



# Enhancing Lives through through Sustainable Water Management



# Infrastructure

Modern water infrastructure is the backbone of every functioning city. Aging pipes, overburdened treatment systems, and outdated control networks are pushing utilities to their utilities to their limits — demanding smarter, data-driven solutions that go beyond traditional traditional maintenance cycles.

## Aging Assets

Over 60% of utility assets now operate beyond their original design life, design life, increasing failure risk daily.

## NRW Losses

40–50% of treated water is lost before it reaches the consumer — representing billions in annual revenue revenue leakage.

## Digital Gap

Legacy SCADA and siloed systems prevent real-time visibility, making proactive decisions proactive decisions nearly impossible.





# Branding & Pilot Packages

IC<sup>3</sup> is designed for rapid, high-impact deployment. Our phased pilot approach enables utilities to demonstrate measurable value within weeks — building the internal case for full-scale rollout across all ULBs.

## Phase 1 — Discovery Pilot

1

Baseline NRW audit, DMA mapping, and quick-win leak identification across a defined pilot zone.

## Phase 2 — Platform Integration

2

IC<sup>3</sup> unified dashboard deployed, replacing siloed tools. Real-time KPI tracking begins from day one.

## Phase 3 — Scale & Sustain

3

Full ULB rollout with AI models active, automated compliance reporting, and reporting, and executive health scores live.

# Why IC<sup>3</sup> Is the Defining Platform for India's Water Future

"IC<sup>3</sup> is not a dashboard for one city. It is the governance infrastructure for India's national water ambition."

## 01 Massive Addressable Market

- 500+ ULBs across India under-digitised
- \$2.5B annual NRW loss — World Bank estimate
- AMRUT 2.0 & JJM — \$40B+ national programme
- Governments mandating smart water tech now

## 02 Proven at National Scale

- Deployed at DJB — India's largest utility
- Validated on 11 instrument types in live ops
- Phase 1–5 roadmap accepted & demo-ready
- < 6 months city onboarding — built for speed

## 03 Unique Technology Moat

- 8 AI models — purpose-built for water
- Single platform replacing 5–7 legacy tools
- Proprietary sensor trust & anomaly engine
- Data → Intelligence → Action in one loop

## 04 Multiple Revenue Streams

- 6 revenue streams per city deployment
- SaaS licensing + implementation + analytics
- Centre-of-excellence model scales nationally
- Recurring utility contracts — high retention

## 05 Measurable ROI — Day One

- ↓30% NRW = direct revenue recovery
- ↓25% energy = immediate OpEx reduction
- 3× faster response = SLA penalty avoided
- 100% compliance = regulatory risk eliminated

## 06 Policy & Mission Tailwind

- Jal Jeevan Mission: water to every home
- Smart Cities Mission: 100 cities digitising
- AMRUT 2.0: urban water quality mandate
- National priority — government pulling demand

# Four Costly Gaps Every Water Utility Faces — Without Exception

**\$2.5B**

Annual NRW loss — India alone (World Bank)

**40–50%**

NRW in Indian cities — 4× the global best

**60%+**

Utility assets operating beyond design life

**500+**

ULBs yet to deploy integrated water intelligence

## NRW Haemorrhage

**20–40%**

Water Lost

Leaks, theft and meter errors drain utility revenue silently every day. Without real-time zone-level detection and attribution, utilities cannot locate, prioritise, or prove the cost of loss — funding requests go unjustified.

**Direct revenue loss + inability to recover investment in treated water**

## Uncontrolled Energy Spend

**#1**

Variable Cost

Pumping is the single largest controllable operational cost. Without efficiency analytics, kWh/m<sup>3</sup> benchmarking, or off-peak scheduling — energy is wasted on degraded pumps running at wrong operating points 24/7.

**Uncapped OpEx growth eroding margins year on year**

## Reactive Fire-Fighting Only

**Days**

Avg Response

Manual processes mean incidents run undetected for days. No predictive alerts, no GPS dispatch, no closed-loop work order tracking — just reactive damage control after citizens and regulators have already noticed.

