🏆 Patent Summary – E-Management Systems for Construction Projects

📜 **Patent Details:**

- **Patent No: 546704**
- **Application No: 202211001000**
- **Date of Filing: 07 January 2022**
- **Date of Grant: 31 July 2024**
- **Patentee: SigmaT Consultancy Private Limited**
- **Inventors: Mr. Yogendra G. Mishra, Mr. Amnashkumar N Rai**
- **Term of Patent: 20 years from the date of filing, i.e., valid until 06 January 2042**
- **Issued by: The Patent Office, Government of India**

💡 **Innovation Overview:**

"E-Management Systems for Construction Projects" is a proprietary system designed to digitally manage end-to-end construction activities with efficiency, transparency, and intelligence. The invention aligns with SigmaT's vision to bring cutting-edge automation and analytics to the infrastructure sector.

🔧 **Core Functionalities:**

- **Real-time tracking and monitoring of infrastructure projects**
- **Mobile-based integration for field reporting and GPS-based analytics**
- **Predictive maintenance insights powered by ML algorithms**

📌 **Key Applications**

- **Smart City Infrastructure & Planning**
  Enable intelligent urban development through real-time monitoring, anomaly detection, and data-driven insights.

- **Municipal Road & Highway Maintenance**
  Improve Road quality and safety with automated detection of potholes, bumps, and surface anomalies.

- **Construction & Site Automation**
  Streamline civil engineering workflows, from planning to execution, using integrated digital tools.

- **Fleet Management & Operational Safety**
  Enhance vehicle tracking, driver behavior analysis, and preventive maintenance using sensor-based inputs.

- **Utility & Infrastructure Management**
  Support utilities and smart city services with compliance tracking, resource mapping, and maintenance analytics.

- **EPC & Government Project Optimization**
  Drive better outcomes through end-to-end visibility, KPI tracking, and decision-making dashboards.