



Special Feature Raising the Curtain on Subaru's Next Generation

Pursuing World-class Safety Performance: the New Impreza!

The all-new Impreza is positioned as the first of Subaru's next-generation strategic vehicles in our Prominence 2020 mid-term management vision.

As it is the first vehicle to be built on our new platform and the first model to use the new design concept, we took on a variety of challenges.

The result was another evolution in enjoyment and peace of mind, the brand values that we offer to customers.

Quite simply, the new Impreza is not only the model that raises the curtain on Subaru's next generation, but also Subaru's new standard.



World-class All-around Safety Performance

Primary Safety

-Accident prevention as the basic design philosophy-

- Excellent visibility and a comfortable driving space

Active Safety

- The Subaru Global Platform ensures a superior driving experience
- Active Torque Vectoring enhances danger avoidance capabilities*

Quality That Far Surpasses Its Class

Outstanding Dynamic Quality

- As well as being the first vehicle to use the Subaru Global Platform, the new Impreza succeeds in combining superb performance with comfort, thanks to analysis technology that quantifies feelings

Static Quality beyond Its Class

- As the embodiment of enjoyment and peace of mind, the DYNAMIC x SOLID design achieves a quality feel that is captivating in every way: appealing to look at, to ride in, and to drive.

Preventive Safety

- EyeSight (ver. 3), the latest evolution of EyeSight, fitted as standard on all vehicles*
- Fitted with Steering Responsive Headlights and High Beam Assist*

Passive Safety

- The Subaru Global Platform delivers outstanding collision impact absorption capability
- Pedestrian protection airbag fitted as standard*

* Specifications may vary for individual markets

Winner of Car of the Year Japan 2016-2017



As well as the higher-quality driving performance offered by the newly developed Subaru Global Platform, the all-new Impreza was recognized for its affordable price bracket and its world-class safety performance, with a host of safety features fitted as standard. These include a pedestrian protection airbag – the first in a Japanese-produced vehicle – and the EyeSight driver assist system.

The All-new Impreza's Chief Engineer Talks about Its Appeal

Delivering the utmost enjoyment and peace of mind for driver and passengers alike was our goal

Kazuhiro Abe
Senior General Manager
Product & Portfolio Planning Division



Achieving a transformative evolution in enjoyment and peace of mind to meet our customers' expectations

We want to better meet our customers' expectations and ensure that even more customers can experience the enjoyment of life with an Impreza. That was the powerful wish that drove us from the moment we started developing the all-new Impreza and it still inspires us today. We asked ourselves what kind of car we would need to end up with to make that wish come true. The search for an answer to that question became the first stage in the car's development. Rather than merely seeking improvements, we decided to pursue a transformative evolution in the values that Subaru offers to customers: enjoyment and peace of mind. We would create a product that enabled everyone to clearly discern these values and recognize them as the car's fundamental appeal. The answer that we came up with and which became the development concept itself was this: "Delivering the utmost enjoyment and peace of mind for driver and passengers alike."

Going beyond a full model change to take on the challenge of building the infrastructure for the next generation of Subaru vehicles

Achieving a transformative evolution in safety performance and driving enjoyment – strengths of Subaru as a whole – was the essential requirement for translating this concept into reality. This meant that we had to go beyond a full model change and rethink the platform from scratch; to put it another way, we had to take on the huge challenge of developing the infrastructure for Subaru’s next generation. I thought that we could only create the infrastructure for the next generation of Subaru vehicles if we achieved a substantial evolution, expressed as “world-class all-around safety performance” and “quality that far surpasses its class.” If we did not succeed with this car, as the first of the next generation, there was no way that we could succeed with the cars that followed. Consequently, every member of the project team felt a tremendous sense of responsibility and pressure in embarking on development.

Over the 15 years or so since the launch of the fourth-generation Legacy, for which the current platform was developed, our engineers have built up various skills and know-how crucial to improving safety performance and driving enjoyment. We poured all of this into the newly developed platform in one go. As well as developing the all-new Impreza, this would lead to the construction of the infrastructure that Subaru needs to continue to deliver the utmost enjoyment and peace of mind globally. With this aspiration in mind, we chose the name “Subaru Global Platform” for the newly developed platform.