**SLA penalties, customer complaints, reputational and political damage**

## Quality & Compliance Blind

**After**

Breach Found

Chlorine decay, turbidity spikes and pH drift are discovered after the regulatory breach — not before. No propagation modelling means no early warning. Compliance is managed retrospectively with manual data compilation.

**Regulatory fines, public health incidents, programme funding at risk**

# IC<sup>3</sup> — One AI-Powered Platform. Every Operational Domain.

IC<sup>3</sup> is not a dashboard.

It is a decision platform.

Combining instrumentation, AI analytics, GIS, automated work orders, mobile field operations and executive reporting — replacing 5–7 disconnected tools with a single source of operational truth.

## Water Supply

Real-time demand, flow balance & supply continuity

## Loss Control

NRW detection, DMA analysis & intervention tracking

## Quality & Safety

Chlorine, TDS, turbidity, pH — compliance & risk maps

## Energy

Pump scheduling, kWh/m<sup>3</sup> benchmarking & efficiency curves

## Asset Health

Predictive pump & reservoir maintenance — 7/30/90-day outlook

## Service Levels

LPCD, pressure, continuity & citizen KPI reporting

# From Field Sensor to Executive Decision — One Continuous Intelligent Loop

## 01 Field Sensors

- Flow Meters
- Pressure Sensors
- Chlorine / TDS / pH
- Pump: power + vibration
- Level Transmitters

## 02 Data Ingestion

- SCADA / IoT / HES
- GIS Integration
- CSV / API / Manual
- Range & Timestamp Check
- Sensor Trust Engine

## 03 AI Analytics

- Anomaly Detection
- Leak / Burst Classifier
- Pump Health Model
- Quality Risk Model
- Demand Forecasting

## 04 Command Screens

- Executive Health Score
- DMA NRW Centre
- Pump Intelligence
- Quality Risk View
- GIS Leak Heat Map

## 05 Actions & Proof

- Alarm → Work Order
- GPS Field Dispatch
- Before/After KPI Proof
- Compliance Reports
- Executive ROI View

Closed loop — every field action feeds back into the KPI engine · Ingestion → Validation → Intelligence → Visualisation → Action

# 8 Purpose-Built AI Models — The Technology Moat

## Anomaly Detection

Sensor

What: Flags abnormal readings with severity score, confidence level, and asset affected — in minutes.

**Why it matters:** Eliminates alarm fatigue — only real events escalate to operations teams.

## Pump Health Model

Asset

What: Predicts failure risk 7/30/90 days ahead using power, vibration, current and runtime data.

**Why it matters:** Converts emergency breakdowns into planned maintenance — saving cost and preventing outages.

## Demand Forecasting Engine

Supply

What: Projects demand, tank levels and supply requirements 6–24 hours ahead per distribution zone.

**Why it matters:** Enables proactive supply scheduling — eliminates reactive shortfalls and supply inequity.

## NRW Attribution Engine

Revenue

What: Separates real losses from apparent losses — attributing variance to leaks, meter errors or theft.

**Why it matters:** Tells management where to act — not just how much is being lost. Investment becomes targeted.

## Leak / Burst Classifier

Network

What: Determines leak probability and burst probability per DMA — enabling targeted field dispatch.

**Why it matters:** Converts guesswork into GPS-precise crew deployment — reducing response from days to hours.

## Water Quality Risk Model

Quality

What: Calculates risk score, propagation zone and probable cause hours before a compliance breach.

**Why it matters:** Proactive safety — stops contamination reaching citizens before regulators are informed.

## Root Cause Assistant

Ops

What: Delivers plain-English incident explanations with ranked recommended actions in real time.

**Why it matters:** Cuts fault diagnosis from hours to minutes — junior staff operate at expert engineer level.

## Energy Optimisation AI

Cost

What: Recommends optimal pump schedules using off-peak tariff windows, demand curves and efficiency.

