

Technology Driving Smart Cities

1. Waste Management Solutions
2. Intelligent Energy Systems
3. Smart Monitoring
4. Aadhaar use in Smart Solutions
5. CSC Integration in Smart Cities

Waste Management

River Thames



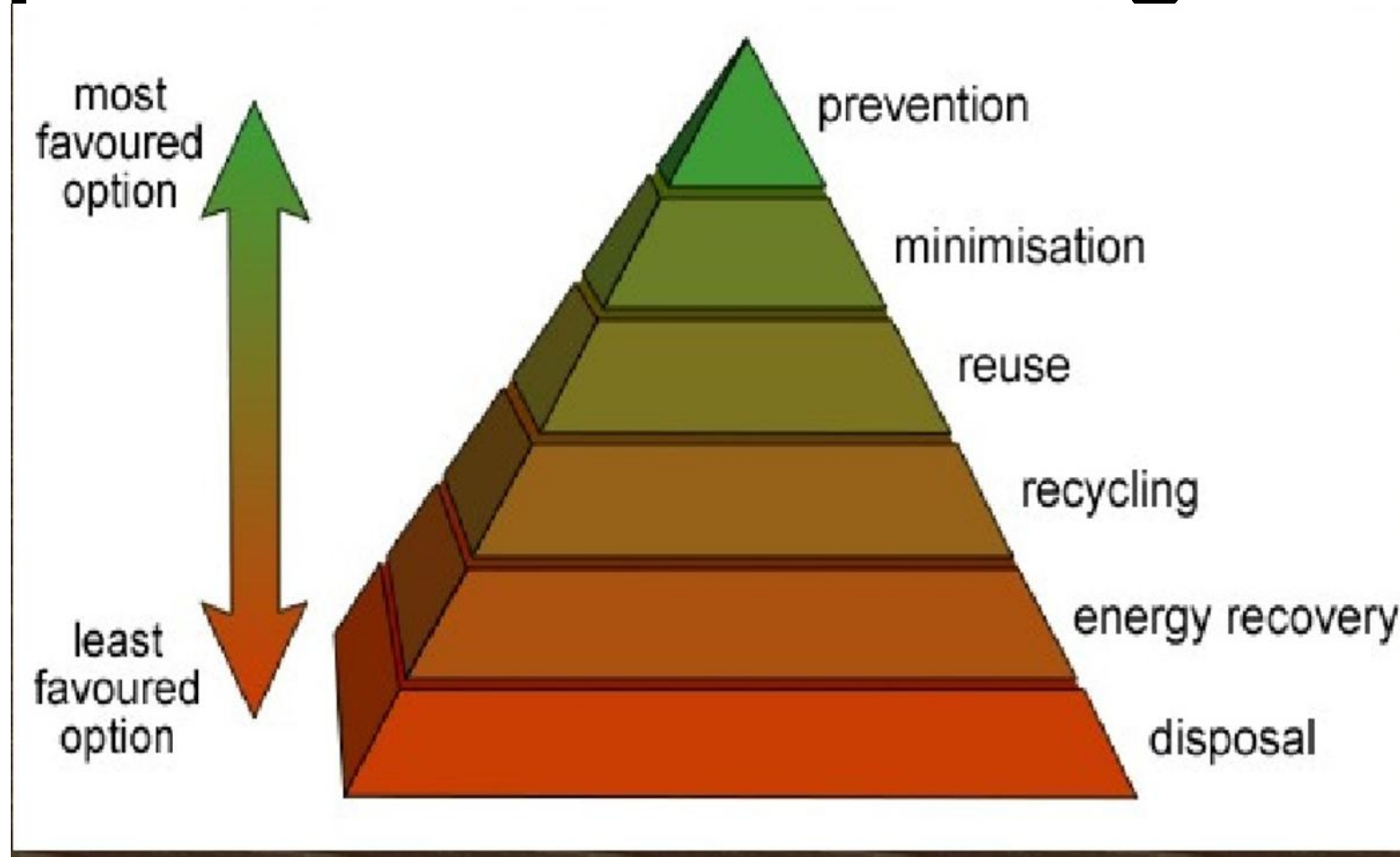
Fifty years after being declared biologically dead, the Thames has been hailed as an environmental success story.

