FOR MANUFACTURING ENTERPRISES

Manage today rather than reporting yesterday.

ICE-ERP is an agile, modern ERP solution that unifies sales orders, material and capacity planning (MRP & CRP), work orders, shop-floor, downtime and OEE tracking, quality and maintenance, inventory and shipping, pre-accounting and the general ledger on a single enterprise platform.

25 Modules, 5 Areas

Manufacturing and planning, supply chain and sales, quality and maintenance, finance and the digital platform on one database.

Live Shop-Floor Data

The shop-floor terminal, downtime and OEE records and the Android handheld bring data into the system the moment it occurs.

Layered Architecture

Core code is protected; customer-specific logic runs in an isolated customization layer.

Primary Objective: Understand your current production, capacity scheduling, quality, maintenance, inventory and commercial workflows; demonstrate through a targeted demo session where ICE-ERP brings immediate operational value.

Production-Centric ERP Completing the Commercial Lifecycle

ICE-ERP focuses on governing real shop-floor operations and their financial reflections rather than mere document filing. Work orders, machine capacity and downtime, quality and maintenance records, inventory, shipments and accounting flow through a single digital spine.

Real-time shop floor to office data

Operation times, completed quantities, scrap and downtime reasons are captured directly on the shop-floor terminal and the Android handheld; the machine status board and the OEE cockpit update at once.

Advanced planning: MRP & CRP

Material Requirements Planning (MRP) resolves material and purchasing needs, while Capacity Requirements Planning (CRP) analyzes machine load, identifies bottlenecks, shows a Gantt view and levels the load.

Quality, maintenance and costing in one database

Inspections and non-conformances, ISO 9001 documents, breakdown and planned maintenance, actual work-order cost and general ledger entries are linked in a single data model.

Core + customization architecture

The standard product core remains intact while customer requirements reside in an independent extension layer. Version updates deploy smoothly without breaking bespoke code.

Who Benefits the Most?

- Manufacturers tracking work orders and machine loads in spreadsheets or disjointed tools
- Teams unable to foresee capacity bottlenecks (CRP) and raw material shortages (MRP)
- Enterprises suffering from communication lag between the shop floor and accounting
- Plants keeping downtime, OEE and maintenance history on paper or in separate tools
- Quality teams running ISO 9001 documents, CAPA and calibration apart from the ERP
- Producers whose dynamic bills of materials, routings and variants exceed standard ERP limits
- Companies that want to share order and shipment status with customers, suppliers and carriers through a portal
- Companies with custom operational flows fatigued by heavy upgrade cycles of legacy ERPs

The ICE-ERP Module Ecosystem: 25 Modules in 5 Areas

From engineering and capacity planning to production, from quality to maintenance, from shipment to accounting: a digital backbone extended by mobile terminals, portals and AI. The scope below summarizes the current ICE-ERP product.

5 modules

Manufacturing & Planning

The whole production cycle, from engineering data to work orders, from the shop floor to OEE.

Engineering & BOM

Dynamic BOMs, routings and rule-based product variants.

- Multi-Level Dynamic BOMs & Formula Engine
- Alternative BOMs/Routings, Rules & By-Products
- Characteristic-Based Configurator & Alternative Materials

Advanced Planning: MRP & CRP

Material requirements, machine load and bottleneck analysis in one cockpit.

- MRP: Gross-to-Net Requirements, Purchase & Production Proposals
- CRP: Machine Loads, Bottleneck Analysis & Gantt View
- MRP/CRP Cockpit, Load Balancing & Substitution Proposals

Production & Work Orders

From sales order to work order, from material issue to receipt.

- Work Order Planning Workspace & Structure Explorer
- Material Issue, Reservations & Subcontracting (External Operations)
- Scrap Recording, Production Receipt, Labelling & Closure

Digital Shop Floor, Downtime & OEE

Real-time shop-floor data, machine status and efficiency.

- Touchscreen/Barcode Shop Floor Terminal & Time Tracking
- Downtime Records, Machine Status Board & Shift Templates
- OEE: Loss Analysis per Machine × Day × Shift & OEE Cockpit

PLM & PDM

Technical document vault, engineering change and part lifecycle.

- Document Vault: Check-Out/Check-In, Revisions & Viewer
- ECR & ECO (Engineering Change Management) & Deviations
- Part Lifecycle Phases & FAI (First Article Inspection)

5 modules

Supply Chain & Sales

A seamless flow from purchasing to shipment, from CRM to foreign trade.

Inventory, Warehouse & Traceability

Multi-location warehousing with end-to-end lot, serial and barcode traceability.

- Multi-Warehouse & Bin Locations, Transfers & Physical Counts
- Lot / Serial Numbers, Barcode Labels & Lot Genealogy
- GS1/GTIN Packaging, Minimum Stock & Consignment

Purchasing & Supply

From requisition to quote comparison, from approval to goods receipt.

