

Shawn Crichley / TJ Palesano

Engineering Team
Honda R&D America Inc.



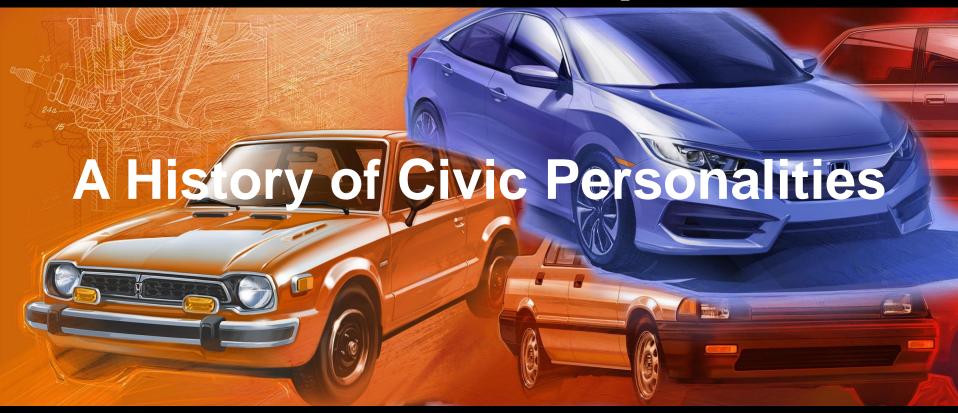


CONCEPT





The First Civic "Super Civic" "Wonder Civic" And Fig Of Cts Civic "Whitele Civic"



