



Telematics—Big Data or Big Brother

Robin Harbage, FCAS, MAAA

October 23, 2015

Telematics—Big Data or Big Brother

- Uses—the pros and the cons
- Privacy implications
- Regulatory aspects

“

“May you live in interesting times”

”

— Purported Ancient Chinese Curse



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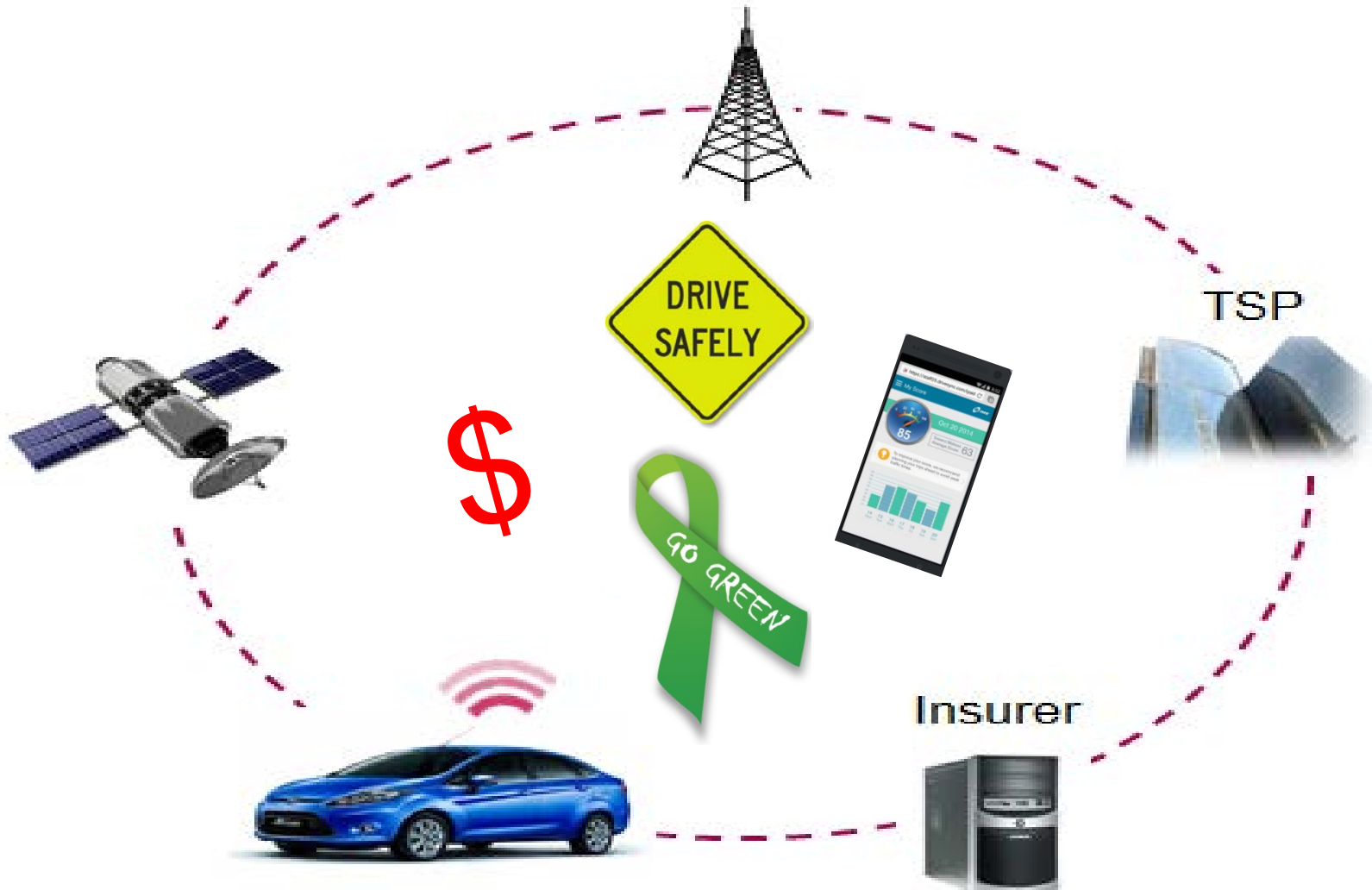
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What is usage-based insurance (UBI)?



Why do policyholders like UBI?

Fair and makes sense

- Everyone understands that safer drivers are less likely to have accidents and deserve to pay less
- Consumers don't like the use of credit scores because it doesn't make sense.

Like to control premium

- Today there are relatively few ways for insureds to control premium charged
- Drivers opt in, get participation discounts, and opportunity for even greater discounts

Want access to useful driving feedback

- Driver feedback significantly reduces risky driving, especially with constant monitoring
- Parents want their teenagers to be safer drivers

Like options for value-added services

- Consumers generally like options
- Some consumers really like the added services

Embrace products that are "green"

- Safer driving and fewer miles significantly reduces emissions
- 14 states have pay as you drive specifically listed in their climate plans

Consumer response has been overwhelmingly positive

About the survey

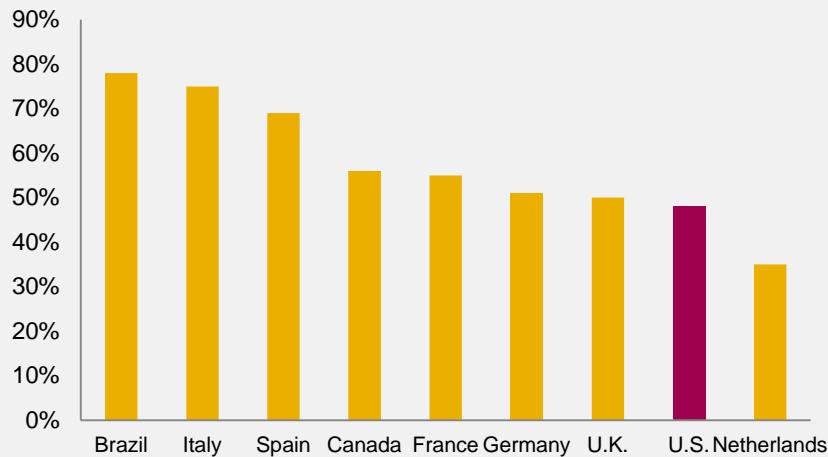
- We surveyed over 1,000 people from the U.S., Canada and Brazil.
- The survey was conducted in July 2015 for the U.S.
- The U.S. survey was the third time we polled consumers about UBI.

The marketplace is ready for widespread adoption of UBI

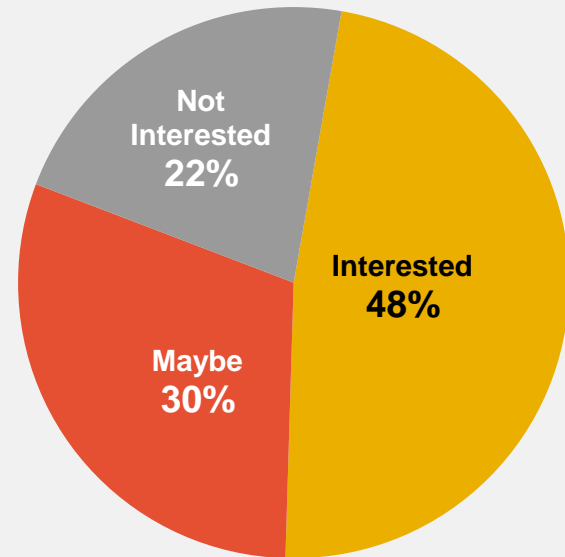
48% Definitely or probably interested in the U.S.