- Departmental Requisitions & Supplier Matching
- RFQ (Supplier Bidding) & Comparison Matrix
- Central Approval Engine, Arrival Notice & Inspected Receipt

Sales & Dispatch

From price lists to shipment, from order to return.

- Customer/Site Price Lists & Discount Hierarchy
- Sales Orders, Stock Reservations & Due-Date Tracking
- Shipments, Picking Lists & Return Delivery Notes

CRM & Customer 360

Sales pipeline from lead to order and prospect management.

- Leads, Opportunities, Activities & Sales Pipeline
- Sales Quotations & Conversion to Orders
- Customer 360 & Prospect Directory

Foreign Trade

Import and export files integrated with costing and accounting.

- Import / Export File Management
- HS Codes & Inward Processing (DIIB) Tracking
- Landed Cost & Customs Expense Allocation

Integrated Processes from Quality to Accounting

5 modules

Quality, Maintenance & Service

ISO 9001-ready quality, planned maintenance and after-sales service in one system.

Quality Assurance & Control (QA/QC)

Control plans, inspections, non-conformance handling and SPC.

- Incoming (IQC), In-Process (IPQC) & Final (FQC/OQC) Inspections, Sampling Procedures
- NCR (Non-Conformance) & Disposition (Scrap/Rework/Return), Waivers
- SPC: Control Charts & Alarm Rules

ISO 9001 Quality Management System

Documents, CAPA, audits and calibration inside the ERP.

- Document Management (QDMS): Revisions, Approval, Distribution & Read Receipts
- CAPA & 8D Methodology
- Internal Audit Programme, Gauges & Calibration

Maintenance Management

Breakdown and planned maintenance, equipment registry and analytics.

- Equipment Registry, Meters & Spare Parts
- Breakdown Requests, Maintenance Orders & Time/Meter-Based Plans
- Maintenance Terminal & Cockpit, Operator Maintenance, MTTR/MTBF

After-Sales Service

Service requests, warranty and field technician management.

- Service Requests, Fault Codes & Installed Base Tracking
- Warranty Management & Technician Visits
- Service Terminal & Help Desk

Project Management

Budget and cost control for project-based manufacturing and services.

- Project, Phase & Activity (WBS) Structure
- Budget Versions & Actual Cost Tracking
- Cost/Revenue Transactions & Project Stock Transfers

5 modules

Finance & Accounting

From pre-accounting to general ledger, from e-invoicing to actual costing.

Pre-Accounting & Finance

Customer/supplier accounts, invoices, cash, bank and cheques.

- Sales/Purchase Invoices & Delivery Note Matching
- Cash, Bank, Bank Statement Import & Cheques/Promissory Notes
- AR/AP Aging, Statements & Accountant Export

e-Transformation (Turkey)

Official Turkish e-documents through an integrator, on one screen.

- e-Invoice, e-Archive & e-Export Invoice
- e-Waybill from Shipments
- Incoming e-Invoice Inbox & Accept/Reject Responses

General Ledger

Integrated bookkeeping on the Turkish Uniform Chart of Accounts.

- Uniform Chart of Accounts (TDHP 7/A & 7/B)
- Journal Vouchers & Approval Flow
- Automatic Posting Rules & Project Dimension

Fixed Assets

The full asset lifecycle, from registry to depreciation.

- Asset Cards, Categories & Custody Assignment
- Locations & Asset Counts (Mobile Included)
- Tax-Law (VUK) Depreciation, Sale/Scrap/Transfer & Opening Import

Costing & Profitability

Actual cost per work order and inventory valuation.

- Work Center Cost Rates & Part Cost Roll-Up
- Overhead Allocation & Cost Periods
- Inventory Valuation: Moving Weighted Average & Standard Cost

A Platform Open to the Shop Floor and Your Partners

5 modules

Digital Platform & Integration

Open the ERP to the shop floor and your partners with mobile terminals, portals, APIs and AI.

Mobile Handheld Terminal

Android handheld app and a web terminal that runs in any browser.

- Warehouse Terminal: Barcode-Driven Stock Transactions
- Shop Floor, Quality, Maintenance & Service Terminals
- Approval Inbox, Management Cockpit & Field Sales (CRM)

Portal & Integration

Secure partner access and standard data exchange with other systems.

- Customer, Supplier & Carrier Portal
- REST Web API (JWT), Swagger & Report API
- Integration Channel & Signed Notifications (Webhooks)

Artificial Intelligence

Ask your ERP data questions in natural language.

- Natural-Language Queries & Result Analysis
- AI Assistant on Detail Screens
- ChatGPT/Claude Access via MCP (User Permissions, Read-Only)

Analytics, Reporting & Workflow

Dashboards, instant reports and notifications for decision support.

- Role-Based Dashboards
- Quick Report (SQL-Based Instant Reports) & PDF/Excel Export
- Task Management, Notifications & Central Approval Inbox

Security & Multi-Company

Role-based security, multi-site operation and an audit trail.

