

ENABLE

Microsoft Dynamics AX

Microsoft Dynamics AX 2009: Designed to Enhance Productivity

White Paper

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Table of Contents

Introduction.....	3
Why Orient Solutions to People?	3
The Impact of Usability on User Productivity	4
The Dimensions of User Productivity	5
Challenges and Solution Trends.....	5
How the Right Solution Can Help.....	6
Research and Development: The Microsoft People-Ready Approach.....	7
Enhance User Productivity with Microsoft Dynamics AX 2009	8
Deliver RoleTailored Information with Role Centers	8
Empower Your People with a Familiar Solution	9
Increase Productivity, Prioritize Tasks, and Keep Processes Moving.....	11
Enhance Connectivity and Collaboration	12
Improve Agility with an Adaptable, Long-Term Solution.....	14
Conclusion	15
For More Information.....	16

Introduction

Today's business management solutions, particularly enterprise resource planning (ERP) solutions, are evolving from a focus on transactions and data entry to one that places people and usability at the center of solution design. This includes attention to varying work styles, role-based perspectives on information and tasks, and the need to extract information in the context of business processes. This shift is being driven by workers' dissatisfaction with rigid solutions that fail to integrate cross-business processes; adapt to changing global markets; or address the needs of individuals in different kinds of jobs. This inflexibility results in poor usability, both for the individual worker and for the solution's fit with company-wide business processes and requirements.

According to a recent Forrester Research study¹, there is a shift toward "Dynamic Business Applications" that is helping to address this challenge. Dynamic business applications are designed for people; they greatly enhance usability and accommodate business agility to help organizations capture the full benefits of their solution. This design-for-people approach places the workers' contextual tasks at the center of the application's interface. The tasks, or work, are the basis for all transactions, business processes, collaboration efforts, and tools. Transactional processing and performance are still relevant, but people become the most important element of the solution.

Microsoft Dynamics® AX 2009 is a leading example of a business management solution designed to optimize usability, improve user productivity, and meet the needs of people in a variety of roles to drive business success. The solution's user-friendly navigation, familiar interface, visualization aids, and self-service business intelligence (BI) tools are prime examples of highly usable features that are designed for the people who use them. This white paper explores the impact of such features on user adoption and personal and organizational productivity.

Why Orient Solutions to People?

A business management solution can only increase efficiency through process speed and automation. It takes people—their ideas, collaboration, and decisions—to envision products and services, create value, and drive business forward. Therefore, any system that prioritizes information processing over people and their needs limits the potential of those people and the success of the business. Rigid business management solutions force people to abandon their creativity, and ultimately result in poor user adoption, frustration, and lost business opportunities.

After hearing customers describe such limitations, Microsoft made a commitment to place people, and their ability to add value, at the center of solution design. This approach, which Microsoft calls a People-Ready Business, better positions organizations to meet the challenges of a fast-changing world. It is designed to help people—an organization's most agile and creative asset—achieve maximum productivity.

In October 2007, Forrester Research explored the approach of Microsoft Dynamics Global User Experience Group, which continues to push the development of better persona-based user interfaces and usability for its Microsoft Dynamics product line². The Microsoft Dynamics user interface strategy, described in detail later in this paper for Microsoft Dynamics AX 2009, includes the following goals:

¹ *The Dynamics Business Applications Imperative, Forrester Research 2007.*

² *Personas Drive Microsoft Dynamics UI Design, Forrester Research 2007.*

- **Make business management solutions as easy to use as mass market products.** The design elements in Microsoft Dynamics solutions have a similar look and feel to those used in other Microsoft applications such as Microsoft® Office 2007 and Windows Vista®, which capitalizes on the knowledge of millions of consumers who already know how to use these products.
- **Focus on the needs of specific business users.** The Microsoft Dynamics AX 2009 interface design is based on a range of personas segmented across various departments and process groups. These personas, or roles, are the basis for the design of personalized home pages that are central to the product design.
- **Support key user tasks.** Based on the design strategy of the Microsoft Dynamics Customer Model, a tool that documents, visualizes, and shares how people work within departments, Microsoft Dynamics AX 2009 supports key tasks that users need to complete within the context of a specific work process.

