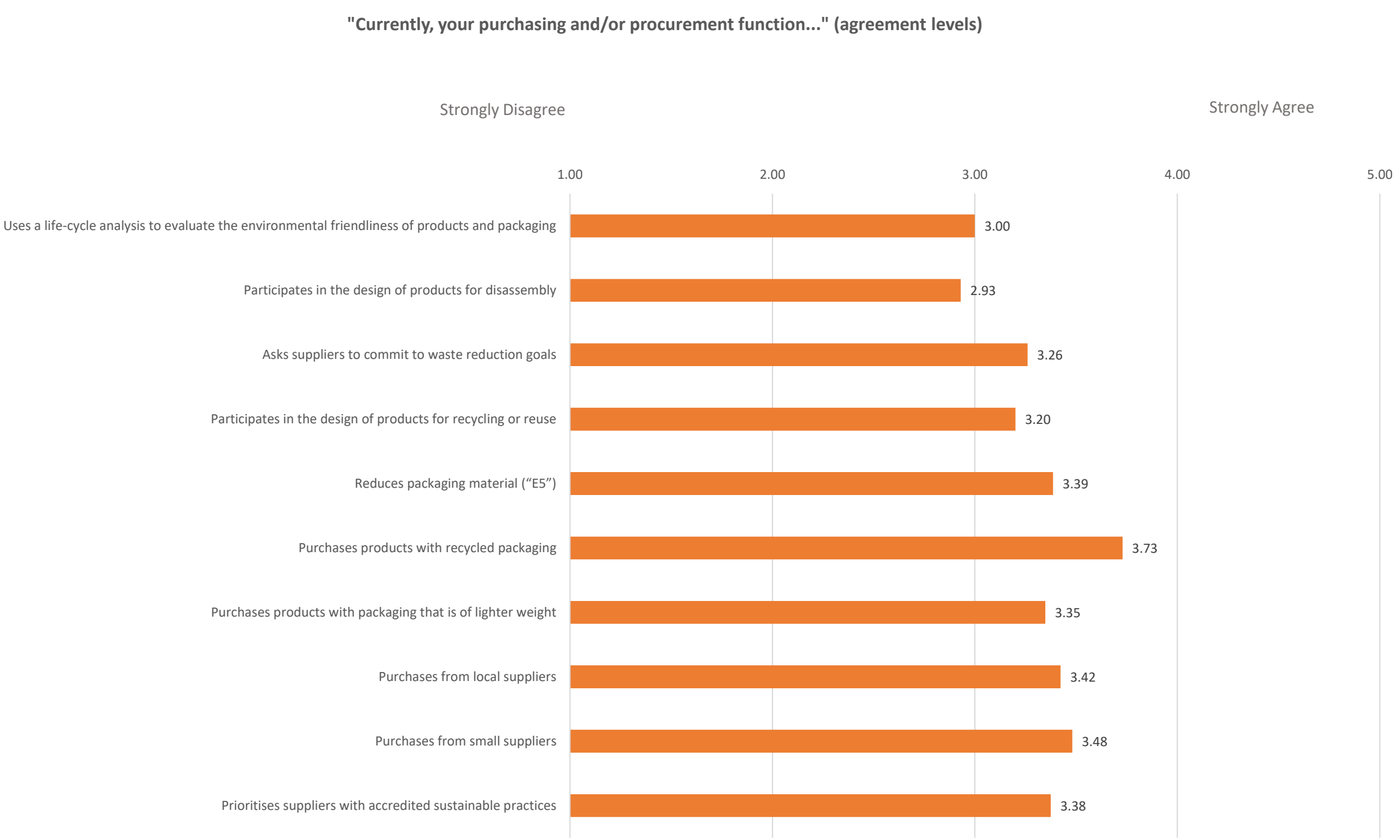
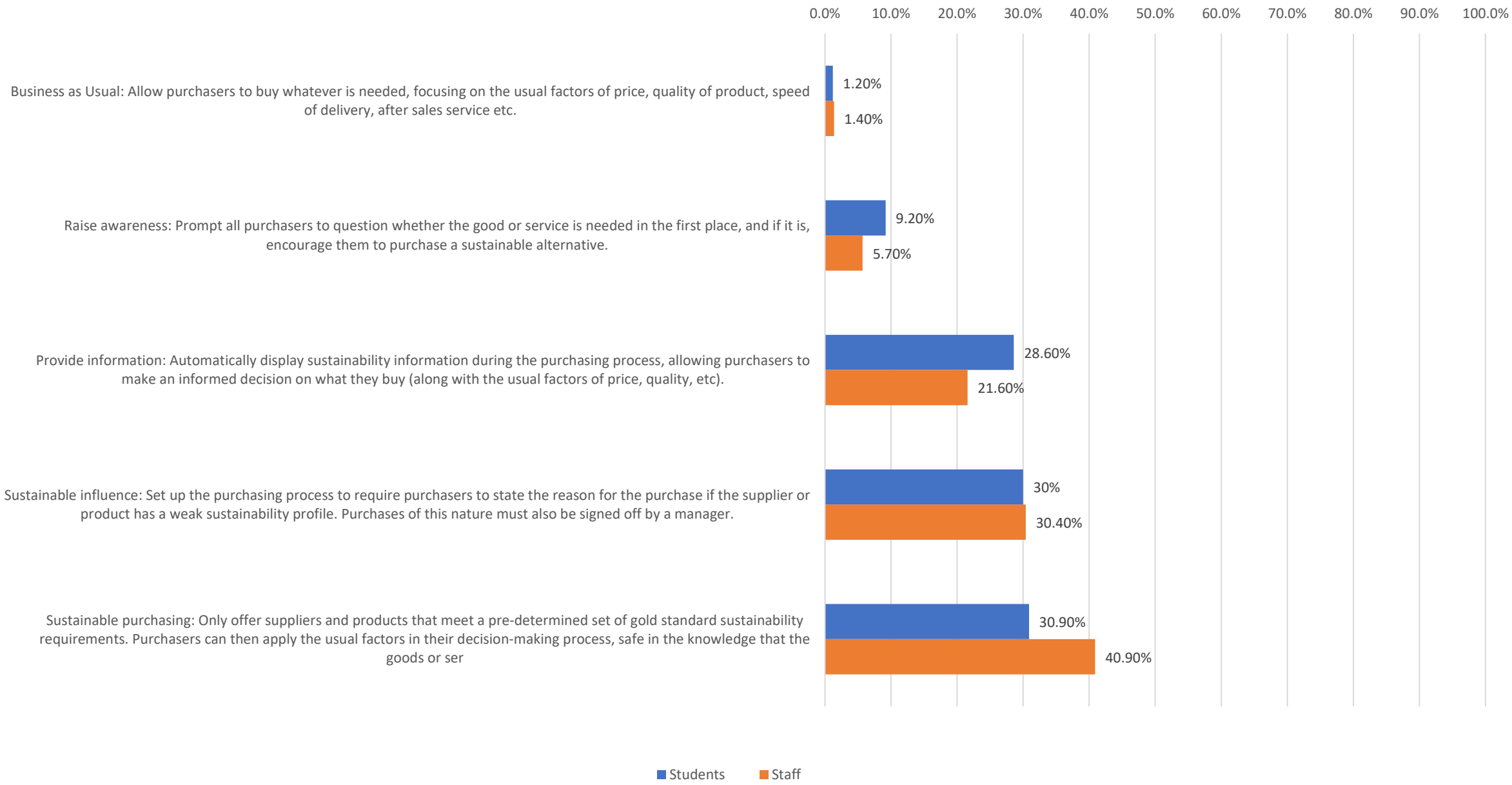
Levels of importance of the following when making purchasing decisions




"Currently, your purchasing and/or procurement function..." (agreement levels)
Strongly Disagree
Strongly Agree
1.00
2.00
3.00
4.00
5.00
Uses a life-cycle analysis to evaluate the environmental friendliness of products and packaging
3.00
Participates in the design of products for disassembly
2.93
Asks suppliers to commit to waste reduction goals
3.26
Participates in the design of products for recycling or reuse
3.20
Reduces packaging material (“E5”)
3.39
Purchases products with recycled packaging
3.73
Purchases products with packaging that is of lighter weight
3.35
Purchases from local suppliers
3.42
Purchases from small suppliers
3.48
Prioritises suppliers with accredited sustainable practices
3.38

Procurement: which policy approach do you feel is most appropriate for the University?



Diet behaviour - Summary

77% eat ruminant meat once a week, 22% 2-4 times.

46% eat white meat once weekly, 46% 2-4 times.

71% eat fish once weekly, 27% 2-4 times.

Staff and students are more open than not to 50% veggie diet.

