

# Johanna Brewer

Technology Design Activist

My research explores how marginalized communities challenge surveillance capitalism and my design practice aims to increase inclusion on media platforms.

My work spans a range of domains including: video games, live streaming, data science viz, public media journalism, home automation, live music discovery, public transportation, and interactive toys.

So far, I've never met a computer I couldn't get along with :]



## Welcome to my portfolio

Hope you like computers.

# AnyKey's Inclusion 101

## Educational Outreach for Gaming Groups

Translating years of research exploring the critical issues in esports and live streaming, this comprehensive curriculum was created to make diversity and inclusion skills accessible to folks from a wide range of gaming groups.

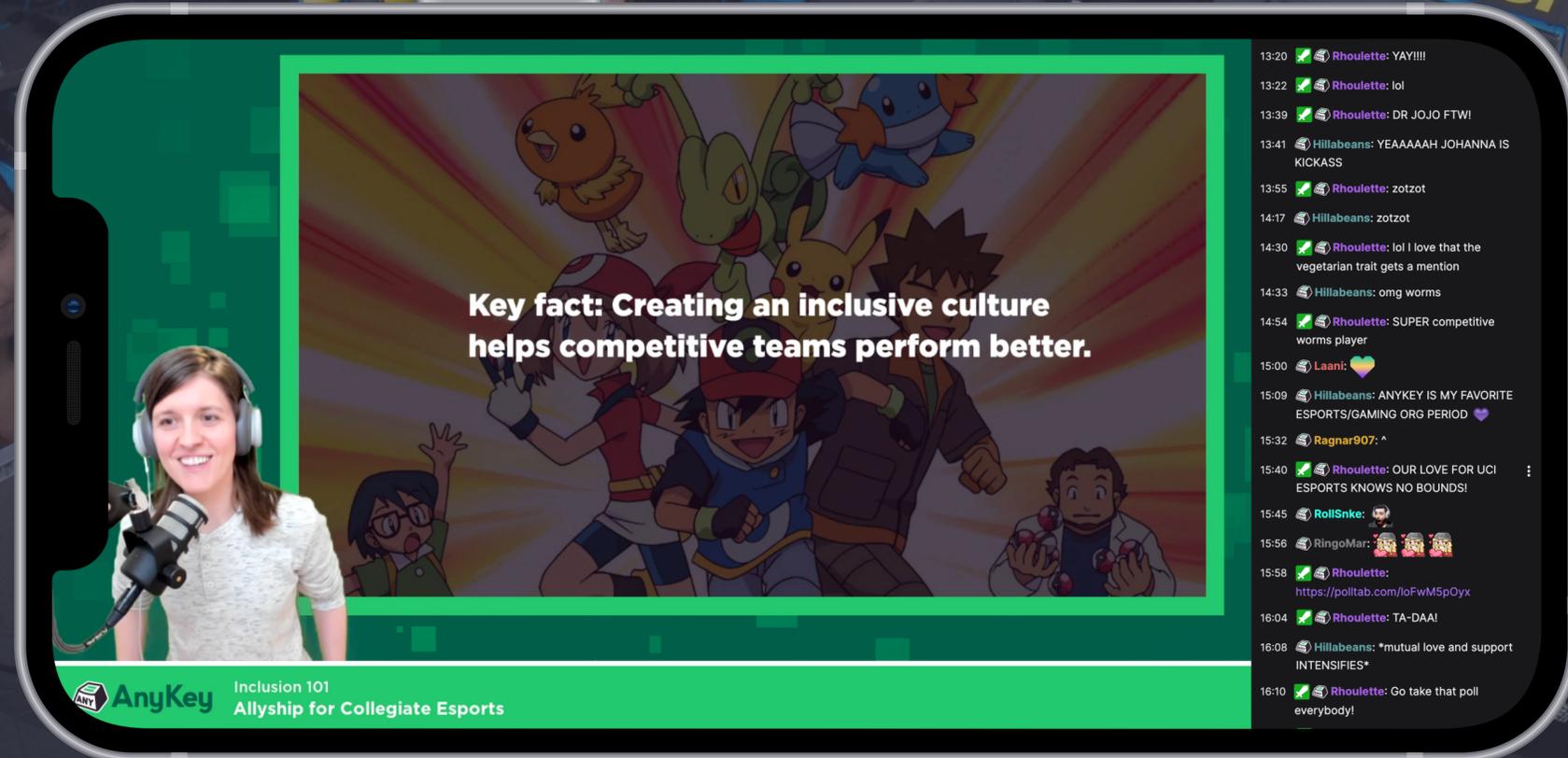
The Inclusion 101 program includes online training seminars, as well as downloadable curriculum materials and facilitator's guides.

The course was designed to help anyone in the game industry build practical skills in allyship, bystander intervention, media literacy, and conduct enforcement.

UCI Esports successfully piloted the program in the spring of 2020, and a new cohort of universities will begin offering the curriculum in early 2021.

 Watch an Allyship Training VOD

2020-Now



**Key fact: Creating an inclusive culture helps competitive teams perform better.**

**AnyKey** Inclusion 101 Allyship for Collegiate Esports

Chat messages:

- 13:20 Rhoulette: YAY!!!!
- 13:22 Rhoulette: lol
- 13:39 Rhoulette: DR JOJO FTW!
- 13:41 Hillabeans: YEAAAAAH JOHANNA IS KICKASS
- 13:55 Rhoulette: zotzot
- 14:17 Hillabeans: zotzot
- 14:30 Rhoulette: lol I love that the vegetarian trait gets a mention
- 14:33 Hillabeans: omg worms
- 14:54 Rhoulette: SUPER competitive worms player
- 15:00 Laani: 🍷
- 15:09 Hillabeans: ANYKEY IS MY FAVORITE ESPORTS/GAMING ORG PERIOD 🍷
- 15:32 Ragnar907: ^
- 15:40 Rhoulette: OUR LOVE FOR UCI ESPORTS KNOWS NO BOUNDS!
- 15:45 RollSnke: 🍷🍷🍷
- 15:56 RingoMar: 🍷🍷🍷
- 15:58 Rhoulette: <https://polltab.com/loFwM5pOyx>
- 16:04 Rhoulette: TA-DAA!
- 16:08 Hillabeans: \*mutual love and support INTENSIFIES\*
- 16:10 Rhoulette: Go take that poll everybody!

# AnyKey's GLHF Pledge

## Fostering Inclusion in Online Gaming

Endeavoring to scale our impact as advocates for inclusion in competitive gaming and live streaming, we developed a new interactive site to support the relaunch of the GLHF pledge for good digital citizenship.

More than 875,000 gamers have already signed our code of conduct and equipped the AnyKey global chat badge on Twitch.

To ensure that the AnyKey badge maintains integrity as a symbol of respect and inclusion, we created a community-based moderation system that allows anyone to file a report if they see someone abusing it, giving folks a direct role in enforcing our shared values.

 Take the Pledge

2019–Now



The central graphic features a screenshot of the AnyKey website. The website header includes the AnyKey logo and navigation links: [glhf PLEDGE](#), [Affiliates](#), [Resources](#), [Stories](#), and [About](#). The main content area displays the "glhf PLEDGE" logo in a green shield shape, with the text "Join 326,624 Gamers TAKE THE PLEDGE" below it. A large quote reads: "Good luck, have fun Make gaming inclusive for everyone". To the right of the quote is a circular AnyKey badge. Below the website screenshot is a screenshot of a Twitch chat interface showing various messages and the AnyKey badge.

# Inclusive Streamers

## Marginal Ethnography in Live Streaming

Gaming is a historically toxic environment for women, people of color, disabled and LGBTQ+ folks. But on Twitch, minority streamers and their allies are creating safe spaces for their communities and keeping the trolls at bay.

