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# Green Safety

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***2015 8<sup>th</sup> ATRANS Symposium on  
Transportation for a Better Life : Harnessing  
Finance for Safety and Equity in AEC***

# Solution of reducing Traffic Fatality

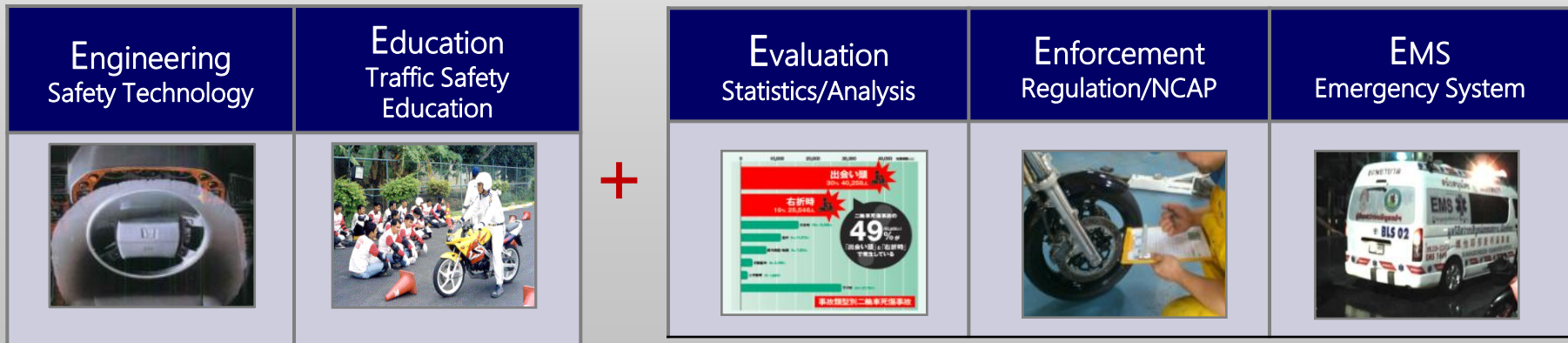
< Developed Country >



< Developing Country >



5 views • 「5E」



Study the accident in Developing Country with wide vision

# Revolutionary Challenge

Developing Country  
( China, Asean, South America )

Developed Country  
( Japan, North America, Europe )

