



What's around the corner?

March 22, 2018

012:42:02 03/16/2020 DRONE DELIVERY 31°18'26.3"N 31°04'54.2"W



Ellis
& Associates

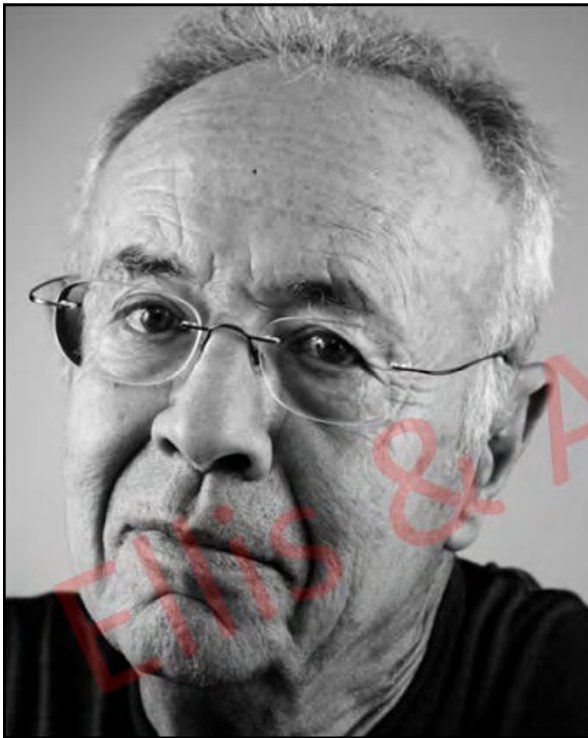


I'm a developer.

Logos included in the collage:

- MOTOROLA
- MOTODEV
- LiMo Foundation™
- open source
- SPDX
- Perl
- THE LINUX FOUNDATION
- SAE INTERNATIONAL
- SCRS REPAIRER DRIVEN
- NACS National Association of Convenience Stores
- NAB NATIONAL ASSOCIATION OF BROADCASTERS
- IFIXIT
- Ford
- DEVELOPER PROGRAM
- smart device link
- Apple CarPlay
- android auto
- TEDx
- LADOT
- ARC europe
- ITS AMERICA
- movement.ai
- etfinance
- etri
- AAA
- AAA SPECIALTY EQUIPMENT ASSOCIATION
- Department of Transportation UNITED STATES OF AMERICA

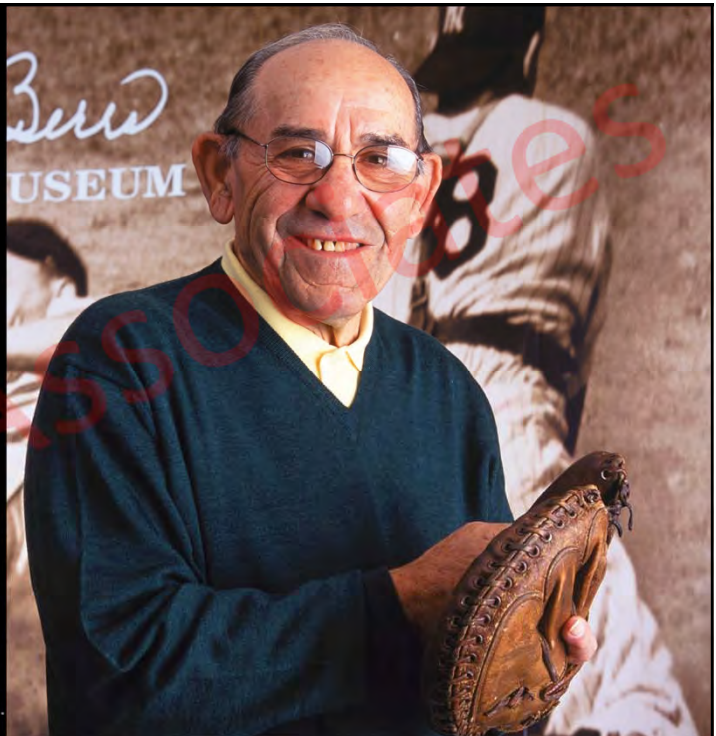
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*Only the
paranoid
survive.*

*It's tough to
make
predictions,
especially
about the
future.*

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1886: From Horses to Horsepower


Karl Benz Patented First
Gasoline Powered Automobile



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OPENING THE HIGHWAYS TO ALL MANKIND

Back of all the activities of the Ford Motor Company is this Universal idea — a whole-hearted belief that riding on the people's highway should be within easy reach of all the people.

An organization, to render any service so widely useful, must be large in scope as well as great in purpose. To conquer the high cost of motoring and to stabilize the factors of production — this is a great purpose. Naturally it requires a large program to carry it out.

It is this thought that has been the stimulus and inspiration to the Ford organization's growth, that has been the incentive in developing inexhaustible resources, boundless facilities and an industrial organization which is the greatest the world has ever known.

In accomplishing its aims the Ford institution has never been daunted by the size or difficulty of any task. It has spared no toil in finding the way of doing each task best. It has dared to try out the untried with conspicuous success.

Such effort has been amply rewarded. For through this organization, the motor car which is contributing in so large a measure toward making life easier, pleasanter and more worth while has been made available to millions.

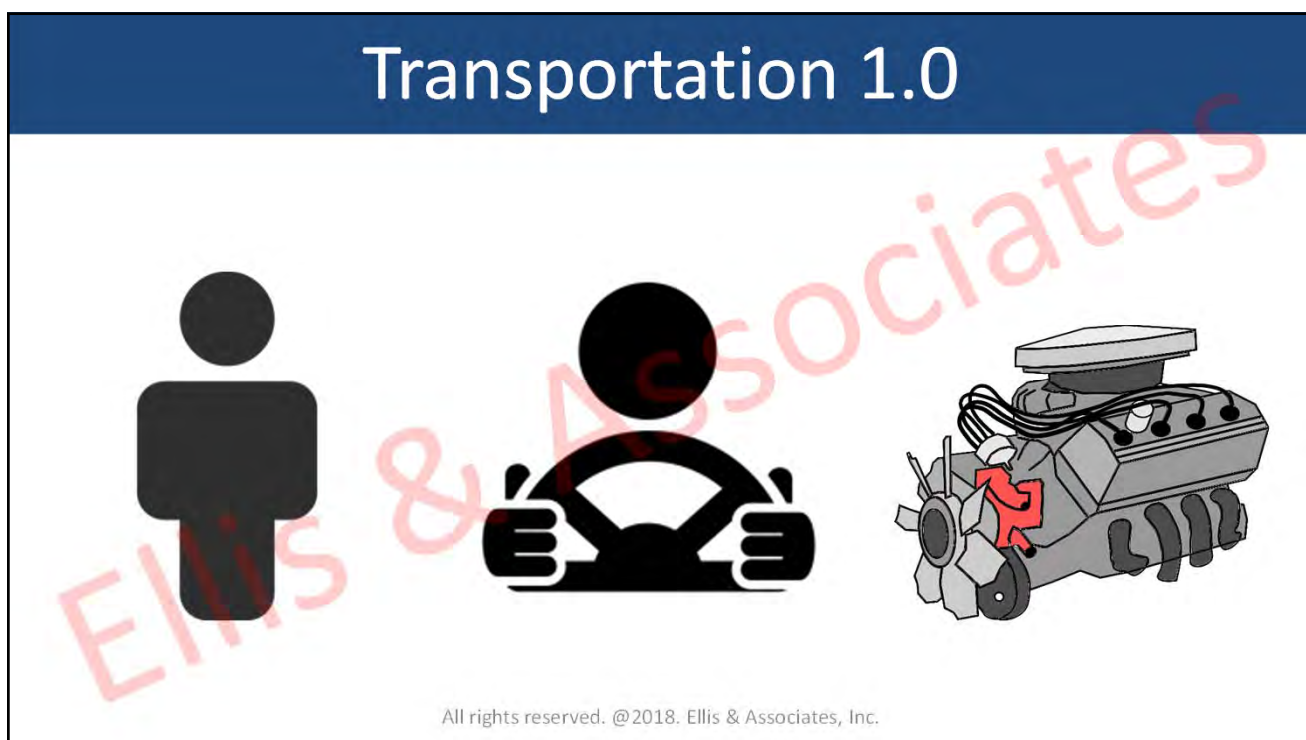
The Ford Motor Company views its situation today less with pride in great achievement than with the sincere and sober realization of new and larger opportunities for service to mankind.

Ford Motor Company

Owning and operating coal and iron mines, timber lands, sawmills, coke ovens, foundries, power plants, blast furnaces, manufacturing industries, lake transportation, garment mills, glass plants, wood distillation plants and silica beds.







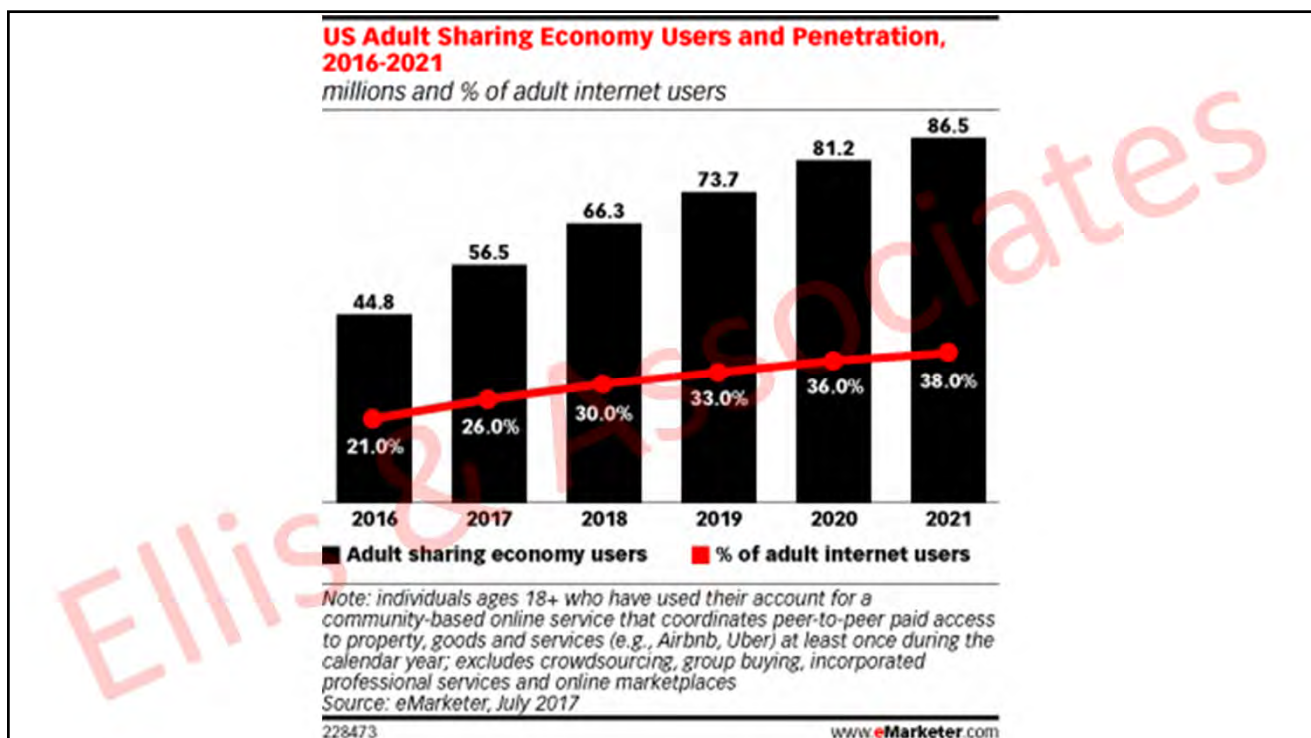
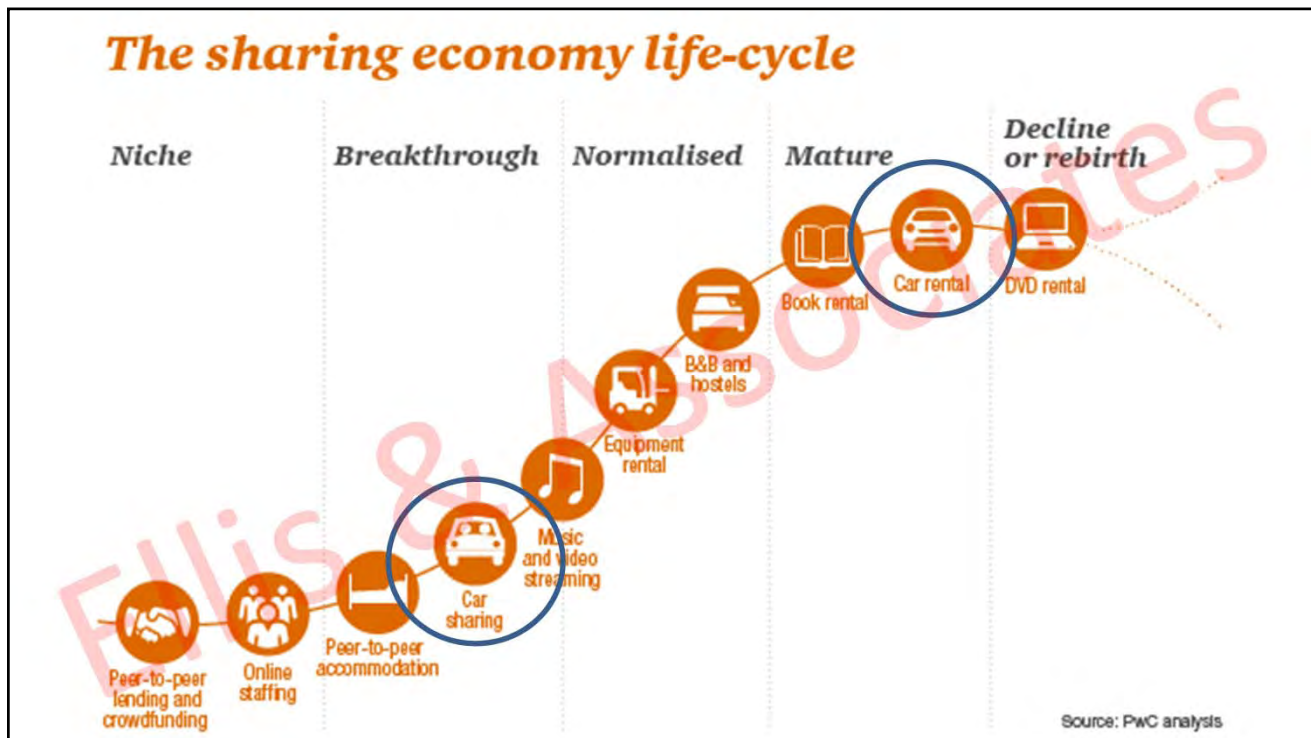
Transportation 2.0



