

An aerial photograph of a multi-lane city street with several cars. Each car is surrounded by a light blue circular glow, and a blue Wi-Fi symbol is positioned above each car, suggesting a networked or autonomous driving environment. The street is lined with green trees on both sides, and a sidewalk with more trees and a few pedestrians is visible on the right. A vertical line down the center of the image separates the left and right halves.

# AI You Can Drive My Car

Consumer Emotion and the  
Future of Self-Driving Cars

March 2019



# Me & Car Automation: Defining Emotional Moment #1





Technology Intelligence

## Arizona residents attack self-driving cars

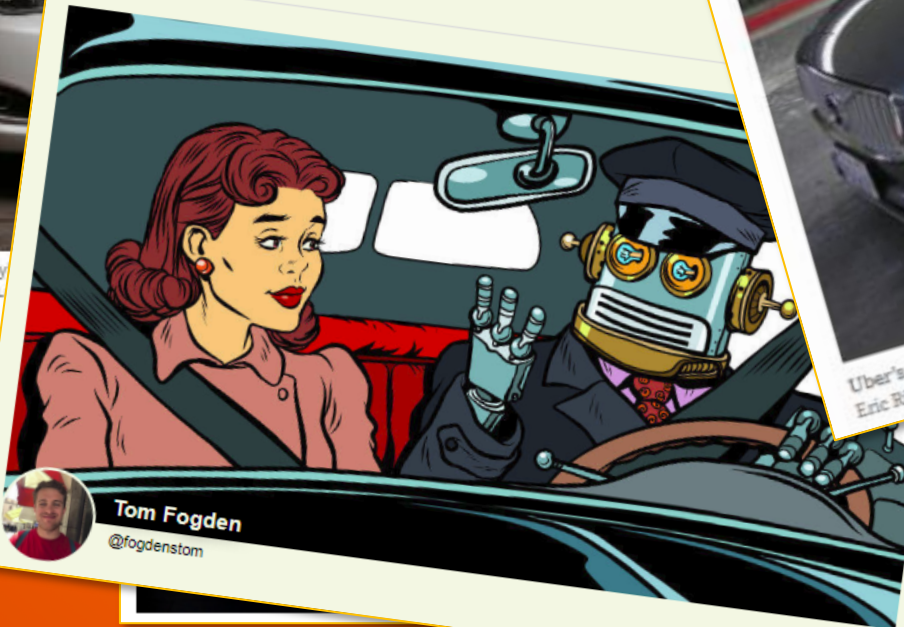


Save 3



A Waymo Chrysler Pacifica Hybrid in Chandler, Arizona. [cra.com](#)

## Mapping Every Driverless Car Crash So Far



Tom Fogden  
@fogdenstom

## Uber's Driverless Cars Return to the Road After Fatal Crash



Uber's autonomous vehicles returned to public roads in Pittsburgh on Thursday.  
Eric Risberg/Associated Press



REUTERS

under  
ogram

EMERGING TECH

6 self-driving cars  
tapped  
autonomous

Our list of  
Arizona Uber

According to  
computer  
bring multiple benefits — from safety  
cities.



# The role of emotions in adopting new and disruptive technologies

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- > Negative emotions can be a barrier to new technology adoption: **Fear of change** the **unknown**, the **learning curve**, the **complexity**...
- > But disruptive technologies often burst into the mainstream by activating positive emotions like making people feel **smart**, **efficient**, and **in control**
- > As part of CMB's ongoing analysis of **the role of emotions in the commercial success or failure of emerging disruptive technologies**, we took on **Autonomous Vehicles**...





