

**Using Communication to Reducing Littering and Illegal
Dumping
Spring 2017
Department of Communications
PIONEERS FOR SUSTAINABLE COMMUNITIES REPORT**



[This page intentionally blank]

ACKNOWLEDGEMENTS

This report was made possible by the collaboration and support of the City of Hayward, including:

The City Council: Barbara Halliday (mayor), Sara Lamnin, Francisco Zermeno, Marvin Peixoto, Al Mendall, Elisa Marquez, and Mark Salinas

The City Manager, Kelly McAdoo

Managements Analyst, Laurel James (and P4SC program coordinator for the City)

City Employees who helped plan and implement the projects: Erik Pearson, Mary Thomas, and Jeff Krump

This pioneering year of P4SC would not have been possible without the generous support of Cal State East Bay President, Leroy M. Morishita.



About Pioneers for Sustainable Communities

Pioneers for Sustainable Communities (P4SC) is a year-long partnership between Cal State East Bay and a community partner that represents local or regional government. P4SC is one of a network of campuses nationwide—the EPIC-N Network—that have adopted a model of using course-based, faculty-lead, student research to support the sustainability goals of local communities. P4SC focuses on sustainability, social justice, and quality of life in the San Francisco East Bay region. It leverages the expertise of faculty and the enthusiasm, time, and innovative ideas of students, providing thousands of hours of research to support local partner sustainability programs including: data acquisition and analysis, stakeholder surveys, geo-spatial mapping and referencing used to establish socio-environmental baselines, track progress, and facilitate planning and communications.

- **P4SC Reports** present the final results of one or more full-time equivalent courses devoted to a single P4SC project.
- **P4SC Mini-Reports** present the results of partial courses devoted to a PSC project, typically used for projects in progress.

About Cal State East Bay

Cal State East Bay's beautiful main campus is located in the Hayward hills with panoramic views of the San Francisco Bay shoreline. Situated above the city of Hayward, the campus offers an ideal setting for teaching and learning and yet easy access to the many cities along the bay. The University has a satellite campus in Concord, a professional development center in Oakland, and a significant presence online. Founded in 1957, Cal State East Bay is one of 23 universities of the California State University system (CSU). With an enrollment of over 15,800 students, Cal State East Bay is recognized as a regionally engaged and globally oriented university with a strong commitment to academic innovation, student success, engaged service learning, diversity, and sustainability.

P4SC Directors and Staff

Karina Garbesi, P4SC Co-Director, Professor and Director of the Environmental Studies Program, Department of Anthropology, Geography, and Environmental Studies, Cal State East Bay

Craig Derksen, P4SC CO-Director, Assistant Professor of Philosophy, Department of Philosophy, Cal State East Bay

Audrey Wade, P4SC Program Coordinator, Cal State East Bay

With support from Jillian Buckholz, Director of the Office of Sustainability

About the City of Hayward

The City of Hayward was incorporated in 1876. With a population of 150,000, Hayward is the sixth largest city in the Bay Area and proudly the second most diverse City in California. A Charter City, Hayward operates under the Council-Manager form of government with a directly elected Mayor and six member City Council. Hayward is a full service City comprised of thirteen departments providing services ranging from public safety and public works to library and community services. The City strives to be a safe, clean, green, and thriving community for all of its residents. To learn more about the City of Hayward, visit www.Hayward-ca.gov.



Using Communication to Reducing Littering and Illegal Dumping

REPORT AUTHOR(S)

Janelle Laberinto McCarthy

Niara Williams

COURSE PARTICIPANTS

P4SC Instructor

Lonny Brooks Ph.D.

Associate Professor of Communication

P4SC Student Participants COMM 4107 Relational Communication in Organizations (Spring 2017) including:

First Name	Last Name	Project	Innovation Role
Heidi	Mackintosh	Hang Tag	Storyteller
Kaboua	Lo	Hang Tag	Collaborator
Benjamin	Hawklyn	Hang Tag	Collaborator
Nicholas	Sears	Hang Tag	Cross Pollinator
Jessica	Irrera	Hang Tag	Caregiver
Robert	Sharkey	Hang Tag	Anthropologist
Brenda	Brown	Illegal Dumping	Hurdler
Janelle Christine	Laberinto	Keep Hay Clean	Experimenter
Ryan	Edmonson	Keep Hay Clean	Anthropologist
Niara	Williams	Keep Hay Clean	Set Designer
Jordan	Beveridge	Keep Hay Clean	Storyteller
Melissa	Medina	May 13 cleanup	Storyteller
Juana	Davila	May 13 cleanup	Collaborator
Paul Andrew	Morrison	May 13 cleanup	Storyteller
Dannie	Carman	May 13 cleanup	Director
Kahealani	Simmons	May 13 cleanup	Caregiver
Amy	Hoang	May 13 cleanup	Hurdler
Nathalie	Saravia Razo	May 13 cleanup	Set Designer
Joshua	Lo	May 13 cleanup	Collaborator
Julieanna	Navarro	May 13 cleanup	Collaborator
Mitchell	Scorza	May 13 cleanup	Director
Kyle	Van Schaack	May 13 cleanup	Cross Pollinator
Jessica	Allman	May 13 cleanup	Anthropologist

Cesear	Saavedra	Ride Along	Experimenter
Briana	Williams	Street Team	Set Designer
Robin	Craig	Street Team	Storyteller
Justin	Aguilar	Street Team	Collaborator
Davon	Gray	Street Team	Director
Logan	Key	Street Team	Anthropologist
Jennifer	Cao	Street Team	Caregiver
Karina	Flores	Street Team	Cross Pollinator
Najma	Amiri	Street Team	Storyteller
Pamela	Simeon		