Development goal

Create the best C-Segment vehicle in the world

R&D Global Teamwork

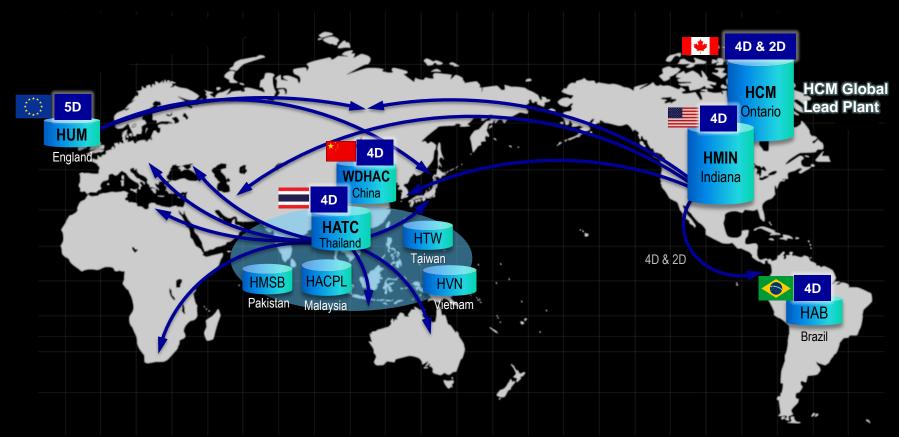






Global Production Locations

Civic is produced at 10 assembly plants globally – 2D, 4D, 5D variations



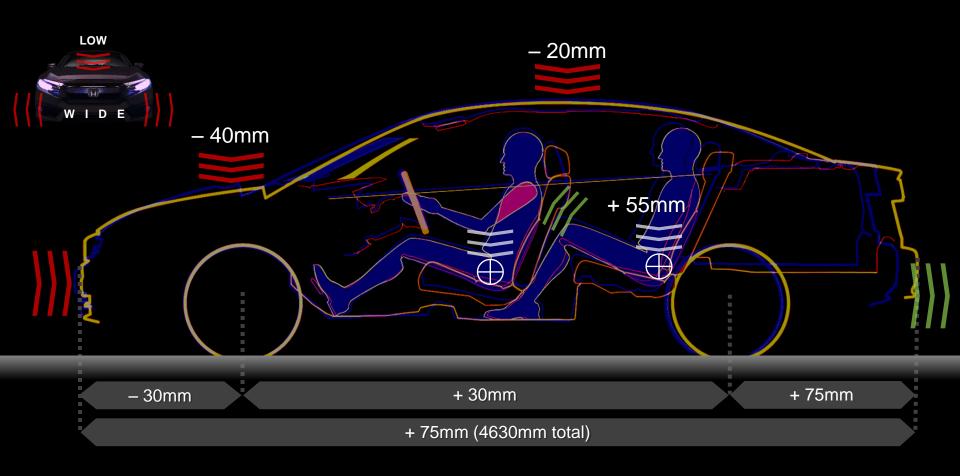




PACKAGE



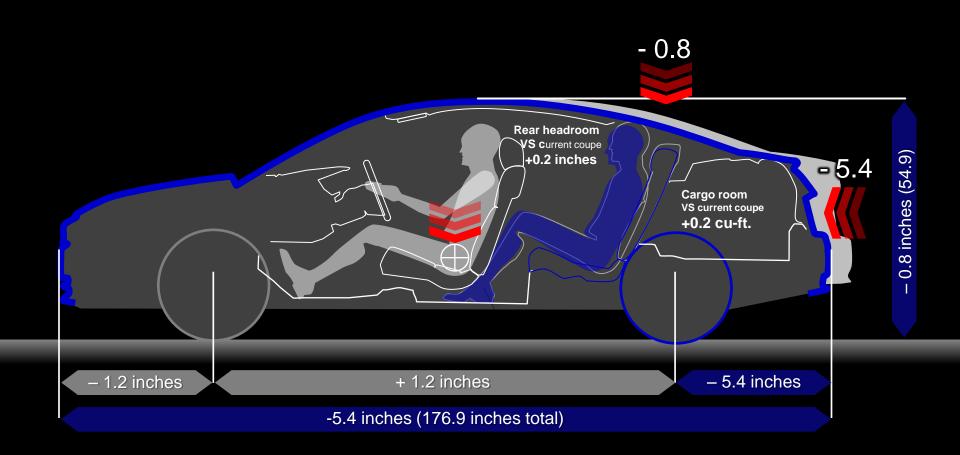
Package Concept







Package concept: Coupe

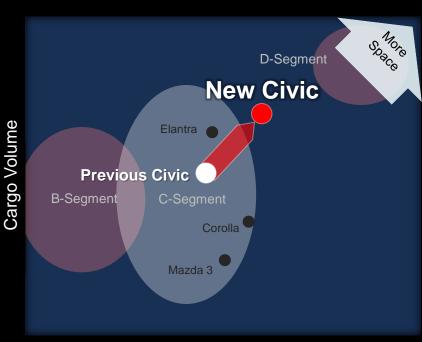




Package Concept

Best-in-Class Interior Volume





Passenger Volume



DESIGN





Exterior Design







Coupe Exterior Design Concept







Interior Design





DYNAMIC PERFORMANCE





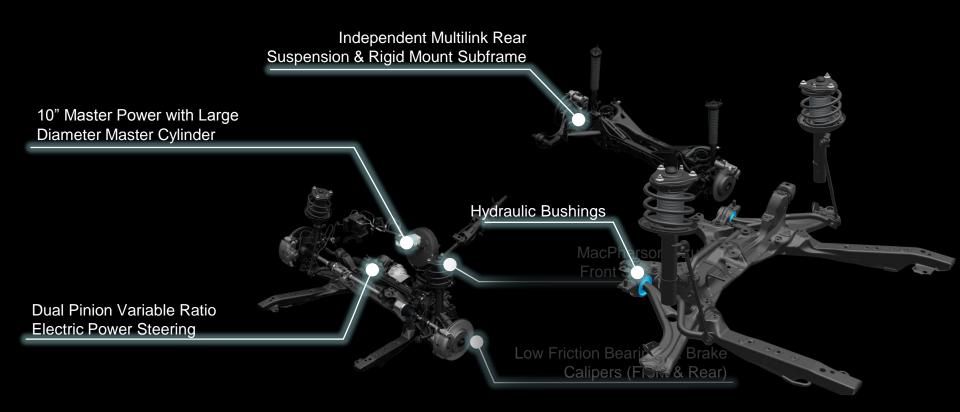
Performance Target







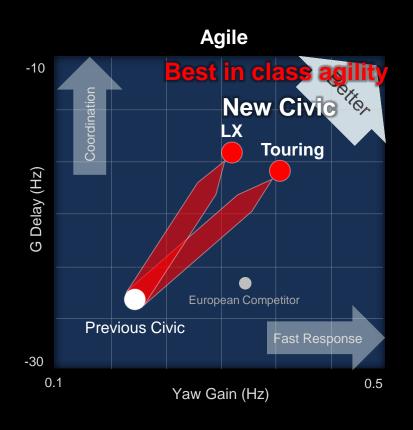
Dynamic Performance | Chassis Optimization

