During a head-on collision between a compact and full-sized vehicle, collision impact from the full-sized vehicle is absorbed and dispersed throughout to decrease deformation to the compact vehicle. The strengthened cabin of the compact vehicle suppresses the impact from a full-sized vehicle: Compact vehicle cabin > Full-sized vehicle front end.

As the absorption of the energy from the collision is dispersed, the front end of the full-sized vehicle becomes deformed even before the deformation of the compact vehicle’s cabin takes place.

Toyota has advanced to a high-strength cabin by incorporating more strength and ability to balance mass in the body structure of compact vehicles. By reinforcing the height of the bumper, it serves as an improvement to better mesh in a collision, preventing the bumper to cave and dive underneath the colliding bumper.

In response to the vehicle height difference
In the event of a collision, safety is improved despite the measured difference in size of the opposing bumper, as Toyota bumpers are reinforced and strengthened with the same grade as the larger bumpers.