

# Proven Experience in Building Real Infrastructure

From remote villages to nationwide networks —  
we know what it takes to deliver on the ground.



**1,680**

uncovered villages  
under nationwide  
4G saturation  
programme



**₹800+ Cr**

programme  
budget governed



**1,279**

villages upgraded  
from 2G/3G to 4G



**4,000 km**

OFC network  
across 10 districts



**10,000+**

digital kiosks  
deployed



**850+**

sites executed under  
BSNL 4G Saturation

Across Assam, Meghalaya,  
Mizoram and Tripura



## Coordination

Government, PSU, OEM and  
implementation-partner interfaces



## QMS Certification

Valid through January 2028

Design, development, production,  
installation, commissioning and  
maintenance of telecom infrastructure  
components.



*"We have operated the kind of  
infrastructure we now want to instrument  
with AI. Our execution experience gives  
us a unique advantage in building  
real-world solutions."*

**Vinay Katwe**

Director, Infranite Globaltech Pvt Ltd

**Real  
Infrastructure.  
Real Impact.**



## Remote Locations

Complex terrains,  
challenging conditions



## Large Programmes

Multi-state execution  
and stakeholder management



## Field Expertise

On-ground delivery  
and contractor coordination



## Measurable Outcomes

Connectivity, inclusion  
and digital access

# Why IGT. Why Now.

A rare combination of on-ground execution experience and AI engineering capability.



## Field Execution Experience

We have built and operated infrastructure at scale.

- ✓ ₹800+ Cr programme governance
- ✓ 1,680 uncovered villages
- ✓ 850+ sites executed (BSNL 4G)
- ✓ 4,000 km OFC network
- ✓ 10,000+ digital kiosks



## AI Engineering Capability

We build AI solutions for real-world infrastructure.

- ✓ Computer vision and multimodal AI
- ✓ GenAI and workflow automation
- ✓ Cloud and edge deployment
- ✓ Convert site data into actionable intelligence



## Project Governance & Stakeholder Coordination

Experience working with complex ecosystems.

- ✓ Government, PSU, OEM and implementation partners
- ✓ Multi-state, multi-vendor execution
- ✓ Regulatory, quality and compliance management



**Proven Foundation**  
Real projects. Real data.



**Scalable Solutions**  
From sites to nationwide networks.



**Measurable Impact**  
Efficiency. Transparency. Trust.

## The IGT Advantage

From physical infrastructure to continuous intelligence.



We didn't start with AI and look for an infrastructure problem.  
**We started with the infrastructure problem and built AI to solve it.**

## InfraSight AI

See the asset. Predict the risk.  
Act before the delay.

## From Projects to a Smarter Tomorrow



**Safer Infrastructure**  
Detect risks early, prevent incidents



**On-Time Delivery**  
Stay ahead of delays



**Optimised Budgets**  
Fix the right issues, at the right time



**Longer Asset Life**  
Reduce lifecycle cost



**Greater Societal Impact**  
Better connectivity. Stronger communities.

# AI INFRASTRUCTURE COMMAND & CONTROL CENTRE

## Proactive Maintenance for Roads, Bridges & Tunnels

### Detect Early. Prioritise Right. Keep India Moving.

**Rodic**  
ENGINEERING A  
BETTER TOMORROW

In Partnership with  
**nasscom**

#startupindia



#### Roads & Highways

- Pavement distress detection
- Roughness & ride quality
- Drainage and shoulder condition
- Signage, markings & furniture
- Network-level maintenance planning



#### Bridges & Viaducts

- Structural health monitoring
- Crack, spalling & corrosion detection
- Bearing, joint and expansion monitoring
- Load and vibration analysis
- Lifecycle and retrofit planning



#### Tunnels

- Lining and surface condition
- Water ingress and leakage
- Ventilation & lighting systems
- Safety and emergency systems
- 3D mapping and clearance analysis



#### Asset Risk & Prioritisation

- AI-based condition scoring
- Failure risk prediction
- Maintenance prioritisation
- Budget optimisation
- Impact on network performance



