HONDA "In-Vehicle Health" Challenge
The Power of Dreams

Background

The recent COVID-19 Pandemic has highlighted the need for our personal vehicles. To capture customer attention, it is not enough to delight them with new features. Instead, a clear focus on health is driving new solutions to meet customers' need for control in a vehicle environment. For personal vehicles, new ways to sanitize surfaces and air have sprung up. In areas such as Mobility as a Service (MaaS), the goal has shifted to delivery of food, medicine and other goods—rather than a mix of passengers. Despite the challenges we've faced, our community has been able to adapt and you can too! This is your chance to break out of the classroom and use your creativity and skill for good!

Challenge

Create a hardware solution that enables health in the vehicle by tracking health indicators and/or actuating responses for unhealthy stimuli. Identify key data streams that create evidence for health actions. The solution may live inside the car or may be an application specific solution that exists beyond the vehicle that ensures healthy interactions with its environment.

Hint: Think beyond the vehicle—they do not exist in a vacuum after all! What interactions with everyday infrastructure might be the best opportunity to promote the health of vehicle occupants?

Hint: Check out the 99P Labs mobility innovation blog to see examples of successful mobility projects.

Hardware Recommendations

The hardware needed for such a challenge entirely depends on the angle you and your team take. The prompt is meant to spark as much creativity as possible. Something to go on is helpful, though. Examples include:

- If your focus is on air quality and sanitization, consider air quality sensors or sanitization actuators.
- Looking outside the vehicle, investigating Internet of Things (IoT) sensors and networking will help emulate the interaction your solution will provide.
- Health can also include the wealth of Human Factors research. Sensors to track driver alertness could include a camera and microprocessor capable of using computer vision.

Prizes

First Place: every team member (up to 4 members) will split $200 in Amazon Gift Cards!

Judging Criteria

- Solution Completeness – does it work? Is there a roadmap for future implementation at Honda?
- Cost Friendliness – how does the solution address the cost needed to scale to track many resources?
- Innovation & Creativity – does the solution bring new ideas & approaches to the problem?
- Design & Build Quality – is the design well thought out? How polished is the prototype?