ZENHAVIOR

DRIVING IMPACTS OUR LIVES

In the US…

200 million people spend on average

80 mins a day driving. Each year they rack up

3 billion miles and have

11 million accidents resulting in

30,000 deaths.

DRIVING BEHAVIOR IMPACTS OUR LIVES!

Drive behavior impacts …

Safety,

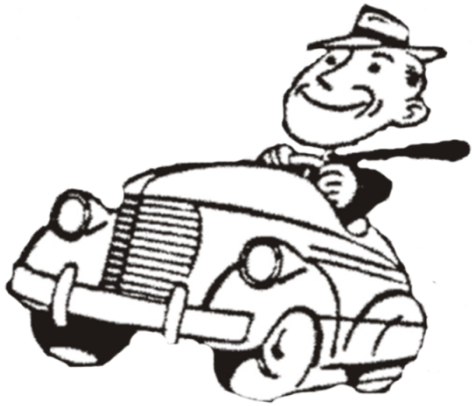
Fuel consumption,

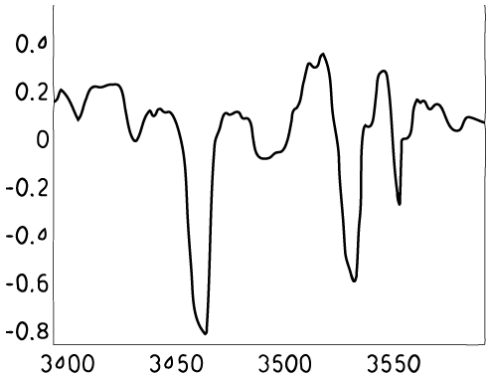
Insurance risk,

Maintenance cost,

and many more ...

DRIVING BEHAVIOR MONITORING - TODAY!





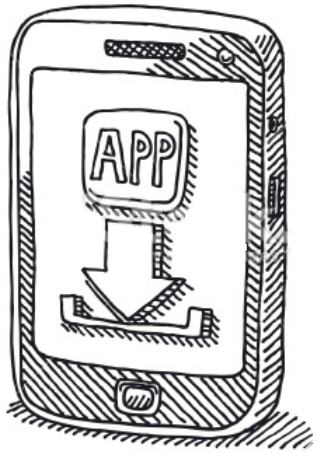
Driving **Accurate Data**

High cost

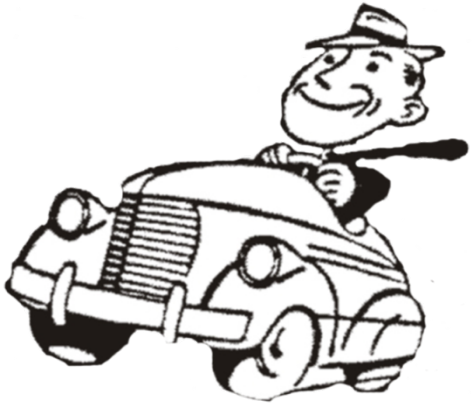
Difficult installation

Painful handling

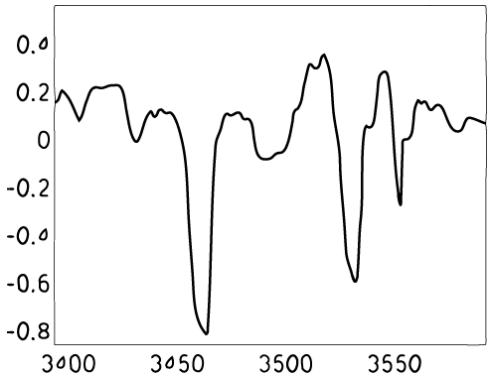
DRIVING ZENHAVIOR MONITORING - FUTURE!



Smartphone



Driving



Accurate Data

No hardware

No Bluetooth

No power drain

WHO NEEDS THIS DATA?

Insurance	Usage Based Insurance, e.g. good driver discounts.
Fleet Tracking	Safety, fuel efficiency, e.g. “How is my driving?”
Teen Safety	Parental Monitoring & Education
Auto Sharing / Rental	Car2Go, others … good driver discount
Taxi / Livery	How safe is the driver? e. g. Uber, Lyft, …
Others …	Contextual Marketing, Traffic Data, IRS Reporting, …

ADDRESSABLE MARKET (US)

Insurance	• **$ 540M** in user acquisition • **$ 554M** in user retention	(16M switch, $30 per switch) (23.1M users, $24 per year)
Fleet Tracking	• **$ 72M** in small fleet (5-14)	(3M vehicles, $24 per year)
Teen Safety	• **$ 240M** in parental monitoring	(5M teens, $48 per year)
Auto Sharing / Rental	• **$ 90M** in drive scoring	(90M contracts, $1 per rental)
Taxi / Livery	• **$ 55M** in drive scoring	(220M rides, $0.2 per ride)

License fees of $24 - $48 per user per year.
One time payment of $1 – $30 per drive score.

