

Driving Home Design Research: A collaborative design case study for developing positive parking experiences on a university campus

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Abstract

CampusParc, the entity that manages and operates The Ohio State University's parking assets under a long-term lease, engaged students and faculty in the university's Department of Design to determine how its brand, services, and parking environments can contribute to a more positive parking experience in garages and surface lots—particularly for visitors to the main campus. This year-long collaboration involved multiple design-definition sessions between design faculty and a CampusParc design strategy team, an 8-week graduate/undergraduate design-led summer workshop, and a full-semester Advanced Visual Communication Design Studio course. The outcomes included discovery themes, user journey maps, observation findings, problem statements, design opportunity proposals, and concept prototypes. Throughout this process, the students worked with, presented to, and received feedback from design faculty and CampusParc representatives. Students engaged stakeholders, university staff, and transient (visiting) parkers. By immersing students into a complex practice-based project, the students applied their design research and service design thinking in environmental graphics and branding. CampusParc is realizing new design opportunities, embracing proposed design themes and concepts, and shifting their role from a 'utility' to a 'service' provider. This new mindset is contributing to CampusParc's interest in enhancing relationship building and crafting a friendly and approachable brand language that interjects a sense of delight. This paper captures this collaboration and presents the student-led design solutions as a case study that can serve as a model for future professional-academic collaborations.

Keywords: design strategy, service design, methods and tools, transportation, urban/social

As Ohio's best and one of the nation's top-20 public universities (U.S. News & World Report 2017), The Ohio State University is one of the largest universities in the United States. The university's main campus in Columbus, Ohio (USA) encompasses 1,765 acres (7 km²) alone, and 16,132 acres (65 km²) in total (osu.edu). The parking system, also one of the largest of its kind, is comprised of 5 million square feet and 13,000 spaces within 16 garages, and 7 million square feet and 23,000+ spaces within 196 surface lots, for a total of 36,000+ system spaces (campusparc.com). CampusParc operates this parking system through a 50-year lease, known as a parking concession, which began in September 2012. CampusParc is responsible for the

operation of The Ohio State University's parking system, including management of the permit system, parking enforcement, customer service, motorist assistance, event parking management, and parking facility maintenance, including major renovations (campusparc.com).

Paid parking on the university's campus has historically not been a popular reality. As a result, CampusParc inherited a pre-existing negative parking reputation from the university. While this is common to most regulatory entities, CampusParc has the additional burden that many of the parking users's dissatisfaction regarded parking policies, for which the university retained responsibility (including pricing, allocation, and use). CampusParc is attempting to take on that reality by providing the highest quality experience within the confines of their parking concession and the realities of business decisions. Ongoing customer feedback, through the Customer Service Center, annual customer satisfaction surveys, etc. have provided useful insights into customer expectations, perceptions, and opinions of parking.

This project with the Department of Design is to contribute to those insights with viable thoughtful recommendations for improvement. By engaging students and faculty in The Ohio State University's Department of Design, CampusParc aimed to determine how its brand, services, and parking environments could contribute to a more positive parking experience in garages and surface lots—particularly for visitors to the main campus.

The Department of Design at Ohio State has three undergraduate programs: Visual Communication (“VC”), Industrial, and Interior design; and two graduate programs: Design Research and Development (“DRD”) and Digital Animation and Interactive Media (“DAIM”). The department is committed to regular inter- and intra-departmental, as well as, interdisciplinary collaboration. As so, when the department was initially approached by CampusParc, it was familiar with these types of collaborative engagements.

The Department of Design laid out a plan that would create a learning experience for graduate and undergraduate students within the department, as well as provide valuable insights to the CampusParc organization. Specific activities would be determined as the overall project developed. In an effort to be responsive to the research, many of these activities could neither be established beforehand nor defined with clear outcomes. CampusParc was a willing partner in this design-led, open-ended, and process-driven journey.

To kick-off the project, a year-long collaboration was planned. It would involve multiple design- definition sessions between design faculty and CampusParc representatives, an 8-week graduate/ undergraduate design-led summer workshop, and a full-semester Advanced Visual Communication Design Studio course. The project goal was to contribute to an overall parking experience with the university, contribute to the parkers's comfort level in approaching and finding parking and reaching their destination, enhance the effectiveness of all communication associated with parking and arrival at destinations (within the scope of

CampusParc responsibilities), and improve customer 'behaviors' (i.e. reduce littering, destructive activity, etc.).

