

# Smart highways are the road to the future

#### What is the issue?

 $n\n$ 

Smart highways will make road transport safe, smart and as a comfortable experience.

 $n\n$ 

### What are smart highways?

 $n\n$ 

\n

- 'Smart roads' or 'Smart highways' will use digital sensors to acquire data pertaining to landslides, accidents, traffic jams and weather conditions.
- It will activate warning systems in time and enabling active LED displays on roads and highways.

۱n

- Which can monitor traffic with an array of intelligent transport systems and is also able to assist motorists in distress.
- The Eastern Peripheral Expressway is India's first smart highway with highway traffic management systems (HTMS) and video detection systems (VIDS) to relay the information collected.

 $n\n$ 

# What are the thematic approaches of smart highways?

 $n\n$ 

\n

- Communication Smart-road-to-vehicle communication will serve as the foundation for safe, connected, autonomous vehicles of the future.  $\$
- Cameras and sensors will allow digital signage allowing drivers to vary their speed accordingly or take alternative routes.
- Convenience The idea of smart lighting solutions for roadways relies on

piezoelectric crystals placed below the surface of asphalt used on roadways.  $\$ 

• The electrical energy harvested is sufficient to power smart lighting poles on highways, freeways and rural roads, and are extremely helpful in foggy or heavy monsoon-prone areas.

\n

- **Safety** In a quest to improve safety on highly risky mountain roads and highways in India, 'Smart Life' poles were developed.
- The system uses these poles to communicate with each other and exchange data on incoming traffic just before sharp turns and hairpin bends.
- $\bullet$  These poles gauge the speed of vehicles and alert drivers of approaching traffic by sounding a horn.  $\mbox{\sc horn}$

 $n\$ 

### What are the advantages of smart highways?

 $n\n$ 

\n

• Smart highways are a crucial link in improving road transportation landscape in the country.

\n

- It is a splendid solution for less-travelled highways, providing night visibility on demand and proving the best for road safety.  $\n$
- It promises to fight against congestion and carbon emissions and can serve as viable sources of renewable energy.
- It can yield significant improvements in the driving experience.

 $n\n$ 

 $n\n$ 

#### **Source: Business Line**

 $n\n$ 

