



High Tech

Manufacturing

Tackling today's challenges requires agility

High tech manufacturers face tough challenges. Manufacturing is a major engine in any economy, but the fundamental success factors in the high tech industry are changing: flexibility, continuous improvement, and superb customer service are the key differentiators today. High tech manufacturers are facing tough challenges, and they need a new breed of tools that can help them meet these challenges.

To move forward and grow your high tech manufacturing business, you'll face many challenges, including how to:

- Introduce new products faster.
- Manage inventory more effectively.
- Improve post-sales operations.
- Reduce manufacturing costs.
- Increase sales and marketing effectiveness.
- Reduce order-to-delivery time.
- Develop better demand forecasts.

To stay competitive in the global market, high tech companies are adapting by improving their ability to respond to changes in end-customer demand even while facing relentless pressure on margins. The right technology can give your company the visibility you need to stay competitive.



CUSTOMER PROFILE

The logo for Network Engines, Inc. is displayed in white text on a dark blue background. The text is arranged in two lines: "Network" on the top line and "Engines, Inc." on the bottom line.

Network Engines, Inc. (NEI) designs and builds server appliances and network equipment products for original equipment manufacturers. Recently, NEI redesigned their business model and moved to a make-to-order environment. To make the adjustment, the company chose to implement Microsoft Business Solutions—Great Plains® [now known as Microsoft Dynamics GP].

The integrated solution provides them with the real-time visibility they need to track work orders and shop floor data, while improving customer service. Inventory turns have increased by more than 240 percent, and parts-tracking has been noticeably simplified.

Better business management

Microsoft Dynamics™ GP offers integrated capabilities for financial management, distribution, manufacturing, project accounting, human resource management, business analytics, and customer relationship management. By delivering deep access to decision-driving information, a rapid return on investment, and expert, dedicated customer service, Microsoft Dynamics GP helps you grow and manage your business better.

Affordable Adaptability

High tech manufacturers need an integrated system that extends to many internal and external functions. Those without this type of comprehensive, business-information support risk losing business to larger partners and will struggle to seize opportunities as they arise. With Microsoft Dynamics GP, you get easy, enterprise-wide coordination and agility. You'll improve operational efficiency, save time, and reduce costs by transforming time-consuming manual processes into automated tasks that can be executed quickly and accurately. Powerful new automation reaches across your entire business, so your employees can gain the control they need to keep the focus on efficient operations that boost profitability, rather than on entering data and chasing down information.

You'll gain flexibility to configure and reconfigure fulfillment services, try new strategies, and even scale the business without raising expenses. Plus, you'll also sharply reduce the time and effort needed to process general ledger transactions and payroll and benefit requirements.

Streamlined Business Processes

In the intensely competitive and fast-moving high tech markets, a company must first achieve control to be poised to seize new opportunities. This requires a proactive approach toward integrating and automating key processes. With Microsoft Dynamics GP you can streamline business processes that connect departments, partners, decisions, product life cycles, and channels. This level of control provides a foundation for success, increasing market responsiveness while achieving cost savings.

“Microsoft Great Plains [now known as Microsoft Dynamics GP] provides Network Engines with the flexibility to purchase the modules we need and to add the functionality and capacity they provide, as we need it and as we can afford to do so. This flexibility provides our company with a greater sense of control and has allowed us to see a return on investment much faster than we otherwise would have.”

—Greg Augustine
Director of Systems,
Network Engines

Improved Visibility

When business processes are automated, business data becomes usable in new ways. You can see the truth behind the numbers, which allows you to respond to change more quickly. Automation can also reduce costs, connect your internal organization with external business partners and customers, allow you to negotiate better rates with suppliers, and much more. High tech manufacturers must not only face the risks of their markets, but also keep a tight control on process integration. By gaining visibility into opportunities, you can act on them quickly, achieving a competitive edge.

Microsoft Dynamics GP facilitates strategic decision-making on all levels. And with enhanced viewing, drilldown, and inquiries, employees can make firm promises today and plan more effectively for tomorrow.

The Microsoft Dynamics GP Advantage

Microsoft Dynamics GP has the look and feel of Microsoft® Office, so users can work within a familiar, easy-to-use environment. List-based navigation and streamlined menus provide everyone in your organization with a clean, intuitive interface that's tailored to their roles.

