

TURNING SUNLIGHT INTO POWER AND PROFITS

HELPING PHOTOVOLTAIC FIRMS ACHIEVE GRID PARITY AND GROWTH

While solar-powered electricity is enjoying a day in the sun, photovoltaic enterprises face stormy weather due to volatile prices and demand. SAP offers comprehensive software that helps photovoltaic companies weather the storm by leveraging best-practice processes across the extended enterprise.

Photovoltaic manufacturers compete in an environment best described as “feast and famine.” While the industry benefits from healthy long-term growth, hiccups in demand play havoc with production and profits. Adding to the complexity, photovoltaic companies must fine-tune intricate manufacturing processes, manage lengthy supply chains, and – perhaps most important – achieve grid parity: the point at which photovoltaic electricity can compete with grid power.

As part of a value chain that begins with silicon and ends with sophisticated power systems, your company must master a daunting array of business processes. Without visibility, control, and the ability to respond to unforeseen events, your business is vulnerable to the many risks that can shrink margins, annoy customers, and disappoint shareholders.

The SAP for High Tech solution portfolio, adapted specifically for the photovoltaic industry, helps you reduce costs and optimize business processes. From product design to supply chain management, from manufacturing to sales and service, SAP provides comprehensive, integrated applications that enable your company to anticipate customer demands, weather turbulent markets, and maintain healthy margins.

Solutions for the Photovoltaic Industry

With best-practice expertise gained from long-standing relationships with high-tech customers, SAP draws on these key strengths to meet the needs of photovoltaic companies around the world:

- **High-tech expertise** – SAP has been serving high-tech customers for more than 30 years. Currently, SAP for High Tech solutions help enhance processes and drive innovation for more than 6,000 manufacturers – including a significant number of leading solar cell and module manufacturers.
- **Comprehensive functionality** – SAP® Business Suite software serves as a foundation for SAP for High Tech solutions. As an integrated family of applications, the software supports end-to-end business processes on a single foundation. Using an à la carte approach, your company can deploy SAP Business Suite to address specific business challenges at your own pace, without costly upgrades.
- **Business intelligence** – SAP for High Tech also leverages the SAP BusinessObjects™ portfolio. This software gives organizations a consistent view of information while providing insight that helps close the gap between strategy and execution. The solutions deliver a complete, intuitive profile of business performance using any data from any application.

SAP software for the photovoltaic industry supports key business processes such as the following.

Demand and Supply Chain Management

SAP applications help your company balance demand and supply within your own supply chain – as well as partner and supplier networks – enabling you to track fluctuations in demand, respond to supplier delivery volatility, and recover from operational disruptions.



With functionality that integrates forecasts, customer demands, and end-user buying trends, you can leverage multiple sources of information to increase demand accuracy and improve responsiveness. As you move from a forecast-driven to a demand-driven approach, you can lower safety stocks and inventory, streamline production runs, and cut distribution costs – all while maintaining or improving delivery service targets.

The solutions also help you improve supply planning by integrating purchasing, manufacturing, distribution, and transportation plans into a single, comprehensive approach. You can enhance key processes such as safety-stock planning, supply network planning, distribution planning, procurement, and materials management. And you can support end-to-end supply chain processes with optimal agility.

The SAP Supply Network Collaboration and SAP BusinessObjects Supply Chain Performance Management applications enable a high degree of visibility, control, and synchronization with component suppliers, supporting on-time delivery of critical materials and minimizing supply risk.

Manufacturing

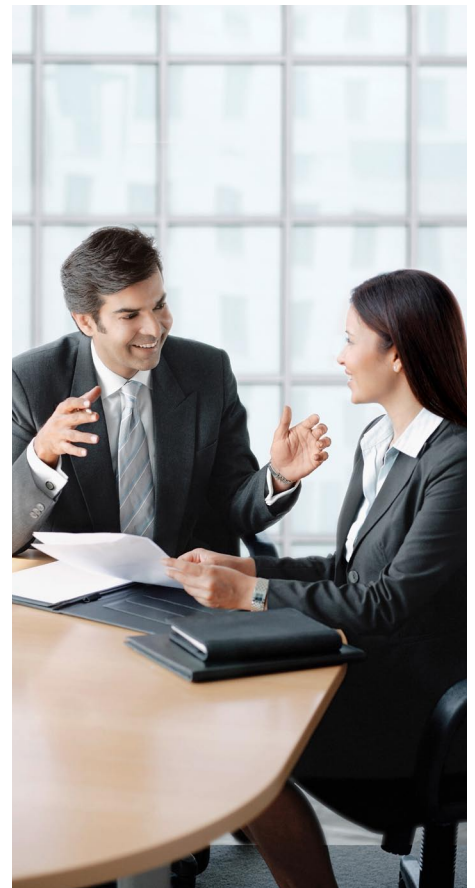
The solutions help you scale and manage a full range of manufacturing activities – from planning to execution to analysis. With improved visibility and integration of manufacturing processes, you benefit from increased yields, higher throughput, and higher equipment utilization while keeping costs and quality under tight control. The applications

support a full range of production strategies for the photovoltaic industry, including make to order, make to stock, repetitive manufacturing, and process manufacturing.

As information flows across engineering, planning, and execution processes, you can document, observe, and control each step in the production lifecycle. Data from your manufacturing-execution and quality-control systems can also be incorporated, further enhancing decision making and control. And, with change management functionality, you can track revisions to customer orders or changes in bills of material while accessing up-to-date information throughout the manufacturing cycle.