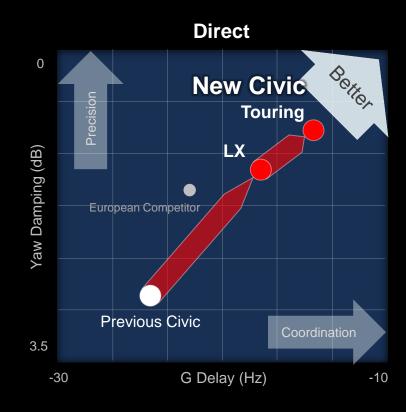






Agile & Direct Handling







POWERTRAIN





Two New Powertrains





Two New Powertrains

All new powertrains maximize acceleration and efficiency

Best Perfomermance 1.5L : Horsepower / Torque / Fuel Efficiency
Best Combinaiton 2.0L : Horsepower / Fuel Efficiency / Value

Model	Engine	Mission	Power (hp)	Torque (lb-ft)	Fuel Economy (mpg)		
					City	Hwy	Comb
2016 Civic EX-T / Touring	1.5L Turbo	CVT	174	162	31	42	35
2016 Civic LX / EX	2.0L	CVT	158	138	31	41	35
2016 Toyota Corolla LE	1.8L	CVT	132	128	29		32
2016 Hyundai Elantra SE	1.8L	6AT	145	130	28	~ ~	32
2016 Mazda 3 <i>i</i> Touring	2.0L	6AT	155	150	30		34

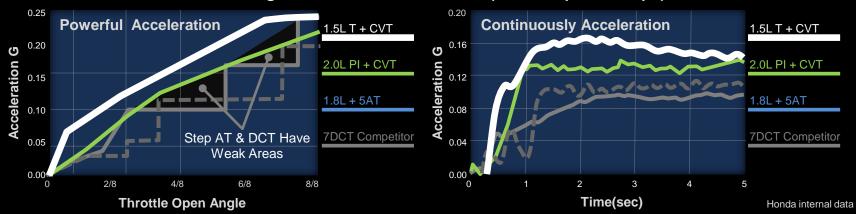


Powertrain concept

Powerful Acceleration



Mid-range Acceleration Performance (Vehicle Speed 50 Mph)





Powertrain | Fuel Economy

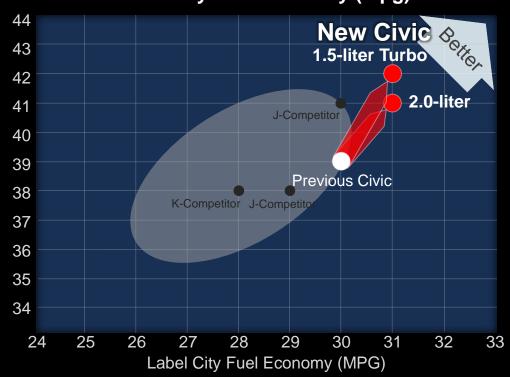
1.5-liter Turbo Powertrain



2.0-liter Powertrain



Label Hwy Fuel Economy (mpg)







BODY CONSTRUCTION

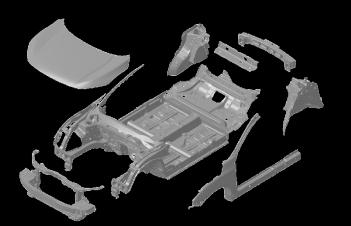




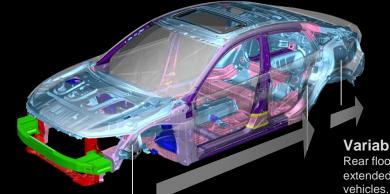
Body | Platform Flexibility

Optimized body construction for platform commonality

- Increased Civic family commonality
- Increased future model commonality



2 Door / 4 Door Shared Stampings



Engine Room Strength!: Stronger front side frame can be used for heavier future models Variable Rear Overhang:
Rear floor can be shortened or
extended for Civic family or future