# The Technique: Measuring emotional benefits and barriers


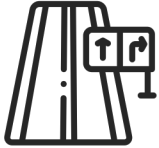







- > Measures the emotions it activates for consumers
- > Compares activated emotions vs. relevant benchmarks
- > Identifies which emotions drive key outcomes
- > Isolates what (e.g., messaging, creative, customer experiences) activates the most important emotions



# Fully autonomous vehicles have a *big* chasm to cross before they gain widespread acceptance

- > Having an AV transport an elderly relative meets with most resistance
- > People are just as sketched out by highway driving as city driving

Self-stated Likelihood to Use AV in Future by Tech Adoption Group		 CITY DRIVING	 HIGHWAY DRIVING	 PARENTS PUTTING CHILD IN AV ALONE	 PUTTING ELDERLY PARENT IN AV ALONE
 Acceptors		10%	11%	13%	7%
 Ambivalent		19%	20%	18%	15%
 Rejectors		70%	70%	69%	78%



# Profile: First Adopters vs. Category Rejectors

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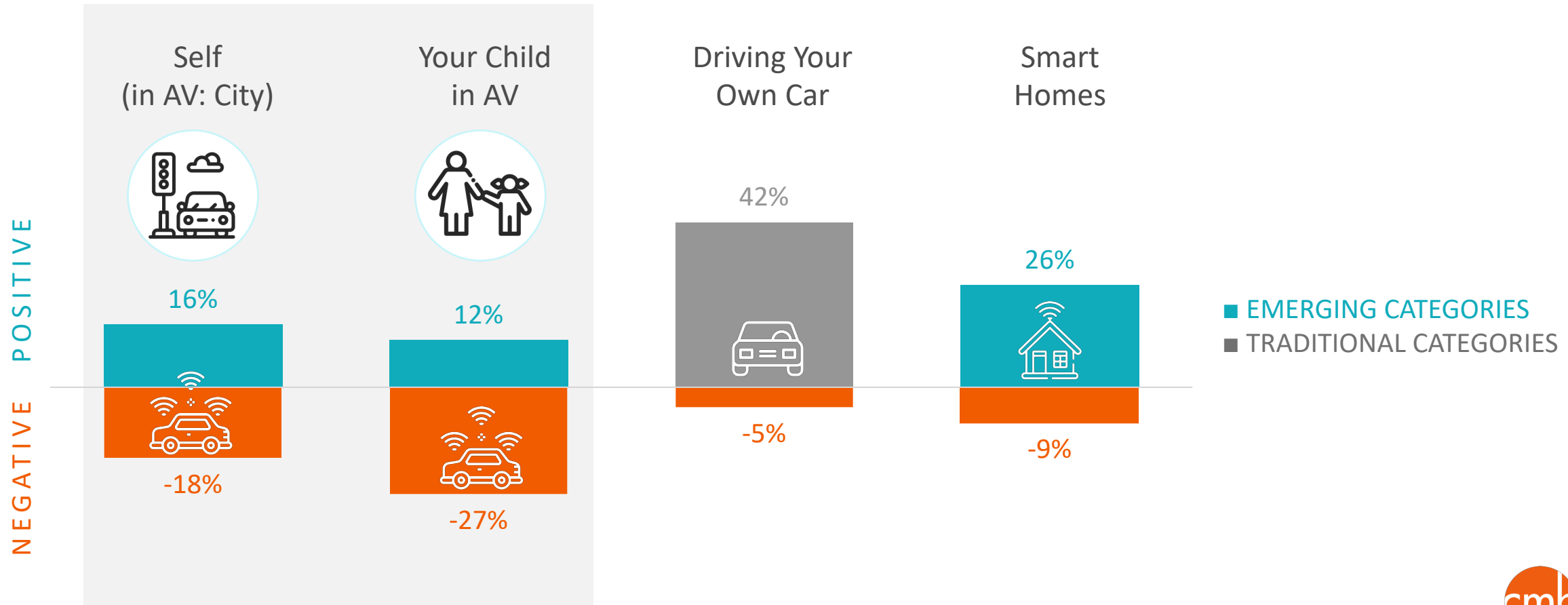
<35 year olds  
are much  
*more likely*  
to get in  
an AV

