## Technology Indicators





## **Technology indicators for light duty vehicles**

Technology indicators that industry is likely to achieve in a mass-market competitive environment.

### Standard indicators

Incremental changes in technology with a light weighting focus

|  |                       |   | 2020     | 2025   | 2035   |
|--|-----------------------|---|----------|--------|--------|
|  | Light Duty<br>Vehicle | Conventional<br>vehicle weight<br>reduction (%) | Baseline | 5-10%  | 20-25% |
|  |                       | xEV vehicle weight reduction (%)                | Baseline | 10-15% | 20-30% |

## **High ambition indicators**

Fundamental changes in vehicle architecture and new technology adoption

|            |   | 2020     | 2025   | 2035   |
|------------|---|----------|--------|--------|
| Light Duty | Conventional<br>vehicle weight<br>reduction (%) | Baseline | 10-15% | 30-35% |
| Vehicle    | xEV vehicle weight reduction (%)                | Baseline | 15-20% | 30-40% |

#### Notes:

- Conventional vehicles refer to ICE architecture vehicles
- xEV refers all variants of electrified powertrains, but primarily battery electric
- The % weight reductions are from vehicle masses in 2020
- · Increasingly stringent decarbonisation targets have accelerated the light weighting forecasts for conventional vehicles
- Battery pack designs, systems integration and advancing electrified drivelines are seeing increased potential for weight reductions in the next 5-10 years

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## Roadmap 2020

# **Lightweight Vehicle and Powertrain Structures**

## Technology Roadmap

Technology indicators for 2020-2035 can be seen on page 1





This roadmap represents a snapshot-in-time view of the global automotive industry propulsion technology forecast for mass market adoption. Specific application-tailored technologies will vary from region to region.



Dark bar:

Technology is in a mass market application. Significant innovation is expected in this time frame



Transition:

Transitions do not mean a phase out from market but a change of R&D emphasis



Dotted line bar:

Market Mature – technology has reached maturity. Likely to remain in mass market until it fades out where it's superseded