**Why it matters:** Reduces pumping cost automatically — the largest variable OpEx — without manual intervention.

# From Reactive Utility to Intelligent Enterprise — Across Every Stakeholder

## MANAGEMENT

*Strategic & Financial Control*

### FINANCIAL

- ↓30% NRW = direct revenue recovery on lost treated water
- ↓25% energy = immediate cut to largest variable cost
- ROI tracked before/after every intervention
- Capital deferral via predictive asset maintenance

### GOVERNANCE

- Executive health score 0–100 — board-ready reporting
- Audit-trail from sensor to regulator submission
- AMRUT 2.0 / JJM / Smart Cities compliance automated
- Single source of truth — ends conflicting report problem

### STRATEGIC

- Scalable to 500+ ULBs — 6 revenue streams per city
- Centre-of-excellence model — one team, many cities
- AI copilot — executive answers from operational data
- National benchmark reference — DJB proven

## CUSTOMER

*Service, Safety & Trust*

### SAFETY

- 24/7 quality monitoring — risk flagged before tap
- Contamination propagation model stops breaches early
- Source-to-tap audit trail — 100% accountability
- Water quality advisories issued proactively, not reactively

### SERVICE

- Equitable LPCD tracked per ward, zone, household
- Supply hours improved via predictive scheduling
- Leak response 3x faster — less disruption per incident
- Pressure-optimised network — fewer pipe bursts near homes

### TRUST

- Grievance resolution backed by operational sensor data
- Transparent public service reporting with real numbers
- RTI-ready data — no manual compilation needed
- Consistent supply schedules — predictable, reliable

## O&M TEAMS

*Operational & Field Excellence*

### AUTOMATION

- Alarm-to-work order in one click — no manual entry
- GPS field dispatch — crews sent to exact coordinates
- Mobile app replaces paper, radio and spreadsheets
- Closure verification via sensor confirmation — no disputes

### INTELLIGENCE

- Root cause in minutes — not hours — using AI assistant
- Pump failure predicted 7/30/90 days ahead of failure
- DMA passports — zone engineers own their performance
- Night flow analysis automates NRW zone prioritisation

### EFFICIENCY

- Off-peak pump scheduling — energy cost cuts automated
- What-if simulation before live network changes
- Demand forecasting enables pre-positioned field teams
- Junior staff perform at expert level via AI guidance

# Quantified, Auditable Returns — Trackable from Day One of Deployment

↓ 30%

NRW Reduction

↓ 25%

Energy Savings

3x

Faster Response

100%

Compliance Ready

BENEFIT AREA	SAVING	OPERATIONAL IMPACT	FINANCIAL VALUE
Lower NRW	↓20–35%	Water loss reduction across DMAs	Revenue recovery on previously lost treated water — direct top-line gain
Lower Energy Cost	↓20–28%	Pump energy savings via AI scheduling	Direct OpEx reduction — largest variable cost cut immediately upon deployment
Faster Leak Response	3x MTTR	AI dispatch vs manual days-long detection	Fewer supply disruptions, lower repair costs, reduced SLA penalty exposure
Quality Compliance	100%	24/7 monitoring + propagation modelling	Eliminates non-compliance risk, regulatory penalty and reputational harm
Operational Intelligence	1 screen	All 6 domains unified — replacing 5–7 tools	Reduces manual effort and headcount; faster, better decisions across all teams
Asset Life Extension	+20%	Predictive maintenance — planned vs emergency	Capital deferral via lifecycle extension — material balance-sheet benefit

# Beyond Monitoring — Predicting, Simulating & Optimising the Future Network

## Demand Forecasting (6–24hr)

What: AI demand model projects hourly supply requirements, tank refill needs and pump runtime across each zone.

**Investor value: Proactive supply scheduling — eliminates reactive shortfalls that cause citizen complaints.**

## Contamination Propagation Model

What: When quality anomaly is detected, IC3 simulates propagation through the network — identifying affected zones.

**Investor value: Proactive isolation and public advisory before contamination reaches citizens' taps.**

## Scenario / What-If Simulation

What: Operations teams simulate impact of valve closures, pump changes or maintenance shutdowns before execution.

**Investor value: Eliminates unintended consequences in the live network — every change tested virtually first.**

## Pump Failure Prediction

What: ML models trained on vibration, current draw, runtime and temperature predict failure windows at 7/30/90 days.