78% Would be open to UBI in the U.S.

Percentage interested in UBI, by Country



U.S. interest in UBI



Progressive's survey is finding similar results

A survey of 500 consumers

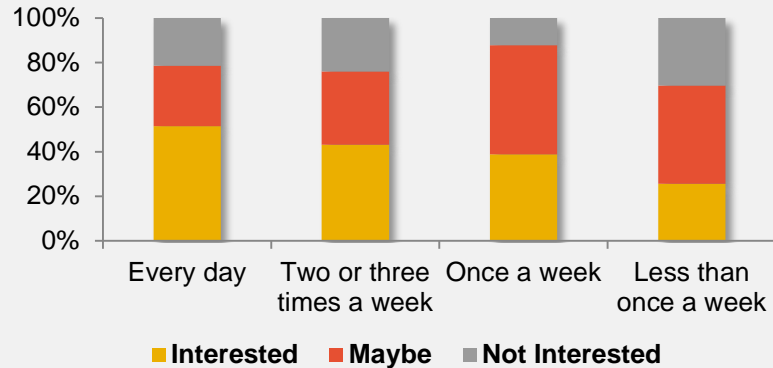
- **84%** believe bad drivers should pay more for their auto insurance.
- Nearly **80%** of consumers agree that UBI is a fairer way to price insurance.
- **90%** of consumers ages 18 – 34 are willing to try UBI.
- More than half don't realize they're paying higher rates due to others' bad driving, and **85%** would be upset to learn they're being charged more because of it.

Drivers currently earning a discount with Snapshot are saving an average of \$150 per year, and Progressive plans to roll out a new program to additional states this year — offering a discount just for signing up, as well as bigger discounts for more drivers.

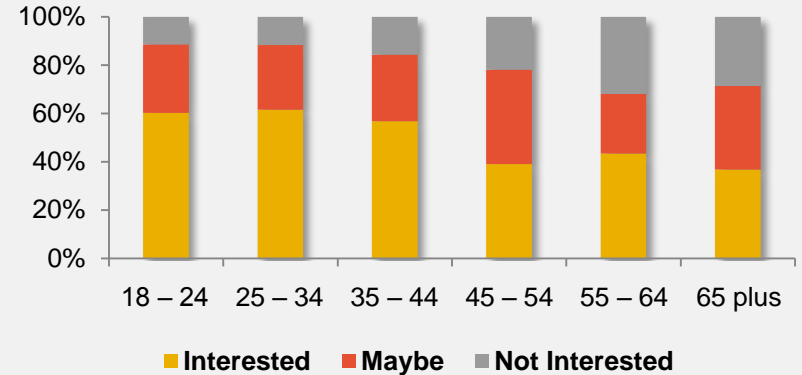


People who drive more, are younger and own newer cars tend to be more interested in UBI; this is consistent across the U.S., Canada and Brazil

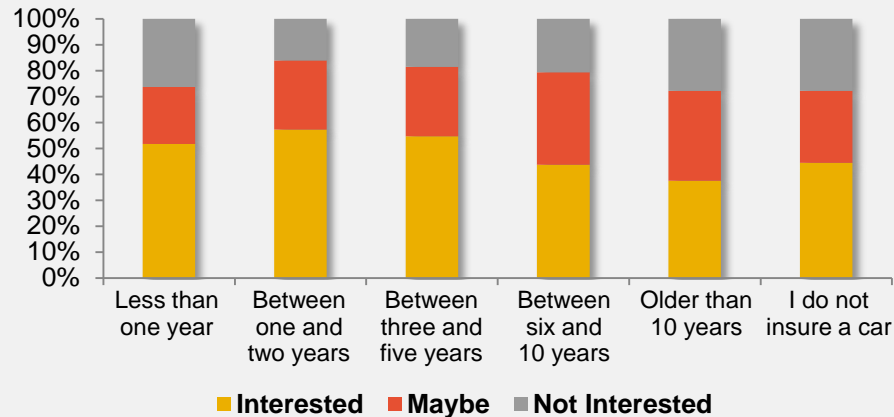
Frequency of Driving



Age



Vehicle Age



Note: Showing U.S. results only

What are insureds' main concerns with UBI?

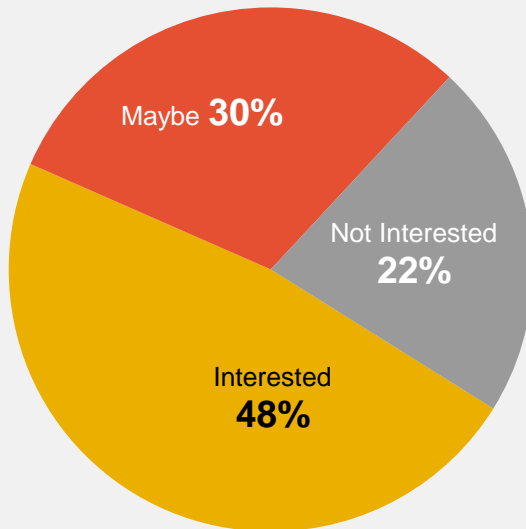
	U.S.	Canada	Brazil
<i>Worried premium will increase</i>	Money 46%	Money 47%	Money 34%
<i>Worried about sharing their data</i>	Privacy 41%	Privacy 46%	Privacy 51%
<i>Worried claims will be invalidated</i>	Claims 34%	Claims 46%	Claims 47%

Millennials are less worried about sharing their data, but otherwise have similar concerns as other generations

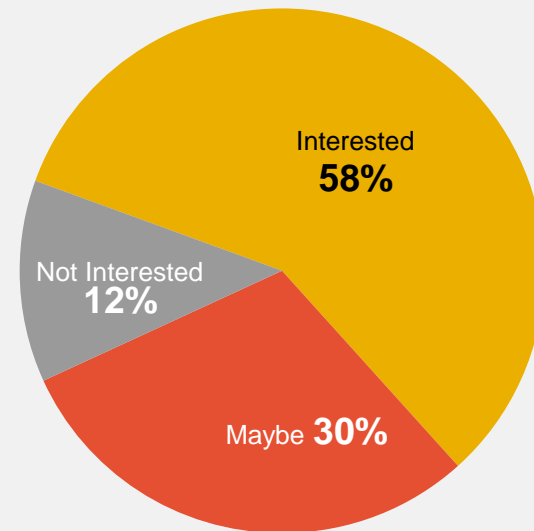
	U.S.	Millennial	Non-Millennial
<i>Worried premium will increase</i>	Money 46%	Money 44%	Money 47%
<i>Worried about sharing their data</i>	Privacy 41%	Privacy 33%	Privacy 44%
<i>Worried claims will be invalidated</i>	Claims 34%	Claims 35%	Claims 34%

Without a risk of surcharge, 88% of U.S. consumers would be open to purchasing a UBI policy

