

# STREAMLINE

Microsoft Dynamics™ AX

## Gain Efficiency, Flexibility, and Insight with Professional Services for Microsoft Dynamics AX

White Paper

Date: March, 2006

[www.microsoft.com/dynamics/ax](http://www.microsoft.com/dynamics/ax)



# Table of Contents

- Introduction ..... 3**
  - Professional Services for Microsoft Dynamics AX.....3
- A Guide to the Benefits of Professional Services Automation (PSA) Solutions..... 4**
- Empowering PSOs with Professional Services for Microsoft Dynamics AX..... 6**
  - Gain Business Agility.....7
  - Tap into Deeper Business Insight.....8
  - Work More Efficiently.....9
  - Contain Risk and Increase Accountability ..... 10
  - Complement the Systems You Already Use..... 11
  - Quality Assurance and Support ..... 11
  - Solution Map of Industry-Specific Capabilities..... 12
  - Independent Study: Microsoft Dynamics AX Customers Earn Strong ROI ..... 12
- Conclusion ..... 13**
- Appendix 1: Technical Details ..... 14**
  - Core Functionality..... 14
  - System/Application Architecture..... 14
  - Built Using Proven Microsoft Technologies ..... 15
  - Key Microsoft Technologies ..... 16
  - Professional Service Modules ..... 19
  - Technical Benefits ..... 20
  - System Requirements ..... 22
- Appendix 2: Additional Resources..... 25**

## *Introduction*

As we settle more firmly into the information age, having and accessing knowledge clearly provides a primary competitive advantage. Helping the people in your organization stay current with evolving trends is a key business requirement. With recent growth at 20 percent a year, the professional service organization (PSO) industry is one of the world's fastest-growing industry segments. Yet in this highly competitive field, maximizing efficiency during the life of a project or engagement can still be one of the greatest challenges.

In addition to the paramount need to ensure organizations run profitably and in compliance with a host of regulations and policies such as Sarbanes-Oxley, PSOs face significant pressures. For example, measuring the degree of project completion is sometimes difficult, and as a result, schedule deadlines are missed. Because employee turnover in the services industry is high (in many cases as high as 40 percent), forecasting and managing resource utilization can be challenging. To add to these complexities, the ability to leverage historical information is critical to the success of projects from financial, scheduling, and scope perspectives. Moreover, as many other industries become global, so must services companies to meet the full needs of customers. That means global resource deployment capabilities are necessary to help ensure the right skills are assigned to the right project.

Project complexity is also increasing due to customers demanding accelerated schedules and expecting that PSOs will leverage knowledge and experience to rapidly produce results. Using project management tools and methods is one way to proactively organize projects and manage time, equipment, and employees effectively.

To round out the set of challenges, PSO customers have grown to expect a far greater range of services, and smaller budgets and faster timelines leave little room for enhancing quality and innovation while the expectation for both is on the rise. Because the value of any service firm is built on people and knowledge, PSOs need tools that can help build team synergy and maximize the effectiveness of the knowledge and experience of PSO employees.

## **Professional Services for Microsoft Dynamics AX**

Designed especially for use by PSOs, Professional Services for Microsoft Dynamics AX, formerly Microsoft® Business Solutions–Axapta®, is an end-to-end business solution that integrates project, financial, and resource management capabilities to help companies increase revenues, lower costs, and contain risks. It helps you to improve profitability, efficiency, and customer service, and to adapt more quickly to changing business conditions. The solution also enables PSOs to connect with customers and business partners more effectively, which can lead to greater customer satisfaction, increased employee productivity, and the flexibility required to seize new market opportunities.

Like all Microsoft Dynamics offerings, Professional Services for Microsoft Dynamics AX helps you be more agile. Professional Services for Microsoft Dynamics AX helps break down boundaries between departments inside your company for increased efficiency and greater flexibility, so you can respond quickly to changing business conditions. It helps remove restrictions that separate your company from customers and suppliers so you can work together in new ways to improve customer service, satisfaction,

and retention. And Professional Services for Microsoft Dynamics AX eliminates barriers between your company and your employees, enabling them to be more effective in making better, faster decisions.

You put a lot of hard work and creativity into pleasing your customers and optimizing your organizational assets. The information in the following pages will show you how Professional Services for Microsoft Dynamics AX can help you get the job done better.

## *A Guide to the Benefits of Professional Services Automation (PSA) Solutions*

PSA solutions can be a powerful way to deliver value for the following PSO stakeholders:

- Current and potential customers who want innovative, high-quality work done on their schedule and within their budget limitations.
- Organizational leaders who need to manage the company to achieve maximum customer satisfaction and profitability, portfolio and business alignment, and responsiveness to change.
- Functional staff members who need to focus their time working on projects, not doing paperwork.
- Project managers who want to better manage teams and deliver projects on time and on budget, and whose teams require accurate time, expense, and status reporting, as well as resource and skill optimization.
- External customers, partners, and suppliers who require accurate invoicing, high-quality customer service, collaboration, and dispute resolution.

This section presents an overview of the types of benefits available to these stakeholders by using a PSA solution.

### **Cost Reduction**

Minimizing unnecessary costs during difficult economic times is not just a return on investment (ROI) issue, but potentially one of market survival. And while lowered cost often is not thought of as a primary reason for implementing a PSA solution, many companies find that the efficiency and productivity gains of a PSA solution result in significant budgetary successes. Cost reduction comes from automating core business processes, improved invoicing, streamlined administration, and better resource time and expense tracking.

### **Increased Revenue and Profitability**

One of the top reasons for investing in a PSA solution is the increased revenue and profitability that results from improved resource utilization, which ultimately leads to improved customer satisfaction and repeat business. Some organizations have already reported annualized ROI of 90 percent or more on PSA deployments. Payback on the original PSA investment sometimes can occur within six months, depending on the size and complexity of the solution.