TEAM

Lukas Kuhn
Co-founder

Qualcomm, Context Aware
PARC, Embedded Reasoning
Client Vela, Direct Marketing

Ph.D. @ Tech. Uni. of Munich
(Computer Science)

Mobile application development and optimization, Lean Software Process, Artificial Intelligence, Embedded Reasoning

Lenny Grokop
Co-founder

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EVAN PATTON
Rockstar

Qualcomm Intern, Context Aware
RPI, Tetherless World Constellation
RPI, Semantic Web

Ph.D. @ RPI
(Computer Science)

Mobile application development and optimization, Infrastructure & Big Data Development and Deployment

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RANDY HOLMES
Advisor - Telematics

Auto-insurance telematics strategist w/ 5+ years in industry
Dir. Qualcomm & Hughes Telematics

TRACTION

Insurers:

- **Top 10 Insurer:** Currently in 2 month trial for internal testing. Fits with their goals as potential licensee – moving towards paid pilot.
- **Top 10 Insurer:** Experiment surpassed acceptance benchmark. 50-user trial to begin mid-March. Fits with their goals of releasing Snapshot Mobile product to complement current hardware in 2014 and later replace
- **Top 10 commercial insurers:** Engaging 3 of the top 10 commercial insurers for low cost mobile solution for driver risk monitoring

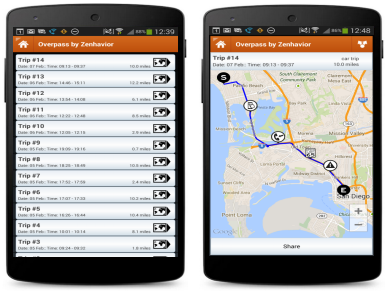
Service Providers & Fleet:

- **Top 10 Insurer Service Provider:** 1 month trial for internal testing begins Feb 24.
- **Top 10 Fleet Provider:** High level of interest to trial our solution. On site meeting on 25th Feb.
- **Top 20 Fleet Provider:** Discussions ongoing, leading toward trial. Fits with their goals of licensing mobile telematics technology to offer in full service product to numerous insurers

Other engagements:

- Multiple parties interested to trial our solution, e.g. parking service, car rental

ZENHAVIOR PRODUCTS

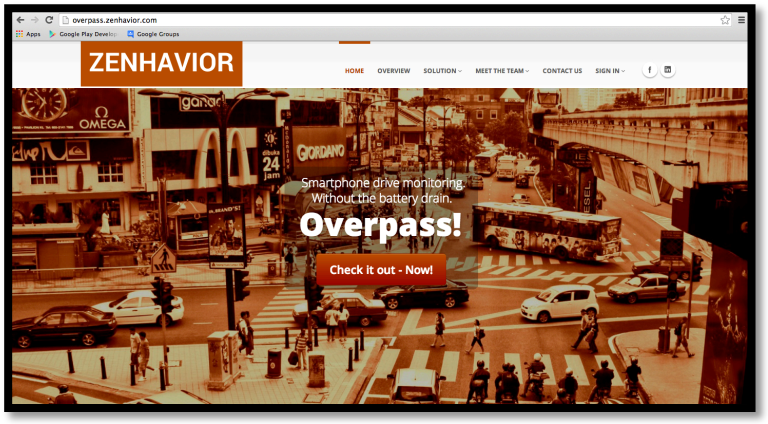


Overpass by Zenhavior

- Fully-functional, drive-monitoring application
- Currently used to run trails and demonstrations
- Enables users to view list of drives
- Visualizes drive events and details on map view

Software-Developer Kit (SDK) by Zenhavior

- SDK with rich drive monitoring features
- Offered to third parties to build their applications.
- Features configurable and data upload can be enabled
- Currently used by Overpass.



Data backend by Zenhavior

- Scalable backend hosted in the clouds (AWS)
- Offers data APIs for third parties
- Enables cross user analytics
- Currently used to run trails and demonstrations