Companies should address concerns through product design



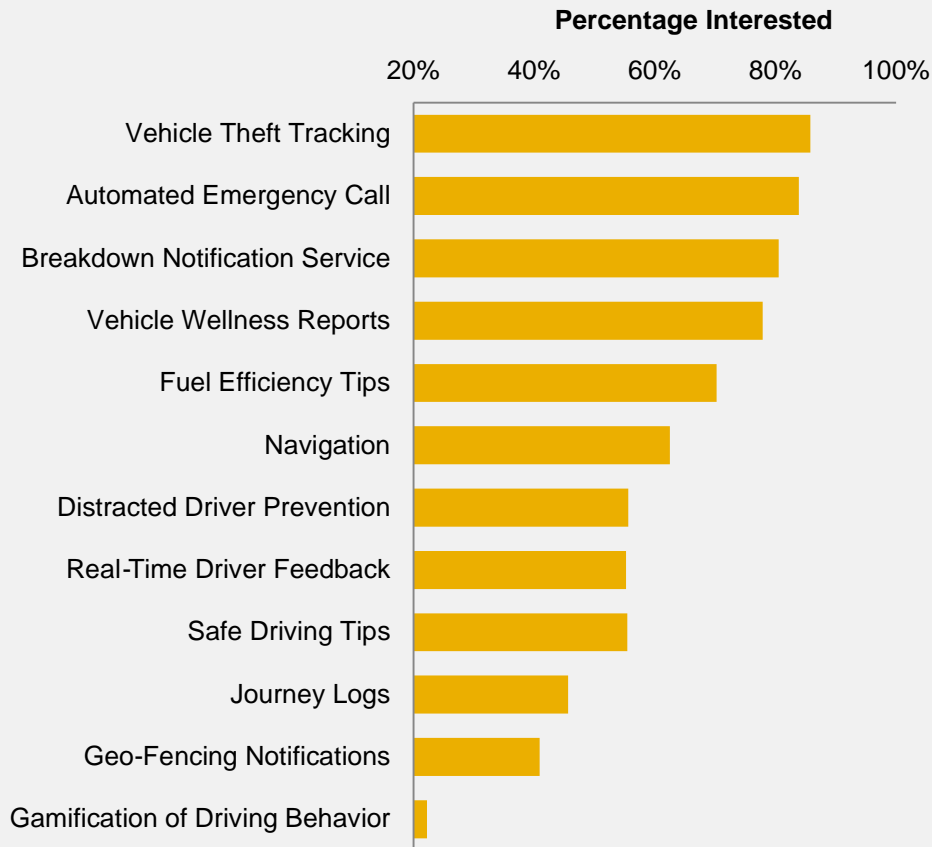
Interest in UBI With Risk of Surcharge



Interest in UBI Without Risk of Surcharge

Value-added services allow insurers to de-commoditize

Value-Added Service, Ordered by Interest
U.S. Respondents



65%

who would buy or consider buying a UBI policy would pay \$45 or more for value-added services.

Of this population, **80%** of millennials would pay \$45 or more, compared to **58%** of other age groups.



Concerned parents are a high potential market for UBI

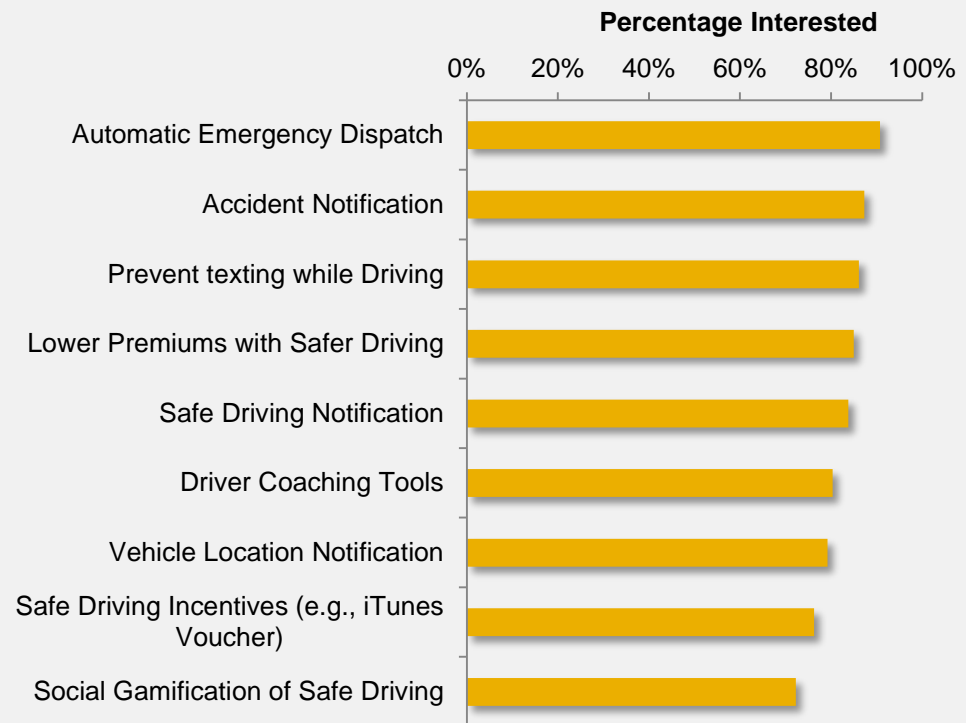
Only **8.6%**

of respondents said they would *not* want safety services for their children.

84%

of parents interested in UBI would be willing to pay for value-added services.

Teen Safety Services, Ordered by interest



Note: Showing U.S. results only

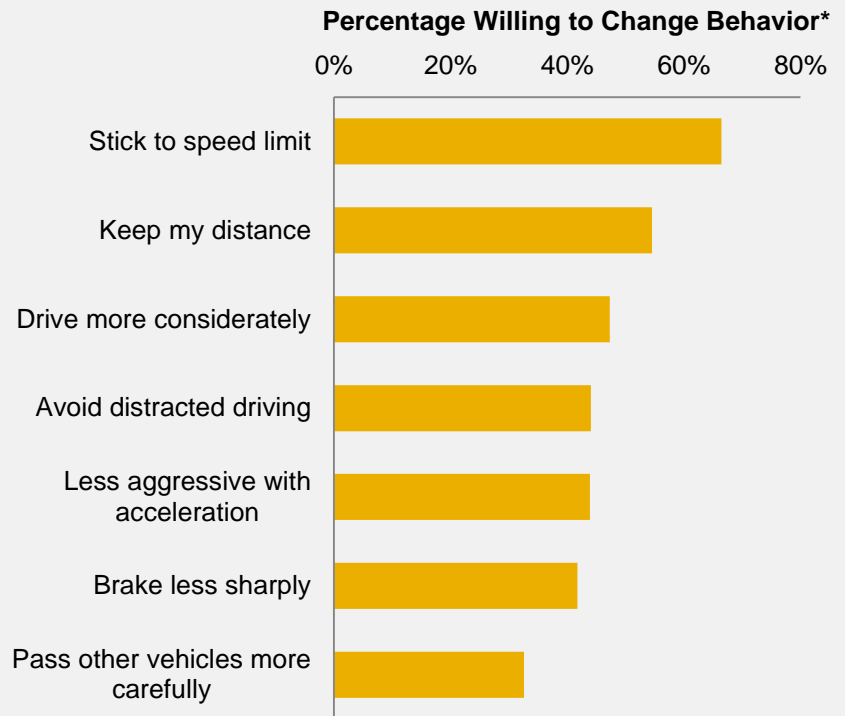
There is a large appetite for behavioral change features

63%

of those open to UBI
are willing to change
their driving behavior.