## Chaos

Accident



Evolution



## Organized

Almost Accident

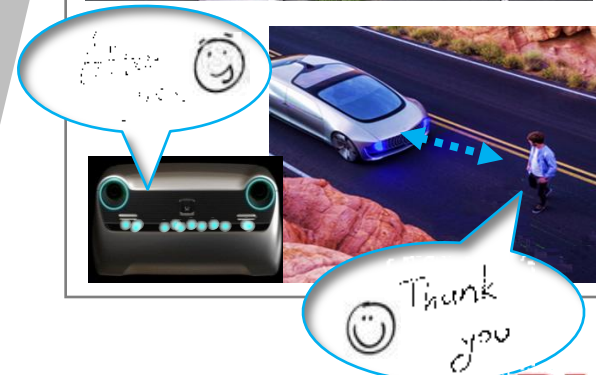


Evolution



## Cooperation Harmony

Never Accident



HONDA

More Secured Society

Realizing the joy of free driving

Enjoy Driving Car



Enjoy Traveling



Enjoy Reunion

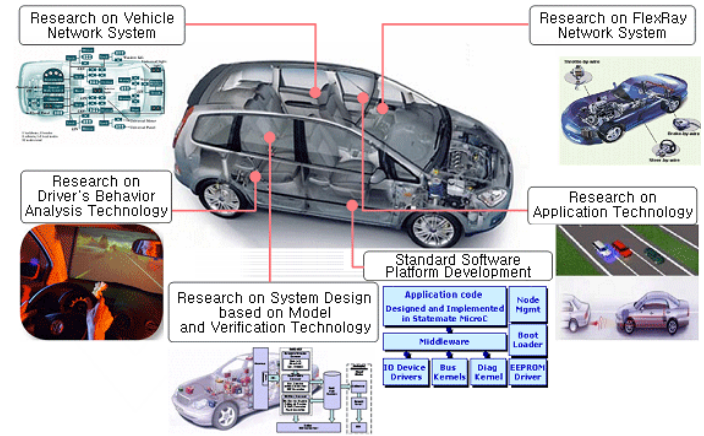


To Enjoy the life,  
Securing your life with Smile

Joy with Security

# Industrywide Effort to Enhance Safety

## ■ Enhance Passive Safety to reduce fatalities



## ■ Encourage research for Active Safety to reduce accidents

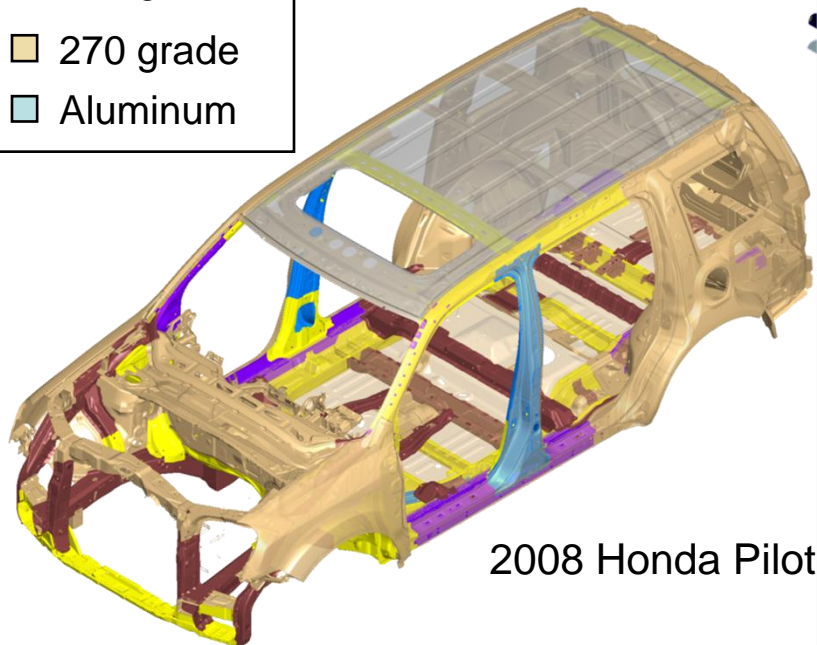
# Designing for “Green Safety”

## ■ Reduce the body weight

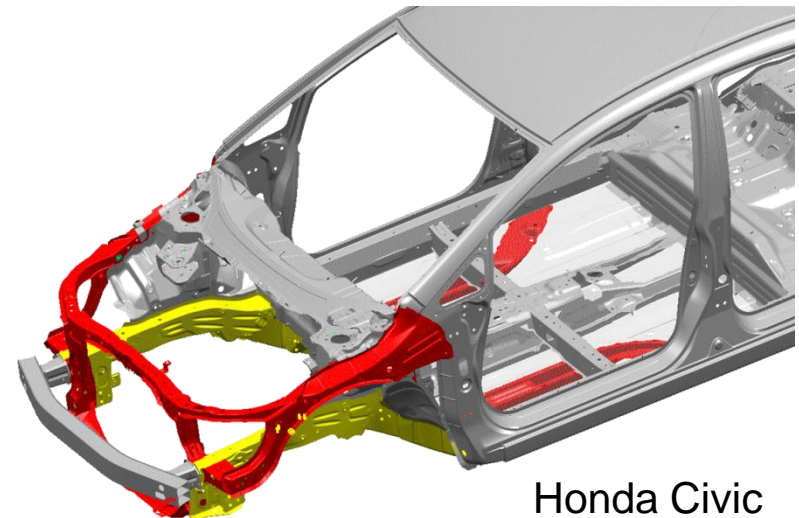
### High Strength Steel

- 980 grade
- 780 grade
- 590 grade
- 440 grade
- 340 grade
- 270 grade
- Aluminum