ZENHAVIOR PRODUCT

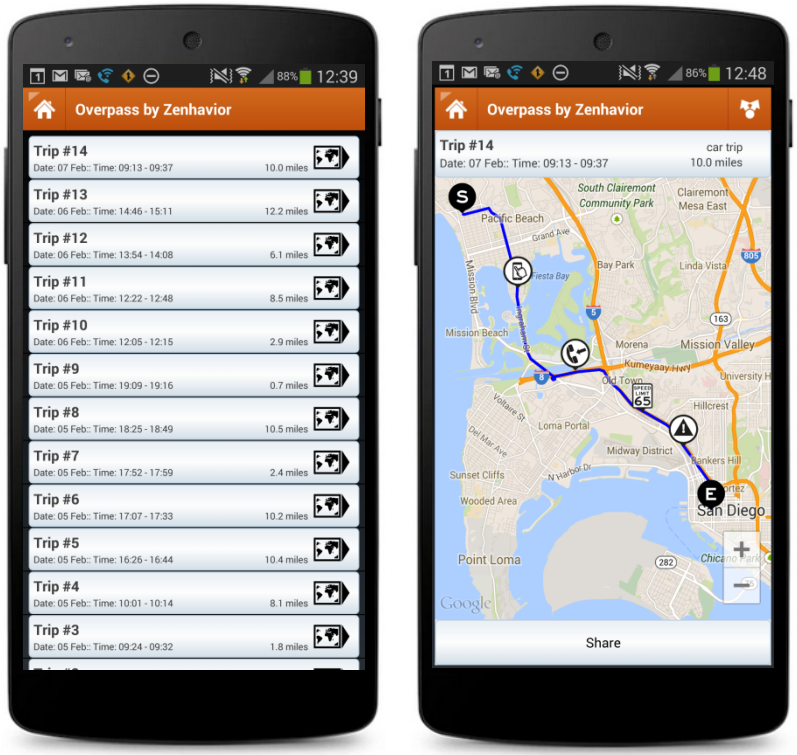
Automatic Drive Detection

Minute-accurate Start & end times

Trips catalogued

Precise mileage

Turn-by-turn playback



Accurate detection of hard accel/ brake/corner

High-Accuracy G-forces @ 4Hz

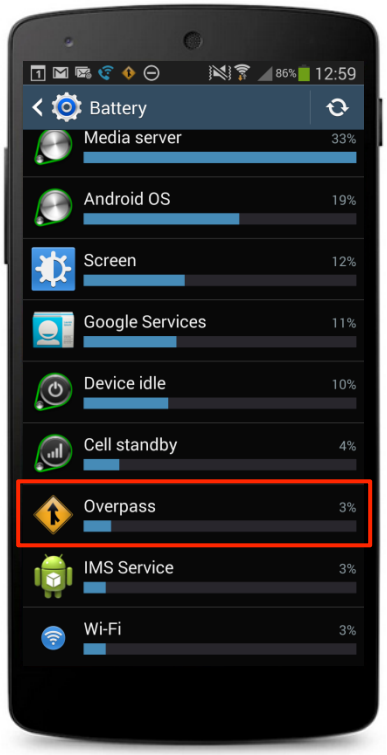
Speed relative to posted limit

Driving vs. Transportation

Calling/texting/ device usage while driving

ZENHAVIOR RPRODUCT

Minimal Battery Impact



Extremely low power drive start detection

Limited resource usage during drives

- Low GPS usage
- Optimized use of all other resources

Overall average battery consumption **comparable to cell-standby** for a typical user

TELEMATICS DATA

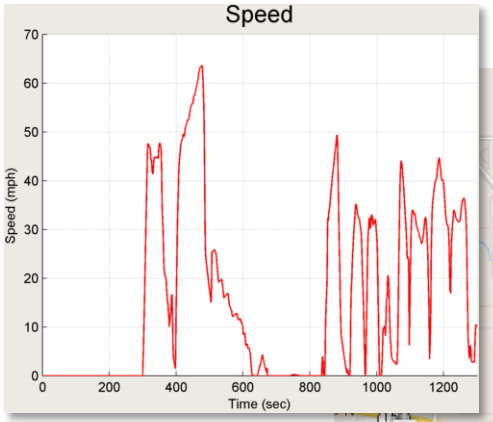
Drive data delivered @ 4 samples/second (configurable):

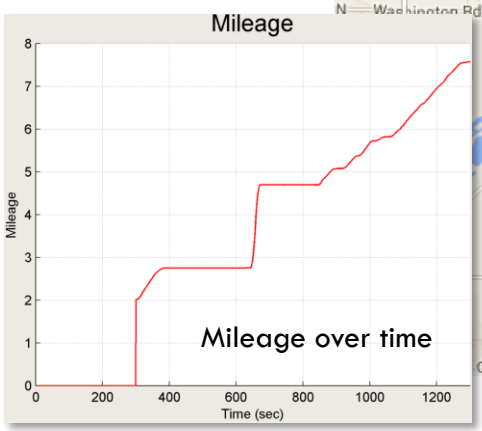
- Linear, lateral and vertical G-forces of vehicle
- Time of day, Date, Time zone, elapsed duration of trip
- Precise location on route in terms of route leg # and fraction along this route leg
- Road Name
- Occurrence of hard brakes, accelerations, right corners, left corners
- Occurrence of right turns, left turns
- Speed, Typical Speed Limit, Cumulative trip mileage
- Text message sent, Phone call status, Device Usage status, Foreground app usage
- Unusable data for driving behavior (due to device usage or otherwise)