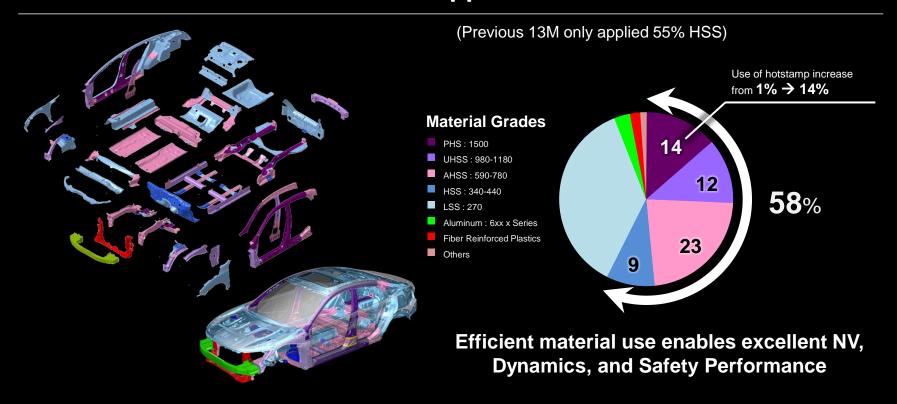
Variable Wheelbase: Front floor can be easily extended for longer wheelbase vehicles.





Body Structure Material Grades

16M Civic has a HSS Application Ratio of 58%







Inner Set Welding | Advanced Manufacturing

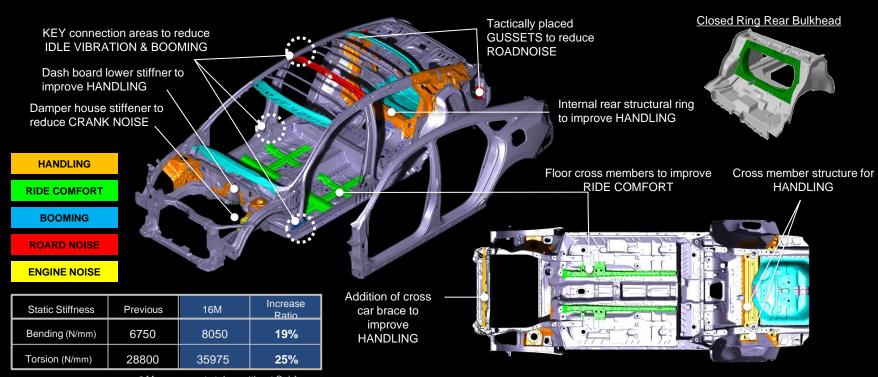






Ride / Handling / NV Performance

16M Civic increases body TORSION by 25% allowing for TOP IN CLASS HANDLING.



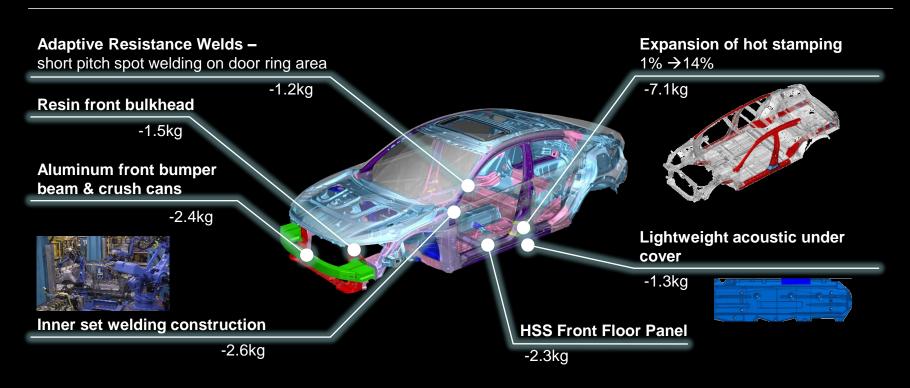






Weight Reduction Sources

Improved body construction and technology allows size and stiffness increase at reduced weight