The development of this platform has not simply enabled us to significantly enhance dynamic quality and all-around safety performance throughout the Subaru range; it also achieves greater efficiency in development and flexibility in production processes, designed with a view to producing not only gasoline engine vehicles, but also hybrids, plug-in hybrids (PHEVs), and electric vehicles (EVs).

“World-class All-around Safety Performance”

The most critical theme in delivering the utmost enjoyment and peace of mind is safety performance. Based on the Subaru concept of safety, we took an uncompromising approach to raising all aspects of safety performance – Primary Safety, Active Safety, Preventive Safety, and Passive Safety – to a level unmatched elsewhere. In the realm of Primary Safety, we minimized blind spots to ensure excellent visibility and created a fatigue-resistant driving space, further enhancing peace of mind while driving. In terms of Active Safety, the unsurpassed driving experience provided by the Subaru Global Platform enabled us to deliver outstanding danger avoidance capability that puts the all-new Impreza in the top of its class. In the realm of Preventive Safety, the all-new Impreza offers the peace of mind that comes from driving a car awarded the top ratings in preventive safety performance assessments, with the EyeSight (ver. 3) driver assist system fitted as standard to all grades*¹.



Crash test using a car fitted with the first pedestrian protection airbag in a Japanese-produced vehicle

Finally, in the arena of Passive Safety, the Subaru Global Platform delivers outstanding collision impact absorption capability. In addition, we made the all-new Impreza the first Japanese vehicle to be fitted with a pedestrian protection airbag^{※1}, which minimizes injury to pedestrians.

Offering even greater safety not only for the driver and passengers, but also for people outside the car, the all-new Impreza was awarded the Collision Safety Performance Assessment Grand Prix for achieving the highest score ever in the collision safety performance assessment conducted as part of the FY2017 Japan New Car Assessment Program run by the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) and the National Agency for Automotive Safety and Victim's Aid (NASVA). In the US market, the all-new Impreza earned the "Top Safety Pick (TSP) +" award, the top rating in the IIHS 2017 safety ratings. I believe that this result only came to fruition thanks to the project team's tireless efforts to achieve performance worthy of the description "World-class All-around Safety Performance."

※1 Specifications may vary for individual markets



Receipt of the 2016-2017 Japan New Car Assessment Program (JNCAP) Grand Prix Award

This prize is awarded to vehicles with a five-star JNCAP collision safety performance assessment rating that have achieved the highest-ever score for collision safety. The all-new Impreza earned the highest-ever scores in all three categories: occupants protection, pedestrian protection, and passenger seat belt reminders (PSBR).



Receipt of the 2017 Top Safety Pick+ Award, the Highest Award of the Insurance Institute for Highway Safety

The all-new Impreza achieved the top rating (Good) in all crashworthiness tests and the top rating (Superior) in the front crash prevention test. In addition, it earned the top rating (Good) in the newly introduced headlight rating and the top rating (Good+) in the child seat anchors ease of use rating, and was recognized as the only small car to earn the top rating on all the criteria assessed by the IIHS^{※2}

※2 Insurance Institute for Highway Safety (US nonprofit organization established by the insurance industry)

A Moving Experience: Quality That Far Surpasses Its Class

The second key theme of the all-new Impreza was elevating the car into the realm of something that moves people emotionally, defying the conventional size-based boundaries between vehicle classes, with all aspects of its sensory qualities that come from “look and feel,” and “drive and ride.” For the dynamic qualities of “drive and ride,” development focused on the goal of making a car that delivers enjoyment and peace of mind for everyone riding in it, while feeling pleasant to drive. With body and suspension rigidity up to 200% higher than the existing range, we took the dynamic quality delivered by the Subaru Global Platform to the next level of a moving experience. In terms of the static qualities of “look and feel,” Subaru’s DYNAMIC x SOLID design philosophy – the embodiment of enjoyment and peace of mind – was adopted across the board for the first time in a production vehicle and blended with premium quality elements that defy conventional class boundaries. We have created an exterior and interior that will capture people’s hearts and provide them with a profound sense of satisfaction. As quality elements that far surpass its class, the dynamic and static qualities of the all-new Impreza are as crucial a part of its appeal as its safety performance.

Besides world-class all-around safety performance and quality that far surpasses its class, the key aspects of the all-new Impreza’s allure are its practicality, designed to enrich people’s active everyday lives; its premium interior feel and up-to-the-minute infotainment system; its comfortable cabin; and its fuel efficiency, which provides a tangible sense of its superiority in daily use.

