INDUSTRY PRODUCT CATALOG

Manufacturing

Vortex ProductionPulse

From customer schedule to shipped part, without the Excel in between

Planning, shop-floor, quality and compliance modules for component makers, fabricators and engineering MSMEs. Run any module on its own beside your current ERP or accounting software, or combine them into one integrated plant.



WHAT WE HEAR FROM OPERATORS EVERY WEEK

- Customer schedules change every week and the plan is rebuilt in Excel every morning
- Material shortages are discovered at the machine, not at planning
- Material lying with job workers is tracked in notebooks, turning GST job-work returns into audit risk
- Machines stop and nobody records why, so real capacity is a guess
- Quotations are priced on old material rates and margin leaks stay hidden
- Large-customer payments slip past the 45-day MSME limit and lock up working capital

Context: Economic Survey 2025-26 notes delayed payments continue to drain MSME working capital despite the 45-day legal mandate.

FULL INTEGRATION PATH

Vortex ProductionPulse Enterprise One

Order to dispatch on one data model: forecast, plan, buy, make, inspect, cost and ship, with SmartAI-Pulse watching the plant. Delivered in phases, starting with your most expensive problem.

OR SELECT INDIVIDUALLY | EVERY MODULE RUNS STANDALONE

Plan, Buy & Make

6 MODULES

Forecast, orders, material planning, procurement, scheduling, quality and maintenance.

Control, Cost & Ship

6 MODULES

Stores, shop floor, job work, costing, dispatch and plant intelligence.

Vortex SmartAI-Pulse

AI LAYER

Shortage risk, bottlenecks, quality early-warning and executive dashboards.

WORKS WITH THE SOFTWARE YOU ALREADY RUN *

Keep your ERP. Add the module that fixes the gap.

Integrates with: your existing ERP, accounting or industry software · legacy and in-house systems · customer portals and schedule files · machine controllers via IoT gateway · barcode scanners · e-invoice and e-way bill services

Each module page shows exactly what it exchanges with your current system.

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** Integration with existing software is subject to a technical feasibility analysis of your current system and its available interfaces.*

VORTEX PRODUCTIONPULSE

6 MODULES

Plan, Buy and Make

The core planning chain: know what the customer will take, what you need to buy and what each machine should run.

VORTEX PRODUCTIONPULSE

Demand Forecast Module

THE PROBLEM

Customer schedules change every week, so the plan built on last month's numbers is wrong before it is printed.

WHAT IT DOES

- Forecast by item and customer from order history and schedules
- Tracks every schedule revision from each customer
- Forecast accuracy by customer and item
- Feeds material and capacity planning directly

WORKS WITH YOUR EXISTING SYSTEMS *

Reads sales orders and customer schedules from your ERP, portal downloads or EDI files. The forecast returns to the ERP as a planning input.

VORTEX PRODUCTIONPULSE

Orders Module

THE PROBLEM

Order status is a phone call to the plant, promises are made without checking material or capacity, and big-customer payments slide past 45 days.

WHAT IT DOES

- Order book with promise dates checked against capacity
- On-time-in-full tracking per customer
- Delivery schedule vs actual dispatch
- Receivables ageing with a 45-day MSME payment flag

WORKS WITH YOUR EXISTING SYSTEMS *

Sales orders and invoices sync with your existing ERP or accounting software, so nothing is entered twice.

VORTEX PRODUCTIONPULSE

Material Planning Module

THE PROBLEM

Shortages surface at the machine, and purchase buys in a hurry at premium prices.

WHAT IT DOES

- Multi-level bill of materials explosion
- Net requirement after stock, open orders and job-work stock
- Shortage list days ahead of need
- Planned purchase and job-work orders

WORKS WITH YOUR EXISTING SYSTEMS *

Uses bills of materials and stock from your ERP. Planned orders are raised back into it after approval.

VORTEX PRODUCTIONPULSE

Procurement Module

THE PROBLEM

Supplier quotes arrive on WhatsApp, prices move every week, and nobody can say which supplier is actually reliable.

WHAT IT DOES

- RFQ to comparison to purchase order
- Price history with change alerts
- Supplier rating on delivery, quality and price
- Pending-order follow-up

WORKS WITH YOUR EXISTING SYSTEMS *

Purchase orders and goods receipts post to your ERP. The supplier master stays in one place.

VORTEX PRODUCTIONPULSE

Production Scheduling Module

THE PROBLEM

The plan is an Excel sheet rebuilt every morning. Urgent orders jump the queue and everything else slips.

WHAT IT DOES

- Machine-wise load against real capacity and shifts
- Sequence by due date, changeover and priority
- What-if view before inserting an urgent order
- Plan published to supervisors' phones

WORKS WITH YOUR EXISTING SYSTEMS *

Work orders come from your ERP; completions return to it for stock and costing.

VORTEX PRODUCTIONPULSE

Quality & Maintenance Module

THE PROBLEM

Rejections are counted but never explained, the same complaint returns next quarter, and breakdowns set the maintenance calendar.

WHAT IT DOES

- Incoming, in-process and final inspection
- Non-conformance and 8D corrective action to closure
- Customer complaint log with response time
- Preventive and condition-based maintenance with spares

WORKS WITH YOUR EXISTING SYSTEMS *

Rejection and scrap quantities post to ERP inventory; maintenance spares are drawn from ERP stores.

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VORTEX PRODUCTIONPULSE

6 MODULES

Control, Cost and Ship

The control layer: where stock sits, why machines stop, what material is out with job workers, and what each part really costs.

VORTEX PRODUCTIONPULSE

Stores & Inventory Module

THE PROBLEM

Money sits on the shelf as slow-moving stock while the line waits for a part the ERP says is in stock.