### **Greater Visibility into the Organization**

More timely and accurate access to resource and project data can enhance executive decision-making when it comes to prioritization of strategic services, projects, resources, and funding. The better visibility

that accompanies a PSA solution also helps project and operational managers to optimize resources, while improving on-time and on-budget delivery. Many customers find this to be even more rewarding than originally anticipated.

### **Improved Resource Utilization**

Having an effective time and expense record of resource usage can help your organization deliver significant benefits. PSA solutions can deliver real business value in migrations from best-available to best-fit project resources. Better alignment of people and skills to billable (and nonbillable) projects can result in resource usage gains averaging at least 2 to 5 percent, with consulting services achieving upward of 10 percent.

### **Improved Team Collaboration**

Project managers can effectively manage teams even when spread over long distances, and teams can keep on top of their deliverables by using Web-based collaboration and communication portals. Portals offer the further benefits of personalized content to reduce information overload and aggregated content from multiple projects and sources to provide the project manager, resource managers, and company executives with views of their entire project portfolio.

### **Process Improvement Across the Service Life Cycle**

In highly project-driven organizations, process improvements can reduce time to market while lowering development costs and improving quality. These benefits come from creating reusable templates and processes, automating core business processes, and more tightly integrating project planning, scheduling, and invoicing.

### **Greater Customer Satisfaction and Loyalty**

Improved efficiency and productivity have little meaning if the customer is unhappy with the final results. Maintaining service quality and effective customer collaboration throughout the service life cycle can significantly improve customer loyalty and repeat business—the hallmark of a highly successful service organization. Ongoing measurement of customer satisfaction should be built into any PSA strategy.

### **Reduced Billing Cycle Time**

A well-conceived PSA solution can calculate resource time and expense, and allocate them to real-time project schedules and customer invoicing to help PSOs lower financing costs with reduced billing cycle times. Streamlining this process contributes directly to bottom-line ROI results.

### **Minimized Revenue Leakage**

When manual entry or separate systems must be used to invoice customers for services, funds can be lost through “revenue leakage”—the result of errors, or incomplete or lost paperwork. Minimizing this leakage includes accurately accounting for all billable time, chargeback, or equipment and material usage on service-related projects.

### **Performance Data Integration**

PSA solutions that support both internally and externally focused services benefit greatly from an integrated IT architecture, including systems that share project, resource, and financial data for in-depth analysis throughout the service life cycle. Purchasing PSA modules that are not designed for smooth data integration can lead to increased IT support, maintenance, and product upgrade costs.

### **Improved Service Agility**

By combining resource and project optimization with improved executive decision-making, PSOs can adapt quickly to sudden change. The ROI on service agility might not be easily measured, but agility plays a critical role when responding to changes in business priorities, competitive pressures, new technology, and economic downturns.

### *Empowering PSOs with Professional Services for Microsoft Dynamics AX*

Professional services organizations operate much differently than other industries. Your company acquires experience and knowledge about your customers, brand(s), competitors, and markets; generates important communications such as e-mail messages, faxes, and phone conversations; produces documents; and generates work product. In addition, you generate project and customer transactions, timesheets, and out-of-pocket expenses. All of this intellectual and transactional capital creates value and takes time.

To thrive, you need tools that map, sometimes quite specifically, to your organizational challenges. For example, your requirements might include the following:

- Systems must adapt to the customer's organizational, project, and financial infrastructure.
- Systems must have the ability to create and manage complex budgets based on time and materials using a variety of customer-specific formulas or negotiated rates.
- Real-time budget reconciliations and change-control mechanisms are needed to help ensure profitability and customer satisfaction.
- Profitability must be measurable at multiple levels—enterprise, office, customer, brand, product, contract, project, and even task.

To illustrate how Professional Services for Microsoft Dynamics AX can help, let's take a look at a representative PSO customer project life cycle. (For technical details, including core functionality, system architecture, and technical benefits, see the Appendix.) Some typical steps in the PSO customer life cycle that are addressed by Professional Services for Microsoft Dynamics AX include the following:

- Identify the opportunity.
- Generate requests for proposals (RFPs) and requests for information (RFIs), and pitch the business.
- Generate contracts, quotes, agreements, and staffing, and create customer records in your accounting and project management systems.
- Execute the project and manage the customer relationship.
- Close the projects and/or contracts.

### **Identify Opportunities**

To help you manage sales opportunities with greater efficiency, Professional Services for Microsoft Dynamics AX provides tools that help you manage your lead pipeline, including a competitive intelligence database and centralized document repository. The solutions include tools for sales pipeline management and reporting, as well as the ability to set up an electronic promotional materials library.

### **Generate RFPs and RFIs, and Pitch the Business**

Professional Services for Microsoft Dynamics AX can also help you accelerate the pitch process and organize and manage your pitch teams using a collaborative RFP/RFI development environment and RFP/RFI template library. Professional Services for Microsoft Dynamics AX solutions for PSOs include the ability to set up and use proposal sites, databases of staff experience, and libraries of samples and materials.

### **Generate Contracts, Quotes, Agreements, and Staffing, and Create Customer Records**

Professional Services for Microsoft Dynamics AX includes contract and project setup routines that conform to your customer and company standards, such as a flexible work breakdown structure (WBS) and customer rules that are configurable at the customer, project, or sub-project levels. Professional Services for Microsoft Dynamics AX also provides you with reusable customer and project templates, multilanguage and multicurrency support, split billing, and configurable revenue recognition methods.

### **Execute the Project and Manage the Customer Relationship**

To help you better mobilize and manage project teams and keep tabs on your progress, Professional Services for Microsoft Dynamics AX makes available bi-directional integration with enterprise project management systems like Microsoft Office Project Server 2003. The solution also provides you with scheduling based on milestones or tasks, configurable automated workflows, digital assets management, a document repository, and the ability to program alerts and notifications.