Of this population, **84%** of
millennials would change their
driving behavior, compared to
53% for all other age groups.

Behaviors That Drivers are Willing to Change



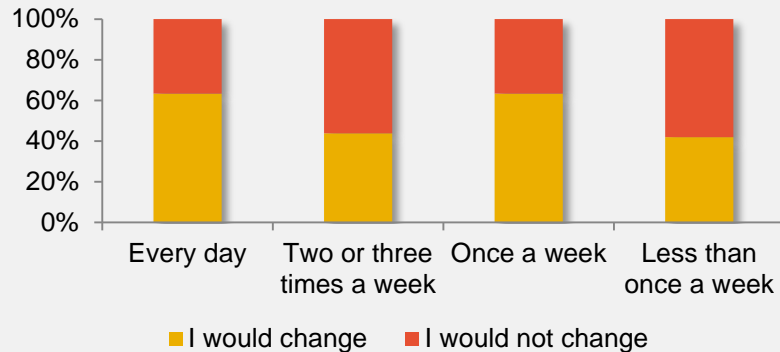
*Percentage taken of those that indicated they are willing to change behavior (i.e., ignores those who are not willing to change behavior).

Note: Showing U.S. results only

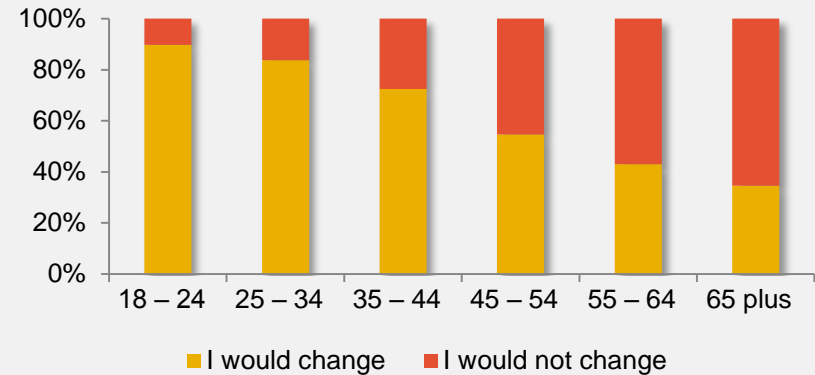


Higher risk segments tend to be more willing to change behavior, potentially resulting in lower loss costs; this is consistent across U.S., Canada and Brazil

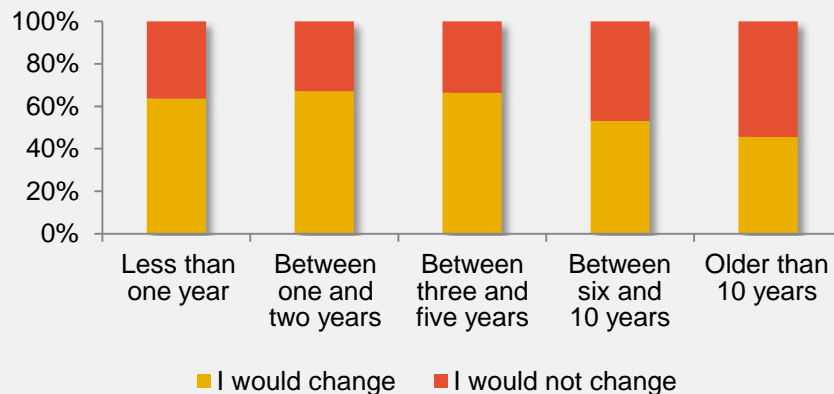
Frequency of Driving



Age



Vehicle Age



Note: Showing U.S. results only

Millennials are particularly interested in UBI

Would Buy a UBI Policy

(Interested or Maybe)

88%

Millennials



74%

All Others

Would Buy IF Premiums Didn't Increase

(Yes or Maybe)

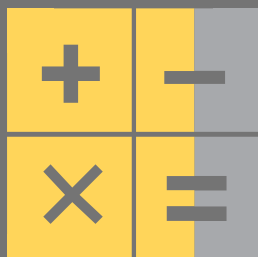
93%

Millennials



85%

All Others



Millennials are enthusiastic because they're believers:
72% think UBI offers a better way to calculate premiums.



Smartphone and apps enhance millennial's UBI experience



- **92% of Millennials** own smartphones, compared with **58% of other age groups.**
- **92% of Millennials** would download a smartphone app.
- **81% of other age groups** would either download or use an existing app for UBI.



UBI in the social world

Sharing is becoming the norm

Facebook has 1.06 billion monthly active users

680 million of them are mobile users

Twitter has 200 million active users

We already use devices that track our data

- Phones
- Cars
- Fitness trackers
- Navigation





Be transparent

Tell consumers:

- What data is collected
- How the data will be used
- With whom the data will be shared





UBI — Benefits

Insurers:

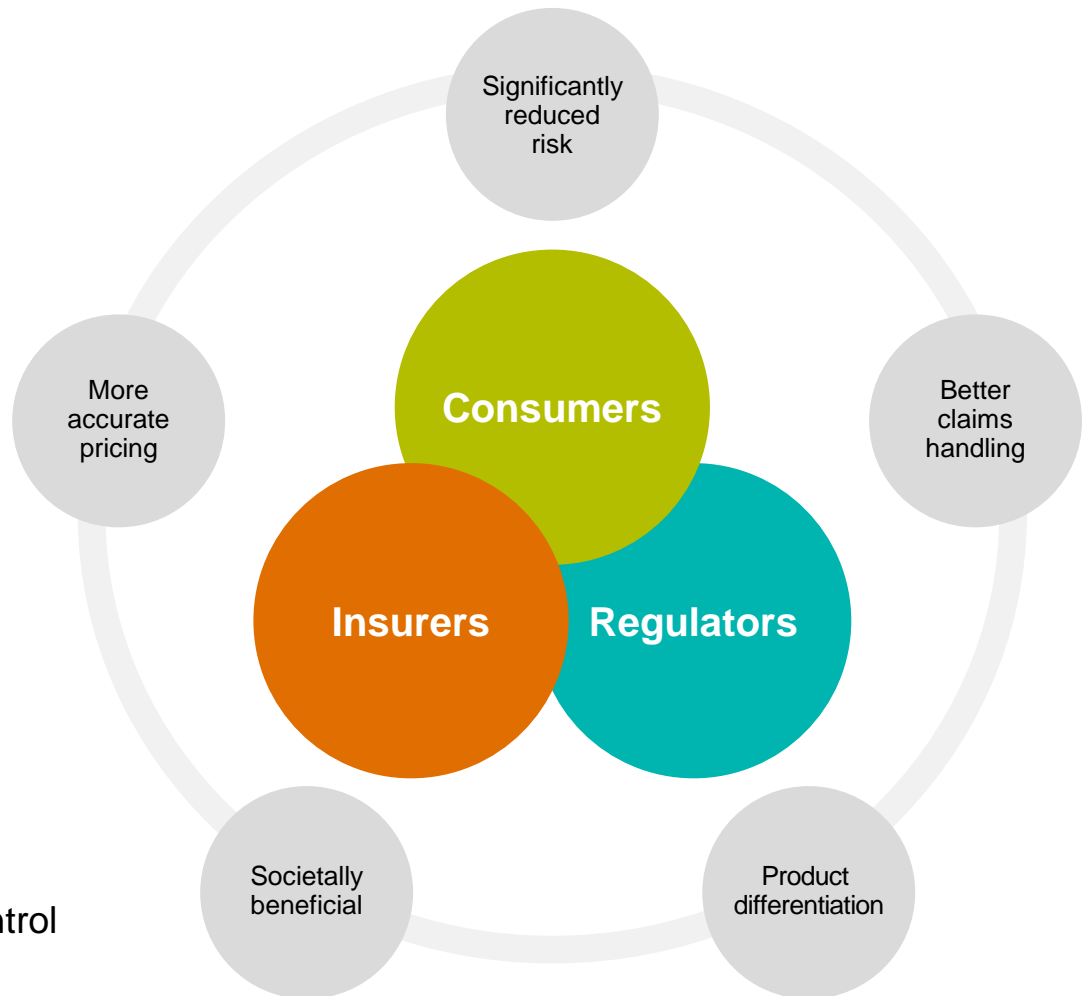
- Enhanced pricing
- Product differentiation and brand awareness
- Reduced loss costs
- Improved consumer satisfaction and retention