TABLE OF CONTENTS

Objectives

City of Hayward Projects and IDEO Human Centered Design (HCD) Processes

IDEO and Human-Centered Design

Student Experiences

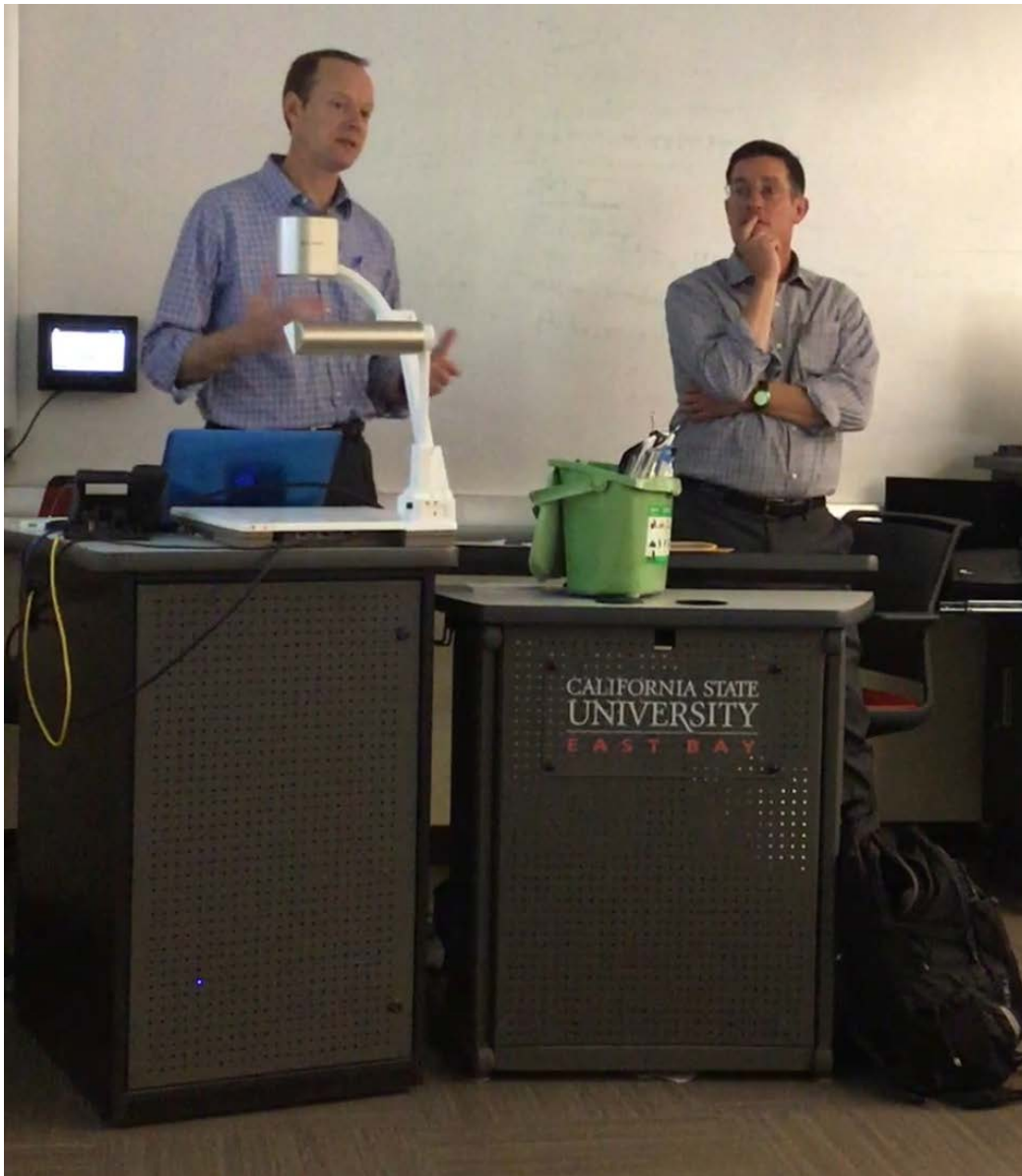
HCD Storyboards

OBJECTIVES

Deploy work done in the field of Communication to the projects and problems associated with littering in the city of Hayward, thus giving the students a chance to apply their knowledge and contribute to valuable projects.

The final deliverable in collaboration with the city of Hayward is to produce a five minute film highlighting the projects associated with littering and composting with a particular emphasis on city worker, staff, volunteer and student experiences. This film is part of a campaign to engage the local community in carrying out sustainable practices. This film will be submitted in September 2017 as an addendum to the report.

CITY OF HAYWARD PROJECTS AND IDEO HUMAN CENTERED DESIGN (HCD) PROCESSES



Eric Pearson and Jeff Krump presenting City of Hayward project initiatives to students in COMM 4107.

By using a human-centered design (HCD) approach, inspired by IDEO.org (a prominent design firm and socially aware organization dedicated to solving industrial and human design problems), students learned about the challenges facing the City of Hayward with respect to anti-littering and anti-dumping. At the beginning of the course City of Hayward employees Erik Pearson and Jeff Krump informed the class about the projects of the city and framed the issues. The City of Hayward asked us to create a film that would help inform the public about the issue and transform their behavior with respect to these issues. Rather than creating slick branding messages that can seem inauthentic about the challenge at hand, we decided to highlight the unique and invaluable perspectives of workers, expert staffers, community volunteers and student researchers/volunteers as they engaged in a number of city projects that address these issues. We wanted to reveal and highlight the complicated nature of the problem, the challenging nature of the issues, what the workers experience daily as they engage in constant struggle with littering and dumping, the dedicated community spirit of the volunteers and students in finding and implementing solutions. In order to do this, students used ethnographic (participant observation) methods of documentation including film and community engagement to reveal what the city does to address recycling, littering and dumping.

a) The groups formed in COMM 4107 (Relational Communication in Organizations) began to work toward solutions to the issues of recycling, littering, and dumping in the City of Hayward by coming up with ‘How Might We’ questions that needed to be answered, using IDEO HCD. The three questions below capture the essence of the initiative projects presented by Erik Pearson and Jeff Krump.

1. “Every small change towards a purpose adds up to tremendous shift. How might we engage those who are aware of the negative impact of dumping, unnecessary waste, and other environmental hazards, yet does not make changes in their actions because they believe what they do or don’t do is of little impact to the overall cause?” - Angilee Stokesberry, Waste Not Want Not
2. “How might we communicate the significant environmental impact of littering to the residents of Alameda County while also providing simple, visible, and well-distributed dumping options for all residents?” - Melissa Medina, Fate of the Waste
3. “How might we get more individuals out into the public to become aware of these environmental problems that harm the world and those currently living in it? In other words, how might we get others to sympathize with those experiencing

lesser quality living than them and want to make change?” - Julieanna Navarro,
Waste Side Story

The Student Group teams and their Members

(some members of each team worked on different Hayward city projects to provide diverse insights in order to provide and document multiple perspectives)

The Green Initiative – Jordan Beveridge, Ryan Edmonson, Janelle Laberinto, Niara Williams

Waste Not Want Not –Justin Aguilar, Brenda Brown, Robin Craig, Angilee Stokesberry, Briana Williams

Fate of the Waste – Dallas Crudupt, Juana Davila, Melissa Medina, Rebecca Olmos, Andrea Gonzalez

Waste Side Story – Jessica Allman, Julieanna Navarro, Mitchell Scorza, and Kyle Van Schaack

Big Fluffy Pandas – Paul Morrison, Kahealani Simmons, Nathalie Razo, Dannie Carman, Amy Hoang, Joshua Lo

Downtown Streets Team – Jennifer Cao, Logan Key, Davon Gray

Hang Tag Project – Robert Sharkey, Benjamin Hawklyn, Nicholas Sears, Jessica Irrera

Bulky Trash Pickup – Heidi Mackintosh, Cesar Saavedra, Faboua Lo, Pamela Simeon

IDEO AND HUMAN-CENTERED DESIGN

IDEO.org defines human-centered design as “a creative approach to problem solving and the backbone of our work at IDEO.org. It’s a process that starts with the people you’re designing for and ends with new solutions that are tailor-made to suit their needs. Human-centered design is all about building a deep empathy with the people you’re designing for; generating tons of ideas; building a bunch of prototypes; sharing what you’ve made with the people you’re designing for; and eventually putting your innovative new solution out in the world.”

In essence, human-centered design is designing with specific people in mind. How will the designs of products, services, spaces, or systems affect the people they are being designed for?

There are three phases to the HCD process: Inspiration, Ideation, and Implementation.

1. Inspiration: Immerse yourself in people’s lives to truly understand their needs
 - a. Choose a design challenge
 - b. Plan your research methods (interviews, ethnography, etc)
 - c. Build an interview guide
 - d. Explore additional research methods
 - e. Capture your learnings
2. Ideation: Analyze what is learned from the Inspiration phase, identify opportunities for design, and prototype possible solutions
 - a. Brainstorm multiple ideas and select the most promising ones
 - b. Determine what to prototype using storyboards
 - c. Create a prototype
 - d. Test the prototype and receive feedback
 - e. Revise the prototype using the feedback and iterate
3. Implementation: Bring solution to life

In order to find a solution to the anti-littering/dumping issue in the City of Hayward, the students of Comm 4107 participated in various cleanup activities around Hayward, recorded their experiences, and created storyboards using IDEO HCD to bring about change. The storyboard ideas were organized into three categories:

1. Awareness

- a. Create a powerpoint presentation to garner more attention that is distributed amongst different schools
 - b. Community outreach to neighboring cities
 - c. Social media campaigns for upcoming cleanup events
 - d. Seek local news media coverage
 - e. Mailed flyers for upcoming cleanup events
 - f. Accessibility to proper separated trash bins throughout the entire city, not just highly populated areas
2. Education
- a. Early education in elementary and middle schools
 - b. Create programs at public schools for children and teens to take part in during the summer - high schools for credit and community service hours
3. Visuals
- a. Revamp website and give it a place of prominence on social media
 - b. Create a recycling tracking app for people to receive gift cards for actively recycling
 - c. Signs and hang tags are unobtrusive ways to educate people on proper dumping habits
 - d. Mailed newsletters highlighting outstanding residents who are already keeping Hayward clean and green
 - e. Commercial advertising the importance of keeping Hayward clean with a catchy slogan

STUDENT EXPERIENCES

The students had a variety of experiences and reflections on them.



How might we... see a change that takes hold in the practices of disposing of waste in the people of Hayward, that they themselves may propel the movement for themselves and generations to come? How might we keep the people of Hayward involved and stay involved for their own future's sake in regards to cleaner waste practices?



