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## The CMS Tracker Upgrade for the High Luminosity LHC

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The LHC machine is planning an upgrade program which will smoothly bring the luminosity to about  $5 - 7.5 \times 10^{34} \text{ cm}^{-2} \text{ s}^{-1}$  in 2028, to possibly reach an integrated luminosity of  $3000 - 4500 \text{ fb}^{-1}$  by the end of 2039. This High Luminosity LHC scenario, HL-LHC, will require an upgrade program of the LHC detectors known as Phase-2 upgrade. The current CMS Outer Tracker, already running beyond design specifications, and CMS Phase-1 Pixel Detector will not be able to survive HL-LHC radiation conditions and CMS will need completely new devices, in order to fully exploit the highly demanding conditions and the delivered luminosity. The new Outer Tracker should have also trigger capabilities. To achieve such goals, R\&D activities have explored options for both the Outer Tracker and for the Inner Tracker. The solutions developed will allow to include tracking information in the first level trigger stage. The design choices for the Tracker upgrades are discussed along with some highlights on technological approaches and R\&D activities.

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