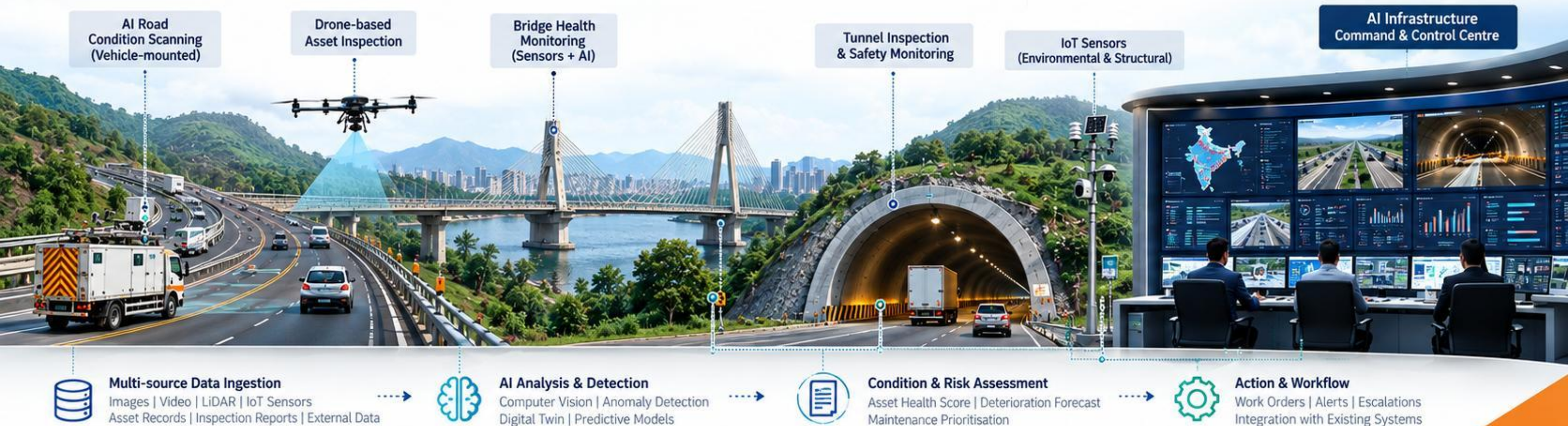
#### Operations & Maintenance

- Work order management
- Inspection scheduling
- Contractor performance
- Inventory & spares planning
- Integration with existing systems



#### Sustainable Infrastructure

- Asset life extension
- Resource optimisation
- Emissions reduction
- Climate resilience
- Data-driven, greener maintenance



Continuous Visibility  
Across the Network



Proactive Maintenance  
Lower Lifecycle Cost



Safer, More Reliable Infrastructure



Sustainable and Resilient Assets



Better Outcomes for Citizens



A Stronger, Connected India

From  
Asset Data  
to National Impact

# AI Road Condition & Maintenance Intelligence

From periodic inspection to proactive, data-driven maintenance

Detect Early. Prioritise Right. Keep India Moving.

Safer Roads | Longer Asset Life | Lower Lifecycle Cost | A Stronger India



## KEY MAINTENANCE PARAMETERS / KPIs

|       |                                       |
|-------|---------------------------------------|
| 100%  | Network inspection coverage (target)  |
| > 85% | Defect detection accuracy             |
| < 10% | False positive rate                   |
| 90%   | GIS location accuracy                 |
| 50%   | Reduction in manual inspection effort |
| 30%   | Faster maintenance response time      |
| 20%   | Increase in asset life (est.)         |

## AI VALUE ADDITION

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| <b>See</b>        | Detect and classify multiple defect types automatically  |
| <b>Measure</b>    | Estimate defect dimensions and affected area             |
| <b>Understand</b> | Assess severity, condition score and deterioration trend |
| <b>Predict</b>    | Forecast maintenance needs and failure risk              |
| <b>Prioritise</b> | Optimise intervention plans across the network           |
| <b>Learn</b>      | Continuously improve from new data and field outcomes    |

## OUR DIFFERENTIATORS

- Multi-modal data fusion** (vehicle, drone, IoT, GIS, historical)
- Network-scale AI analytics** not just isolated detections
- From detection to decision** — prioritisation and work orders
- Closed-loop verification** — AI checks post-repair
- Integrates with existing systems** (Rodic Eye, asset inventory, PMS)
- Scalable and customisable** for diverse road networks

## BUSINESS OUTCOMES FOR RODIC

- Safer and more reliable road networks
- Proactive maintenance, lower lifecycle cost
- Data-driven allocation of maintenance budgets
- Faster, evidence-based decision making
- Improved citizen experience
- Supports sustainable and resilient infrastructure

# AI Bridge Health Intelligence

Assure Structural Safety. Enable Predictive Maintenance.