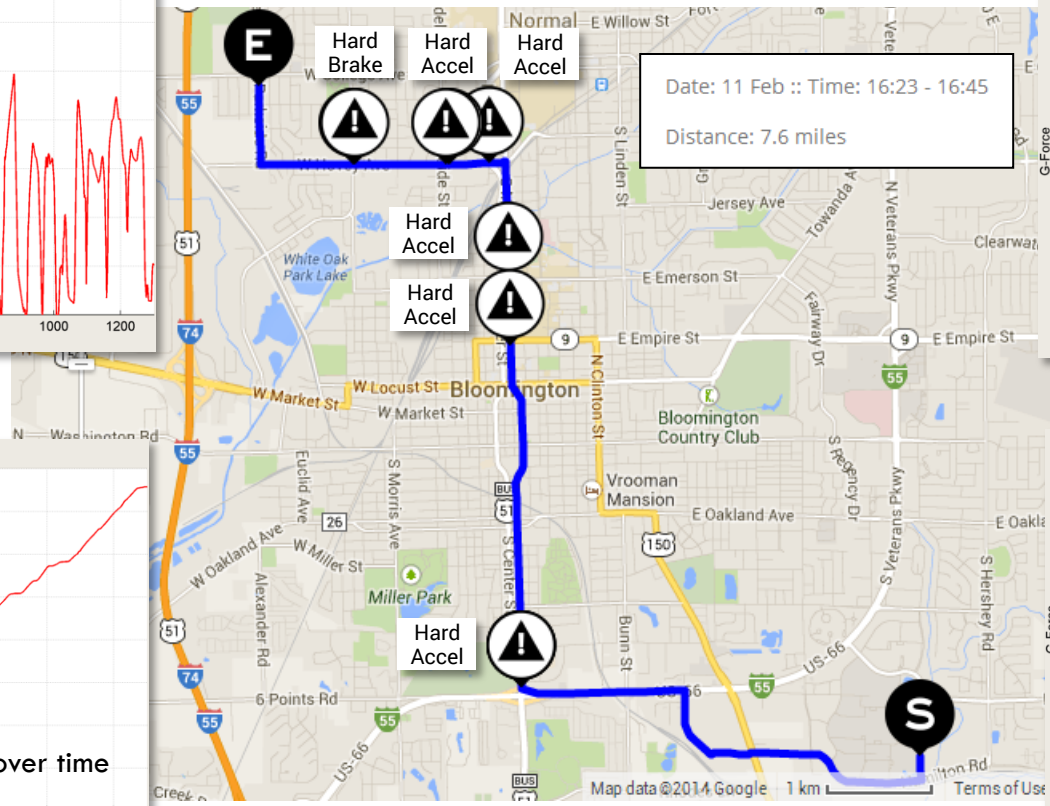
DATE	TIME	ELAPSED TIME	LAT	LONG	LEG	LEG FRAC	ROAD NAME	SPEED	MILEAGE	LINEAR G_FORCE	LATERAL G_FORCE	VERTICAL G_FORCE	DATA UNUSABLE	RIGHT TURN	LEFT TURN	HARD BRAKE	HARD ACCEL	HARD RIGHT CORNER	HARD LEFT CORNER
2/6/2014	12:12:33	453000	32.8263	-117.2794	353	0.609	Palomar Ave	7.19	5.082	-0.23	0.03	-0.02	0	0	0	FALSE	FALSE	FALSE	FALSE
2/6/2014	12:12:33	453250	32.8263	-117.2794	354	0.962	Palomar Ave	5.91	5.083	-0.26	0.05	-0.02	0	0	0	FALSE	FALSE	FALSE	FALSE
2/6/2014	12:12:33	453500	32.8263	-117.2795	356	0.347	Palomar Ave	4.55	5.085	-0.27	0.05	-0.03	0	0	0	FALSE	FALSE	FALSE	FALSE
2/6/2014	12:12:34	453750	32.8263	-117.2795	357	0.402	Palomar Ave	2.92	5.085	-0.32	0.07	-0.02	0	0	0	TRUE	FALSE	FALSE	FALSE
2/6/2014	12:12:34	454000	32.8263	-117.2795	358	0.002	Palomar Ave	1.03	5.086	-0.37	0.10	-0.04	0	0	0	TRUE	FALSE	FALSE	FALSE
2/6/2014	12:12:34	454250	32.8263	-117.2795	358	0.006	Palomar Ave	0.00	5.086	-0.37	0.09	-0.05	0	0	0	TRUE	FALSE	FALSE	FALSE
2/6/2014	12:12:34	454500	32.8263	-117.2795	358	0.006	Palomar Ave	0.00	5.086	-0.37	0.09	-0.05	0	0	0	TRUE	FALSE	FALSE	FALSE
2/6/2014	12:12:35	454750	32.8263	-117.2795	358	0.006	Palomar Ave	0.00	5.086	-0.33	0.08	-0.06	0	0	0	TRUE	FALSE	FALSE	FALSE
2/6/2014	12:12:35	455000	32.8263	-117.2795	358	0.006	Palomar Ave	0.00	5.086	-0.28	0.07	-0.04	0	0	0	FALSE	FALSE	FALSE	FALSE
2/6/2014	12:12:35	455250	32.8263	-117.2795	358	0.006	Palomar Ave	0.00	5.086	-0.24	0.06	0.00	0	0	0	FALSE	FALSE	FALSE	FALSE
2/6/2014	12:12:35	455500	32.8263	-117.2795	358	0.006	Palomar Ave	0.00	5.086	-0.18	0.04	-0.03	0	0	0	FALSE	FALSE	FALSE	FALSE

