



India's First Fully Automated Metro

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Why in News

Recently, the Prime Minister has inaugurated the **country's first fully automated Metro**, (Driverless Metro) on **Delhi Metro's Magenta Line**.

He also extended the **fully operational National Common Mobility Card** (NCMC) to the Airport Express Line of the **Delhi Metro Rail Corporation** (DMRC).

Key Points

- **Driverless Metro:**
 - With this achievement, DMRC has entered the **elite league of 7% of the world's Metro networks** where such a facility is available.
 - In **2014, only five cities had Metro rail** and **currently, it is present in 18 cities** and the number of Metro users has also increased manifold.
 - The driverless trains will be **fully automated, eliminating the possibility of human error**.
 - The technology has **different levels or Grades of Automation (GoA)**:
 - In GoA 1, trains are run by one driver.
 - In GoA 2 and GoA 3, the role of the driver is reduced to operating doors and for taking over in case of emergencies and the starting and halting of trains is automated.
 - In GoA 4, trains are set on a completely unattended operations mode.

- **Significance:**
 - It uses a **braking system** in which **50% of the energy goes back into the grid** when the brakes are applied, which will save a considerable amount of energy making it an **energy-efficient system**.
 - In a **boost to Make in India**, various big companies are involved in the manufacturing of Metro coaches and dozens in the manufacture of Metro components.
 - **130 MW of solar power is currently being used** in the operations of Metro rail, which the government **intends to increase to 600 MW**.
 - The **Regional Rapid Transit System (RRTS)** and **Metro Lite models** will **reduce the distance** between major cities and within them.
- **National Common Mobility Card:**
 - It will give **access to all modes of transportation** and will do away with commuters having to wait in long queues for tokens.
 - It **allows users to pay for** travel, toll charges and retail shopping, and permits them to withdraw money at the same time.
 - It will **enable anyone carrying a RuPay-Debit Card issued in any part of the country to travel on the route**.
 - This will not only help provide a common platform for people but will also allow better research data. **Researchers will be able to better assess the travelling patterns of people** and accordingly suggest the best plan for development
- **Other Developmental Works in Delhi:**
 - **Incentivizing electric vehicles (EVs) by giving tax rebates.**
 - The old infrastructure of the capital is being **transformed into environment-friendly infrastructure based on modern technology**.
 - **Provision of better living conditions** to slum dwellers through **regularization of hundreds of colonies**.
 - **Opening up of new tourist destinations** and generation of employment.
 - Work for the new Parliament building under the **Central Vista Redevelopment Project** will not only **give employment to thousands** of people from Delhi but will also **change the face of the city**.

Source: TH