**Detect. Assess. Predict. Prioritise. Preserve for Generations.**

Safer Structures | Reduced Risk | Optimised Maintenance | A Stronger India



## KEY MAINTENANCE PARAMETERS / KPIs

|       |                                        |
|-------|----------------------------------------|
| 100%  | Critical structures inspected (target) |
| > 90% | Defect detection accuracy              |
| < 10% | False positive rate                    |
| 90%   | Component-level localisation accuracy  |
| 50%   | Reduction in manual inspection effort  |
| 30%   | Faster maintenance response time       |
| 20%   | Increase in asset life (est.)          |

## AI VALUE ADDITION

|                   |                                                          |
|-------------------|----------------------------------------------------------|
| <b>See</b>        | Detect structural defects at scale (CV + AI)             |
| <b>Measure</b>    | Estimate defect dimensions and crack width               |
| <b>Understand</b> | Assess structural condition and load impact              |
| <b>Predict</b>    | Forecast deterioration and potential failure risk        |
| <b>Prioritise</b> | Rank interventions based on risk and consequence         |
| <b>Learn</b>      | Continuously improve from new inspection and repair data |

## OUR DIFFERENTIATORS

- Multi-modal data fusion** (drone, sensor, visual, legacy data)
- Structural AI models** for component-level analysis
- Risk-based prioritisation** not just defect detection
- Integration with existing systems** (asset inventory, PMS)
- Closed-loop verification** AI checks post-repair
- Scalable across bridge types** (minor to major, viaducts)

## BUSINESS OUTCOMES FOR RODIC

- Safer and more reliable bridges and viaducts
- Reduced maintenance cost and lifecycle cost
- Data-driven capital and maintenance planning
- Early detection of critical risks
- Better allocation of maintenance budgets
- Enhanced public safety and confidence

# AI Tunnel Condition & Safety Intelligence

Continuous Monitoring. Predictive Maintenance. Safer Operations.

See Beyond the Surface. Prevent Failures. Ensure Uninterrupted Connectivity.

Safer Tunnels | Higher Availability | Lower Life Cycle Cost | A Stronger India



## KEY MAINTENANCE PARAMETERS / KPIs

|       |                                          |
|-------|------------------------------------------|
| 100%  | Tunnel length scanned (target)           |
| > 90% | Defect detection accuracy                |
| < 10% | False positive rate                      |
| 95%   | Location accuracy ( $\pm 1$ m)           |
| 50%   | Reduction in manual inspection effort    |
| 40%   | Faster response to critical issues       |
| 20%   | Increase in tunnel availability (uptime) |

## AI VALUE ADDITION

|                   |                                                 |
|-------------------|-------------------------------------------------|
| <b>See</b>        | Detect and classify defects in real time        |
| <b>Measure</b>    | Estimate defect size and severity               |
| <b>Understand</b> | Assess structural and operational safety        |
| <b>Predict</b>    | Forecast deterioration and failure risk         |
| <b>Prioritise</b> | Rank interventions based on risk and impact     |
| <b>Learn</b>      | Continuously improve from new data and outcomes |

## OUR DIFFERENTIATORS

- Multi-modal AI (video, LiDAR, IoT, sensor & document data)
- Integrated structural + safety + environment analysis
- 3D digital twin integration for precise localisation
- Risk-based maintenance prioritisation
- Closed-loop verification with field evidence
- Scalable across tunnel types (mountain, urban, highway)

## BUSINESS OUTCOMES FOR RODIC

- Safer tunnels and reduced incident risk
- Proactive maintenance and lower lifecycle cost
- Higher tunnel availability and user confidence
- Data-driven budget allocation
- Faster decision making with real-time insights
- Supports smart, resilient and future-ready infrastructure

# AI Infrastructure Command & Control Centre

Unified intelligence for Roads, Bridges, Tunnels and more.