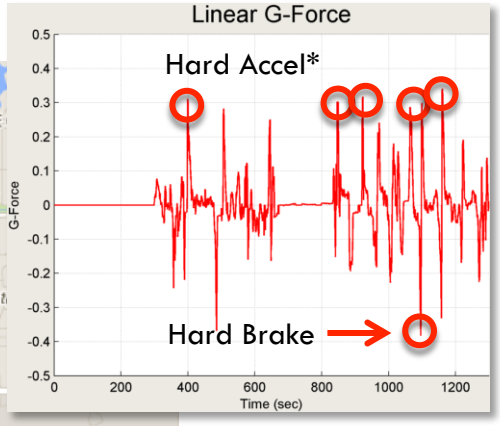
TRIAL DATA

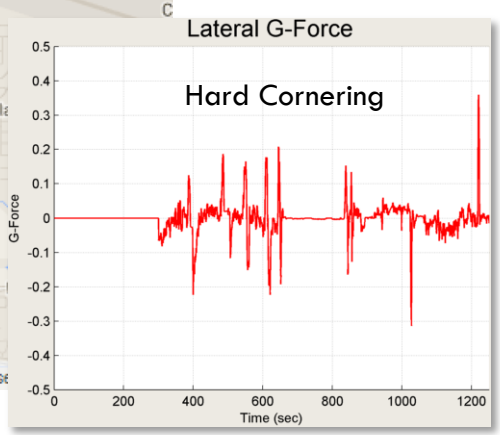
Sample drive trip from trial data collected