Summer Workshop (May–June 2016)

The first project began in the summer of 2016. The design faculty, DRD graduate students, and a VC undergraduate student formed the design team. At the kick-off meeting with the CampusParc Corporate Communications Director, the design team received an introduction to the organization, the problem, and the goals of the partnership. During this discussion, it was decided the focus of the Summer Workshop would be to study prospective students and their families, since new student orientations take place during May and June. Additionally, a timeline was determined: Week 1) introduce project and define scope; Week 2) conduct research; Weeks 3 & 4) identify stakeholders; Weeks 5 & 6) map user-Journey; Week 7) frame situations; Week 8) share insights.

This plan was set around two key activities the design team decided would yield the best insights: Stakeholder and User-Journey Mapping. A stakeholder map is a visual representation of the key stakeholder (a person, group, or organization involved with a particular product or service) and their relationship (Curedale, 2013; Stickdorn & Schneider, 2012). This is essential to design teams, allowing them to identify user needs and explore areas of potential design offers (i.e. product/service features and benefits). A User Journey Map is a flow map that tracks users's steps through an entire experience of a targeted segment (Polaine, Løvilie, Reason, 2013; Saco & Goncalves, 2009; Stickdorn & Schneider, 2012). It visualizes the user's interactions with the product and service through the context of engagement (Kumar, 2013). This process provides a design team with narratives describing the activities that the targeted user experienced while using the product and service. It facilitates the concept exploration process and inspire useful, useable, and delightful design solutions. These activities were supplemented throughout the project with web-based research, observations, onsite user interviews, and meetings with representatives of the university directly involved with correspondences related to orientation activities.

The design team held weekly meetings to share insights, give informal presentations, discuss and white-board ideas, and set upcoming tasks. Throughout the process the design team documented their work by updating a shared digital workspace and photo-documentation. It was decided to frame found problems and opportunities using an end-user timeline. The decided phases were taken from the User-Journey Map: 1) pre-planning, 2) arrival to campus, 3) parking, 4) leaving the garage on foot, 5) returning to the garage on foot, and 6) payment. Additionally, 7) global and 8) public relation categories were added.

A total of 23 opportunities were discovered. These opportunities included “empower with digital technology,” “simplify garage names,” and “car fob finding” (e.g. Figure 1). They were presented as both an informal exhibit and a final presentation. The 23 exhibit poster were displayed in the presentation space. They each framed a specific opportunity: problem statements, current conditions, proposed conditions, included images, and a short discussion.

The presentation documented both the 8-week process and the findings from the workshop. Both the exhibit and presentation were shown together to CampusParc during the project's final week.



Figure 1: Posters from the final exhibit during week 8

The Summer Workshop served the design team in understanding many of the conditions surrounding the university's parking experience first-hand and what changes CampusParc could control. It also provided CampusParc an 'outsiders' view of their organization, key insights from a design-oriented perspective, and familiarity with this type of open-ended research process and service design thinking approach. It was deemed a success by both parties and the artifacts from it would go on to introduce future team members to CampusParc and inform future projects.

Design Studio course (August–December 2017)

The next project phase moved the design team's work into the classroom. The design faculty adapted the Advanced Visual Communication course to provide the opportunity for senior

visual communication students to be a part of this sponsored research project. The general course's description is the application of planning, analyzing, and designing in two/three-dimensional visual communications and information design systems; with an emphasis on application of design research, analysis techniques, design strategic thinking, concept development, implementation, and design evaluation. The CampusParc project was a natural fit within this course goal. A graduate student from the Summer Workshop served as a semester-long contributor to the course, providing an additional layer of carry-over between projects.

The semester was divided into four phases: 1) Discover, 3 weeks; 2) Define, 2 weeks; 3) Explore, 4 weeks; and 4) Frame solutions, 7 weeks. These phases emphasize the processes of a user-centered and iterative design approach that first starts with rational and analytical research of current trends, systems, technologies, stakeholders, and environments; second, strategic interpretations and definition of design intent and context-driven principles; third, generating concepts of clear value and innovative approach; and finally, a consistent, flexible, and appropriate design applications. The conclusion of each phase would be marked with presentations to communicate phase findings and design advancements.

The class was divided into 6 collaborative teams with three students per team. Each team would work together throughout the course schedule. Students were required to apply various design methodologies to discover and identify design problems, opportunities and strategies during the first five weeks of the course. The remainder of the course, each student explored and developed design concepts with proposed solution prototypes in narrative and dynamic video walk-through format. At the end of each project phase, each team and individual summarized the outcomes and process with an oral and visual presentation documentation (printed and digital reports).