For all of us involved in its development, our dream is to see the all-new Impreza become a key partner in the lives of our customers. Feeling happier and more enriched, our customers suddenly realize that this car has become an integral part of their lifestyle.

Next-generation Technology Research and Development

The Subaru Global Platform Looks Ahead to the Safety Standards of the Future

Leading a further evolution in collision safety performance with a 40% increase in impact energy absorption efficiency.

One of our key objectives in completely revamping the platform – the basic structure of the car – is a further evolution in world-class safety performance, which is the pre-eminent feature of Subaru vehicles. With the new platform, we pursued an evolution in the undercarriage by substantially increasing the rigidity of the body and chassis, bringing the center of gravity even lower, and rethinking the suspension design. As a result, in our own tests, danger avoidance capability (the speed at which dangers can be safely avoided by quickly turning the steering wheel in an emergency) increased from 84.5 km/h in the existing model to 92.5 km/h in the next-generation model built on the new platform, reaching a level comparable with high-end sports models.

Dramatically increased driving stability provides world-class danger avoidance capability.

In addition to increased body and chassis rigidity, the new platform achieves a dramatic increase in body strength, due to an optimized frame structure, multiplexed load transmission paths, and the use of high-strength materials. This all adds up to an increase of about 40% in the efficiency of impact energy absorption.

Looking ahead to the next ten years, we are working on a design that will bring further performance improvements through the use of even stronger materials, so that our vehicles can absorb more severe collisions efficiently in the future.



Subaru's Perspective on Environmental Technology

We will meet each region's regulations through a combination of significant efficiency improvements in the internal combustion engine and the use of electric motors.

Aiming to increase fuel efficiency while reducing CO₂ emissions, we are working on further improvements to the current direct-injection engine, while also undertaking development with a view to launching a new design of downsizing turbo engine.

Looking at our mainstay US market, the Zero Emission Vehicle (ZEV) Regulation will be extended to intermediate volume manufacturers – including Subaru – in California and a number of other states in 2018. As such, we are moving forward with research and development so that we can time the launch of our PHEVs to coincide with this and subsequently launch our EVs there in 2021.

Fundamentally, our approach is to add PHEVs and EVs that leverage the individuality and handling features of the Subaru brand's existing models, rather than developing dedicated PHEV or EV models. This will enable us to keep offering cars equipped with Subaru's characteristic enjoyment and peace of mind in the green vehicle era.

Subaru's Perspective on Self-driving Technology

Rather than making cars drive instead of people, we aim to reduce traffic accidents to zero by evolving our EyeSight driver assist system.

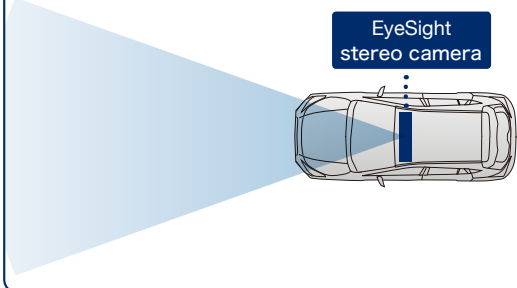
In 2017, we will introduce an updated version of EyeSight that features the new Touring Assist function.

This extends the minimum speed at which EyeSight's Lane Keep Assist function operates from 60 km/h to 0 km/h. It also adds automated steering that follows the preceding vehicle in the same lane, teamed with Adaptive Cruise Control to assist drivers with automated control of acceleration, braking, and steering on expressways, greatly reducing driver burden. Our original stereo camera technology simultaneously uses information on lane markings and preceding vehicles to offer consistent operation in a wide range of real-world settings. In 2020, we plan to add radar and digital maps to EyeSight, commercializing an advanced driver assist system that further expands the range of situations in which automated driving can be used to include lane changing and steering around curves.

By prioritizing the development of driver assist functions that target situations in which such accidents are most likely to occur, we will continue to enhance the accident avoidance capability of Subaru vehicles going forward.

2017: Touring Assist function added

- Extends Lane Keep Assist operation to wider speed range
(Previously 60 km/h or more ⇒ Starting from 0 km/h)
- Automated control of acceleration, braking, and steering at any speed range, greatly reducing driver burden



2020: Further evolution

- Expands the range of situations in which automated driving can be used to include lane changing and steering around curves, reducing driver burden still further (Achieved with the minimum possible number of extra devices)

