

T H E



Let's drive the future.

Ray C. Anderson (1934-2011)

Interface, Inc.

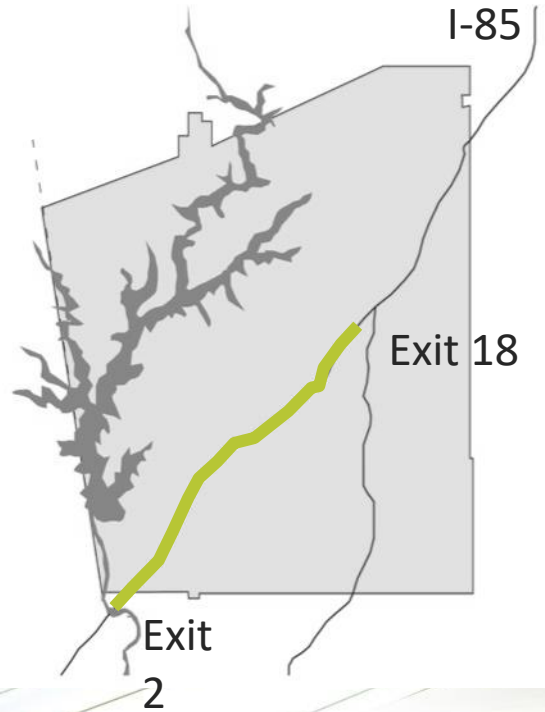
- Pioneered business case for corporate sustainability
- Brought industrial ecology to the mainstream
- "America's Green Industrialist"



Road to "The Ray"

Ray C. Anderson Memorial Highway

- GA-AL state line → Exit 18 on Interstate 85
- Designated April 2014
- Includes I-85 Visitor Information Center
- Troup County, City of LaGrange, City of West Point



"The Ray" Goals, Mission

**Better outcomes for communities,
the economy & the environment.**

Zero deaths
Zero carbon
Zero waste
Liabilities → Assets
Leverage more value





EV Charging



- First public PV4EV in the Southeast
- Important EV charging infrastructure – connects Atlanta & Montgomery
- 8 MWh generated
6 tons CO2 avoided



Wattway on The Ray

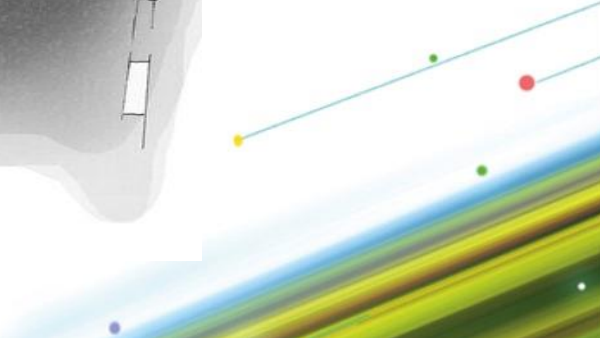
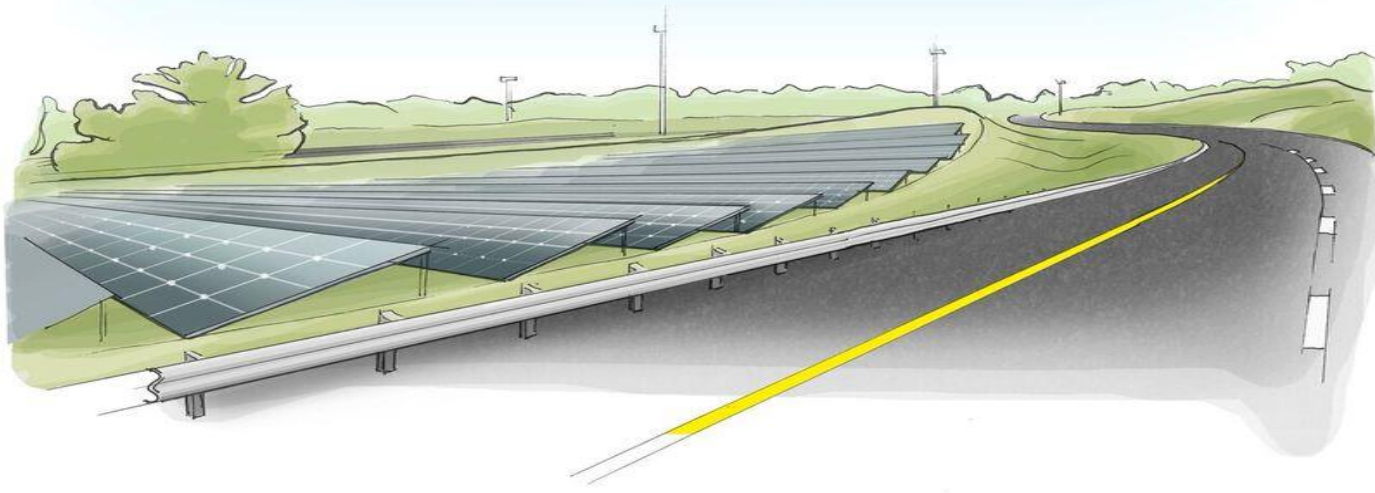
- World's first **DRIVABLE** solar road surface
- Pilot on The Ray is 1st in world outside of France
- Minimum 10 yr. durability, all-weather, rain-proof
- Exceeds state average for road surface safety
(.98 friction number = 70 skid number)
- 3.5 MWh generated