The Green Initiative participated in the Keep Hayward Clean & Green Task Force event at Weekes Park in Hayward, CA on April 22, 2017. Waste Side Story participated in the Keep Hayward Clean & Green Task Force event at Weekes Park in Hayward, CA on May 13, 2017. With their “How Might We” questions in mind, they participated in picking up trash and interviewed staff members and CSU East Bay students. Waste Side Story created a video of their experience.

How might we... discourage and enforce illegal dumping? How might we ensure that all Hayward residents are aware of their options to properly dispose of unwanted bulky items and litter?



Ultimate impact would be money better spent on more worthy expenditures. The impact would be spending the money collected from violators to promote programs and relieve taxpayers.

Waste Not Want Not also participated in the Keep Hayward Clean & Green Task Force event on May 13, 2017. They captured their experience through photographs. They saw items left behind on the sidewalks for weeks before being picked up. The above photograph shows items left on the sidewalk in the Hayward Hills near CSU East Bay. They also created a prez presentation to show their findings.

<https://prezi.com/view/OCPEjQSs9JypftujT9nw/>

How might we... communicate the significant environmental impact of littering to the residents of Alameda County while also providing simple, visible, and well-distributed dumping options for all residents?



Fate of the Waste documented their experience at the May 13, 2017 clean up event through photographs.

Ryan Edmonson: “My experience participating in the Keep Hayward Clean & Green Event was fulfilling. Upon arriving to the event, I was surprised to find out how many people actually participated. It wasn't until we finished cleaning that I found out during our interview, a lot of the participants are from CSUEB. The keep Hayward Clean & green actually relies a lot on the relationship with CSUEB. I'm not sure if they have the same relationships with Chabot and the surrounding Hayward high schools who need community work service hours, but I definitely think it would grow the program, as I didn't speak to anyone from these institutions. I found out that there was some confusion as to what we were doing. There was actually a woman that stopped traffic to ask us what we were doing. While some people were happy to see people cleaning and would give us smiles and thumbs up as they honked their horns, others thought we were serving some type of community service because we had committed a crime.

I think that the outskirts of downtown Hayward would benefit from cleaner, and more accessible garbage cans. They were few and far between when we were cleaning our areas. Ironically, when I went to my friend's daughter's birthday in the Hayward hills, that wasn't the situation. Not only were the receptacles clean and not overflowing, there were also recycling bins as well. My friend chose the park because only the people in the area knew about it, making it less traveled. It was ironic, because the area we were cleaning was more frequented, yet, I didn't see any recycling bins, and the garbage cans were dirty and overflowing. If someone wanted to dispose of their waste in a proper way, it might not even be a possibility. I definitely think there's room for growth in these areas, but again, I'm pleased with my experience."

Students read and reflected upon how to assist people in transforming behavior by reading the work by Chip and Dan Heath, *Switch: How to Change Things When Change Is Hard*.

Niara Williams "As we take away from chapter one, I can identify with ways to improve my own behavior and thought process. As different as the rational and emotional system may sound, these systems need to balance in order to pass change through people and organizations."

Dallas Crudupt "Behavior is a habit we learn behavior and technologically improve it."

Rebecca Olmos "The biggest insight about the switch was the use of the elephant and the rider to represent the emotion and rational parts of your brain. It gave a visual of how difficult it could be to control your emotions when trying to change. I also thought it was interesting that they say laziness is often exhaustion because of self control. Self control is a resource that can be used up. I never thought that controlling yourself, but with the visual, it's much easier to understand the connection. I am interested to see what other insights this book can teach me about change"

Melissa Medina: "My main take away from chapter one is that if you want to spur change, you not only need to convince the person/organization involved in a logical manner, but also appeal to their emotions as well as show them logistical steps necessary to make the change. Chip and Dan Heath go on to explain that this is due to the fact that the brain is comprised of two distinct and independent systems: the rational and the emotional. There is often tension between these systems, as they each seek different goals. While the rational mind is able to set and pursue goals based on logical outcomes, the emotional mind tends to chase feelings, most often pleasure-based or pain-avoidant. Therefore, if you want to change behavior, both systems must be on

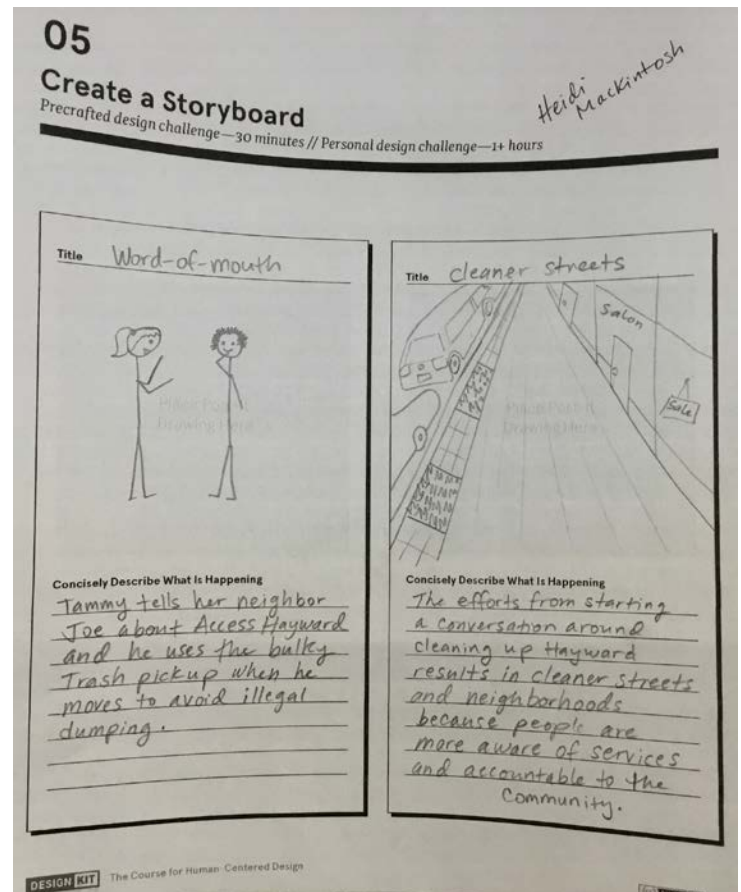
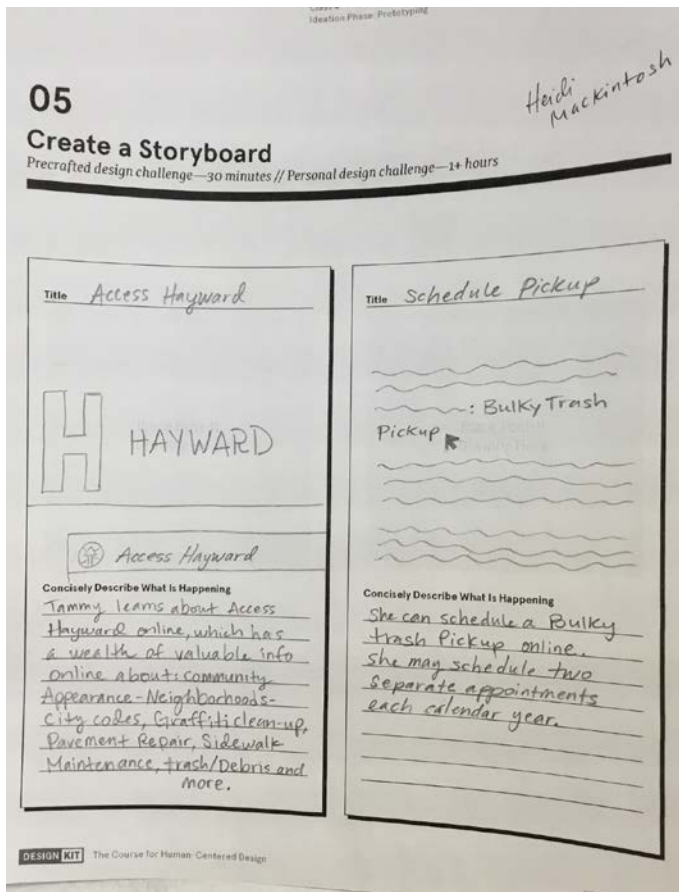
the same page. The Heath brothers introduce a great analogy to illustrate this concept, wherein the emotional mind is represented by an elephant, whereas the rational mind is compared to the rider of the elephant. This analogy gave me an idea of just how little control the rational mind has when the emotional mind wants to stray. This analogy reminded me of the times when I'm on a diet and my rational mind is on board, yet my emotional mind has other plans. The only way to succeed in this scenario, as with all the scenarios presented in this chapter, is to get the elephant on the same page as the rider (for example, by reminding the elephant of the feeling of long-term success). The other important element Dan and Chip note is to lay the path, meaning to set up an environment where success can be achieved easily. All in all, the Heath brothers made a great case for the fact that when the rational and emotional minds are in opposition, change is almost impossible; however, when the rational mind is clear, the emotional mind is on board with the rational mind's goal, and a clear path to success is laid out, enormous change is possible."