A solution that's accessible and relevant to a variety of people can contribute significantly to business success. Although the usability of a business management solution is only one aspect of productivity, it is critical because it can constrain or magnify all other productivity benefits of the solution.

The Impact of Usability on User Productivity

According to a recent study from AMR Research, on average only 15 percent of employees are licensed to use their company's ERP solution and 46 percent of ERP licenses remain unused.³ Because a limited portion of the organization is using the solution, the potential for productivity benefits and growth remains untapped.

Why aren't ERP solutions adopted more broadly, by more employees, and for more of their daily tasks? Unfortunately, these solutions are often identified as too difficult to use; too rigid; or both. A 2007 Forrester Research report concluded that "poorly designed user interfaces can profoundly affect the bottom line. The expenses associated with a bad UI, over the course of the application's lifetime, may end up being many times the cost of the application itself."⁴

The negative impact of low usability can include increased training times, a lack of user adoption, and a decrease in workplace productivity. Additionally, when people don't use the ERP system, mission-critical processes can be compromised because there is no access to or enforcement of standard operations and best practices. Furthermore, individuals often track pertinent business information using separate spreadsheets because using a centralized system is too complex and time-consuming.

³ *The Enterprise Planning Spending Report 2005-2006, AMR Research 2005.*

⁴ *The Future of Enterprise Applications, Forrester Research 2007.*

The Dimensions of User Productivity

Although user productivity can be difficult to calculate, it should be a critical factor when evaluating, purchasing, and implementing an ERP solution. Overall, ERP solutions have demonstrably improved user productivity. Research conducted in 2007 by Keystone Strategy included an analysis of widely accepted usability tests, such as Software Usability Measurement Inventory (SUMI), which showed that business productivity is a product of six factors⁵. These factors include:

- **Collaboration**, including the ability to submit work for review, obtain comments or approval from others, and share information and tasks with trade partners.
- **Business insight**, including visibility across departments and real-time access to accurate, relevant data in context of the process or decision where it will be used.
- **Flexibility**, including the ability to depart from transactional tasks to manage problems or exceptions.
- **Usability**, including easy navigation, the number of steps required in tasks, instructions and prompts that are helpful rather than cryptic, and the user's overall command of functionality.
- **Familiarity**, including how easy and intuitive the system is to learn and the sense that information and tasks correlate with the user's job role and activities.
- **Transactional efficiency**, including speed and reliability in accomplishing or automating common, repetitive tasks.



Figure 1. A graphical representation of user productivity factors discussed in "ERP End-User Business Productivity: A Field Study of SAP & Microsoft" by Keystone Strategy, Inc. in March 2007.

Challenges and Solution Trends

Research has shown that after an ERP solution is implemented, users often struggle to learn how to use it and find the information they need. Complaints range from "it's hard to learn" and "it's not integrated with my other tools" to "it's hard to extract information" and "it's not flexible enough for real-world situations."

⁵ ERP End-User Business Productivity: A Field Study of SAP & Microsoft, Keystone Strategy, Inc. March 2007.

Such objections, which are addressed by the six dimensions of user productivity, account in part for the low user adoption rate discovered in the AMR Research study. These challenges are a reflection of solutions designed with a focus on transactional and functional processes, rather than user productivity and comprehensive, end-to-end business processes.