The 55+  
crowd is  
*very averse*  
to the  
concept



# Overcoming *emotional* barriers will be key to greater acceptance of autonomous vehicles

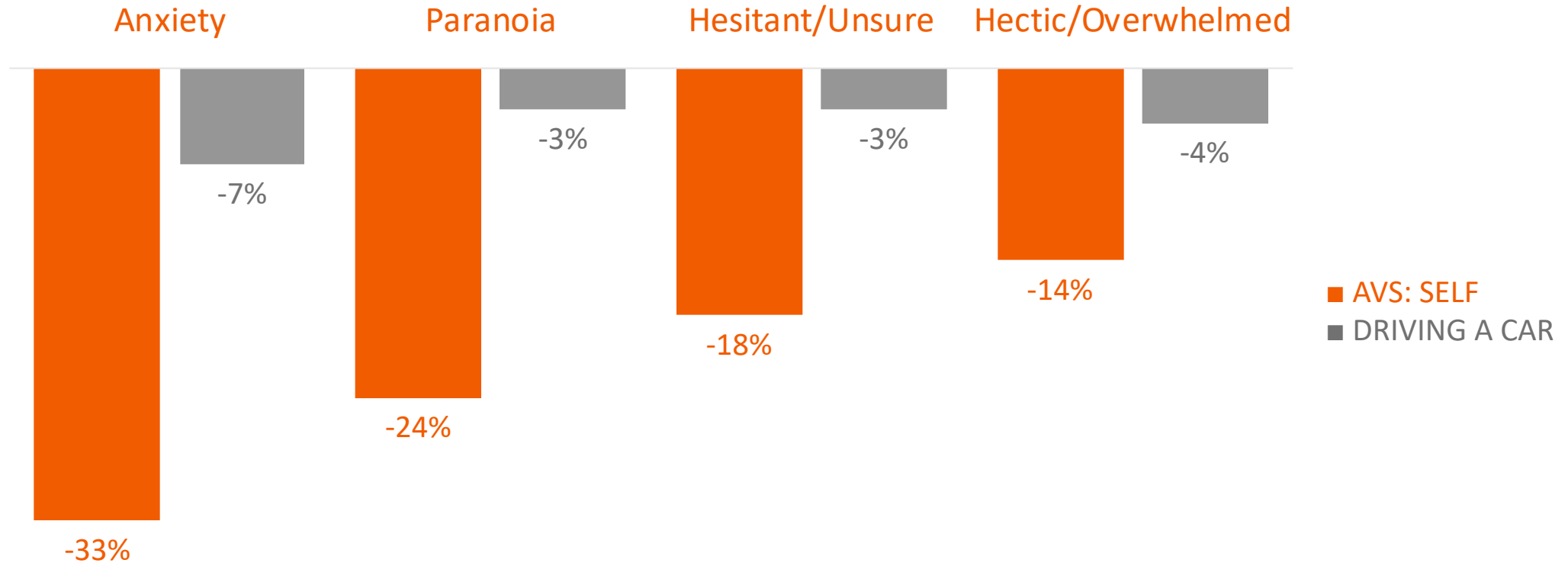
## Net Positive and Negative Emotional Activation by Category