Unlocking the value in the Road

Generating energy





Solar in the Right-Of-Way

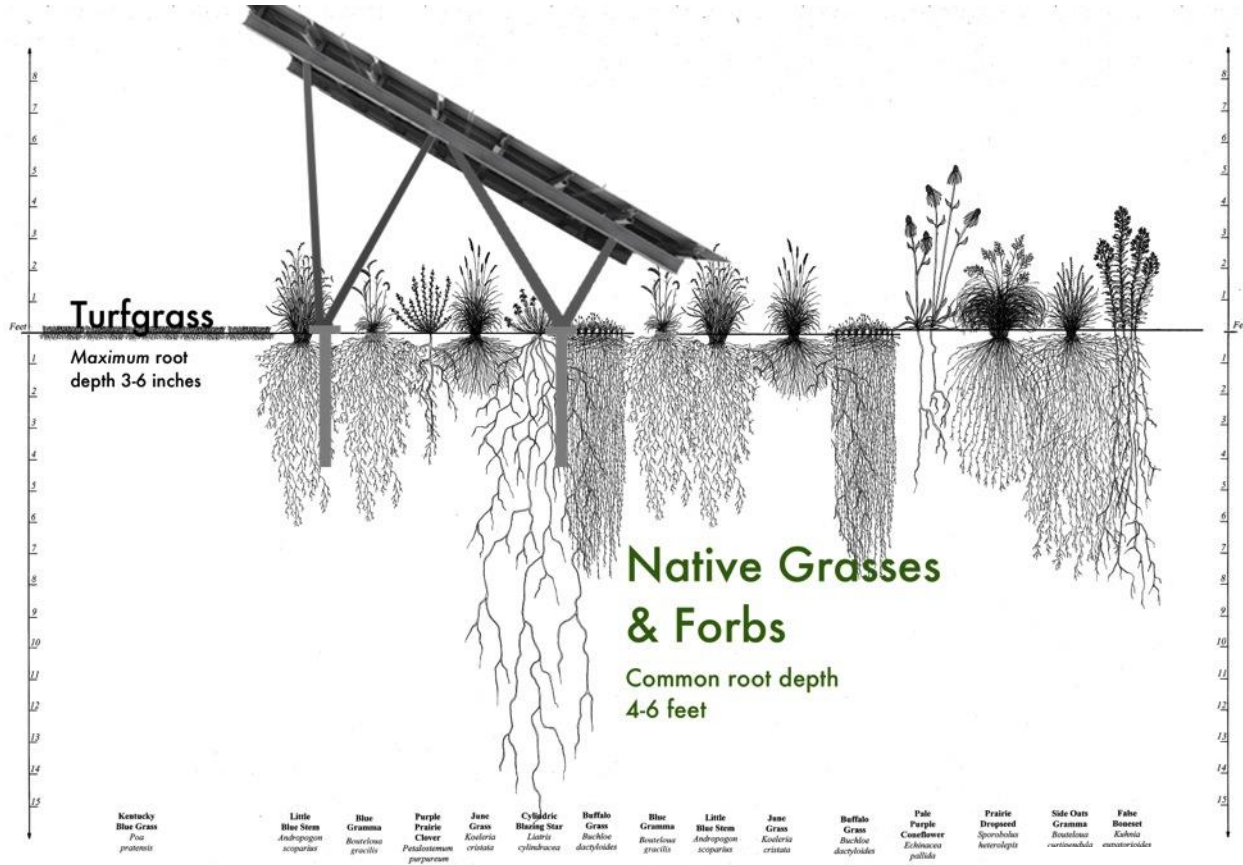
- 1MW ROW solar pilot – online Q3 2018
- Approx. 3,000 panels on 5 acres → 170 homes
- Georgia Power self-build = power to grid
- Pilot on The Ray will be 5th in U.S., 1st in GA
- Pollinator-friendly solar pilot