But how has the iconic river been transformed?

Han River (South Korea)

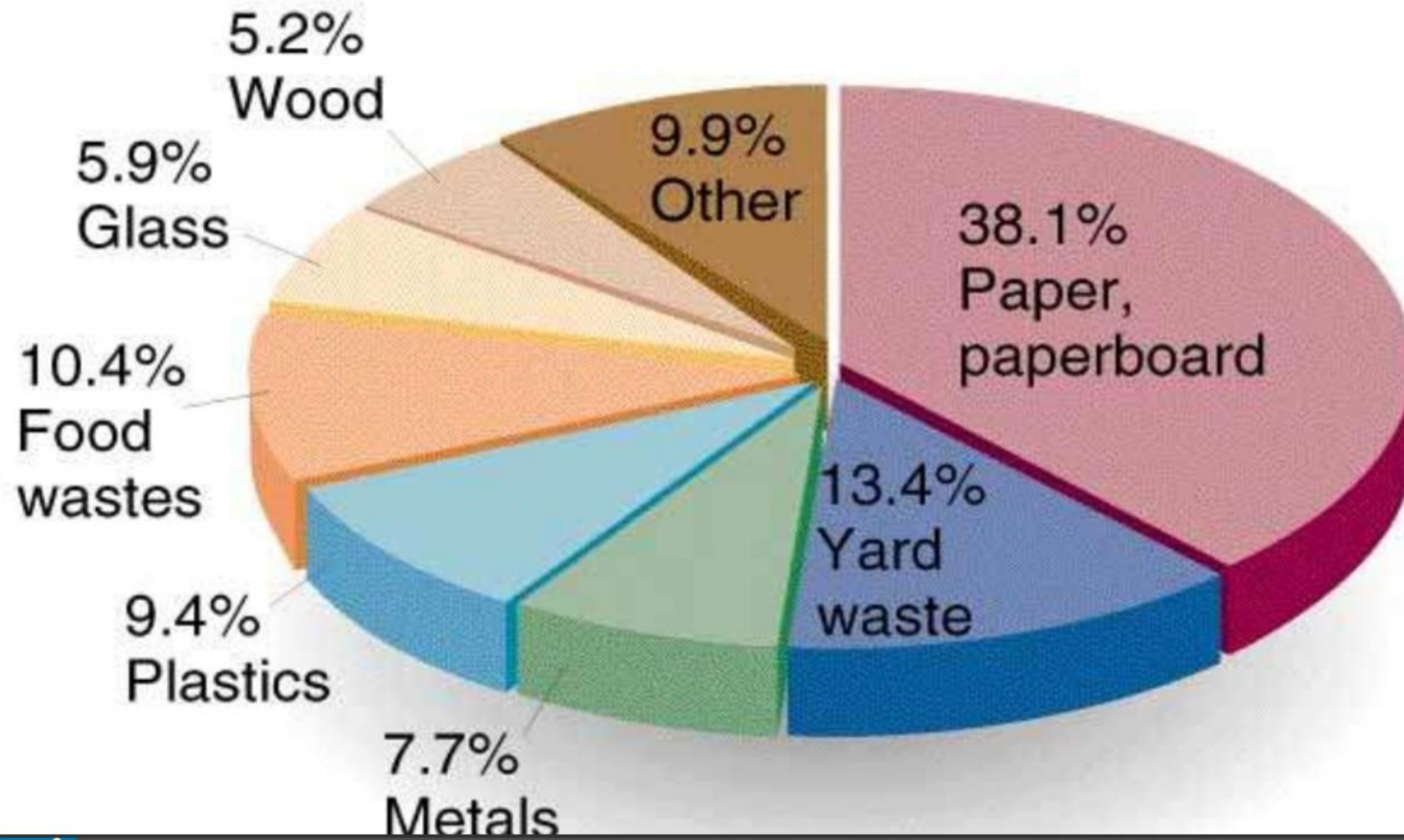


Options for Waste Management



Treat the Cause, Not the Symptom

Different Types of Waste



Features of Smart Waste management System