### **Close Projects and Contracts**

Finally, to accelerate revenue recognition and formalize project closing, Professional Services for Microsoft Dynamics AX provides your organization with the ability to administer project review scorecards and review project metrics; electronically archive digital project assets; and choose between milestone, percent complete, or time-based billing. The solution also can provide tools to assist you with time and materials reconciliation and support your organization's Sarbanes-Oxley compliance efforts.

### **Gain Business Agility**

Professional Services for Microsoft Dynamics AX helps provide critical insight into your company's financial, resource, and project management data to increase revenues and proactively manage and improve your business. The solution easily conforms to the way your company works, not the other way around, and it can be customized to fit your business and adapted easily to meet changing needs. To increase your business agility, Professional Services for Microsoft Dynamics AX enables you to do the following:

- Deploy only the tools and features that are relevant to your business.
- Create client, team, department, and project sites as you need them.
- Create and deploy new tools and features as you need them.
- Assign resources, establish billing rules and revenue recognition, and report at any level of detail necessary (including company, client, brand, product, project, sub-project, and task) with flexible planning and reporting work breakdown structures (WBS).

- Personalize and group the delivery of information to make the content more relevant and accessible.

Professional Services for Microsoft Dynamics AX also enables you to layer information so you can see both high-level (executive summary) and drill-down (detail) views of company information. Users can deploy multicompany and multicurrency support throughout as needed, and create client profile folders and templates for ease of use, with matrix rules for WBS roles, rates, billing rules, and expenses. In addition, you can customize powerful revenue recognition and project billing rules to your unique business needs.

The ability to gather, analyze, and present valuable external insight into your business processes is reinforced with the capacity to administer security-enhanced Web-based surveys for planning, project post-mortem analyses, and corporate scorecard feedback. Moreover, the system enables users to take advantage of past experience to identify evolving trends and core competencies, such as the ability to archive and later retrieve historical staffing plans, out-of-pocket (OOP) estimates, and budget reconciliations for later use in client and project folders, and tools that enable you to capture, manage, and archive intellectual capital in document libraries, image libraries, schedules, and links.

### **Tap into Deeper Business Insight**

Professional Services for Microsoft Dynamics AX is a flexible solution that enables you to integrate key business systems and information into a centralized dashboard to provide real-time insight that can help you identify potential problems early. For example, it can help you acquire insight into your financial data so you can increase revenues, maintain tight control over costs, and shorten billing cycle time. To deepen your business insight, Professional Services for Microsoft Dynamics AX provides users with the ability to do the following:

- Track financial transactions within and between different departments and subsidiaries for an accurate overview of revenue and cost flows.
- Identify aging accounts and projects quickly.
- Monitor variations in estimates and costs to help track trends in profitability.
- Track items throughout the supply chain with full traceability.
- Reduce manual work and redundant effort when generating sales and purchase orders.

PSOs need to effectively manage agreements with suppliers and customers. To meet these requirements, Professional Services for Microsoft Dynamics AX helps users increase the efficiency and accuracy of sales and purchasing processes by maintaining a complete overview of customer and supplier agreements. It also simplifies the handling of agreements with suppliers and customers to save time and money, and it gives your customers the correct price every time by automatically retrieving account-specific and agreement-specific prices and discounts when creating estimates.

Professional Services for Microsoft Dynamics AX can also help you improve cost efficiencies by better managing the allocation of your resources. For example, it enables users to view and analyze human and material resources across the enterprise to avoid over- and under-allocations. To help analyze and identify potential opportunities to improve your processes, the solution provides business process monitoring (BPM) tools that help identify and manage company and process bottlenecks.

Achieving deep business insight is easier when you have the ability to keep all of your critical business information and services in one place. Professional Services for Microsoft Dynamics AX helps by enabling you to do the following:

- Manage everything—including lists (such as client contacts or vendors), links to critical Web sites, and other enterprise applications, tasks, issues, and project risks—in one place based on your users' access rights.
- Eliminate password overload with single sign-on to portal and corporate applications, such as customer relationship management (CRM), HR, and enterprise resource planning (ERP) systems.
- Take advantage of information stored in Microsoft Active Directory® to target, filter, and sort critical company information.
- Roll up disparate information into consolidated views to increase information relevance and value.

Users can also gain a fast and efficient overview of clients, projects, and teams with powerful, flexible reporting functionality that helps identify the following:

- Clients and industries that represent a business expansion opportunity.
- Most and least profitable clients.
- Most effective and efficient internal sales, production, and account management teams.
- Most profitable project types.

## **Work More Efficiently**

Professional Services for Microsoft Dynamics AX helps optimize your team's time and energy management to lower costs and achieve company goals through collaboration workspaces and centralized access to critical intellectual capital. To help you manage teams proactively to avoid project cost overruns and allocation issues, the solution provides users with the ability to do the following:

- Build and manage teams across the office or around the world by assigning members from a global resource pool.
- View and analyze proposed team member availability and workload before booking them on projects to avoid conflicts and over-allocations.
- Keep management and team members abreast of changes to projects, documents, and tasks with dashboard and e-mail alerts.
- Manage project costs with flexible, robust client/project budgeting and estimating capabilities.
- Improve team member efficiency with Web-based, workflow-enabled time and expense entry.

Having the ability to capitalize on historical information is another way to trim costs from the bottom line. To help, Professional Services for Microsoft Dynamics AX enables you to create reusable templates and business processes from historical data. Users also have the ability to do the following:

- Capture notes associated with any projects, phases, tasks, or documents during your project, and then archive them for future use.
- Enforce document, list, and digital asset item-level version control to create historical records of project progression.
- Search the entire portal for relevant documents, notes, and lists, and get results according to your role-based system access rights.

- Create schedule, team, pricing, and process site templates based on historical information captured from previous projects.

