

The Beans: How Tiny Mobile Pods Create a More Equitable Access to Higher Education

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INTRODUCTION

The increasing housing insecurity in major American cities has cast a long shadow over university campuses, and it is especially pronounced among commuter students. The skyrocketing cost of housing coupled with the limited availability of affordable options near campuses has compelled many students to seek housing solutions far away from their educational institutions. Among this diverse group of students, a significant segment comprises “super-commuters,” individuals who live off campus and endure grueling commutes, often exceeding 90 minutes¹. Recent studies have revealed the alarming prevalence of housing insecurity (43%)² and homelessness (15%)³ among super-commuter students, who frequently organize their lives around lengthy commutes, sometimes resorting to sleeping in cars or libraries overnight to cope with the logistical and financial challenges of living and studying^{4,5}.

PROBLEM STATEMENT

This project addresses the pressing issue of housing insecurity among commuter students in Los Angeles and explores the potential of specially designed and fabricated mobile micro-environments, aptly named “Beans,” as a temporary solution to this problem. We delve into the comprehensive research, design, construction, and deployment of fifteen Bean prototypes across a university campus and investigate their impact on the student population.

METHODOLOGY

The development of this project was characterized by close collaboration with student commuter groups, involving a series of iterative and feedback-based workshops. These workshops aimed to understand various facets of the problem:

a) Student Behavior in Pods: We sought to comprehend how students use these pods for activities such as studying and sleeping, their preferred duration of stay, and other relevant behaviors.

b) Programming Needs: Identifying the essential requirements within the pods, including power outlets, personal storage space, adequate lighting, and other amenities.

c) Health and Wellness Needs: Addressing cleanliness, maintenance, and COVID-19 prevention measures to ensure the safety and well-being of users.

d) Psychological Needs: Ensuring the pods provide a sense of safety, security, and access to those who use them, especially during vulnerable moments like sleep.

Our design and development process entailed extensive interviews with students, ongoing feedback from focus groups, and rigorous physical body testing to accommodate various body types. This inclusivity ranged from accommodating a petite five-percentile female student to a burly football player. Over the course of four years, this initiative led to the launch of BruinHub and new commuter spaces in different parts of the campus.

BEAN DESIGN AND FEATURES

Conceived as micro-environments for studying and sleeping, each Bean derives its shape from an analysis of multiple human activities taking place within. They are equipped with adjustable lighting systems, power outlets, and personal storage, catering to the multifaceted needs of student commuters. The materials used are easy to clean, promote COVID-19 prevention, enhance ventilation, and ensure fire safety. Moreover, removable privacy screens provide the much-needed privacy and safety while students sleep. The cost of each prototype was \$15,000 which would be lowered significantly if this project were to go into the production.

COMMUTER HUB

As noted by Cuff, the Bean Hub stands out from conventional napping capsules, commuter lounges, or overnight shelters on other campuses. It is organized by playful, individual study-napping pods, collected into a lounge where the full range of students’ daily needs is dignified by design and accommodated without stigma⁶. The Bean Hub serves as a secure gathering place accessible 24 hours a day, providing additional spaces for both focused and collaborative work. Additionally, the hub is