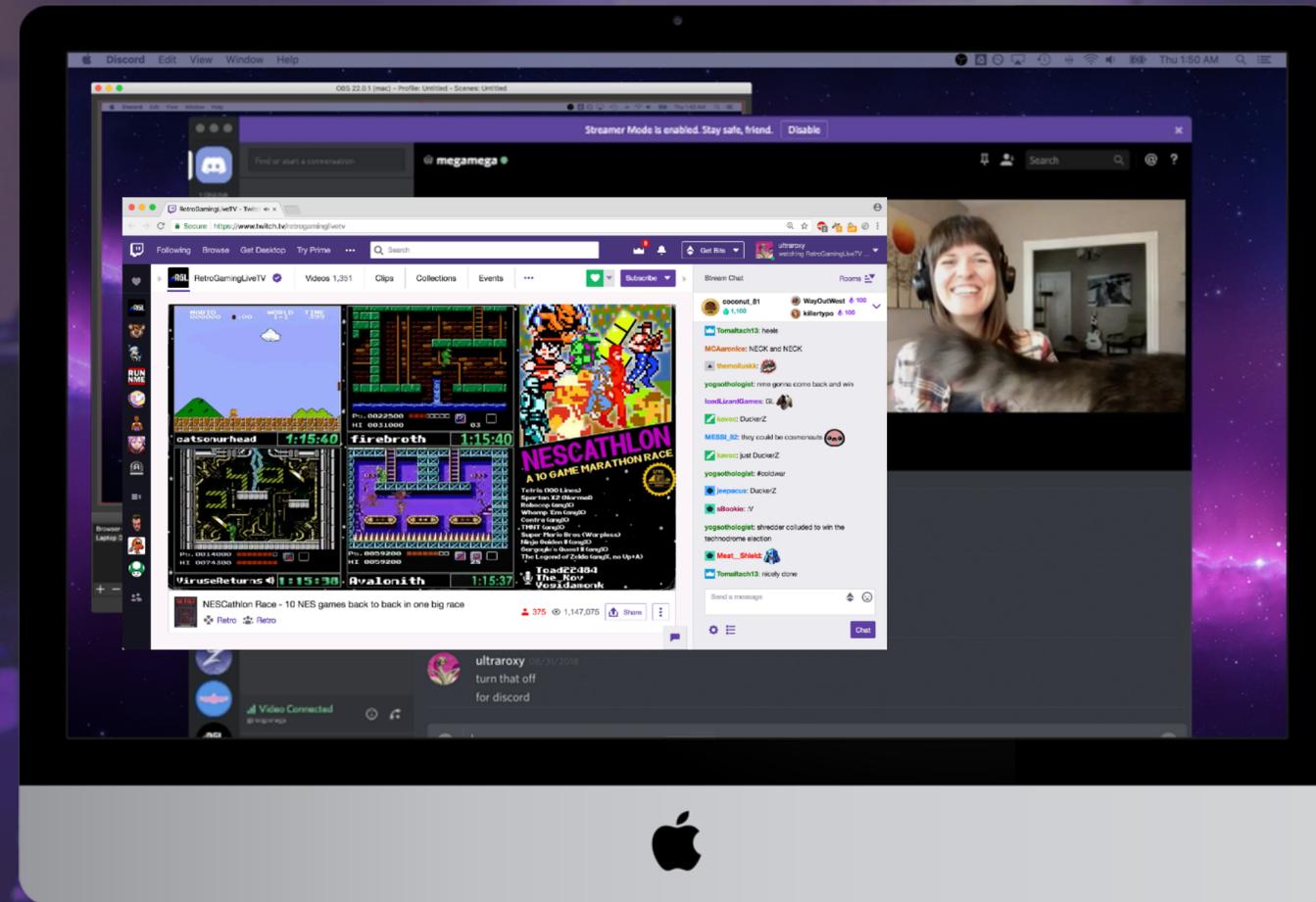
Inspired by their achievements, this in-depth study was launched in 2018 to learn more about the inclusive streamers behind this growing movement.

Using an immersive methodology, interviews with participants are conducted in Discord, a text and video chat app popular with gamers, and those conversations are captured with the same Open Broadcaster Software that powers most streams.

To date findings have been shared in a series of articles and talks. Further results of this study will be published on an ongoing basis.

[View Slides from MIT Talk](#)