Before



After





Solar Site Management for Soil, Storm Water, and Pollinator Benefits



Goal: Zero deaths on The Ray

- 20% increase in U.S. road fatalities since 2011
- Over 40,000 people killed on U.S. roads in 2016
 - most in 10 years
- number of road fatalities as % of miles driven is also increasing
- “everyone else’s problem” ... \$100’s of millions spent to reduce distracted driving, impaired driving, speeding & tailgating



WheelRight tire safety station

- Measures tread depth & tire pressure within seconds - automatic, drive-through
- In U.S., under-inflated tires waste 2B gal. fuel/yr. & increase tail pipe emissions
- WheelRight (UK) pilot on The Ray 1st in U.S. – only tread depth monitoring in the world




WheelRight
tire pressure management

Sponsored by



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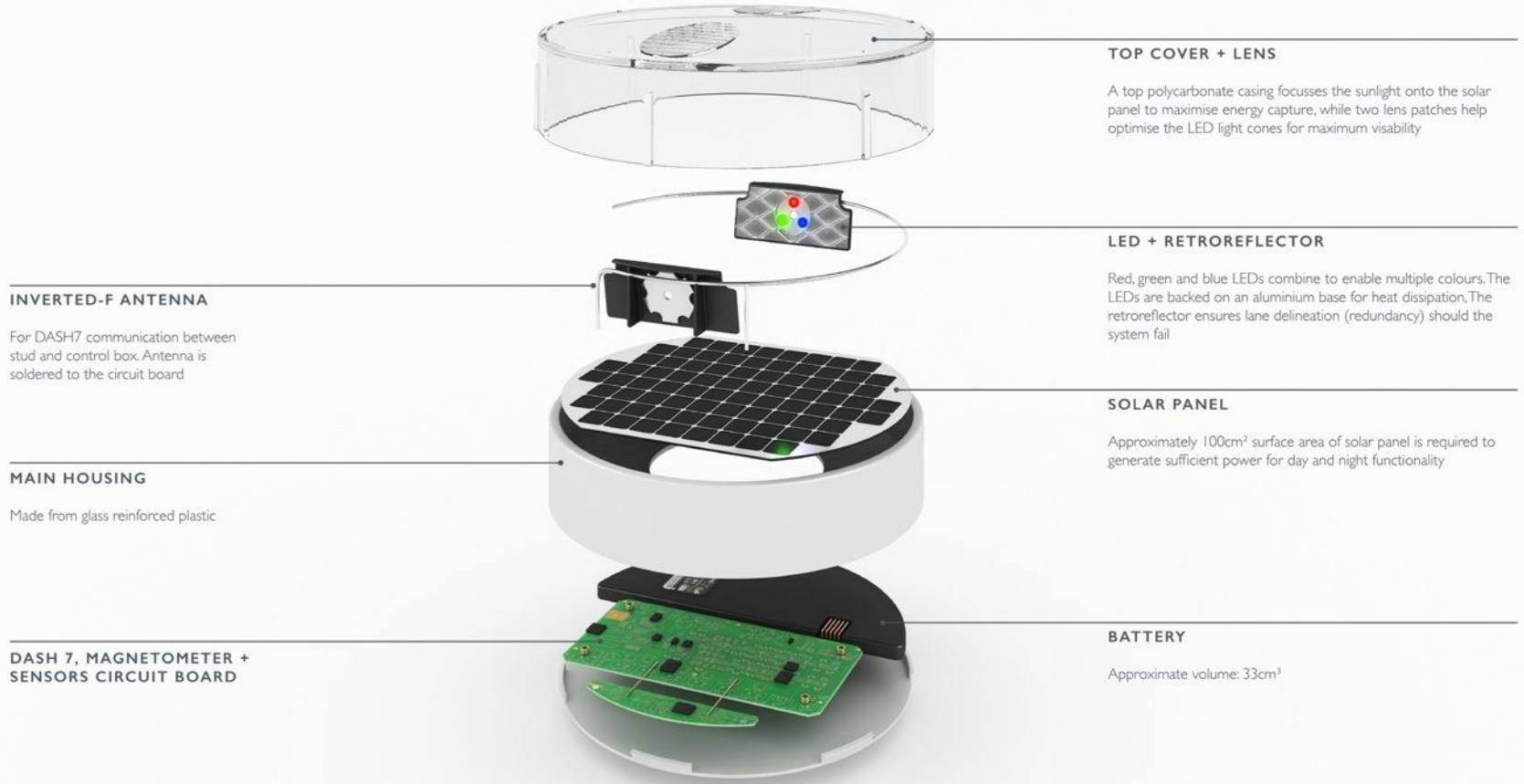


Value proposition:

BLIP can impact 89% of U.S. road deaths

- (1) Lane visibility
- (2) Smart road that collects data digitally
- (3) ... that communicates data digitally
- (4) ... that communicates through color to "classic" cars

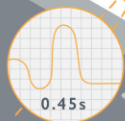
The BLIP Components



SYSTEM OVERVIEW

1. ROAD STUDS

Road studs are set 12-24m apart along all lane boundaries. Each stud detects a 'blip' when a vehicle passes at a particular point in time, and each 'blip' is then transmitted to a control box.



2. CONTROL BOX

Control boxes, repeated every mile along the side of the road, collect the 'blips' transmitted by the road studs within that section of road. The control boxes process a series of 'blips' to calculate vehicle position and speed. They can also communicate with the outside world and be programmed remotely using cellular communication.