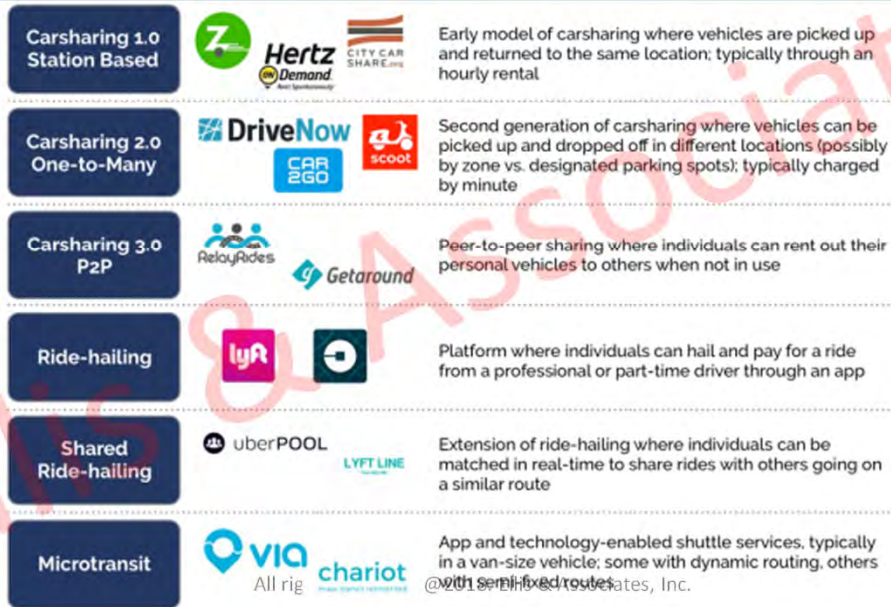
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Sharing Economy

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The Evolution of Shared Mobility Services



MOBILITY IN CHINA

THE SHARED ECONOMY FOR CARS IS BOOMING

Roland Berger

CAR OWNERSHIP IS RARE



About

150,000,000

Chinese have a driver's license but don't own a car

RENTING IS STILL UNCOMMON

China has just
0.4 rental cars per 1,000 people

(compared to approx. 3.5 in Western Europe)

SHARING IN GENERAL IS HUGE

Sharing apps for just about everything – strollers, umbrellas, battery packs, books and even folding chairs! – are flourishing

Roughly 10% of the Chinese vehicle fleet is "shared" in the form of taxis, rental cars, ride hailing etc.

(compared to approx. 1% in Western markets)



TAXI AND LIMOUSINE USE IS WIDESPREAD

China has about 12 times as many taxis as the USA (adjusted for the ratio of taxis to the total car parc)



USA

CHINA

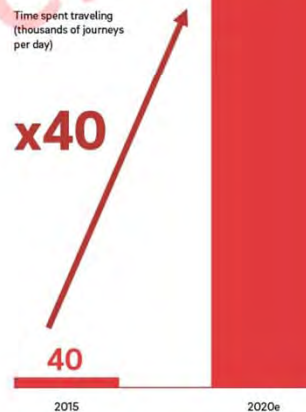
Since their launch, ride hailing services have exploded. Didi China has around 8 times more rides per day than Uber worldwide



Taxi rides in Beijing and Shanghai cost about half what they do in New York (adjusted for purchasing power)

CAR SHARING COULD BE EVEN BIGGER!

Vast potential for car sharing business (hourly-based car rental) through both organic growth and conversion from other mobility segments



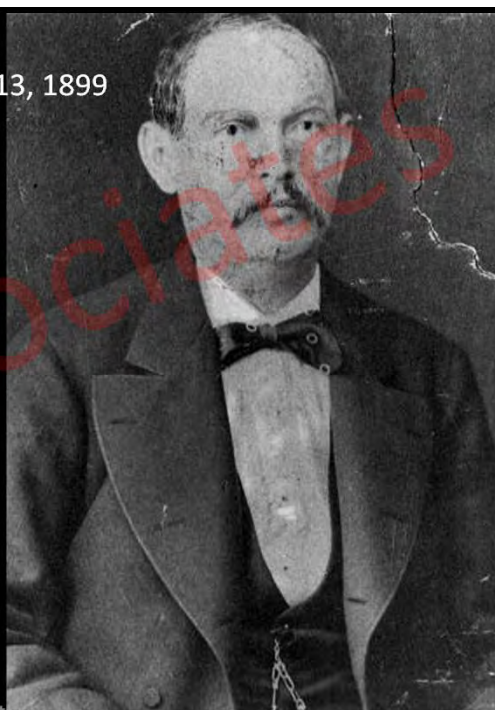
Autonomous Vehicle

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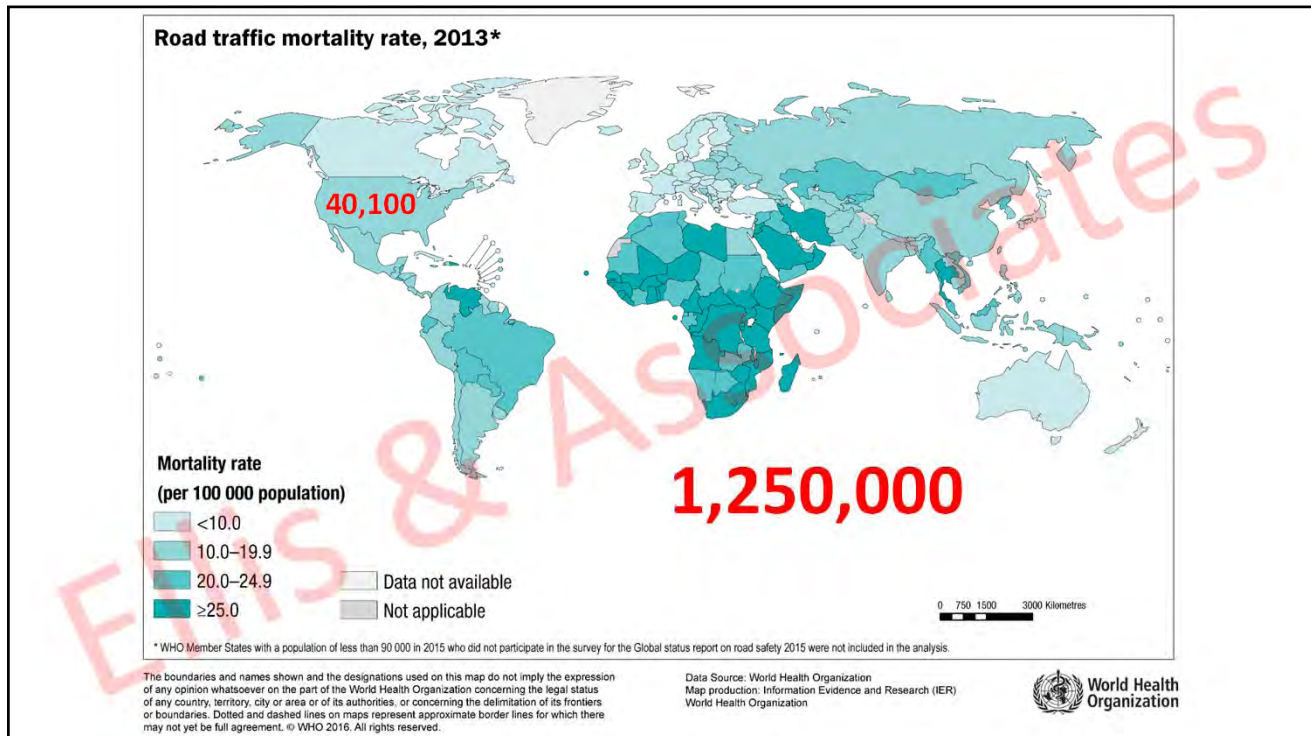


