

PROJECT AURA

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630 fatalities
2009

Riding at night can be a daunting and dangerous task; many biking commuters are faced with the issue of being obscured when riding on the streets. Visibility at night is a vital component of biker safety, hence the need for reflectors and attachable lights. However, some of these devices are not always effective, especially reflectors as they require the driver to be directly in the narrow swath of reflected light.

Attachable lights are great at making riders seen, but due to the size of these devices as well as the requirement of the riders to physically turn them on and off each time, they may not be the most effective ways of increasing visibility to all motorists, especially from the side.

Riders, most often, have only a small headlight and taillight to make their presence known to drivers and pedestrians. These small lights leave bikers vulnerable to drivers traveling perpendicular and do little to define the obscured biker; it may not be intuitive to identify two blinking lights as a bicycle. We created a system that requires very little rider input and maintenance, while increasing the visual footprint of bikers from all directions especially from the side.

We accomplished this by expanding the surface area of light emitted through the use of RGB LEDs inside the rims of the wheels that change from red when slowing down to white when at cruising speed.

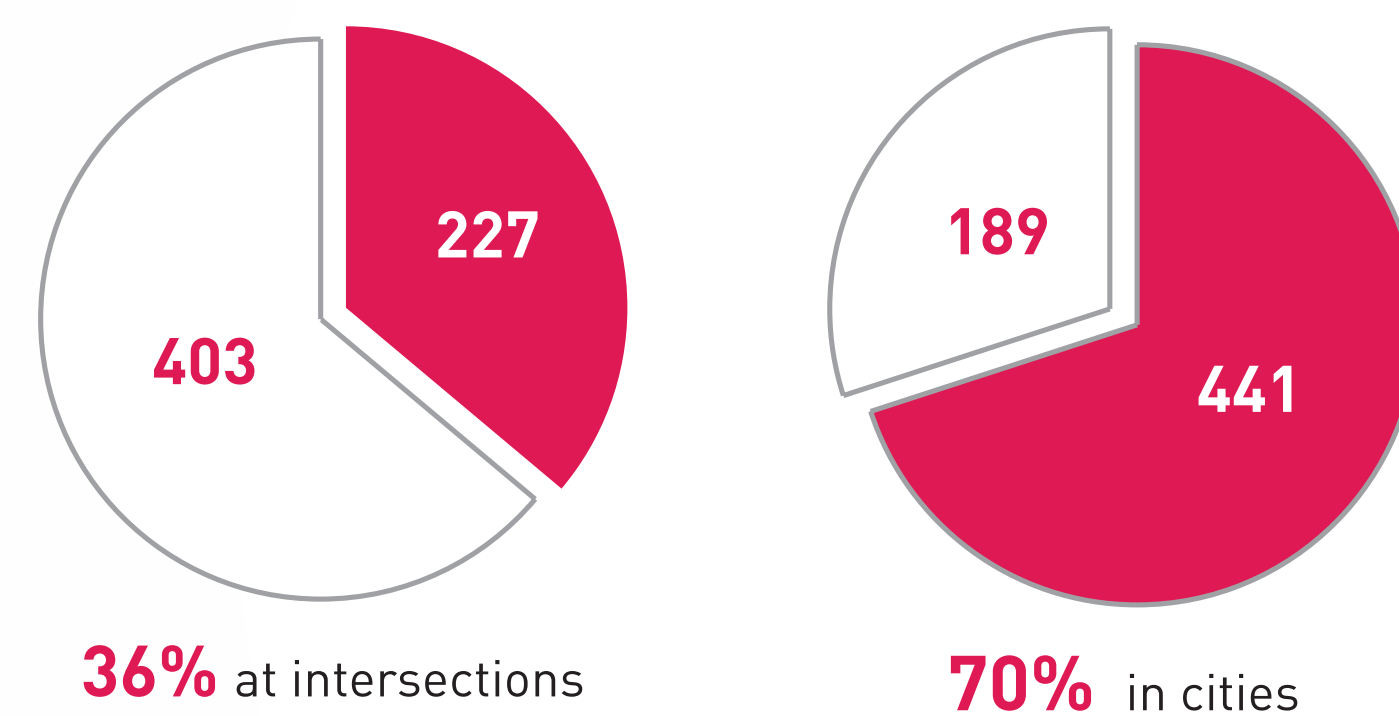
By illuminating the form of the wheels, we hope to increase the overall presence of the bicycle from all directions and create a more intuitive and recognizable form.

"If you have integrated lights and have them motion activated you have solved 80% of the problem"