SENSING

Measure depth with ultrasonic sensor,
Geo location for phones

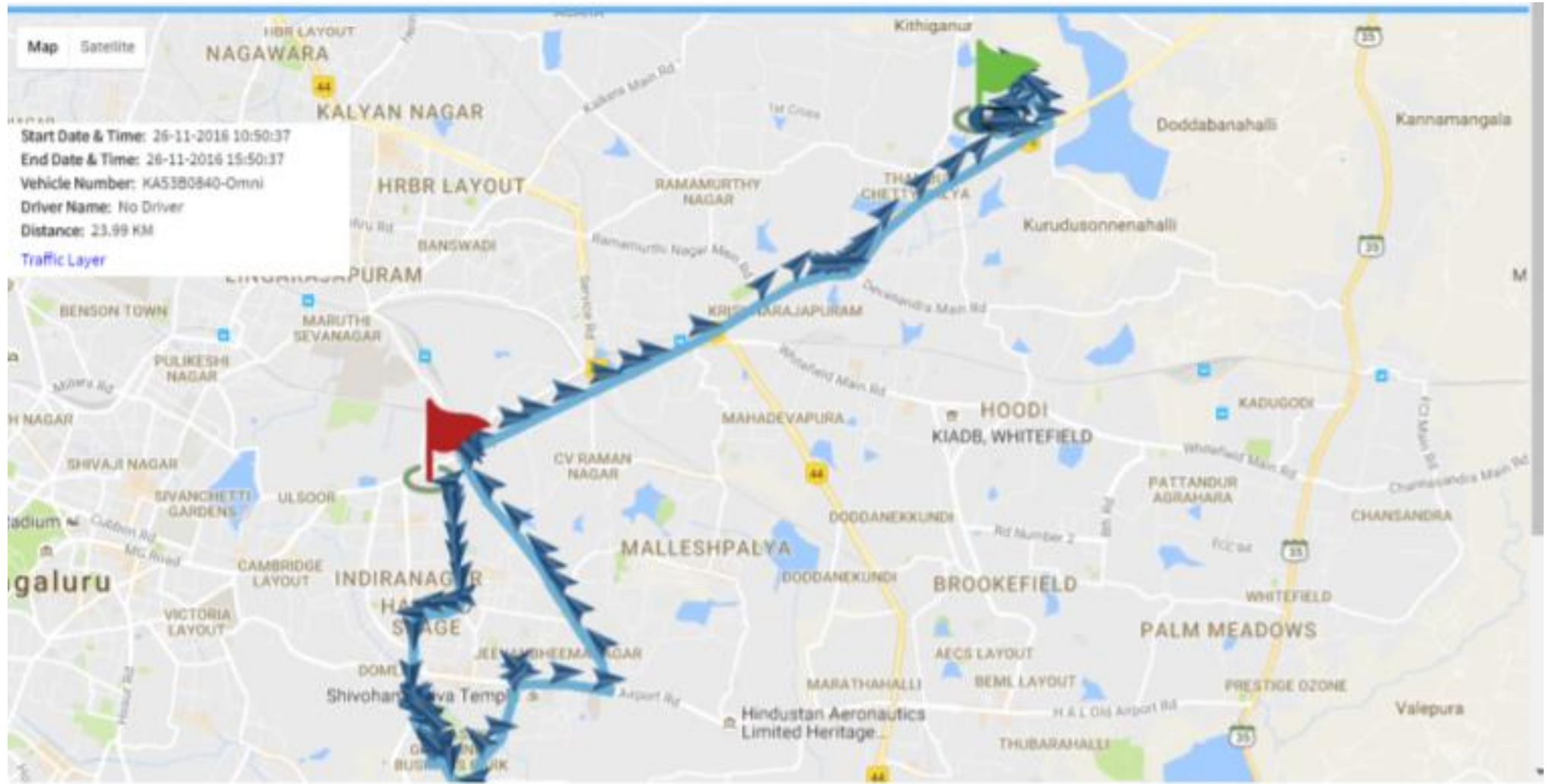
MONITORING

Use data to optimize collection operations, track assets and cost analysis using mobile data.