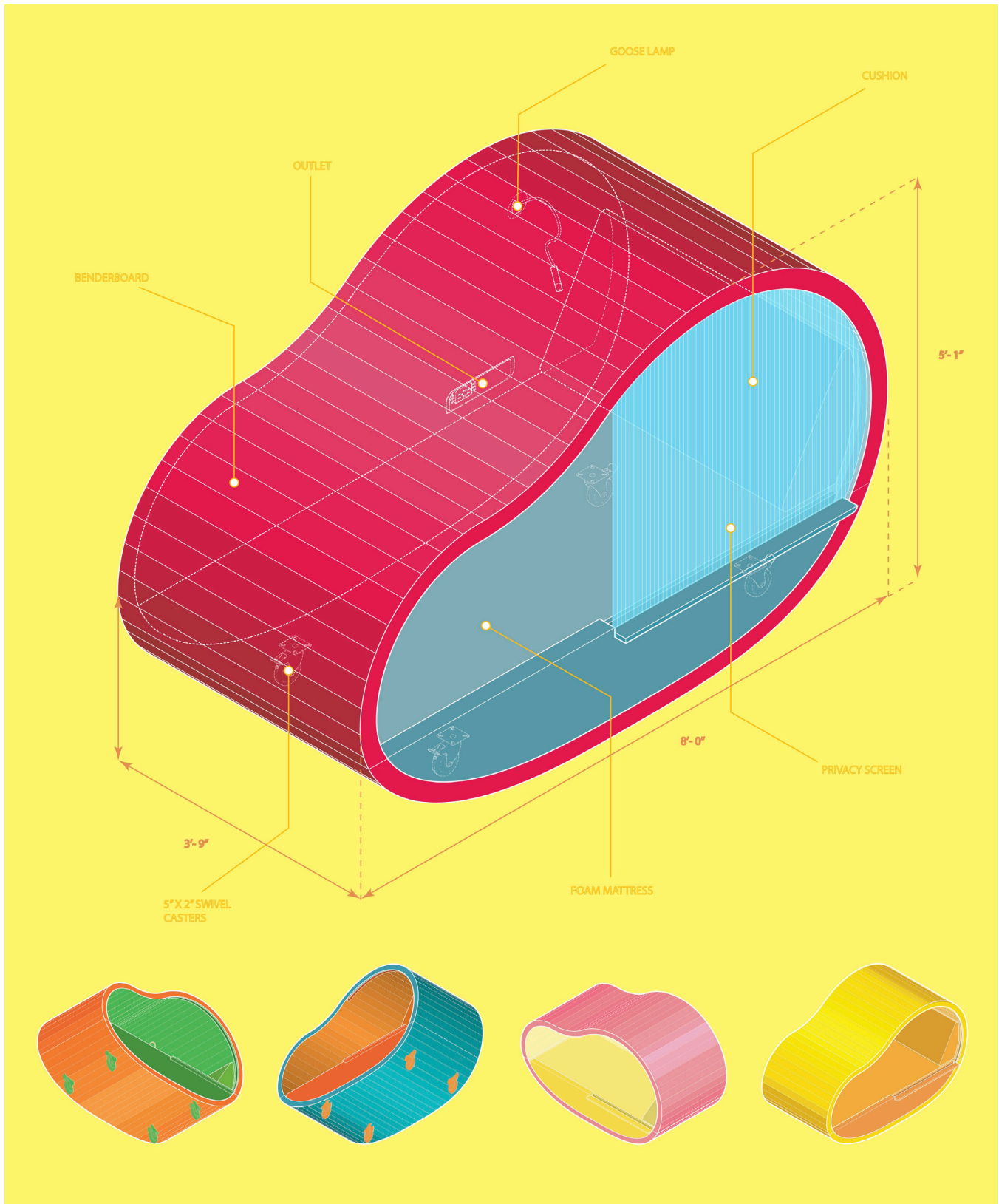


Figure 1. Beans in difrent color pallets. AN.ANONYMOUS

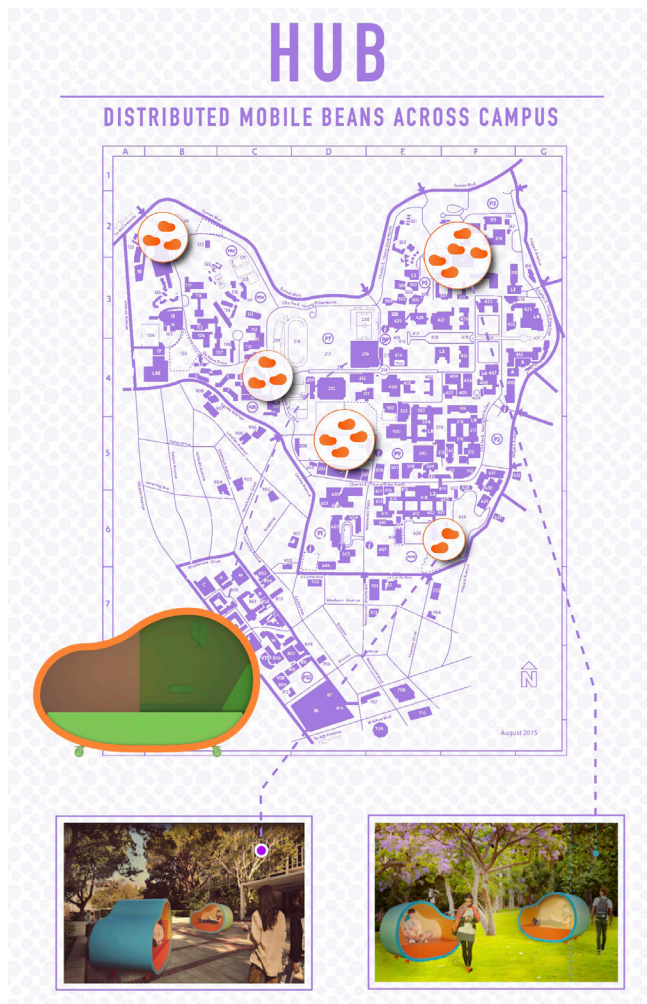


Figure 2. Proposed locations for the Beans. AN.ONYMOUS

located in the main gym with close proximity and continuous access to basic amenities such as bathrooms, showers, storage and a kitchenette.

EVIDENCE OF SUCCESS

As described by Cuff, the implementation of the Beans at the BruinHub in September 2021 marked a significant milestone, coinciding with the return of students to campus after a year and a half of remote learning. The BruinHub was launched with great enthusiasm. Since its inception, this space has been consistently occupied by commuters who can easily register for a free BruinHub pass online. Cuff states that “...for the first time, not only can the university identify students who may be on the brink of homelessness, but UCLA’s commuter students have a home away from home at UCLA”⁷. Moreover, a comprehensive report, drawn from a year and a half of commuter usage, unequivocally underscores the effectiveness of the Bean Hub initiative. The report states that the Bean Hub is a resounding success, as confirmed by interviews with students and staff, as