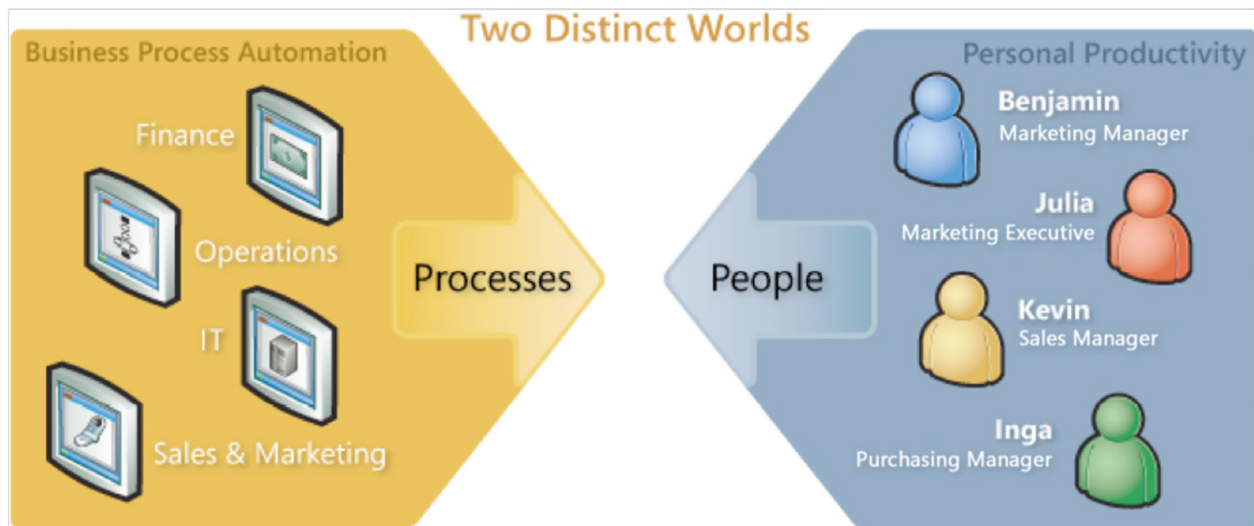


Figure 2. The challenge of combining business process automation and personal productivity.

Fortunately, the shift in ERP solution design is addressing these challenges. For example, transactions, business processes, content, communications, social networking, and tools plug into a unified work "hub." Instead of determining how to apply tools and business information to their jobs, people can rely on the solution to provide contextual tasks and data at the appropriate time. With a unified perspective of daily tasks, ad-hoc activities and custom processes can be better integrated with structured work.

How the Right Solution Can Help

The easier a business management solution is to use, the faster people can to adopt it. The right solution can improve business productivity and lead to a fast return on investment (ROI) by enhancing collaboration, extending contextual business insight to people who need it, and increasing the reach of the solution so that a larger percentage of employees can gain access to it. Finally, a comprehensive solution can support the needs of both frequent and infrequent users.

When assessing business management solutions, it is important to find solutions that are:

- **Familiar and comfortable.** The right solution works the way your people work. Minimize training time and encourage user adoption with a familiar interface, navigational features, and views, such as desktop views, menus, or Web browser interactivity.
- **Focused.** Simplify information overload by providing individuals with only the tasks and information most relevant to their jobs.
- **Proactive.** Increase efficiency with the ability to prompt users with urgent tasks, create alerts for items needing special attention, and automatically deliver meaningful performance results.
- **Integrated.** Connect disparate legacy systems, manufacturing control systems, and business applications to save time and enhance communication. Integrate real-time data and documents internally, across organizational boundaries, and with trading partners. Tight integration also enhances the connectivity and transparency of business processes and information that cross job

functions and departments, helping organizations achieve end-to-end visibility and process automation.

- **Flexible.** Improve your organization's ability to respond to change by adapting business processes and functionality to meet your unique business needs. A flexible, scalable solution can adapt and grow as your business changes by enabling you to add more users, helping you achieve a low total cost of ownership (TCO).

Research and Development: The Microsoft People-Ready Approach

People are at the heart of every organization—they bring the creativity, passion, hard work, and thought leadership that ultimately propel a business forward. Microsoft People-Ready Business is based on empowering people with the right tools, information, and opportunities they need to succeed.