2018–Now

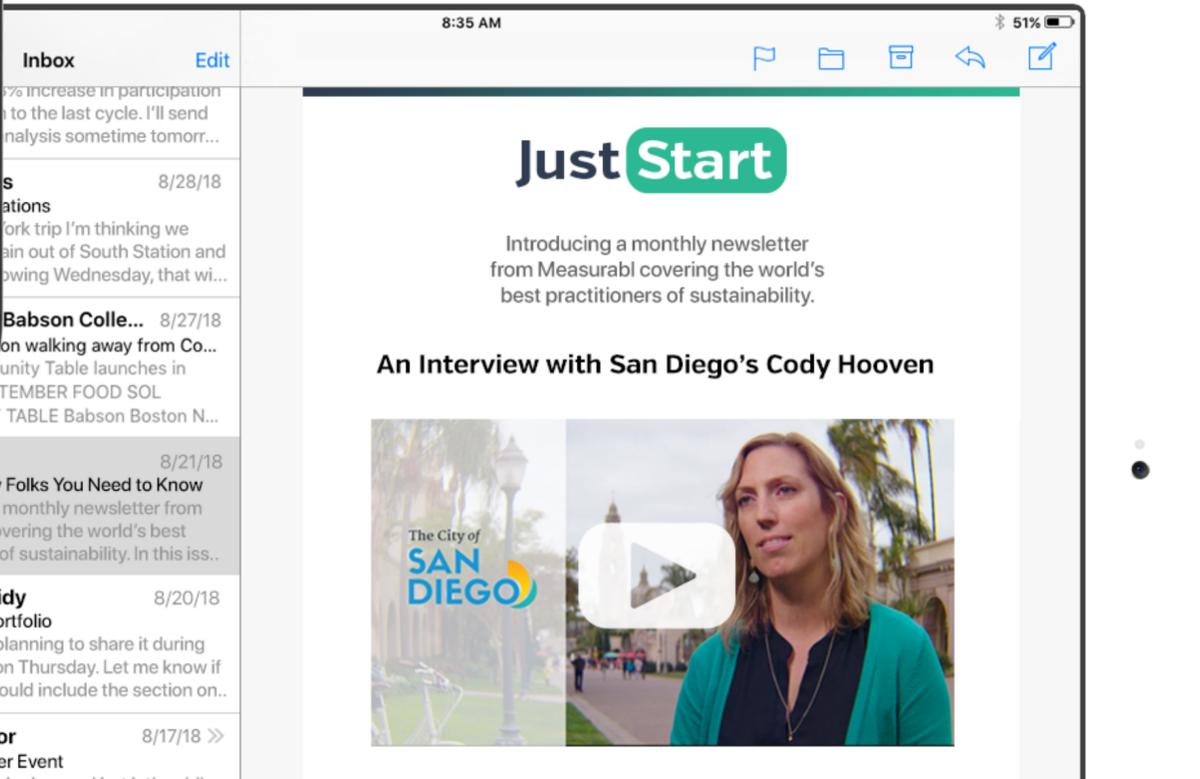
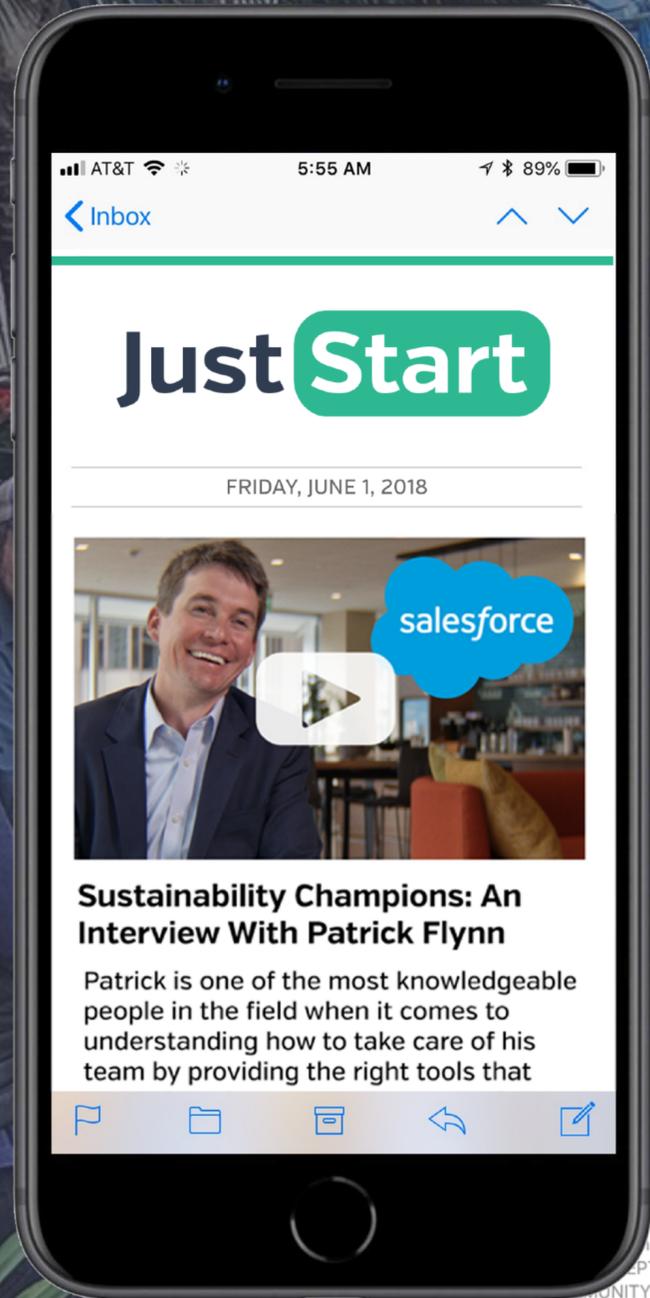
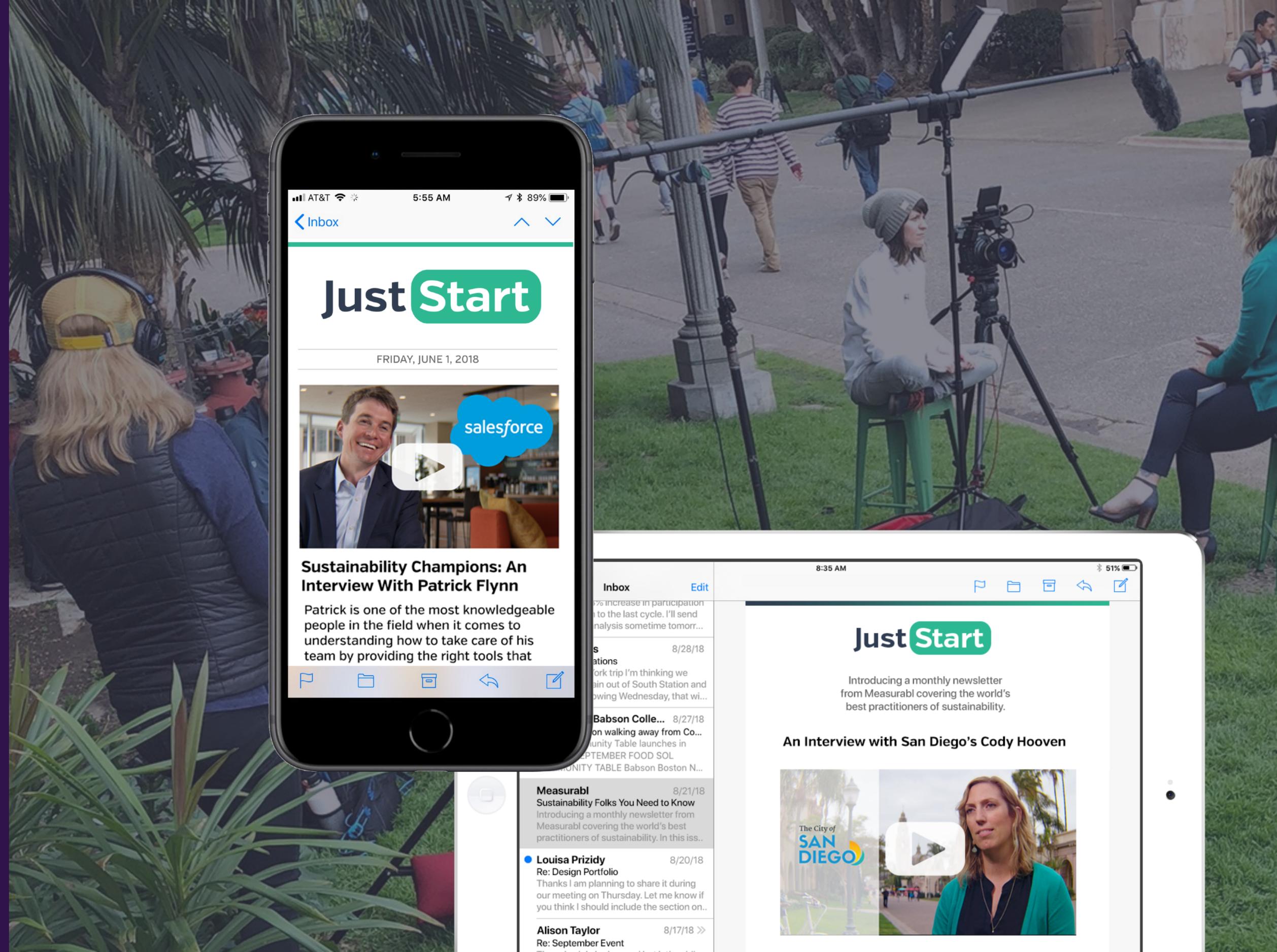


# Sustainability Champions

## Experimental Ethnography in Media Production

Taking an experimental approach to creating meaningful marketing content for a growing sustainability tech startup, this project involved filming a series of ethnographic interviews on location and in high definition.

Creating a collection of short videos accompanied by in-depth journalistic articles ensured that the authentic insights captured on camera would be enlightening for employees and potential customers alike.



Watch the Web Series

2018

# WBUR Let's Talk

## Participatory Ethnography in Public Radio

As one of the largest NPR stations, WBUR was finding it difficult to understand its changing audience. I had the privilege to lead a team of station staff in a large-scale research project to address this knowledge gap.

