

Redefine, Redesign

Information Station for the Homeless

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Abstract

Redefine, Redesign purposes itself with creating a medium capable of promoting the dissemination of information to newly homeless individuals, all the while unifying the general community with that of the homeless.



Introduction & Problem Statement

The Storyboard is an information station designed for the homeless community, containing cards with information within compartments along the main body, as well as "at a glance" information on its front panel.

The Storyboard is designed to respond to the problem of poor communication and dissemination of information in regard to resources for the newly homeless while also creating a connection between the homeless and non-homeless communities that interact with the product.

The problem statement our team set out to respond was the following:

"What medium can we design to address the poor communication and circulation of information within the homeless community in regards to accessibility to adequate resources for the newly homeless? In what manner can we foster a safe environment for them so that they can have peace of mind and feel more inclined to ask for help when they need it?"

I was team lead for the duration of the project, and spent a majority of my time organizing our project as a PM, as well as doing all of the CAD modeling & most of the prototyping for our high resolution prototype.

The Storyboard was developed as a project in the Third studio of the DIS Studio Series. The premise of the project was a semester-long assignment where we were tasked with creating a product that would "integrate and balance safety, community, and connection".

Design Process

Background Research & Ethnography

Given the prompt of working with community and connection, my team quickly honed in on the homeless community as one we wanted to design for. As such, we did extensive research on a national level pertaining to the metrics that define homelessness, and corroborated that research with ethnography we conducted in downtown Troy, NY. The photo below shows a Troy PD officer eating with a homeless individual in town.

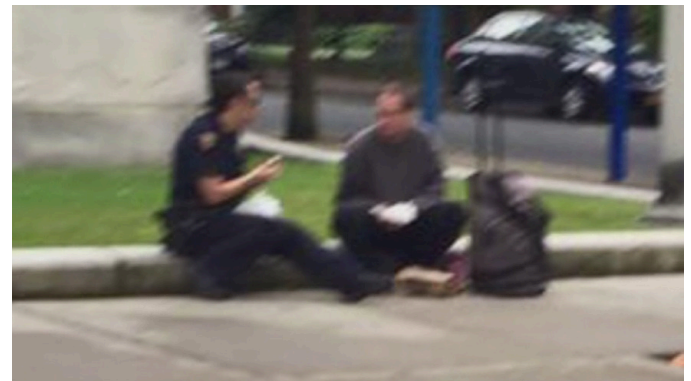


Figure 1 - Troy PD and Homeless Interaction

Ideation

Having determined the problem for which we would be designing, we set a list of priorities and constraints for our product, and ideated 7 different concepts. All of the concepts were limited to the boundaries of using little to no technological components, using a small form factor, and making sure that they were water and weatherproof. Some of the product ideas are shown here.

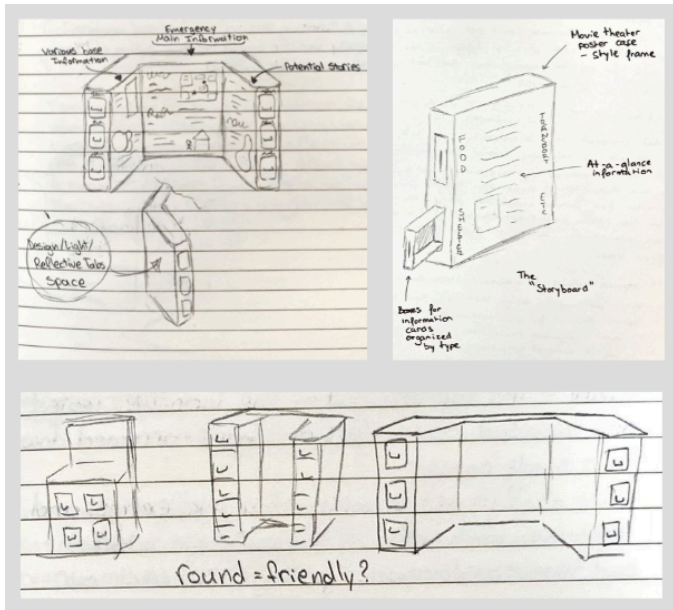


Figure 2 - Concept Sketches

more rounded frame due to its better visual appeal, friendlier appearance, and easier use.



Figure 5 - Models of Prototypes

Design & Prototyping - Iteration 1

After ideating, we evaluated which concept was most fitting for the project using multiple factors all laid out in a Pugh Matrix. Our design concepts came down to two, and we chose the storyboard as our solution due to its effectiveness at working with the already pre-established flows of information that existed within the homeless community.

