EOI for Empanelment of Startups

Basic Details

Organization	National Productivity Council, Department for Promotion of Industry & Internal Trade (DPIIT), Ministry of Commerce & Industry
Title	Expression of Interest for Empanelment of Startups for implementation of "Shopfloor Insight & Monitoring Kit (SIM-kit)" – A Standardized Digital Twin
Bid Validity	One month from date of publication
Period of Work	Up to 31st March 2027 or completion of project whichever is later

Critical dates

Publish Date / Document download start date	24th Dec 2025
Pre-submission meeting in online mode	05th Jan 2026
Last date for submission of EoI	16th Jan 2026
Date of opening EoI	19th Jan 2026

Remarks : These services are not available on GeM

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Notice Inviting EoI for empanelment of startups

The National Productivity Council (NPC), an autonomous body, under Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, Government of India, invites Expression of Interest (EoI) from eligible startups recognized under the DPIIT Startup India program for empanelment.

MSME Commissionerate, Government of Gujarat is implementing various Strategic Investment Plans (SIPs) identified under Raising and Accelerating MSME Performance (RAMP) scheme of Ministry of Micro, Small and Medium Enterprises (MSME), Government of India in the state of Gujarat. NPC has been chosen as Implementing Agency, for SIP # 4 - Scaling up Industry 4.0 Transformation in Gujarat's Manufacturing Sector.

As part of the project, NPC aims to empanel Startups, for implementing, "Shopfloor Insight & Monitoring Kit (SIM-kit)" – a standardized digital twin (comprising of 4 standard modules), wherever applicable, for one chosen machine, in about 750 manufacturing MSME units in the state of Gujarat at a standardized cost.

Activity Schedule

Activity	Details
Publish Date / Document download start date	24th Dec 2025
Last date for sending queries	02nd Jan 2026
Email for sending queries	gandhinagar@npcindia.gov.in
Pre-submission meeting in online mode	05th Jan 2026 (Online link will be shared to the interested bidders upon email confirmation – request email to be sent on gandhinagar@npcindia.gov.in)
Last date for submission of EoI	16th Jan 2026
EoI opening date	19th Jan 2026
Document processing fees	EoI processing fees of ₹ 1,180/-, non-refundable through NEFT / IMPS
Bank Details for depositing document processing fees	Name : National Productivity Council Bank Name : State Bank of India Branch Name : GIDC Electronic Estate Address : Shed No. A-78/6/3, Sector 25, Gandhinagar, Gujarat – 382 019 Account no. : 39739716062 IFSC : SBIN0007949

Section 1 : Invitation for Expression of Interest (EoI)

1. Disclaimer

    a. National Productivity Council (hereinafter called as NPC) has prepared this Expression of Interest document (EoI Document) solely to invite prospective startups for empanelment for SIM-kit implementation in MSME units of Gujarat at standardized cost.

    b. NPC reserves the right not to proceed with the EoI based empanelment process at any stage without assigning any reasons thereof, or to alter the schedule reflected in this document or to change the process or the procedure to be applied. It also reserves the right to decline to discuss the EoI further with any party submitting the EoI.

    c. NPC will not be liable to pay / reimburse any cost/ losses/ expenses/ penalties/ damages of whatsoever nature to any person / entity submitting the EoI.

    d. The EoI document is neither an agreement nor an offer and is only an invitation by NPC to the entities that are qualified to submit their expression of interest in response to this notice for empanelment.

    e. The purpose of this notice inviting EoI document is to provide interested applicants with information to assist the formulation of their strategy for implementation of standardized digital twin solution (SIM-kit) at standardized costs in select one machine of chosen manufacturing MSME units in Gujarat.

    f. The issue of EoI does not imply that NPC is bound to select an agency.

    g. While NPC has taken due care in the preparation of information contained herein and believes it to be accurate, neither NPC or its employees give any warranty or make any representations, express or implied as to the completeness or accuracy of the information contained in this document or any information which may be provided in association with it.

    h. This information is not intended to be exhaustive and interested parties are required to make their own inquiries in order to submit the EOI. The information is provided on the basis that it is non–binding on NPC or any of its employees.

2. Introduction

    a. National Productivity Council (NPC) is a tri-partite, not-for-profit, autonomous body under Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India.

    b. Established in 1958, it has a national mission to promote the cause of productivity in all sectors of economy and to achieve all round economic development of the country.

c. Minister for Commerce and Industry, acts as the President and Secretary, DPIIT acts as the Chairman of the NPC.

d. NPC undertakes research in the area of productivity, provides consultancy and training services in areas of Industrial Engineering, Agri-Business, Economic Services, Quality Management, Human Resources Management, Information Technology, Technology Management, Energy Management, Environmental Management etc., to the Government and Public & Private sector organizations through twelve regional offices spread across the country and corporate Head Quarters at New Delhi.

e. NPC is a constituent of the Tokyo-based Asian Productivity Organisation (APO), an Inter-Governmental Body of which the Government of India is a founding member.

f. Considering the importance of MSMEs in fostering entrepreneurship, steering economic growth, and generating large employment opportunities, the Ministry of MSME, Government of India, designed and launched a new Central Sector Scheme, namely 'Raising and Accelerating MSME Performance (RAMP)', supported by the World Bank.

