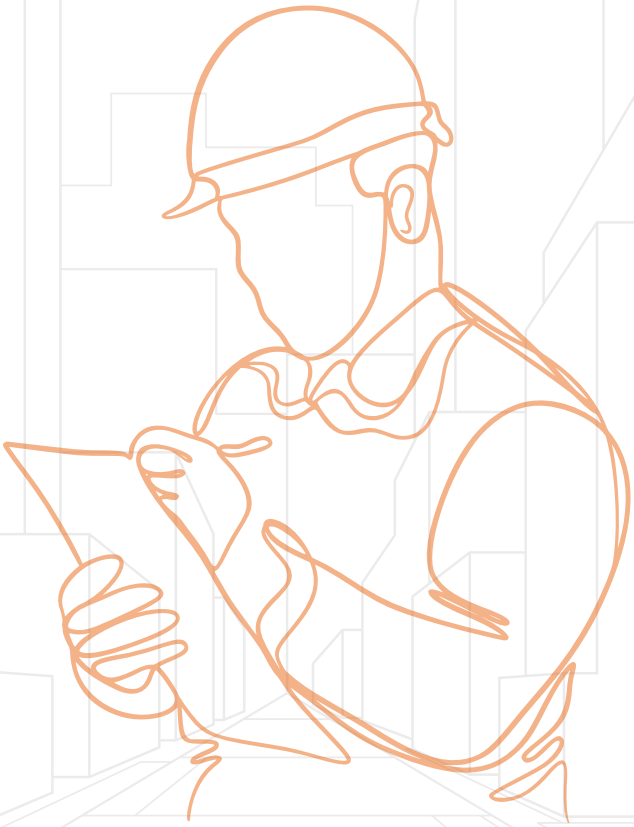
JSW PRESENTS

Association of Infrastructure Industry(India)

BUILDING भारत™ SAMPAARK

INNOVATION BOOT CAMP IN CIVIL ENGINEERING



Theme of Hackathon

Innovation in Infrastructure Asset Management in India

Supported by

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Manthan

Initiative partners

AICTE

NIUA National Institute of Urban Affairs

Background

India's infrastructure network — comprising roads, bridges, railways, airports, water systems, and urban utilities — represents **trillions of rupees in public investment.** As the country advances toward Viksit Bharat 2047, maintaining, monitoring, and optimizing these assets has become a national priority.

However, the current system of **infrastructure asset management** is often fragmented and reactive. Many assets are designed and built well but **deteriorate prematurely** due to lack of timely maintenance, data-driven monitoring, or lifecycle planning. Manual inspections, inconsistent record-keeping, and inadequate funding for maintenance lead to escalating costs and safety risks.

There is an urgent need for **innovative, data-driven, and sustainable approaches** to ensure that India's infrastructure assets deliver long-term performance, reliability, and value.

The Challenge

Develop an **innovative solution, tool, or platform** that enhances the **management, monitoring, and optimization** of infrastructure assets across their lifecycle — from design and construction to operation, maintenance, and renewal.

The goal is to **extend asset life, reduce lifecycle costs, and improve service reliability** through technology, data, and sustainable engineering practices.

Problem Areas to Explore

Participants may address one or more of the following areas, or propose their own creative interpretation of infrastructure asset management:

Sustainable Asset Management

- Innovative repair materials and techniques that reduce environmental impact.
- Lifecycle carbon tracking and sustainability performance dashboards.

Policy and Governance Innovation

- Systems for transparent asset data sharing across departments and stakeholders.
- Blockchain-enabled audit trails for infrastructure performance and maintenance history.

Expected Outcomes

Participants should present:

- **Proof-of-concept** demonstrating measurable improvement in asset monitoring or maintenance efficiency.
- A **real-world deployment roadmap** adaptable for government or private sector use.
- **Quantifiable benefits** such as cost savings, safety improvement, sustainability impact, and data reliability.

Evaluation Criteria

- Innovation & Creativity
- Feasibility & Technical Soundness
- Impact Potential
- Scalability & Sustainability
- Implementation (Roadmap)
- Presentation & Clarity

Vision

To enable *"Smart, Sustainable, and Resilient Infrastructure for Viksit Bharat"* — where every bridge, road, and public asset is monitored intelligently, maintained proactively, and managed for generations to come.