	Practicality	Efficiency	Ease of Use	Cost	Durability	Maintenance	Feasibility	Total
Storyboard	X	✓	X	X	✓	✓	X	3
Slider Tablet	✓	X	✓	✓	X	X	✓	4

Figure 3 - Pugh/Decision Matrix 1

Having made this evaluation, we moved into the prototyping phase to visualize the potential shapes for the frame of the storyboard as well as to consider what different drawer configurations could look like.



Figure 4 - Prototype 1A, 1B, and 1C

To better visualize the different frame and drawer designs before we moved to our second iteration, we created CAD models and renders of the two different types of frames we'd prototyped for the storyboard. We decided on the

Design & Prototyping - Iteration 2

To better assess the four different drawer designs we had previously sketched out in our first iteration, we made a medium-resolution wood prototype. We tested three types of drawers: a hinged drawer, an open face drawer, and a spring-loaded drawer. We again used a Pugh matrix to decide on what drawer configuration we wanted to use for our product, as shown below.



Figure 6 - Prototype 2

	Practicality	Storage Capacity	Ease of Use	Simplicity	Maintenance	Signifiers	Visibility
Hinge	X	X	X	X	✓	✓	X
Open Face	✓	✓	✓	✓	X	X	✓
Spring	X	X	X	X	X	X	X

Figure 7 - Pugh/Decision Matrix 2

Having decided to use the open faced drawers, we then began considering how we wanted to disseminate the information through a portable medium. We had extensive discussions and ethnography to determine what tool we could use. The 50/50 split in ethnography coupled with our comparative analysis led us to choosing cards as the medium over banner pens, lanyards, or wallets.



Figure 8 - Information Dissemination Modes

Design & Prototyping - Final Iteration

Having made our decisions on specifics of the design in our second iteration, we moved forward to making a high resolution, full scale, and fully functional prototype of the storyboard. we also created high resolution models of the cards, as well as the front poster, as to give a fully-working and complete model of the storyboard.



Figure 9 - Beauty Shots of Storyboard Prototype



Figure 10 - Beauty Shots of Information Cards

Moving Forward & Next Steps

Although we have created the design within the scope of Troy, in looking to the possibilities for the future of our project and for Redefine, Redesign, we've considered a multitude of factors, including cost (through a cost report), and branding & marketing.

System	Subsystem	Part	Size	Cost (\$)	Count	Total Cost	Time Allocation (hrs)
Physical	Frame	Pressure-Treated Wood	1" x 6" x 8'	15	2	30	N/A
Physical	Frame	Panelboard	30" x 60"	15	1	15	N/A
Physical	Frame	Screws	#8 x 1.5	10	Box of 55	10	N/A
Physical	Frame	Plexiglass	30" x 60"	15	1	15	N/A
Physical	Frame	Stain	1 qt	15	2	30	N/A
Physical	Frame	Assembly	N/A	0	N/A	N/A	5
Physical	Drawers	Wood	1/8" x 6" x 24"	10	5	50	2
Physical	Drawers	Handles	4"	5	6	30	0.5
Physical	Drawers	Supports	6" x 3/4" x 2mm	10	1000	10	N/A
Physical	Drawers	Glue	4 fl oz	10	1	10	N/A
Physical	Drawers	Assembly	N/A	0	N/A	N/A	2
Physical	Cards	Cards	4 1/4" x 3"	50c each	500	250	N/A
Physical	Poster	Poster	30" x 48"	20	1	20	N/A
Process	Stories	Collection	N/A	0	N/A	N/A	5 per
Process	Stories	Curration	N/A	0	N/A	N/A	3 per
Process	Updating	Stories	N/A	0	N/A	N/A	1 per
Process	Updating	Resource Information	N/A	0	N/A	N/A	1-2
Process	Updating	Cards	N/A	0	N/A	N/A	1-2

Figure 11 - Cost Report & Analysis

This cost analysis was especially important to us as we wanted to consider who and how we would go about deploying the Storyboard. Understanding that the design can be scalable to any environment (i.e. it can be used in any city/town around the world) was integral to this step, and we wanted to acknowledge how the solution could be used on a much grander scale than just in Troy.

The ideal future for our project would be to have Storyboards deployed around the country and around the world. Furthermore, possible expansion for the brand would be to take our findings from working with resources for homeless individuals around the world and develop more tools that they could benefit from.