g. The scheme has two Key Result areas, Strengthening institutions & governance of MSME programs and Support for market access, firm capabilities and access to finance.

h. Each state / Union Territory designed their own Strategic Investment Plans (SIPs) to achieve these broad objectives. MSME Commissionerate, Government of Gujarat, accordingly, designed SIPs for the state of Gujarat.

i. NPC has been identified as the Implementing Agency for SIP Project # 4 i.e. 'Scaling up Industry 4.0 Transformation in Gujarat's Manufacturing Sector'

j. As part of the project, NPC aims to empanel Startups, for implementing, standardized Shopfloor Insight & Monitoring kit (SIM-kit) (comprising of 4 standard modules), wherever applicable, for one chosen machine, in about 750 manufacturing MSME units in the state of Gujarat at a standardized cost. The chosen MSME units would cover various sectors and the geographical spread of the state.

3. Objective

NPC invites Expression of Interest (EoI) from Indian companies / firms (Applicants) registered under DPIIT's Startup India program having prior experience of digital twin / IIoT implementation in MSME sector.

4. Instructions for online proposal submission

    a. The agencies are required to submit their responses to this EoI-document by email to gandhinagar@npcindia.gov.in with subject format "EoI-SIMkit-<Startup name>". Foldered zip submission is allowed.

    b. The prospective agencies should take into account any corrigendum published regarding this EoI document before submitting their proposals

    c. The following documents should be submitted in PDF format with EoI-document

        i. Copy of the on-line transaction receipt towards payment of document processing fees of INR 1180/- (Rupees One Thousand One hundred eighty Only) to NPC.

        ii. Covering letter as per format given in Annexure A.

        iii. Duly filled proposal documents with proper seal & signature of the authorised person with name, designation, email ID & contact number along with the authority letter, as per the format given in Annexure B.

        iv. A copy of Certificate of Incorporation, Partnership Deed/Memorandum and Articles of Association or any other equivalent document showing date and place of incorporation, as applicable.

        v. Copies and documents in support of General eligibility criteria stipulated at para 2(a) of Section – II of this document.

        vi. Organizational Details, as per Annexure – C.

        vii. Experience of Organization : Annexure – D.

        viii. Land Border sharing declaration : Annexure – E.

        ix. Self-Declaration Certificate for Non-Blacklisting : Annexure – F.

        x. Confidentiality & Non-Disclosure Agreement : Annexure – G.

        xi. The copies of PAN, TAN, as applicable.

        xii. The copies of GST registration certificate/s.

        xiii. Copies of documents in support of other credentials like DPIIT certificate, ISO Certification, awards won, professional membership, etc.

        xiv. Other documents necessary in support of eligibility criteria and/ or credential of the prospective agency

NPC reserves the right to reject the submission if any of the above listed document/s is not submitted.

(End of Section I)

Section 2 : Instructions to agencies

1. Period of Engagement

   The period of Engagement for empanelled agencies would be up to completion of implementation in 750 units, i.e. tentatively up to Mar 2027.

2. General Eligibility Criteria
   a. Startups registered under the CA 2013 or under section 59 of Partnership Act 1932 or under the LLP Act 2008, in India. Copy of Certificate of Incorporation/ Registration/ Partnership Deed or any other relevant document, as applicable, should be submitted along with a copy of address proof.
   b. Startups should be registered with DPIIT Startup India and submit certificate.
   c. Startups should have a functional office in the state of Gujarat.
   d. The bidder should have a valid PAN and GST Registration (copy of PAN card and GST Registration Certificate should be submitted in the bid).
   e. Detailed technical profiles of the proprietor/ directors/ partners/key employees of the bidding firm, demonstrating their expertise and experience in the relevant domain, to establish the bidder's domain competency for participation in the EoI. Proof of implementation of Digital Twin solutions in MSMEs.
   f. The bidder shall submit an undertaking on their letterhead stating that: "In reference to the Government of India, Ministry of Finance, Department of Expenditure, Office Memorandum No. F.No. 6/18/2019-PPD, Dated 23-07-2020. I hereby submit that; we have read the Clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. We are from such a country and have been registered with the competent authority. The copy of the valid registration certificate is enclosed. OR
   We certify that we are not from such a country or the beneficial owner is not from such a country, or we will not subcontract any work to a contractor from such countries.
   g. Proof of PF registration to be submitted by the bidder, if the bidder comes under PF.
   h. The bidder should not be insolvent, in receivership, bankrupt or being wound up, not have had their business activities suspended and not be the subject of legal proceedings for any of the foregoing. An undertaking by the bidder should be submitted.
   i. The bidder should not be blacklisted/debarred/banned/restricted by any Union Govt./State Govt. /PSU as on the date of submission of the Bid.
   j. Bid by Consortium is not allowed.

Note: The prospective agencies (Bidder) should provide sufficient documentary evidence to support the eligibility criteria. NPC reserves the right to reject any proposal not fulfilling the eligibility criteria

3. Amendment to EoI document

   At any point before the deadline for submission of documents, NPC may, for any reason, whether on its own initiative or in response to clarification request by a prospective agency, modify the EoI document. The amendments to EoI would be shared on NPC website.