OPTIMIZATION

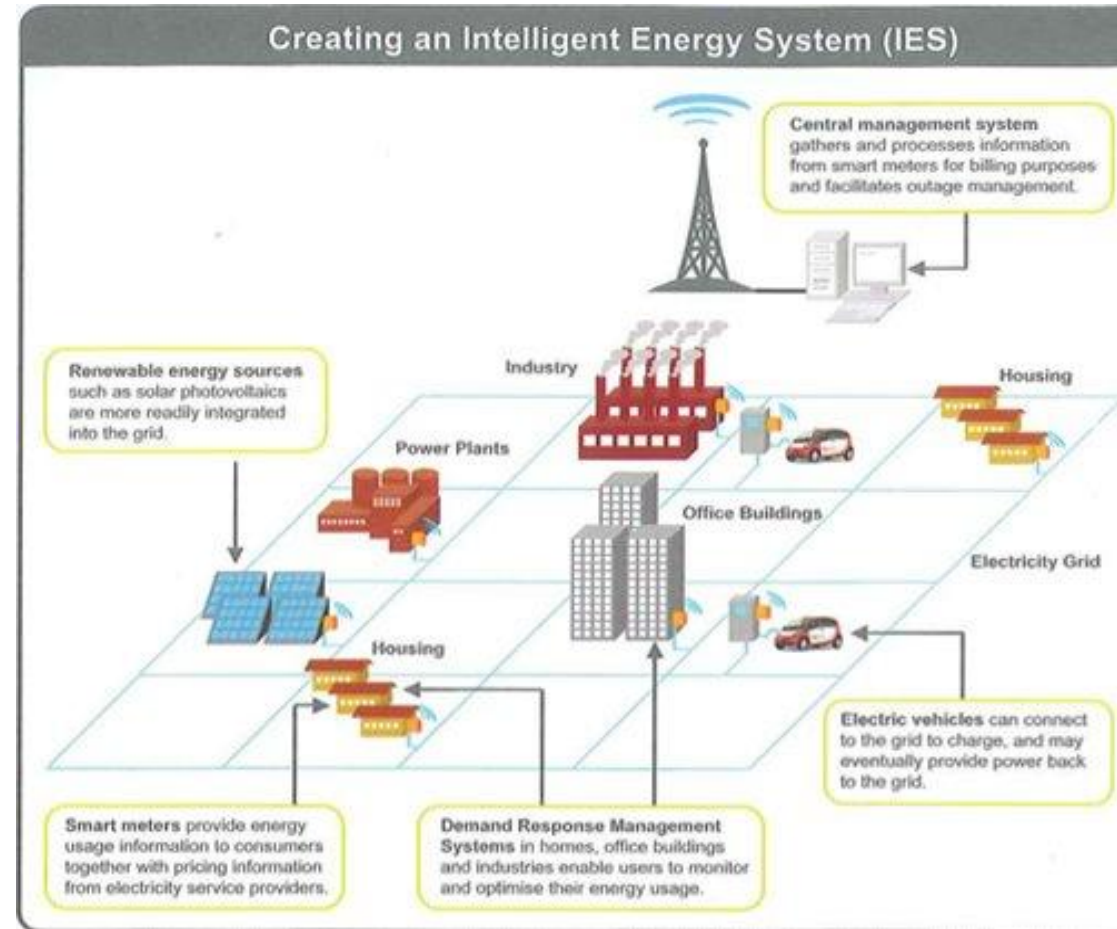
Be able to generate the smartest routes to go based on traffic, bin contents, etc.

