

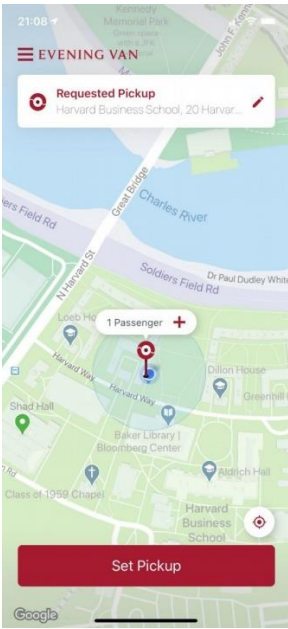
Green on the Go: Sustainable Transportation at HBS

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According to the [U.S. Environmental Protection Agency](#) (EPA), transportation is responsible for about 28% of total U.S. greenhouse gas emissions. It is the highest-emitting sector, more than electricity, industry and agriculture.^[1] Based on [Harvard Business School](#) (HBS) student behavior, which involves fairly frequent air travel on breaks and long weekends, trips to New York City for career treks, and transportation across the Boston/Cambridge community, we decided addressing the HBS transportation carbon footprint could have tremendous impact. Thankfully, we were not alone in this pursuit, and teamed up with [Professor Ashley Whillans](#), an expert at HBS on behavior science whose research includes testing behavioral interventions to increase sustainable transportation.

Before we could get to interventions for students, however, we needed to better understand their transportation habits. To do so, we conducted a survey of 269 first-year students, representing ~30% of the class. We gathered data on an assortment of transportation habits, including how students commute to school each day, how they get around the Cambridge community and how they travel to the airport. We also solicited open-ended suggestions on ways the transportation system at HBS could be improved.

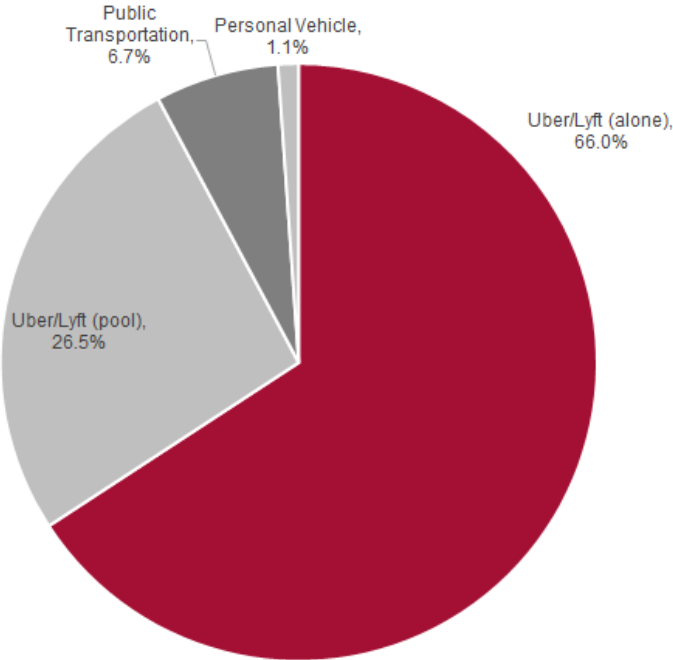
We met with staff from across the school and [University](#), including the teams at Harvard [CommuterChoice](#), HBS Operations, [Harvard Fleet Management](#), [HBS Student Association](#) and [Harvard Outings and Innings](#) to gain a better understanding of transportation programs already offered at HBS/Harvard. Armed with thorough student data and knowledge of established programs, we felt ready to propose some immediate recommendations that would make HBS student transportation more sustainable. Our findings and recommendations were focused on five topic areas: 1) airport transportation; 2) bike usage and infrastructure; 3) mobility in the Boston/Cambridge communities; 4) transportation to and from New York City; and 5) general awareness and communications of transportation options.