Weight Reduction Sources

Hot Stamping and 980MPa materials used in B-PIr improve safety at reduced weight



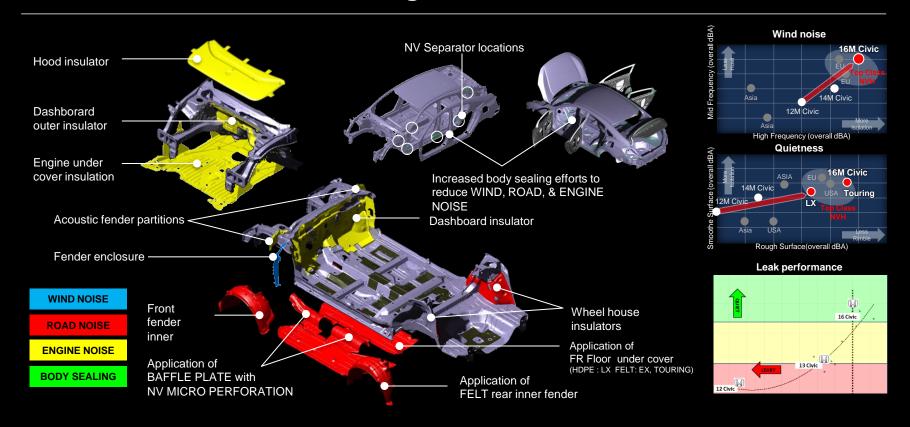


LSS: 270



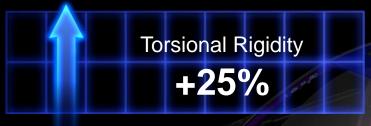
Body NVH Treatment

16M Civic achieves TOP IN CLASS NV PERFORMANCE at all grades levels.





Dynamic Performance | Body Rigidity



Quicker Handling Response

Body-in-White Weight
- 68 lbs

More Nimble Performance



Remarkably Hushed Interior



Better Fuel Economy





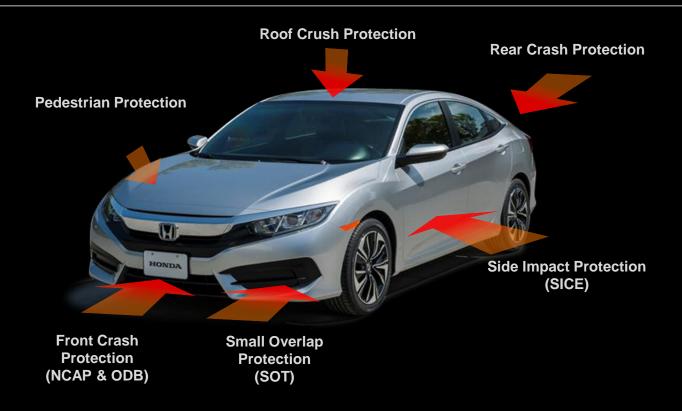
CRASHWORTHINESS DEVELOPMENT





Presentation Outline

Complete Vehicle Safety Design



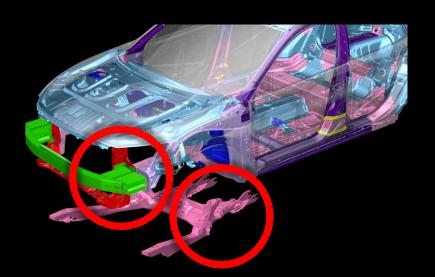


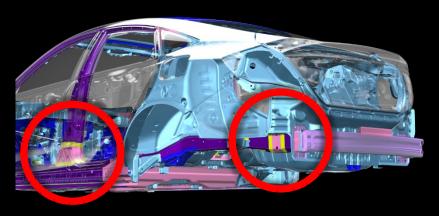


Vehicle Safety Features & Structure

Key Design features provide the highest level of crash performance, while maintaining styling, weight, and technology targets.

- Mullti-Crush Can, High Load Front Bumper System
- High Load Capacity Sub Frame with Link Bracket
- Tailor Tempered Hotstamp Center Pillar
- Tailor Tempered Hotstamp One Piece Rear Frame

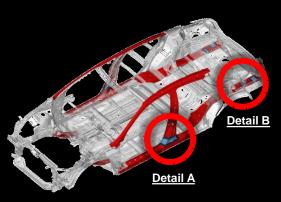




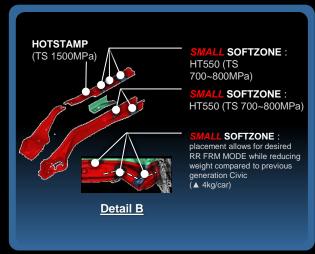


Vehicle Safety Features & Structure

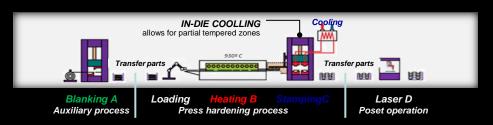
16M Civic utilizes Gestamp IN-DIE SOFTZONE technology to achieve tailor tempered area within a single part.