HCD STORYBOARDS

Project Storyboards from Illegal dumping to Hang Tagging

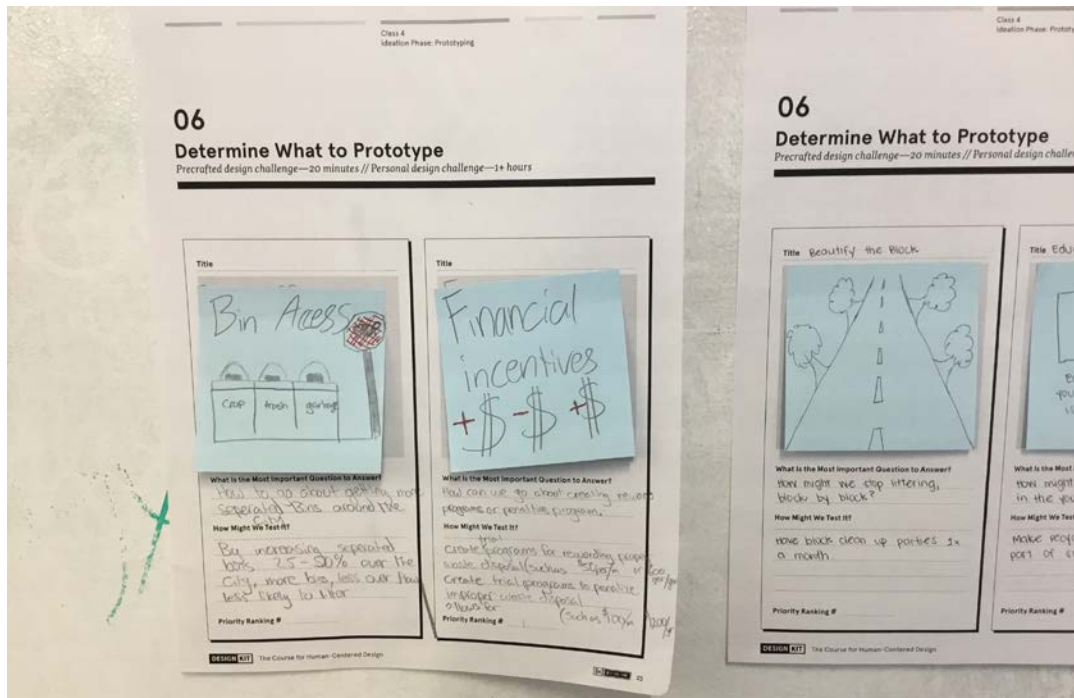
The storyboard presentations were used to illustrate the path towards community involvement. Storyboards were used to capture student project experiences as a method to organize the scenes for the final film in development and to provide a blueprint for the student film editors to follow.

How might we raise awareness among the residents of the negative effects of dumping?

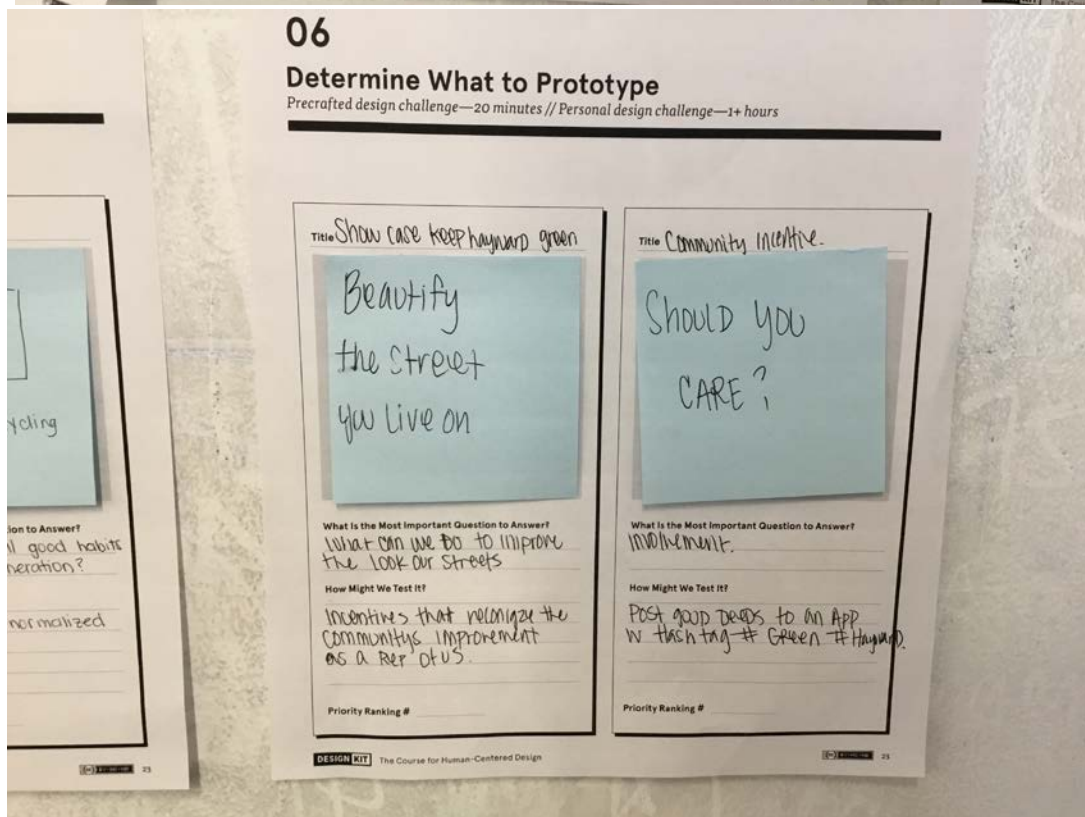
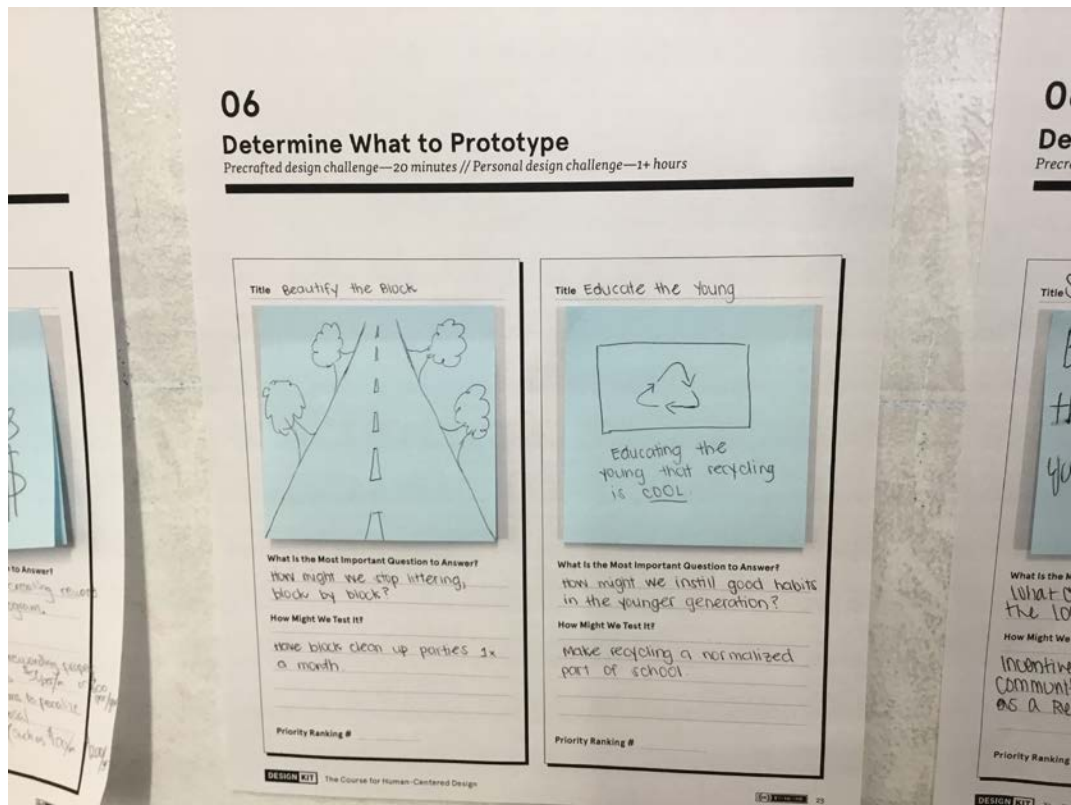