4. Technical Presentation

   Subsequent to submission of documents, the evaluation committee of NPC, may ask the eligible prospective agencies to give a detailed presentation (20 min max followed by Q&A) **in online mode**, covering following points.

   a. Company profile and nature of activities.
   b. Knowledge, skills, experience and expertise in the area of Digital Twin / IIoT, particularly in cross-sectorial MSMEs. (primary focus)
   c. Achievements / awards won etc.
   d. Methodology / Plan for rendering services.
   e. Implementation experiences of Digital Twin / IIoT in MSMEs. Problems faced and how they were resolved.

5. Other points
   a. NPC reserves the right to cancel this EoI without assigning any specific reasons.
   b. NPC reserves the right to reject any submission, in case prospective agency is found to have utilized corrupt or fraudulent practices while empanelment against this EoI.
   c. NPC reserves the right to reject any submission, in case prospective agency is known to have used any undue influence.
   d. The startup and / or their personnel shall not, disclose any proprietary or confidential information relating to the MSME unit, contract or NPC's services without the prior written consent from NPC or MSME, as the case may be.
   e. Force Majeure – NPC may relax timelines and / or deliverables, if the delay in implementation / performance is due to Force Majeure. Force Majeure is defined as an event of effect that cannot reasonably be anticipated such as acts of God (like earthquakes, floods, storms etc.), acts of states/state agencies, the direct and indirect consequences of wars (declared or undeclared), hostilities, national emergencies, civil commotion and strikes at agency's premises or any other act beyond control of the agency.
   f. Arbitration – NPC and the startup, will make every effort to resolve any issue amicably, by direct negotiation, any disagreement or dispute arising between them under or in connection with the allotted work. If any dispute arises between the parties, will be referred to arbitrator appointed by Director General, NPC, and the award of arbitrator will be final and binding on both the parties. Such arbitration will be governed by the provisions of Indian Arbitration Act 1996.

g. In case of any dispute or legal matter related to this EOI or subsequent empanelment or during the execution of project, the same shall be subject to the exclusive jurisdiction of the competent courts in Gandhinagar, Gujarat, India

(End of Section II)

Section 3 : Scope of services

1. Broad steps
    a. NPC will develop Organizational Readiness and Maturity Assessment Tool for carrying out Diagnostic Studies in MSME units.
    b. NPC will raise awareness regarding Industry 4.0 through Roadshows in the state.
    c. NPC will utilize digital and print media for raising awareness regarding Industry 4.0 in MSME units.
    d. NPC will develop a portal for registration of interested MSME units, and logins for MSME units, assessors, implementing startups.
    e. NPC along with partner organizations would carry out Diagnostic assessment of registered MSME units, in which among other things, machine for implementation will be identified.
    f. NPC will allot MSME unit to implementing startup, based on a set criterion, which will depend upon number of empanelled startups.
    g. Startup will implement standardized solution (see point 2 below) on chosen machine and prepare a use-case (standard format) and upload on portal after implementation.
    h. Startup will be paid ₹ Fifty Thousand only (₹ 50,000 /-) including GST for each MSME unit (one chosen machine).
    i. Startup would be responsible for proper running of the solution for a period of 12 months from the date of installation. (see point 3 below)
    j. Based on successful implementation on one machine and ensuring satisfaction of the MSME unit, Startup and MSME unit may join together for further implementation in remaining machines. Though, this would be outside the scope of present project, startups would be expected to keep on uploading unique use-cases, which would go a long way in guiding other MSMEs to take up Industry 4.0 implementation at a later date. This would also result in a win-win ecosystem developing between MSMEs and startups in the field of Industry 4.0.

2. Scope of solution – Shopfloor Insight & Monitoring Kit (SIM-kit) [Standardized Digital Twin] of machine / asset for MSMEs
    a. Purpose and coverage

        This section defines the functional scope and non-functional requirements for an SME-ready Digital Twin of Machine/Asset solution. It specifies what the solution shall do (capabilities, performance, interoperability) while avoiding vendor-specific designs. Vendors may implement proprietary hardware/firmware/software that conforms to this scope.

    b. Definitions and abbreviations

        Digital Twin (DT): Live digital representation of a machine/asset, including state, parameters, events, and KPIs.

        SIM-kit : Shopfloor Insight & Monitoring kit [A standardized Digital twin solution for this project implementation]

        Edge (IoT Data Meter/Gateway): Industrial device that interfaces with machines/sensors, performs local processing, and securely transmits data to cloud/on-prem.

        OEE: Overall Equipment Effectiveness (Availability × Performance × Quality).

        SEC: Specific Energy Consumption (kWh per unit/meter/kg), domain-configurable.

        HMI/PLC: Human–Machine Interface / Programmable Logic Controller.

        ToD: Time-of-Day tariff.

        MTBF/MTTR: Mean Time Between Failures / Mean Time To Repair.

    c. Reference Architecture (Hybrid Edge + Cloud)

        Goal: Low-latency visibility, resilient data capture, secure and scalable analytics.