PROCESS EQUIPMENT (direct PHD process)







New Global Model Introduction: The All-New 2016 Honda Civic

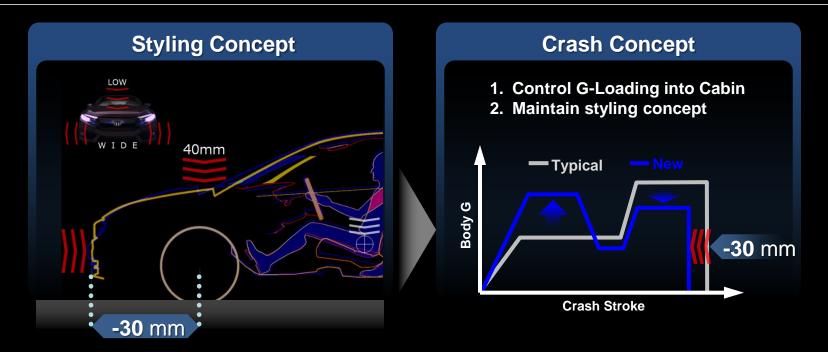
VEHICLE PLATFORM DEVELOPMENT FOR FRONTAL CRASHWORTHINESS





US NCAP | Concept

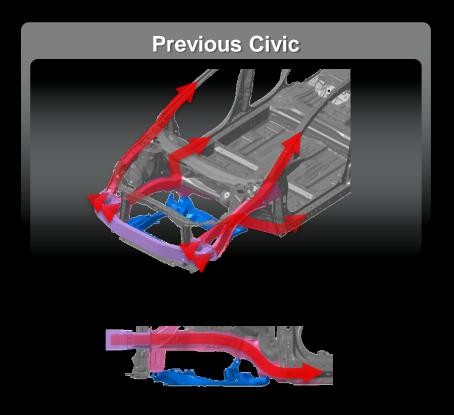
Maintaining the styling concept resulted in a reduction of 30mm of crash stroke. In order to achieve this, a new crash concept was developed.