Vehicle Tracking and Monitoring, Geo Fencing

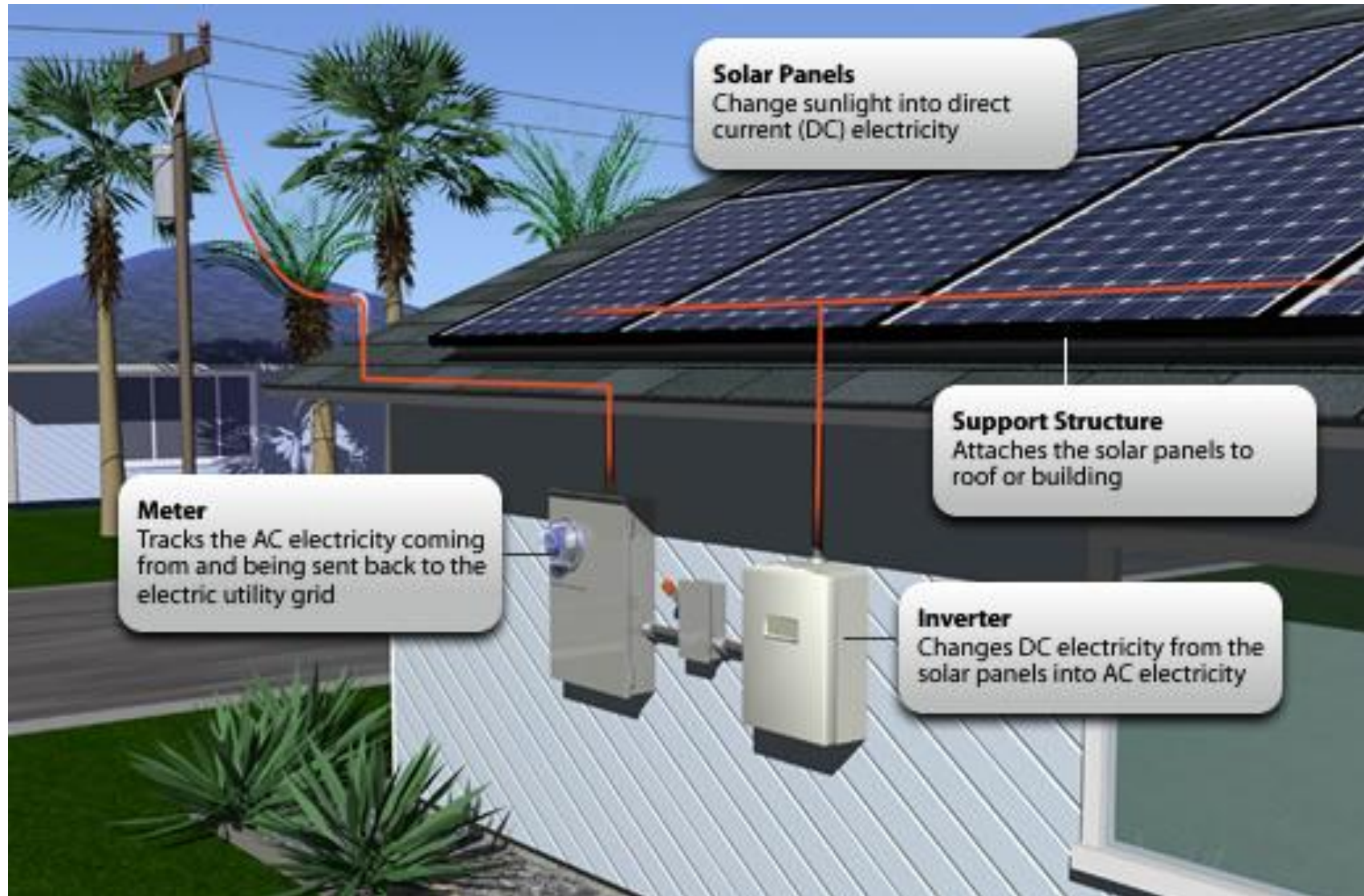


Smart Energy Systems

- Meet rising demand, increase reliability and quality of power supplies, increase energy efficiency
- Reduced operations and management
- Reduced peak demand
- integration of customer-owner power generation systems, including renewable energy systems



Solar Power Integration to Smart Grid



Indian Solar Power touches Rs 2.62 per Unit.

Indian solar power prices hit record low, undercutting fossil fuels

Plummeting wholesale prices put the country on track to meet renewable energy targets set out in the Paris agreement