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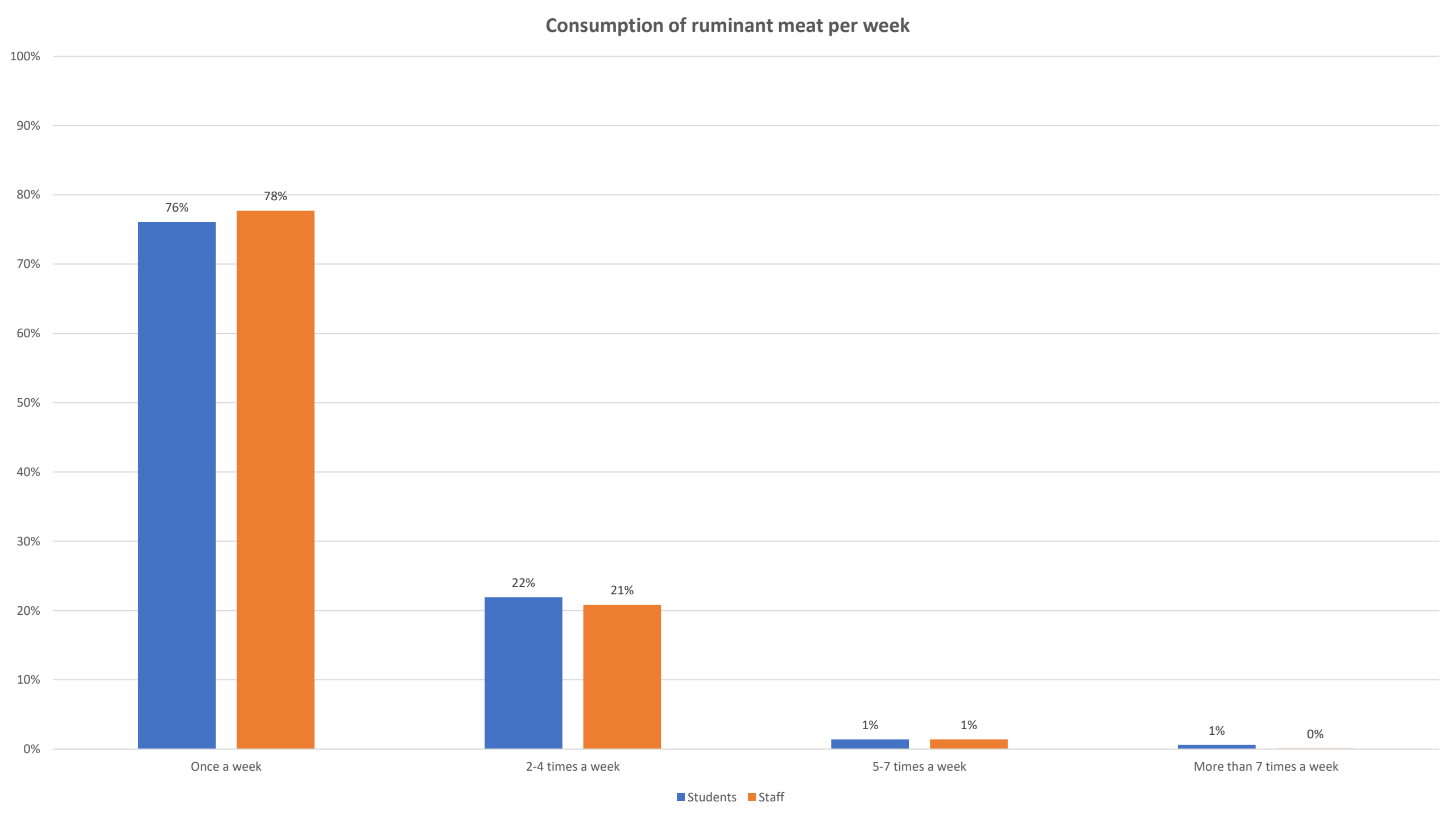
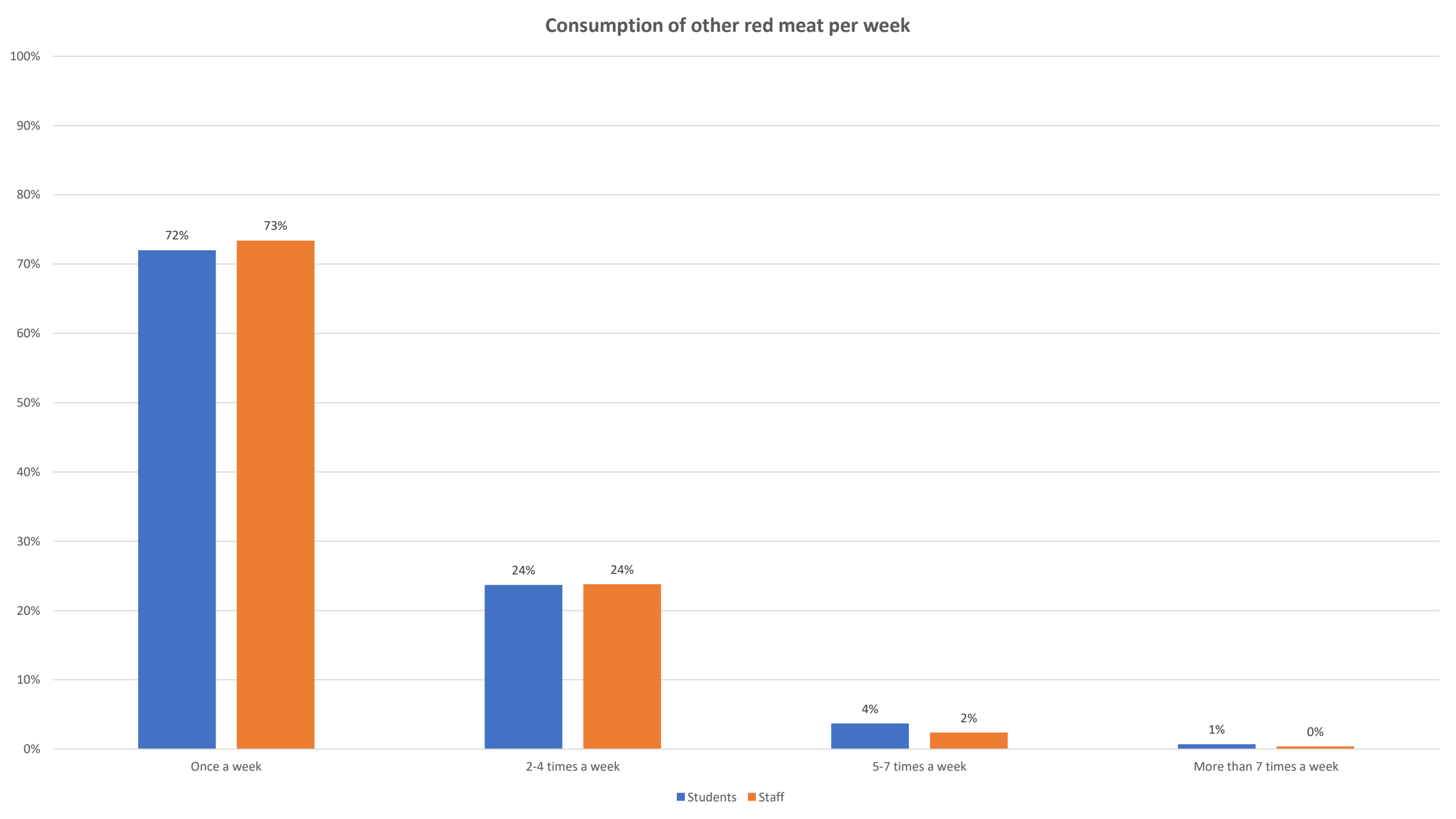