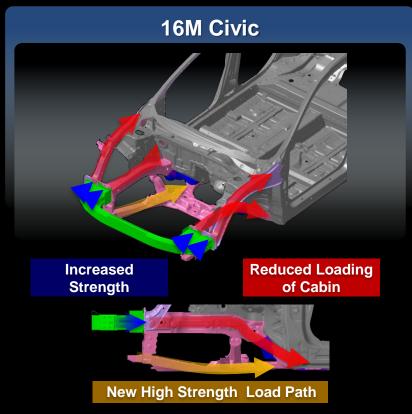






US NCAP | Construction









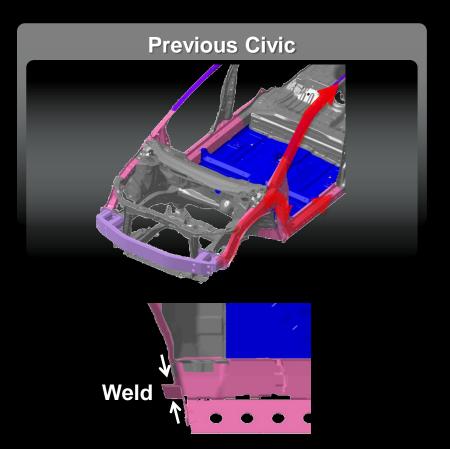
US NCAP | Video

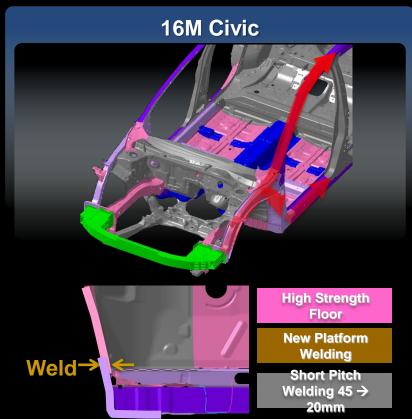






IIHS SOT | Construction

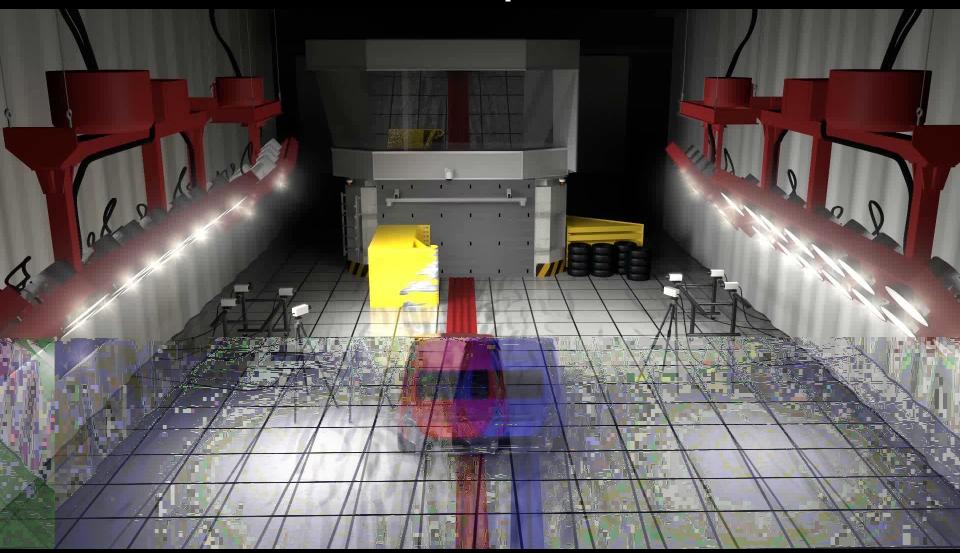








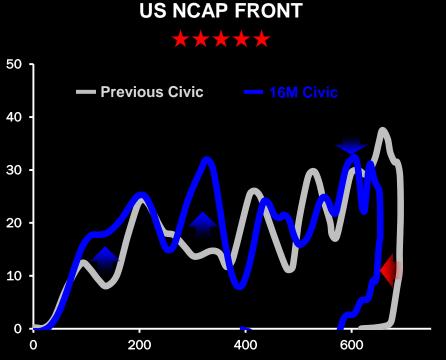
IIHS SOT | Video



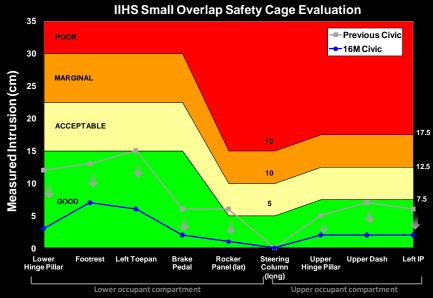




Front Crash | Achievement



IIHS SOT+MOT GOOD





New Global Model Introduction: The All-New 2016 Honda Civic

VEHICLE DEVELOPMENT FOR SIDE CRASHWORTHINESS

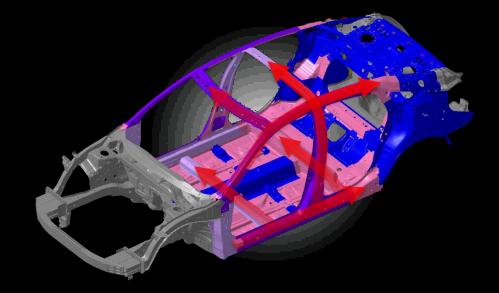




Side Crash | Concept

Side crash concept is to maximize loading of large high strength cross car sections to minimize intrusion and occupant injury.