- RBAC (Role-Based Access & Branch Isolation)
- Audit Trail (Modification History)
- Multi-Company & Multi-Site Infrastructure

Work Bench: Digital Shop Floor

Touch-first operator interfaces: replace paper forms and delayed entries with real-time visibility of what happens on the shop floor. Tablet, PC, kiosk and Android handheld ready.

Start / Stop Production

Start work orders and record actual operator/machine time and completed quantities instantly.

Scrap & Waste Management

Capture scrap instantly and reflect its impact on cost without delay.

In-Process Inspection

Run quality checks during production and stop defects at the source.

Downtime & Maintenance Requests

Record machine stops with a reason and report breakdowns from the terminal; OEE and the machine status board update at once.

End-to-End Workflow from Order to Delivery & Accounting

ICE-ERP replaces fragmented files with a single operational and financial data backbone across all departments: one database, zero data duplication.

1. Sales Order
CRM opportunities and quotations convert to orders; pricing, due dates and reservations are logged.

2. Planning
MRP resolves material needs; CRP balances machine loads and bottlenecks.

3. Production
Work order operations run; terminals record labor, machine time, downtime and scrap.

4. Quality & Stock
Inspections are recorded; materials are issued; finished goods and lots/serials are received.

5. Shipping
Picking lists, shipments and e-waybills complete the delivery.

6. Accounting & Cost
Invoices are issued, ledger vouchers are posted and actual job cost closes.

For Production & Planning Managers

- **With CRP:** Which machine/work center is overbooked? Where are bottlenecks?
- **With MRP:** What raw material is needed and when? When should POs be released?
- **With OEE:** Which machine loses time, on which shift, and why?
- Operation times, scrap and planned vs. actual quantity comparisons
- Maintenance plans, breakdown history and MTTR/MTBF indicators

For General Managers, CFOs & IT Leaders

- Real-time account balances, invoicing, collections and trial balance/balance sheet reports
- Actual job cost per work order: materials, machine time and labor
- Data opened to partners and other systems through the portal, Web API and AI access (MCP)
- Modern, high-speed web architecture built on .NET 10, Blazor Server and EF Core
- **Layered Architecture:** Secure client-specific customizations that never break core updates

Recommended Topics for Initial Assessment

- Current pre-accounting, general ledger and inventory tracking workflows
- Production scheduling and capacity methodology (MRP / CRP evaluation)
- Shop-floor data capture: time, downtime and OEE tracking
- Product BOM structures, routing alternatives and configurator complexity
- Today's handling of quality (ISO 9001) and maintenance processes
- Inventory accuracy, lot/serial, barcode and multi-warehouse requirements
- Integration of sales, purchasing, shipping and e-invoicing/e-waybill
- Customer/supplier portal and integration needs with other systems

Scalable Packages for Every Manufacturing Tier

Core Edition

For Growing SMEs: Inventory, warehousing, lot/serial and barcodes; purchasing, sales and shipping; production (work orders, BOMs, routings, shop-floor terminal, downtime records); pre-accounting, general ledger and fixed assets. Up to 15 full users.

Pro Edition

For Mid-Sized Producers: Everything in Core plus MRP, product configurator and alternative BOMs/routings, advanced purchasing and sales, quality management (ISO 9001 QMS), OEE, maintenance, project management, dashboards and Quick Report. Up to 30 full users.

Premium Edition

For Advanced Enterprises: Everything in Pro plus Capacity Planning (CRP), CRM, actual costing and inventory valuation, SPC and AI-powered queries. Unlimited full users.

Add-On Modules & e-Document Packages

Modules that can be added to any package: **PLM & PDM, Foreign Trade, After-Sales Service, Mobile Handheld Terminal, Portal, Web API** and **AI Access (MCP)**. The Turkish e-Invoice (including e-Archive and e-Export) and e-Waybill packages are licensed per company (tax ID) per year. Shop-floor, maintenance and service terminal users are counted apart from the full-user limit.

Flexible Deployment: Cloud SaaS or On-Premise

ICE-ERP is offered as either **Cloud SaaS** (monthly base + user subscription) or **On-Premise Private Deployment** (perpetual license + annual update & support agreement) based on corporate infrastructure preferences. Implementation, tailored training, and go-live consulting are delivered by senior architects.

Schedule a Targeted Demo & Process Evaluation

Let's review your production, capacity scheduling, quality, maintenance, inventory and accounting workflows together and conduct a focused demo tailored to your operational realities.

Founding Team & Solution Contact

Aykut Kurtuluş — Founder & Chief Solution Architect
Şura Erhalim — Co-Founder & Software Engineer / Consultant
ICE-ERP Platform · Izmir / Turkey
aykut.kurtulus@ice-erp.com.tr · www.ice-erp.com.tr/en

Consultation Proposal

A 25-30 minute online or on-site process assessment and focused demo with your plant manager, planning head, quality or maintenance lead, finance lead, or IT director.