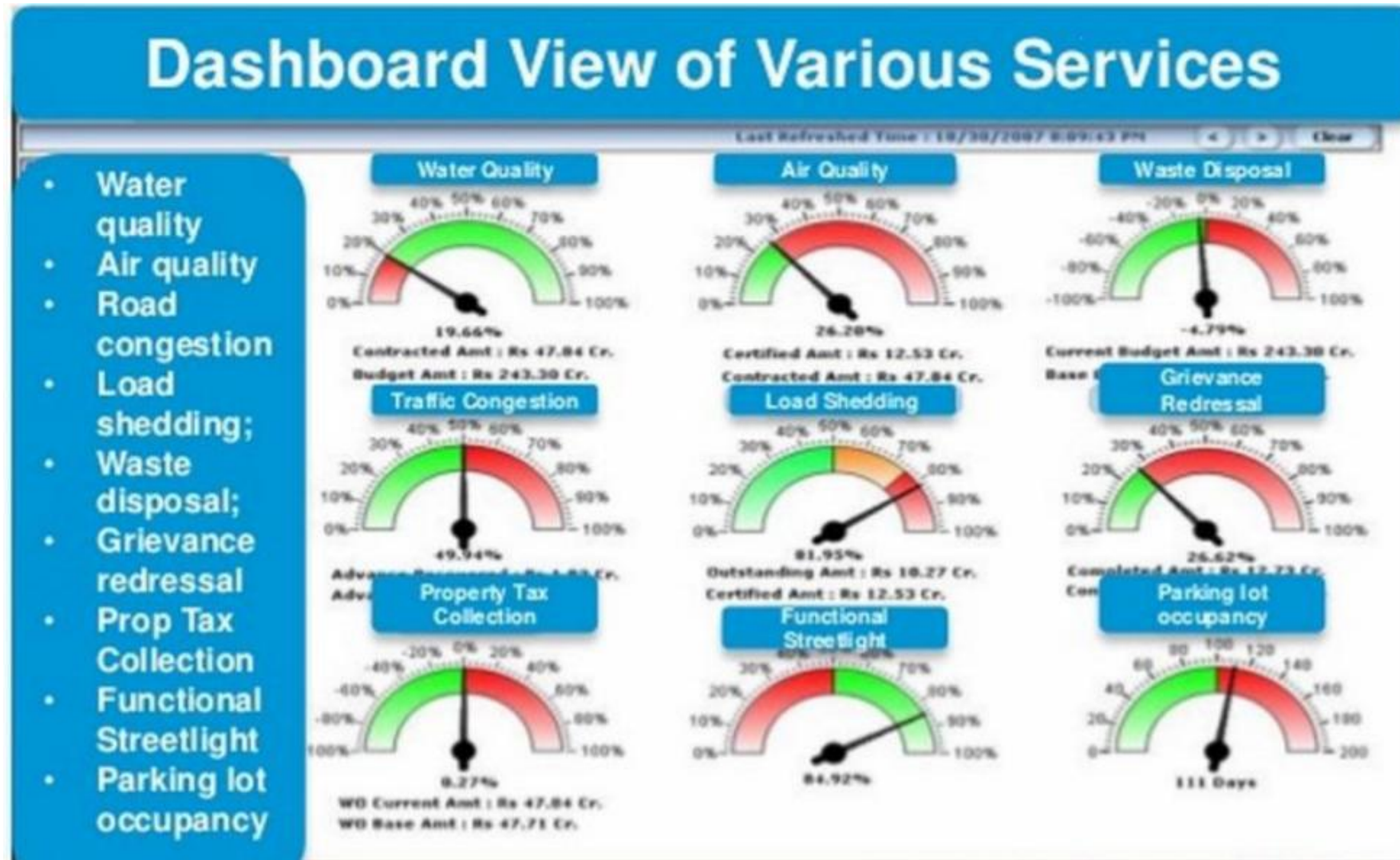


i Solar panels for sale at a market in New Delhi. India's solar power prices have fallen to 2.62 rupees per kilowatt hour. Photograph: Saurabh Das/AP

Smart Monitoring

- *What gets measured gets managed*
 - *It means regular measurement and reporting keeps you focused — because you use that information to make decisions to improve your results. Your most critical measurements are called Key Performance Indicators.*
- *Key Measure for smart solutions.*
 - *Number of service transactions with citizens*
 - *Energy consumption*
 - *Waste Management*
 - *Water Management*

