## **EXPRESSION OF INTEREST**

BEML, H&P DIVISION, K.G.F invites EXPRESSION OF INTEREST from prospective vendors with expertise and track record of success in:

Design, Development, Implementation and Sustenance of Industry4.0 tools, technology, applications and solutions for CNC machines with FANUC and SIEMENS controls.

High level requirements:

- 1. Validate IIOT readiness and compatibility for 70 CNC machines (available at H&P Division, BEML, K.G.F) with Fanuc & Siemens control.
  - a. List of pre-requisite as scope of BEML's readiness to implement the system to be proposed.
- 2. Operations Management System for above CNC machines should provide
  - a. Real time Insights of Process and production activity with processed graphical representation on dashboards (For cycle time, setup time, downtimes with reasons, parts count, scrap parts with reasons etc)
  - b. Analytics of data captured to generate periodic reports and dashboards for machine/s **OFF**
- 3. Maintenance Management System for above CNC machines should provide
  - a. Real time information of machine parameters / status on dashboards
  - b. Instant alarms & notifications for the issues/break downs
  - c. Analytics of data captured to generate periodic reports and Real time dashboards /Reports for **machine availability**, Idle time, break down alarms, maintenance schedules, critical element health and Alerts etc.
- 4. Hardware and Software System infrastructure with IIOT Platform specifications to Design, Develop, implement and sustain the systems as stated in point no 2 and 3
  - a. Solution must be "On premise" (Not cloud based)
  - b. Solution must meet Cyber security compliance.
  - c. Human Machine Interface CNC machine level.
  - d. Ability to provide reports and dashboards on devices like mobile phones/ pads with dedicated mobile Apps.
- 5. Scope for Expansion in Future :
  - a. Openness, flexibility & scalability to cover and integrate Conventional machines / Assets
  - b. Extending the services in future to various locations of BEML plants at Bangalore, Mysore and Palakkad.
  - c. Provision for data exchange and Integration with SAP and PLM systems for accessing Production plan & work orders from SAP, 2D/3D drawings/models, Quality plans and process plans (Work instructions)and NC programs.
- 6. Details to be provided after study:
  - a. Roadmap with timelines for implementation in phases -
  - b. Phase 1 -Implementation for maximum 25 CNC IIOT ready machines
  - c. Feasibility report with Phase wise budgetary quotes with Cost benefit and risk analysis.
- 7. Contact person Mr. Ramesh, DGM Facility Planning, H & P division Contact No 9449993260 Email ID – he@beml.co.in

## EOI closing date and time - 25.03.2020 @ 16:00 hrs.

Note: Interested vendors may to visit BEML H&P division, KGF complex to understand the Requirements.