**Investor value: Converts emergency breakdowns into planned maintenance — preventing 3 AM service outages.**

## NRW Trend Projection

What: NRW trajectory modelled by zone — accounting for pipe age, pressure variance and seasonal demand.

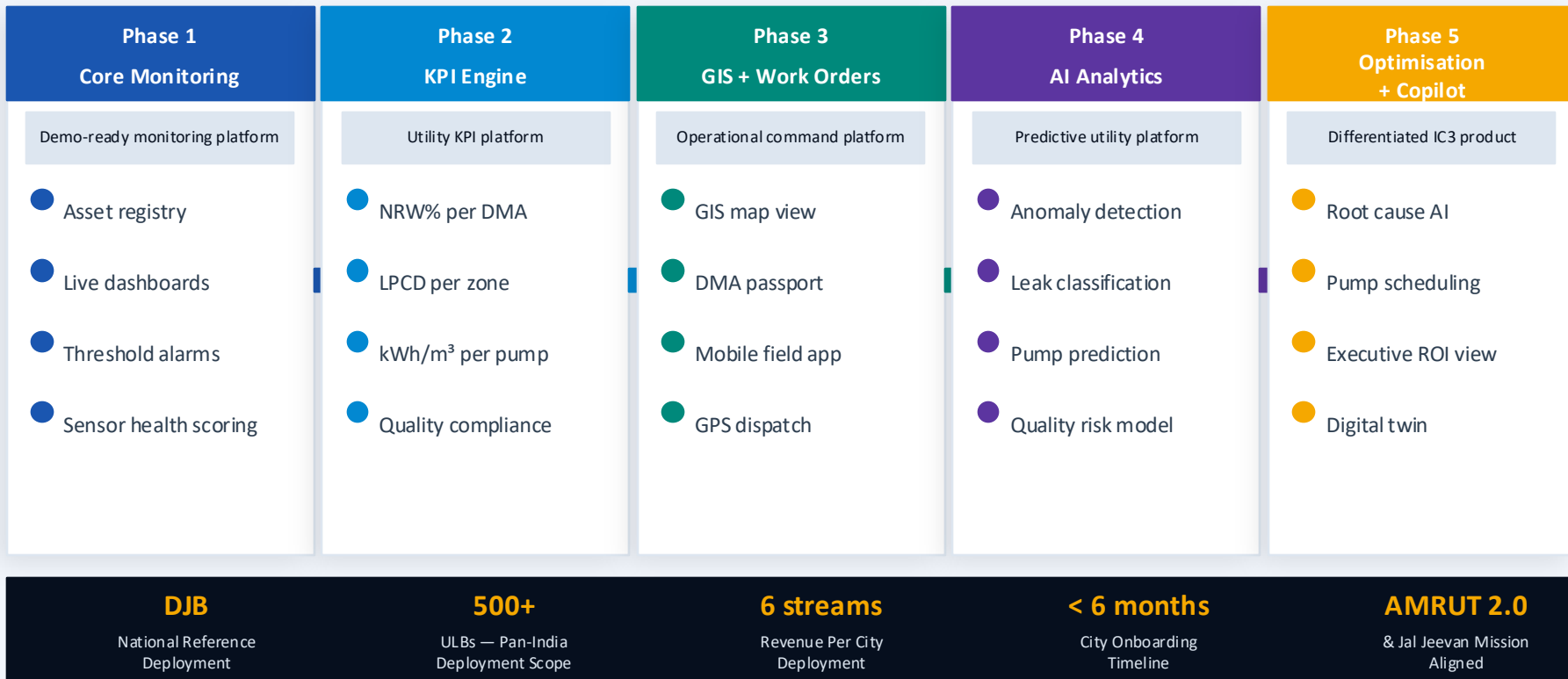
**Investor value: Gives management a 3–6 month loss outlook — turning NRW from a surprise into a managed KPI.**

## AI Executive Copilot

What: Natural-language interface: 'What are our 3 highest risk zones this week?' — answered instantly with data.