Consumers:

- Control of premium
- Understandable rating based on how, when, where they drive
- Access to useful driving feedback
- Value-added services
- “Green” and “progressive” products

Regulators:

- Reduce accidents and save lives
- “Fairly” discriminatory variables
- Consumer acceptance
- Affordability by granting premium control
- Environmentally friendly



Behavior Modification Can be Effective

30+%

Reduction in claims costs

Young driver:

30% – 40%

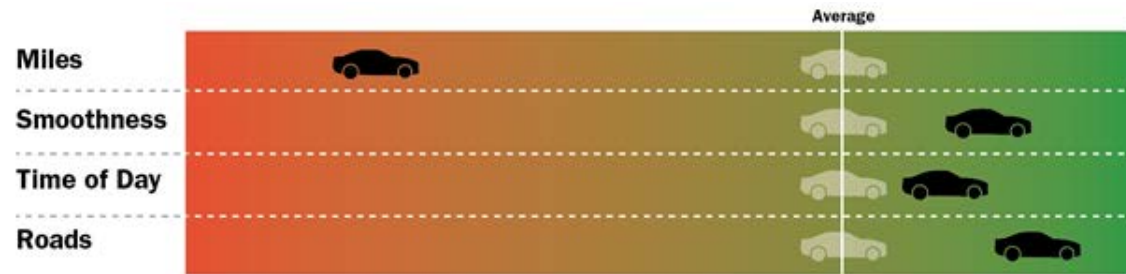
Commercial fleet:

54% – 93%



**Behavior
change**

DriveAbility® Score Components



- Providing actionable feedback on controllable behaviors with appropriate incentives can improve driving.
- Norwich Union (now Aviva) cited improvement of 30% in youthful loss ratios for participants in UBI product.
- Insurethebox cites Improvement of 35% to 40%

Desjardins Ajusto Benefits

30+%

Reduction in claims costs

Young driver:

30% – 40%

Commercial fleet:

54% – 93%



**Behavior
change**

Mississauga, ON, May 28, 2014 - Ontario and Quebec drivers who have signed up for the Ajusto usage based insurance (UBI) savings program from Desjardins General Insurance Group (DGIG) are improving the way they drive and consequently saving money.

In a DGIG survey marking the one-year anniversary since the launch of the Ajusto program, more than two-thirds of respondents agreed with the statement that they pay more attention to acceleration and braking since signing up for the program. In addition, 50 per cent agreed that they've become safer drivers since they installed the Ajusto telematics device in their vehicle and began monitoring their own driving habits online.



UBI Marketplace

Insurers are realizing the benefits and launching rapidly



Notable Global Developments

Progressive wrote \$2.6B in Snapshot premiums in 2014

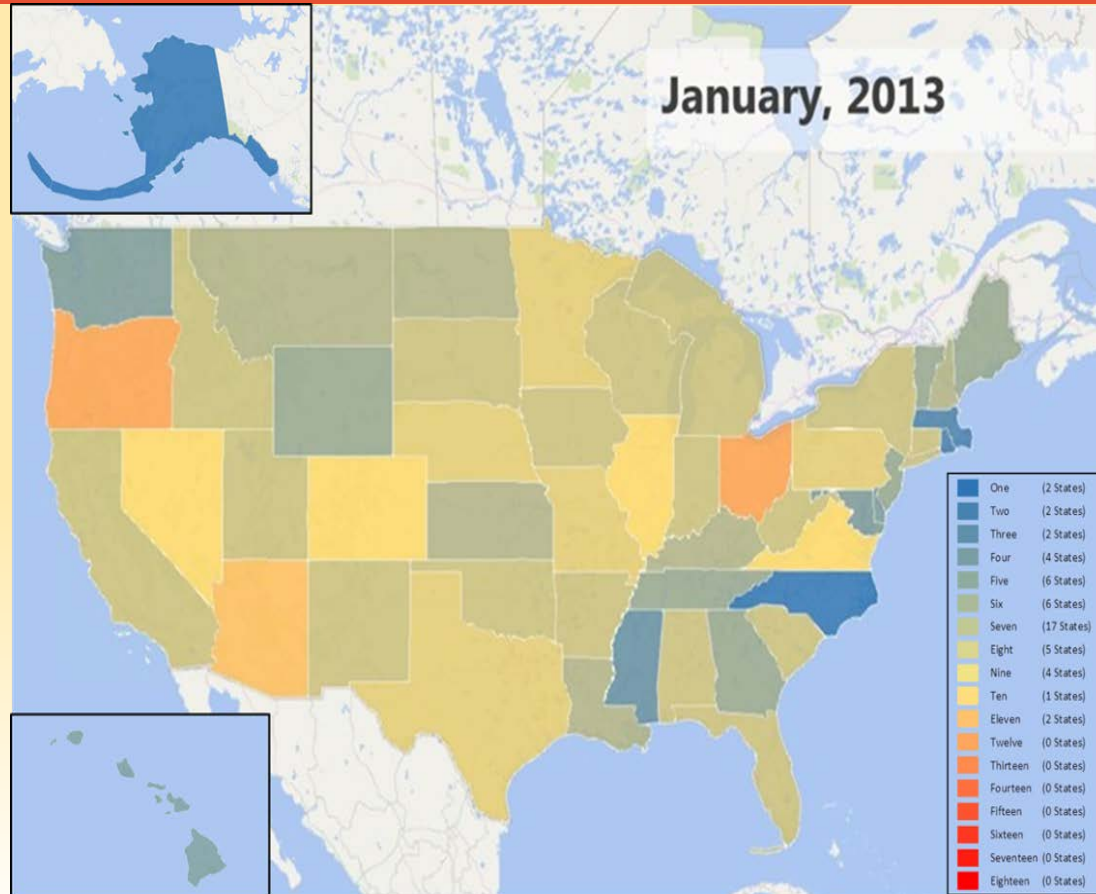
1	State Farm Mutual Automobile	35,588,209
2	Berkshire Hathaway	20,520,188
3	Allstate	19,000,663
4	Progressive	16,566,932
5	USAA Insurance	9,843,321
6	Farmers Insurance	9,701,153
7	Liberty Mutual	9,499,538
8	Nationwide Mutual Group	7,337,880
9	American Family Mutual	3,530,595
10	Travelers Companies	3,153,507
11	Hartford Financial Services	2,426,305
12	Auto Club Exchange Group	2,423,836
13	Erie Insurance Group	2,362,671
14	MetLife Inc.	2,261,807
15	Mercury General	2,221,574
16	CSAA Insurance Exchange	2,178,621
17	Auto-Owners Insurance	1,851,701
18	Auto Club Insurance Assoc.	1,604,160
19	MAPFRE	1,538,790
20	Integon National	1,404,396