One platform. Complete visibility. Safer infrastructure. Stronger India.

See the Big Picture | Act in Real Time | Stay Ahead of Risk | Build for a Safer India



Roads



Bridges



Tunnels



Other Assets  
(Drainage, Signage,  
Slopes, etc.)

## AI detects road distress



Pothole detected  
Severity: High  
Location: NH-48, KM 124.3

## Monitor structural health



Anomaly detected  
Bridge BR-07  
Attention required

## Ensure tunnel safety



Water leakage  
Tunnel T-04  
Section 2.1 km

## KEY OUTCOMES



### Safer Infrastructure

Detect and mitigate risks early



### Optimised Budgets

Prioritise what matters most



### Faster Response

Reduce issue resolution time



### Longer Asset Life

Preventive maintenance, lower cost



### Better Public Experience

Reliable and resilient infrastructure

From Data  
to Decisions.

For a Safer,  
Stronger India.

## AI INFRASTRUCTURE COMMAND & CONTROL CENTRE

Network View

Roads

Bridges

Tunnels

Other Assets



Total Assets

18,420

↑ 12%

Active Alerts

247

↑ 8%

Open Work Orders

486

↓ 18%

Avg. Response Time

2.4 days

↓ 40%

## InfraSight AI

Asset Health Index



Good

Fair

Poor

Smarter Infrastructure.  
Brighter Tomorrows.

InfraSight AI

# AI Asset Risk & Maintenance Prioritisation

From inspection data to actionable maintenance plans.

Right intervention. Right time. Right value. For a resilient India.

Smarter Prioritisation | Optimised Budgets | Reduced Risk | A Stronger India



## KEY MAINTENANCE PARAMETERS / KPIs

|       |                                     |
|-------|-------------------------------------|
| 100%  | Network coverage (target)           |
| > 85% | Risk prediction accuracy            |
| < 10% | False positive rate                 |
| 90%   | Asset data completeness             |
| 50%   | Reduction in manual analysis effort |
| 30%   | Better budget utilisation           |
| 20%   | Reduction in emergency repairs      |

## AI VALUE ADDITION

|            |                                              |
|------------|----------------------------------------------|
| See        | Ingest and unify multi-source data           |
| Understand | Assess condition and predict deterioration   |
| Predict    | Estimate future risk and failure probability |
| Prioritise | Rank assets for optimal intervention         |
| Plan       | Optimise maintenance budget and schedule     |
| Learn      | Continuously improve from asset outcomes     |

## OUR DIFFERENTIATORS

- Network-level intelligence** not just isolated asset analysis
- Multi-asset, multi-source data fusion** (road, bridge, tunnel)
- Predictive risk modelling** with scenario planning
- Optimised maintenance planning** with budget impact
- Integration with existing systems** (Rodric Eye, GIS, ERP, PMS)
- Scalable and customisable** for national and state networks

## BUSINESS OUTCOMES FOR RODIC

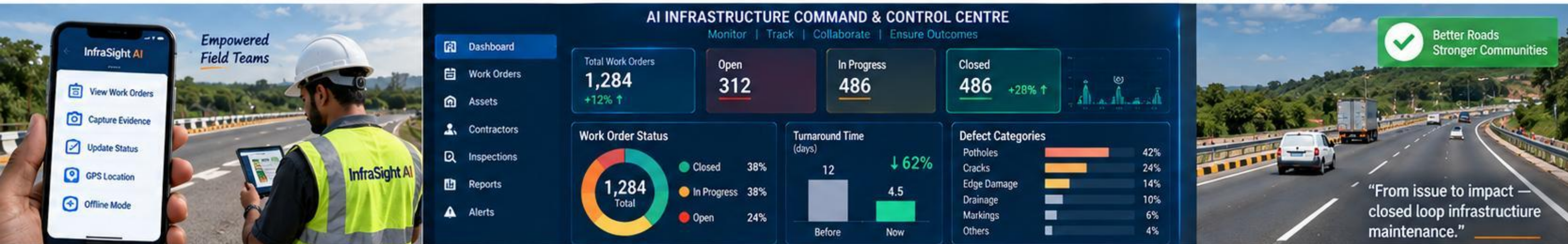
- Proactive and risk-based maintenance
- Lower lifecycle cost, higher asset availability
- Data-driven decision making and budget planning
- Reduced risk of failures and disruptions
- Better utilisation of maintenance resources
- Safer, more resilient infrastructure

# AI Maintenance Operations & Workflow

From detection to closure, a unified, intelligent maintenance workflow.