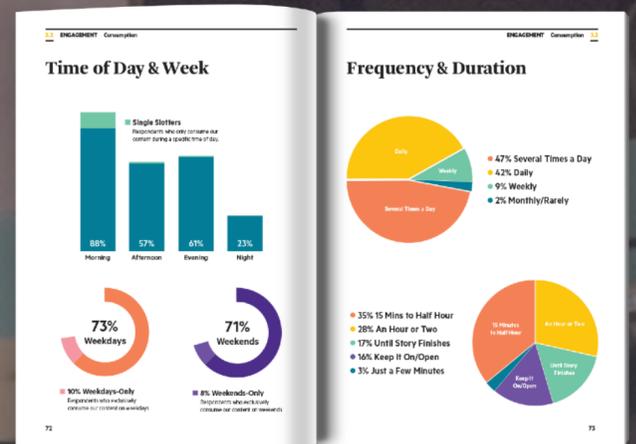
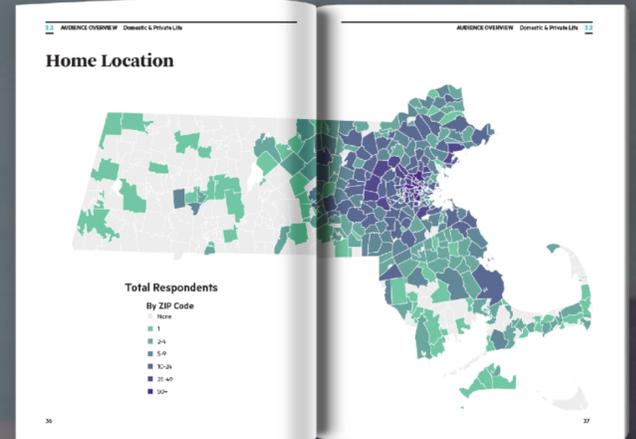
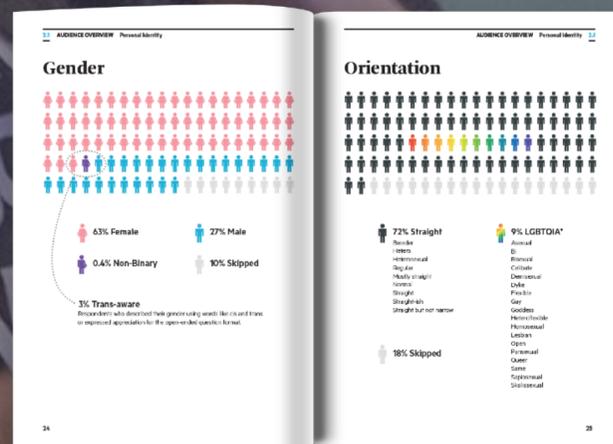
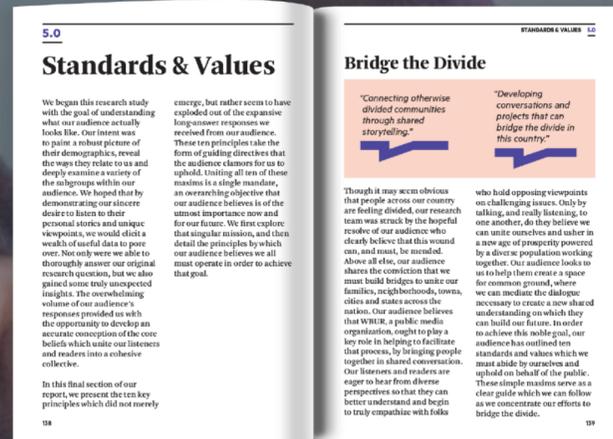
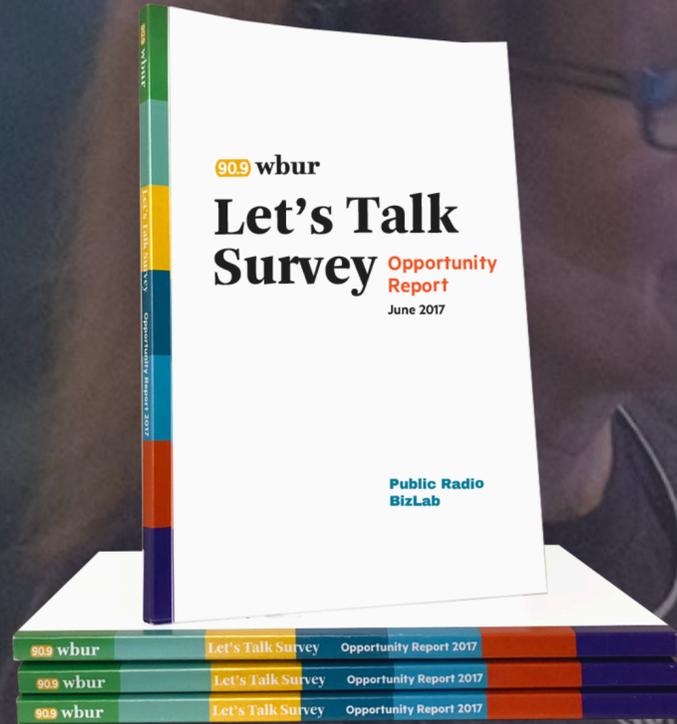
Working under my advisement, 36 members from the newsroom decided to ask and answer the simple yet crucial question: "what does our audience actually look like?"

The team created an open-ended survey designed to reach members of the community they hadn't heard from before. Astoundingly, the Let's Talk Audience Survey received responses from nearly 1% of listeners.

Results were published internally as a 160-page Opportunity Report book that encapsulated the extensive findings from the study and offered a roadmap for future human-centered innovation in NPR.

[Download the Opportunity Report](#)

2017



# The Food Rainbow

## Nutritional Visualization for Public Health

As an unbiased and kid-friendly way to reveal the nutritious values of any food, this visualization uses colors to represent the six macronutrients that make up what we eat.

The Food Rainbow simplifies the USDA guidelines and allows for easy at-a-glance comparison of daily dietary choices for children and caregivers alike.

Initiated in 2016 as a response to the current health crisis, this ongoing project is focused on building a grassroots movement to promote nutritional literacy using The Food Rainbow as a common framework.

The work began with the development of a cloud-based engine that can process all sorts of nutritional data. This backend has already analyzed tens of thousands of foods.

This online system allows families and communities to browse the Food Rainbows for the unlabelled basic, bulk and staple items in their pantries and fridges.

2016–Now

Protein

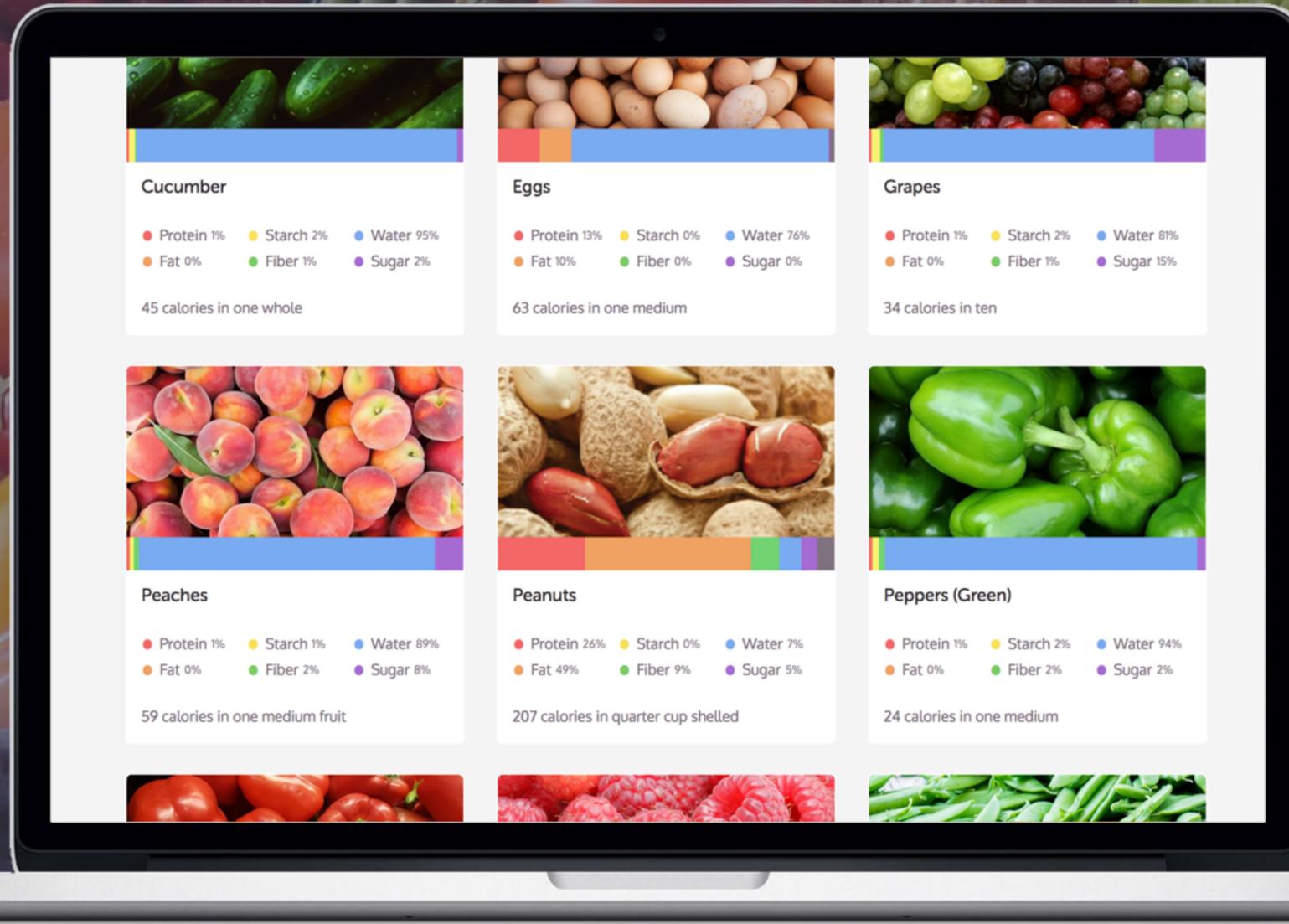
Fat

Starch

Fiber

Water

Sugar



# The Food Rainbow

## Nutritional Visualization for Public Health

In addition to the ability to analyze the unlabelled items in a pantry, the Food Rainbow is designed to decode the USDA recommendations we deal with every day.