Microsoft Dynamics AX 2009 represents the latest expression of the Microsoft long-term strategy to raise usability to a higher standard by enabling the People-Ready Business. Microsoft Dynamics User Experience researchers and designers conducted extensive research into the requirements customers have for business management solutions. This detail-oriented approach included three practices: research, the Microsoft Dynamics Customer Model, and RoleTailored design.

Research

The Microsoft Dynamics User Experience approach is based primarily on research. Microsoft Dynamics User Experience researchers and designers use multiple methods to move up the usability pyramid—starting with the baseline of determining what it is that people need and what is usable; then making it easy and comfortable to use; and finally, reaching the end goal of people actually enjoying using it.

The Microsoft Dynamics Customer Model

Microsoft Dynamics User Experience researchers and designers distilled the voluminous research results into a framework called the Microsoft Dynamics Customer Model—a representation of the people within an organization, the departments within which they work, and the actual work that they do. This model is a key part of the design strategy to enhance productivity in Microsoft Dynamics AX 2009.



Figure 3. The Microsoft Dynamics Customer Model.

RoleTailored Design

RoleTailored design enables people to cut through the clutter, delivering just the information they need, where and when they need it. It offers perspective by providing an overview of the work ahead, so that you can plan and prioritize efforts.

As discussed in the following section, RoleTailored design is a key productivity enhancement in Microsoft Dynamics AX 2009.

Enhance User Productivity with Microsoft Dynamics AX 2009

Microsoft Dynamics AX 2009 is an end-to-end business management solution for mid-market organizations and divisions of enterprises with diverse operations across the global supply chain. Because it works and feels like familiar Microsoft desktop productivity tools, and is tightly integrated with Microsoft technologies and products, including Microsoft Office and Microsoft SQL Server®, Microsoft Dynamics AX is uniquely positioned to solve common user productivity challenges.

“The out-of-the-box Role Centers in Microsoft Dynamics AX 2009 add value from day one for all employees in our organization. Our users see enormous value with the visuals, the ability to easily design cues, and the year-to-year comparison.”

—John Elmer, VP of Information Systems, Rodgers and Hammerstein

Deliver RoleTailored Information with Role Centers

Role Centers are personalized home pages that are based on an individual’s role within the organization. Role Centers present job-specific information and enhance personal productivity by helping people prioritize their work and focus on the most relevant information and tasks.

Role Centers are based on Microsoft SharePoint® technology, so they are accessible through the Microsoft Dynamics AX client or by using Enterprise Portal in Microsoft Dynamics AX, which further enhances flexibility and control. You can easily personalize information and reconfigure your Role Center based on work preferences or current business needs. Role Centers provide current ERP data, and they can present information from other applications, such as an agenda, a document library, or community site news items. In addition, developers can create and customize Role Centers to fit your industry or unique roles within your organization.

Because you can see at a glance all of your work in progress; better visualize urgent needs and changing conditions; and extract contextual information, you can make faster decisions and exert greater influence over processes and change. By using the unified Work List in your Role Center, which represents workflow action items and alerts, you can be an active participant in business processes. You can also gain quick access to reports, alerts, key performance indicators (KPIs), and common tasks. Track the status of projects, manage orders, and receive notifications and actions-to-be-taken that are initiated by automated workflows. With this RoleTailored information, you can better monitor your work and quickly respond to unexpected changes.

The user profile for a specific role, such as Chief Financial Officer or Accounting Manager, determines the content displayed in that Role Center. In addition, each Role Center may contain:

- Cues that provide a visual representation of work items, such as sales quotes, purchase requisitions, or overdue POs, with flags to identify the most urgent needs.