After the initial weeks of orientation, research, and learning, each team presented their problem direction in their Discovery Phase presentation. The CampusParc Corporate Communications Director and members from the management and strategy team attended these presentations, providing feedback and offering specific insights. The teams settled on six unique directions: Team 1) "A CampusParc brand campaign" to improve the user's experience by offering peace of mind through clarity of communication, brand campaign, and delight of the experience; Team 2) "Brand identity update and refresh" to create a more approachable brand perception by humanizing CampusParc and enabling their users to see them as a friendly and helpful organization; Team 3) "Evaluative and generative design toolkit" to reposition CampusParc as a business that focuses on design thinking and service design; Team 4) "ParcPerc, an intuitive parking system and delightful customer appreciation program" to simplify the parking service communication and enhance customer satisfaction by providing added value and positive perception to the CampusParc brand and creating an intuitive parking system and delightful customer appreciation program for student permit holders (e.g. Figure 2); Team 5) "Social care to provide responsive customer service" to change the culture of parking on campus by using social media to connect Campus Parc to the people that use their services; and Team 6) "Memorable navigation through elements of

nature” to target users’s emotional journey from the garage to the university’s James Cancer Hospital and Solve Research Institute (“The James”). Each team was given the autonomy at this point to proceed as needed to further their specific project goals. Activities included scheduling meetings with university staff, site audits, photo- documentation sessions, direct engagement with specific user groups, and on-site observations.

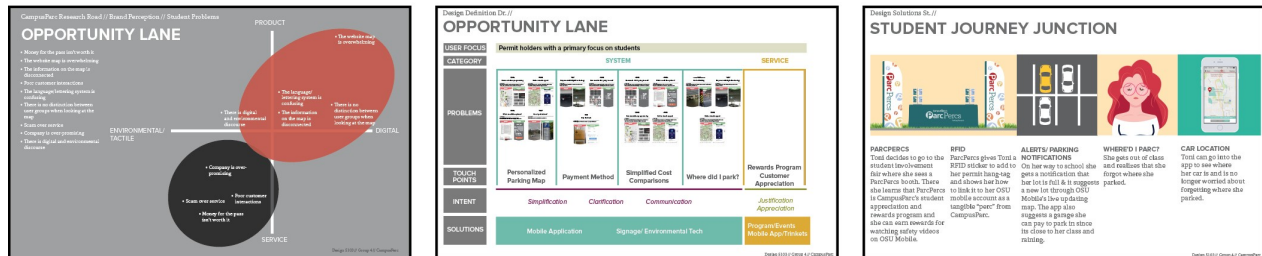


Figure 2: Team 4 research findings (Opportunity Land and Student Journey Junction)

The design faculty used class time to meet with individual teams, providing direction and instruction. Since project topics were divergent, students worked within their team both in- and outside of class, only re-grouping during progress presentations. This provided student control in project needs and offered a set of “fresh eyes” to other student team projects during presentations. The presentations marked phase transitions, providing checkpoints for progress.

Several of the teams found challenge transitioning between phases, particularly between Phases 3 and 4. While Phase 4 allowed for the production of the required video, documentation book, and presentation, many expressed a desire to continue work on their solution during the final weeks. A few teams were caught with the additional burden of producing final deliverables while a team member continued to generate new materials. Upon later reflection, those students stated that this was a valuable learning experience, both for future professional work and in understanding the demands of team design challenges.

Team 1
CampusParc brand campaign



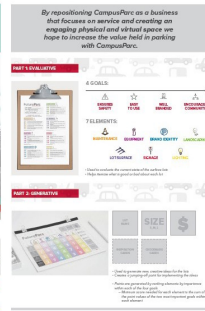
- Engage university units interested in installing temporary Welcome Signage/ Banners for special events, such as Buckeye Visit Day?

Team 2
Brand identity update and refresh



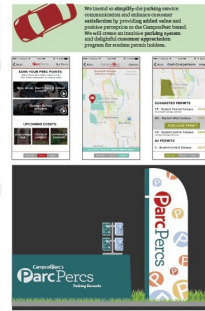
- Friendlier language in our communications
- More intuitive pay machines (coming this summer!)

Team 3
Evaluative and generative design toolkit



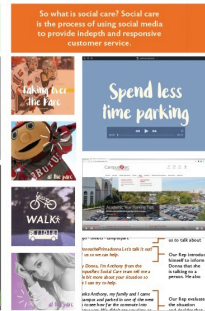
- More of a service approach to our business

Team 4
ParcPercs: intuitive parking system & delightful customer appreciation program



- Perhaps pilot PercPoints to a new customer market, such as sophomores living on campus?

Team 5
Using social care to provide responsive customer service



- Tutorial, other video content for web, social media
- Enhanced social media presence
- Seek university partners to re-tweet/repost our messages

Team 6
Memorable navigation through elements of nature



- Explore affordable, impactful ways to enhance the Cannon garages (concrete poles, walls)
- The pedestrian walkways have great potential, but may be cost prohibitive. Worth exploring

Figure 3: Final Design Presentation Overview

For the final presentations, teams presented their process and design solution as a digital presentation (e.g. Figure 3). Each was accompanied by a 3 to 5-minute video that used a narrative to realized their proposed solution. In attendance for the final presentation were members from the Department of Design, CampusParc representatives, and representatives of the The James Patient Experience team (who students worked with during their project). Documentation books were also submitted at this meeting.