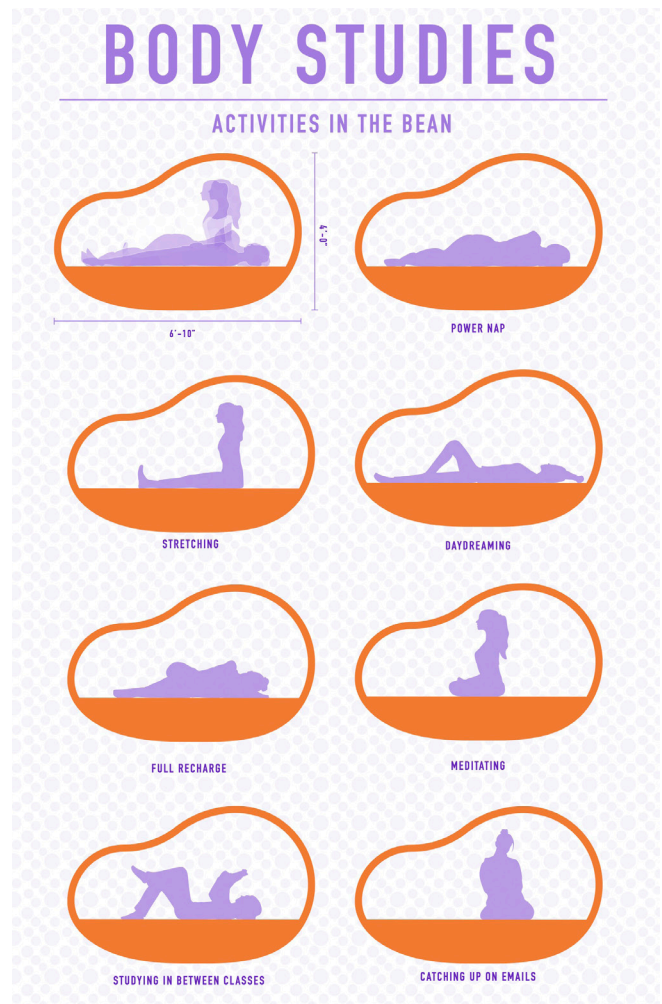


Figure 3. Body Studies in the Bean. AN.ONYMOUS

well as site observations: “Bruin Hub is the first step in the right direction in addressing the needs of long-distance commuters⁸”.

The impact of the BruinHub is also evident in its substantial registration numbers. During its opening phase, it registered an impressive 800 students, and this number surged to 500 more by the end of the first academic year which captures more than 75% of the super commuter population (estimated total 1,700). In the following year since its inauguration, an additional 600 students registered and used the Beans and the hub. The sentiment among students who have experienced the BruinHub is overwhelmingly positive, as one student aptly noted, “BruinHub is unique because it’s designed to meet the specific needs of commuters in a way that does not stigmatize. What I mean by that is it was cool to go in there. It was fun to go there. It makes you feel comfortable to go in there⁸.”

There is still room to improve the functionality of the Bruinhub with a better reservation system and allowing overnight access any time. But most of the feedback would go toward



Figure 4. Beans in the BruinHub. Phtos by Nathan Su.



Figure 5. Beans usage over the time of booking: from sleeping to studying. Phtos by Nathan Su.



Figure 6. BruinHub during regular use. Phtos by Dana Cuff



Figure 8. User inside the Bean. Phtos by Nathan Su.

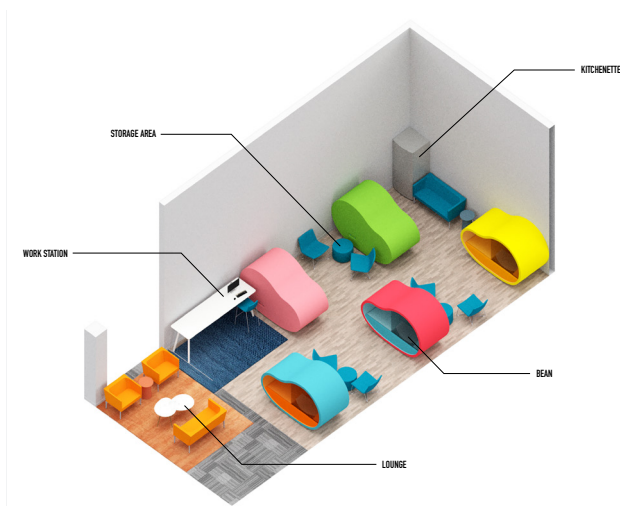


Figure 7. Laout for five beans at BruinHub.

supporting the operations and infrastructure beyond what the Beans can offer.

CONCLUSION

In conclusion, this project represents one of several low-cost, temporary solutions that can effectively address student housing insecurity and improve access to education for commuter students. The “Beans” mobile micro-environments, shaped by the needs and feedback of the student community, offer a glimpse into new strategies that universities and communities can employ to support these vulnerable populations.

While these Pods may not be the definitive solution to the issue of housing insecurity among student commuters, they serve as a beacon of hope, providing a secure and accessible refuge⁹. These temporary measures become essential lifelines while

more stable and permanent affordable housing solutions are sought. The future lies in the hands of institutions willing to embrace such integrated approaches to foster a more equitable access to higher education for all students, regardless of their housing challenges.

ENDNOTES

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