

2016 Consumer Electronics Show (CES) Press Conference - Bob Carter

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Bob Carter, Toyota Motor Sales Senior Vice President, Automotive Operations

Good afternoon everyone. Thank you all for joining us.

In just a few minutes it will be my pleasure to introduce Dr. Gill Pratt, the CEO of the new Toyota Research Institute...which, by coincidence, officially opens for business later this month.

Many of you are probably aware of Dr. Pratt's work in **artificial intelligence and robotics** when he was the project manager of the DARPA Robotics challenge.

And what in the world, may I ask, does that have to do... with selling Camrys and Tacomas?

The auto industry announced its 2015 sales results today, and more vehicles were sold in the U.S. last year than at any other time in history.

Over 17.5 million cars and trucks.

But the industry is seeing more than just historic sales numbers. We're seeing rapid evolution in what customers are looking for in their products.

Today, the car business is being transformed at an astonishing rate.

For the last 100 years,

- the car has played the role of a functional tool,
- responding
- to our human needs and input.

That relationship has forever changed.

Not only can cars see things and react quicker than humans...

- they are becoming intelligent.

In fact, we now find ourselves at a point

- where perhaps the most important focus of all...
- may be on what is often called...
- the *driver-vehicle interface*.

In truth, it should more aptly be called... the driver-vehicle ***relationship***.

People relate to electronic devices socially. They build strong bonds with them. And like any human-to-human connection, they have an emotional effect on people.

If you have any doubt about what I just said, I give you **Exhibit A**....your smart phone.

Be honest... How long does it take to experience

- that feeling of panic
- when you realize you do not have your smart phone in your possession...
- and have no idea where you left it.

Exhibit B: We are now capable

- of creating a true inter-relationship between the driver...
- and an **intelligent** vehicle.

And it will have a profound effect...

- on saving more and more lives on the highway.

As the car becomes more intelligent, it can perform higher levels of driver assist, when needed.

Like teammates, the intelligent car and driver are learning from each other. They watch, listen and remember. They adapt. They communicate. And they assist, when needed.

Over time, a **foundation of TRUST is built.**

And as trust is built,

- more tasks can be shared or re-assigned.

Together, these teammates are building

- a common *situational awareness*
- of their driving environment.

Toyota's vision of future mobility

- includes **two important pathways**
- that must be travelled simultaneously.

One will eventually provide **access** to mobility for everyone,

- no matter their physical limitations
- via the future adoption
- of **fully autonomous** technologies
- importantly including personal robotics

The other will provide more immediate rewards.

As Dr. Pratt will describe, it is the goal of the TRI

- to accelerate machine learning,
- allowing more and more functions to be assigned to the car—
- when needed—to avoid a crash.

As we get to that point where the car is incapable of causing a crash,

- it will be possible to save more and more lives along the way.

Last year here at CES, we announced that we would openly share at no cost...

- **ALL** of our 5600 patents related to *hydrogen fuel cell technology*...
- accumulated during more than 20 years of development...
- of our Mirai hydrogen fuel cell electric vehicle.

Wood was replaced by coal...which was replaced by petroleum...which we believe will be replaced by Hydrogen

If you believe in saving the planet

- from smog forming pollutants and greenhouse gases,
- you do everything you can
- to get to zero emissions
- as quickly as possible.

Likewise, if you believe in trying to save...

- more than 30,000 lives a year in the U.S. by creating cars incapable of causing a crash,
- you start exploring ways to work together as an industry
- and get this technology to market as quickly as possible.

Here to tell you how we plan to do that...is Dr. Gill Pratt.