Because you can process more information faster when multiple people attack the same problem from different angles, Professional Services for Microsoft Dynamics AX helps you facilitate team collaboration to accelerate and enhance the quality of work. Specifically, it provides users with the ability to do the following:

- Use document and online meeting workspaces to improve collaboration with team members, clients, and partners.
- Maintain accurate version control with document check-in/check-out processes.
- Create compelling RFPs and RFIs more efficiently by providing access to prior standard responses and assigning individual document sections to content editors.
- Capture important strategic and tactical thinking and feedback with threaded discussion boards that help team members, partners, and clients to interact.
- Increase team collaboration and ease of use through full bi-directional integration with Microsoft Office Professional Edition 2003.
- Synchronize project, personal, and team calendars with Microsoft Office Outlook® 2003 and Microsoft Exchange Server 2003.

Professional Services for Microsoft Dynamics AX also helps you push mission-critical information to your frontline so you can make critical company, client, and project information accessible to frontline staff anywhere in the world at any time through a Web-based enterprise portal.

### **Contain Risk and Increase Accountability**

To help you contain risk and maintain control of your business processes, Professional Services for Microsoft Dynamics AX provides tools that can help ensure that teams work within corporate policies and that your processes adhere to industry best practices, client standards, and government regulations. For example, it provides the ability for users to do the following:

- Ease Sarbanes-Oxley compliance with access to real-time, integrated financial information.
- Manage companywide system access with user, group, and role-based security, including assigning access to content at the document or list level.
- Extend corporate security policies to critical business systems through synchronization with Active Directory.
- Establish standard document templates, reports, and forms to help ensure consistency across teams and departments.

To help you establish, automate, and monitor core business processes, Professional Services for Microsoft Dynamics AX provides mechanisms that enable you to configure workflows to automate key business processes, help ensure that rules are consistently followed, and speed up the routing process. In addition, users can easily document complete audit trails of business and project processes with business activity monitoring (BAM). The solution also helps you manage and record the evolution of project and financial information. For example, you can maintain project histories down to the document, list, item, and transaction level with version control. Every version change is stamped with the date, time, and user information—and you can even enforce the collection of revision comments.

---

## **Complement the Systems You Already Use**

Professional Services for Microsoft Dynamics AX works like and with familiar Microsoft software, so you can take advantage of the entire catalog of Microsoft products. The solution integrates closely with powerful Microsoft technologies such as Microsoft SQL Server™ 2000 and Microsoft Internet Information Services 6.0, as well as familiar Microsoft Office system programs such as Microsoft Office Word 2003, Microsoft Office Excel® 2003, Microsoft Office PowerPoint® 2003, and Outlook 2003. Easy to use, deploy, and upgrade, this fully integrated solution is designed to help you quickly and affordably seize competitive advantages whenever possible.

## **Quality Assurance and Support**

To provide high quality and excellent value, Professional Services for Microsoft Dynamics AX has been reviewed by Microsoft's internal development and quality assurance staff and is supported by Microsoft Dynamics Support Services globally. So you can count on the overall assurance of receiving support for your entire solution coming from one place, rather than having to contact different people and organizations for different support needs. In addition, technical review prior to launch and throughout the product life cycle helps ensure greater product quality, performance management, and stability through service packs or major releases.

## Solution Map of Industry-Specific Capabilities

The following diagram shows the industry-specific capabilities provided by Professional Services for Microsoft Dynamics AX as they integrate with core Microsoft Dynamics AX functionality.