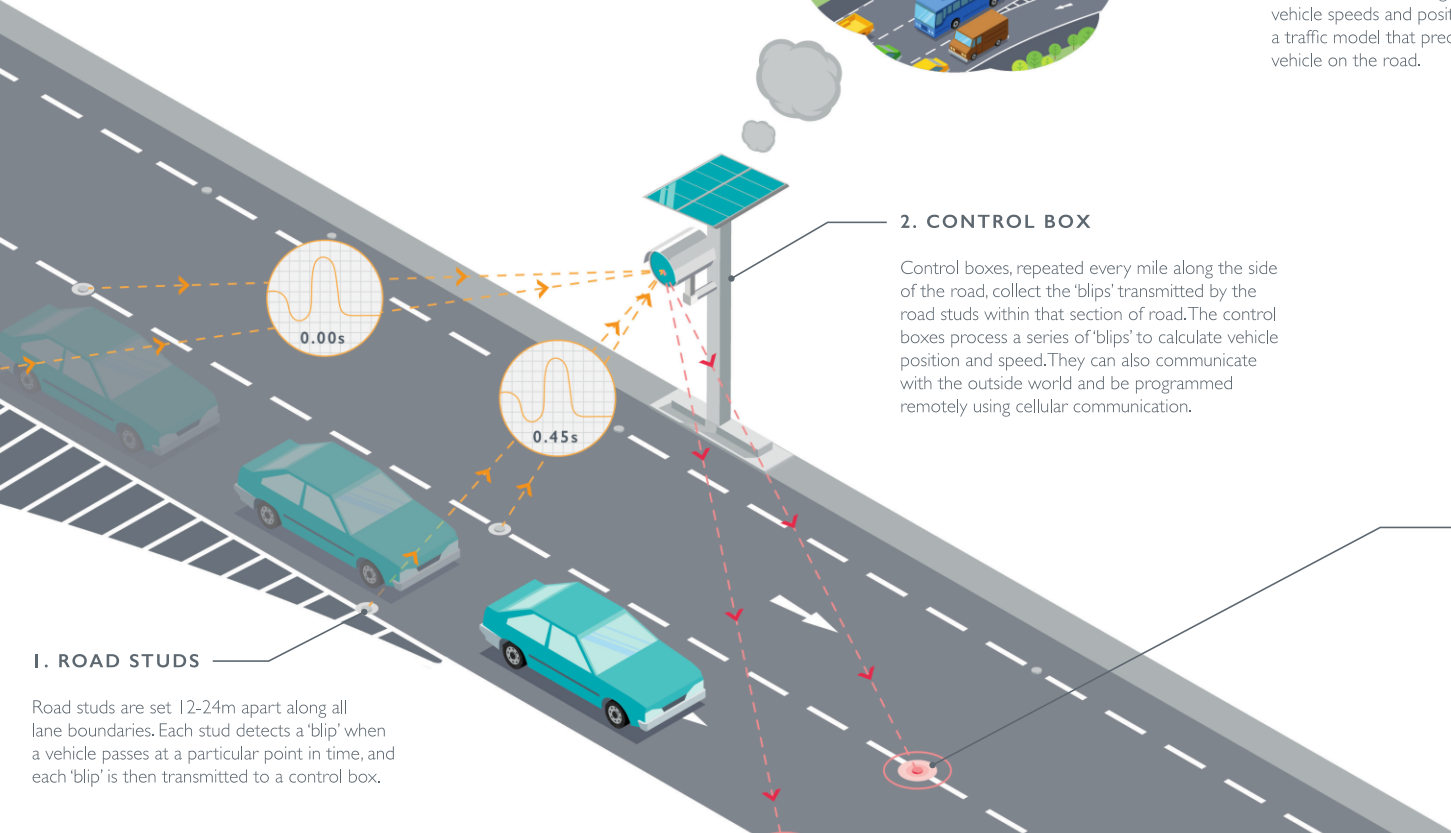
3. PREDICTIVE TRAFFIC MODEL

With the control box gathering snapshots of vehicle speeds and positions, it is able to produce a traffic model that predicts movements of each vehicle on the road.



4. SIGNAL

The control box is programmed to recognize particular situations in the traffic model where a road stud should produce a signal - for example, if the control box recognizes a case of tailgating, it communicates to the appropriate road studs to change colour (e.g. to flash red).





Concepts for Future Consideration

- Integrated solar noise barriers
- Right-of-way wind generation
- Drone monitoring
- Sensor network for safety & sustainability
- Connected vehicle pilot
- Sustainable road materials
- Right-of-way farming



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