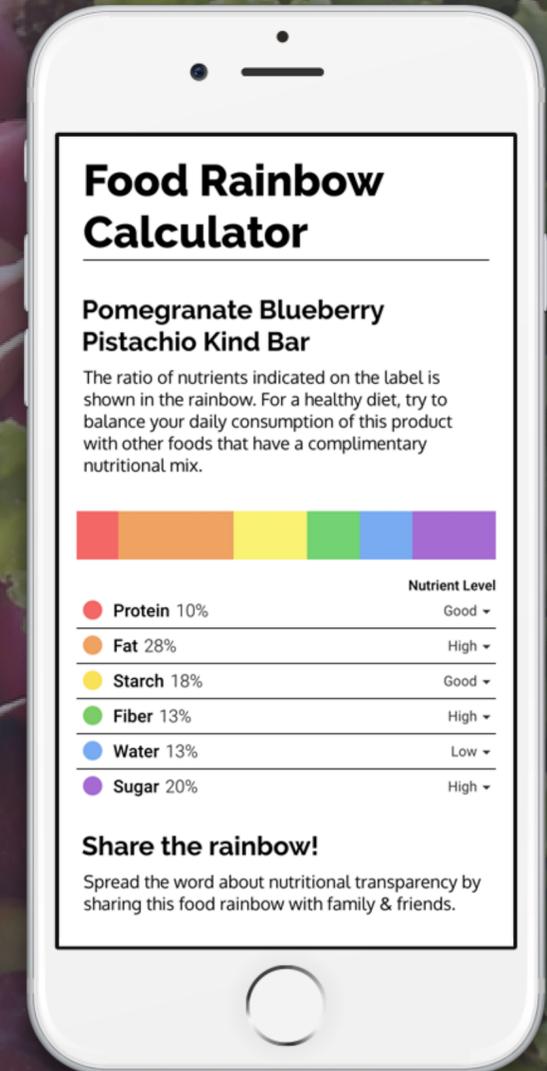
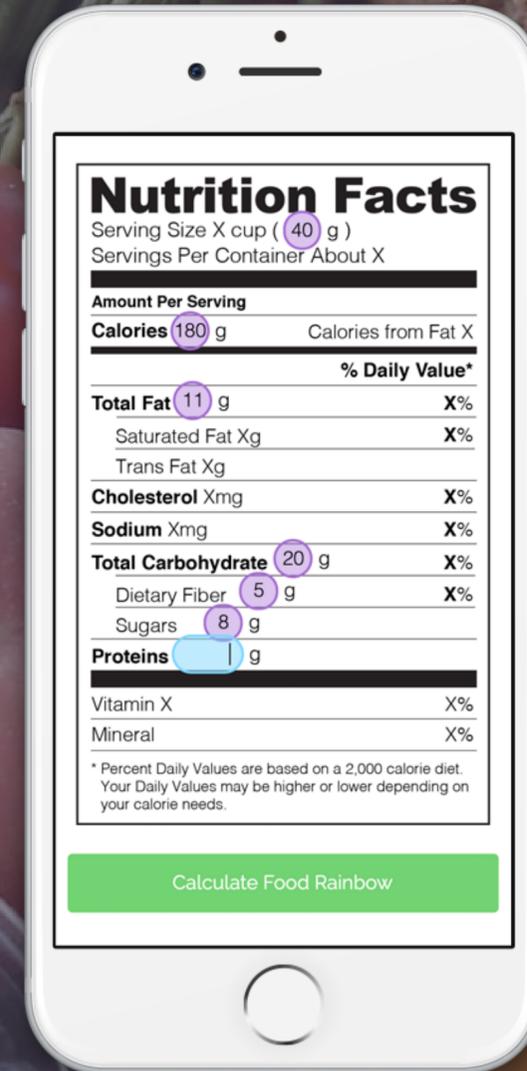
Nutrition labels are the most common way people are exposed to dietary guidelines, but as the product of a bureaucratic process, they are complicated and confusing.

The Food Rainbow calculator helps translate these overloaded labels. By entering a few key numbers from the back of any package, the mobile app instantly displays the ratio of nutrients that are inside.

[Browse a Community Pantry](#)

[Try the Food Rainbow Calculator](#)

2016–Now



# Magic Pill

## Experimental Podcast for Public Radio

News organizations often produce more content than they can air. This project helped breathe new life into a dormant asset at WBUR by reinventing Magic Pill as a 21-day exercise challenge that was delivered to participants interactively via email.

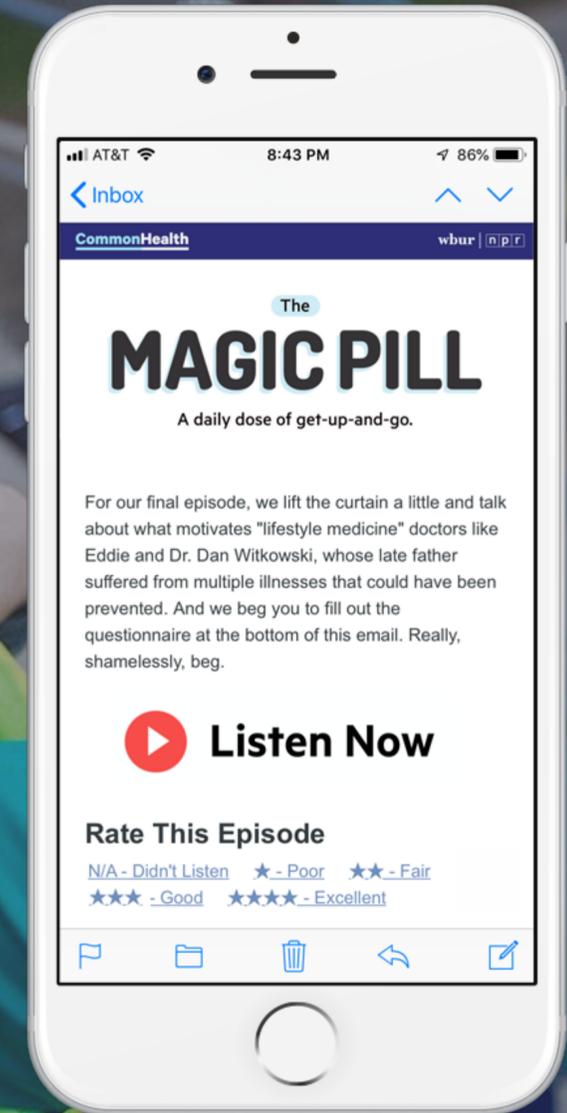
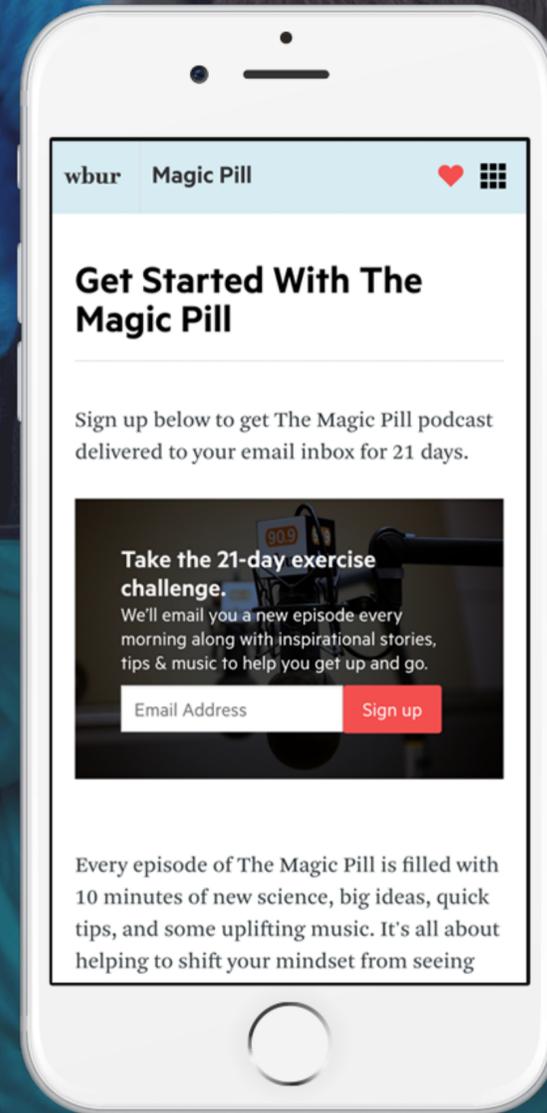
While most podcasts are distributed via in-app subscriptions that automatically download new episodes as they air, we invited users to sign up for a more personal, interactive system that only delivered new content after they engaged with the previous installment.

By matching the pace of content delivery to each user, we achieved an astoundingly high level of engagement. While the standard media industry open rate for emails is 19%, we saw an average of 90% with the Magic Pill!