Harvard's relatively new Evening Van app interface, a popular service among HBS Students

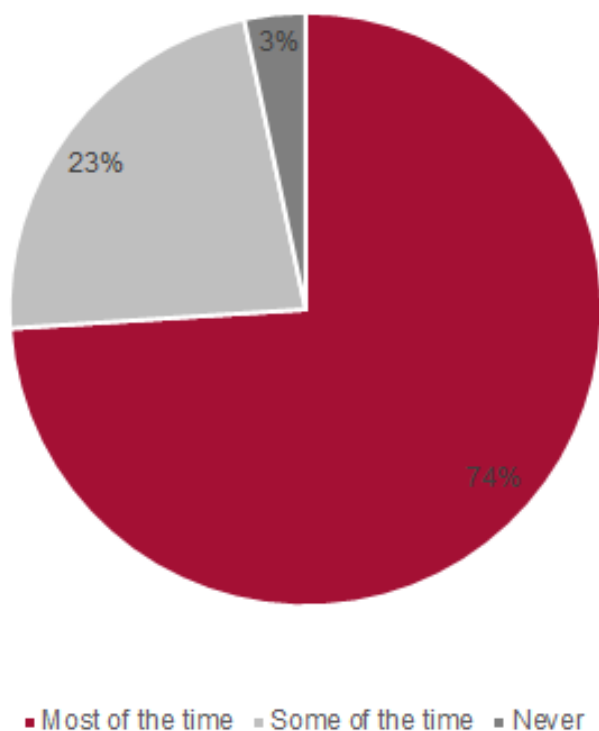
Airport Transportation

From our survey, we learned that over two-thirds of students take single occupancy vehicles to the airport. The remainder largely uses shared rides in [Uber/Lyft](#) that typically do not operate at full capacity. HBS's airport travel does not only generate emissions, but exacerbates road congestion^[2] and reduces air quality.



An easy way to help HBS students reduce single-occupancy rides to the airport would be to provide an airport shuttle to [Logan Airport](#) on peak weekends. When asked if they would utilize a free shared airport shuttle that leaves within 30 minutes of their typical departure time, 97% of students responded that they would use the shuttle at least some of the time.

We received helpful input from the Harvard Transportation team, and believe that for less than \$1,000 a weekend, we could implement an airport transportation solution effectively and sustainably. We proposed launching a pilot next year during a long weekend, and hope to kick off a service that is not only beneficial to HBS students and the environment but the City of Boston and our communities on the road.



Bike Infrastructure

Our survey also highlighted a need for improved biking infrastructure. 6.3% of survey respondents bike to school in nice weather, but only 3% bike in poor weather. Students expressed hesitancy to park their bikes in the rain, and cited limited bike rack parking space outside of Aldrich Hall, where most classes occur. Students also requested more BlueBike stations.

Our team concluded that biking is underutilized at HBS. We learned from Commuter Choice that expanding BlueBike racks is a complex and expensive process that requires city approval. Therefore, as low hanging fruit, we explored expanding campus bike parking infrastructure. We learned that HBS Facilities has been considering expanding bike parking for some time, and our team is now

working with HBS Facilities to prioritize funding to build a new sheltered bike rack outside of Aldrich, and to increase awareness around bike parking stations and tire pumps on campus.