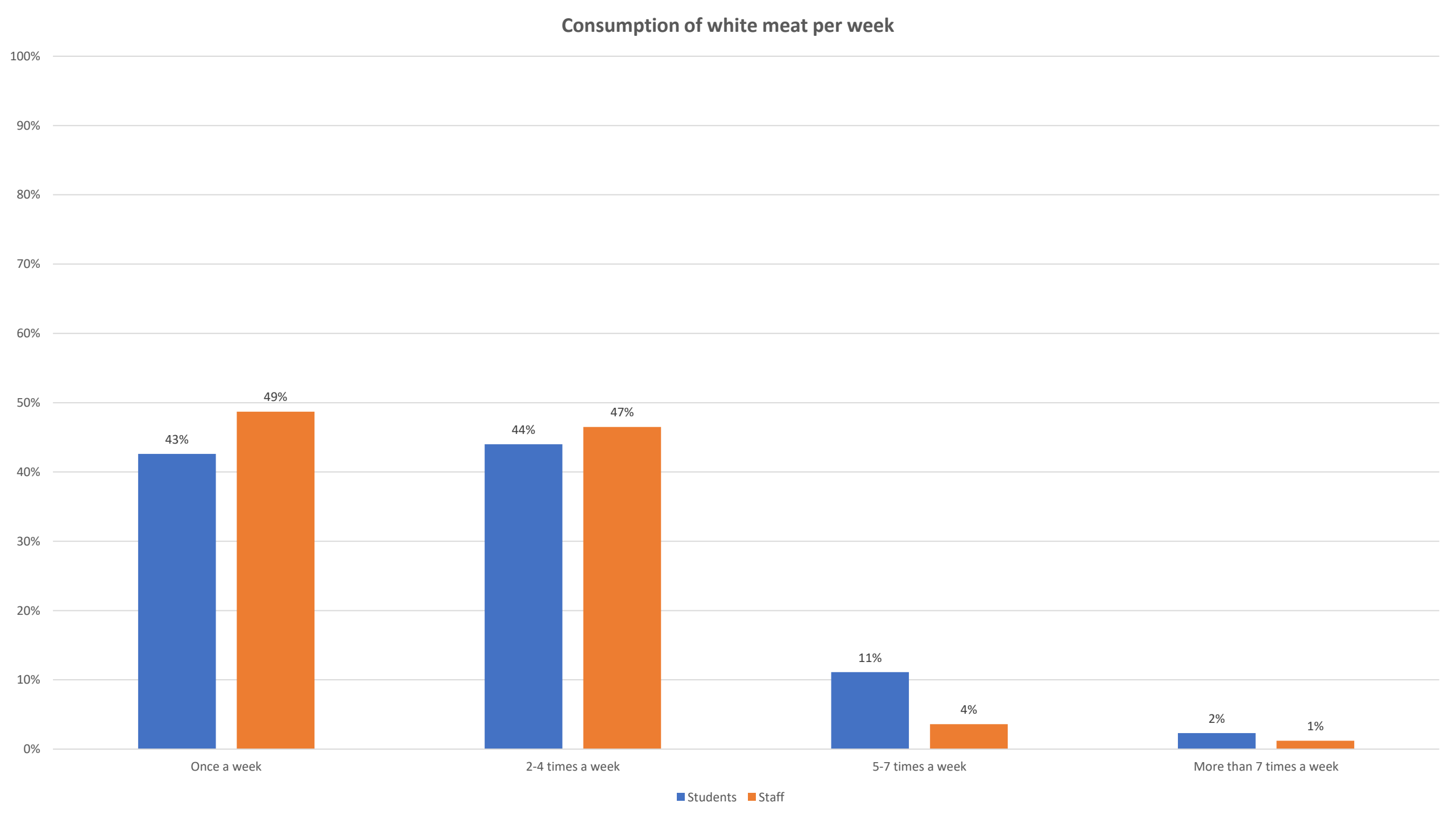
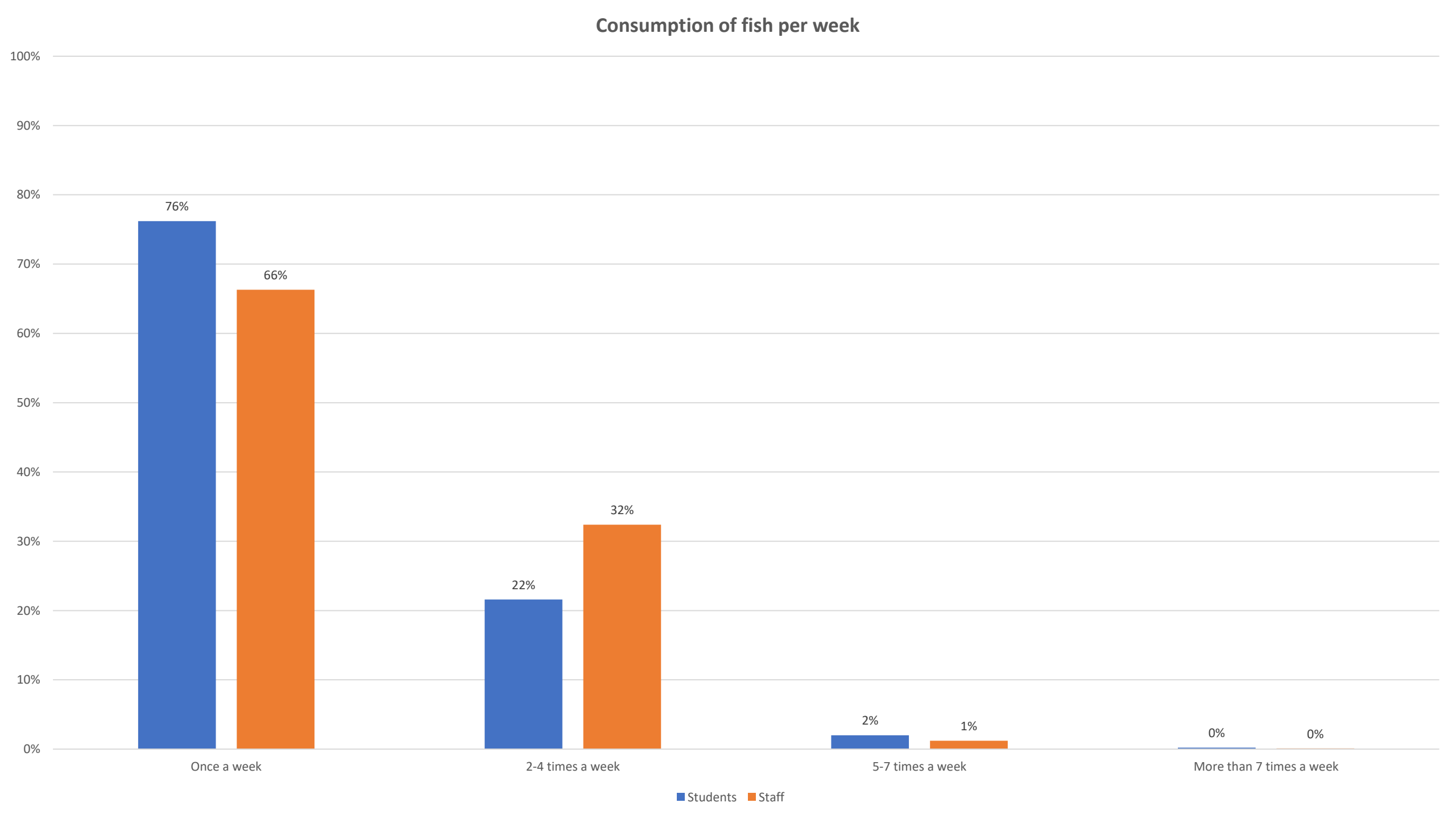
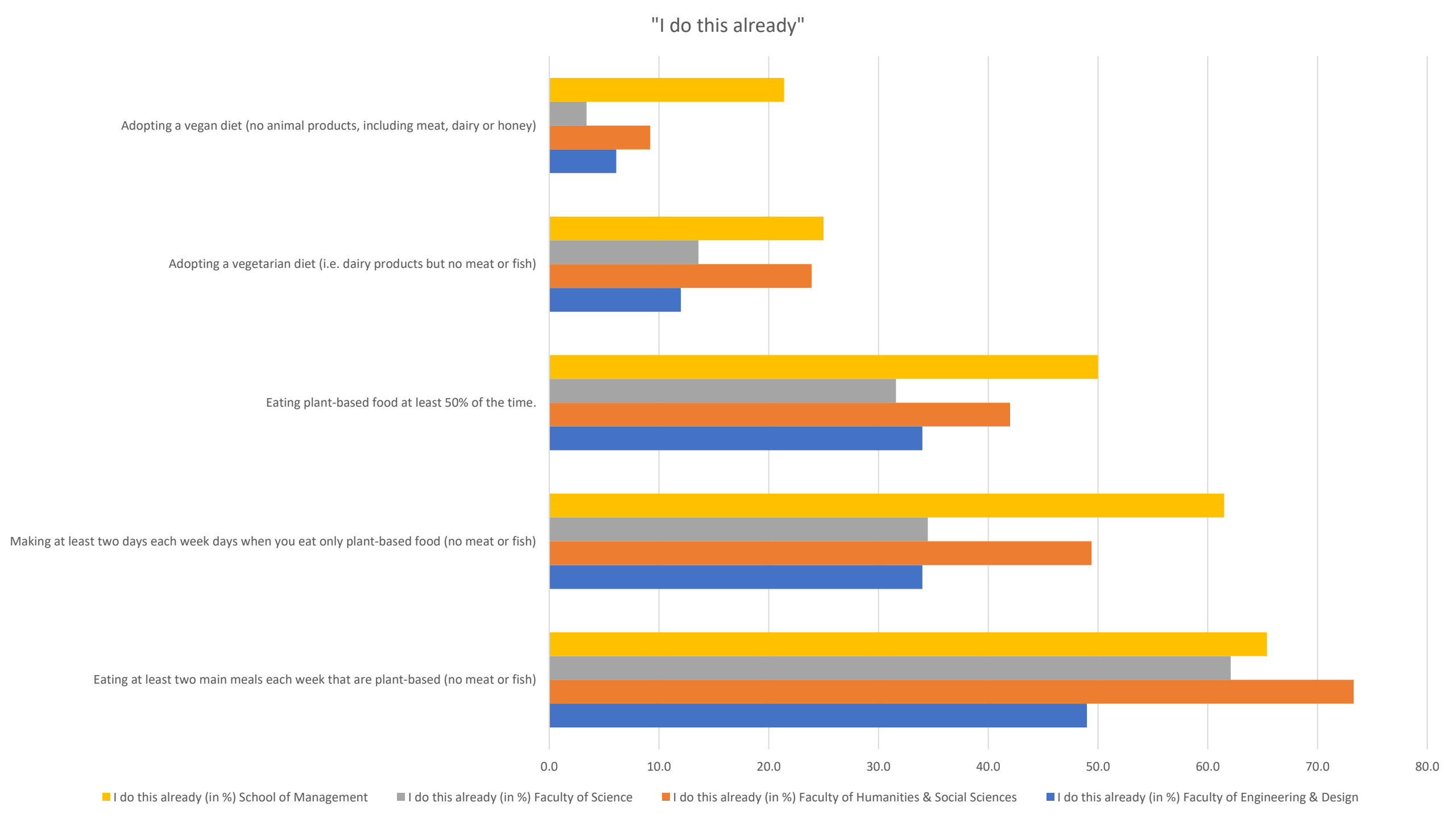