The significant results of this project earned the station a 2017 regional Edward R. Murrow award for Excellence in Innovation.

 [Listen to the Podcast Series](#)

2016



# Dynamic Growth Dashboard

## Data Science for Organizational Management

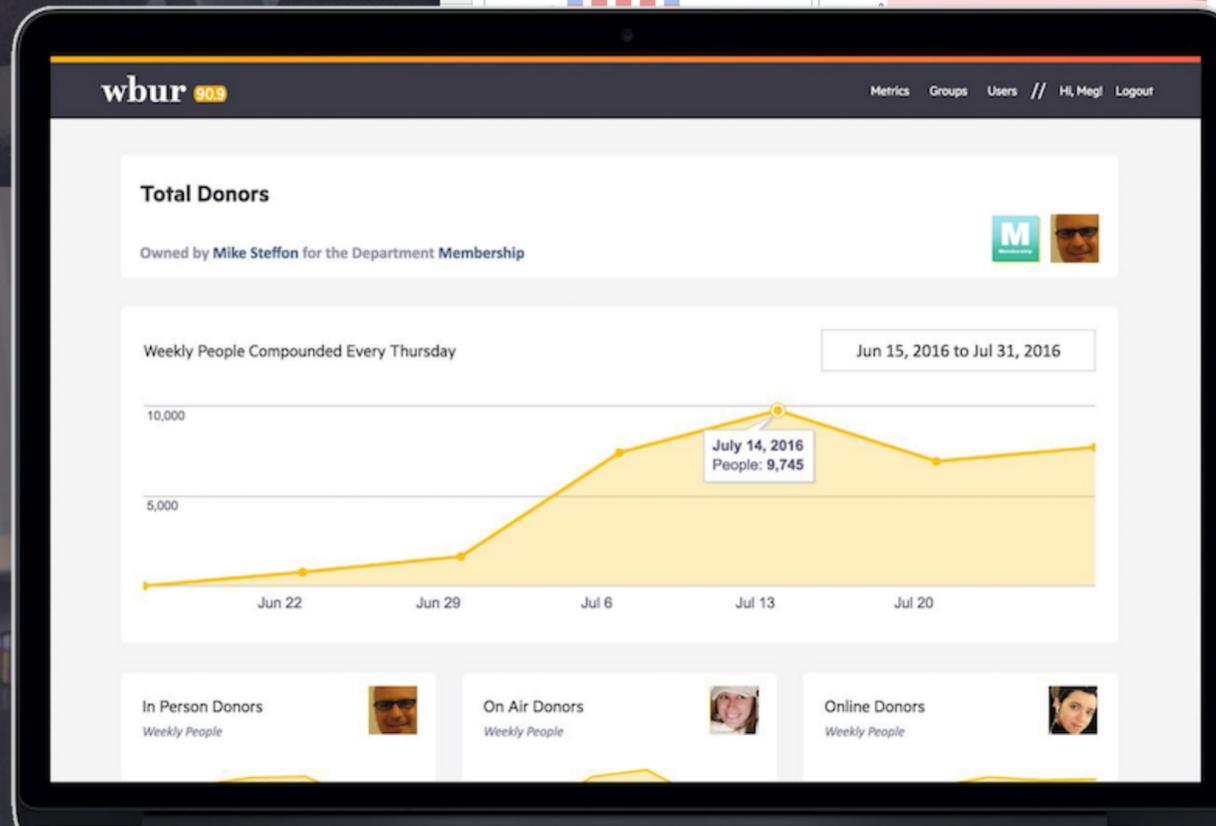
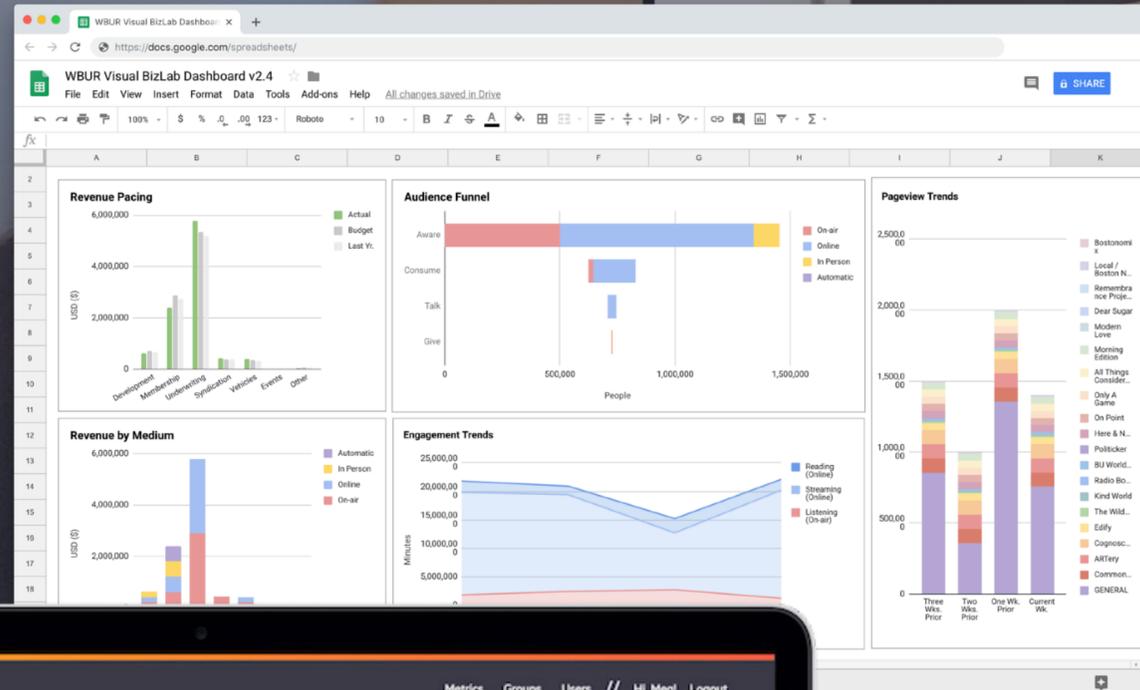
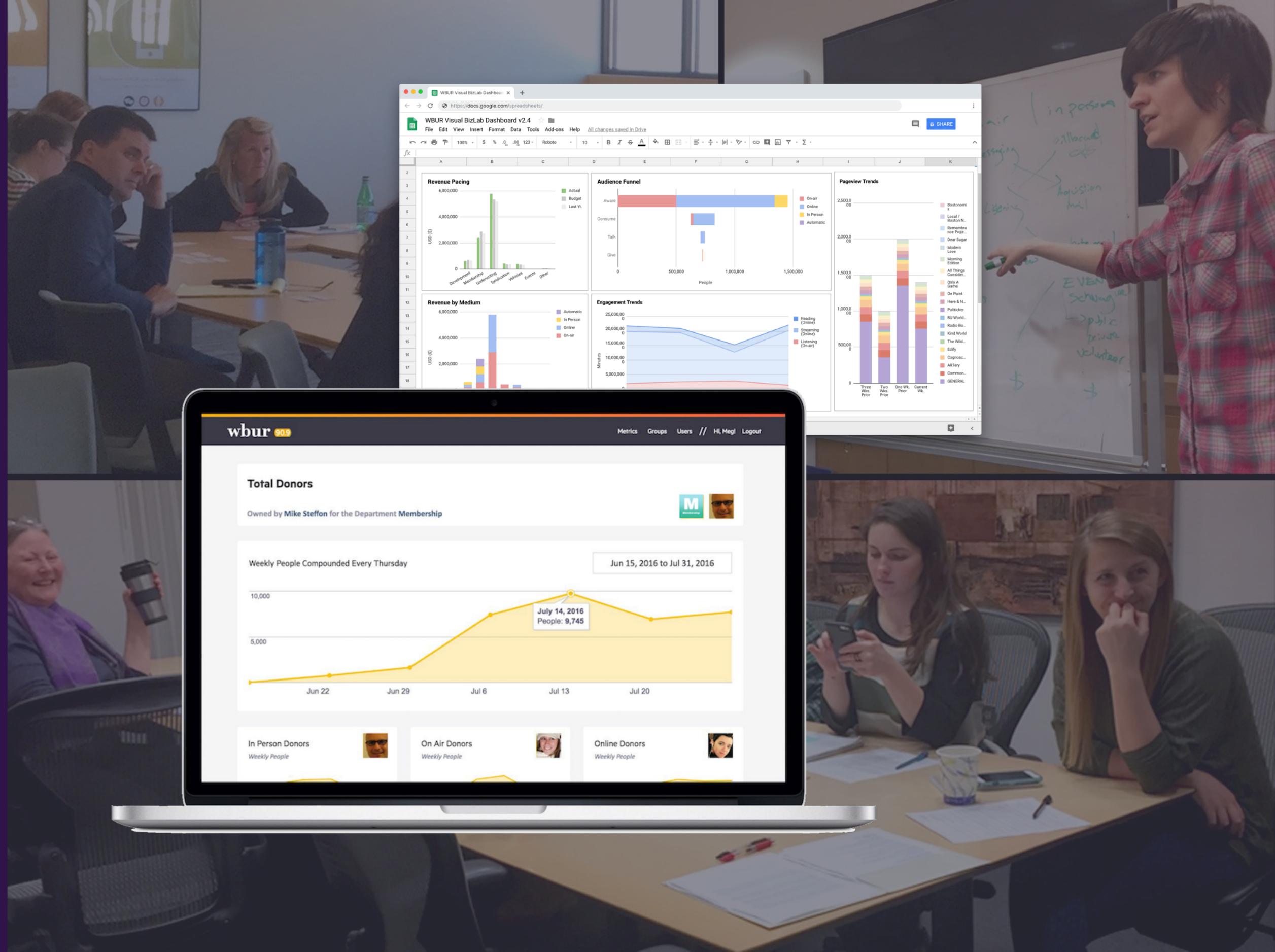
The development of a customizable internal analytics dashboard was the culmination of a participatory design effort to identify, share and compare key organizational metrics at WBUR.