A Microsoft Certified Partner can help you deploy the modules you need, and rich new integrations with Microsoft Office let your organization take full advantage of existing software investments. You'll enjoy low total cost of ownership, building on the productivity foundation that Microsoft Office offers. It's no wonder that installations of Microsoft Dynamics GP are growing. Thousands of businesses already know how great technology can help build success.



Advanced features and capabilities

Stay agile with advanced manufacturing capabilities. Microsoft Dynamics GP provides high tech manufacturing companies a comprehensive suite of applications designed for the make-to-stock, make-to-order, assemble-to-order, and hybrid manufacturing environments. Powerful and easy to use, these tools give you everything you need to handle production management and resource planning, which helps you reduce costs, boost customer satisfaction, and improve profitability.

Sales Forecasting

- Review prior years' sales and quickly revise projections based on your knowledge of customer needs.
- Change forecasts easily, reflecting an upward or downward sales trend, and tweak to account for seasonal influences or promotional activities.
- Create a Master Production Schedule (MPS) from forecasts, helping eliminate any reentry of information. Then easily create manufacturing orders from the MPS.

Material Requirements Planning

- Plan your material needs easily and effectively using a Material Requirements Planning (MRP) graphical user interface.
- View MRP information in the way that best meets your needs—by days, weeks, or months, or in a bucketless format that shows your material requirements regardless of the time frame.
- Drill down on any of the MRP quantities to review the source of the demand using MRP Quantity Pegging.

Sales Configurator

- Simplify the order process for your employees, and improve your ability to deliver customized products to your clients.
- Set up a single bill of materials that includes all the options available for each product you manufacture.
- Add and remove options from the configured bill of materials; Sales Configurator recalculates the finished goods' costs and provides you with an estimated manufacturing completion date.

Manufacturing Order Processing

- Easily analyze information to identify routings that meet the criteria you specify using advanced querying tools.
- Track labor and machine capacity, worker skills, scheduled work hours and shifts, and fixed and variable overhead at the level of the individual worksite using Work Center Definition.
- Work in Process provides insight into each committed manufacturing order that is still in the manufacturing process, allowing you to spot trends that may need to be addressed—and costs that may be out of line—before production is complete.

Bill of Materials

- Maintain an active bill of materials (BOM) for each item you manufacture, tracking the components you currently use and managing those bills that you have in production.
- Update entries, edit revision levels, save revision histories, and change BOM categories at any time using an intuitive, graphical BOM.

- Manage products at different stages of their life cycle with different types of BOMs. The engineering BOM allows you to see the effects of changes to your products on the cost of the item.
- Create phantom BOMs to track critical components of subassemblies.
- Manage electronics assembly BOMs with reference designators for each component and manage multiple manufacturers' part numbers for any component.

Quality Assurance

- Track raw material quality issues and take the necessary steps to ensure suppliers are providing the grade of goods you've requested.
- Define the Quality Assurance procedures you need, including step-by-step processes, acceptable-quality-level tables, and disposition codes.
- Test a single item used in several tests, one test used on several items, or any combination of the two using flexible sampling procedures.

Job Costing

- Use extensive analysis tools to spot variances and unreasonable cost contributors before they become unmanageable.
- Eliminate error-prone duplicate entries with streamlined data entry, which makes it easy for personnel to assign transactions to jobs when the transactions are first entered.

Materials Management

- Reduce costs by efficiently managing the entire chain of requisitions and approval, control over purchasing and vendor management, and comprehensive inventory tracking.
- Ensure that inventory is on hand where needed using expiration dates, serial and lot management, and multi-bin and multi-location management.



Efficient system integration

Seamless integration provides a perfect fit for high tech manufacturing. Whether you're looking for employees to exchange information and collaborate effectively, improved demand forecasting, or other manufacturing business process automation, Microsoft Dynamics GP gives you the flexibility and functionality you need. Additional Microsoft Dynamics GP modules are available for your high tech manufacturing solution, so all your data flows freely, and deployment won't strain your budget or your IT staff.

Demand Planner

- Generate reliable future demand forecasts based on your company's historical data with a library of selected forecasting algorithms that are applicable for the manufacturing business.
- Gain deep, multidimensional visibility into customer buying patterns by mapping your business data to the most relevant elements that drive forecasting—product, time, and markets.