Consumption of ruminant meat per week
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
76%
78%
22%
21%
1%
1%
1%
0%
Once a week
2-4 times a week
5-7 times a week
More than 7 times a week
Students
Staff

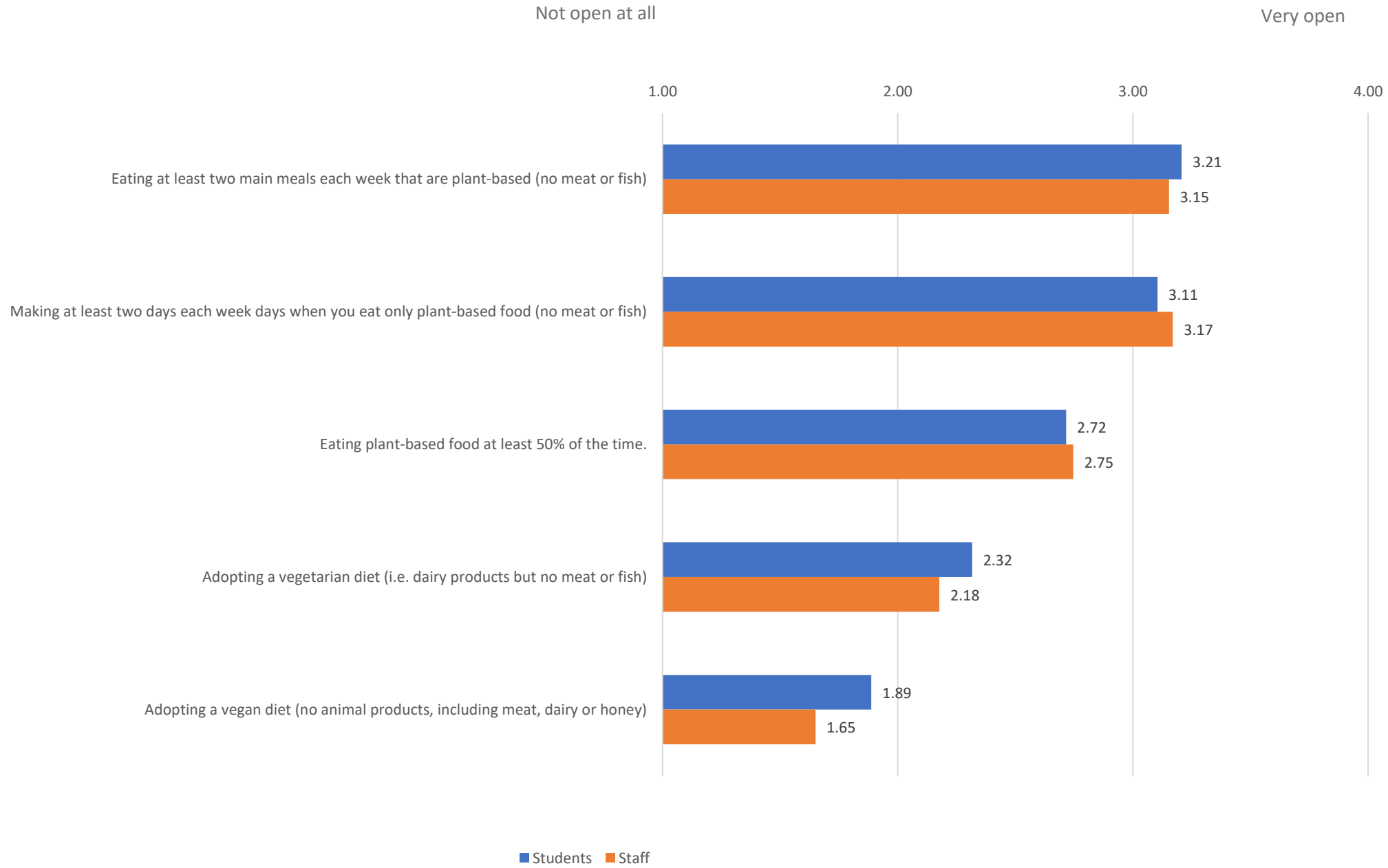

Consumption of other red meat per week
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
72%
73%
24%
24%
4%
2%
1%
0%
Once a week
2-4 times a week
5-7 times a week
More than 7 times a week
Students
Staff


