

A BETTER LANGUAGE FOR THE ROAD.

At a glance...

We partnered with Honda 99P Labs to explore how future vehicles might support safer, calmer, road interactions. Our research showed that road rage was too subjective to design for directly. We reframed the challenge around a clearer opportunity: **Helping drivers understand one another's intent in ambiguous moments.**



Powered by Honda 99P Labs

Honda 99P Labs is the Ohio-based innovation office of Honda Research Institute USA. It explores future mobility through research, experimentation and collaboration.



The Opportunity.

Drivers communicated with outdated systems like the horn, headlights and etc, but none explained intent. Our **research reframed** the project from reducing road rage to reducing ambiguity.

ORIGINAL BRIEF

Reduce road rage through driver-to-driver communication.

WHAT WE LEARNED

Road Rage is...

- ✓ Too Subjective
- ✓ Too Broad
- ✓ Perspective Bias

REFRAMED BRIEF

Improve **road safety** and **driver well-being** by **reducing ambiguity** in how drivers interpret intent during everyday road interactions.

Our Approach.

Moved from **broad problem space** to **focused future concepts and framework.**



Explore

85+ Academic Sources
70+ Survey Responses
50+ Interviews
5 SMEs



Prototype

15+ Divergent Concepts → 4 Iterative Prototypes



Test

Immersive Concept Evaluation/Testing
Beepo + Traffic Party



Refine

STEER Framework + Final Concepts



STEERING THE COURSE.

Honda 99P Labs x CMU MHCI 2026

continued pt. 2

Designing not for more communication, but for better understanding

The insights became the **STEER** framework

S

Signals

A small, shared vocabulary works better than open-ended conversation.

T

Trust

Help must feel reliable, restrained and clearly useful.

E

Empathy

More context helps drivers interpret one another with less negativity.

E

Ease

Communication must fit the driving task and stay low-distraction.

R

Role

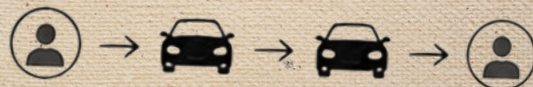
The vehicle should mediate intent, not make the driving decision.

OUTCOMES & SOLUTIONS

[Beepo Github](#)

[Traffic Party Github](#)

I. D2V2V2D Model



Driver Vehicle Vehicle Driver

A structured mediation model for intent between drivers.



II. Beepo

A driver-controlled system using voice, AI mediation, console controls, and AR guidance to clarify intent in ambiguous road interactions.



III. Traffic Party

An opt-in system using voice, AI moderation, an in-vehicle display, and social features to connect drivers ring congestion.

THE ROAD AHEAD

FOR HONDA

Clearer problem definition, reusable framework, and future-facing concept and directions.

FOR DRIVERS

Less ambiguity, more confidence, and calmer road interactions,

NEXT STEPS

Future work should test integrated concepts in higher-fidelity real-world conditions.