By visiting Access Hayward (<http://user.govoutreach.com/hayward/faq.php>), residents of Hayward can schedule bulky trash pickup. Through word-of-mouth about the effects of illegal dumping on the community of Hayward, residents can create cleaner streets.

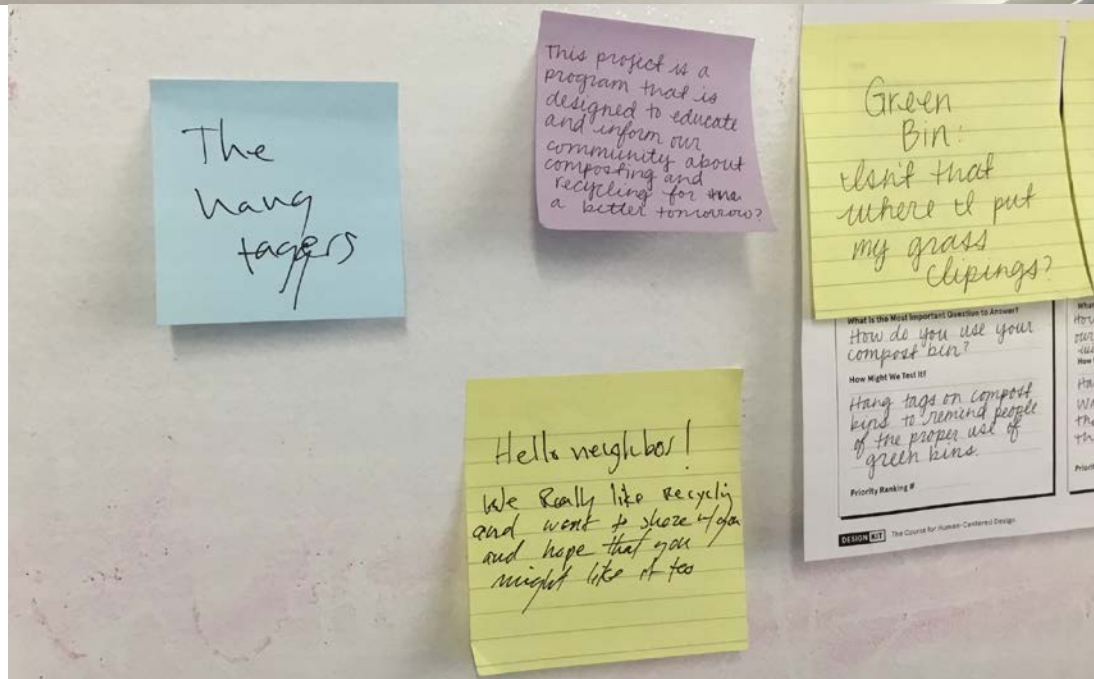
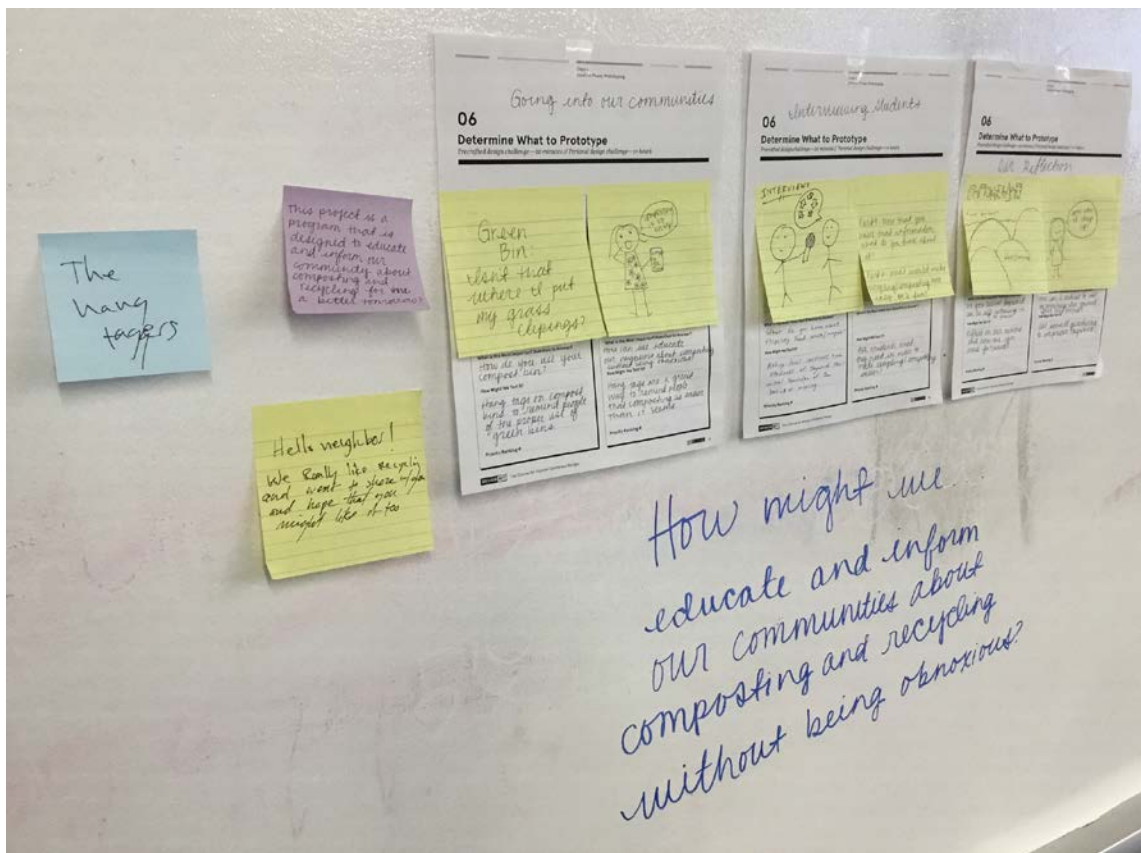
Goal: To Change the Dumping Habits of the Citizens of Hayward