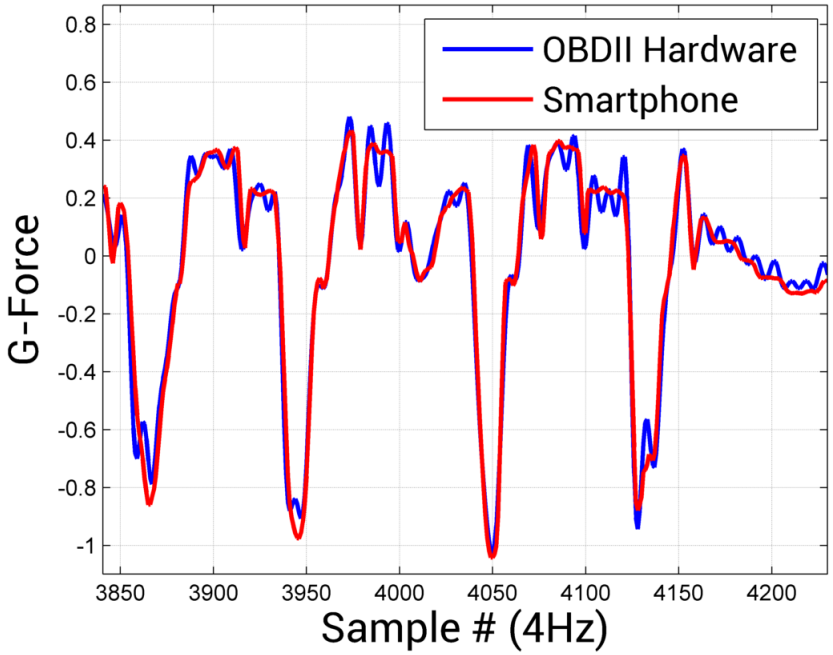




* timely nearby events only visualized once on map

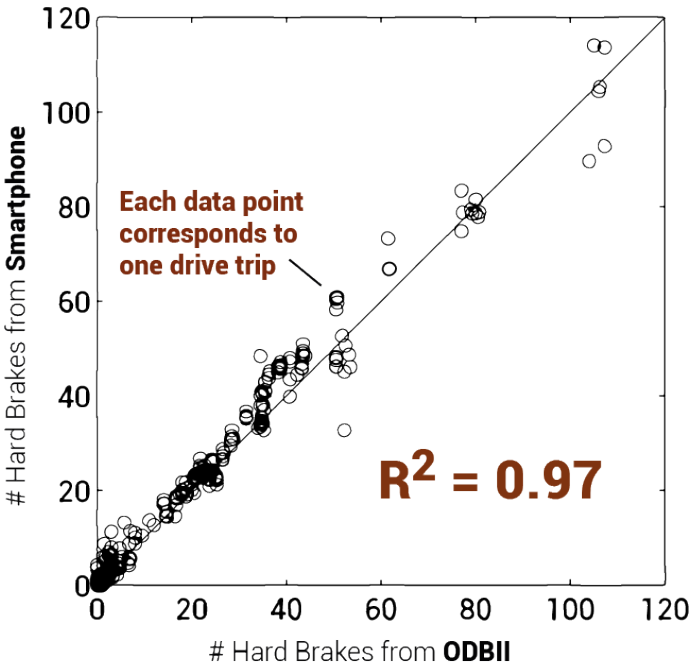
DATA ACCURACY

Comparison **Zenhavior** ↔ **OBDII plug-in Bluetooth dongle**



2011 Porsche 911S, Samsung Galaxy S2 on passenger seat

Correlation between Overpass and OBDII



Predictive power evaluated across 261 drives trips with multiple phone models, vehicles and device positions. Hard braking event defined as >11 kph speed drop in 1 second.

WHY SO HARD?

