CASE STUDY

Enhancing Efficiency in Smart Infrastructure Management for National Highway Development

Client Profile

An Asian central authority overseeing national highway development and management aimed to implement smart infrastructure governance solutions.

CHALLENGES

The client sought to implement sustainable, intelligent urban street lighting solutions to overcome the limitations of traditional systems, including:

- Excessive energy consumption and a significant carbon footprint
- Lack of control and flexibility, requiring constant manual intervention
- High maintenance expenses and prolonged downtime



iSSL addressed these with IoT-enabled connectivity and predictive maintenance, achieving **energy savings, increased uptime,** and **enhanced citizen safety.**

SOLUTIONS

ITHENA implemented the **Smart Street Light Solution (iSSL)** to foster a smart community.

1. **Design Mapping**
   Optimized street light layout considering road configurations, traffic patterns, and visibility needs
2. **Expert Consultancy**
   Delivered insights on energy-efficient technologies, including dimming controls, smart mesh connectivity, remote scheduling, and management tools
3. **Smart Connectivity**
   Integrated IoT for remote monitoring, diagnostics with alerts, predictive maintenance, and AR-enabled service excellence
4. **Smart Application**
   A total of 210 poles have been installed to ensure comprehensive coverage.

BENEFITS

37% **Decrease** in energy consumption

35% **Increase** in lamp uptime

23% **Decrease** in Carbon Footprint

70% **Enhancement** in citizen safety & experience

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