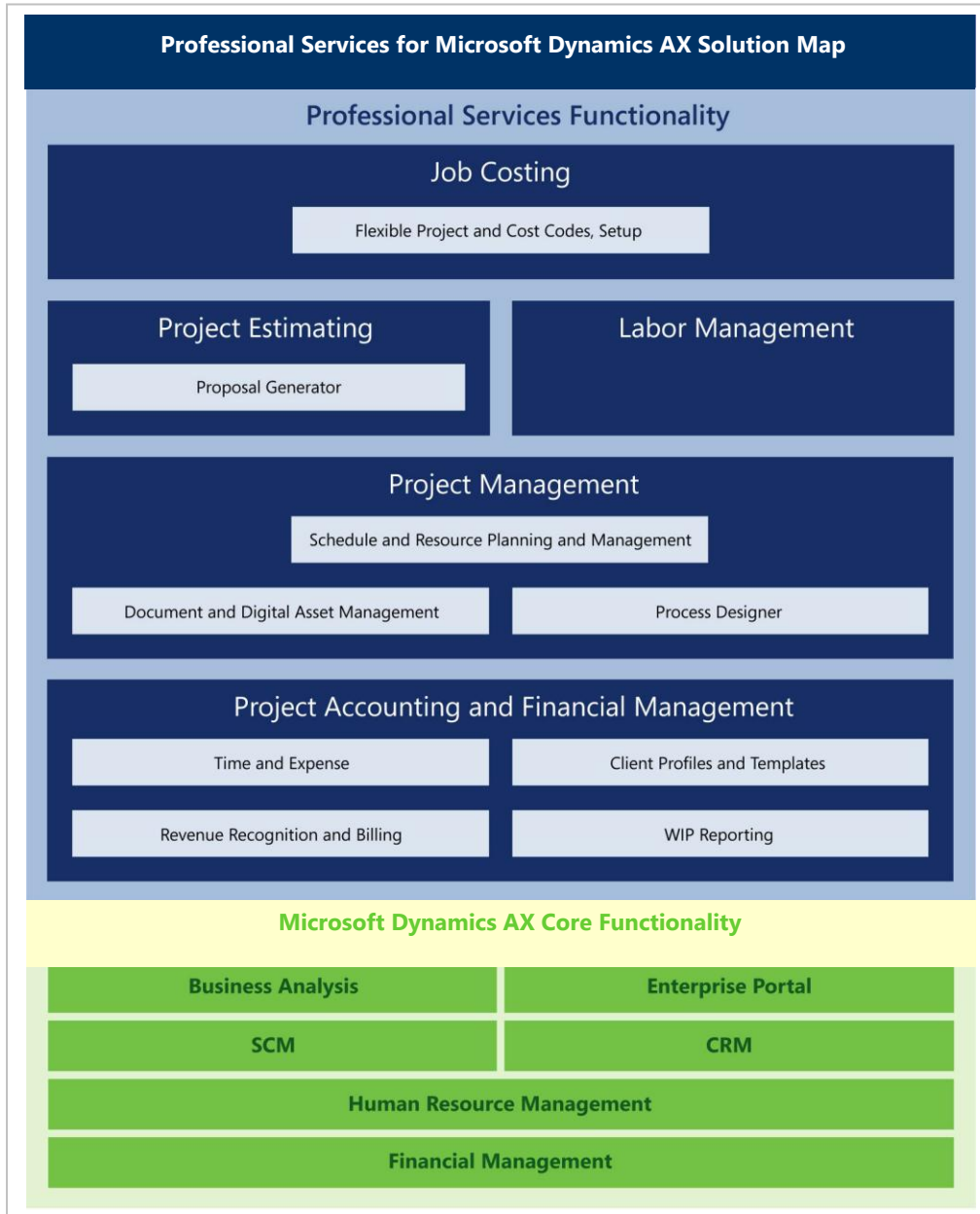


Figure 1. Project accounting and project and team management functionality and information are accessed by using an enterprise portal.

## Independent Study: Microsoft Dynamics AX Customers Earn Strong ROI

Microsoft Dynamics understands that today's sophisticated business management software buyer demands applications personalized for their business at the lowest possible total cost of ownership (TCO).

According to Nucleus Research Inc., a global provider of ROI-focused research and advisory services, 75 percent of Microsoft Dynamics AX solution customers interviewed achieved a positive ROI from their deployments, with an average payback period of only 23 months.

In the Nucleus Research survey,<sup>1</sup> Microsoft Dynamics AX compared favorably with other business management software vendors, some of which failed to show a positive ROI regardless of length of deployment. According to the survey report, “Companies cited four key benefits leading to a positive ROI from [Microsoft Dynamics AX]: staff reductions, reduced IT costs, improved customer and partner satisfaction, and improved operations and visibility.”

The report states, “Fifty-six percent of [Microsoft Dynamics AX] customers were able to directly reduce staffing costs as a result of their [Microsoft Dynamics AX] deployment.” In addition, 44 percent of customers reduced IT costs as a result of their Microsoft Dynamics AX deployment, and 75 percent reported “improved operations and visibility.” Microsoft expects that the wizard-based configuration and system setup tool will further accelerate the strong ROI results demonstrated in the independent study.

## *Conclusion*

Professional services organizations today face a whole new set of challenges: a deluge of information, constant demands on attention, new skills to master, and pressure to be ever more productive. Professional Services for Microsoft Dynamics AX gives you new ways to link islands of information and streamline processes to help you deal with a complex, information-rich environment. You can then use your time better to seize emerging opportunities, build stronger customer relationships, and deliver world-class customer service.

In addition to providing you with new and better ways to work, Professional Services for Microsoft Dynamics AX can be tailored with add-on functionality while maintaining low TCO, so you can adapt and upgrade your solution over time with less risk and expense. The highly flexible, layered architecture—a major benefit over competitors’ solutions—enables Microsoft technology partners to provide valuable customizations and extensions to the Microsoft Dynamics AX product line to fit your unique vertical business needs. So you can invest in your future with a solution that is backed by a vast network of Microsoft solution providers and independent software vendors, all dedicated to helping ensure that your Microsoft Dynamics AX solution changes and grows alongside your business.

At Microsoft, we believe the keys to helping businesses be more agile are to empower individual workers with tools that improve efficiency, enable users to focus on the highest-value work, maximize the impact of employees and workgroups, and drive deeper connections with customers and partners. If you are looking for ways to gain operational agility and efficiency; gain deeper insight into business opportunities, information, and processes; and maintain control of your business processes and remain in compliance with corporate, client, and government policies and regulations—such as Sarbanes-Oxley—consider taking your PSO to the next level with Professional Services for Microsoft Dynamics AX.

---

<sup>1</sup> Nucleus Research, Inc. *The Real ROI from Axapta*. Research Note E116, October 2004.

## *Appendix 1: Technical Details*

### **Core Functionality**

Specific functionality for the core professional service modules includes:

- Flexible planning, hierarchy, and analysis with configurable work breakdown structure (WBS).
- Multi-company and multicurrency support throughout projects.
- Ability to create matrix rules and templates for WBS, roles, rates, billing rules, and expenses.
- Web-based, workflow-enabled time and expense entry.
- Powerful revenue recognition and project billing rules.
- Configurable alerts and notifications.
- Bi-directional integration between Microsoft Office Project Server 2003 and project accounting.
- Access to all critical systems and data through a central interface by using one password.
- Project management reports and queries.
- CRM enhancements.
- Integration between projects and production.

### **System/Application Architecture**

Professional Services for Microsoft Dynamics AX provides a flexible two- or three-tier architecture, which enables the system to scale as usage is increased.

The key features of the architecture include:

- Layer technology.
- Ability to easily add in vertical-specific functionality without affecting the core code of the system.
- Scalability.
- Ability to implement additional servers as more users and locations are brought in.
- Decentralized implementations can roll into a global instance if needed.
- Global access.
- Single global base supports localization for each country.
- Only one code set to manage.
- Integration.
- Electronic document exchange between partners.