**Investor value: Institutional knowledge embedded in the platform — junior staff operate at expert engineer level.**

# 5-Phase Rollout — Each Phase Stands Alone as a Working Product



# A National-Scale Opportunity — 6 Revenue Streams Per City

## Total Addressable Market

# 500+ ULBs

Urban Local Bodies yet to deploy integrated water intelligence across India

## Programme Tailwind

# \$40B+

AMRUT 2.0 + Jal Jeevan Mission combined — government-funded demand pull

## Annual NRW Financial Pain

# \$2.5B

Lost annually in India alone — IC3 directly recovers this revenue for utilities

## City Onboarding Speed

# < 6 months

From contract to live operations — built for rapid pan-India scaling

## SIX REVENUE STREAMS PER CITY DEPLOYMENT

### 01 Platform SaaS Licence

Annual per-city recurring licence for the IC3 platform — predictable, high-retention revenue

### 02 Implementation Services

City onboarding, sensor integration, SCADA connectivity, data migration and go-live support

### 03 AI Analytics Modules

Premium AI model bundles (predictive maintenance, NRW attribution, demand forecasting) sold as add-ons

### 04 Annual Support & Managed

Ongoing support contracts, system health monitoring and managed service operations per city

### 05 Data & Benchmarking

Cross-utility benchmarking reports and national water intelligence data products for regulators & MoUD

### 06 Training & Certification

IC3 operator certification programmes for utility staff — builds platform stickiness and renewal rates

# Why IC<sup>3</sup> Wins — Six Structural Advantages That Are Hard to Replicate

## 01 Purpose-Built for Water

Unlike generic IoT platforms or SCADA overlays, IC3 is engineered specifically for water utility operations — with domain models, KPIs and workflows that generic platforms cannot replicate.

## 02 End-to-End — Not Point Solutions

IC3 replaces 5–7 tools in one platform — from sensor ingestion to executive reporting. Point solutions solve one problem; IC3 eliminates the fragmentation that creates the problem.

## 03 AI That Explains Itself

IC3's Root Cause AI delivers plain-English explanations and ranked recommended actions — not just alerts. Engineers act on IC3 output; they require training to act on competitor dashboards.

## 04 Proven National Reference (DJB)

Deployed at Delhi Jal Board — India's most complex and largest water utility. This is not a pilot; it is a national reference implementation that demonstrates capability at full operating scale.

## 05 < 6 Month City Onboarding

Built for speed. Rapid city onboarding means shorter payback cycles for both the utility and investors. The platform scales nationally without proportional increase in implementation cost.

## 06 Government Mission Alignment

AMRUT 2.0, Jal Jeevan Mission and Smart Cities Mission create government-funded demand. IC3 is not selling technology — it is the infrastructure that enables government water mandates to be met.

# IC<sup>3</sup>

## PLATFORM

The governance infrastructure  
for India's national  
water ambition.

↓ 30%

NRW

↓ 25%

Energy

3×

Response

100%

Compliance

## The Case for Investing in IC<sup>3</sup>

- India's water crisis is not a future risk — it is today's reality
- \$2.5B annual NRW loss is recoverable with the right platform
- Government is pulling demand — \$40B+ in programme funding
- IC3 is proven at DJB — national reference, not a prototype
- 500+ ULBs represent a recurring, scalable revenue base
- 6 revenue streams per city — high-retention SaaS model
- Phase 1 demo-ready — investors see live capability now
- < 6 months to revenue per city — short payback cycles

[REQUEST AN DEMO BRIEFING](#)



# Thank You

## IC<sup>3</sup> Platform · Water Industry Challenges & Solutions · June 2026

Enhancing lives through sustainable water management — one city at a time.



### Get in Touch

Connect with our team to schedule your tailored IC<sup>3</sup> demonstration and feasibility assessment.



### Request a Demo

See IC<sup>3</sup> live — real data, real dashboards, real outcomes from our DJB reference deployment.



### Scale Your Impact

From pilot to 500+ ULBs — IC<sup>3</sup> is designed for rapid, cost-effective deployment across all city sizes.