

## Design Proposal Template:

School: Chiawana

State: WA

Division: Middle School or High School

Team Members' Names: Soleil Olivera Hernández, Ryan Abastillas, Bradley Caulfield

**Project Title:** Readers should have a general sense for what the project is about and want to read more. (20 word maximum)

**Kitty Katcher: A Kinder, Gentler Cat Trap**

**Inequity Being Addressed:** Describe the inequity that you will attempt to address with your proposed solution, and why you chose this inequity. Students are able to consider a global perspective related to their inequity. (75 word maximum)

KittyKatcher addresses the ethical and economic inequities Tri-City *Trap-Neuter-Release (TNR)* volunteers face in managing cat populations. We chose these inequities because they reflect our area's systemic burden of the inability to allocate limited resources towards prevention. It also aligns with UNSDG 15.8's initiative to reduce invasive species impacts. Our gentler cat-trapping system provides a cost-effective, humane solution, alleviating financial strain on citizens and organizations in our community while mitigating shelter overcrowding and overly necessitating euthanasia.

**Community Research and User Identification:** Explain the process used to identify the inequity and select your user. Include any research done to identify issues in your community and understand which groups face challenges because of these issues. (150 word maximum)

We found inspiration when our teacher, Jeff Albertsen, shared his personal struggles with managing a cat colony on his property. Through his guidance, we connected with local *TNR* organizations to interview volunteers and conduct surveys. We quickly identified specific inequities by analyzing firsthand accounts from different interviewees. It was when we asked about their motivation that we identified a specific user group: dedicated volunteers involved in trapping, neutering, and care efforts. Further research indicated that these organizations face systemic challenges, including ethical dilemmas around euthanasia, financial strain, and emotional burnout. Considering that the National Feline Research Council estimates that two cats can produce 5,000 descendants in seven years, we understood that this group undoubtedly faces greater compassion fatigue due to the relentless cycle of overpopulation. These volunteers, although passionate, lack resources and grapple with higher mental health risks, highlighting the need for support to address both economic and ethical inequities.

**User Profile:** Provide a detailed description of your selected user. Include information about challenges they face, how those challenges impact their lives, and specific project needs based on user feedback. (150 word maximum)

Our specified users are the volunteers in Tri-Cities that work in TNR-related organizations that actually do the trapping. Kyle Taylor, the owner of Cattitude, a TNR nonprofit, admitted the biggest challenges were public ignorance and lack of funding. These people are extremely passionate about the wellbeing of stray cats, but with that comes compassion fatigue, which impacts their emotional wellbeing along with their ability to efficiently manage cat populations. Their feedback shaped our design to emphasize humane and effective features. According to them, an efficient solution would incorporate:

- More humane accommodations within the trap to keep the cat comfortable
- Increased access to information and resources about TNR efforts
- Portable and easily resettable system for efficient and less time-consuming trapping

With feedback from people directly involved in the cause, our system aims to offer a more ethical and efficient solution for managing cat populations while ensuring user success and satisfaction.

**Project Goals:** List your project goals and explain how these goals will address the inequity. Project goals should define the desired outcomes, not specific features of the proposed solution. (150 word maximum)

**Our project goals are to:**

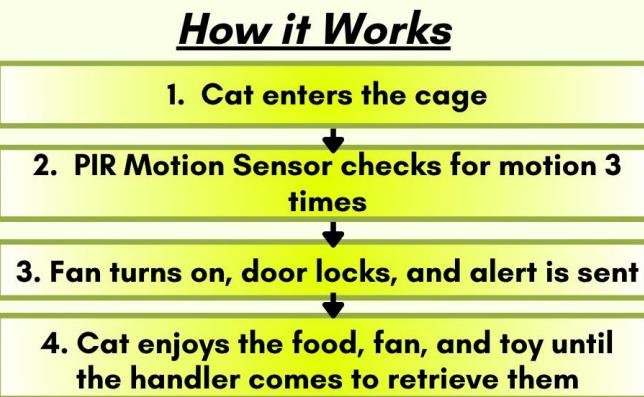
- **Ensure Affordability:** Make the trap out of sturdy, yet cost-effective materials. This targets the economic inequity by allowing TNR organizations to use their funds towards neutering rather than trapping systems. The user needs are also addressed by making a portable and reusable trapping mechanism.
- **Raise Awareness:** Incorporate informative resources on the app to increase public engagement. This addresses the ethical inequity because they will have to witness less suffering of strays as the public takes more preventative action. This also addresses the user needs because they identified community ignorance as a key contributor to overpopulation.
- **Improve Safety and Efficiency:** Cats raise a greater risk of injury to themselves and the handler when stressed. Incorporating a low-stress trapping system not only addresses the user's need for a more effective system but addresses the inequity by reducing the chances of compassion fatigue- an issue prevalent among volunteers.

**Proposed Solution:** Describe your proposed solution, including any innovative and unique features, and explain how this solution will address your users' needs and the inequity they face. (150 word maximum)

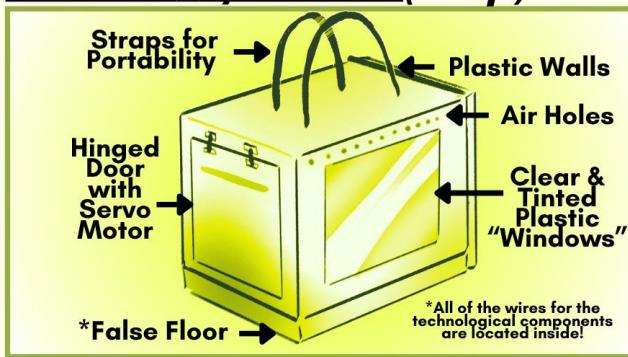
Our proposed solution is a portable and durable cat trap, with the primary function being a motion sensor that, when triggered three times, will activate built-in comfort functions to ensure the captured feline remains comfortable. Our prototype also includes other features such as food, bedding, and a cat toy, which are incorporated to add to the cat's comfort, reducing the physical and emotional strain that comes with handling aggressive strays. There is also an app equipped with a live camera and informative resources. Affordability is one of the key inequities that we sought to address, so by using accessible materials to create an ethical solution for population control, we can allow economic resources to be allocated towards neutering programs. The app itself addresses the project goals by fostering collaboration between civilians and organizations that alike, face many financial inequities. Our prototype uses innovation to prioritize both efficiency, and compassion.

**Initial Design:** A single graphic of your first design idea with key features adequately labeled. It should be easy to understand and the reader should have a general understanding of how the prototype functions by looking at the graphic. Max size 8.5" x 11"

## KittyKatcher Prototype Design



### External 3/4 View (Trap)



### Internal 3/4 View (Trap)