Smartphones are NOT designed for this

Individual Sensors are NOT accurate

Each phone is different – e.g. chipsets

Device can be anywhere in car

Every data point consumes power

The NEED for Sensor Fusion

SUMMARY

100's of millions will benefit from drive monitoring in the near future

Big opportunity and need in multiple industries

Hard problem on a smartphone, uniquely positioned team to solve

Clearly demonstrable solution working today

Early customer traction

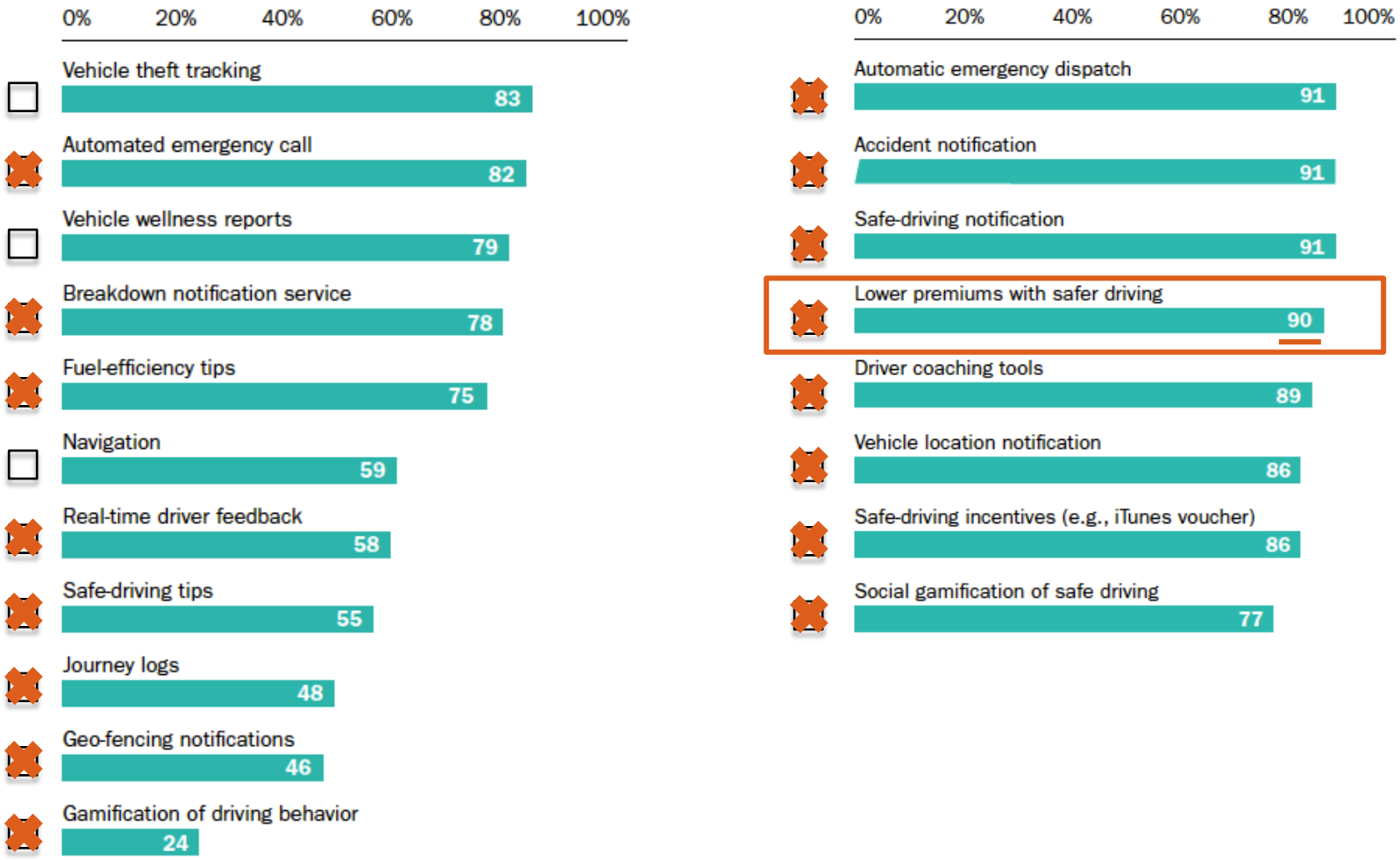
Fully bootstrapped to date

Raising seed funding now


www.hp.com.my/TX2
GIORDANO
GEORGE CLOONEY, PILIHANKU
BACKUP

TOWERS WATSON, TRENDS (2013)

61% are willing to pay $3.75 - $7.50 / month for value added services



INSURANCE

Service Provider

AUTO INSURANCE MARKET

- Usage based insurance (UBI) enables dynamic pricing based on driving behavior (good driver discount programs).
- 70% of NA property casualty insurers engaged in UBI
- Progressive Snapshot (UBI) has over 1.2M subscribers
- Global market **3.6 million** subscribers in 2012 to 89 million by 2017
- Global insurance telematics market predicted to reach $5.2 billion by 2017

Great drivers get
GREAT RATES with
Snapshot®

TARGET MARKET

Target drivers under 25 years

- These drivers are tech-savvy and have greatest financial incentive
- Fast adoption: 13% are under 25, but account for ~20% of the telematics market due to disproportionately high premiums
- Average auto-insurance rate 16-24 in 2010 was ~$2500
- Average increase in premiums after a teen is added to a policy is 156%

HARDWARE TELEMATICS

How UBI currently works…

Order, credit card, shipping, plug
Day 1-10

Drive
Day 10-40

Save
Day 41

The current experience is painful…

Hardware is NOT free. Costs $120/year per customer in device procurement, data offloading, shipping, inventory & support.

Lead generation is slow and costly. Blanket mailing hardware is infeasible!

We can help you get out of the hardware business!

MOBILE TELEMATICS

The direction UBI is heading…

The desired experience…

Low cost. No costs for procurement, data offloading, shipping, inventory.

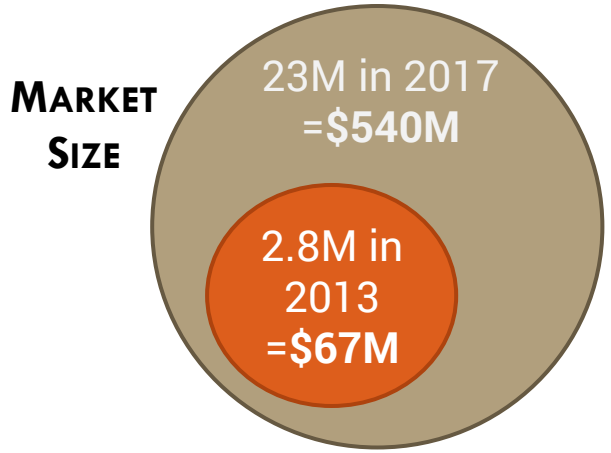
Good user experience. No battery drain, no user interaction

Hardware-accurate data. hardware solution. Precise drive features such as mileage, g-forces, etc. in order to compute risk.

GO TO MARKET STRATEGY

	Industries	Current Approach	Business Model
Existing High Value Applications	Auto insurance, Fleet Tracking, Driving Behavior	Smartphones with external triggers or high battery usage	**License** to data engine to enhance existing programs
New High Value Applications	Auto insurance, Fleet Tracking, Parental monitoring	After market hardware solutions	**Develop** applications as appropriate and license data engine.