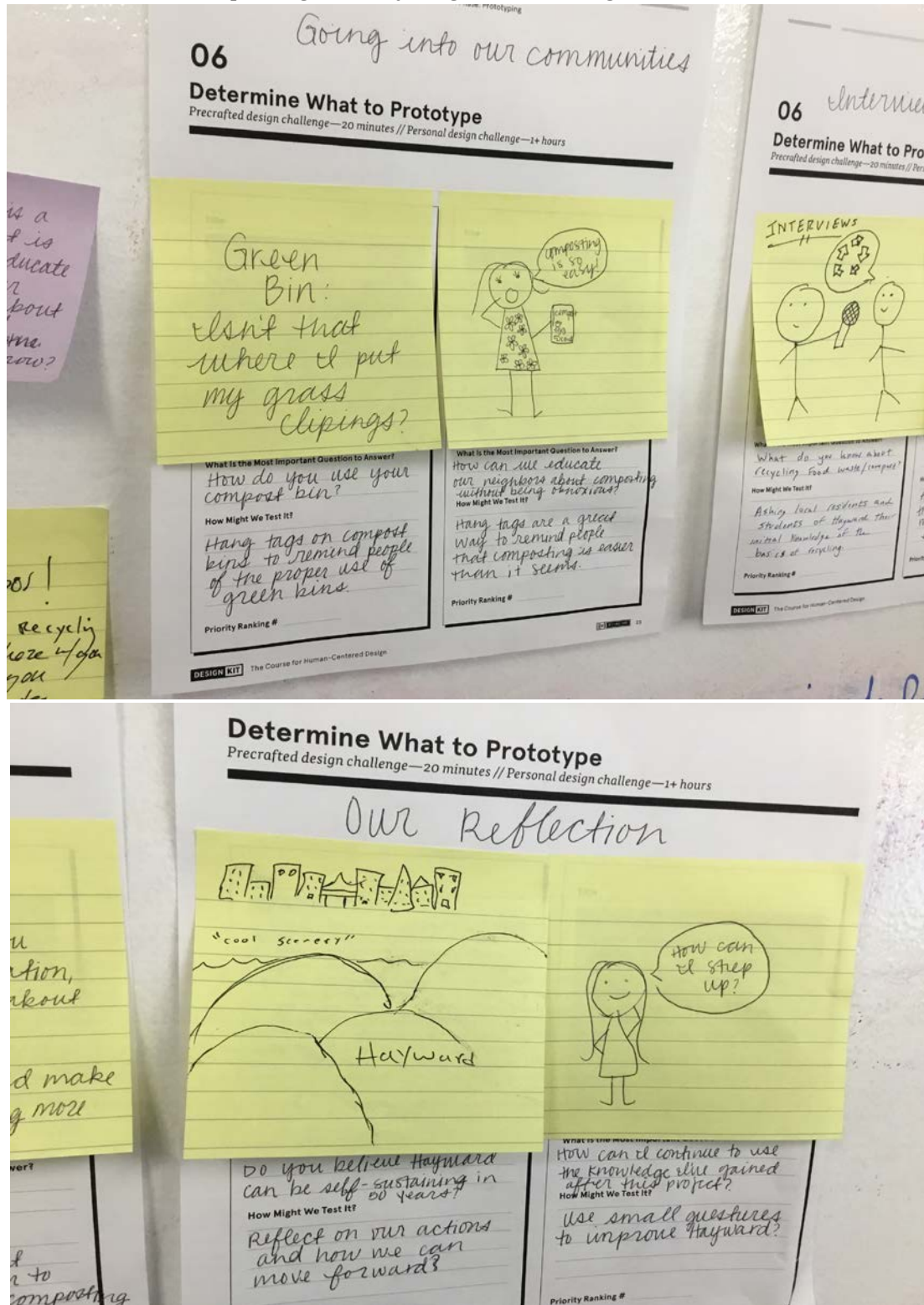
To change the dumping habits of the citizens of Hayward, better bin access and financial incentives should be utilized.



Make it a Mission to Beautify the City, One Street at a Time.

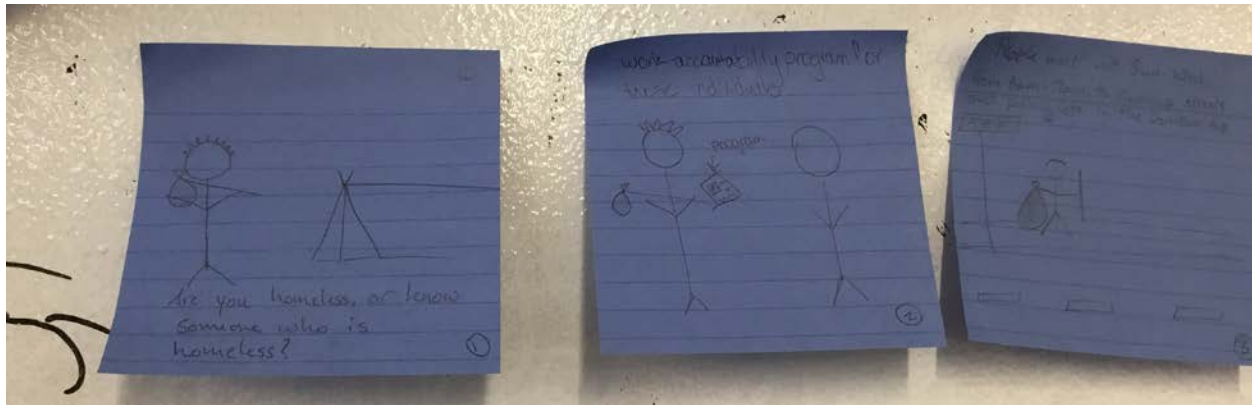


The Hang Taggers want to know, “How might we educate and inform our communities about composting and recycling without being obnoxious?”

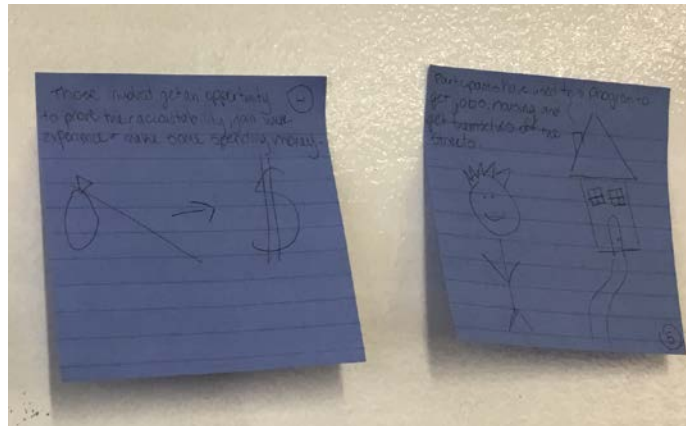


Informational hang tags on people's garbage bins help them sort their trash into their respective bins.