Smart Monitoring

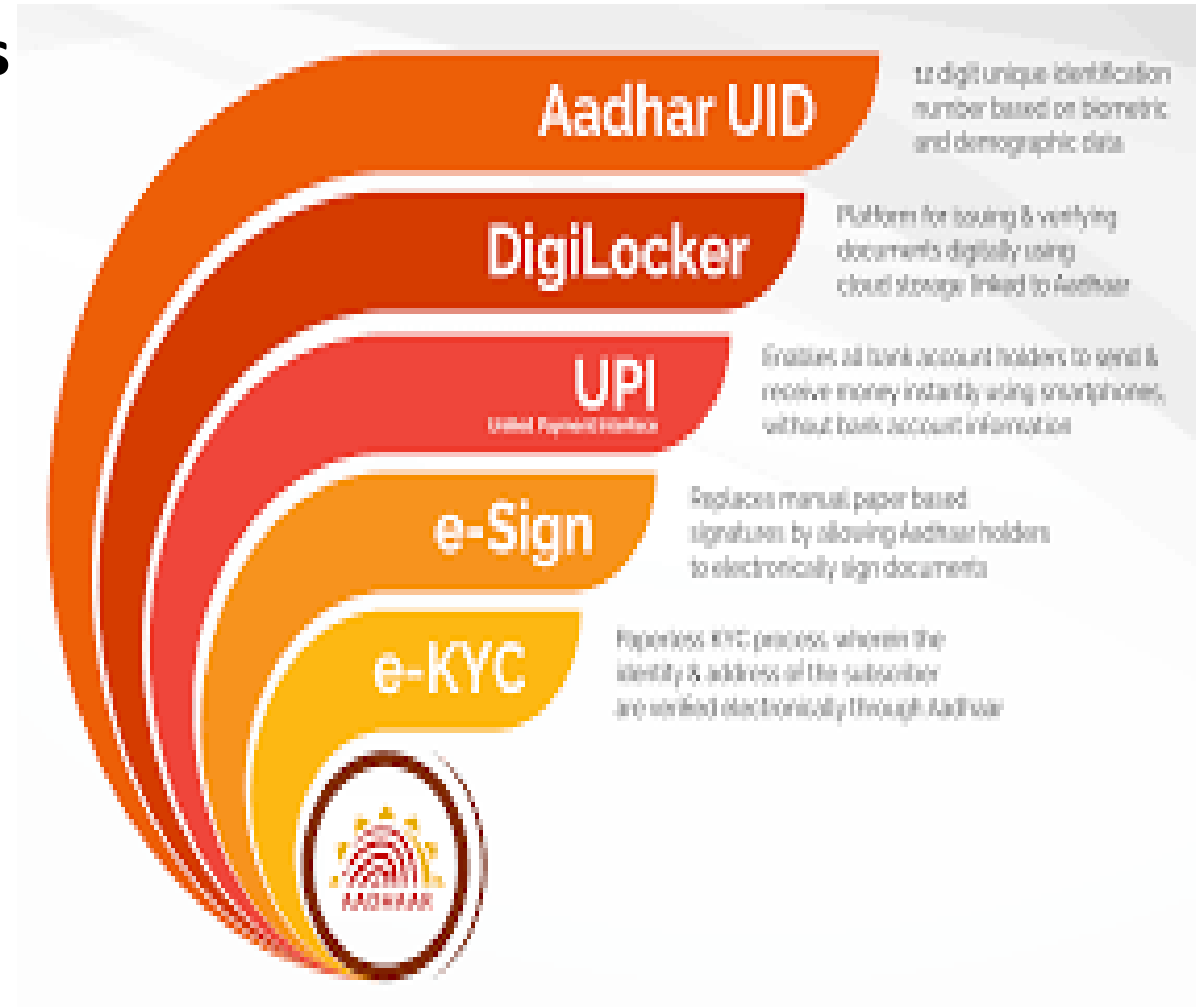


Key Smart Solutions

- **Waste Management**
- **Telecom – Smart pole**
- **Smart Parking**
- **Smart Grid**
- **Water Management**
- **Integrated Transport system**
- **Command and Control Centre**

Relevance of Aadhaar for Smart cities

- Aadhaar is a digital id based on biometrics , can be verified from anywhere on line and is an accurate financial address.
- Integration of Aadhaar will enhance efficiency, reliability and ease of delivery of service.
- Over 4 crores of Aadhaar enabled transactions take place every day
- Typical uses in Smart City
 - eKYC based record creation
 - E-payments , UPI, Aadhaar Pay
 - Virtual Smart card for citizens.



Integration of CSCs(Common Service Centers)

- Digital Service Delivery is key to success of Smart City
- High percentage of Digitally Illiterate
- Section of people having no Smartphone
- CSCs will bridge the digital divide

