

India's first indigenous quadruped (four-legged) robot

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In news— As part of the Atmanirbhar Bharat initiative, Hyderabad-based Svaya Robotics has developed India's first indigenous quadruped (four-legged) robot and exoskeleton for the defence sector.

About quadruped (four-legged) robot-

- **Quadruped robots are four-legged robots which can walk or run in uneven and rough terrains.**
- For example, in Leh, where soldiers have to navigate through unfavourable conditions, these robots can be used instead.
- These are also **useful in recognising terrorist activities** and other unsafe locations and capturing the visuals which can be monitored from any part of the country.
- He said the robots **can carry 25 kg in payload** and walk along with the soldier, and added that these robots can be used in nuclear plants and other industries as well.
- These active exoskeletons, when worn by soldiers, can carry such heavy loads without expending much effort. Even if they are carrying 25 kg, soldiers feel as if they are carrying six or seven kg, thus they are not fatigued easily.
- Both are dual-use robots and have multiple use cases in industry and healthcare as well.
- These robots can be enabled even in the areas where the Border Security Force (BSF), Central Reserve Police Force and other paramilitary and military forces operate.
- **The indigenous robots and wearable exoskeletons were developed in collaboration with the DRDO Labs, Research**

and Development Establishment (R&DE), Pune, and the Defence Bioengineering and Electromedical Laboratory (DEBEL), Bengaluru, as technology demonstrators with their design inputs.

- **India currently imports these robots from the US and Switzerland** to help strengthen the country's defence capabilities.