        Components: IoT Data Meter (Edge): Interfaces with modern (PLC/HMI, Modbus/OPC-UA/Ethernet) and legacy/manual machines (sensors). Provides time-stamped data, local buffering, and rule-based event detection.

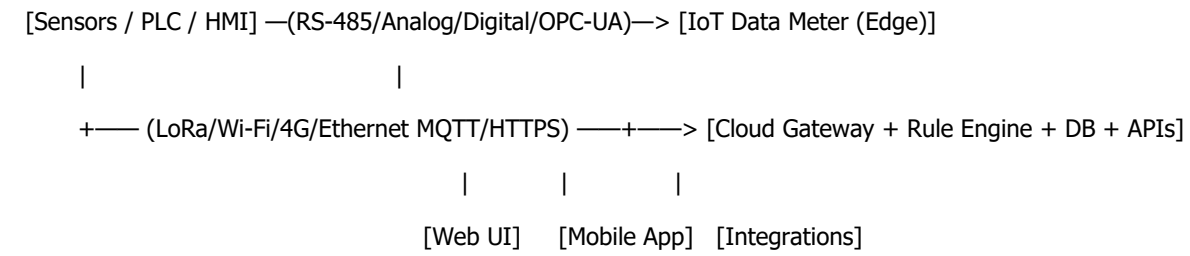
        Connectivity Layer: RS-485, Ethernet, Wi-Fi, Cellular (4G/LTE), LoRa/NB-IoT. Automatic network fallback; secure MQTT/HTTPS transport.

        Cloud / On-Prem Gateway: Device registry, ingestion, storage, stream processing, rule engine, analytics, and API services.

        Visualization: Web dashboard + Mobile App (Android/iOS) for live views, manual inputs, alerts, and maintenance workflows.

Integrations: WhatsApp Business/API, Email, SMS, Webhooks, REST/GraphQL API for ERP/MES/SCADA/CMMS.

(Textual Diagram)



d. Machine Compatibility

The solution shall support both modern and legacy equipment:

i. Modern machines: Modbus RTU/TCP, OPC-UA, or Ethernet-based HMI/PLC data access (cycle count, speed, statuses, energy where provided).
ii. Legacy/manual machines: Retrofit via external sensors (e.g., current clamp, voltage tap via transducer, proximity/inductive, optical counter, vibration, temperature, pressure, flow, encoder/pulse) mapped to runtime/production signals.
iii. Configurable Sensor Library: Prebuilt templates for common sensors with range, scaling, debouncing, smoothing, and calibration parameters.

e. Functional Modules

i. Module A – OEE & Production Performance

Purpose: Compute and visualize OEE (or OEE-lite where Quality is not electronically available) with production context.

Requirements:

Data Ingestion:

Cycle count, part count, length/weight (configurable), machine state (RUN/IDLE/STOP), speed/RPM where available.
Manual entry support for Quality (Good vs Rework/Scrap) when automation is absent.

Computation:

Availability = (Run Time) / (Planned Time – Planned Breaks)

Performance = (Actual Output ÷ Theoretical Max Output) or (Ideal Cycle Time × Output) ÷ Run Time

Quality = Good Output ÷ Total Output (optional via manual input)

OEE = Availability × Performance × Quality

KPIs & Views: Utilization %, Output/Shift, Idle %, Changeover counts & duration, Top loss categories, Operator/Shift leaderboard.

Visualization: Machine timeline (24h/shift), trend charts (day/week/month), Pareto for losses, drill-downs by machine/line/operator.

Reports: Shift/Daily/Weekly OEE summaries with CSV/PDF export.

ii. Module B – Energy Monitoring

Purpose: Per-machine energy and power quality visibility; compute SEC and detect anomalies.

Requirements:

Measurements: Voltage (LL/LN), Current (per phase), kW, kWh, PF. Accuracy per vendor implementation; configurations must capture CT/VT ratios.

Derived Metrics: SEC (kWh per unit/meter/kg), Base-load detection, Demand peaks, PF deviation, Phase imbalance.

Tariff/ToD: Configurable tariff structure; cost estimation in reports; day/shift overlays.

KPIs & Views: Energy trend (kWh), power demand (kW), PF gauge, night base load, SEC trend and benchmarking across machines.

Alerts: Idle energy > threshold, PF < threshold, sudden spikes, persistent base-load.

iii. Module C – Down time analysis

Purpose: Track and analyse downtime with reason codes; combine auto-detection with shop-floor inputs.

Requirements:

Detection: Automatic state transitions (RUN→IDLE/STOP) by logic; adjustable debounce/thresholds.

Reason Tagging: Auto-tag from HMI/PLC reason codes when available. Manual tagging via Mobile App/Web UI (operator-friendly forms).

Taxonomy: Configurable categories: Mechanical, Electrical, Tooling/Changeover, Material Shortage, Manpower, Planning, Power Outage, QA Hold, etc.

KPIs & Views: Downtime %, frequency, MTBF, MTTR, Top-10 reasons (Pareto), duration timelines.

iv. Module D – Maintenance & Condition Monitoring

Purpose: Plan, execute, and track preventive/predictive maintenance.

Requirements:

Preventive Maintenance (PM) Scheduling: Based on runtime hours, calendar period, or output count. Auto task generation and reminders.