Right issues. Right teams. Right closure. With complete visibility.

Connected Workflows | Higher Productivity | Better Compliance | A Stronger India



## KEY OPERATIONAL KPIs

|          |                                        |
|----------|----------------------------------------|
| 100%     | Work order digitalisation (target)     |
| < 24 hrs | Average work order generation time     |
| > 90%    | SLA compliance rate                    |
| 50%      | Reduction in resolution time           |
| > 95%    | AI verification accuracy               |
| 30%      | Reduction in repeat defects            |
| 20%      | Improvement in contractor productivity |

## AI VALUE ADDITION

|            |                                         |
|------------|-----------------------------------------|
| See        | Auto-detect and categorise defects      |
| Understand | Prioritise based on condition and risk  |
| Predict    | Estimate time and cost for intervention |
| Optimise   | Recommend best intervention method      |
| Verify     | AI-based before/after comparison        |
| Learn      | Improve models from field outcomes      |

## OUR DIFFERENTIATORS

- End-to-end closed loop from detection to verified closure
- Multi-modal AI (image, video, LiDAR, sensor, GIS)
- Integration with existing systems (Rodic Eye, ERP, PMS)
- Mobile-first for field teams (online/offline)
- AI verification of repairs (not just manual sign-off)
- Scalable across asset types (roads, bridges, tunnels, others)

## BUSINESS OUTCOMES FOR RODIC

- Faster and more reliable maintenance execution
- Higher asset availability and user satisfaction
- Lower lifecycle cost through proactive maintenance
- Better contractor performance and accountability
- Data-driven decision making
- Audit-ready records and compliance
- Supports a safer, stronger and more

# Same Infrastructure. Greater Possibilities.

Monitor. Maintain. Monetise.

Turn public infrastructure into a safer, smarter and self-sustaining ecosystem.



**SEE**

Real-time asset  
visibility



**OPTIMISE**

Better operations  
& maintenance



**MONETISE**

Unlock new  
revenue streams

## AI INFRASTRUCTURE COMMAND CENTRE



### Live Assets

- 1,284**  
Monetisable Assets
- ₹ 42 Cr**  
Potential Annual Revenue  
(Illustrative)
- 312**  
Active Contracts
- 87%**  
Asset Utilisation

### Asset Categories

- Advertising
- 5G / Telecom  
Hosting
- IoT / Sensors
- Retail / Hawker  
Booths
- EV Charging
- Smart Parking
- Bus Shelters
- Bridges / Flyovers