Field Service Management

- Improve service levels with new Revenue Recognition Posting Reports, Return to Stock from RMA Entry, Improved Contract Administration, and integration with Sales Order Processing.
- Manage complex field operations with higher levels of profitability and customer satisfaction. Streamline returns processing and deliver the most efficient customer service with a centralized and fully customizable location to manage returns.
- Use eReturns to delight your customers by providing online access to your returns management system, which will help them to initiate returns at the time that's convenient for them.
- Streamline your repair process and minimize costs with a more effective and efficient way to manage multiple repair facilities and share information.
- Deploy Microsoft Dynamics GP—provided mobile field service capabilities using handheld devices (Windows Mobile® PDA, Windows XP laptop, or smart phone) and synchronize with Service Call Management.

Microsoft Business Portal

- Seamlessly integrate Microsoft Business Portal with Microsoft Dynamics GP to deliver applications, information, and processes to employees, customers, and partners across your organization.
- Enhance employee productivity by providing role-based access to information and processes from a single browser-based portal.
- Improve purchasing management and reduce overhead by using Requisition Management to enable users to enter their own requisitions online for manager approval and automatic transfer to Purchase Order Processing.

Customer Relationship Management (CRM)

- Easily integrate Microsoft Dynamics CRM with Microsoft Dynamics GP. Integration functionality includes key data mapping for accounts, contacts, product catalog, orders, and prices.
- Integrate customer information bidirectionally, with account and contact information in Microsoft CRM mapping to customer fields in Microsoft Dynamics GP.
- Use this integration to ensure consistency of data across teams and departments, streamline processes, and empower employees with a complete, accurate view of customer information.

Engineering Change Management

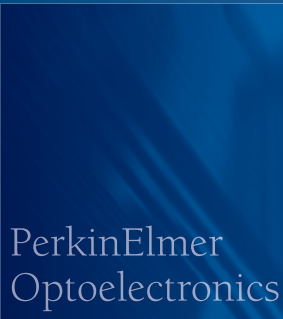
- Manage customers' changing needs while keeping those changes from disrupting your production efforts.
- Avoid making changes to your production process before the implications have been considered—Engineering Change Requests log all proposed changes, automatically assigning these documents to authorized individuals for review before implementation.
- Document and control the process of updating inventory records, bills of materials, routings—even current manufacturing orders—using Engineering Change Requests which, once accepted, are converted to Engineering Change Orders.

Sales and Distribution

- Control your sales with discount management, drop-shipping, kit items, sales quantity status, and online sales tracking.
- Speed time to delivery with multiple ship-to addressing and allocation of inventory from multiple sites for a single order.
- Harness the pick/pack/ship process with user-defined procedures for more consistent, accurate workflow and improved control.
- Manage inventory more effectively with customized rules for shelf life and minimum stock levels.



CUSTOMER PROFILE



PerkinElmer is a \$1.7 billion organization with 10,000 employees. PerkinElmer Optoelectronics, a PerkinElmer business unit, is a global technology leader providing technologies, service, and support that fuel the medical, genomic, and digital revolutions. They manufacture a wide variety of products including laser cutters, microwaves, sensors for ear thermometers, and parts for disposable cameras.

They also run on Microsoft Great Plains [now known as Microsoft Dynamics GP]. With the passing of government regulations such as the Sarbanes-Oxley Act, PerkinElmer had to improve the quality of financial information while ensuring data integrity. Microsoft Great Plains provided the organization with the tools it needed to solve its data quality issues.

Manageable finances

Streamline financial management with easy-to-use automation. Microsoft Dynamics GP delivers comprehensive financial management tools that high tech manufacturing companies need to run their businesses efficiently. It sharply reduces time and effort for key accounting tasks, provides easy access and rich analysis of integrated, updated information, and improves your ability to attract and retain talented, motivated employees through tools that make it significantly easier to record, store, and access employee information.

General Ledger

- Improve efficiencies with automated transaction processing and payment adjustments. Users can verify, annotate, and record transactions, as well as copy, void, delete, or correct General Ledger entries with full audit control.
- Enhance financial controls with complete audit control, definition of up to 367 fiscal periods, and immediate access to high-level and deeply granular financial information.
- Organize financial information the way you want with flexible accounting structures and the ability to create Microsoft Office Excel®-based budget templates and build customized financial reports.
- Perform multidimensional analysis of financial, sales, and purchase transactions.