Consumption of white meat per week
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
43%
49%
44%
47%
11%
4%
2%
1%
Once a week
2-4 times a week
5-7 times a week
More than 7 times a week
Students
Staff


Consumption of fish per week
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
76%
66%
22%
32%
2%
1%
0%
0%
Once a week
2-4 times a week
5-7 times a week
More than 7 times a week
Students
Staff


"I do this already"
Adopting a vegan diet (no animal products, including meat, dairy or honey)
Adopting a vegetarian diet (i.e. dairy products but no meat or fish)
Eating plant-based food at least 50% of the time.
Making at least two days each week days when you eat only plant-based food (no meat or fish)
Eating at least two main meals each week that are plant-based (no meat or fish)
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
I do this already (in %) School of Management
I do this already (in %) Faculty of Science
I do this already (in %) Faculty of Humanities & Social Sciences
I do this already (in %) Faculty of Engineering & Design

Openness to change - diet



Diet Policy - Summary

>94% think change is required.

<6% think we should have meat-free campus.

74% of students, and 71% of staff believe ruminant meat should be replaced on campus

50% of staff, 42% of students believe meat proportions should be reduced.

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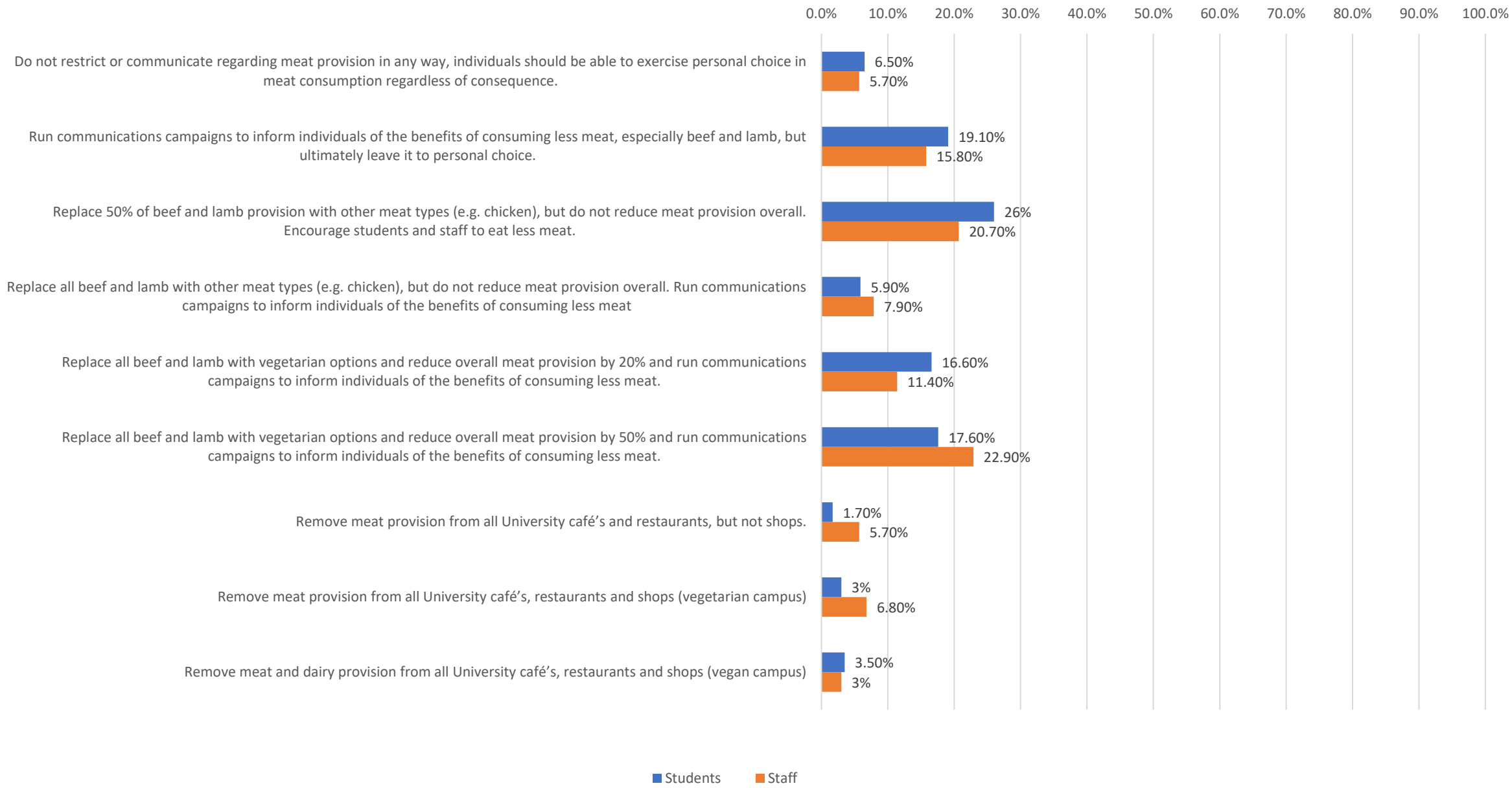
Food: which policy approach do you feel is most appropriate for the University?



Travel - Summary

Students mainly travel by bus (2.36), walking (0.76) and car (0.46).

Staff mainly travel by car (2.68), bus (0.63), walking (0.46), and cycling (.36)

The majority are very open to significant change to reduce travel in a range of ways .

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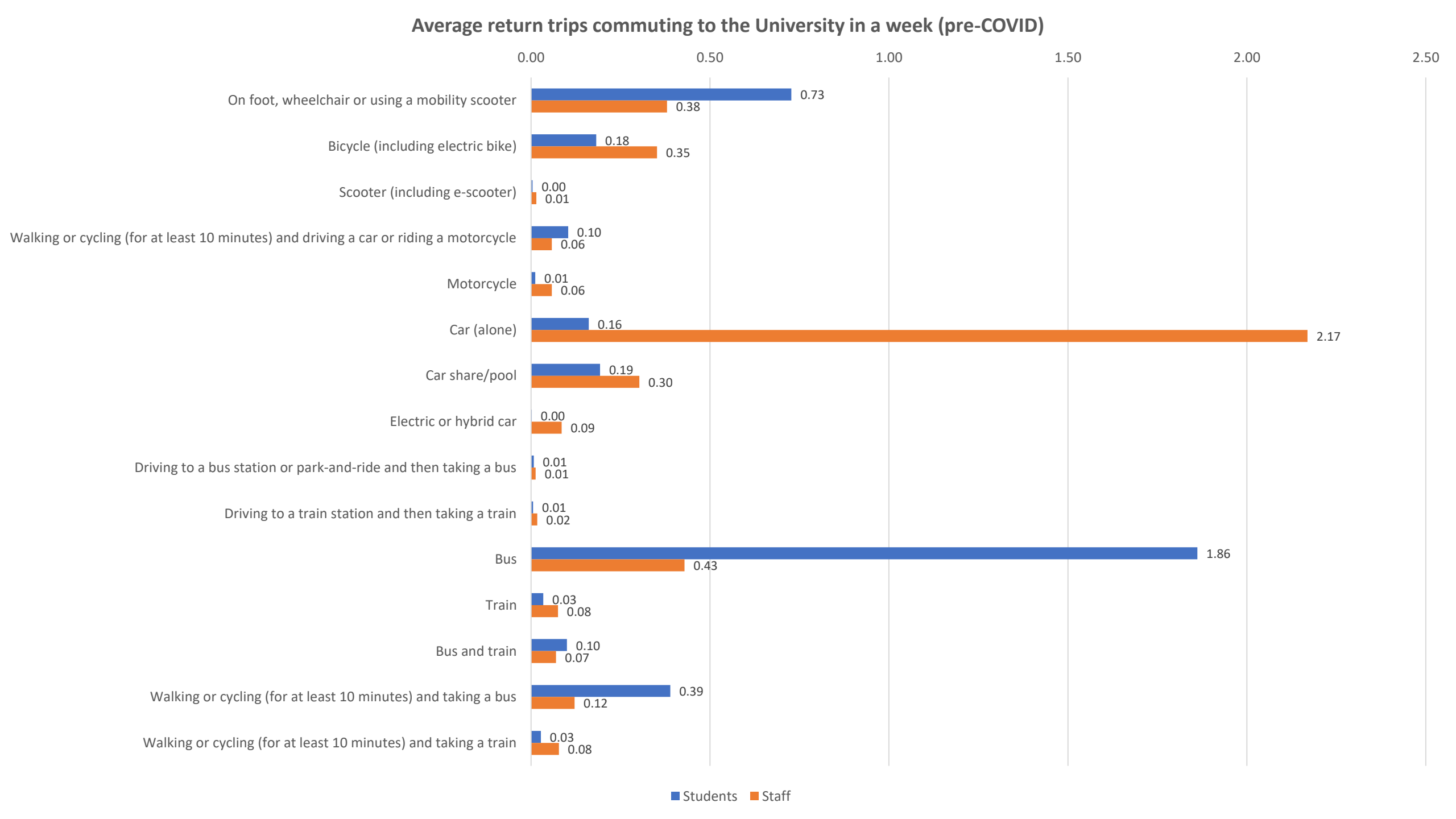
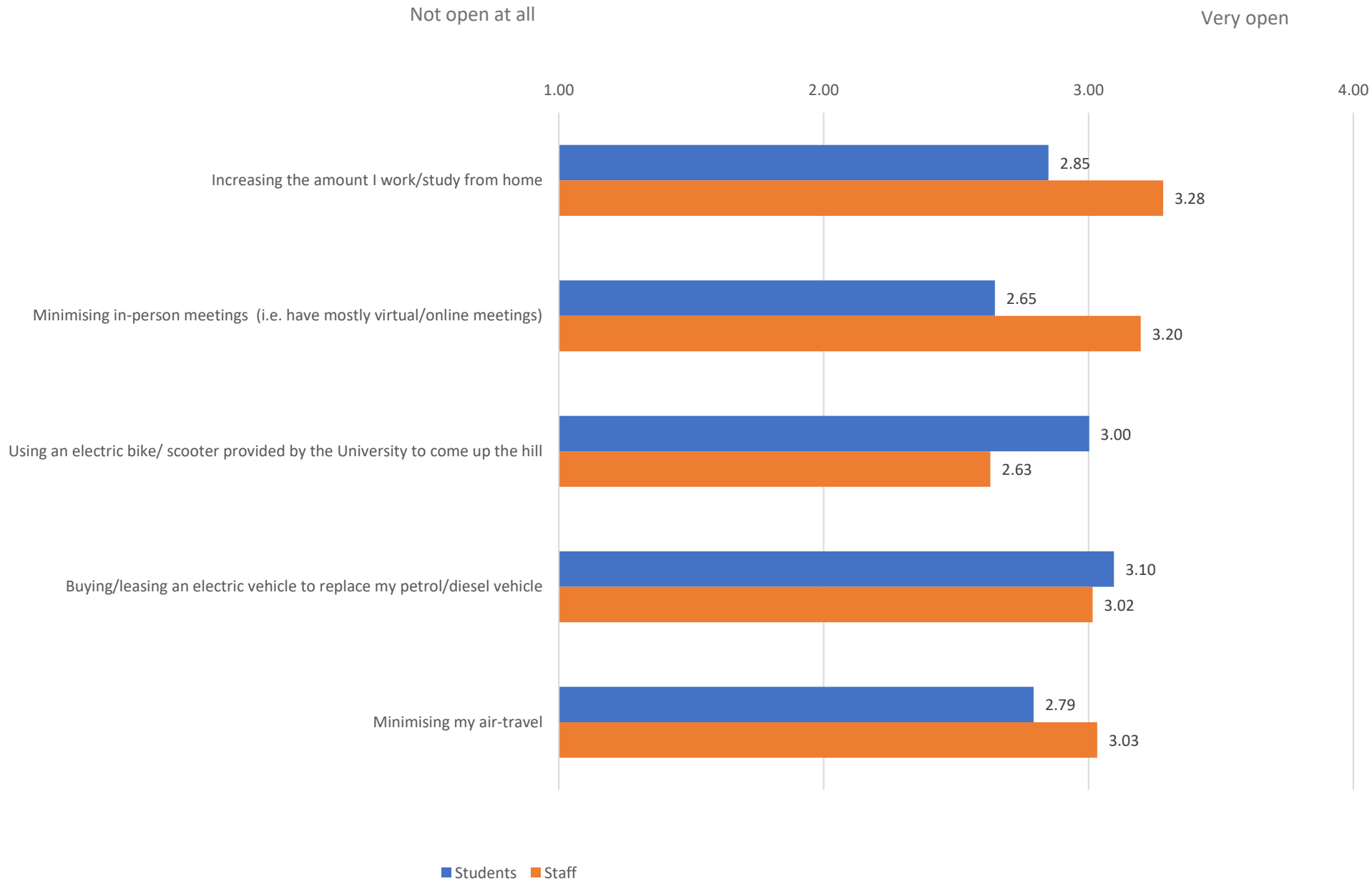