Expected revenues of $15-$24 per user per year (vs. $150-200 today)



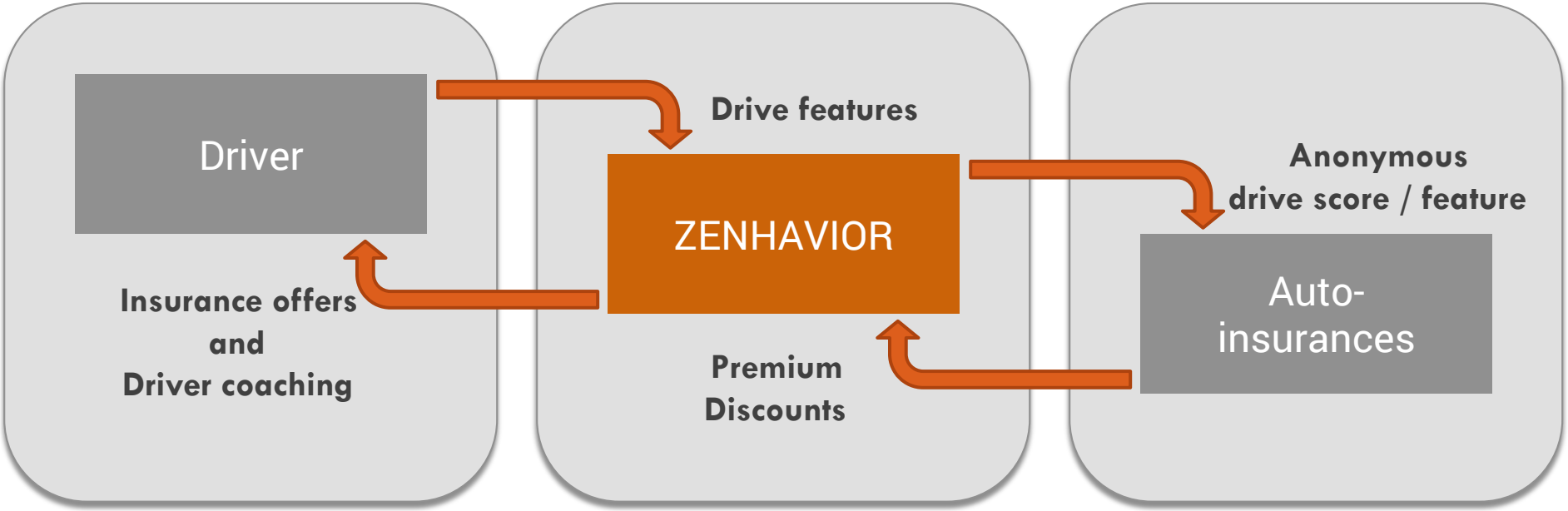
INSURANCE

Lead Generation

LEAD GENERATION

ZENHAVIOR

- Make young drivers safer and get them affordable auto-insurance.
- Telematics-based auto-insurance brokerage (disruptive)
- Smart-phone based driver monitoring and analytics (highly scalable)



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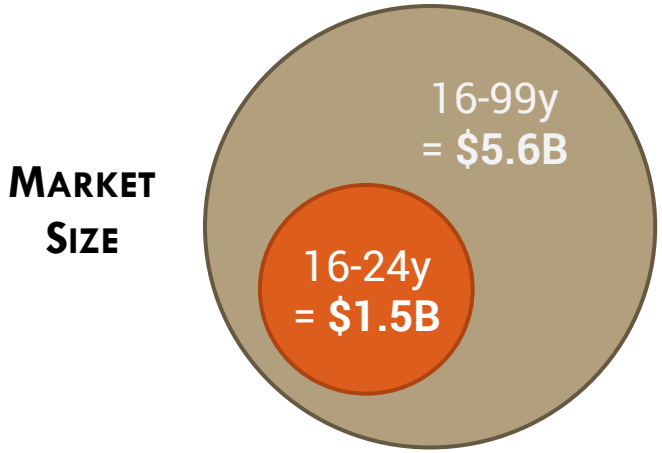
LEAD GENERATION - FINANCE

- 189M auto-insurance contracts in the US:
- 11% switchers per year + new drivers
- 2,500 US$ average premium for 16-24 year olds (US average 839 US$)
- 13% segment share (16-24 year olds)
- Commissions: 15%-20% (first year) & 10%-14% (renewal) (industry standard).
- ZENHAVIOR 5% market share by 2019, total market size is $1.5 billion.



GO TO MARKET STRATEGY

1. Driver Monitoring

Gain traction by **monitoring and ranking drivers** for companies in ride sharing, parental monitoring & small fleet telematics.

B2B play

2. Telematics as service

Enter insurance market by **pre-screening drivers** for eligibility of hardware-based premium discounts for auto insurances.

B2B play

3. Telematics Brokerage

Convert insurer customers into mobile brokerage app… think **e-surance, mobile, and discounted** 10-40% based on actual driving behavior.

Consumer play