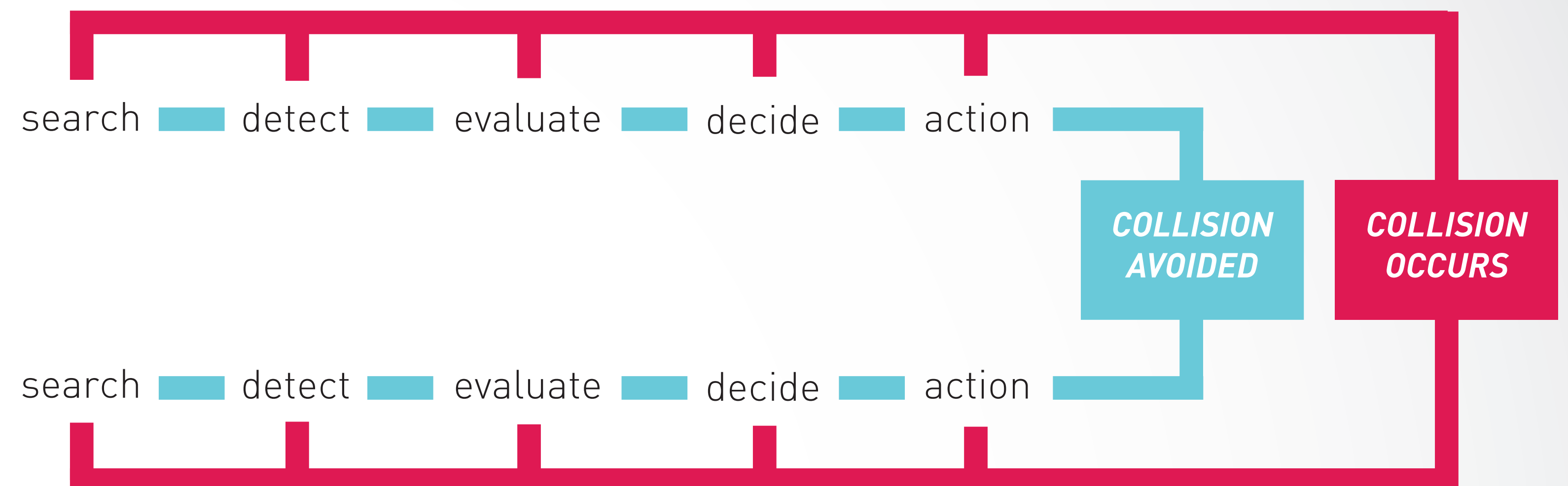
-PJ Gill
bike mechanic at Westend Bikes, Portland OR



View our process blog and videos of the bike in action at surg2011.tumblr.com

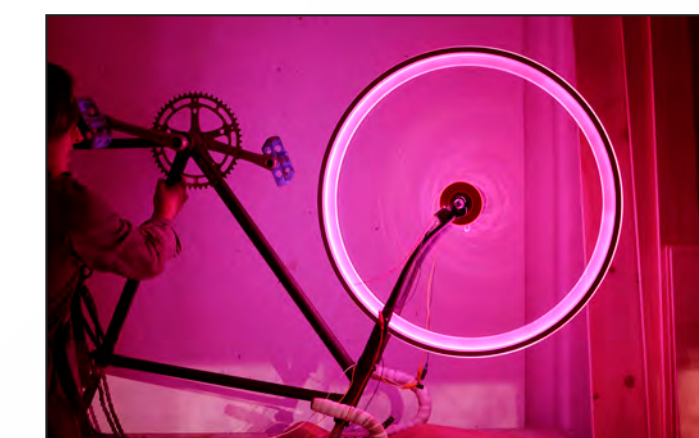
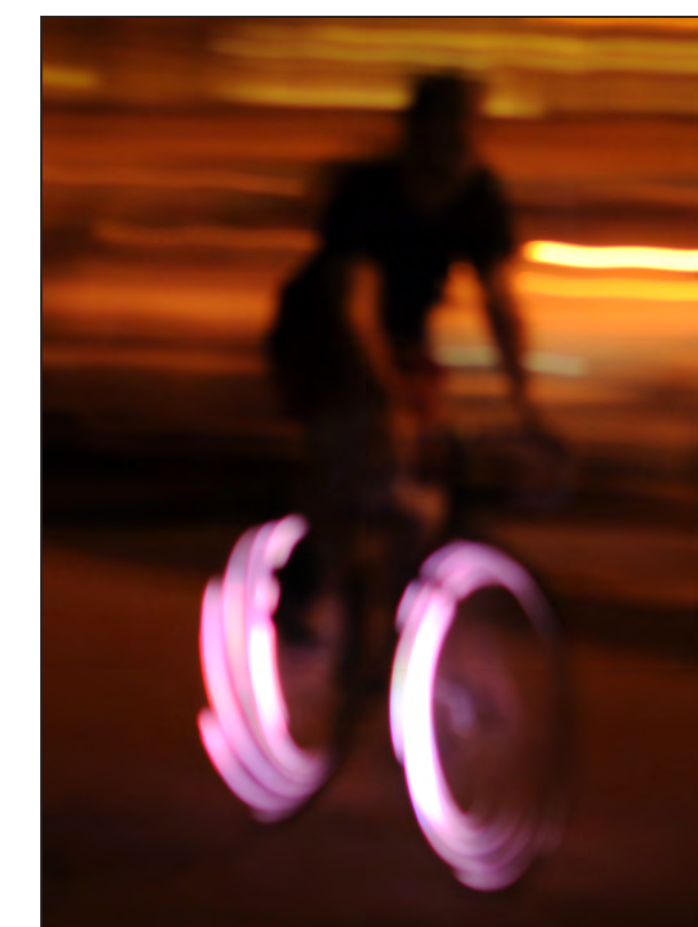


The Anatomy of an Accident:



If at any point during this sequence a driver *or* biker does not successfully accomplish one of the tasks, they deviate onto the red pathway and a collision occurs. Many different factors can cause both parties to cause an accident

Project AURA helps drivers **SEARCH, DETECT** and **EVALUATE** at night.



RGB LEDs in both rims illuminate the profile of both wheels and change from red at slow speeds to white at cruising speed