Execution: Checklist, photos/attachments, spare parts note, assignment to technician, status (Open/In-Progress/Done), e-sign.

Condition Monitoring (CM) (Predictive): Vibration trend capture (overall RMS, optionally band-limited), temperature trend, threshold alerts. Startup may integrate basic health indices.

KPIs & Views: PM adherence %, overdue %, repeated failures, condition trend charts.

f. Web Dashboard (Visualization Layer)

General: Responsive web application with RBAC and audit logging.

Pages/Sections:

Overview: KPI tiles (Utilization, Output, Energy cost, Idle loss estimate), machine status timeline (24h), quick insights, export.

Machines/Lines: Tabular live status, filters (shift, operator, product), timeline, drill-downs.

Energy: kW/kWh/PF graphs, ToD overlays, base-load detector, SEC comparison.

Downtime: Reason tagging UI, Pareto, MTBF/MTTR charts.

Maintenance: Calendar, task list, equipment registry, condition trends.

Reports: Shift/Daily/Weekly reports (PDF/CSV), scheduled email.

Admin: Users & roles, machines & mappings (Modbus registers/sensor configs), shifts, tariffs, alert policies, localization.

Exports: CSV (raw & KPI), PDF (report snapshots), JSON (API).

g. Mobile Application (Android / iOS)

Purpose: First-line, on-floor tool for operators, supervisors, and technicians.

Capabilities:

Live View: Per machine status, basic KPIs, alert feed.

Manual Inputs: Quality counts (Good/Scrap), downtime reason tagging, notes/photos.

Maintenance: Work orders, checklists, close-out with signature, photo uploads.

Push Notifications: Alerts (idle > X min, spikes, PF low), PM reminders.

Offline Mode: Queue entries when offline; safe re-sync with conflict resolution.

Onboarding: QR code scan to join factory/asset; role-based access.

Localization: Multi-language UI (configurable by factory).

Deep Links: Tap WhatsApp/email alert → open target machine in app.

h. Integration and notification

Channels:

WhatsApp Business API: Alert messages, daily summaries (subject to customer API account/policies).

Email: Scheduled reports, high-priority alerts.

SMS (optional): For critical alarms in low-data contexts.

Webhooks: POST alert/events to third-party endpoints (ERP/MES/CMMS ticket creation).

Enterprise Integrations (APIs):

REST/GraphQL: Authenticated access to telemetry, KPIs, assets, alerts, and maintenance objects.

Inbound Connectors: CSV/JSON import for master data (machines, shift calendars, tariff tables, reason codes).

SCADA/MES/ERP: Integration via REST/webhooks; Modbus/OPC-UA at edge where applicable.

Alert Engine:

Rule types: threshold, rate-of-change, windowed conditions (e.g., idle > 30 min), composite rules (PF<0.85 AND kW>5 for 15 min).

Actions: in-app, push, WhatsApp, email, SMS, webhook.

Policies: severity, deduplication, throttling, escalations, on-call rotation.

i. Data, Time and Quality

Timestamping: Edge shall time-stamp samples; NTP synchronization with local clock fallback.

Sampling: Configurable; defaults per channel (e.g., 1–10 s for states, 1–60 s for energy/power; aggregated 15-min windows for demand).

Buffering: Edge shall buffer min. 24–48 h data during connectivity loss; guaranteed ordered delivery on reconnection.

Data Model (illustrative JSON):


```
{
  "ts": "2025-10-31T10:24:00Z",
  "asset_id": "PIPEMILL-02",
  "state": "RUN",
  "kW": 6.8,
  "kWh_delta": 0.028,
  "pf": 0.93,
  "counts_delta": 4,
  "length_m_delta": 7.2,
  "quality": { "good_delta": 4, "scrap_delta": 0 },
  "vibration_rms": 1.2,
  "supply": { "v_ll": [402, 404, 401], "i_a": [8.4, 8.7, 8.2] }
}
```


j. Security & Privacy

Transport Security: TLS 1.2+ for MQTT/HTTPS; device certificates or token-based auth.

Access Control: RBAC (Admin/Manager/Operator/Technician/Observer), per-factory tenancy.

Data Protection: Minimal PII; encryption at rest (cloud DB, backups). Audit log for admin actions.

Device Security: Signed firmware, OTA with integrity checks, secure boot (where supported). Disable unused ports/services.

Compliance: Follow applicable Indian data protection guidelines; provide data residency options if requested.

k. Performance and non-functional requirements

Uptime Target (service): ≥ 99.0% monthly for pilot; roadmap to 99.5%.

Latency: Live tiles ≤ 5 s from edge to dashboard under normal conditions.

Scalability: Per tenant: ≥ 50 machines, ≥ 100 alerts/day, ≥ 1 year data retention (configurable).

Report Generation: ≤ 60 s for daily/weekly standard reports.

Browser Support: Latest Chrome/Edge/Firefox; responsive layout down to 1280×720.

l. Device (Edge) Requirements

Interfaces: Min. 1× RS-485 (Modbus), 4–8× DI, 2–4× AI (4–20 mA/0–10 V), 1× Ethernet; cellular or Wi-Fi option.