August 31, 1869

September 13, 1899



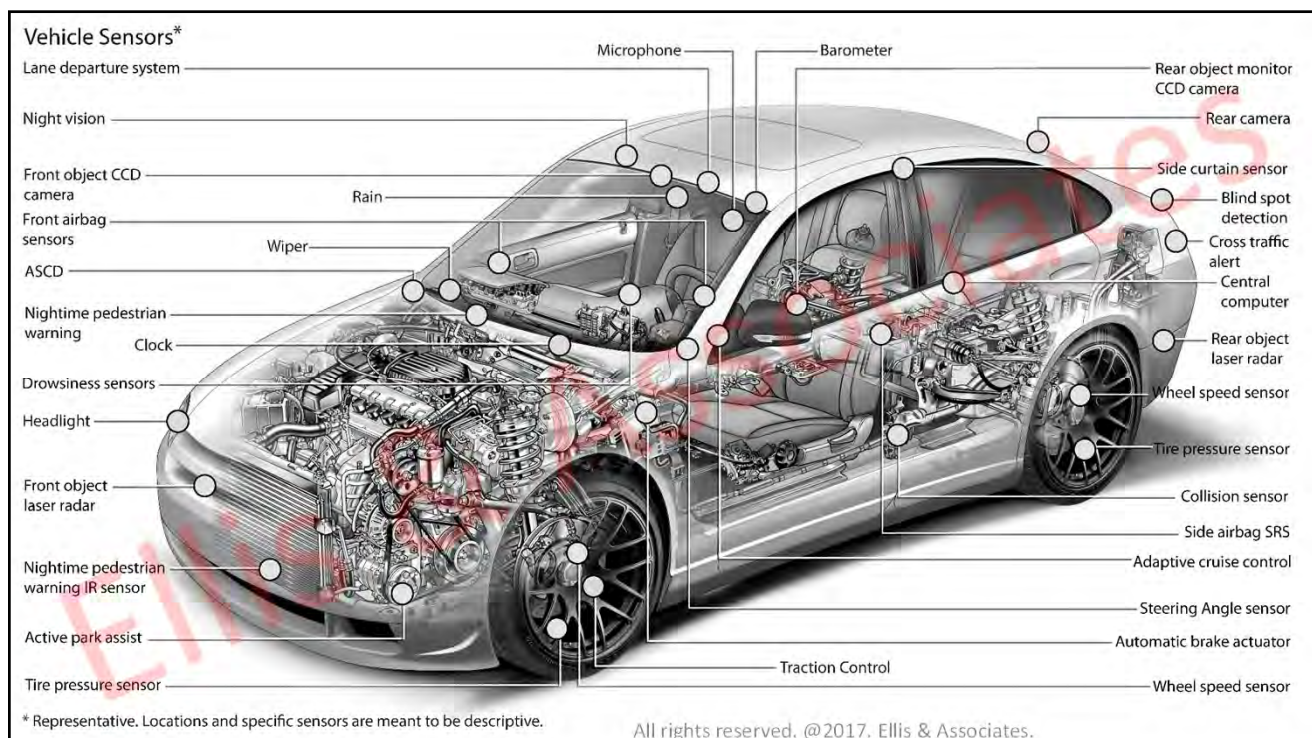
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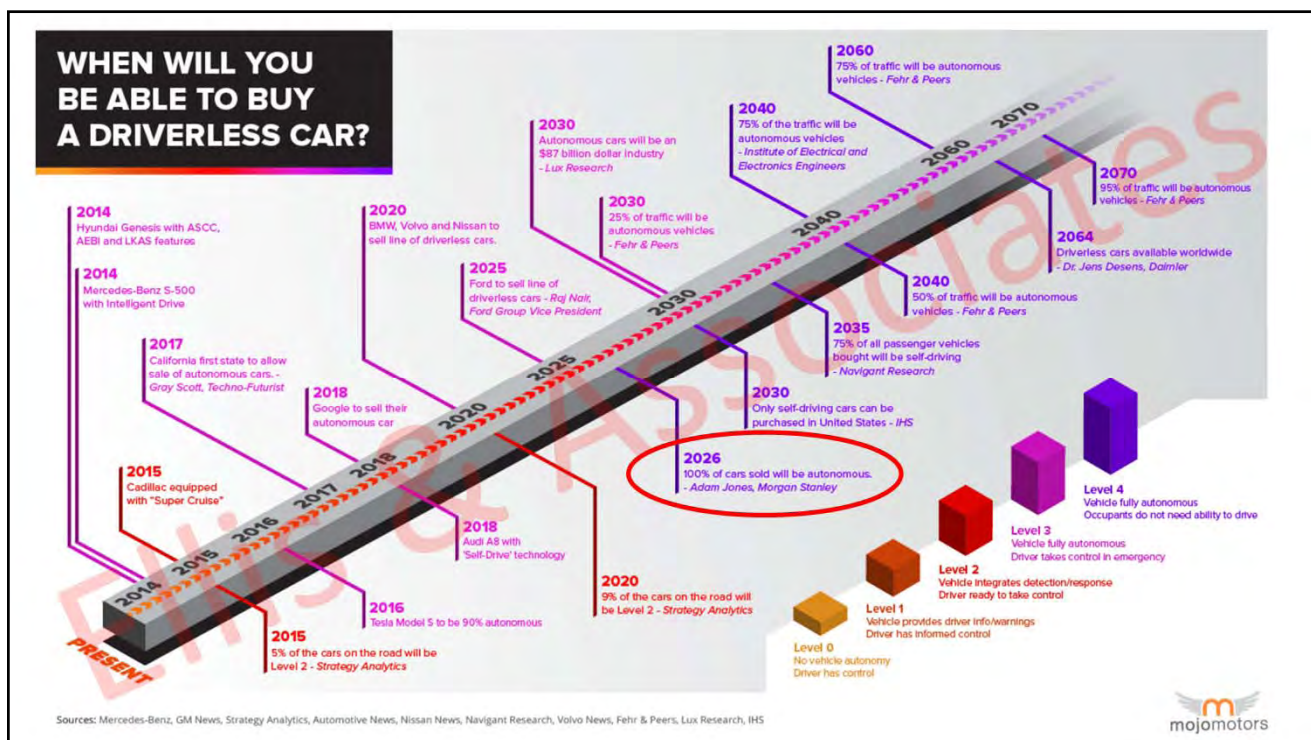
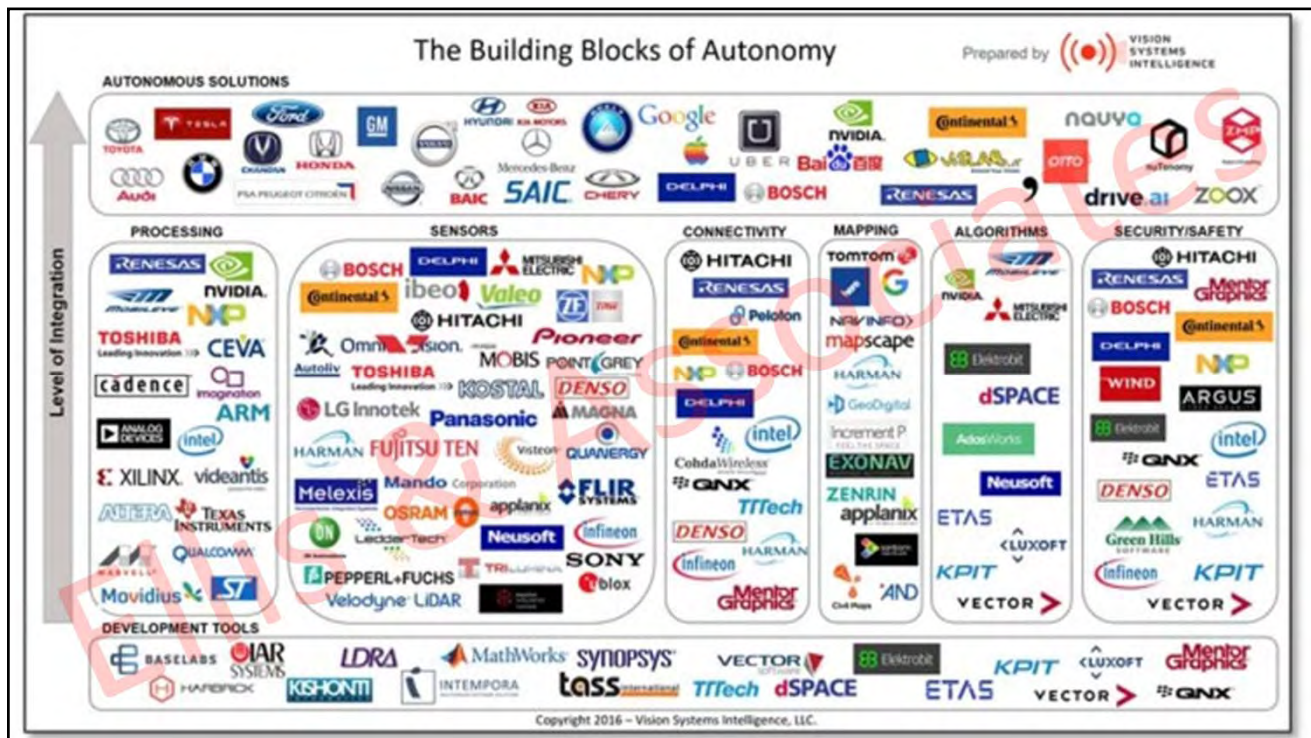


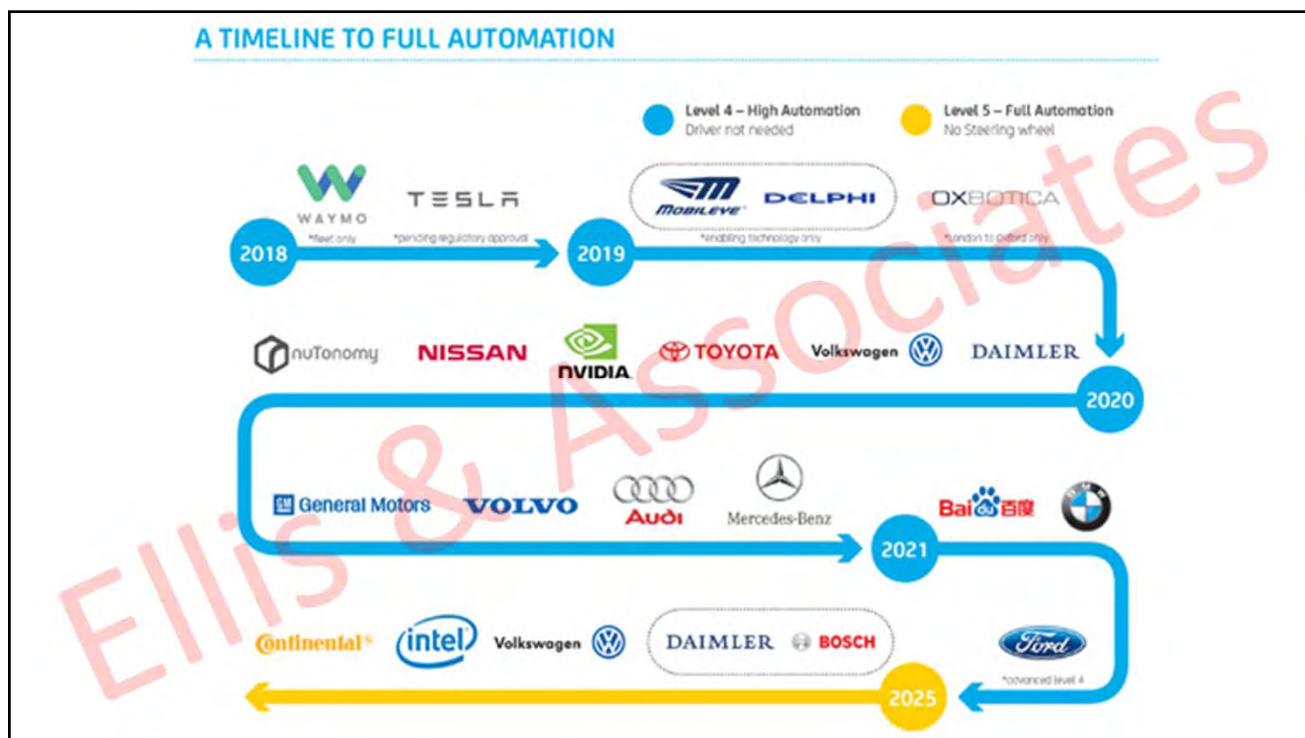
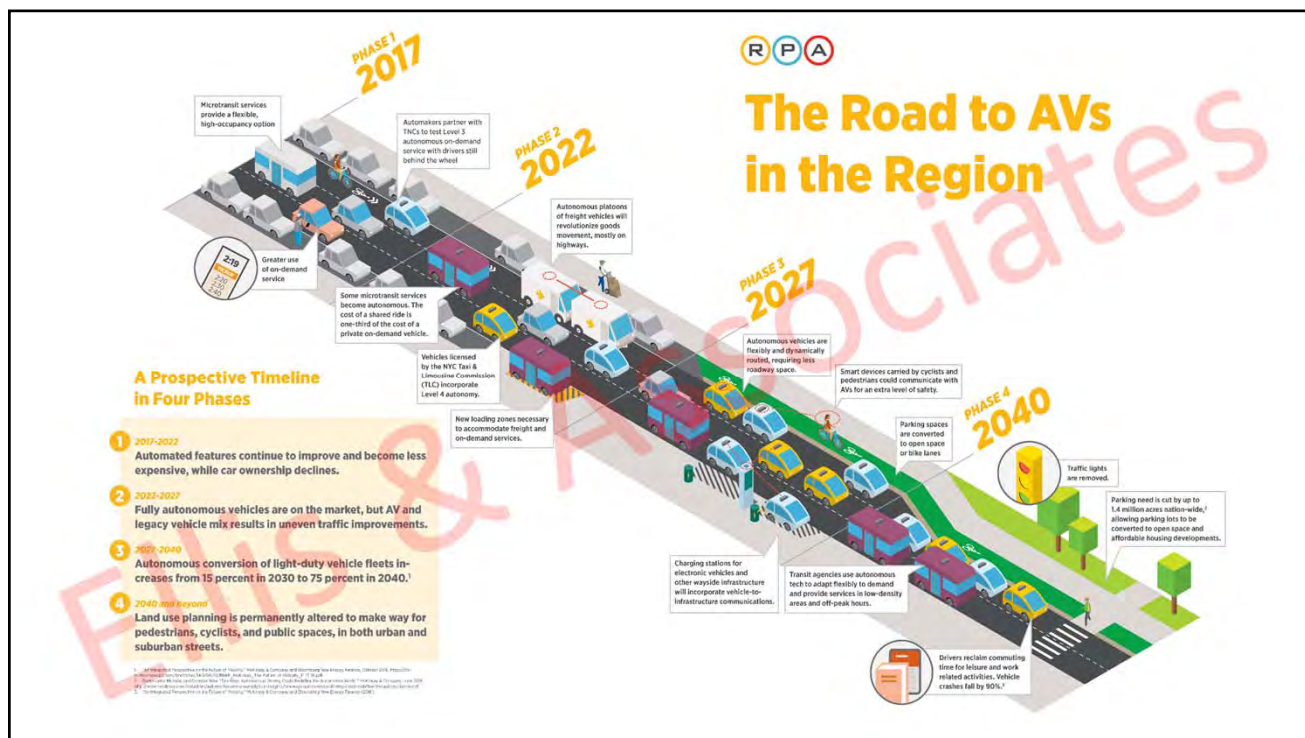
[Human] driving is the new smoking.