Allstate exceeded
750,000 Drivewise
vehicles



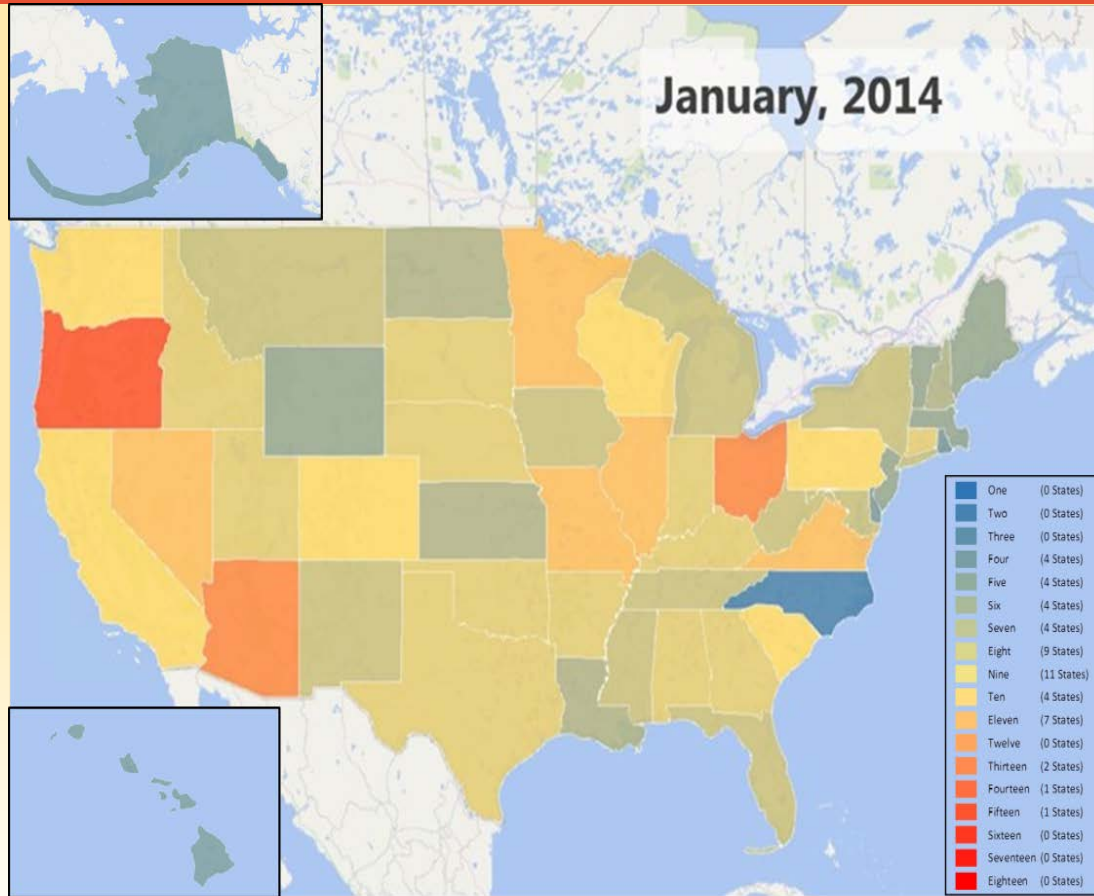
Availability of UBI

United States



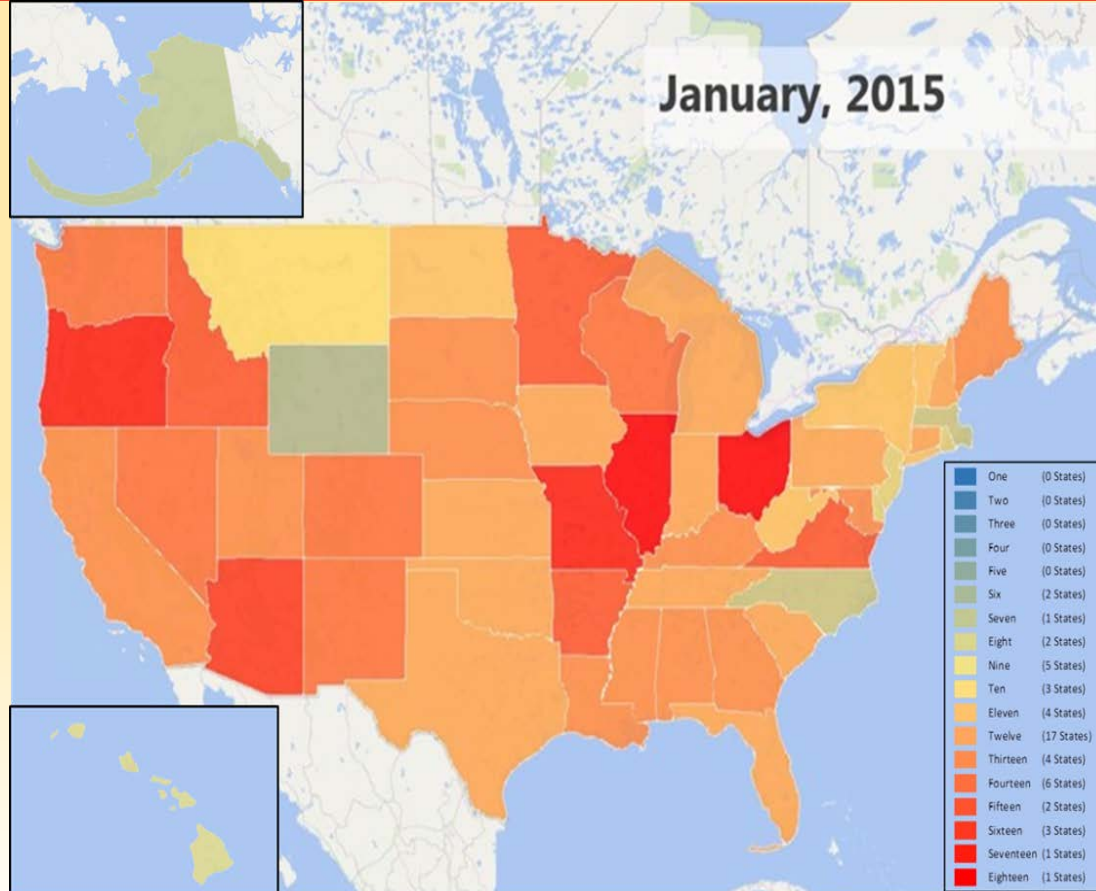
Availability of UBI

United States



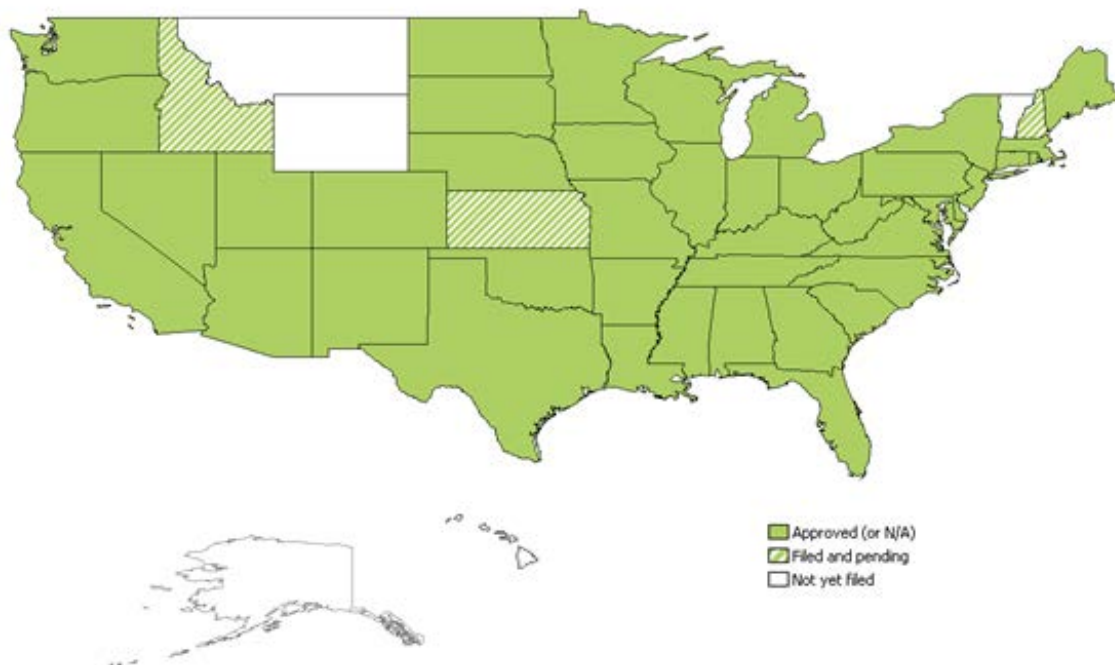
Availability of UBI

United States



Widespread acceptance by U.S. regulators

- 41 states have at least 10 UBI programs showing widespread acceptance
- TW has had significant discussions with regulators while filing our score
 - Overwhelmingly positive feedback amongst regulators (with one exception – Indiana)
 - Individual states have raised concerns requiring product tweaks
 - California
 - Florida
 - Georgia
 - Maryland
 - Pennsylvania
- DriveAbility currently licensed in 45 states and DC





Related Topics

Evolution of technology



Technology	Description	Status
Hard install device	After-market 'black-box' device - requires professional installation.	Available
On-Board Diagnostics (OBD) device	After-market device in the vehicle's OBD port. Can be installed by the customer.	Available
Smartphone app	A smartphone application capturing driving data.	Available , consumer issues being addressed
Smartphone with tethering	Smartphone application tethered (often via Bluetooth) to a device connected to the vehicle.	Available , consumer issues being addressed
Connected car	Technology for data connection is factory installed.	Limited based on geography & manufacturer

Behavior Analysis Not Limited to Auto Insurance



Property

- Smart Home data measures risk
- Allows for loss prevention and mitigation
- Vacancy, equipment maintenance and failure, and emergencies



Workers Compensation

- Vehicle operation is already a huge portion of exposure
- Fleet tracking services have direct application to risk



Benefits, Health, Life

- Personal fitness trackers free to employees
- Healthy choices rewarded with benefit credits
- Discounts for life insurance