This Visual Communication Design Studio exploration ended with six targeted directions for CampusParc. Some projects, like Team 2 “Brand identity update and refresh” and Team 5 “Social care to provide responsive customer service” offered insights that could be immediately adoptable. Team 5 went so far as to hand over to CampusParc a “How to” booklet the day of the final presentation. Other projects, like Team 3 “Evaluative and generative design toolkit” and Team 6 “Memorable navigation through elements of nature” offered CampsuParc a very ‘blue sky’ perspective. One thing was clear, each team offered CampusParc new design opportunities from the user-centered and service design perspectives. CampusParc left the final presentations expressing an eager excitement to meet with the design team and discuss future steps.

The CampusParc representatives responded with valuable feedback for each team from business management and strategic perspectives. Team 1 “A CampusParc brand campaign” Their recommendation reinforces the need for CampusParc to balance regulatory requirements of a parking facility with parkers need for a friendly and approachable experience. Team 2 “Brand identity update and refresh” CampusParc would be able to implement/install/apply the recommendations within constraints of budget and university policies. Realistic costs and production requirements. Proposed design prototypes are effective and relevant. Team 3 “Evaluative and generative design toolkit” Their recommendations align well with CampusParc’s business and strategic interests: possible revenue generation; contributing to a positive parking experience among key customers; enhancing the parking environment. Clear and creative visual approaches that emotionally-connect to stakeholders. Team 4 “ParcPerc, an intuitive parking system and delightful customer appreciation program” Both the university and CampusParc find the ideas appealing and of interest and benefit to key audiences. There is great potential that both CampusParc and the university would find some “news value” and benefit from the implementation of the recommendations. Team 5 “Social care to provide responsive customer service” this project provides a holistic design approach based on insightful discovery, in-depth concept exploration, and forward-thinking solutions. Team 6 “Memorable navigation through elements of nature” this project provides researched and innovative ideas that align with mission of The James and could be implemented in future garage designs and parking service for the functional and emotional needs of the hospital patients, visitors, and staff.

Outcomes

The two sponsored design research and concept exploration projects in this year-long collaboration satisfied the initial project goals to determine how CampusParc can contribute to a more positive parking experience in garages and surface lots around the campus environment. Additionally, while CampusParc knew the Department of Design had something to offer (based in part on positive past experience the Corporate Communications Director had working with the department), this was a design thinking experience with Design Research and Service Design. It was their willingness to be open to allowing the students and faculty determine each project direction that allowed the department to offer new ideas that inspire useful, useable, and delightful design solutions.

To round out the year-long project members of CampusParc and the design team met in the Spring of 2017 to discuss the outcome of these two projects and to discuss research and design approach for the next academic year. The outcomes included discovery themes, user journey maps, observation findings, problem statements, design opportunity proposals, and concept prototypes. The team identified four future project directions: 1) “Brand and Personality” to perform a comprehensive brand audit; 2) “Social Care” to build assets and infrastructure for social media efforts; 3) “Friendlier CampusParc” to potentially pilot campaigns at the Union Garage related to visitor events; and 4) “The future new garage for The James” to form a design/ technology partnership to explore virtual reality (“VR”) prototyping for future construction.

The design faculty furthered its model for collaborative research, developing meaningful coursework, and providing ‘real world’ problems in the classroom. Students were able to work with, present to, and receive feedback from design faculty and the CampusParc team. Additionally, students engaged stakeholders, university staff, and transient (visitor) parkers. By immersing students into a complex practice-based project, the students applied their design research and visual communication coursework, used service design tools, and applied design thinking methodology in environmental graphics and branding.

Future work

CampusParc is now realizing new design opportunities, embracing proposed design themes and concepts, and shifting their role from a ‘utility’ to a ‘service’ provider. This new mindset is motivating CampusParc’s focus on the entire customer journey (rather than just the parking transaction), crafting a friendly and approachable brand language that interjects a sense of delight while supporting confidence and loyalty. They are also committed to finding opportunities to collaborate with university experts to inform their decision making.

At the start of Autumn 2017 the team decided to advance “The future new garage for The James” project and formed a design/technology partnership to explore VR prototyping. A 9-month collaboration is now underway for “Human-centered and desirable parking experience”.

This is a collaboration currently has 23 team members from parking system management, patient experience experts, OSU faculty and students, design practitioners, and technology application developers identifying core design values to create a holistic user journey by exploring physical and emotional experiences related to the future parking experience at The Ohio State University.

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