Power: 24 VDC (typ), surge protected; tolerance 18–36 V.

Enclosure: DIN-rail or small IP-rated enclosure appropriate for industrial panels.

Environment: 0–55 °C operating; 5–95% RH non-condensing (typical SME conditions).

Clock: RTC with battery backup; NTP sync on network.

Storage: Local buffer sufficient for ≥ 24–48 h at configured sampling rates.

Indicators: Status LEDs; optional small HMI for commissioning.

OTA: Remote upgrade of firmware/config; rollback on failure.

m. Configuration and commissioning

Templates: Sensor and Modbus templates per common machine families (e.g., compressors, pumps, presses, welders, tube mills).

Guided Setup: Wizard in Web/Mobile for asset creation, channel mapping, CT/VT ratio, unit scaling, timebase, shift calendar.

Validation: Live preview (test read) of registers/sensors; threshold sanity checks.

Change Management: Versioned configs with audit.

n. Reporting and analytics

Standard Reports:

OEE Summary (shift/day/week) with Availability/Performance/Quality breakdowns.

Energy & Cost (kW/kWh/PF, ToD overlays, SEC by asset).

Downtime Pareto (Top reasons, durations, MTBF/MTTR).

Maintenance (PM adherence, overdue, repeated failures).

Scheduling: Email/WhatsApp PDF snapshots to role lists at configured times.

Ad-hoc Export: CSV with filters (date range, asset, shift, operator).

o. Acceptance Test (Illustrative Cases)

i. OEE & Production

Auto Counts (Modern Machine): Inject Modbus test data: 120 parts in 4 hours, planned 5 h with 30 min break. Expected: Availability≈(4/4.5)=88.9%, counts=120; OEE computed.

Manual Quality Input: Enter Good=95, Scrap=5; Expected: Quality=95/100=95% applied to OEE.

Timeline State Changes: Simulated RUN/IDLE/STOP with 5-min granularity; Expected: chart accuracy and utilization tile updates within 5 s.

ii. Energy

SEC Calculation: kWh=50 over shift, parts=200 → SEC=0.25 kWh/part; Expected: displayed in Energy and Overview.

PF Alert: PF dips <0.85 for 20 min; Expected: High-severity alert via in-app + WhatsApp (Wherever enabled).

Base-load Detection: Night kW >1.5 for ≥3 hours; Expected: Insight card with monthly cost estimate.

iii. Downtime

Auto Downtime: RUN→IDLE > 10 min triggers "downtime" event; Expected: requires reason tag; if none after 2 min → reminder push to operator.

Reason Taxonomy: Select "Material Shortage"; Expected: reflected in Pareto and report.

iv. Maintenance

PM Scheduling: Runtime exceeds 250 h threshold; Expected: PM task auto-created, technician notified.

Vibration Trend: Simulate step increase of RMS by 40%; Expected: "Condition warning" alert and trend plot.

Mobile App

Offline Entry: Submit downtime tag without network; Expected: queued and synced on reconnection with correct timestamping.

Deep Link: Tap WhatsApp alert → lands on exact machine screen in app.

v. Integrations

Webhook: On "PF low" alert, POST payload to CMMS endpoint; Expected: ticket created, ID stored in alert record.

p. Roles and Access (RBAC)

Admin: Full access; manage users, assets, policies.

Manager: View all data; create reports; approve maintenance.

Operator: Live machine view; submit quality/downtime entries.

Technician: Maintenance tasks; condition data.

NPC: Read-only cross-factory summary (when applicable), anonymized KPIs.

q. Data Retention and residency

Retention: Raw high-frequency data ≥ 90 days; aggregated KPIs ≥ 12 months (configurable).

Residency: India-hosted cloud preferred; on-prem option acceptable when requested by SME

r. SLA and support (for Pilot Context)

Provisioning: ≤ 2 hours per factory (1 machine demo) after hardware installation.

Incident Response: Within 1 business day for P2, same day for P1 (critical data loss/outage).

Training: 2-to-3-hour session for operators/managers; quick-start guides provided.

s. IP & neutrality

This scope defines functional behaviours and interfaces. Vendors retain IP for specific hardware designs, firmware, algorithms, and dashboard implementations while conforming to this scope. NPC will not publish vendor-specific internals

t. Examples

i. Example ToD Tariff JSON

```
{
  "currency": "INR",
  "periods": [
    {"name": "Off-Peak", "from": "22:00", "to": "06:00", "rate": 6.00},
    {"name": "Normal",   "from": "06:00", "to": "18:00", "rate": 8.50},
    {"name": "Peak",     "from": "18:00", "to": "22:00", "rate": 10.00}
  ]
}
```

ii. Example Downtime reason code

M01 Mechanical – Bearing/Seal
E03 Electrical – Overload/Overheat
T02 Tooling – Changeover
O01 Operations – No Order
MTR Material – Shortage/Delay
QA1 Quality – Hold/Rework
POW Power – Utility/Panel

iii. Minimum telemetry fields

ts, asset_id, state, counts_delta/length_m_delta/weight_kg_delta, kW, kWh_delta, pf, optional vibration_rms, temp_c.