Travel to NYC

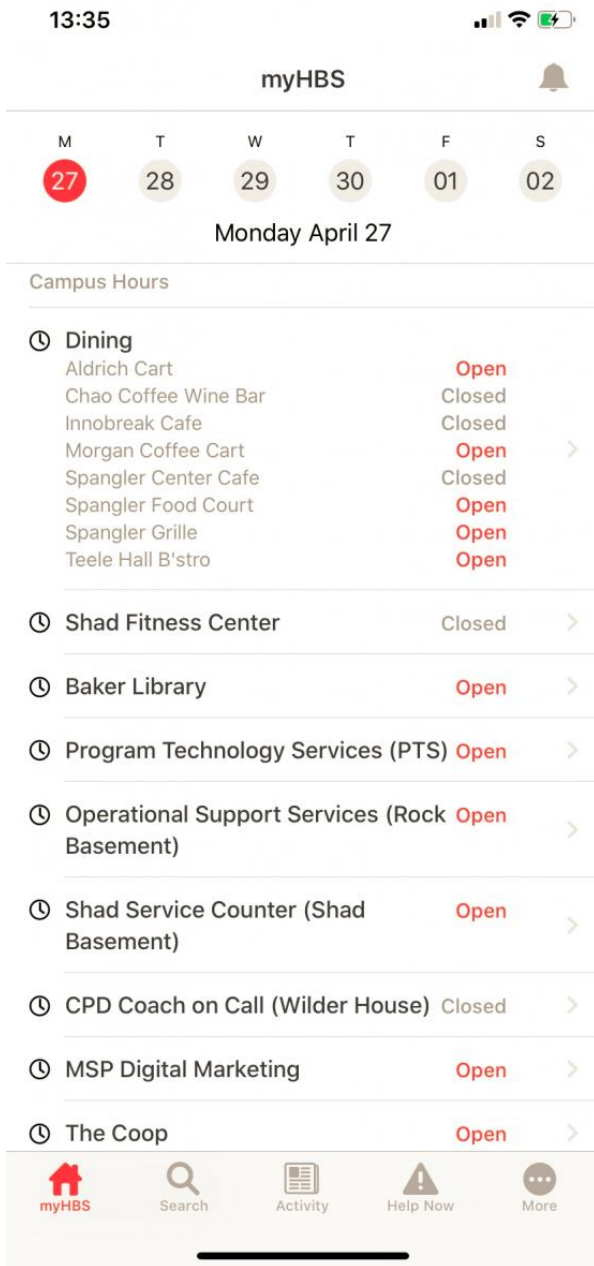
Our survey demonstrated that students travel heavily to New York City, both for pleasure and for career and trek opportunities --14% of those traveling to NYC do so by plane. Shifting a trip from a flight to a train ride would reduce 88% of the GHG emissions associated with each trip.^[3] We met with Harvard Outings & Innings, and they are currently investigating a Harvard-wide Amtrak discount. When surveyed, 67% of students said that a 15% Amtrak discount would make them more likely to take the train.

Local Transit

Students identified opportunities in mid-distance travel around the Boston and Cambridge area. Students self-report spending an average of \$28 per week on Uber or Lyft. We estimate that a portion of these rides come at night and believe the Evening Van service could help reduce these rides. Based upon meetings with the HBS Fleet Services group, it seems possible that ~40% of initial HBS interest in the Evening Van service is lost due to long wait times. We are currently further investigating Evening Van data with the goal of increasing usage of the service among HBS students.

Awareness & Communication

Students currently have low awareness of transportation benefits and lower carbon intensity options. Additionally, there is no one singular resource available to students that includes information on transportation options and benefits. We are aiming to integrate transit options into the HBS app and my.hbs.edu, as well as add information to the HBS Survival Guide which is provided to incoming RCs each August. It is particularly important to provide students this information at the beginning of the year, as research shows that there are optimal windows to nudge behavior change during times of transition.^[4] We plan to work with the SA and the new VP Sustainability role that was created this year to enact these changes.



myHBS app interface where transit options can be integrated



Survival Guide for the Class of 2020

Next Steps

With the findings and recommendations described above, we are excited to take the next steps of selecting one or two interventions to begin testing and refining. We look forward to working with all the wonderful faculty and staff that helped us get to where we are today, and we are confident that once we reach a new post-COVID19 normalcy, we will implement programs that ensure HBS students are green on the go!

[1] [EPA: Greenhouse Gas Emissions](#). May 5,2020

[2] We conservatively estimated an annual greenhouse gap impact of 13-17 tonnes of CO₂e originating from student travel from Allston to the BOS airport (about a US resident's annual footprint).

[3] [Carbon Footprint Calculator](#)

[4] Dai, H., Milkman, K. L., & Riis, J. (2014). The fresh start effect: Temporal landmarks motivate aspirational behavior. *Management Science*, 60(10), 2563-2582.