This multi-user KPI dashboard capable of unifying and synthesizing any type of metric was designed following an ethnographic study of organizational data gathering practices.

After coaching senior managers to incorporate measurement and feedback cycles into weekly meetings, this cloud-based software was developed to share this practice across public media.

[Read an Article about the Dashboard](#)

2015-2016



# Rhomby

## Anti-Surveillance Smart Homes

Designed as an enhancement for home automation ecosystems, Rhomby is a complete toolkit for keeping tabs on the locations of mobile devices.

With a pocket-sized server, a single Bluetooth iBeacon for each room and a lightweight mobile app, Rhomby enables programmers to create responsive, context-aware controls based on where people are in the house.

Developers can set up real-time indoor location tracking and geofencing in less than an hour, allowing them to quickly create seamless, hands-free experiences for people as they move between rooms or leave home.

Unlike other smart home and IoT devices, Rhomby is fully self-contained and private. Location information is never transmitted outside the house and there is no central server gathering user metadata.

[Learn more about Rhomby](#)

2014-2018



# frestyl

## Live Music Discovery & Promotion

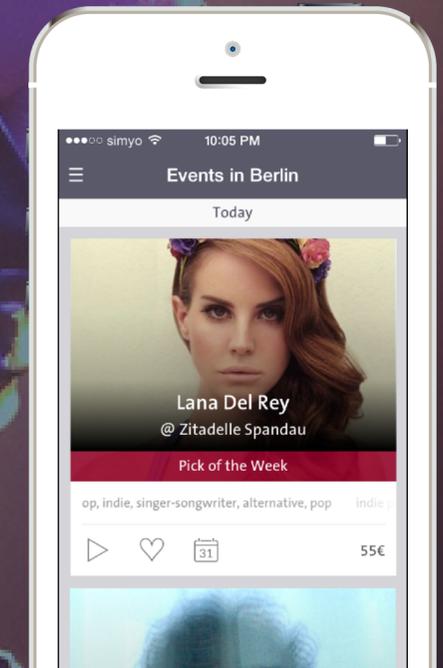
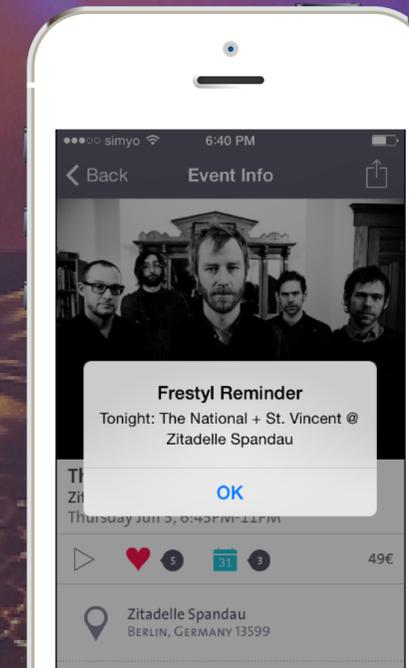
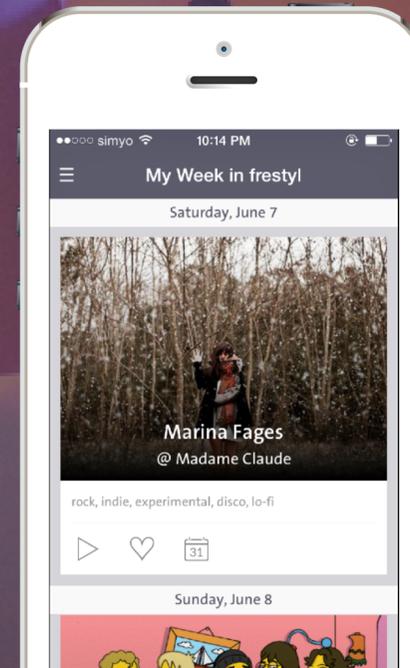
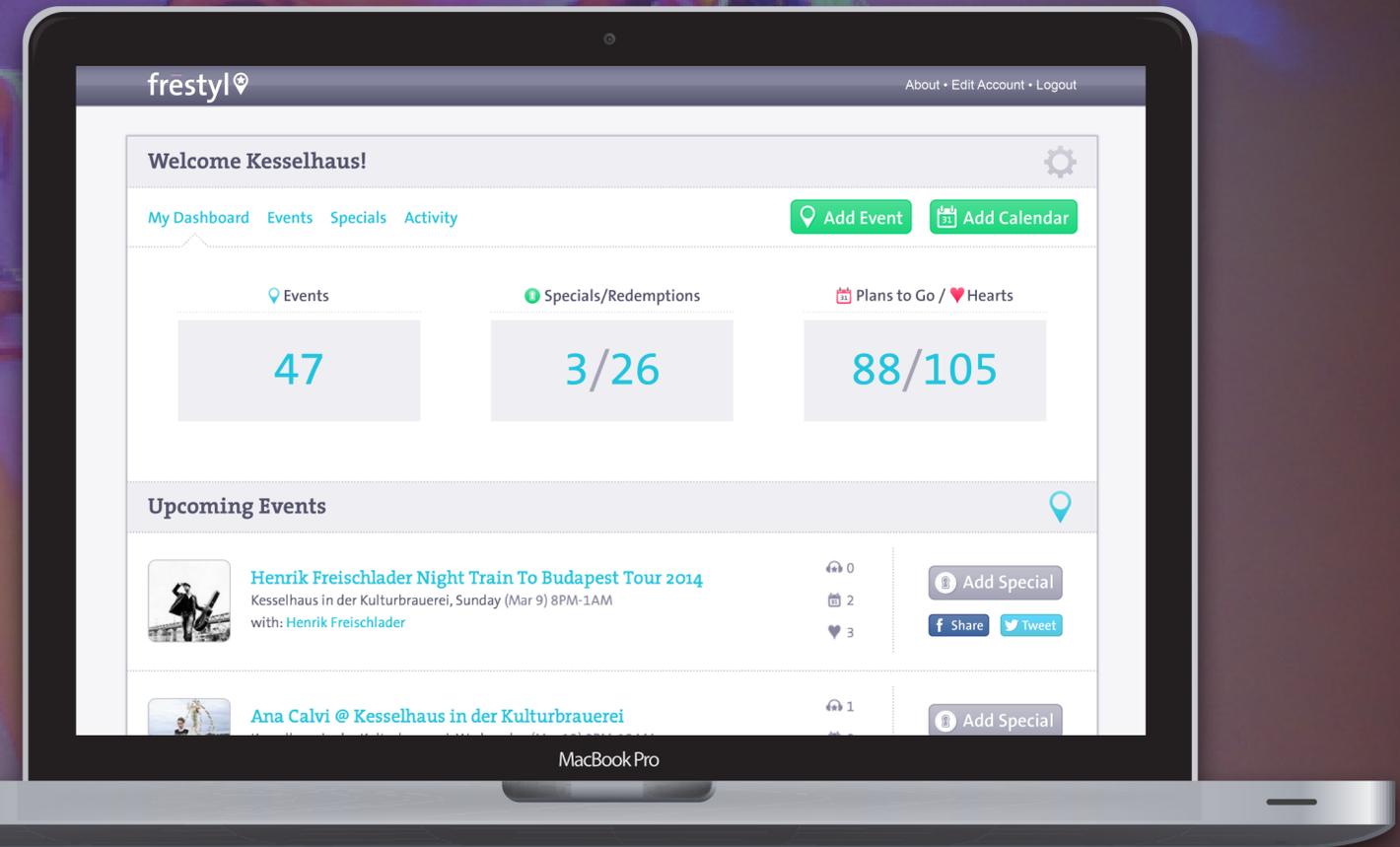
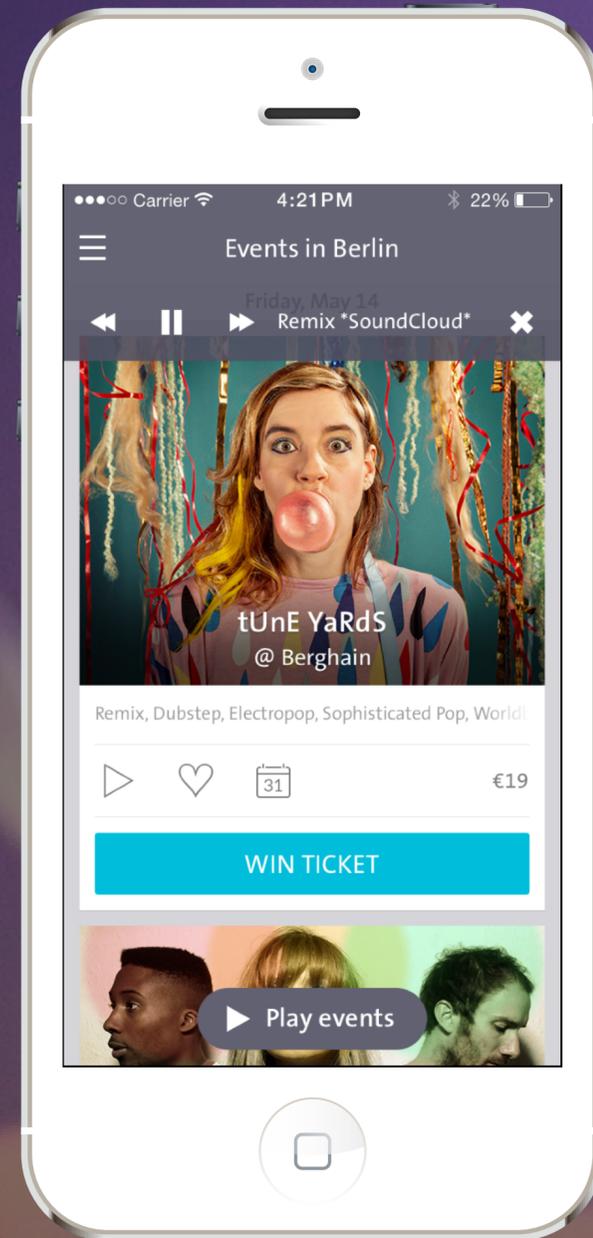
Launched in Rome in 2010, frestyl was once the most comprehensive web service for concert discovery in Italy.