**5G Small Cell  
Hosting**  
₹X/month

**CCTV &  
Surveillance**  
₹X/month

**Environmental  
Sensors**  
₹X/month

**Public Wi-Fi**  
₹X/month

**Digital  
Advertising**  
₹X/month

**Smart Bus Shelter**  
Advertising + Retail + Wi-Fi  
₹X/month

**Smart Hawker Booth**  
Rental  
₹X/month

**Bridge / Flyover**  
Sponsorship  
₹X/year

**Smart Parking**  
Fees + Advertising  
₹X/month

**EV Charging**  
Revenue Share  
₹X/month

## From Road Images to Real Action.

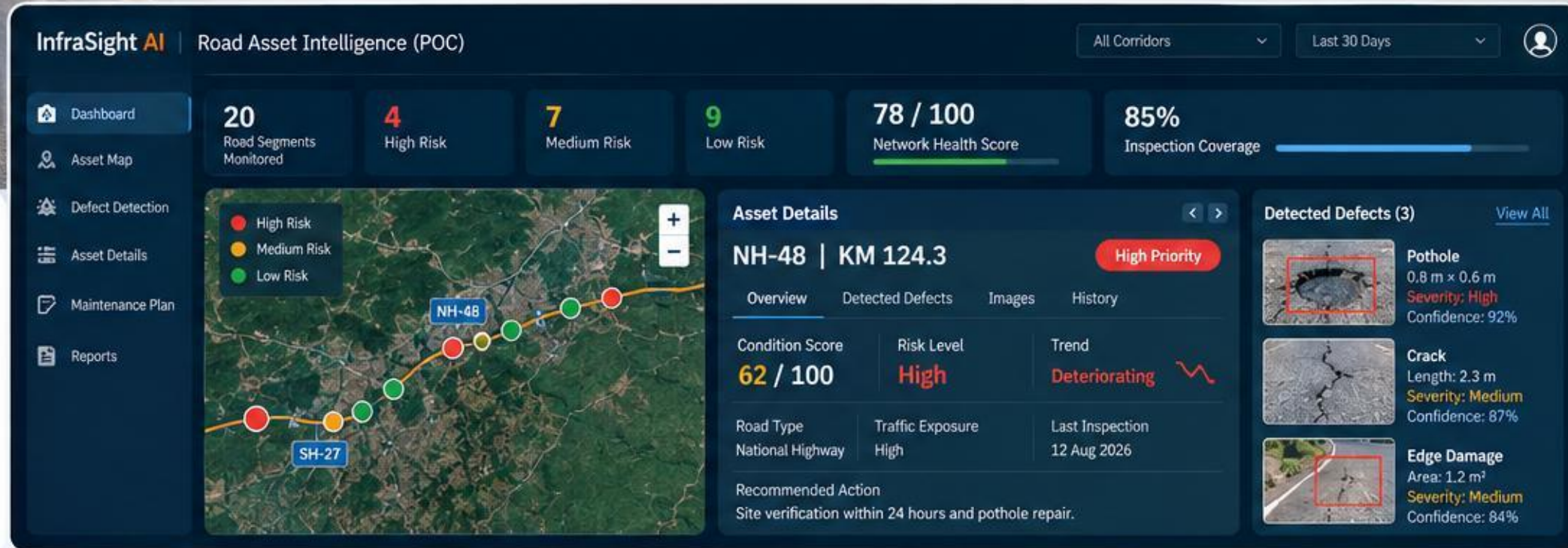
AI-powered intelligence to detect defects, assess risk and prioritise maintenance — before small issues become big problems.



- Vehicle Camera
- Drone Imagery
- GPS & GIS
- Asset History
- Weather & Traffic Data

### POC Scope

- 10–20 road segments**  
Different conditions and road types
- Detect & classify defects**  
Potholes, cracks, rutting, edge damage and more
- Measure severity**  
Dimensions, area, crack length
- Generate condition & risk score**  
Explainable, data-driven
- Prioritise maintenance**  
What to fix first
- Recommend action**  
Evidence-backed intervention
- Verify after repair**  
Close the loop



### Expected Outcomes (POC Targets)

- >85%** Defect detection accuracy
- <10%** False positive rate
- >90%** Geo-location accuracy
- >80%** Engineer acceptance of prioritisation
- >50%** Reduction in manual image review

### A Scalable Foundation for AI Infrastructure Command & Control Centres

- Roads
- Bridges
- Tunnels
- Beyond

# Prove First. Scale Modularly.

A practical, phased approach to deliver real value — fast.

01

## POC

Prove the Intelligence

14 Days

- ✓ 10–20 road segments
- ✓ AI defect detection & measurement
- ✓ Condition & risk scoring
- ✓ Maintenance prioritisation
- ✓ Interactive evidence dashboard

**Outcome:**  
Working end-to-end intelligence loop

02

## PILOT

Validate in Real Environment

6 – 8 Weeks

- ✓ 1 live corridor / project
- ✓ Real Rodic data
- ✓ Engineer validation
- ✓ GIS + historical records
- ✓ Field workflow integration

**Outcome:**  
Validated solution and business case

03

## SCALE

Multi-Asset Deployment

3 – 6 Months

- ✓ Multi-project deployment
- ✓ Roads → bridges → tunnels
- ✓ Integrate IoT, CCTV, drone, GIS
- ✓ Advanced predictive analytics
- ✓ Maintenance management and contractor workflows