Gabe Klein, 2016

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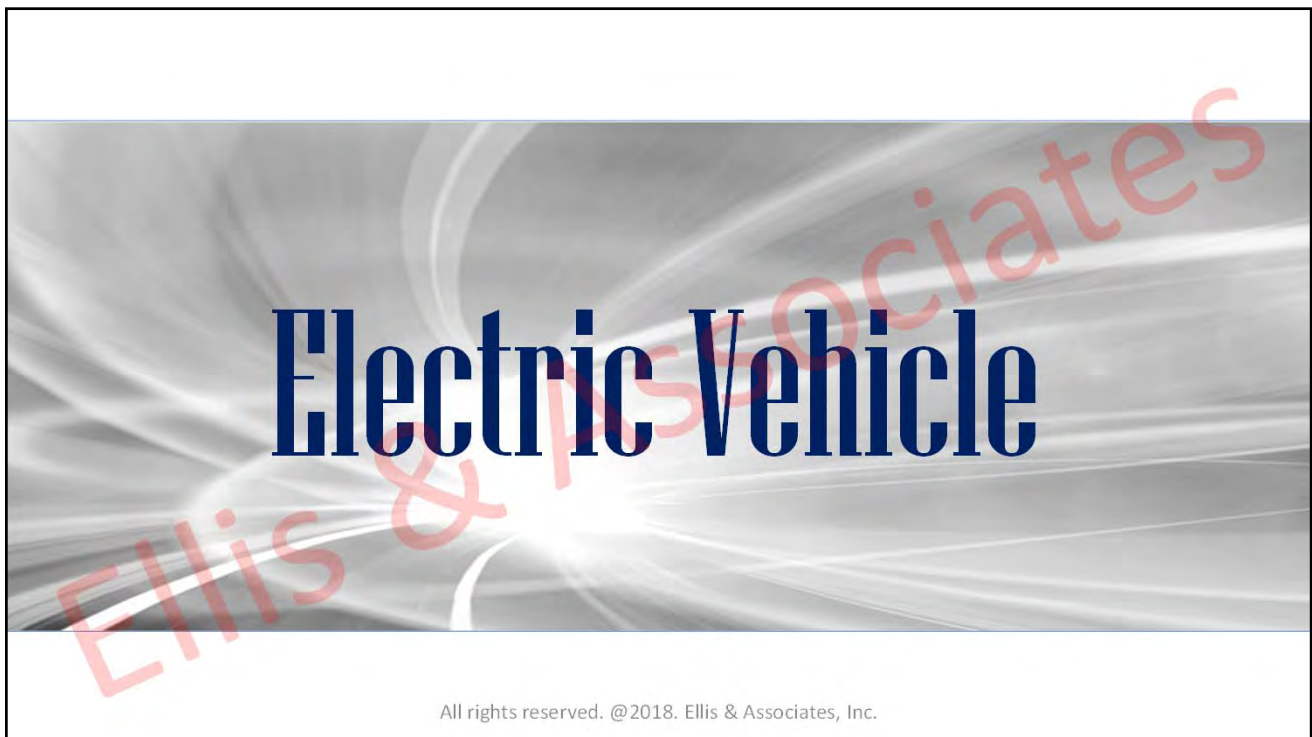


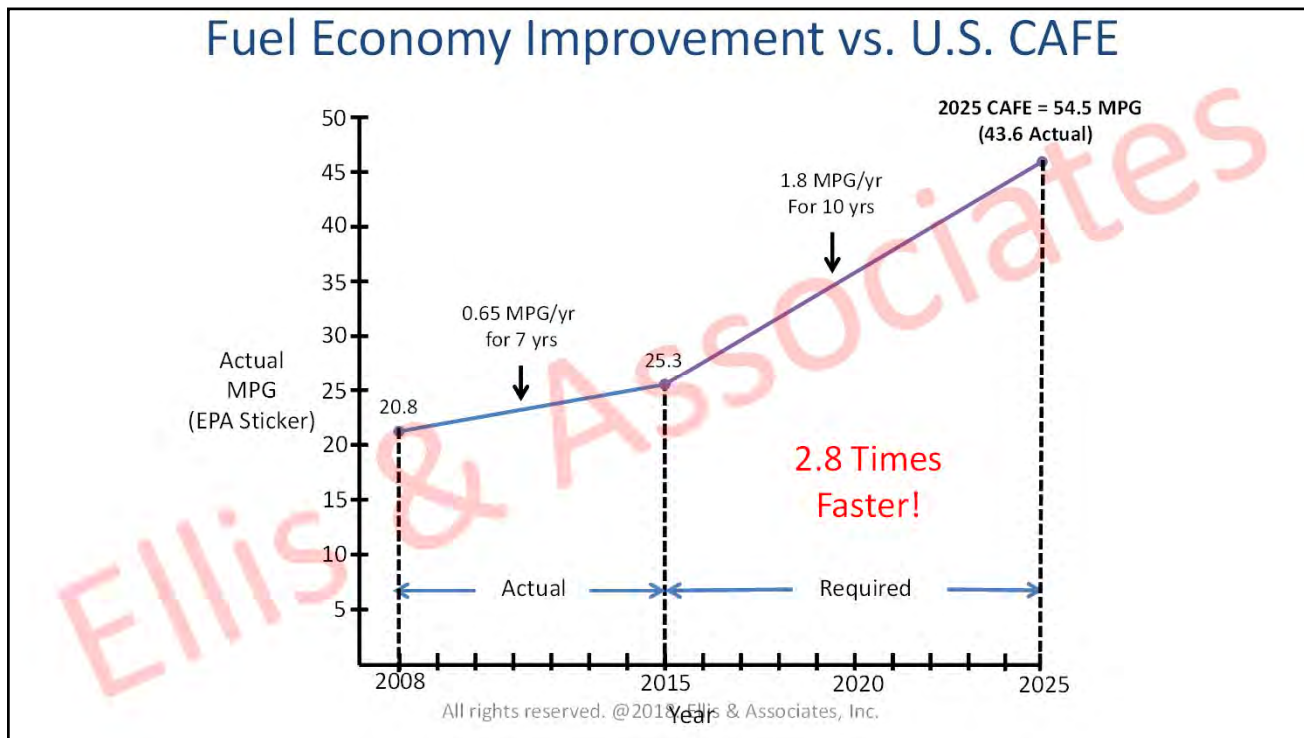


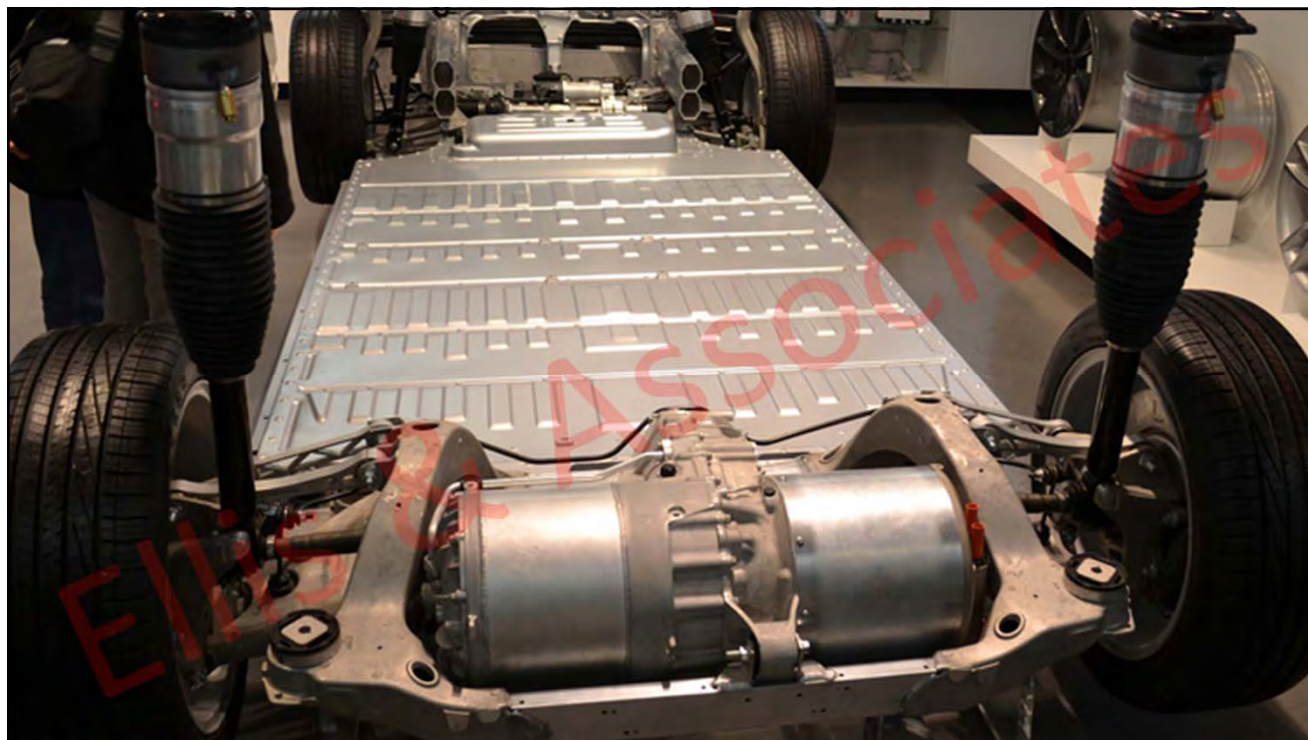


You trust someone you've never known to...

- Know all the rules of the road
- Not be on a call and distracted
- Not be distracted by the radio
- Not be on opiates
- Have taken their meds
- Not be drunk
- Not be tired
- Not be texting