WHAT IT DOES

- Raw material, WIP and finished goods by location
- Issues against each work order
- Ageing, slow and non-moving analysis
- Minimum, maximum and reorder alerts

WORKS WITH YOUR EXISTING SYSTEMS *

The stock ledger reconciles with your ERP every day, giving stores and accounts one number.

VORTEX PRODUCTIONPULSE

Shop Floor & OEE Module

THE PROBLEM

Machines stop and nobody records why. Availability, performance and quality losses are guesses.

WHAT IT DOES

- Digital job cards on tablet or phone
- Downtime captured with reason codes
- OEE by machine, shift and operator
- Hourly production vs plan board

WORKS WITH YOUR EXISTING SYSTEMS *

Reads machine signals through an IoT gateway where your machines allow it. Output posts to ERP work orders.

VORTEX PRODUCTIONPULSE

Job Work & Subcontracting Module

THE PROBLEM

Material sent to job workers is tracked in notebooks. Returns go unmatched and the GST job-work return becomes an audit risk.

WHAT IT DOES

- Job-work challan out and receipt in
- Pending material by job worker and age
- Process loss and yield tracking
- Job-work register ready for GST filing

WORKS WITH YOUR EXISTING SYSTEMS *

Challans and receipts sync with your ERP or accounting software; the regist exports for your GST return.

VORTEX PRODUCTIONPULSE

Costing & Margin Module

THE PROBLEM

Quotations use last year's material rates, and margin leaks are only discovered at the annual audit.

WHAT IT DOES

- Product cost from BOM, routing and current rates
- Quotation costing with a margin guard
- Estimated vs actual cost per order
- Profitability by customer and product

WORKS WITH YOUR EXISTING SYSTEMS *

Pulls latest purchase rates and overheads from your ERP; costing sheets export for your quotations.

VORTEX PRODUCTIONPULSE

Dispatch & Compliance Module

THE PROBLEM

Invoice, e-invoice, e-way bill and packing list are prepared separately, and one mismatch stops the truck at a checkpoint.

WHAT IT DOES

- Packing list and labels from the order
- E-invoice and e-way bill data checked for consistency
- Dispatch readiness per truck
- Hands the trip to DeliveryPulse Trip & Load

WORKS WITH YOUR EXISTING SYSTEMS *

Invoices from your ERP; e-invoice and e-way bill through your GST provider or the government API.

VORTEX PRODUCTIONPULSE

Plant Intelligence Module

THE PROBLEM

The owner sees the plant through a WhatsApp group and a month-end report, long after the problems could have been fixed.

WHAT IT DOES

- Shortage and bottleneck prediction
- Quality early-warning from rejection trends
- Reorder and safety-stock optimisation
- Executive and KPI dashboards, approvals kept with people

WORKS WITH YOUR EXISTING SYSTEMS *

Works across every ProductionPulse module and your existing ERP, spreadsheets and machine data without replacing them.

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STANDARD ACROSS EVERY VORTEX INDUSTRY

Vortex SmartAI-Pulse core layer

- **Predictive analytics** — Forecasts and early-warning signals from your own operating history.
- **Executive & KPI dashboards** — Interactive views from company level down to a single order, truck or machine.
- **Workflow automation** — Routine reports, alerts and hand-offs run on their own, on WhatsApp, email or screen.
- **Human-in-the-loop approvals** — Anything that changes money, stock or a customer promise waits for a person to approve.
- **Disruption & exception handling** — Rules watch every transaction and escalate by severity to the right owner.
- **Decision audit trail** — Every recommendation, approval and override is recorded with who, when and why.

Where rules or optimisation give a reliable answer, we use them. AI is applied where it genuinely improves a decision, and never without a person accountable for the outcome.

HOW WE WORK

Business first. Technology second.

01 · Understand
We map the real workflow and your current systems before recommending anything.

02 · Feasibility
We confirm what your ERP and equipment can exchange before we quote integration.

03 · Phase one
The first module fixes your most expensive problem and goes live in weeks.

Vortex SitePulse ● LIVE IN OPERATION

Proof that we integrate with systems others call closed

SitePulse runs live at a Chennai fuel outlet, reading a vendor forecourt controller that has no published interface: no new hardware, no write access, delivered in 3.5 weeks. We bring the same read-first discipline to your ERP and equipment.

Founder-led. 22+ years in enterprise supply chain and operations.

Magesh Raman spent over two decades at Ford Motor Company, Timken and St John Freight Systems before founding Vortex. We have run the operations we now digitise.

TYPICAL STARTING POINTS

Three modules, one phase, measurable in weeks

Auto-component suppliers
Demand Forecast + Material Planning + Dispatch & Compliance
Schedule changes flow straight through to material and trucks.

Job-work-heavy fabricators
Job Work & Subcontracting + Stores & Inventory + Orders
Material with job workers visible; GST job-work register ready.

Plants short of capacity
Shop Floor & OEE + Production Scheduling + Quality & Maintenance
Find hidden capacity before buying another machine.

DATA SECURITY | COMMON SAFEGUARDS ACROSS ALL PRODUCTS

- **Identity & least privilege** — Role and purpose-based access · MFA
- **Encryption & secrets** — In transit and at rest · managed keys
- **Privacy & data control** — Minimisation · retention · consent
- **Audit & monitoring** — Protected logs · traceable approvals
- **Resilience & assurance** — Backups · tested recovery · continuity
- **AI governance** — Approved use cases · human review

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Start with a focused 30-minute consultation

No charge, no obligation. Bring your current system and your biggest operating problem. We will tell you which module fits, what integration looks feasible, and what it would take.

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Scan for the industry page

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