How Might We Inform More Homeless People about the Downtown Streets Team



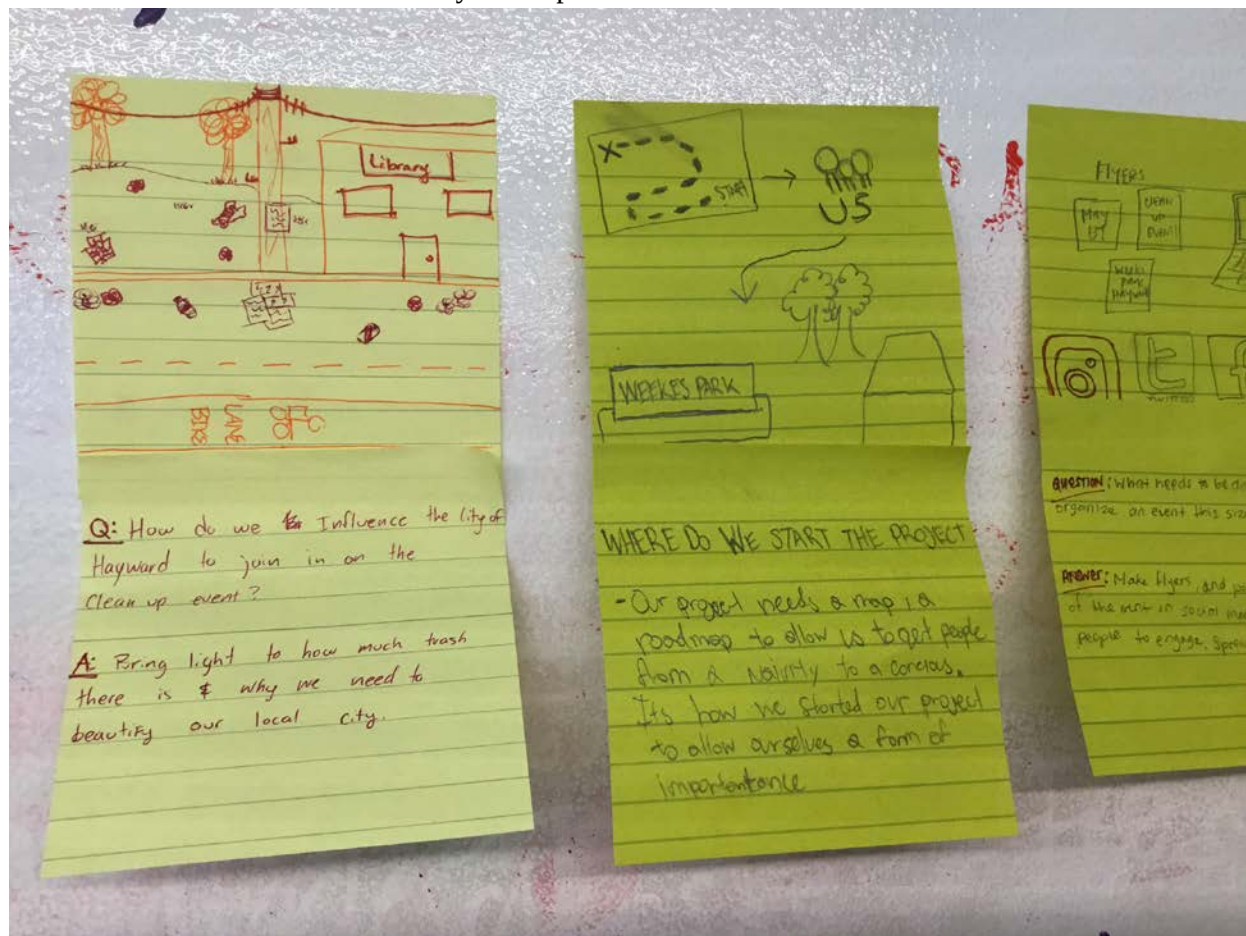
Through word-of-mouth, the homeless population can learn about opportunities to clean up their communities for work experience and resources.



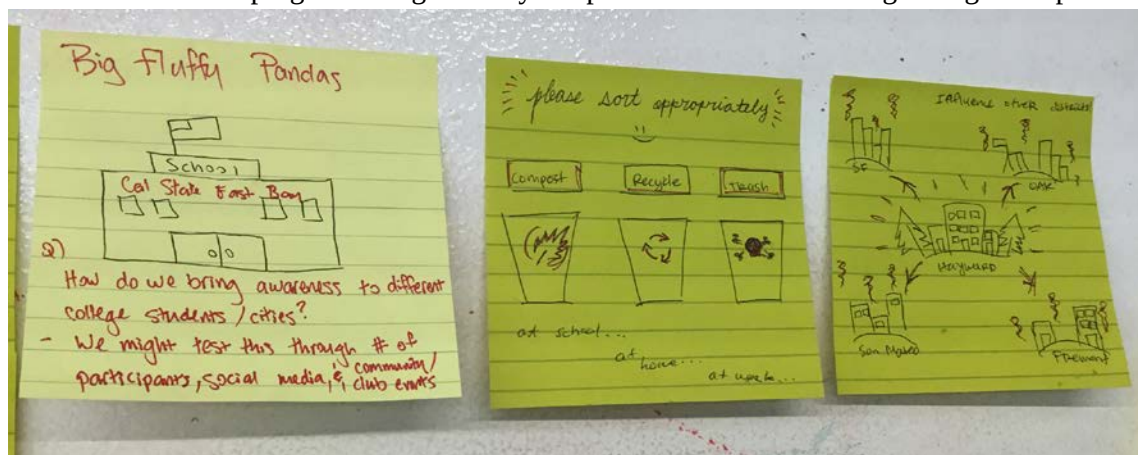
Volunteering to clean up streets and parking lots in Downtown Hayward has afforded homeless individuals the opportunity for jobs, money, and housing.

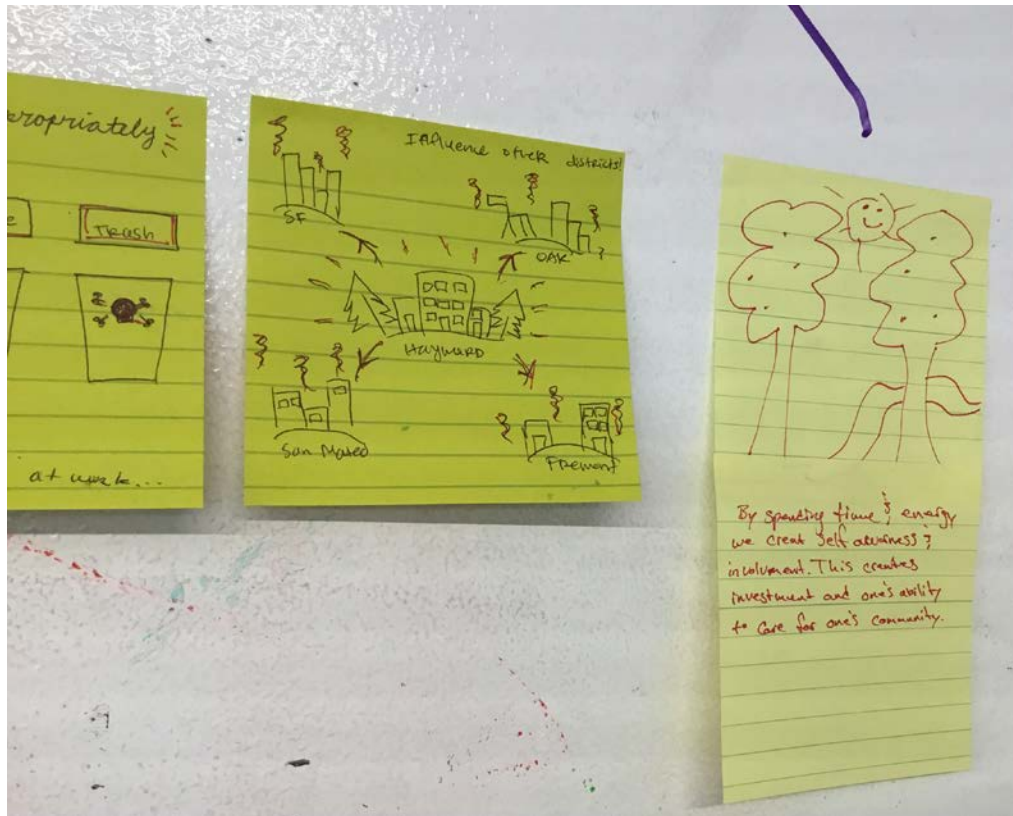
How Might we Bring Recycling Awareness to College Students and Cities?

How can Hayward spread awareness to other cities?