**Outcome:**  
Production-ready platform

04

## EXPAND

Infrastructure Command & Control Centre

6+ Months

- ✓ Enterprise ICCC deployment
- ✓ Nationwide / multi-state rollout
- ✓ Add asset monetisation layer
- ✓ Integrate with existing systems
- ✓ Continuous learning & model improvement

**Outcome:**  
A sustainable, scalable infrastructure intelligence platform



## Our Approach



**Modular architecture**  
Build once, scale across assets



**Use existing data sources**  
No heavy hardware upfront



**Leverage proven AI models**  
Fine-tuned for infrastructure



**Low initial investment**  
Quick time to value



**Engineer-in-the-loop**  
Trusted, explainable outcomes



**Designed for scale**  
From projects to national infrastructure

Start Small  
Create Real Impact

POC  
(14 Days)

PILOT  
(6–8 Weeks)

SCALE  
(3–6 Months)

EXPAND  
(6+ Months)

From  
Demonstration  
to Deployment

From  
Projects to  
Programmes

Towards Smarter,  
Safer, Self-Sustaining  
Infrastructure



Faster  
Implementation



Lower  
Initial Cost



Measurable  
Outcomes



Built for  
National Scale

**InfraSight AI**

See the asset. Predict the risk. Act before the delay.

# How We Implement

From existing data to real-world impact.

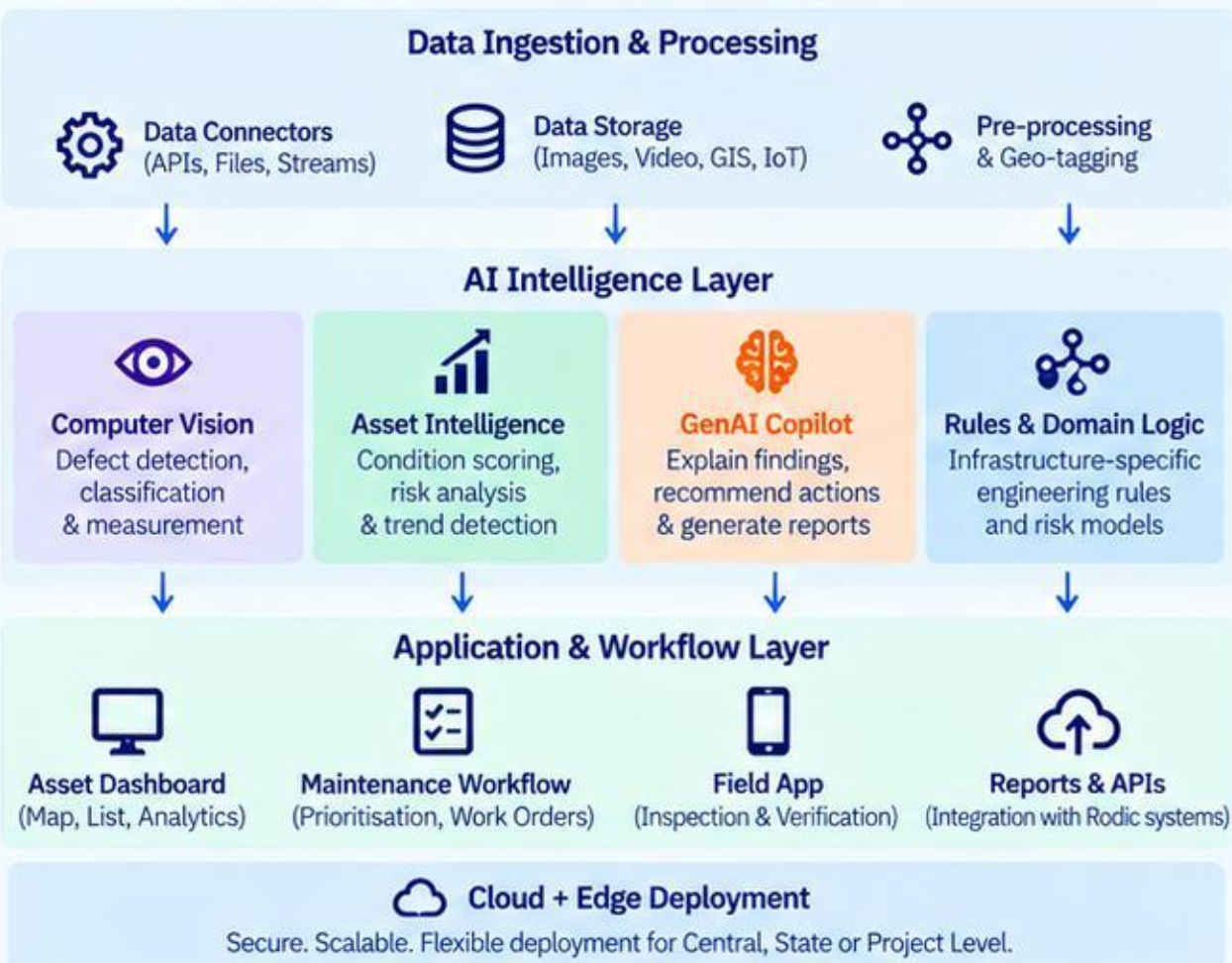
A modular, scalable approach that leverages existing infrastructure and proven AI technologies.