Average return trips commuting to the University in a week (pre-COVID)
0.00
0.50
1.00
1.50
2.00
2.50
On foot, wheelchair or using a mobility scooter
0.73
0.38
Bicycle (including electric bike)
0.18
0.35
Scooter (including e-scooter)
0.00
0.01
Walking or cycling (for at least 10 minutes) and driving a car or riding a motorcycle
0.10
0.06
Motorcycle
0.01
0.06
Car (alone)
0.16
2.17
Car share/pool
0.19
0.30
Electric or hybrid car
0.00
0.09
Driving to a bus station or park-and-ride and then taking a bus
0.01
0.01
Driving to a train station and then taking a train
0.01
0.02
Bus
1.86
0.43
Train
0.03
0.08
Bus and train
0.10
0.07
Walking or cycling (for at least 10 minutes) and taking a bus
0.39
0.12
Walking or cycling (for at least 10 minutes) and taking a train
0.03
0.08
Students
Staff

Openness to change - travel



Investments - Summary

>98% believe ethics should be considered in our ethical policy.

83% of students and 77% of staff feel we should primarily make ethical investments or only make ethical investments.

The most popular response (37%/ 41%) proposed making only ethical investments and active shareholder engagement.

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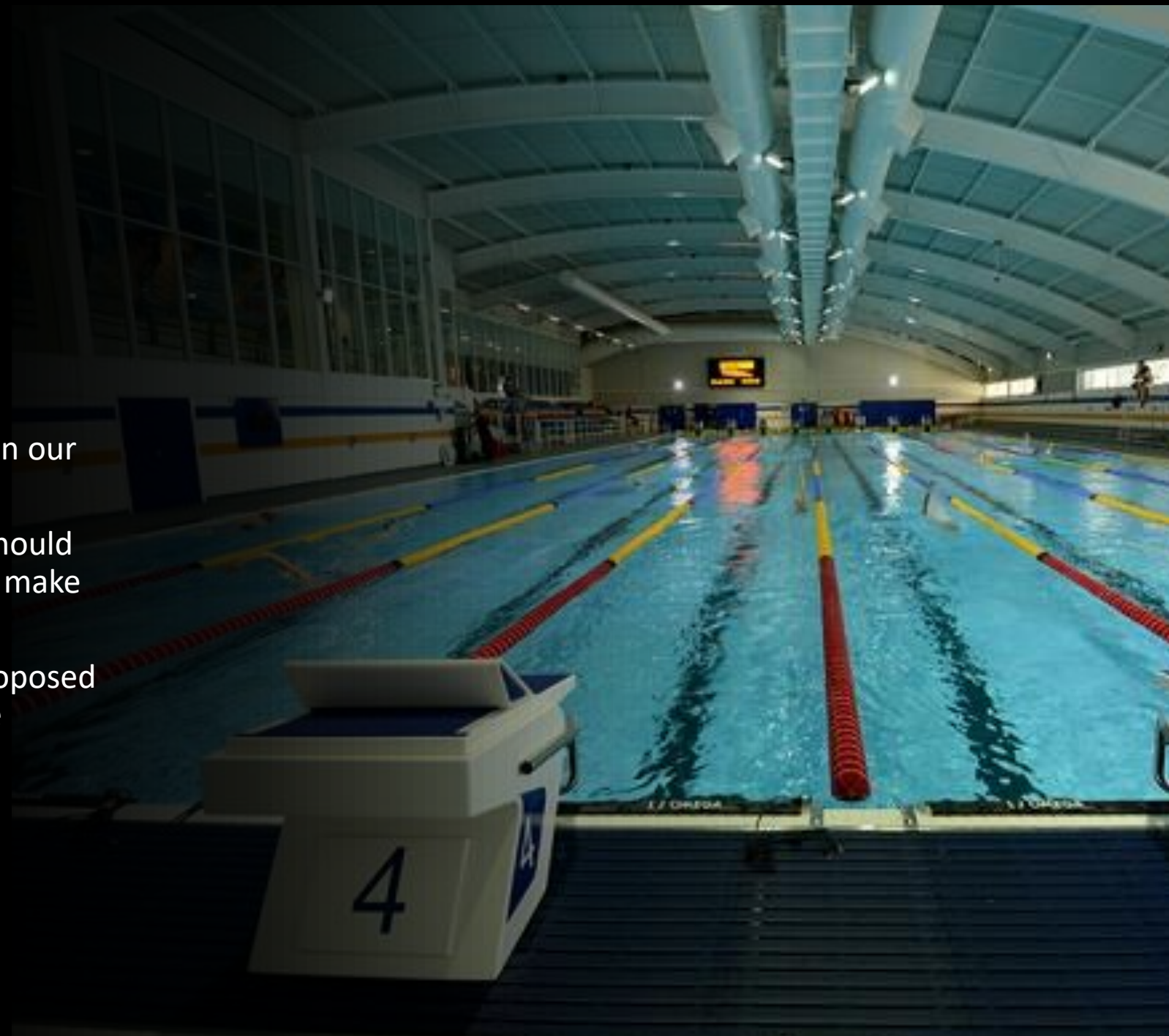
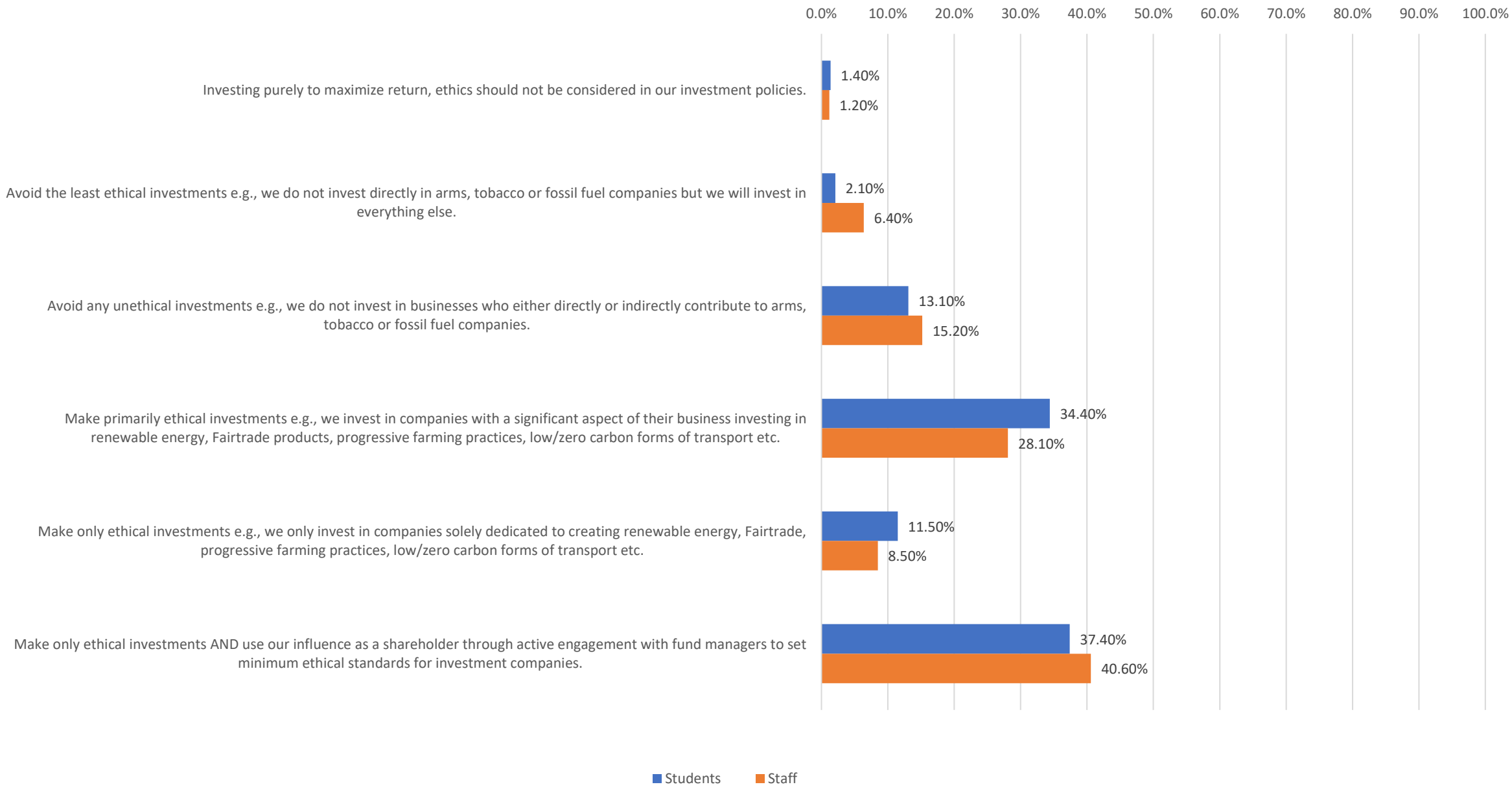
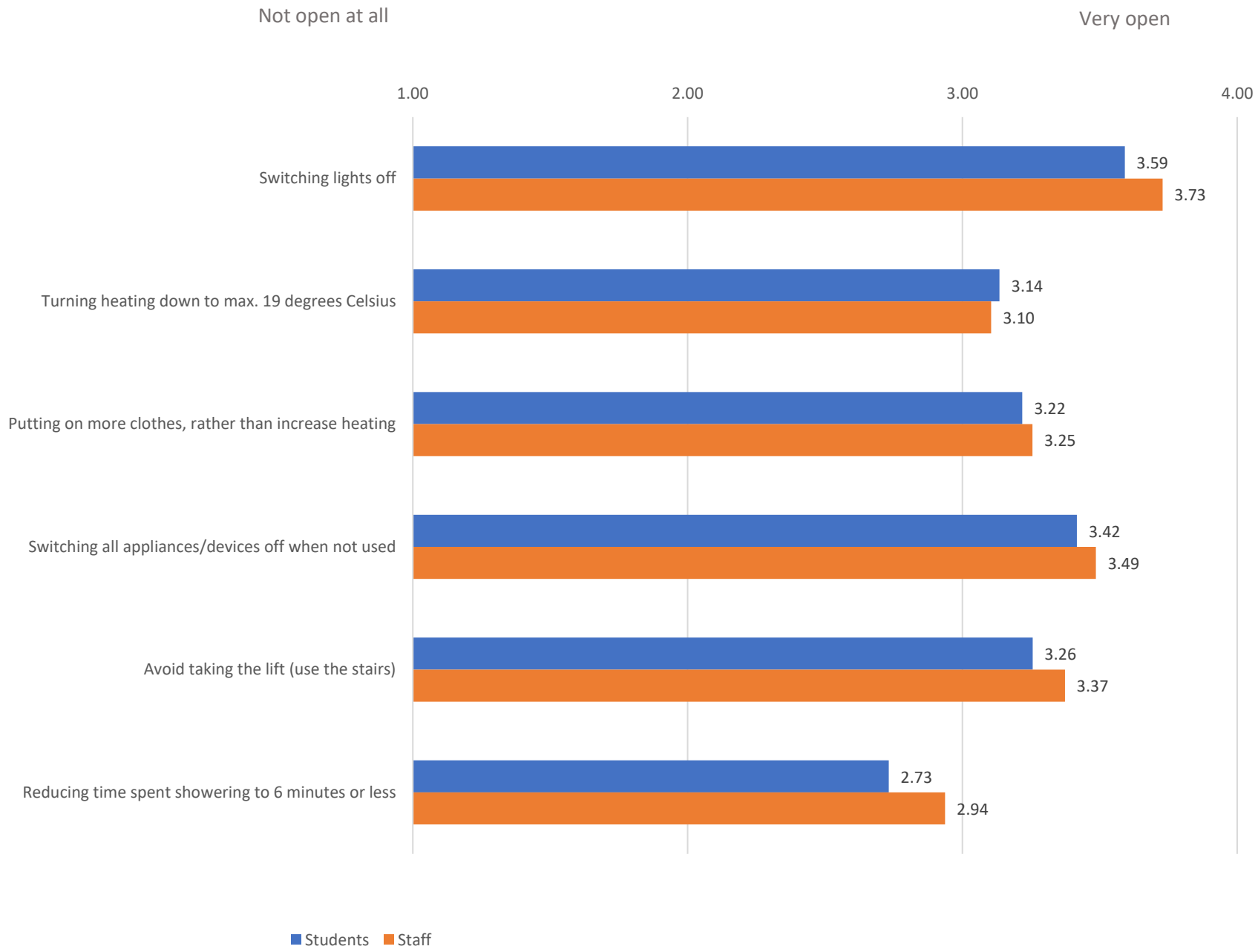


Investments: which policy approach do you feel is most appropriate for the University?



Openness to change - energy



Level of Knowledge and Empowerment

Following slides relate to the survey questions on levels of knowledge and open-ness to change

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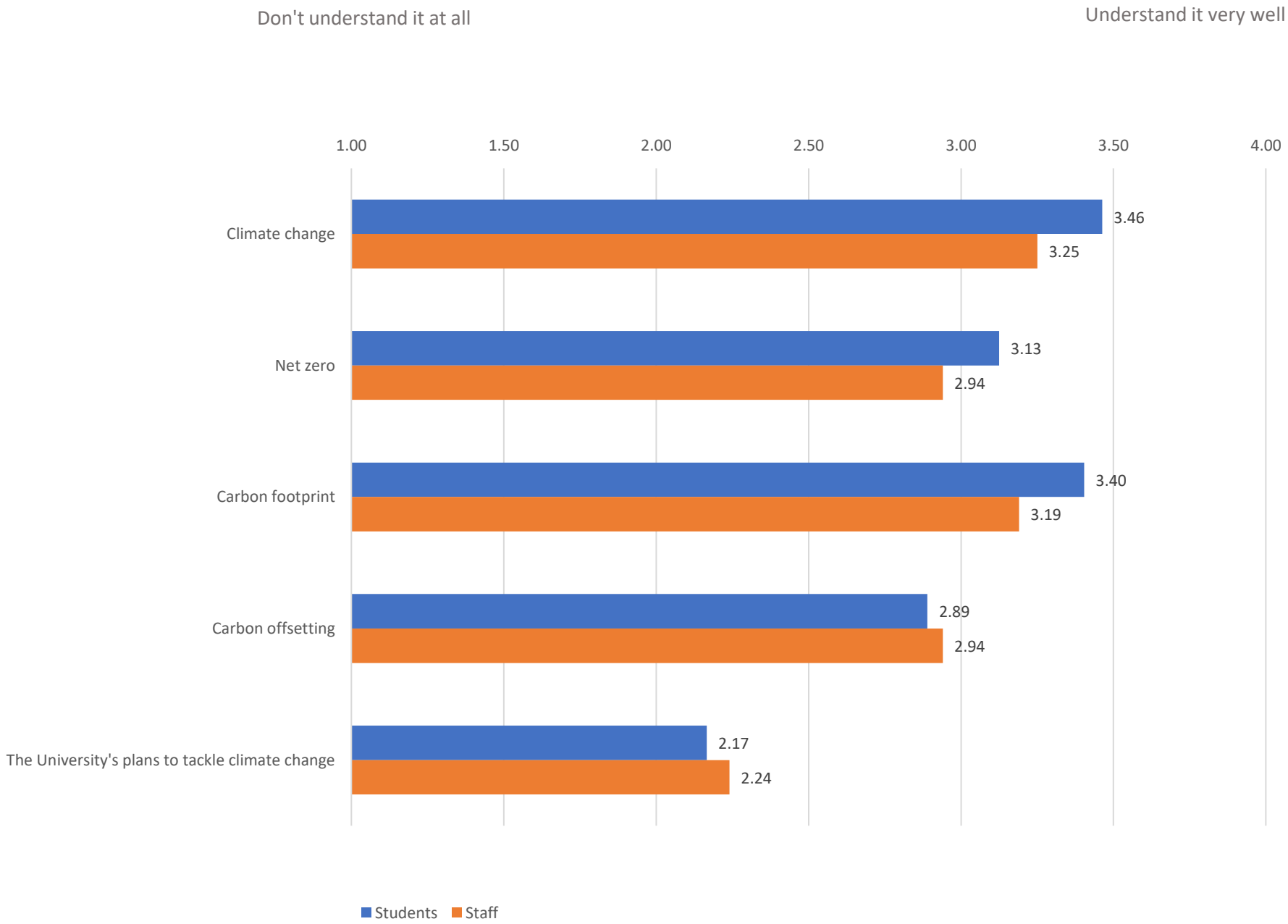
Levels of knowledge



Correct order	Mean ranking (staff)	Mean ranking (students)
1. Beef (from abroad)	1. Beef (from abroad)	1. Beef (from abroad)
2. Beef (from UK)	2. Beef (from UK)	2. Beef (from UK)
3. Lamb	3. Lamb	4. Pork
4. Pork	4. Pork	3. Lamb
5. Farmed sea fish	6. Chicken, Turkey or other Poultry	6. Chicken, Turkey or other Poultry
6. Chicken, Turkey or other Poultry	5. Farmed sea fish	5. Farmed sea fish
7. Wild sea fish	8. Fruits and Vegetables (from abroad)	7. Wild sea fish
8. Fruits and Vegetables (from abroad)	7. Wild sea fish	8. Fruits and Vegetables (from abroad)
9. Grains (e.g., wheat, maize, rice, etc.)	9. Grains	9. Grains
10. Fruits and Vegetables (from UK)	11. Legumes	11. Legumes
11. Legumes (e.g., beans, soybeans, peas, chickpeas, lentils)	10. Fruits and Vegetables (from UK)	10. Fruits and Vegetables (from UK)
Kendall's Tau	3	
Median Number of Mistakes	11	

(1) Many answers are high in accuracy; however, few gave a prefect (or nearly perfect) answer, which reflects the uncertainties/difficulties of the question. Nevertheless, I am very confident that answering is at better than chance levels.