The software also supports enhanced production planning that helps ensure material availability. Your planning professionals can monitor existing stock, create procurement proposals automatically, and maintain an optimal balance between meeting customer requirements, minimizing costs, and avoiding capital lockup. The software supports both manufacturing resource planning and consumption-based materials planning.

The SAP Manufacturing Integration and Intelligence application provides a direct, critical link between shop floor equipment and vital control solutions such as the SAP Manufacturing Execution application. It also enables integration between the shop floor and enterprise software such as the SAP ERP application. This integration provides near-real-time insight and control of production processes while also recording lot genealogy, process data, and product characteristics.



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Financial and Cost Management

SAP software supports comprehensive financial and management reporting while helping you maintain consistent, reconcilable, and auditable records. It also enables a robust consolidation process that meets legal and statutory reporting requirements. Cost management functionality provides an accurate picture of standard and actual costs – an invaluable benchmark for photovoltaic manufacturing processes, which typically yield products with variable characteristics.

SAP for High Tech solutions also help you gain a clearer picture of cash availability – a particular concern when credit is tight and markets are stagnant. The software gives you a comprehensive view of cash and liquidity positions for all areas of your enterprise. And, with sophisticated risk analysis and risk management tools, you can improve operational efficiency while maximizing business profits.

Risk and Compliance

Like all companies, photovoltaic manufacturers must conduct their operations effectively, profitably, and ethically. SAP BusinessObjects governance, risk, and compliance (GRC) solutions help ensure that your business is reliable, compliant, and sustainable. The solutions support development of a unified strategy that guides people and standardizes processes, embedding GRC functionality at every level of your organization.

For companies such as thin film manufacturers, dealing with the Restriction of Hazardous Substances Directive is a particular concern. Environmental product compliance software helps prevent stiff penalties and loss of sales. GRC solutions also help you improve compliance with financial, trade, and health regulations. With functionality that supports access and process controls while enabling the separation of duties, you can improve adherence to regulatory requirements while achieving better execution of business strategy. The SAP BusinessObjects Global Trade Services application enables streamlined export controls and import processing while also helping you avoid doing business with denied parties.

Sourcing and Procurement

SAP software helps photovoltaic companies manage a wide range of integrated sourcing and procurement processes. It also supports materials management processes for purchasing, receiving, inventory, and invoice verification. Your company can identify optimal sourcing opportunities, reduce material costs, and track contract compliance while building collaborative relationships with trustworthy suppliers. In addition, scorecard functionality allows you to rate and rank suppliers according to your preferred metrics. You can also streamline vendor selection and agreement negotiation while monitoring vendor deliveries and payments.

The SAP BusinessObjects Spend Performance Management application enables you to identify potential savings, reduce maverick spending, and negotiate more effectively with suppliers. In addition, supplier risk management applications help you appraise the health of your key suppliers and mitigate identified risks.

Sales, Support, and Order Management

SAP for High Tech solutions can help your company improve vital sales and support processes including contract management, order processing, and billing cycle management. The solutions support flexible pricing and product configuration, allowing you to build products according to individual customer needs. Invoices, credits, and debit memos are fully integrated with financial accounting functionality, which puts accurate information in the hands of those who need it and boosts operational efficiency.

SAP for High Tech solutions also help you gain a clearer picture of cash availability – a particular concern when credit is tight and markets are stagnant.

The software also helps your company develop, sell, and deliver more profitable service offerings. You can transform your after-sales service business into a strategic business asset by aligning processes and systems to allow complete visibility and control – inside your organization and across the service network. With tracking functionality that spans the product lifecycle, SAP software lets you keep a close watch on the location and history of all parts and components.

For More Information

To learn how SAP software can help your company drive down costs, mitigate risks, and improve margins, contact your SAP representative or visit us at www.sap.com/industries/hightech.

Summary

Transform your photovoltaic business into a more agile, efficient, and profitable enterprise. SAP delivers comprehensive, integrated software that helps you leverage industry best practices to reduce costs and drive innovation.

Business Challenges

- Scale and optimize operations while controlling costs and quality
- Improve ability to respond to changes in both supply and demand
- Ensure product, trade, and regulatory compliance

Key Features

- **Demand and supply chain management** – Balance demand and supply planning to continuously adjust to ongoing volatility
- **Manufacturing** – Improve visibility, control, and integration of diverse production processes, eliminating gaps in manufacturing networks
- **Financial, operational, and product cost management** – Optimize liquidity and working capital while streamlining planning, consolidation, budgeting, reporting, closings, and product cost
- **Risk and compliance** – Help ensure good governance, corporate accountability, and a sustainable business model with risk management tools embedded at all levels of the enterprise
- **Sourcing and procurement** – Identify optimal sourcing opportunities, get a better perspective on spending, and reduce procurement risks

Business Benefits

- **Improve compliance** with comprehensive reporting and a single source for maintaining compliance information
- **Boost manufacturing efficiency** by integrating shop floor and quality-monitoring applications while gaining a unified view of production status
- **Reduce operating costs** by making better procurement decisions, matching supply with demand, and streamlining new product development
- **Shorten financial closing and reporting times** by reducing manual processes and automating consolidations

For More Information

Call your SAP representative or visit us online at www.sap.com/industries/hightech.

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