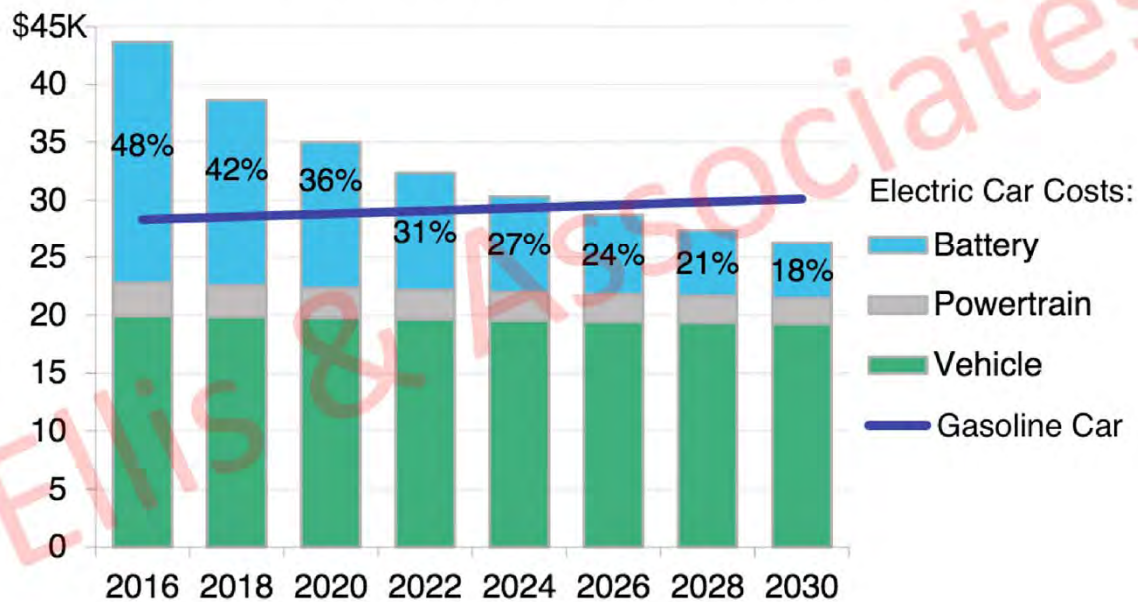


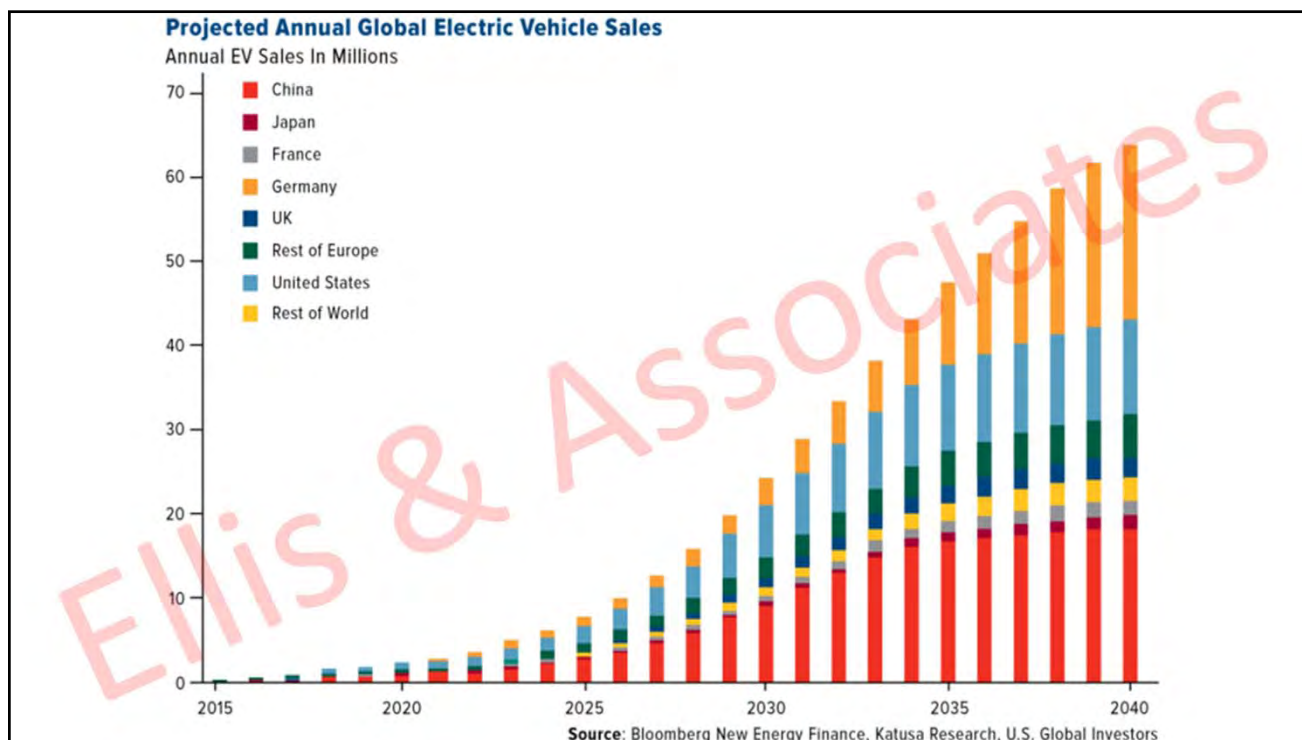
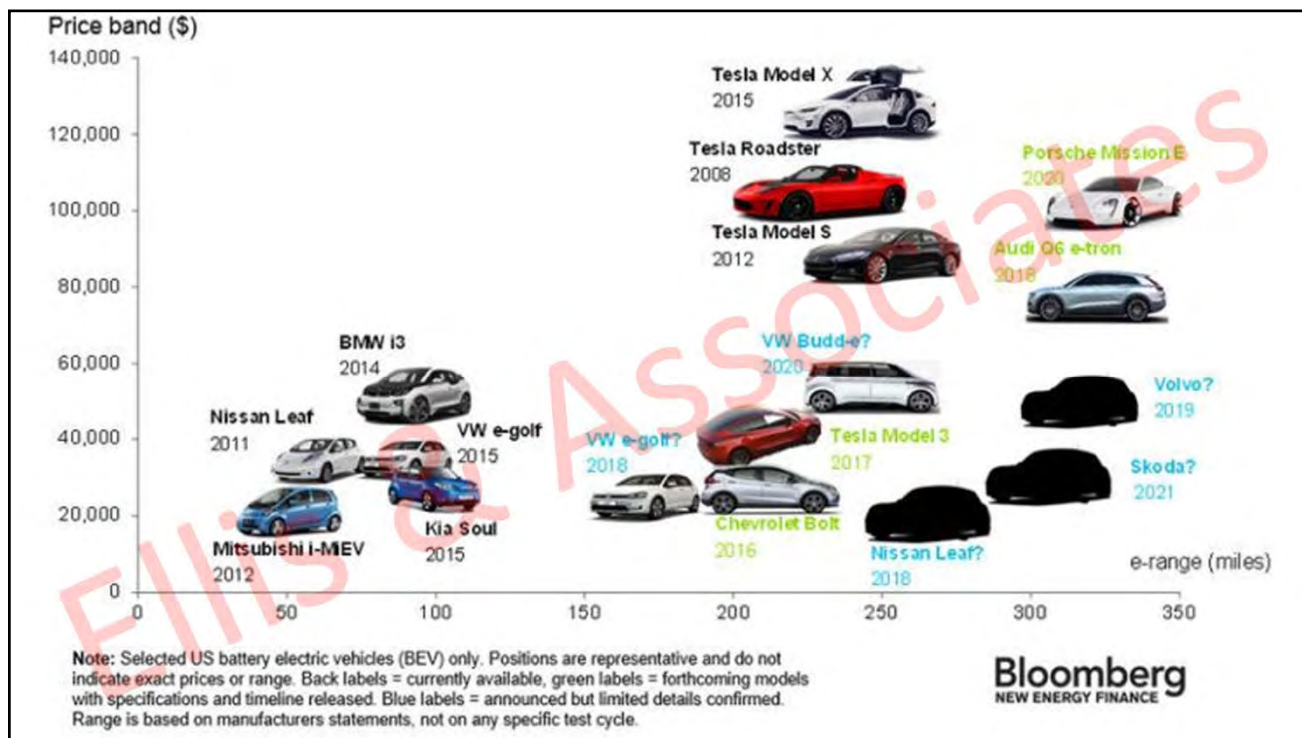


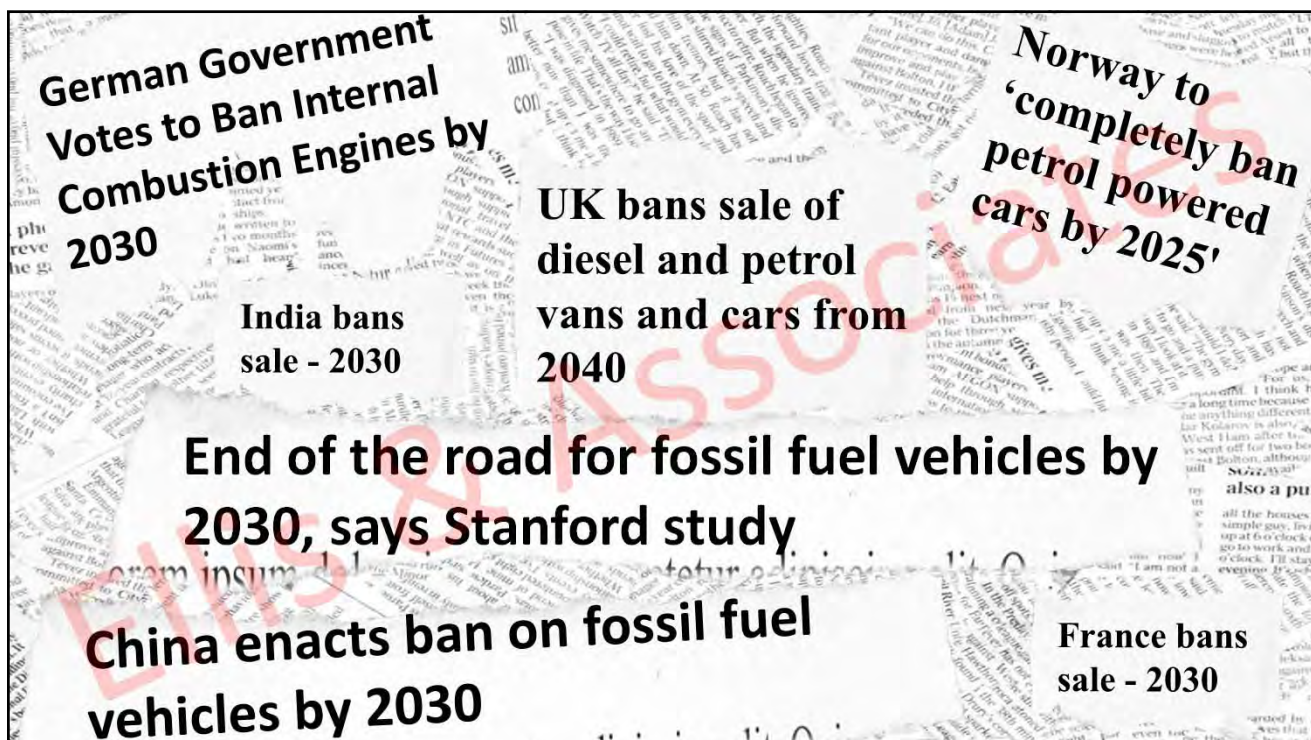
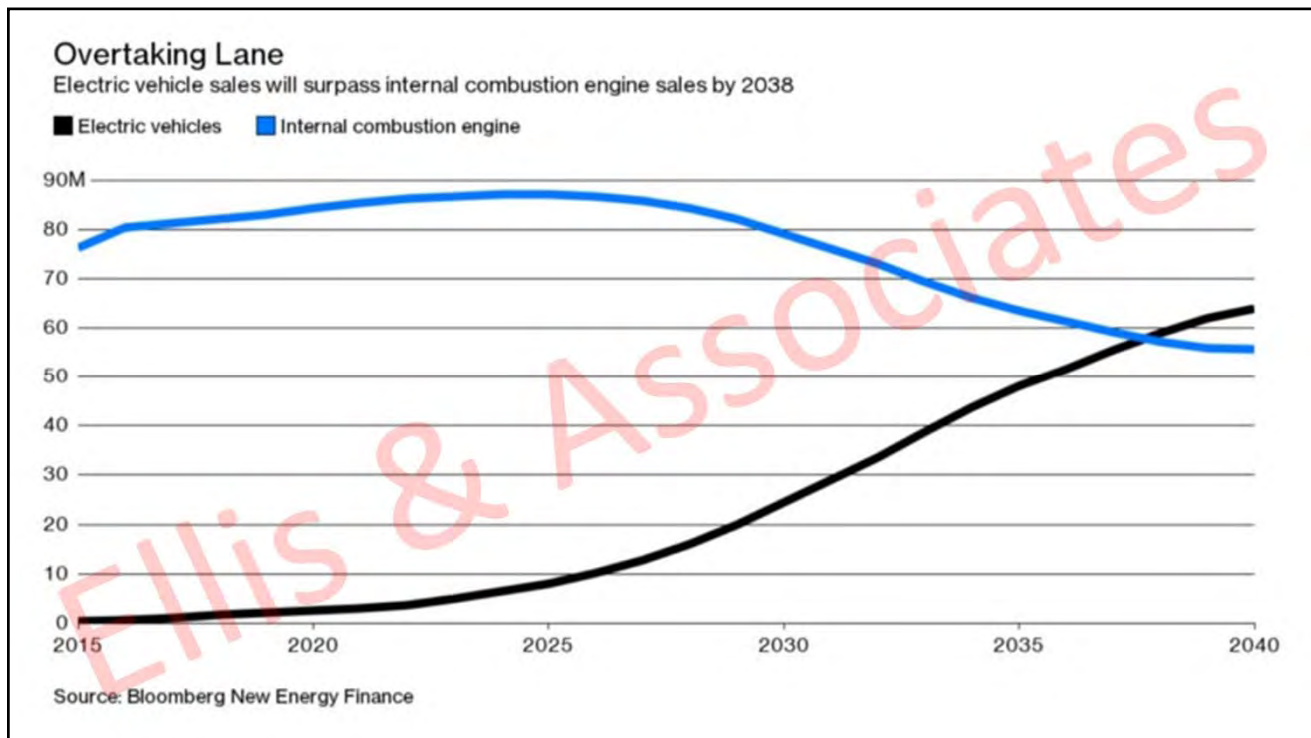