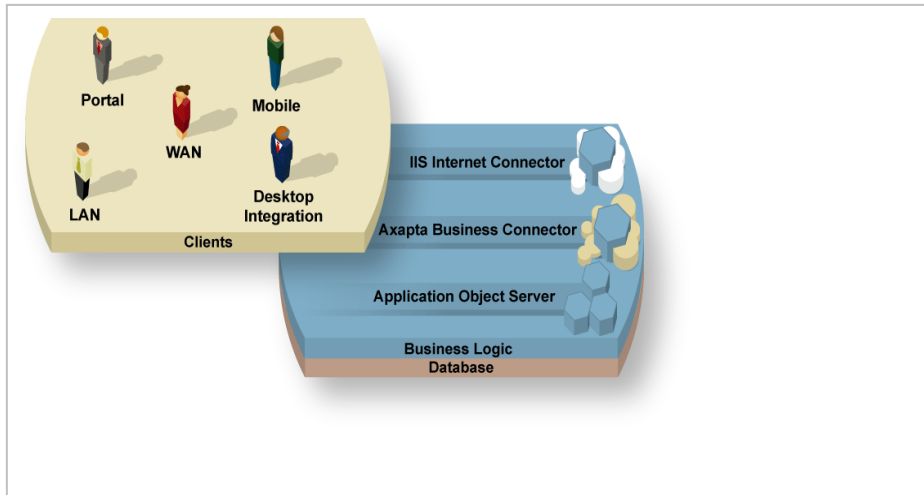


Figure 2. With Professional Services for Microsoft Dynamics AX, users can access the application by using the Internet, a wide area network (WAN), a local area network (LAN), or a mobile device, or through desktop integration.

### Built Using Proven Microsoft Technologies

Professional Services for Microsoft Dynamics AX is anchored by the following integrated Microsoft technologies:



Figure 3. Professional Services for Microsoft Dynamics AX uses Microsoft SQL Server 2000 to store data and can integrate tightly with other optional Microsoft technologies for a comprehensive solution.

## Key Microsoft Technologies

This table lists key Microsoft technologies and their functions as part of the Professional Services for Microsoft Dynamics AX solution:

<p>Microsoft Dynamics AX</p>	<p>Designed for midsize and larger companies, Microsoft Dynamics AX is a multilanguage, multicurrency enterprise resource planning (ERP) solution.</p> <p>Microsoft Dynamics AX includes applications for financial management, customer relationship management, supply chain management, human resource management, project management, and analytics.</p> <p>Because it integrates with widely familiar Microsoft applications—such as Microsoft SQL Server, Microsoft BizTalk® Server, Microsoft Exchange Server, the Microsoft Office system, and the Microsoft Windows® operating system—employees can work with the tools they are likely to be already familiar with, lowering training costs.</p>
<p>Microsoft SQL Server 2000</p>	<p>Microsoft SQL Server 2000 is an enterprise-class relational database management system that enables optimum scalability and connectivity between various systems.</p>
<p>Microsoft Windows SharePoint® Services (included with the Microsoft Windows Server™ 2003 operating system)</p>	<p>Windows SharePoint Services is a Web-based team collaboration portal solution. Its primary purpose is to enable team members to communicate and collaborate on specific projects and documents.</p> <p>Key features:</p> <ul style="list-style-type: none"> <li>• Document libraries</li> <li>• Lists (tasks, contacts, events, custom)</li> <li>• Team calendars</li> <li>• Threaded discussions</li> <li>• Document workspaces (for document sharing and collaboration)</li> <li>• Alerts and notifications (additions, changes, deletions)</li> <li>• Flexible site structures (project hierarchies)</li> </ul>

	<ul style="list-style-type: none"> <li>• Dynamic/configurable access control lists, down to the document library and/or list level</li> <li>• With digital asset management, you can store documents, images, and files directly into Microsoft SQL Server fields and surround them with metadata for fast indexing and retrieval.</li> <li>• Use built-in version control to save every version of a document with notations.</li> </ul>
<p>Microsoft Office SharePoint Portal Server 2003</p>	<p>SharePoint Portal Server 2003 aggregates information from the entire organization and presents it to your team members, executives, customers, and partners through Windows SharePoint Services lists and document libraries, and through other enterprise systems using a robust single sign-on (SSO) engine. Having aggregated data increases team member efficiency, enhances collaboration and communication, and aligns project teams to corporate policies.</p> <p>Access to portal data is controlled through integration with your network credentials or simple username/password authentication and can be synchronized with Microsoft Active Directory services. Content can be targeted to all portal users, specific groups, or individual users.</p> <p>Key features:</p> <ul style="list-style-type: none"> <li>• Fully customizable interface: Branding, page design, and content structures are fully configurable.</li> <li>• Single sign-on: Connect your enterprise users, customers, and partners to all relevant enterprise systems and information by using a single password.</li> <li>• Content targeting: Control access to information contained within the portal and underlying Windows SharePoint Services sites, and publish relevant news, announcements, and notifications to specific groups or users.</li> </ul>

<p>Microsoft Office Project Server 2003</p>	<p>Project Server 2003 is a server-based data aggregation, processing, and reporting system used to collect and manage project, resource, and task information created with Microsoft Office Project Professional 2003 desktop software.</p> <p>Using the Project Web Access functionality in Project Server 2003, team members can view and update their progress on tasks, issues, and risks assigned to them. Project managers can view and manage their entire project portfolio. Resource managers and executives can manage resource allocations and stay on top of enterprise projects quickly and easily.</p> <p>Key features:</p> <ul style="list-style-type: none"> <li>• Alerts and notifications: Team members and project managers can set proactive system alerts and notifications to let the team know when tasks have been assigned, changed, or deleted, and when they are approaching a critical date or milestone.</li> <li>• Web-based timesheets: Enable 'round-the-clock access from virtually anywhere in the world.</li> <li>• Notations: Attach project notes associated with entire projects or individual tasks.</li> <li>• Issues and risks planning/management: Identify, assign, and track issues and risks associated with a project.</li> <li>• Resource allocation reporting: Resource managers, department managers, and executives can use OLAP cubes to view the allocation of resources across the organization.</li> <li>• Dynamic, customizable views of project data: Create executive summaries and detailed views of your project data to proactively manage budgets, resources, and expectations.</li> </ul>
---	--