Significant trends

Ride sharing

Car sharing

Assisted driving cars

4 simple steps to
zipcar freedom



1. join



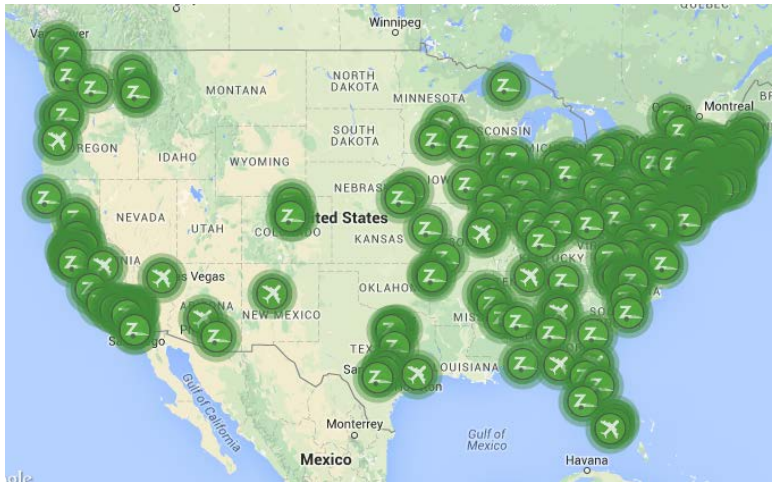
2. reserve



3. unlock



4. drive



Number of active U.S. drivers

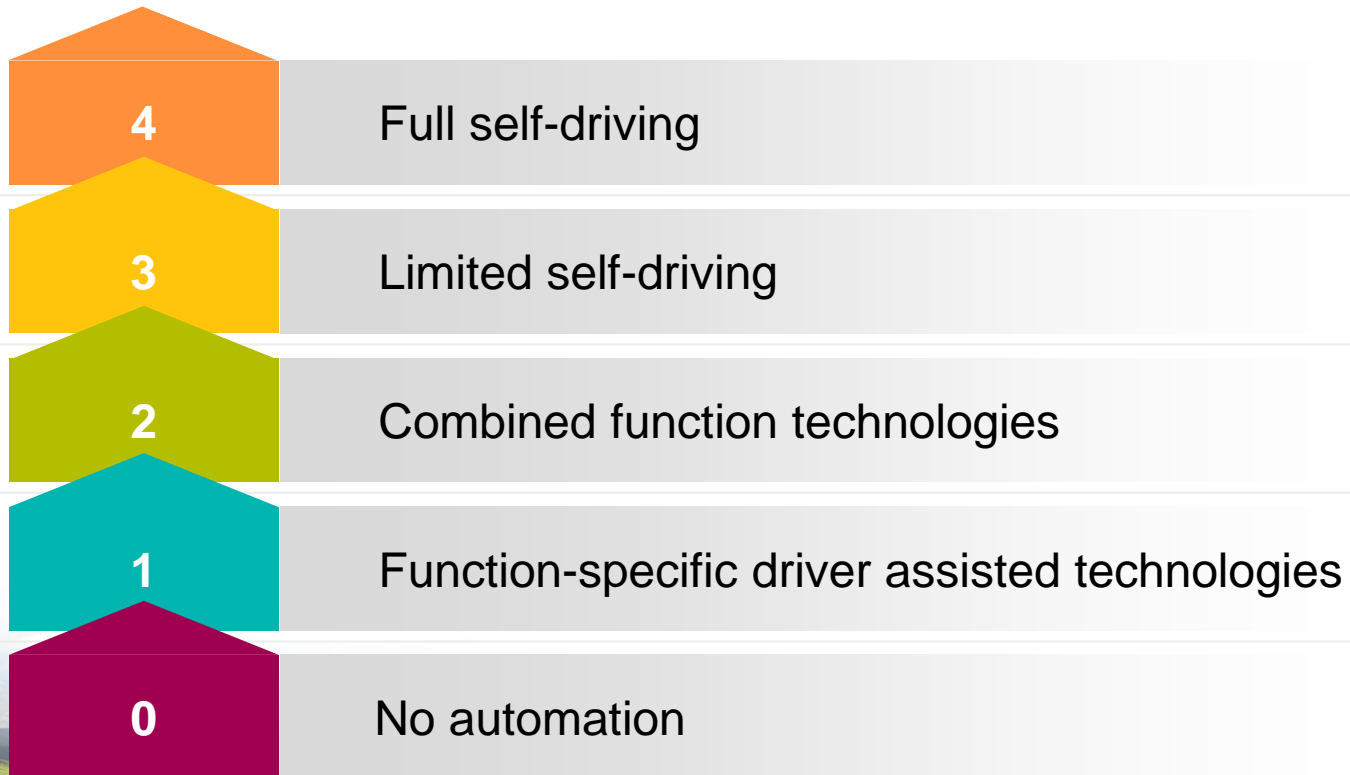


Source: An analysis of the labor market for Uber's driver-partners in the US, Hall & Krueger 22/1/15

Saturday Evening Post, 1950s



Levels of vehicle automation (defined by NHTSA)



Consumer acceptance

66%

of Americans are
**moderately or
very concerned**
about riding in
a vehicle with
**self-driving
technology**¹



55%

are not willing to
pay a penny more
for the technology

10% will pay \$5,800¹

By **2020**, **84%**
of Americans
expected in
urban areas²



25% of the population are **Millennials**
16% are **under 14, digital natives**
24% are **baby boomers**

¹ University of Michigan Transportation Research Institute, August 2014

² World Urbanization Prospects, United Nations Department of Economic and Social Affairs, 2011

Contact Details



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Towers Watson UBI credentials



Towers Watson has established a global team and invested in infrastructure to develop and manage telematics service propositions for our clients.