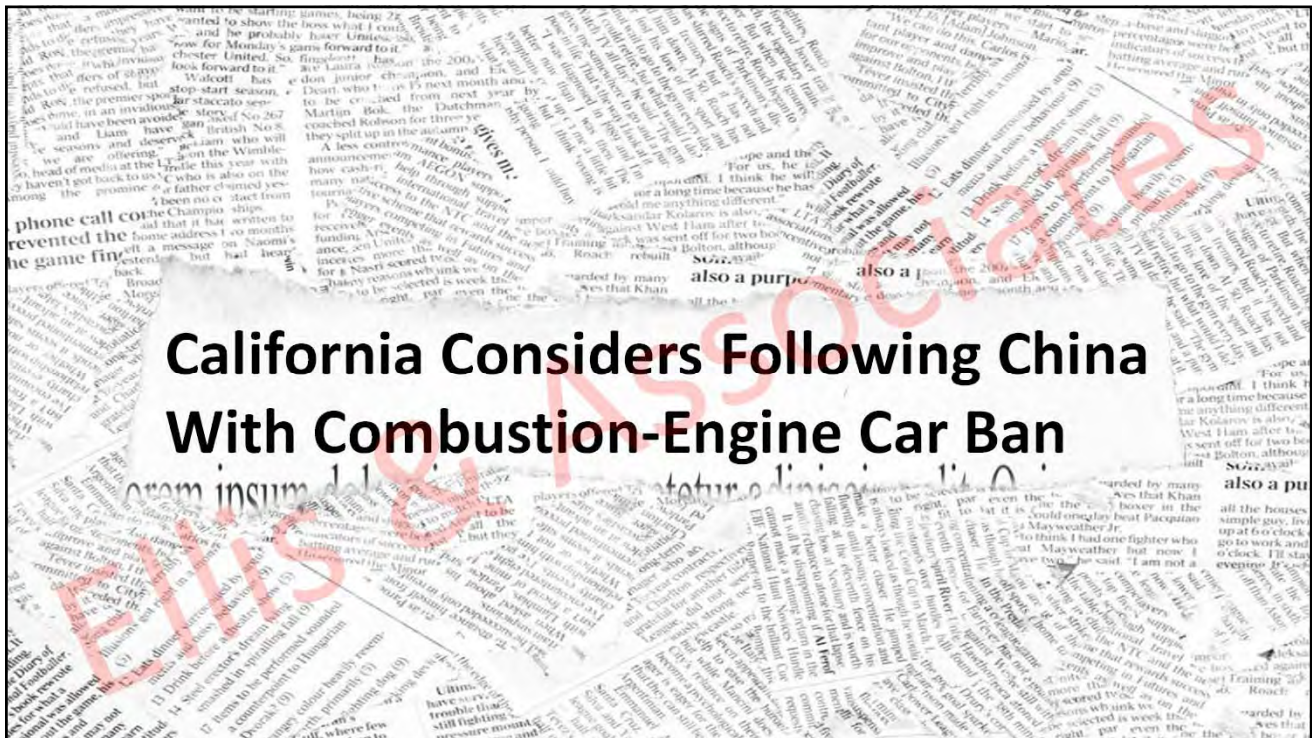
Electric Cars Will Win on Price

Falling battery prices undercut gasoline cars by mid-2020s

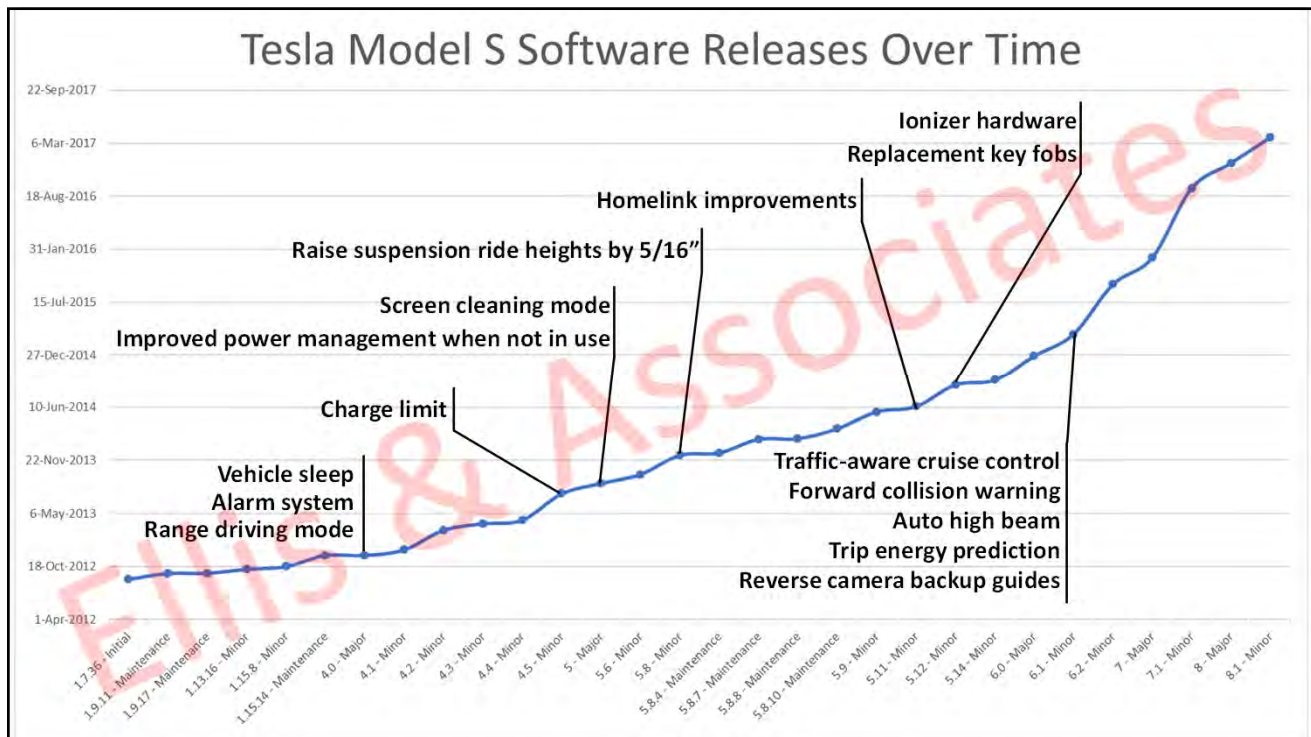
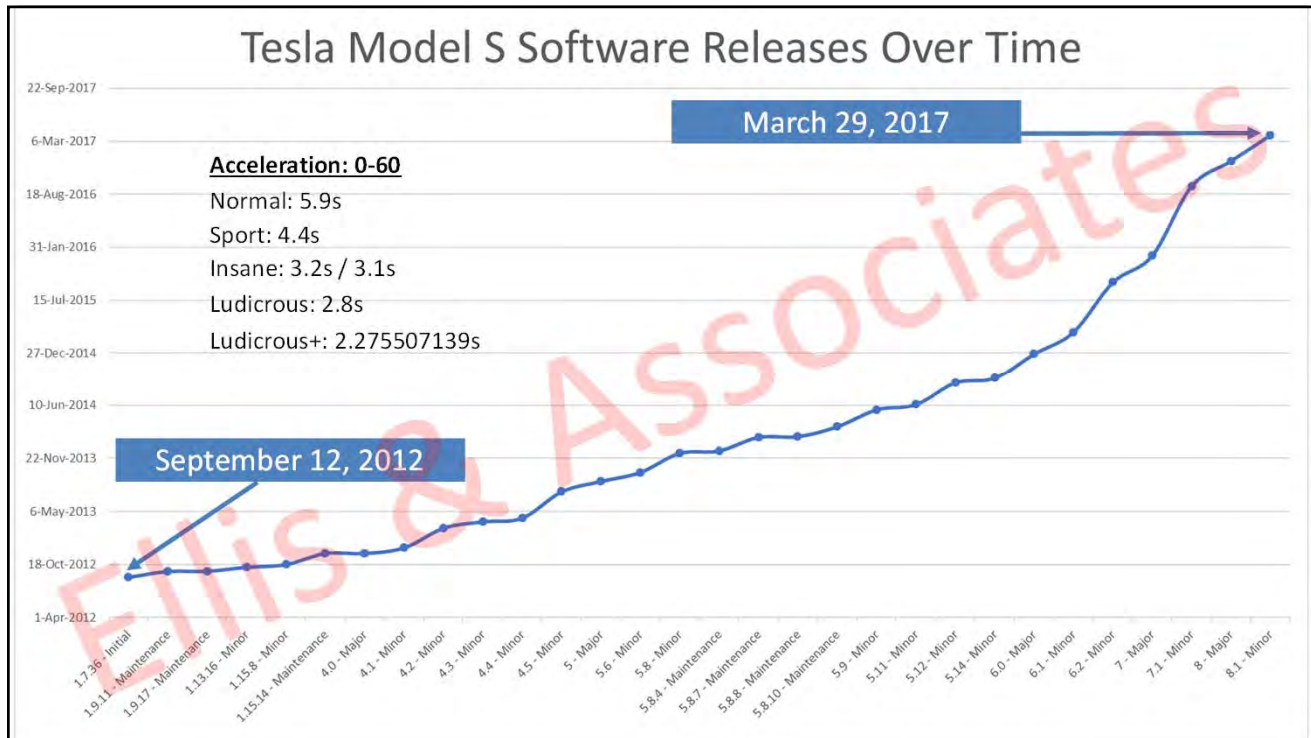