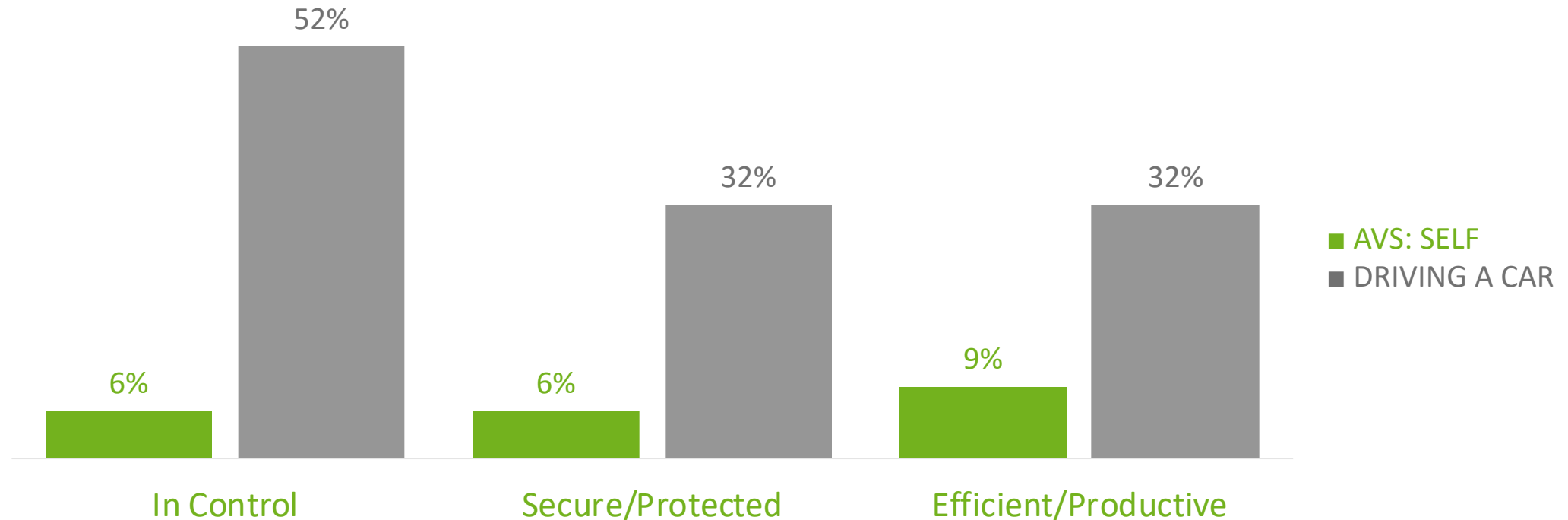
# Negative Emotions: Anxiety, Paranoia, and Hesitancy are the most widespread barriers

> AVs activate these emotions *much* more than driving your own car



# Positive Emotions: Driving your own car makes people feel more in control, secure, and efficient

> Surprisingly, few people would feel “efficient/productive” in an AV





# Predictive Analytics: Which emotional levers *predict* someone's likelihood to use AVs

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- > Reducing anxiety is priority #1 for the industry



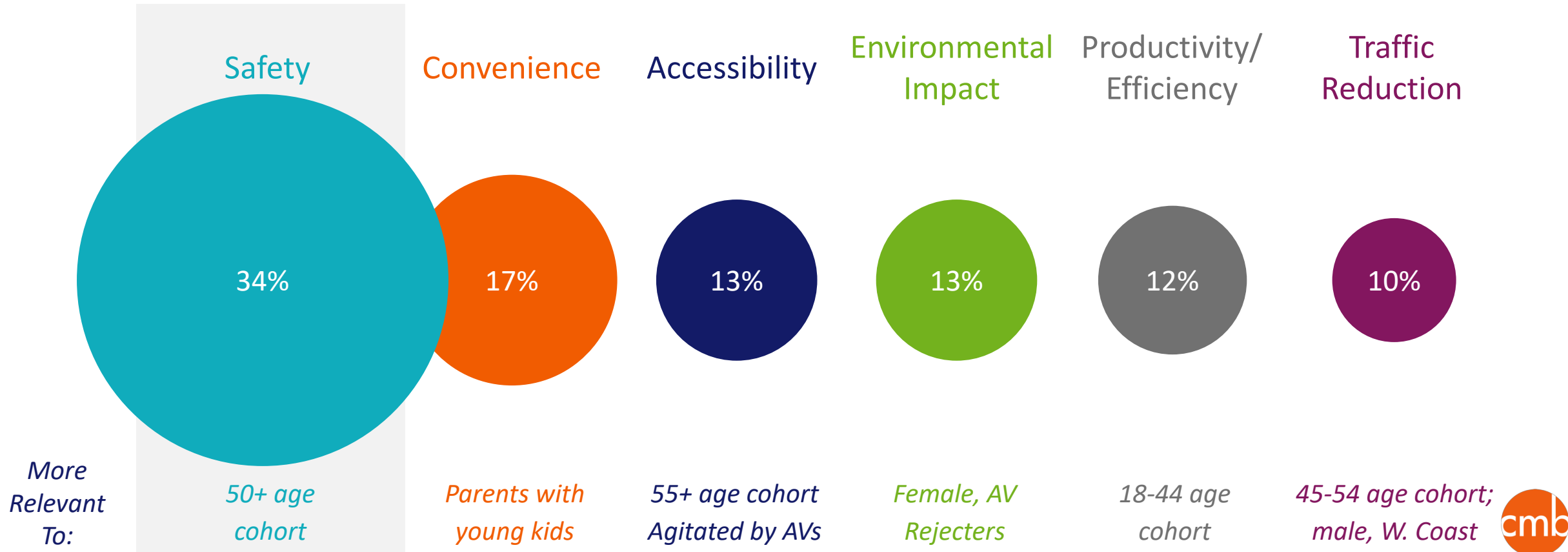
So: How Can the Industry Best  
Change How People *Feel* About  
Autonomous Vehicles?