These individuals have gained significant experience while delivering consulting and services for Towers Watson clients, as well as leading the launch and operations of UBI programs while working at major insurance companies, including Progressive, Hollard, AAA, Travelers and Allstate

UBI Consultancy

- Supported over 50 insurers on six continents
- Advised OEMs, retailers, TSPs, and aggregators
- Consulting services range from educational workshops to strategic advice to our comprehensive DriveAbility product

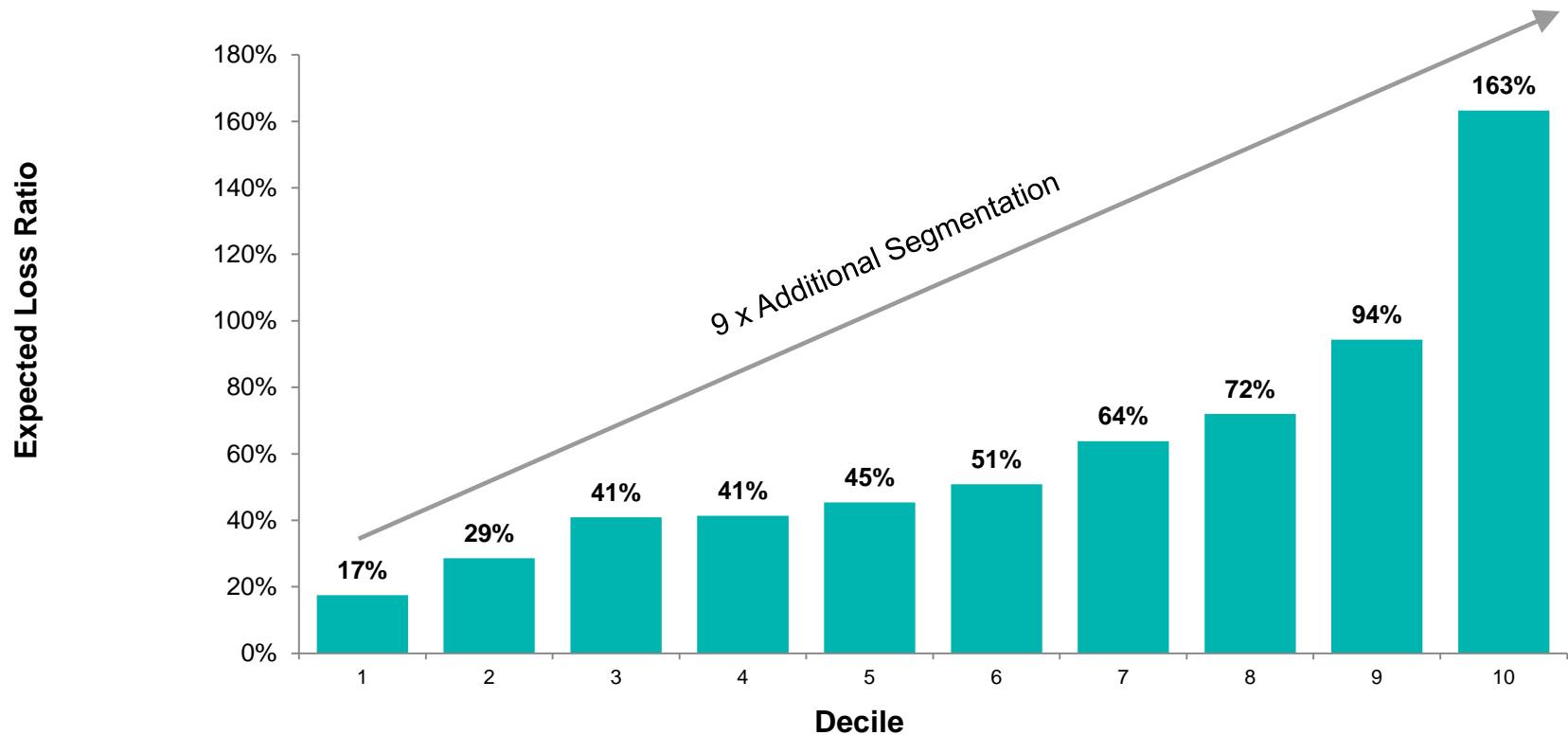
UBI Analytics

- Dedicated team specializing in analysis of telematics data
- Large pool of telematics and insurance data collected since 2010
- Proprietary predictive modeling software, Emblem XE, handles large volumes of telematics data
- Developed special techniques to increase lift

DriveAbility Program

- Hosted infrastructure: collect, scrub, host, pool and analyze granular data - since 2010
- The only active program of aggregated telematics and insurance data
- DriveAbility score is three times as powerful as any existing rating factor
- Rate Service Organization to file score for our clients in the USA

The power of the Towers Watson DriveAbility[®] score



Expected loss ratio shows tremendous lift allowing insurers to fairly price and advise current and prospective insureds

DriveAbility® Sub-scores

- Provides consumer feedback
- Makes information tangible
- Improves transparency
- Initiates driver coaching and behavior modification