(2) There are a small number of people who scored close to chance levels (i.e., close to Tau = 27.5), indicating a minority who didn't know the answers.

(3) Tau is quite variable, indicating that there is a variety of knowledge-levels in the sample.

(4) The second graph shows no clear differences in scores between staff and students; the mean average score for students was 12.81 and for staff 12.69.

Correct order	Mean ranking (staff)	Mean ranking (students)
1. A single, direct aeroplane flight from London to New York (3461 miles)	1. A single, direct aeroplane flight from London to New York	1. A single, direct aeroplane flight from London to New York
2. A single, direct aeroplane flight from London to Paris (approx. 210 miles)	2. A single, direct aeroplane flight from London to Paris	2. A single, direct aeroplane flight from London to Paris
3. A single direct journey from London to Paris by petrol car, crossing the channel on the ferry (approx. 290 miles)	3. A single direct journey from London to Paris by petrol car and ferry	3. A single direct journey from London to Paris by petrol car and ferry
4. A single coach journey from London to Paris, crossing the channel on the ferry (approx. 290 miles)	4. A single coach and ferry journey from London to Paris	4. A single coach and ferry journey from London to Paris
5. A single direct journey from London to Paris by electric car, crossing the channel on the ferry (approx. 290 miles)	6. A single railway journey from London to Paris	6. A single railway journey from London to Paris
6. A single railway journey from London to Paris (approx. 300 miles)	5. A single direct journey from London to Paris by electric car and ferry	5. A single direct journey from London to Paris by electric car and ferry
Kendall's Tau	1	
Median Number of Mistakes	6	

Knowledge is divided, here. Many people know the correct answers, scoring either Tau = 0 or Tau < 4. However, if we ignore people who scored Tau <4, the distribution (pattern) is only slightly greater than we would expect from chance (the median and mode are 6 and 7, close to the 7.5 mode/median for chance scores). This is a good example of how this statistic can 'add value' to the Borda order (average rank) results. Despite this disparity, overall I am confident that answering is at better than chance levels.

The divide in knowledge is probably not due to differences in knowledge between students and staff: the mean average Tau score is 5.38 for students and 5.20, which is similar. The second bar graph, above, shows students and staff to have a similar distribution (pattern) of results, though there is a slight difference for some scores (compare bars for '0' and '3' to bars for '6' and '7').

Correct order	Mean ranking (staff)	Mean ranking (students)
1. Procurement (e.g., food, IT, water, paper, etc.)	4. Electricity and gas (used at the University)	4. Electricity and gas (used at the University)
2. International Travel	3. Construction (e.g., of buildings)	2. International Travel
3. Construction (e.g., of buildings)	2. International Travel	3. Construction (e.g., of buildings)
4. Electricity and gas (used at the University)	5. Travel within the UK (including the commute)	1. Procurement (e.g., food, IT, water, paper, etc.)
5. Travel within the UK (including the commute)	1. Procurement (e.g., food, IT, water, paper, etc.)	5. Travel within the UK (including the commute)
Kendall's Tau	6	
Median Number of Mistakes	5	

The fit between Tau score and what we'd expect from chance indicates that respondents did no better than chance when answering this question. However, they do not seem to have any misconceptions, either (i.e., they didn't do worse than chance, either).

It is still possible, given the large sample, that a statistical hypothesis test might detect a difference that isn't visible in the graph. I quickly estimated the t-statistic and it could be significant.

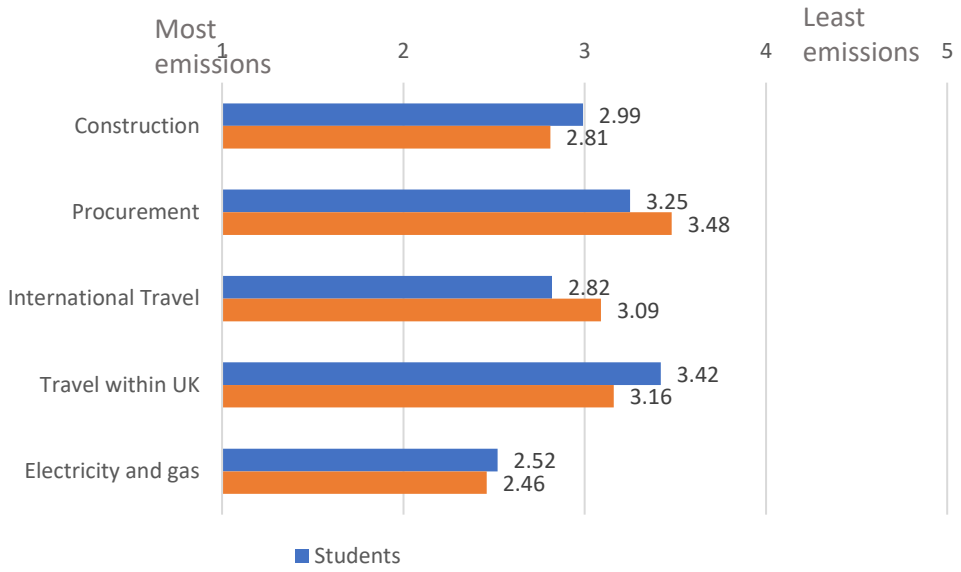
Correct order	Mean ranking (staff)	Mean ranking (students)
1. Living car-free	2. Avoiding flying	2. Avoiding flying
2. Avoiding flying	1. Living car-free	1. Living car-free
3. Avoiding eating red meat (beef, lamb, etc.)	3. Avoiding eating red meat (beef, lamb, etc.)	3. Avoiding eating red meat (beef, lamb, etc.)
4. Avoiding eating dairy products (milk, cheese, etc.)	9. Avoiding buying things made of plastic	6. Buying energy-efficient appliances
5. Avoiding food waste	6. Buying energy-efficient appliances	9. Avoiding buying things made of plastic
6. Buying energy-efficient appliances	4. Avoiding eating dairy products (milk, cheese, etc.)	4. Avoiding eating dairy products (milk, cheese, etc.)
7. Turning lights off when not in use	5. Avoiding food waste	5. Avoiding food waste
8. Recycling paper, plastic, glass and cans	8. Recycling paper, plastic, glass and cans	8. Recycling paper, plastic, glass and cans
9. Avoiding buying things made of plastic	7. Turning lights off when not in use	7. Turning lights off when not in use
Kendall's Tau	9	
Median Number of Mistakes	15	

(1) I am very confident that answering is at better than chance levels. (blue lines show must people have lower Tau than might be predicted by chance). The best score was 7 (Tau = 7, i.e. seven 'mistakes'), indicating that nobody gave a highly accurate answer.

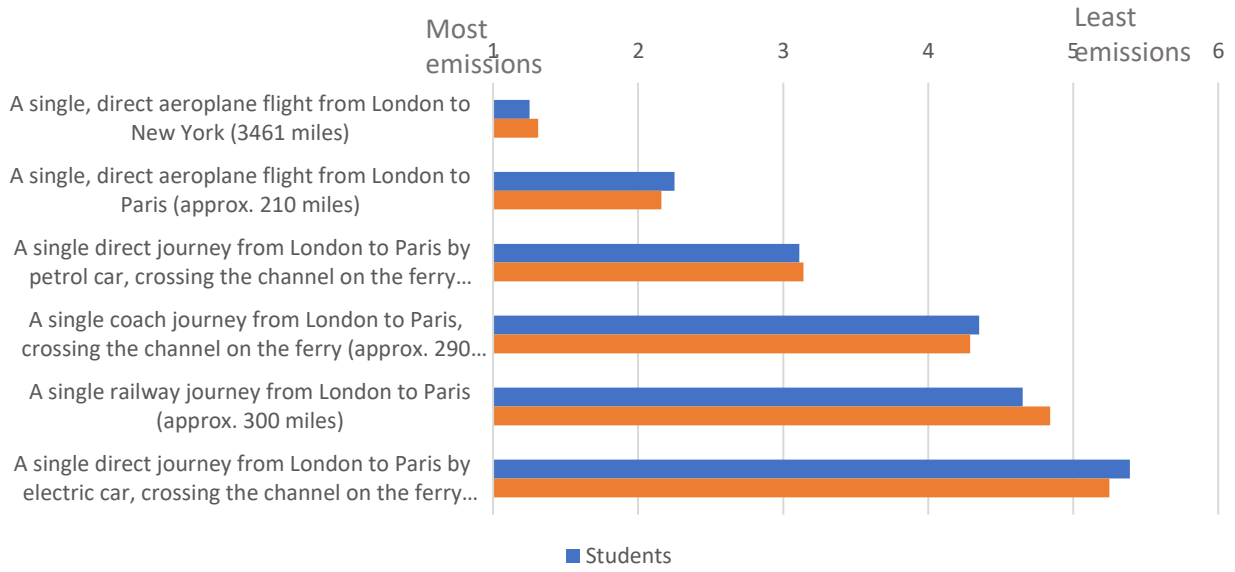
(2) Compared to the food question answering, answering is less variable – most people make about 12-19 'mistakes.'

(3) The graph, above, comparing staff and students shows a similar distribution of scores; the mean Tau score for students is 15.50 and the mean score for staff is 15.74.