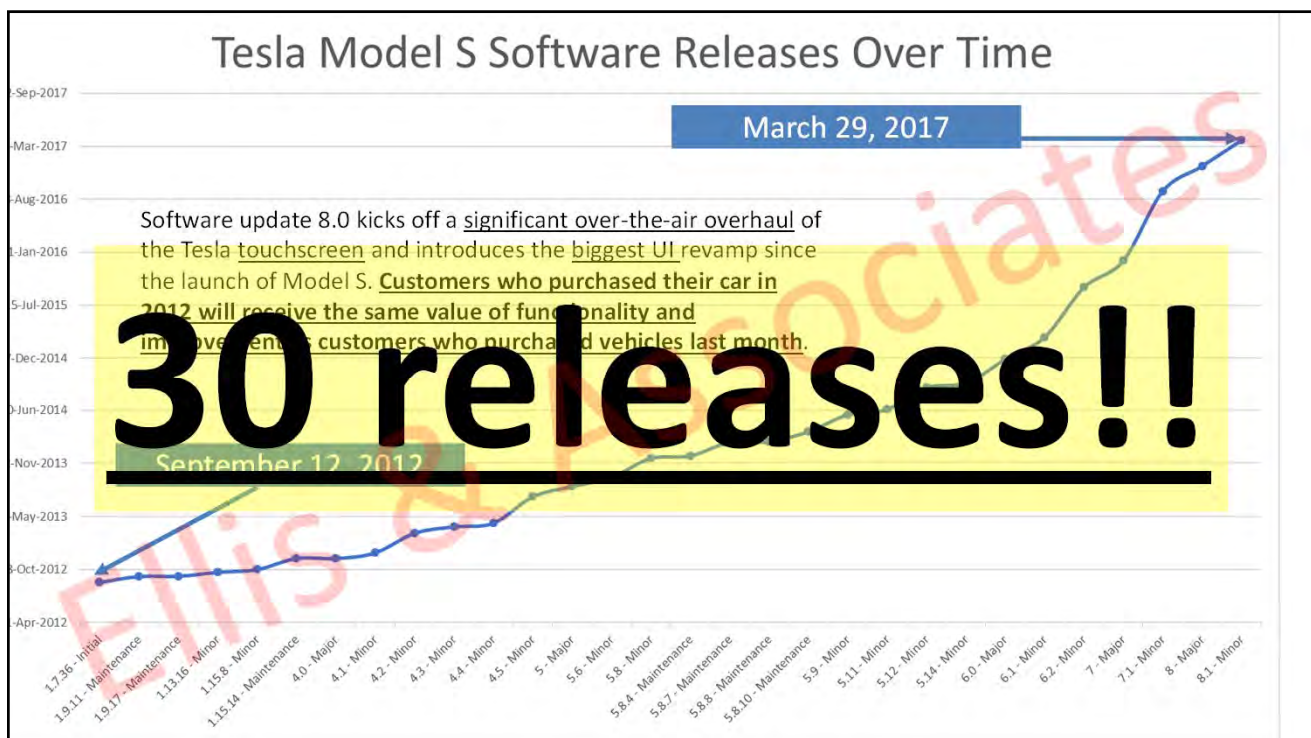
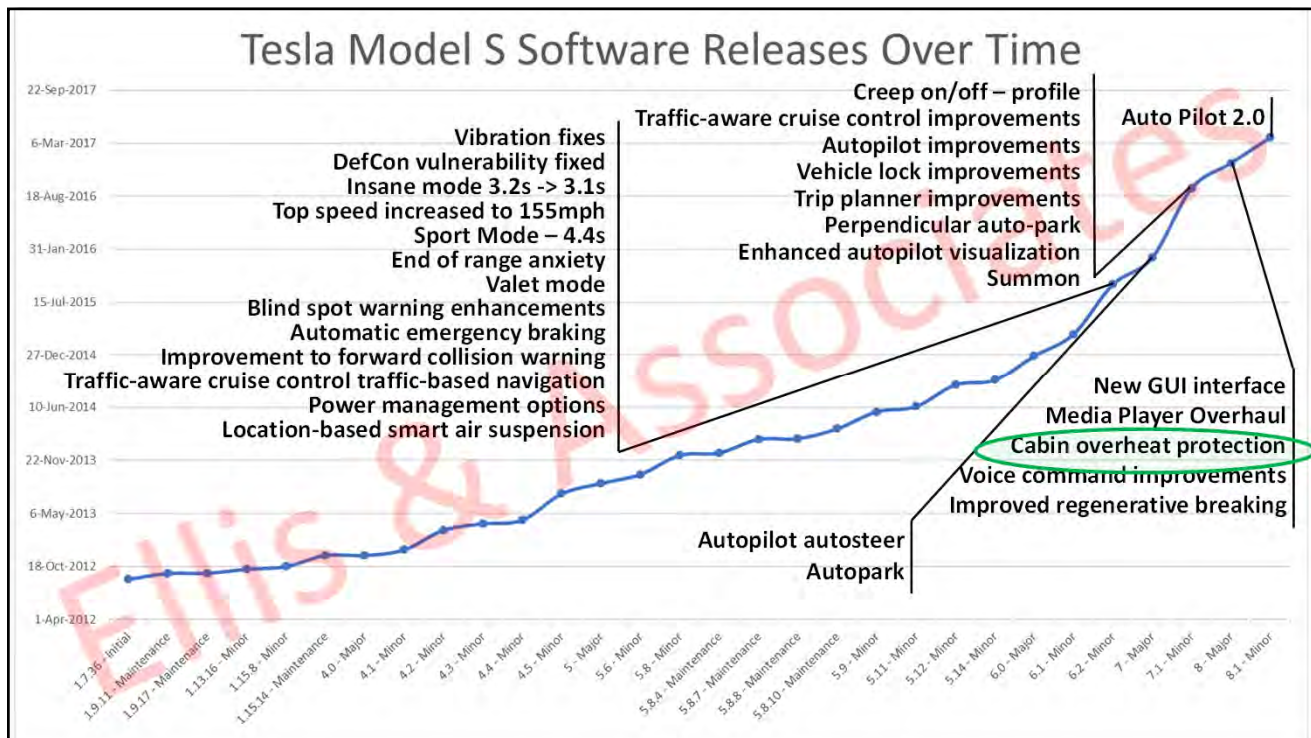


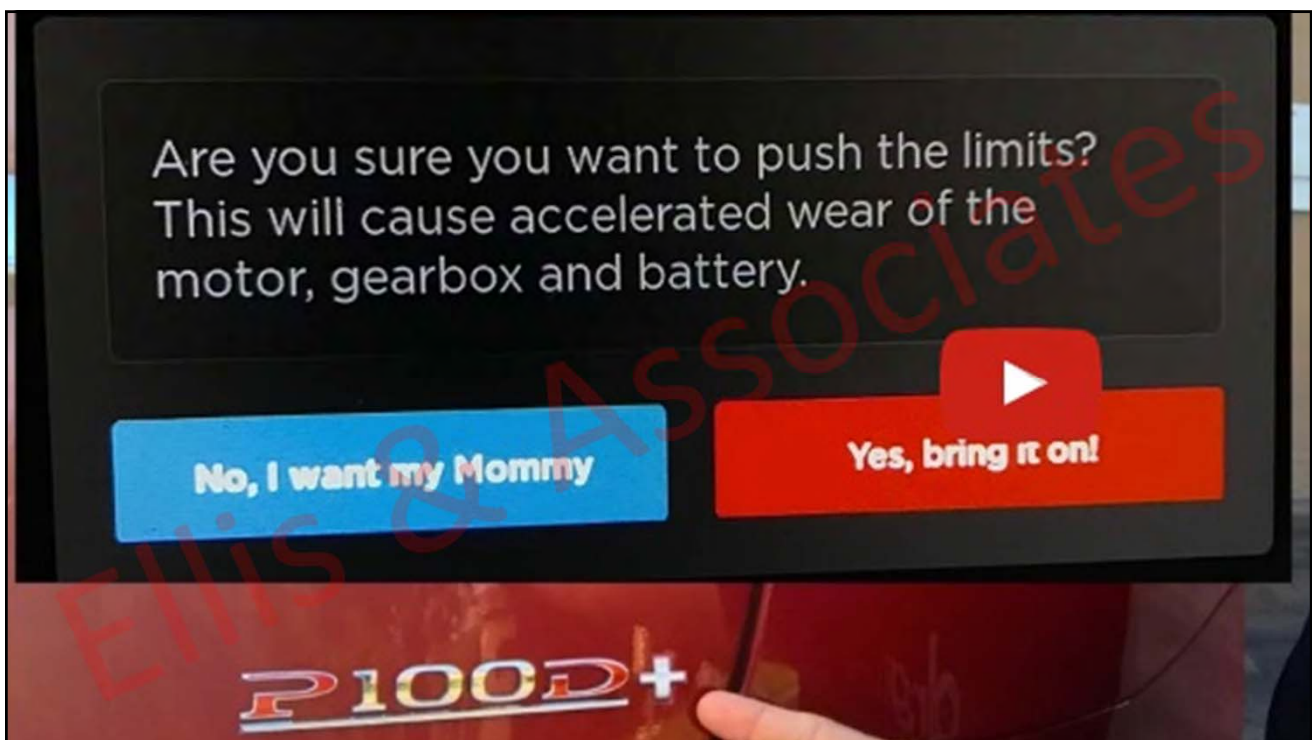




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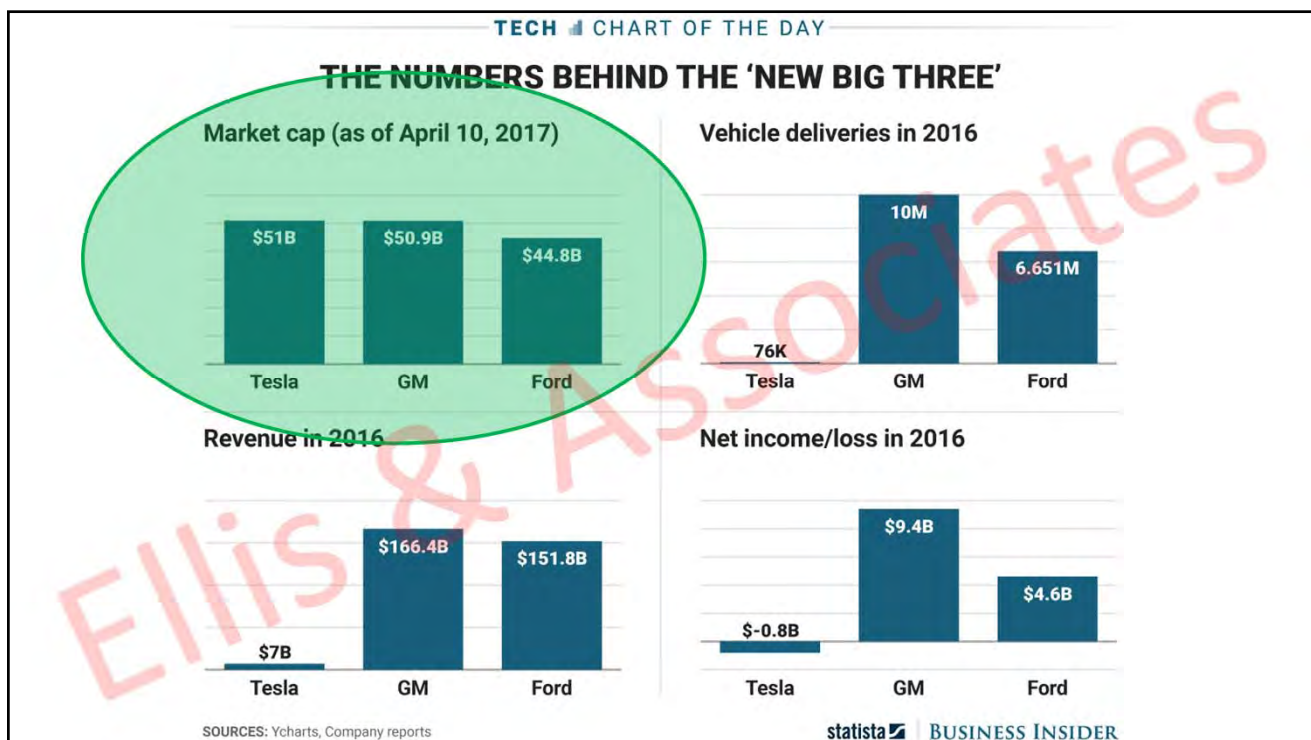






Video redacted due to size.
See Information Cited document for
the original video sources.

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Passenger Economy

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The arrival of Smart City innovations has added new urgency and opportunity for cities to achieve long-held goals to reduce single occupancy driving.



Impact to Repair

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The New York Times

New Cars Are Too Expensive for the Typical Family, Study Finds

July 1, 2016

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Just a few of the safety features

- ✓ Adaptive Cruise Control
- ✓ Lane Change Assist
- ✓ Park Assist
- ✓ Collision Avoidance
- ✓ Vehicle Stability Control
- ✓ Back-up Assist
- ✓ Pre-Safe
- ✓ Blind Spot Detection
- ✓ Cross Traffic Alert
- ✓ Back up Camera
- ✓ Birds Eye View Camera
- ✓ Night Vision Camera
- ✓ Side Impact
- ✓ Heads- up Displays
- ✓ Lane Departure Control
- ✓ Self Parking
- ✓ Attention Assist
- ✓ Incline/ Decline Assist

Sample Repair – LED Lighting

A8 LED HEADLIGHT ASSY.

\$2,765.00 Housing w/o modules

\$275.00 Cooling Fan

\$298.85 Daytime Running

\$292.00 Directional Beam

\$292.00 Turn Signal

\$530.00 Mail Light Control

Total \$4452.85 W/O Calibration



Standard running light bulb

BMW LED turn signal bulb – \$201.61

Standard signal bulb – \$3.22

LED daytime running lamp



Sample: Zero Point Calibration

Front Bumper Camera: \$647.50
(Mandatory after bumper R&I)



Adaptive Cruise \$1,205.50
(Inc. 4 wheel Alignment)



Night Vision: \$1,480.00



Blind Spot: \$462.50



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IIHS: In just 2 years, percentage of vehicles with front crash protection has crossed 50%

— August 26, 2015

In 2013, when the Insurance Institute for Highway Safety first started rating models for front crash prevention, 69 percent of them lacked even the simplest anticrash tech as an...



Reuters: OEMs producing 99% of vehicles to install autobraking by 2022

— March 16, 2016

OEMs worth 99 percent of the market share will commit to installing autobraking in every vehicle they build by 2022, Reuters reported Wednesday, citing three unnamed...