HSS represents  
52% of white body



### Advanced Compatibility Engineering™ (ACE™)

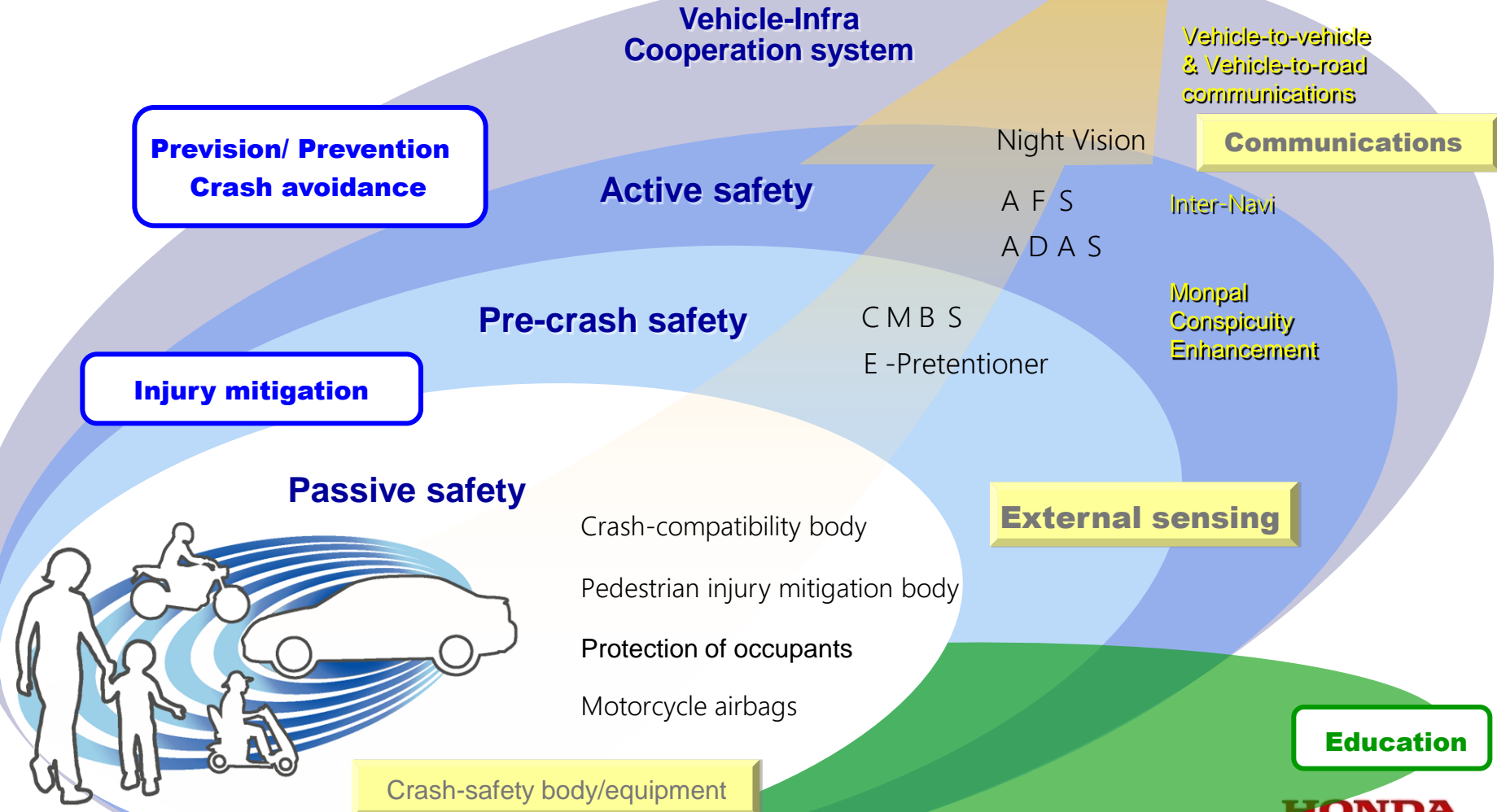


**HONDA**  
The Power of Dreams

# Safety for Everyone Commitment

## ■ Safety for All Road Users

## Safety for Everyone



# Today's Discussion

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## ■ Green Safety - Human Element of Safety