- 1. Minimize Intrusion
- 2. Passenger Protection





Side Crash | Construction







Side Crash | Achievement

US NCAP MDB



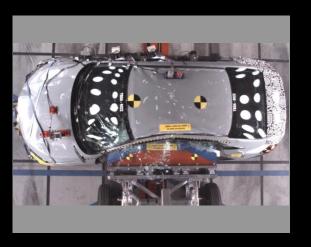


US NCAP POLE





IIHS SICE GOOD



Side Crash | Video







New Global Model Introduction: The All-New 2016 Honda Civic

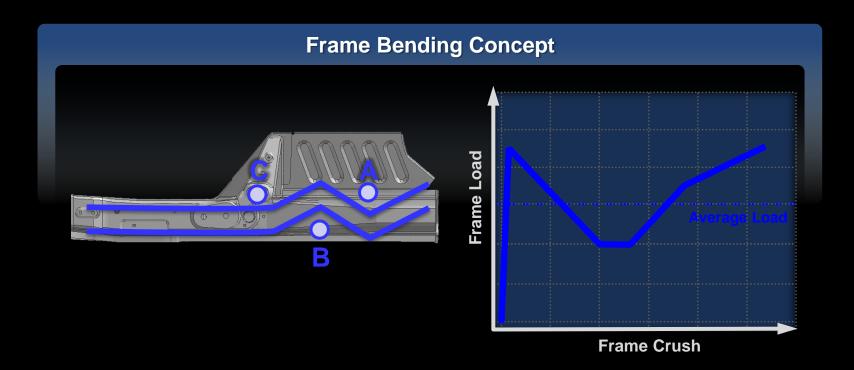
VEHICLE PLATFORM DEVELOPMENT FOR REAR CRASHWORTHINESS





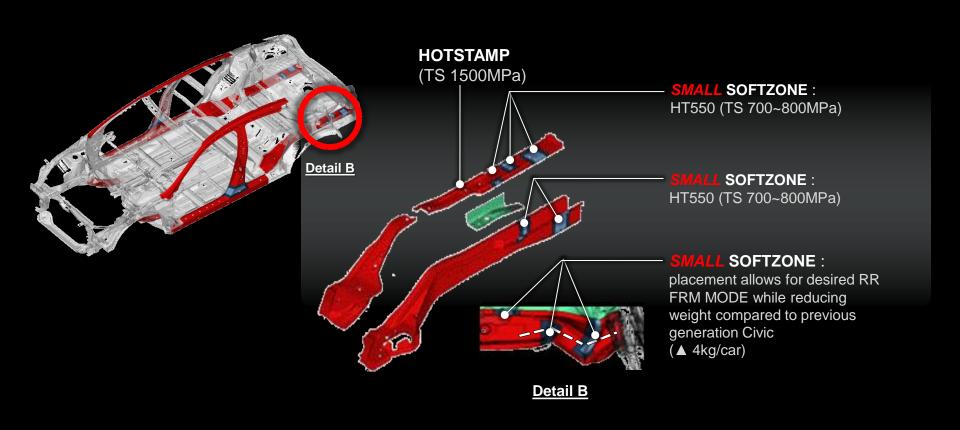
Platform Concept | Rear Crash

Rear crash concept was developed to maximize efficiency of the rear frame and minimize intrusion towards the fuel system.





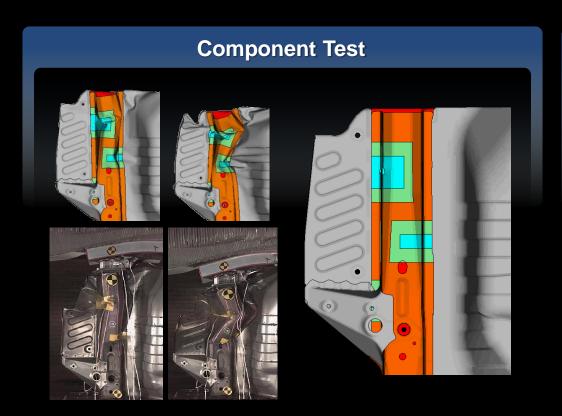
Rear Crash | Construction

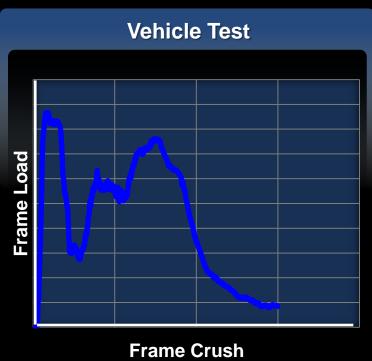






Rear Crash | Results





Rear Crash | Video







Honda Sensing™ | Advanced Safety & Driver Assist Technology

ACC with **Low Speed Follow**

Honda Sensing™

Lane Keeping Assist System

Road Departure Mitigation

CMBS (Vehicles & Pedestrians)

Forward Collision Warning

Lane Departure Warning











All New Chassis Body engines
How do we create the best
C-Segment vehicle in the world?

Create an "epic sivic"

2016 North American Car of the Year