Financial Reporting and Business Intelligence

- Easily create, update, and modify all the reports and forms your high tech electronics business uses with Microsoft Dynamics GP Report Writer, and use flexible scheduling and delivery options to publish reports.
- Extend the power of Business Insight throughout your organization using Microsoft Dynamics GP Analysis Cubes for Excel. Using prebuilt OLAP cubes, you can link information across your company and produce fixed-format reports as well as ad-hoc queries in a familiar Excel environment.
- Empower decision-makers to quickly assess performance by delivering online, personalized views of critical business metrics with Key Performance Indicators for Microsoft Business Portal.
- Build customizable financial reports with Microsoft Dynamics for Analytics—FRx®, including personalized packages that consolidate Microsoft Office documents, Microsoft FRx Reports, Crystal Reports, and other formats into a single file for delivery to decision-makers.

“Microsoft Great Plains [now known as Microsoft Dynamics GP] provided a big step up from the software packages we were using because of the integration between the manufacturing, order processing, and accounting modules.”

—Paul Dreyer
Western Americas Controller,
PerkinElmer Incorporated

Budgeting and Forecasting

- Meet demanding group reporting needs by tailoring data collection and reporting processes with Microsoft Enterprise Reporting, and deploy flexible budgeting processes business-wide with Microsoft Demand Planner.
- Use Microsoft Analytical Accounting to create budget trees that create a hierarchy of dimension codes. Budgets can be created at a dimension-code level or a dimension/account combination—providing greater flexibility by allowing budgeting at a summary or detail level.

Payables Management

- Minimize expenses and increase staff productivity with intuitive transaction entry, customizable automation of processes, and complete payment tracking.
- Manage vendors effectively and negotiate better prices with access to complete histories and instant recall of billing, payment, discounts, and other information.
- Simplify deferring payments or costs over multiple periods, and automate vendor installment payments.
- Manage payables control accounts by reporting segments, with automated reconciliation and a true picture of amounts owing by segment value.

Receivables Management

- Enhance your profitability by shortening receivables cycles, fine-tuning product and service offerings, and creating a predictable cash flow.
- Improve customer satisfaction and retention with customized information, history, and notes.
- Save time and reduce the potential for costly errors by automating receivables processing while maintaining full control.



Integrated data-management solutions

When it comes to deploying Microsoft Dynamics GP, you are not alone. Our network of Microsoft Certified Partners has proven expertise, and will install, and customize your Microsoft Dynamics GP solution. Their experience streamlines deployment, minimizing downtime. Plus, they provide all the training and support you need to get and stay up and running.

Connect your high tech manufacturing and engineering teams, letting them easily share inventory and bill of materials data. A number of partner solutions are also available to help streamline your engineering and manufacturing processes.

Autodesk® Integration

Integration between the Microsoft Dynamics GP Manufacturing Series and Autodesk's design applications will ensure that production is using the most up-to-date bill of materials, with ready access to drawings and data within the engineering application. With Microsoft Dynamics GP Manufacturing integration to Autodesk Productstream™, you can achieve:

- Synchronization of engineering and production: Share inventory item data and engineering documents, such as drawings, specifications, etc., between production and engineering so that both groups are working with up-to-date and accurate data. Production will have the most recent bill of materials revision, with the ability to easily view the latest designs.
- Integration with several Autodesk applications: Integrate Microsoft Dynamics GP data to and from AutoCAD 2005, AutoCAD Electrical 2005, and Autodesk Inventor.
- Exporting from Microsoft Dynamics GP to Autodesk applications: Export inventory item data (Item Number and Description) from Microsoft Dynamics GP to your Autodesk product.
- Exporting from Autodesk applications to Microsoft Dynamics GP: Using the Autodesk Express Viewer and the Dynamics GP Manufacturing drawing window, production users can quickly open and view engineering drawings that reside in the engineering application.

PLM Integration Suite

The PLM Integration suite ensures that your engineering and manufacturing systems are kept in sync, and that everyone within your organization is using timely, accurate data—all while eliminating redundant data entry.

The Universal Adapter updates your Microsoft Dynamics GP database with data published by a PLM, CAD, or another ERP application using the PDX (IPC Product Data Exchange) format. The Universal Adapter is highly configurable and extensible, among other benefits:

- It creates or updates item master records, bills of material, manufacturer parts, drawings, and engineering change notices.
- Each relevant field is exposed and can be filled with import data, or initialized with a default or with the result of a user-defined script.
- Interested parties throughout your organization can be notified by e-mail of completed additions and changes to your product definition data.
- Data is rigorously validated to ensure integrity and compliance with business rules.