- A Work List containing prompts as result of a workflow, helping the user stay informed of changes and focus on critical information and activities.
- KPIs relevant for a particular role, so that performance information is always accessible to help improve decision-making.
- A document library and direct access to relevant reports so users don't waste time looking for information they need regularly.
- Quick links to different applications, Web sites, reports, or communities, such as finance, sales and marketing, or service. For example, finance employees can connect to the Microsoft Dynamics Finance Community portal located at <https://community.dynamics.com/finance/home.aspx>.

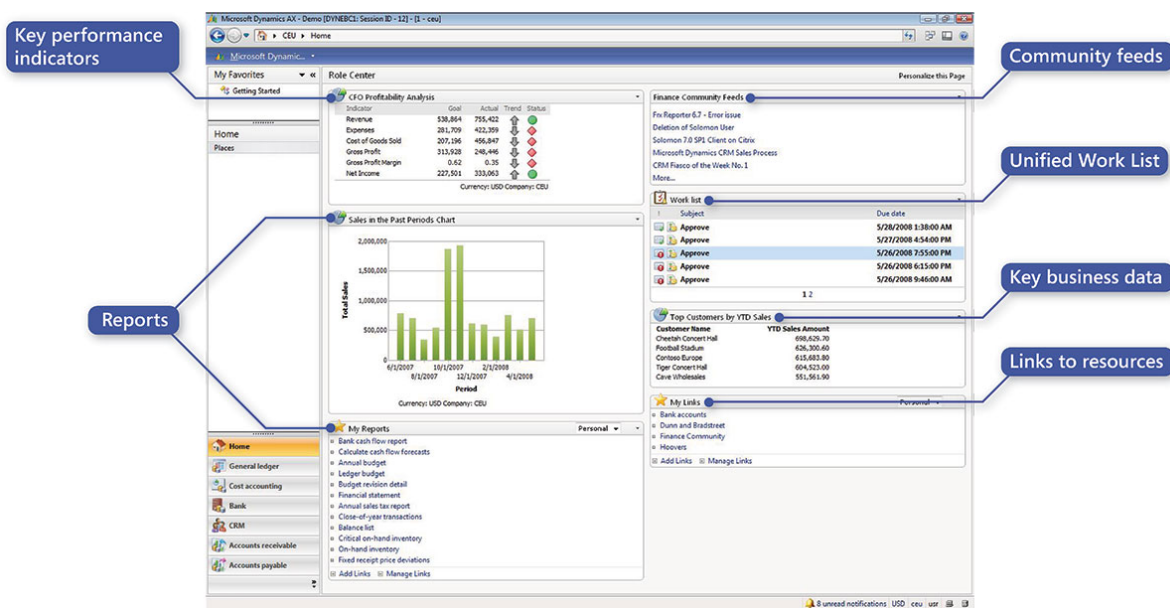


Figure 4. The Accounts Payable Coordinator Role Center for April's persona in the Microsoft Dynamics Customer Model, including current activity status, schedule, KPI data, and alerts.

Empower Your People with a Familiar Solution

Microsoft Dynamics AX 2009 looks and works like familiar Microsoft Office products, including Microsoft Office Outlook® and Windows® Internet Explorer®, helping to minimize training time. The streamlined user interface presents information in a simple, accessible way, requiring fewer open windows and reducing the number of clicks required to get to the right information.

Provide intuitive, user-friendly navigation

Microsoft Dynamics AX 2009 navigation includes the following elements familiar to most Microsoft Office users:

- **Address bar with a breadcrumb path.** The successful Windows Vista "breadcrumb" trail makes it easier to return to a previous view or other frequently-visited pages.
- **Travel buttons.** Forward and backward "travel" buttons are similar to those in most Internet browsers and provide another option for moving around previously viewed pages.
- **Navigation pane.** From the Navigation pane, which uses a visual menu familiar to Outlook, people can quickly open their Role Center, application areas, lists, or forms. The Navigation pane streamlines information by displaying the modules for which the user has access permissions, and it

provides an at-a-glance reminder of the current selection. Users can speed routine work with My Favorites, and with the ability to add shortcuts to the forms, reports, and queries you use most. My Favorites can be further organized into convenient groups with folders.