# Messaging: Which One Do People Prefer?

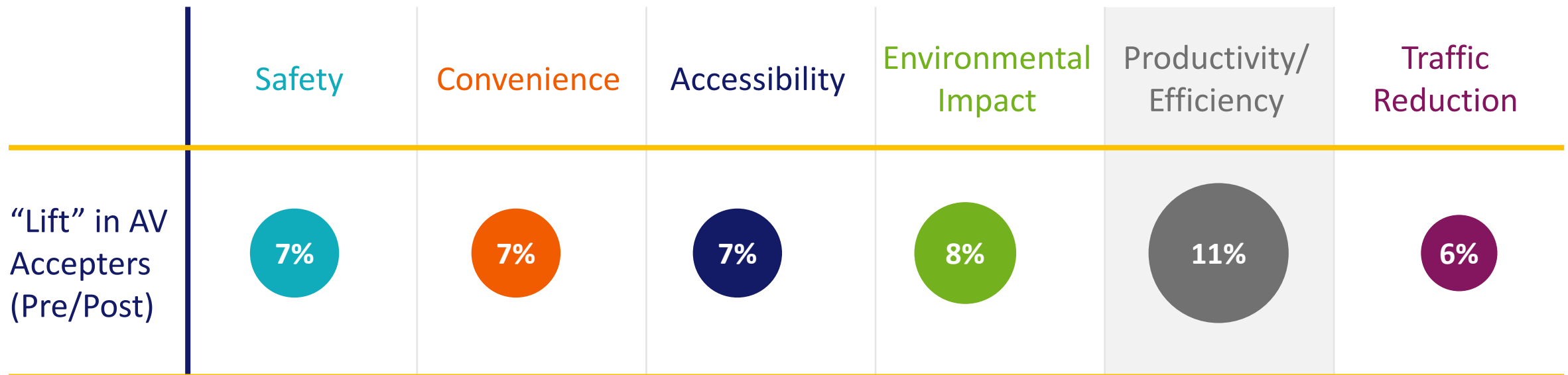
We tested six statements to make the case for AVs

- > The “safety” messaging is the most mainstream preference...the one most likely to make people reconsider AVs



# Unfortunately, none of these messages changed many people's minds

- > The statements only converted 8% or Rejecters or Ambivalents overall
- > “Productivity/Efficiency” had a higher conversion rate



“Lift” = % of people preferring each message who became an “Acceptor” *after* reading this statement.



# Many believe—rationally—that fully-automated transportation systems would be much safer

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- > Most understand that AI *could* do a better job than humans at lowering traffic accidents and fatalities (currently 100/day die from this):



# ...but many are *very* anxious about that loss of control

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- > The hesitation, anxiety and uncertainty that come from “letting go” is a very serious emotional obstacle to adoption:





# ...and even when people *do* trust AVs...they don't trust human-driven cars interacting with AVs

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- > Many fear the “hybrid” world to come in the near term, where some vehicles are AI-driven, while others cars remain human-driven (not to mention pedestrians, bicyclists, scooters, etc.):





# Implications

- > Emotions matter for driving disruptive technology adoption
- > For Autonomous Vehicles to gain greater acceptance, the industry must address the deep anxiety people have about losing control
- > Emotions around AVs are complicated and contradictory: many fear for their safety when getting in an AV now, but aspire to an AI-driven world with many fewer accidents



# Me & Car Automation: Defining Emotional Moment #2



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