The PDX Creator allows you to create a PDX package from any ODBC-compliant database, an Excel spreadsheet, or text file in a programming-free, point-and-click environment. With the PDX Creator you can:

- Generate a single XML file in the PDX format or generate a PDX package (zip file) that includes relevant attachments.
- Access predefined templates for Microsoft Dynamics GP, or use with any supported data sources.
- Allow output profiles to be reused without editing with user-defined parameters such as item number ranges, date ranges, etc., with an easy-to-use report writer-like user interface.

The PDX Viewer is a Microsoft Windows®-based standalone program that allows a user to view the contents of a PDX package. The PDX Viewer even allows you to extract selected PDX package contents (e.g., items, bills of material, manufacturer parts, etc.) to an Excel spreadsheet or text file.



Fabless Semiconductor Management (FSM)

Fabless semiconductor operations have unique business system requirements. Fabless semiconductor companies are usually challenged with a complex supply chain, short product life cycles, long manufacturing cycle times, lack of WIP visibility, demand variability, and more. FSM was designed with integration in mind from the start. Extending the core Microsoft Dynamics GP capabilities by adding fabless semiconductor-specific operations and manufacturing functionality, FSM provides a comprehensive solution for real visibility.

FSM provides you with:

- Detailed product cost and variance analysis and reporting
- Full product genealogy tracking
- Inventory calculation and reporting
- Inventory location tracking
- Automatic real-time WIP data imports
- Billing and ship-to date reporting
- RMA tracking and product return handling
- Flexible routing
- Real-time backlog reporting
- Full WIP analysis and reporting
- Lot merges and splits
- WIP and customer fulfillment planning
- Material allocation process handling
- Allocation support
- Customer history analysis
- Standard and actual cost of each transaction by step in the production process

With a seamless integration with Microsoft Dynamics GP, FSM provides better information in less time with less effort. It also enables you to better collaborate with customers, which helps fabless companies develop more accurate forecasts and make better strategic decisions.



With Microsoft Dynamics GP, you can streamline business processes that connect departments, partners, decisions, product life cycles, and channels.

High tech manufacturing

Microsoft Dynamics GP just makes sense.

The goal of Microsoft Dynamics GP is to deliver a broad-based, full-featured business management solution through our dedicated partners and ISVs.

Designed to meet the full range of business management needs, Microsoft Dynamics GP offers a solution as broad as it is deep, backed by a commitment you can count on for years to come. And our partners' third-party solutions enable key features and functionality that cover the entire spectrum of your manufacturing business operations, giving you the power you need to streamline and simplify business processes, improve business insight, accelerate productivity, and make the most of existing technology investments.

Get more out of your business automation investment, including:

- Integration that fuels productivity and collaboration, extending the reach of information and processes to customers, partners, and suppliers, and lets you build on existing technology investments.
- Deep integrations with Microsoft products—including Microsoft Office, InfoPath®, SharePoint®, and SQL Server™.
- Familiar, Microsoft Office–like interface, streamlined navigation, and improved usability, which help everyone in your organization conduct business smoothly and efficiently.
- New Microsoft Office Solution Accelerators, which help take the pain out of managing processes such as Sarbanes-Oxley, Excel reporting processes, and more.

Microsoft

© 2006 Microsoft Corporation. All rights reserved. This document is for informational purposes only. MICROSOFT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, IN THIS SUMMARY. Microsoft, Excel, FRx, Great Plains, InfoPath, Microsoft Dynamics, the Microsoft Dynamics logo, SharePoint, Windows, and Windows Mobile are either registered trademarks or trademarks of Microsoft Corporation, FRx Software Corporation, or their affiliates in the United States and/or other countries. FRx Software Corporation is a subsidiary of Microsoft Corporation. All other trademarks are property of their respective owners.

0306 Part No. XXX

Microsoft Dynamics is a line of integrated, adaptable business management solutions that enables you and your people to make business decisions with greater confidence. Microsoft Dynamics works like familiar Microsoft software such as Microsoft Office, which means less of a learning curve for your people, so they can get up and running quickly and focus on what's most important. And because it is from Microsoft, it easily works with the systems your company already has implemented. By automating and streamlining financial, customer relationship, and supply chain processes, Microsoft Dynamics brings together people, processes, and technologies, increasing the productivity and effectiveness of your business, and helping you drive business success.

Worldwide (1) (701) 281-6500

U.S./Canada Toll Free (1) (888) 477-7989

www.microsoft.com/dynamics