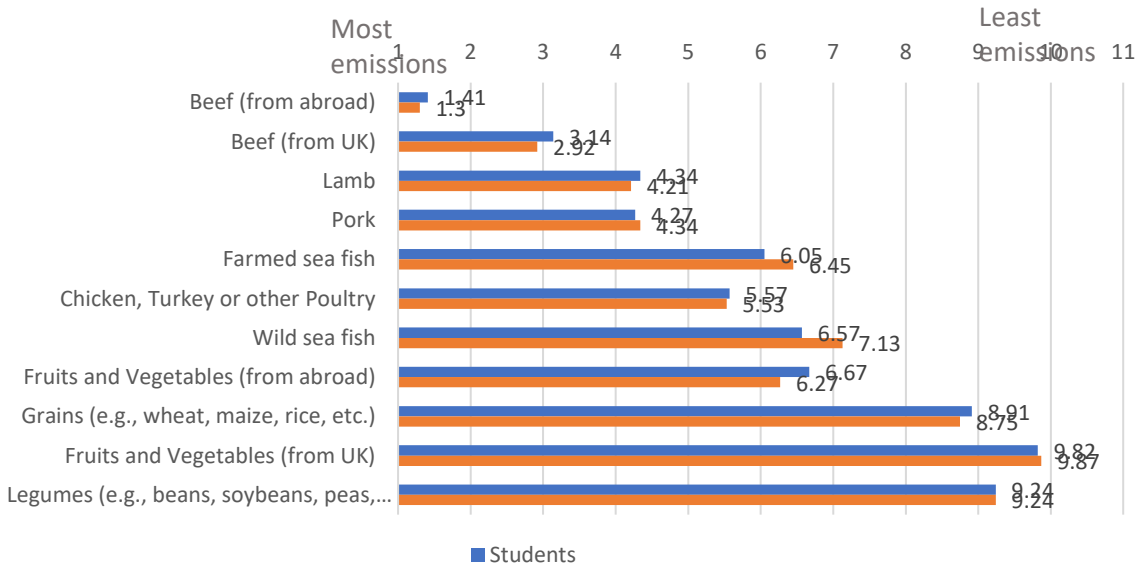
How much do you think each of the following contributes to the carbon footprint of the University of Bath?



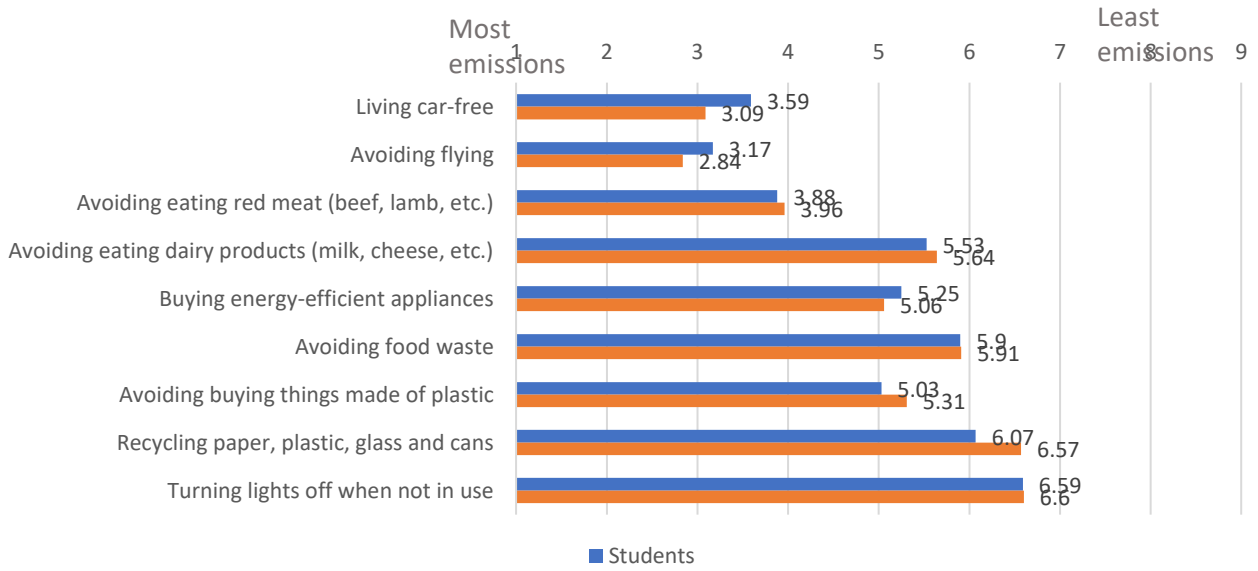
Which journey contributes most to one's carbon footprint?



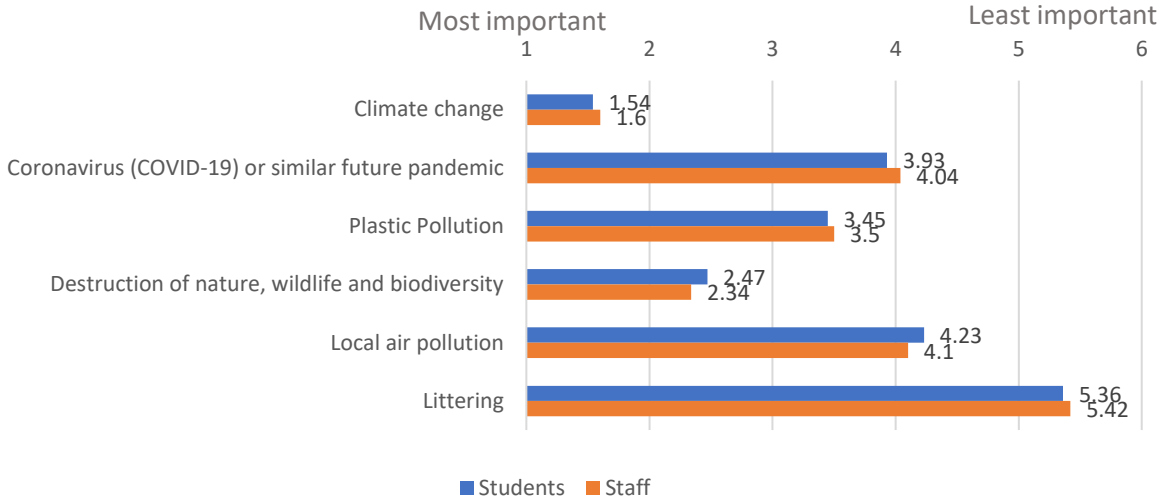
Which food contributes most to one's carbon footprint (per kg)?



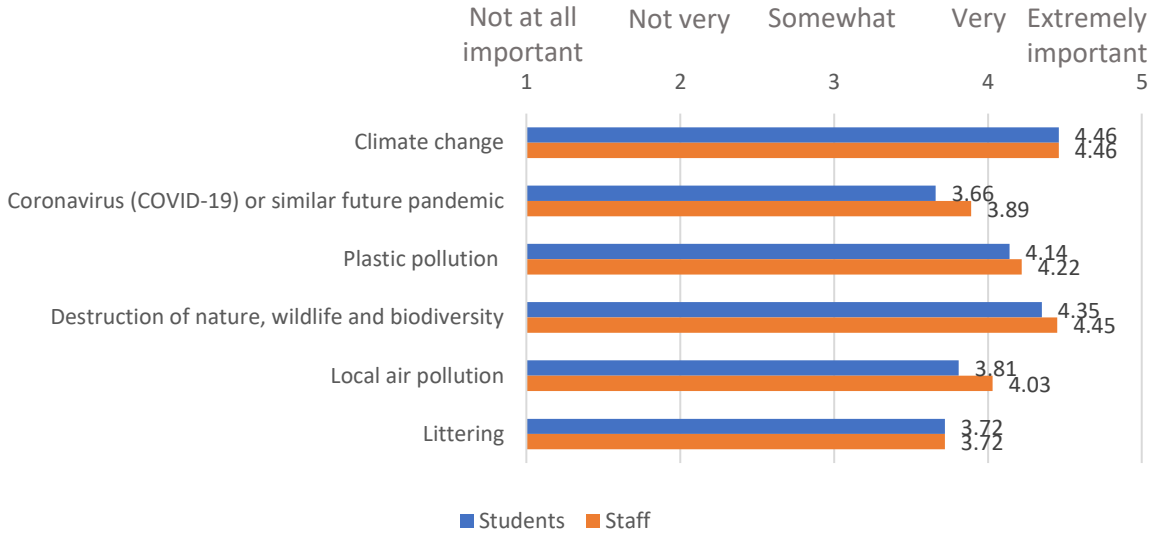
How much do you think each of the following would contribute to cutting your carbon footprint?



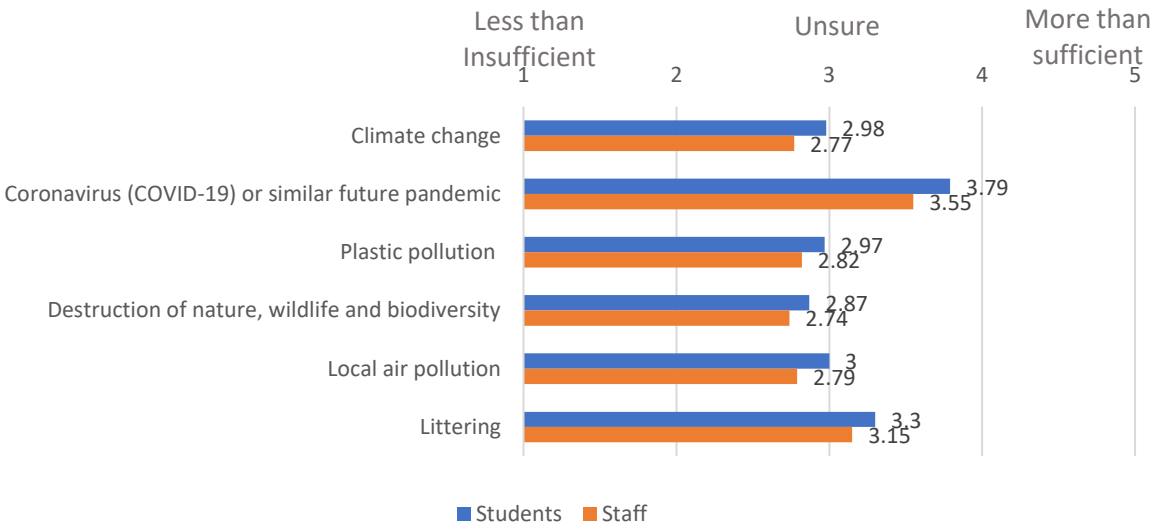
In terms of their overall impact, how important do you think the following issues are?



How important is it to you that the University of Bath takes action to help address the following issues?



Do you feel the University is addressing the following with sufficient scale?



Do you feel the University is addressing the following with sufficient urgency?