- Not a focus on “hardware” – technologies to protect occupants or enable them to avoid accidents
- Human element of safety – design vehicles and systems the enable people to reduce human error that contributes to accidents

# Approach to Developing a “Car That Does Not Crash”

- Over 90% of traffic accidents are caused by human error



# Approach to Developing a “Car That Does Not Crash”

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## ■ 3 Key Factors

Optimal traffic flows are maintained through the harmonization and integration of the **Traffic Environment – Vehicle – Human**



## ■ Mutual Compatibility

# Approach to Developing a “Car That Does Not Crash”

## ■ Driver's Skill

The difference between an unskilled driver and a race car driver

The driving performance to control the car to fit certain conditions with the correct judgment to avoid an “incompatible situation”



# Approach to Developing a “Car That Does Not Crash”

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## ■ Human Factor

Education about the cause of traffic accidents related to human factors is done in driving school

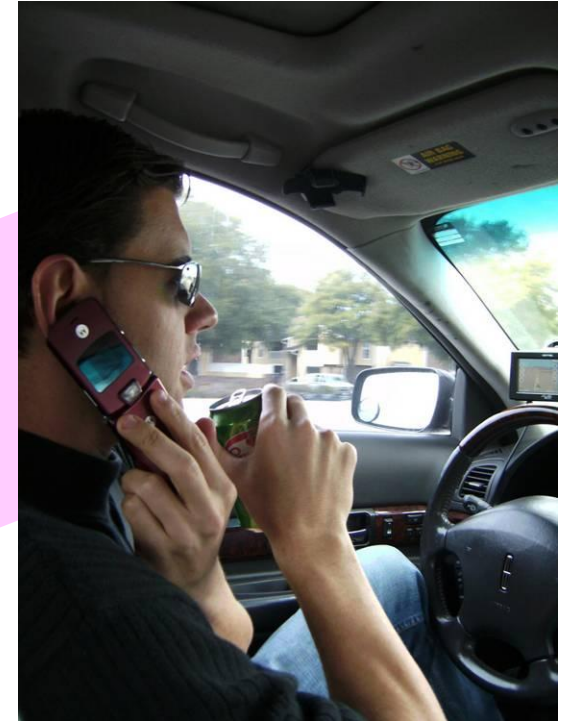


# Approach to Developing a “Car That Does Not Crash”

## ■ Isolated Iron Box

An iron box called a “car”

A false sense of security  
Leads to carelessness



A sense of being in our own living room

Isolation from outside information and other people

# Approach to Developing a “Car That Does Not Crash”

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## ■ Distraction

Don't look at me while you are driving!



# Approach to Developing a “Car That Does Not Crash”

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## ■ Booster System

Cars have energy (speed, weight) we cannot even handle



Cars are booster systems designed to enhance the mobility of man

# Approach to Developing a “Car That Does Not Crash”

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## ■ Booster System

Cars do not have complete freedom or nimbleness



Cars cannot stop or turn suddenly like a Cheetah



# Approach to Developing a “Car That Does Not Crash”

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## ■ Illusion: Anonymity in the iron box



# Approach to Developing a “Car That Does Not Crash”

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## ■ The principle of “Me First”

The feeling of anonymity contributes to self-centered behavior (anger, frustration)



# Approach to Developing a “Car That Does Not Crash”

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## ■ In summary

Accidents occur when this space shielded from the outside world creates an illusion ... that leads to self-centered behavior and carelessness ... and causes us to take action with a car that has energy that cannot be controlled by the abilities of a human being

# Approach to Developing a “Car That Does Not Crash”

## ■ Optimization among Traffic Environment ↔ Vehicle ↔ Human

One approach to developing a “car that does not crash:”

Cooperative vehicle communication system:

⇒ Provide driver with more and better information

- how to get to their destination and how long it will take
- calm driver by establishing realistic expectations

Coordination with the outside world

⇒ Independence and autonomy are not a “trade-off”



# Approach to Developing a “Car That Does Not Crash”

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## ■ Approach

- Passive:

The car detects the relationship between the external environment and the driver, and prevents the driver from driving radically.

- Active:

The driver feels good and becomes gentle whenever driving the car.



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