

Powering Efficiency in Solar Manufacturing

CEL’s Digital Transformation with Microsoft Dynamics 365



Industry – Solar Panel & Renewal Energy Manufacturing
Location – India
Solution Implemented – Microsoft Dynamics 365 Business Central



ABOUT CUSTOMER

Central Electronics Limited (CEL), a Government of India enterprise, is a pioneer in solar photovoltaic technology and a leading manufacturer of solar modules, systems, and solutions for both rural and urban India. As demand surged and project volumes grew, CEL required a modern ERP to streamline its operations, ensure quality control, and gain visibility across departments.

CHALLENGES

- Lack of **standardized production processes and visibility across solar panel** manufacturing lines.
- Difficulty in **managing multi-layer Bills of Materials (BOMs)** involving **cells, frames, junction boxes, and encapsulants**.
- No real-time tracking of material consumption, WIP, and **finished goods output**.
- Inability to trace components by lot/batch, which is critical for warranty and compliance.
- **Inefficient inventory** management with **overstocking** of some parts and shortages of others.
- **Manual coordination** between **procurement, stores, production, and finance**, leading to delays and inaccuracies.
- **Limited control** over project-based delivery schedules and costing.
- No **integrated dashboards** for **real-time monitoring** of production performance or cost variances.

SOLUTION IMPLEMENTED

Trident implemented **Microsoft Dynamics 365 Business Central** as a unified **ERP** platform across CEL’s core functions.

Key Functionalities Deployed:

- Production Order Management with **multi-stage routing** and **work centers**
- Complex BOMs for **solar panel, module, and inverter** assembly
- Lot & Serial Traceability for all critical **raw materials** and **finished panels**
- Advanced Inventory & **Warehouse Management**
- Procurement & Vendor Management with **approvals** and **quality checks**
- **Project Accounting** and **cost tracking** for government and commercial orders
- **Finance & Taxation Automation** aligned with **compliance** norms
- **Dashboards** and **Reporting** for real-time business insights

BENEFITS TO CUSTOMER

- ✓ Standardized production processes for **consistent batch quality** and **optimized ingredient** use
- ✓ Reduced **wastage** and **expiry losses** through **proactive inventory and shelf-life tracking**
- ✓ Improved **visibility** into **production schedules, stock levels, and outlet performance**
- ✓ **Faster MRP & demand forecasting**, resulting in better procurement and reduced overproduction
- ✓ Centralized retail control over **pricing, discounts, and loyalty programs**
- ✓ Real-time business insights for **agile decision-making**
- ✓ Enhanced **traceability** and **compliance** with food safety norms
- ✓ Scalable system to support **new stores, product lines, and distribution expansion**

CUSTOMER TESTIMONIAL



“Trident’s implementation of Dynamics 365 Business Central has given us real-time control and traceability across our solar manufacturing operations. It’s a major step forward in our digital journey.”

— Plant Head, CEL

TRIDENT INFORMATION SYSTEMS



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