Automotive News: IIHS head says adaptive headlights could be required soon for Top Safety Pick+

— December 1, 2015

A top Insurance Institute for Highway Safety executive said that a good adaptive "steerable" headlight option might be necessary for a Top Safety Pick+ rating...

tes, Inc.



Replacement emblem on some 2015 Toyotas leaps in price — but could save your life

— February 10, 2016

Some late-model Toyota Avalons, Camrys and Highlanders with certain advanced safety options see the MSRP price of a



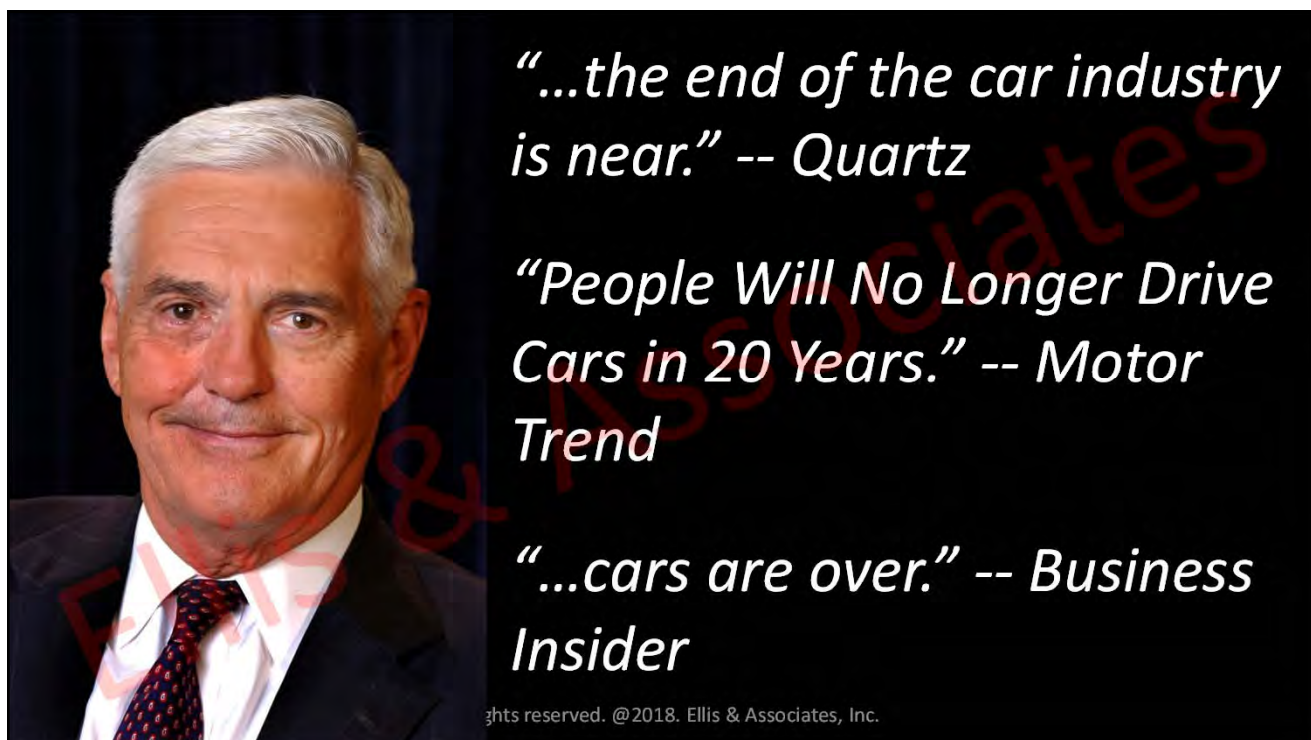
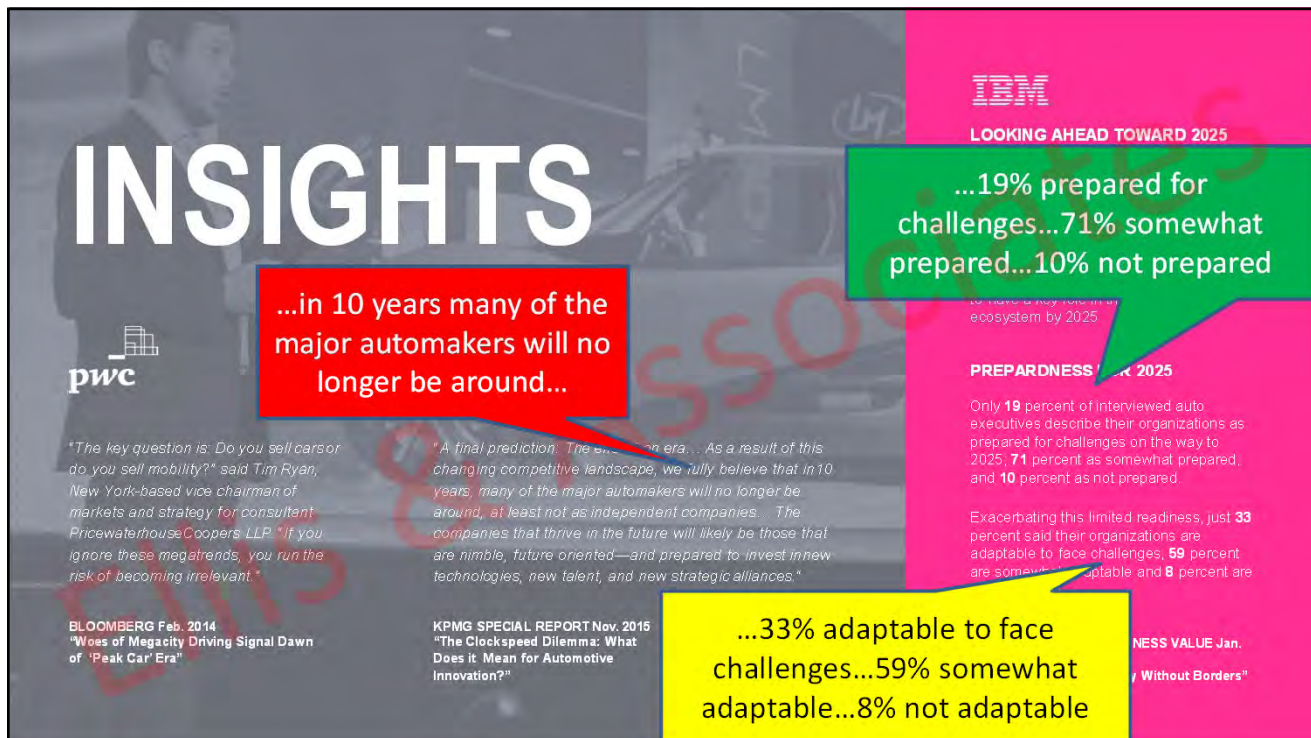
When is a collision repair 'done' on electronics-intensive car? Group working on question

— March 14, 2016

Saying he was "hopeful" but not positive a document could be ready by the 2016 SEMA, an electronics expert said a group is working on best...

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'Expert' Disruption Forecasts

In the mid-1980s AT&T hired McKinsey & Co to
forecast cell phone adoption by the year 2000

THEIR (15-YEAR) PREDICTION

900,000

SUBSCRIBERS

THE ACTUAL NUMBER WAS

109 million

They were off
by a factor of:

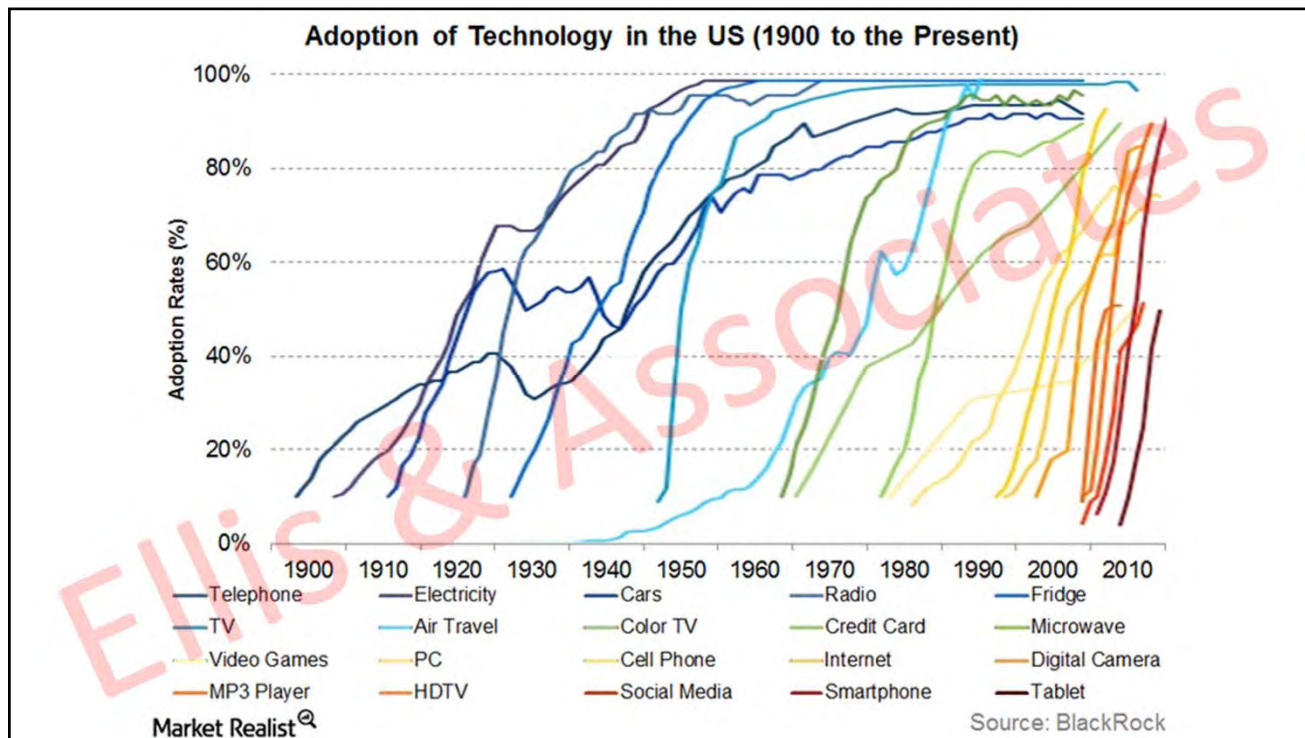
120x



We tend to overestimate the effect of
a technology in the short run and
underestimate the effect in the long
run.

-- Roy Amara

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What to Do?

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What to do?

1. Get comfortable being uncomfortable
2. Think of yourselves as a technology company that owns real estate to deliver repair as a service
3. Co-creation (aka “separate sucks”)
4. Prepare for the Passenger Economy

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What to do?

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Most companies die by suicide rather
than homicide.

– Paul Graham

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**“THE BEST WAY
TO PREDICT THE
FUTURE IS TO
CREATE IT.”**

Software is eating everything.

-- Marc Andreessen

Every company is now a software company.

-- David Kirkpatrick

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We can **evade reality**, but we cannot evade the consequences of evading reality.

-- Ayn Rand

May you live in interesting times.

-- Purported Chinese Curse

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THE ZERO DOLLAR CAR


Available now


#1 Amazon Best Seller (Auto Industry)

www.JohnTEllis.com

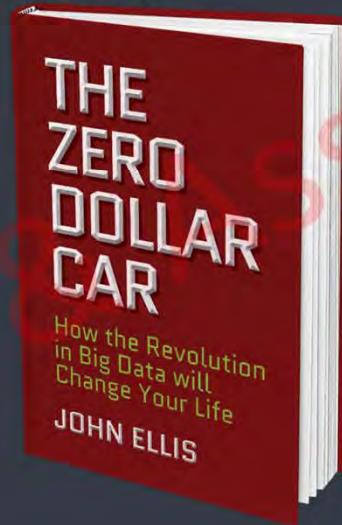
LET'S TALK:

 @JohnTechEllis

 @JohnTechEllis

 @JohnTEllis

#ZeroDollarCar



In essence, the same company (Motorola) that gave the world the first car radio, the first mobile phone, and the first walkie-talkie also produced John Ellis.

-- Roger Lancot, Strategy Analytics

Worth a look, as John Ellis is one of the most provocative and knowledgeable thinkers I have met in the auto space.

-- Don Abraham, Kantar Futures

Whether you like it or not, John Ellis tells it like it is.

-- Regina Hopper, Former CEO, ITS America