3. Terms of implementation, Service and Commercials
    a. Scope of Supply (per MSME – single machine pilot)
        i. Hardware and Edge
            - Industrial IoT gateway (DataMeter) with Modbus RTU/TCP + sensor I/O (DI/AI/pulse). Min. 1× RS-485, 2× DI, 1× AI (4–20 mA/0–10 V) (DI/AI/pulse).
            - Standard sensor pack (as applicable to the machine): energy interface, run/stop sensing, count/speed, optional vibration/temperature.
            - DIN rail mounting/Small panel, power supply, cabling, RS 485 wiring, panel integration (non-invasive where possible).
        ii. Software and Cloud
            - Secure device onboarding; multi-tenant cloud workspace; role-based web dashboard.
            - Mobile app / PWA for live KPIs, downtime reason capture, maintenance tasks.
            - Alerts (email; WhatsApp Business optional), scheduled PDF/CSV reports, data export.
        iii. Commissioning and Hardware
            - Site survey & tag mapping (HMI/PLC registers or sensor mapping).
            - Calibration & validation with machine counters/energy meter.
            - Operator & supervisor training; laminated quick start; acceptance checklist.
    b. Service Term (included) – 12 months from site acceptance
        i. Included in the first year
            - Hosting: multi-tenant cloud (production), time series storage, backups.

- Connectivity: internet charges for device connectivity (Wi Fi or cellular as feasible) under fair use.
- Support Window: remote support during business hours (see Section 3(d) – SLA).
- Maintenance: security patches, minor feature updates, OTA firmware updates, rules tuning.
- Monitoring: device heartbeat, data gap detection, alert rule health.

ii. Excluded

- Physical damage/misuse, electrical surges beyond rated protection, civil/electrical works, new sensor additions after commissioning (chargeable), on-prem server requests.

c. Post year subscription (Month 13th onwards)

i. Startup / solution provider to continue services based on agreement with MSME unit.

ii. Price : Up to ₹ 499 + applicable taxes.

Inclusions : hosting, routine OTA updates, remote support (business hours), internet/SIM charges under fair-use, continued access to dashboards, alerts & standard reports.
Billing : Monthly or annual with discounts as applicable.
Upgrades : additional sensors/analytics/WhatsApp Business API billed as add-ons.

d. Service levels (SLA)

Support hours : 09:00–19:00 IST, Monday–Saturday (excluding national holidays).
Channels : support portal/email/phone; remote session via approved tools.

i. Severity & Targets

- Sev 1 (System Down / No Data): First response within 4 business hours; workaround within 8 business hours; target resolution 24–48 business hours (on site if required).
- Sev 2 (Major Function Degraded): First response 8 business hours; target resolution 3 business days.
- Sev 3 (Minor / How to / Report tweak): First response 1 business day; resolution 5–7 business days.

ii. Availability Objectives (non-penal)

- Cloud service uptime ≥ 99.0% monthly (excluding upstream IaaS force majeure).
- Device telemetry availability ≥ 95% (subject to site power/network conditions).

e. Warranty (Hardware)

i. 12 month limited warranty against manufacturing defects from Site Acceptance Date.
ii. DOA unit replacement within 7 days of commissioning; otherwise, repair/replace at startups' discretion.
iii. Exclusions: incorrect wiring, over voltage/surges, ingress, mechanical abuse, modifications, unauthorized repairs.

f. Data ownership, privacy and security
   i. Data Ownership: MSME owns its machine data; startups act as processor for hosting & analytics.
   ii. Access & Export: CSV/PDF exports; additional API access available on request.
   iii. Retention: active subscription — full history retained per program policy; on cancellation — data export available and portal access suspended after a defined retention period (90 days).
   iv. Security: TLS secured transport, device auth, RBAC in application, audit logs for admin actions

g. Commercials
   i. Startups will be paid ₹ Fifty Thousand only (₹ 50,000 /-) including taxes for one machine per MSME units.
   ii. Coverage : hardware kit, installation, 12-month hosting & internet, support, training, analytics & acceptance and preparation of use-case in standard format.
   iii. In total one machine implementation in 750 MSME units, spread across Gujarat districts and various sectors, has to be undertaken.
   iv. As far as possible, startups would be allotted MSME units in geographical clusters, so as to minimise their travel, B & L expenses.

(End of Section III)

Annexure A : Covering Letter

(To be submitted in original – on letter head)

Date :

To,

The Regional Director,
National Productivity Council,
E-5, GIDC Electronic Estate,
Sector 26 GIDC, Gandhinagar – 382 028
Gujarat, India

Subject : Submission of EoI for empanelment of Startups for implementation of SIM-kit

Dear Sir,

We hereby submit our documents in response to EoI No. NPC/IE/C11/580/25-26 published on 24th Dec 2025

Please find enclosed herewith the following documents, as required.

1. Authority Letter : Annexure B
2. Copy of certificate of incorporation or equivalent
3. Copy of Startup Registration with DPIIT
4. Copies of PAN / TAN / GST
5. Organization details : Annexure C
6. Experience of Organization : Annexure D
7. Land border sharing declaration : Annexure E
8. Self-declaration for not-blacklisting : Annexure F
9. Other documents

We hereby declare that all information and statements are true.