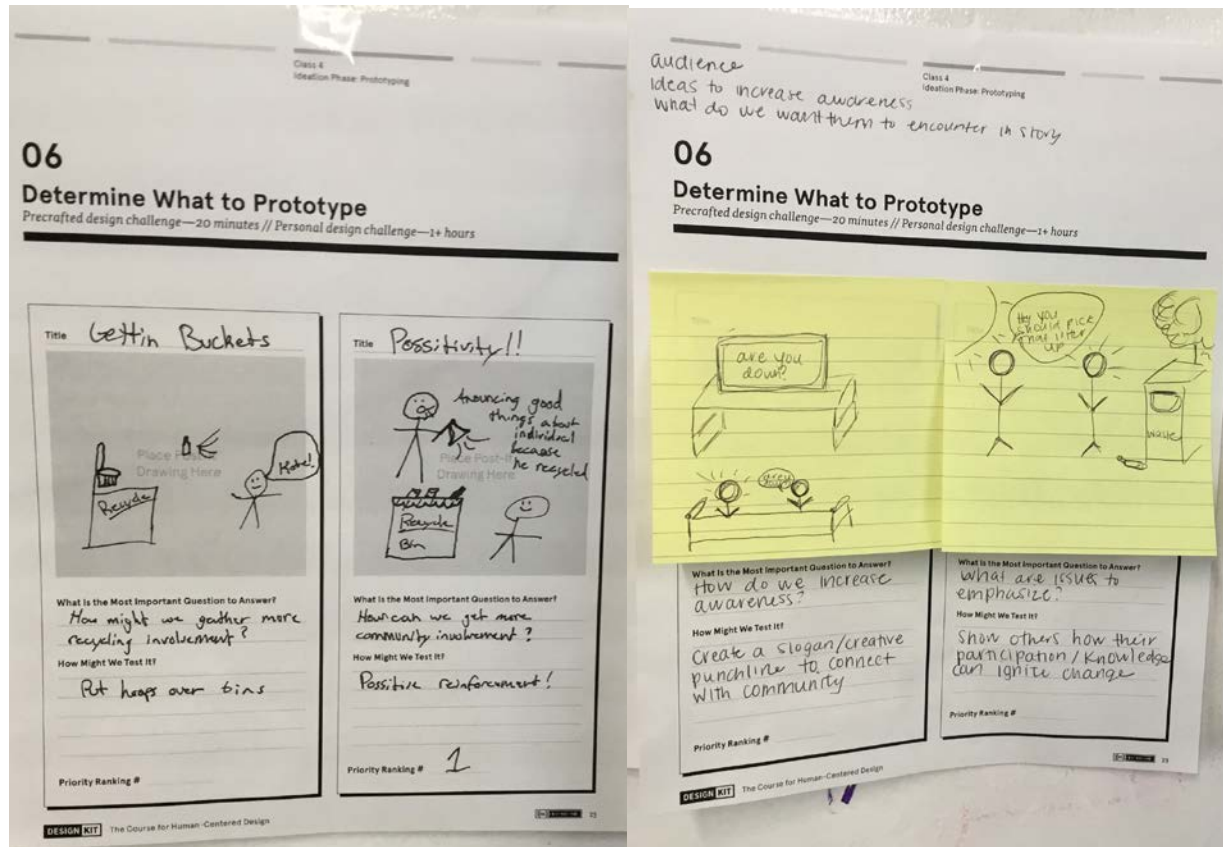
The Big Fluffy Pandas participated in the Keep Hayward Clean & Green event on May 13th. Social media campaigns are a good way to spread awareness among college campuses.



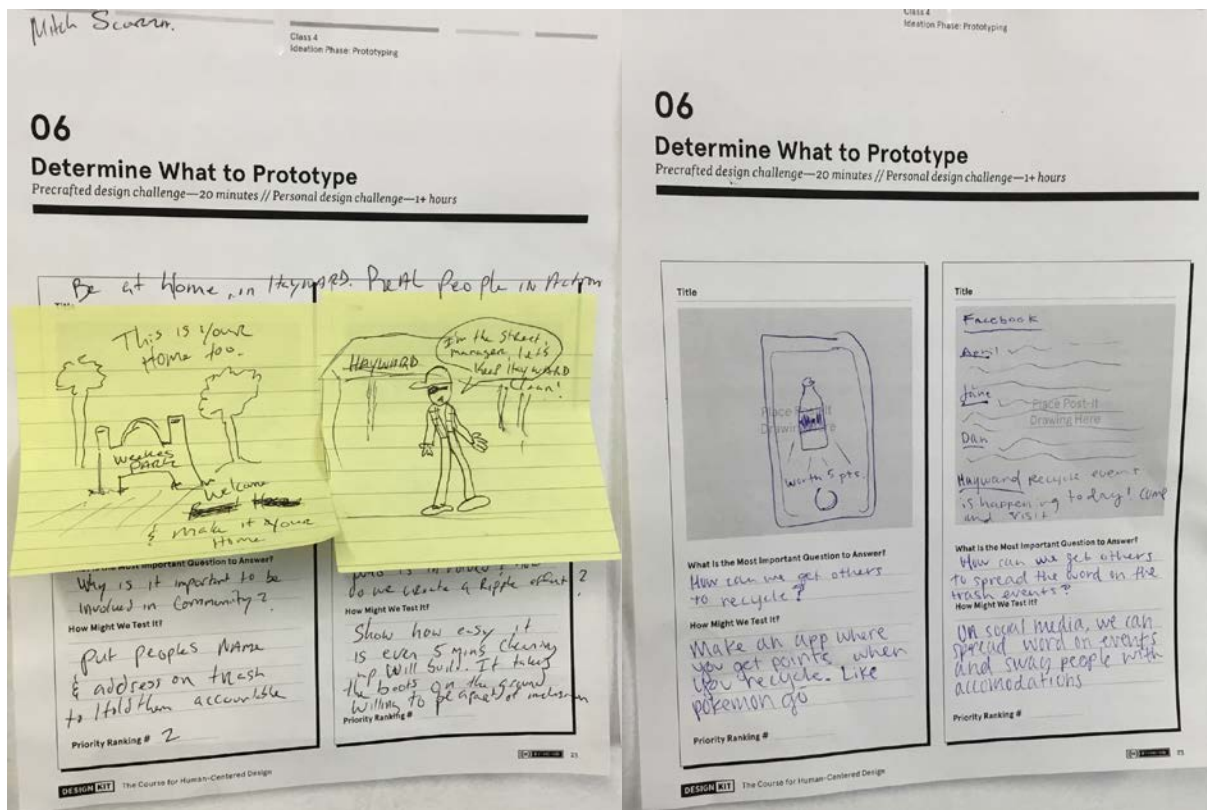


Self-awareness and individual involvement can jumpstart community involvement.

How Might we Create a Ripple Effect of Involvement Using Very Little Individual Time to Create Maximum Output by Connecting Common Ground?



Educational recycling games and positive reinforcement can get children involved.



Create a catchy slogan to connect the community and build an accessible mobile app recycling game. Hold each other accountable.

Final Student Video Pitches

Each student team presented a pitch, the value proposition of their project that encapsulated the meaningful impact of the City of Hayward project they had worked on in conjunction with developing a storyboard that captured their experience for the film in development. Student teams shaped the final outcome and editing of the five minute film reflecting on the variety of their shared experiences and to influence community members locally and regionally who will likely view the final video. Students presented their pitches, that were documented on video and that will appear in the film, by answering the question: What kind of impact do you want to make as part of your project team (social impact, personal impact, local/community impact, environmental impact, etc.)? What is your one-minute value proposition for your team's work this quarter? In the wake of the U.S. decision not to continue the Paris Climate Accord, smaller scale actors have arisen in our nation to continue with the Paris Climate Accord protocols. California has led the path in this effort and with this project, local stakeholders such as the City of Hayward with our student Pioneers for Sustainable Communities, are making a generational and sustainable pathway for a carbon neutral future.

The Communication VideoLab editors are reviewing the storyboards our students have created along with the compilation of student photo and video footage gathered to edit the final video deliverable and share out.



Logan Key (the student team leader) and his final pitch of the team's storyboard ideas for the Pioneers For Sustainable Communities film for the City of Hayward.



Niara Williams (the student team leader) and her final pitch of the team's storyboard ideas for the Pioneers For Sustainable Communities film for the City of Hayward.



Andrea Rodriguez (the student team leader) and her final pitch of the team's storyboard ideas for the Pioneers For Sustainable Communities film for the City of Hayward.



Mitchell Scorza (the student team leader) and his final pitch of the team's storyboard ideas for the Pioneers For Sustainable Communities film for the City of Hayward.



Paul Morrison (the student team leader) and his final pitch of the team's storyboard ideas for the Pioneers For Sustainable Communities film for the City of Hayward.

Conclusion

The primary deliverable, to conclude our design process, is to develop a short five-minute film (to be delivered to the City of Hayward in September 2017) by representing the lived experience of workers, volunteers and students involved in sustainable projects with the City of Hayward and our CSUEB Pioneers for Sustainable Communities project. The film will communicate with authenticity the story of our collective efforts in the often messy, worthwhile and global saving effort of littering and composting worth our time and community building efforts. We used the Human centered design approach of IDEO to study the user experience in its many dimensions and facets in the collective experience of recycling, composting and anti-illegal dumping and anti-littering messaging. The film and footage is vital in documenting how our urban lives are transforming into more conscious, environmentally aware citizens and members of an interconnected ecological landscape locally, regionally and on a global level.