Microsoft Office Project Professional 2003	Desktop application for client computers, used to create, staff, estimate, and manage projects. Dynamic scheduling capabilities at the organization, resource, and task level help ensure project accuracy and speed the development of project plans. Further, project templates help ensure fast, consistent project plan creation across the organization.
Microsoft Office Professional Edition 2003	<p>Desktop application suite for client computers that includes:</p> <ul style="list-style-type: none"> <li>• Microsoft Office Word 2003</li> <li>• Microsoft Office PowerPoint 2003</li> <li>• Microsoft Office Excel 2003</li> <li>• Microsoft Office Access 2003</li> <li>• Microsoft Office InfoPath® 2003</li> </ul> <p>Microsoft Office Professional Edition 2003 programs can be extended using Microsoft .NET software for connecting people, information, systems, and devices. Use this technology to add features, functionality, and connectivity with other corporate systems and databases.</p>

**Professional Service Modules**

The core functionality offered by the Microsoft solutions outlined above can be tailored for professional services organizations by adding the following modules. Together with the previously listed products, these modules comprise Professional Services for Microsoft Dynamics AX.

Professional Services Automation (PSA) Adapter for Microsoft Dynamics AX	<p>PSA Adapter for Microsoft Dynamics AX is a tool that enables tight integration between Microsoft Dynamics AX and Microsoft Office Project 2003. The solution enables users to set up and manage projects by using Project client software, while the actual data is stored in the Microsoft Dynamics AX database. For example, an employee can use Project to create a project, assign resources, and create and update tasks. After the data is saved, it automatically transfers to Microsoft Dynamics AX.</p> <p>The reverse situation applies when a project is created in Microsoft Dynamics AX: Data can be made available in Project. This option can be restricted in cases where Project is not being</p>
--	---

	used for all projects.
Microsoft Office Solution Accelerator for Proposals	A client- and server-side solution that connects team members directly to document libraries through Microsoft Office Word 2003. Using both Word 2003 and Windows SharePoint Services document libraries when connected through the Accelerator for Proposals, team members can collaborate on the creation of a document while accessing content stored in company document archives or content repositories.

## Technical Benefits

### Unique architecture provides powerful integration possibilities

Microsoft Dynamics AX has a unique three-tier architecture that makes it easier to integrate with other components and programs and with the Internet. The possibilities include program peer-to-peer integration, COM/managed interfaces integration, and Web services-to-Microsoft Office system integration.

### Full bi-directional integration with Microsoft Office system programs

Microsoft Dynamics AX, Windows SharePoint Services, and Project Server 2003 are all capable of importing and exporting information to and from Microsoft Office System programs such as Word, Excel, PowerPoint, and Access. This capability enables your users to create documents offline and then import them into the enterprise solution, or to export data contained in enterprise applications for presentation and offline manipulation. This tight integration also enables your organization to gain the maximum benefit from your investment in Microsoft Office system technologies.

### Easy integration of Microsoft Dynamics AX with existing portal solutions

The Microsoft Dynamics AX Web part framework opens up Microsoft Dynamics AX Web elements as individually and independently usable components. Microsoft Dynamics AX Web parts can be used directly in any existing portal solution that supports hosting of Windows SharePoint Services Web parts. For instance, customers with existing portal solutions—such as portals based on ASP.NET, Windows SharePoint Services, or even SharePoint Portal Server 2003—can simply use Microsoft Dynamics AX Web parts and reference Web forms and Web reports from Microsoft Dynamics AX.

### Common search of both Windows SharePoint Services and Microsoft Dynamics AX

A common search from Enterprise Portal enables the discovery of content from both the Windows SharePoint Services and Microsoft Dynamics AX databases. Information workers require immediate access to the information they use every day, as well as access to data that is not on their team site but is stored on the corporate intranet. Searching across the structured and unstructured data in SharePoint and Microsoft Dynamics AX makes this possible.

### Reliable, scalable, and extensible Windows SharePoint Services platform reduces total cost of ownership (TCO)

A reliable and scalable infrastructure enables IT professionals to establish a foundation that can help to reduce network administration effort and TCO. Such an infrastructure also accommodates future collaboration needs, such as an organization-wide portal strategy or interorganization communications.

Establishing Windows SharePoint Services team sites that use Microsoft Dynamics AX content provides IT professionals with the following reliability and scalability benefits:

- **Cost-effective scale-up.** With Microsoft System Architecture and ASP.NET stateless front ends, IT professionals can provide scalable team workspace services in environments that range from a single computer to a clustered server farm. Even in very large environments, system administrators can set up Windows SharePoint Services configurations with multiple, stateless front-end Web servers that support large numbers of user connections and as many database servers as required. Organizations can scale up their Windows SharePoint Services workspace environment without compromising system reliability, security, or performance, and without committing substantial additional systems management effort. These capabilities can help IT professionals to expand Windows SharePoint Services and keep systems administration costs under control.
- **Continuous system operations of large sites.** Windows Server 2003 and SQL Server 2000 technologies such as load balancing and failover enable system administrators to maintain enterprise-class reliability for all team workspace infrastructures. By detecting host failures and automatically redistributing traffic to functional hosts, Windows Server 2003 load balancing helps ensure that team sites and mission-critical services based on Windows SharePoint Services are available when and where users need them. The resulting increase in system availability reduces system administration effort and its related costs.
- **Faster configuration and reduced development costs.** To build integrated collaboration programs quickly and easily, IT professionals can use the development tools of the Microsoft .NET Framework, standard data formats such as XML, and common tools. The strategy of using the Microsoft .NET Framework, Web services, Microsoft Visual Studio® .NET, and Windows Server 2003 to build SharePoint products and technologies reduces the time, effort, and costs involved in developing Windows SharePoint Services solutions.
- **Accelerated return on IT investments.** Industry standard protocols like XML that enable data exchange between different platforms help IT professionals extend the value of existing business data and computing systems by making formerly isolated data silos available through a Web browser or productivity program.
- **Lower site-provisioning costs.** Standardized site design templates and easy-to-use site operations tools help IT administrators to provision team workspaces quickly. With Windows SharePoint Services, system administrators can help users create sites, control site membership, directly monitor site usage, and moderate content submissions with minimal IT effort and site-provisioning costs.
- **Reduced site-related support costs.** After the team workspace is set up, the self-service tools of Windows SharePoint Services enable users to create site templates that use Microsoft Dynamics AX and collaborative information, to share them with one another, and to reuse customized, proven site solutions. Because teams handle day-to-day site functionality and administration, users rely less on the IT staff, and IT support costs decrease.