## Multiple Data Sources (Use what already exists)



Data agnostic. Designed to work with available infrastructure and systems.

## InfraSight AI Platform Architecture (Modular and extensible)



## Phased Implementation Approach



## Key Enablers for Successful Implementation



**Faster Time to Value**  
Prove impact quickly with a focused use case.

**Lower Execution Complexity**  
Build on existing infrastructure and data.

**Trusted and Explainable**  
Engineer validation at every step.

**Sustainable and Scalable**  
A clear path from pilot to nationwide deployment.

# What We Need from Rodic

Your support will help us build a relevant, impactful and scalable solution.

We bring the AI expertise and implementation capability. Your domain knowledge, data and guidance will ensure real-world impact.

## 1 Access to Project / Asset Data

Sample data to develop and test the PoC

- ✓ Road project details (10–20 segments)
- ✓ Existing inspection images / videos
- ✓ Drawings, BOQs (where available)
- ✓ Historical inspection and maintenance records



Images  
Videos  
Drawings  
Asset details

## 2 Domain Expertise & Guidance

Help us build it right for your context

- ✓ Access to subject matter experts (roads, bridges, tunnels)
- ✓ Guidance on key use cases and priorities
- ✓ Review and validation of AI outputs
- ✓ Feedback on engineering rules and standards



Engineer  
Insights  
Real-world  
Validation

## 3 Access to Existing Systems

Integration and alignment

- ✓ Relevant access to existing systems (GIS, asset management, maintenance)
- ✓ APIs or data extracts (where available)
- ✓ Understanding of data formats and standards
- ✓ IT and security guidelines



GIS  
Asset Management  
Maintenance  
Data Integration

## 4 Project Coordination

Enable smooth and efficient execution

- ✓ Nomination of a single point of contact (SPOC)
- ✓ Help in coordination with relevant teams and stakeholders
- ✓ Facilitate data access and approvals
- ✓ Support in scheduling reviews and demonstrations



SPOC  
Stakeholder Access  
Timely Approvals  
Regular Reviews

## 5 Field Support (As Required)

For pilot and real-world validation

- ✓ Facilitate site access for data collection (if required)
- ✓ Support for drone / vehicle surveys (where applicable)
- ✓ Coordination with field teams and contractors
- ✓ Help in validating AI outputs on ground



Site Access  
Field Coordination  
Safety Clearances  
Ground Validation

## 6 Long-term Collaboration

Beyond the PoC

- ✓ Share your vision and priorities for scale-up
- ✓ Explore integration with Rodic programmes and initiatives
- ✓ Provide feedback for continuous improvement
- ✓ Consider future deployment opportunities



Scale Together  
Real Impact  
Safer Infrastructure  
Stronger Communities



## A Collaborative Partnership for Real-World Impact

Your support and partnership will help us demonstrate meaningful outcomes in the challenge and lay the foundation for a scalable solution across Rodic's infrastructure portfolio.



Real Data  
Real Insights



Expert Guidance  
Better Outcomes



Faster Execution  
Lower Risk



Scalable Solution  
Long-term Value



**Together,  
we can set a new benchmark  
for AI-driven infrastructure  
management in India.**