- **Command bar.** The command bar provides quick, contextual access to commands that apply to the entire active area or module, as well as the current content pane.

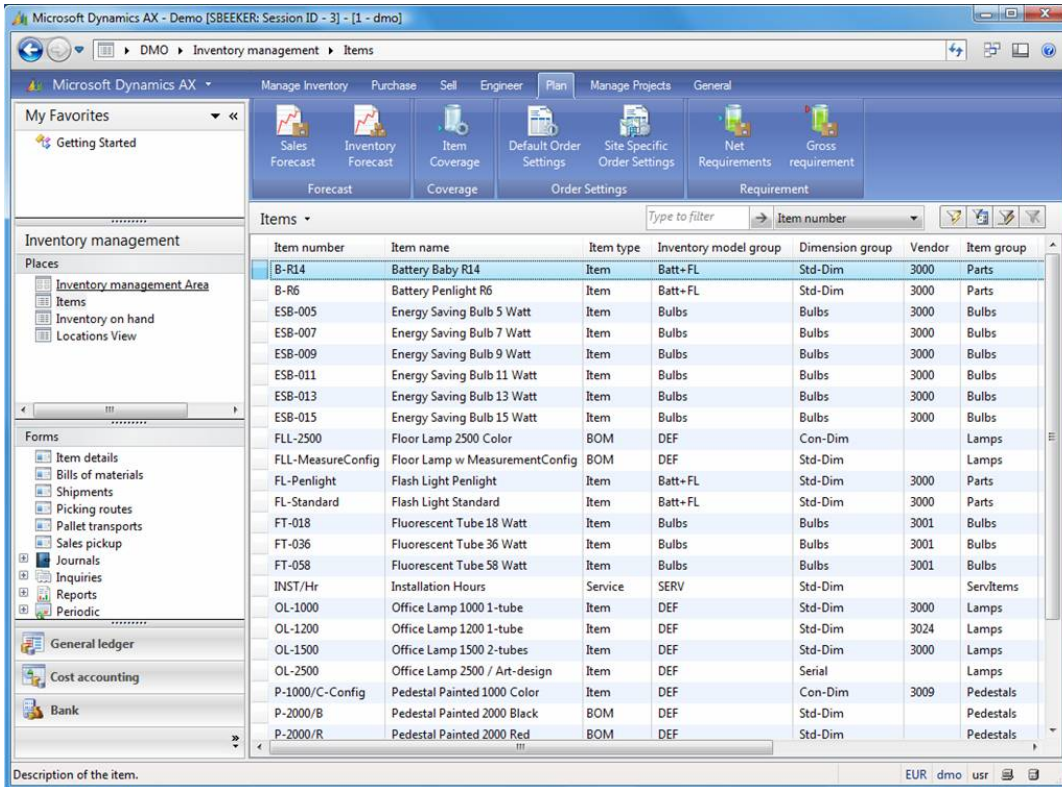


Figure 5. Simplified navigation in Microsoft Dynamics AX 2009.

Speed access to information

Microsoft Dynamics AX 2009 helps people cut through clutter and focus on the information they need to take immediate action. In addition to Role Centers, the solution includes other productivity tools, such as:

- **List pages.** List pages make it easy to find specific information or records, such as customer data, items, or orders, and initiate a relevant action on that record. A filter pane on every list page enables quick isolation or grouping of specific records. The filter pane's search function enables users to search a column for all records with a specified value. Finally, preview panes give people an at-a-glance view of search information so they can determine if they've found the record they want.
- **Action panes.** Microsoft Dynamics AX 2009 has adopted the concept of the Ribbon from the 2007 Microsoft Office system to create action panes. Action panes are image-oriented command bars that display relevant actions above all lists, so performing an action on a selected item or items is only one click away. Each action, such as opening a form, deleting a record, or printing a list of records, is represented by a button; actions consistent between different parts of the solution use similar buttons to aid navigation.
- **Visualizations.** Appearing on relevant list pages, visualizations show graphical representations of information structures, such as staff organization or distribution channels.