- **Lower operational costs and TCO.** Using the underlying management technologies and tools of the Windows Server 2003 platform, IT professionals can monitor and troubleshoot Windows SharePoint Services team sites with less time and effort. IT professionals can configure Windows SharePoint Services from a centralized location by using Group Policy and the familiar Microsoft Management Console (MMC) graphical user interface, monitor sites with Windows Management Instrumentation (WMI), and administer the sites remotely by using scripts and command-line tools.
- **Lower site backup and restore costs.** Per-site backup and restore, along with the centralized user administration capabilities of Windows SharePoint Services, help IT professionals to back up and restore team workspaces individually. As a result, IT administrators can minimize effort and related system management costs by restoring a small subset of data rather than an entire database.
- **Lower site management costs.** IT professionals can use the Microsoft .NET object model to create custom scripts that automate common site management functions and to build custom programs on the Windows SharePoint Services platform. IT administrators can use browser-based administration tools or the command line to manage workspace sites and site collections. These capabilities reduce the effort and costs involved in site management.

## System Requirements

Component	Server Requirements	Client Computer Requirements
<b>Microsoft Dynamics AX</b>	Windows Server 2003 or Windows 2000 Server	Windows XP or Windows 2000
<b>Microsoft SQL Server</b>	Windows Server 2003 or Windows 2000 Server	Enterprise Manager (required only for DBAs and users accessing data directly)
<b>Microsoft Windows SharePoint Services</b>	Windows Server 2003 Microsoft SQL Server Internet Information Services Exchange Server or SMTP configured for notifications	Microsoft Internet Explorer 5.0 or later Microsoft Office FrontPage® 2003 Web site creation and management tool for interface manipulation/design (PC only) Visual Studio .NET for advanced customization
<b>Microsoft SharePoint Portal Server 2003</b>	Windows Server 2003 Windows SharePoint Services Microsoft SQL Server Internet Information Services	Internet Explorer 5.0 or later

---

	Exchange Server or SMTP configured for notifications	
--	---	--

<b>Microsoft Office Project Server 2003</b>	Windows Server 2003 Windows SharePoint Services Microsoft SQL Server Internet Information Services Exchange Server or SMTP configured for notifications	Internet Explorer 5.0 or later (PC) Terminal Services using Internet Explorer 5.0 or later (Mac) Microsoft Office Project Professional 2003 (for project managers)
<b>Microsoft Office Project Professional 2003</b>	N/A	Windows XP or Windows 2000
<b>Microsoft Office Professional Edition 2003</b>	N/A	Windows XP or Windows 2000
<b>Microsoft Office Solution Accelerator for Proposals</b>	Windows Server 2003 Microsoft SQL Server Internet Information Services Exchange Server or SMTP configured for notifications Windows SharePoint Services Office Solution Accelerator (server version) Microsoft .NET Framework 1.1 (must be installed prior to Office Solution Accelerator)	Windows XP or Windows 2000 Internet Explorer 5.0 or later Microsoft Office Word 2003 with .NET Programmability Support Microsoft .NET Framework 1.1 Office Solution Accelerator (client version)

## *Appendix 2: Additional Resources*

More Microsoft Dynamics AX information:

[www.microsoft.com/dynamics/ax](http://www.microsoft.com/dynamics/ax)

More Microsoft Windows SharePoint Services information:

[www.microsoft.com/sharepoint/](http://www.microsoft.com/sharepoint/)

More Microsoft Office system information:

<http://office.microsoft.com/en-us>

More Microsoft Office Project Server 2003 information:

<http://office.microsoft.com/en-us/FX011204851033.aspx>

The information contained in this document represents the current view of Microsoft Corporation on the issues discussed as of the date of publication. Because Microsoft must respond to changing market conditions, it should not be interpreted to be a commitment on the part of Microsoft, and Microsoft cannot guarantee the accuracy of any information presented after the date of publication. This white paper is for informational purposes only. MICROSOFT MAKES NO WARRANTIES, EXPRESS, IMPLIED, OR STATUTORY, AS TO THE INFORMATION IN THIS DOCUMENT.

Complying with all applicable copyright laws is the responsibility of the user. Without limiting the rights under copyright, no part of this document may be reproduced, stored in or introduced into a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), or for any purpose, without the express written permission of Microsoft Corporation.

Microsoft may have patents, patent applications, trademarks, copyrights, or other intellectual property rights covering subject matter in this document. Except as expressly provided in any written license agreement from Microsoft, the furnishing of this document does not give any license to these patents, trademarks, copyrights, or other intellectual property.

© 2006 Microsoft Corporation. All rights reserved.

Microsoft, Active Directory, Axapta, BizTalk, Excel, FrontPage, InfoPath, Microsoft Dynamics, the Microsoft Dynamics logo, Outlook, PowerPoint, SharePoint, Visual Studio, Windows, and Windows Server, are either registered trademarks or trademarks of Microsoft Corporation or Microsoft Business Solutions ApS in the United States and/or other countries. Microsoft Business Solutions ApS is a subsidiary of Microsoft Corporation. Other trademarks are property of their respective owners.