We would agree to abide by all the terms and conditions of EoI document.

We understand you are not bound to accept any bid you receive.

Sincerely yours,

(Signature of Authorised person)

(date) (Full Name)

(designation) / stamp

Email / Mobile

Annexure B : Authority Letter

(To be submitted in original – on letter head)

Date :

To,

The Regional Director,
National Productivity Council,
E-5, GIDC Electronic Estate,
Sector 26 GIDC, Gandhinagar – 382 028
Gujarat, India

Subject : Authority Letter

Reference : EoI document no NPC/IE/C11/580/25-26 dated 24th Dec 2025

Dear Sir,

I, Mr. / Ms. _____ (Name), _____ (designation) certify that, we, M/S _____ (org name) having registered address at _____ (reg address) herewith submit our documents against subject and reference cited above.

Mr. / Ms. _____ is authorized to sign and submit this bid on our behalf, against the EoI.

Sincerely yours,

(Signature of Competent Authority)

(date) (Full Name)

(designation) / stamp

Email / Mobile

Annexure C : Organization Details

Sno.	Particulars	Details
1.	Name of the agency	
2.	Name, designation, e-mail and mobile number of contact person	
3.	Registered Office / Head Office address	
4.	Address of Office in Gujarat	
5.	Website	
6.	DPIIT registered startup certificate number	
7.	Organizational Chart	
8.	Number of technical personnel	
9.	Any other information	

(Signature of Competent Authority)

(date) (Full Name)

(designation) / stamp

Email / Mobile

Annexure D : Experience of the agency (Last 5 years)

Sno.	Client Organization + Contact details + Attach work-order / completion certificates separately	MSME / non MSME	Project details Start date, end date, present status

(Signature of Competent Authority)

(Full Name), (designation)

Date / stamp

Annexure E : Certificate / Undertaking

(To be submitted in original – on letter head)

Date :

To,

The Regional Director,
National Productivity Council,
E-5, GIDC Electronic Estate,
Sector 26 GIDC, Gandhinagar – 382 028
Gujarat, India

Dear Sir,

We hereby certify that the Services being offered by us vide our proposal, comply with the provisions of order No. Order No P-45021/2/2017-PP (BE-II), dated 16th Sept 2020 in line with Class-I/Class-II Local supplier issued by Public Procurement Division, Department for Promotion of Industry and Internal Trade, Ministry of Commerce & Industry, GoI.

We have read the clause mentioned in Order (Public Procurement No. 4) No.F.No.7/10/2021-PPD(1) of Public Procurement Division, Department of Expenditure, Ministry of Finance dated 23rd Feb 2023 and further Order/Oms regarding restrictions on procurement from a bidder of a country which shares a land border with India.

In view of this, we also certify that,

We are not from a country sharing land border with India and any registration as

mentioned in said OM is not applicable to us.

For (Name of Bidder)

Authorised Signatory

(Name & Signature)

(Company's Seal)

Annexure F : Self certification

(To be submitted in original – on letter head)

Place :

Date :

To,

The Regional Director,
National Productivity Council,
E-5, GIDC Electronic Estate,
Sector 26 GIDC, Gandhinagar – 382 028
Gujarat, India

Subject : Non-blacklisting certificate

Reference : EoI document no NPC/IE/C11/580/25-26 dated 24th Dec 2025

Dear Sir,

We confirm that our {company or firm or entity}, _____, has not been banned/debarred/blacklisted in any manner by any of the State/Union Territory/ Central Government of India or any other government organization on any ground including but not limited to indulgence in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice.

We also confirm that there is no enquiry going on by CBI/ED/any other Government agency against us.

(Signature of Competent Authority)

(date) (Full Name)

(designation) / stamp

Email / Mobile

Annexure G : Confidentiality & Non-Disclosure Agreement

This agreement is entered into on _____ day of _____ month in the year _____

Between

National Productivity Council, 5-6 Institutional Area, Lodhi Road, New Delhi, represented by its Regional Directorate at E-5, GIDC, Electronic Estate, Sec 26 GIDC, Gandhinagar, an autonomous body under Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, Government of India

And

M/s _____, situated at _____

Of the other part.

M/s _____ further agrees as follows:

1. To protect confidential information, received from NPC or Government of Gujarat or participating MSME unit. All such information shall remain property of the participating MSME unit or NPC or Government of Gujarat, as the case may be.
2. Neither party shall disclose to any third party any confidential information of the other party, which is acquired during activities related to this empanelment, without the prior written consent from the other party.
3. The confidentiality obligations herein will not apply to information in the public domain, information in the possession of receiving party prior to signing this agreement, information that is independently developed prior to this agreement, information required to be released by law, information that is rightfully received from third party without any breach of confidentiality obligations.
4. The Intellectual Property rights, for all reports, material, and other documents prepared during this empanelment, shall vest with the MSME Commissionerate, Government of Gujarat.

In witness whereof, the parties have caused the agreement to be executed as of the date set forth above.

For and on behalf of _____	For and on behalf of _____
Sig:	Sig:
Name :	Name :
Title :	Title :
Place :	Place :

Witness :
Signature :
Name and Title :

(**End of Document**)