After relocating to Berlin in 2012, frestyl relaunched as a B2B2C service that directly connected live music event organizers with fans to increase attendance at shows.

The mobile platform was featured by Apple as Best New App in Germany thanks to a custom recommendation algorithm providing weekly personalized concert suggestions, as well as a unique built-in music player allowing users to stream playlists for upcoming gigs nearby.

[Watch an Interview with the Founders](#)

2009-2014



# Aesthetic Journeys

## Ethnography & Design for Public Transportation

My PhD thesis reframed mobility for ubiquitous computing by examining the aesthetic aspects of urban movement.

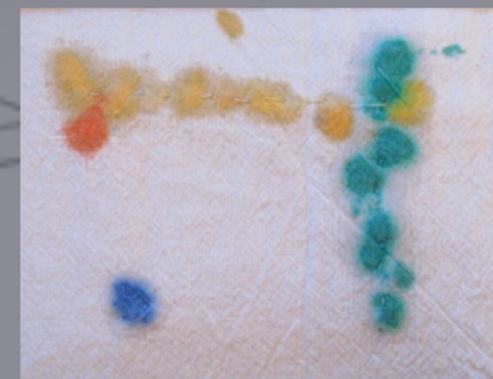
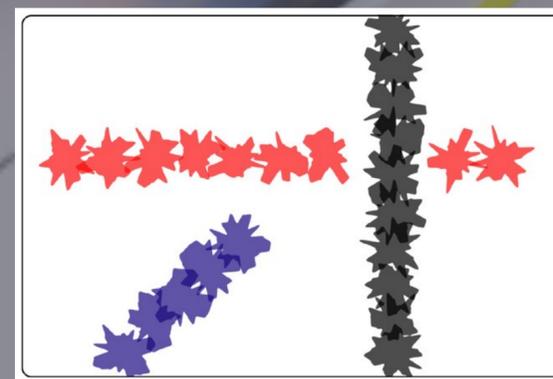
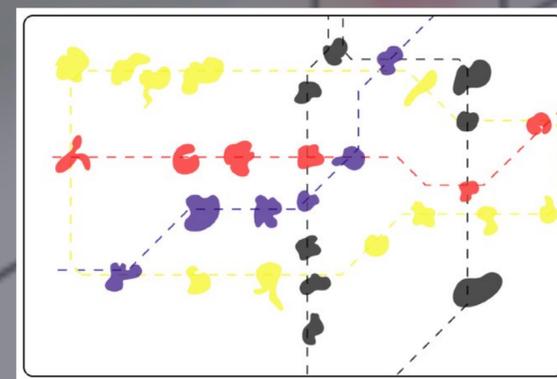
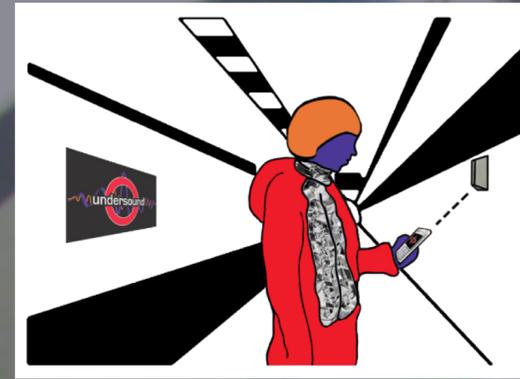
By conducting a series of studies on public transportation in Portland (OR), London & Paris, I developed both new ethnographic techniques, like object shadowing, as well as a set of design principles for urban mobility.

This Intel-funded research led to the creation of two conceptual design pieces. *undersound* was a situated peer-to-peer music sharing system comprised of a mobile phone client and a series of visualizations and access points situated in the London Underground.

Designed for the same environment, *SeeShell*, was a prototype RFID ticket card holder with a permanent ink display that emerged over time based on a rider's journeys through the Tube.

[Download my PhD Dissertation](#)

2006-2009



# Nimio

## Interactive Toys for Office Collaboration

The world's first hybrid tangible interface and ambient display, Nimio was a set of interactive office toys designed for the administrators of the California Institute for Telecommunications and Information Technology.

These hand-held, translucent silicone toys were given out as individual playthings, but wirelessly networked via RF to act as input-output devices for a collective visualization of distributed activity.

With embedded sensors and internal LEDs, action around one Nimio caused the others to glow in distinctive patterns and colors that became uniquely identifiable by the group using them.

[Watch a Video about Nimo](#)

2005-2007

	cube	dome	pyramid	cylinder
red				
green				
blue				



**/End**

## Questions?

To learn more about the projects I've had a hand in creating, please visit my website. There you will also find my curriculum vitae, downloadable publications and outreach activities in the community.