- **RoleTailored reports.** With access to dozens of predefined reports for the most frequently needed information, plus a variety of OLAP data cubes for all major solution areas, you can access and analyze information for greater business insight. You can retrieve frequently accessed reports directly from your Role Center and store them in personal report folders.

Increase Productivity, Prioritize Tasks, and Keep Processes Moving

By proactively presenting information where and when it is needed, Microsoft Dynamics AX can help you save time, ensure timely response to change or unexpected events, and keep critical business processes on track.

The solution presents relevant information to the user in a variety of ways:

- A unified Work List provides a single, at-a-glance reference to items that require the user's attention, including circumstances or changes that have triggered an alert, and actions or approvals required by standard workflows.
- Task cues provide a visual aid that prioritizes tasks and prompts necessary actions, helping to ensure that processes stay on track and that the most important activities are clearly identifiable.
- Configurable alerts can appear as pop-up windows, as e-mail messages in Outlook, in Role Centers, or in Enterprise Portal in Microsoft Dynamics AX.

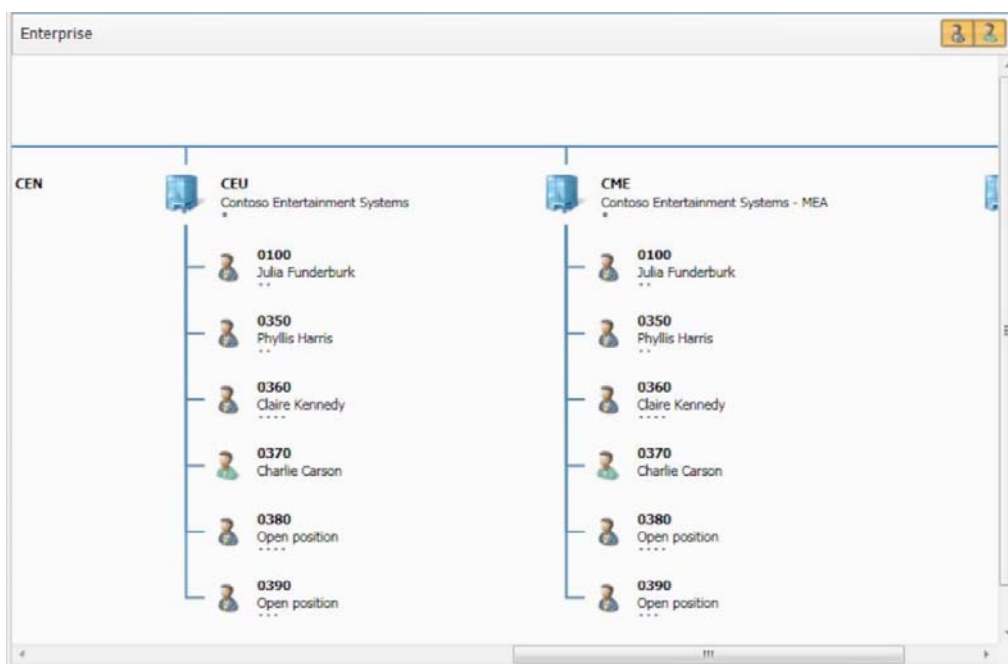


Figure 6. Gain quick access to the information you need with visual aids such as organizational charts.

Provide self-service business intelligence

Microsoft Dynamics AX 2009 extends BI tools to everyone in the organization to deliver greater insight, improve information sharing, and foster more confident decision-making. With self-service access to business information and analytical tools, you can improve individual productivity while reducing the demand on valuable IT resources. Your people can work independently to find, filter, tailor, drill up or drill down, and analyze the precise information they need using a variety of integrated analysis tools, including Microsoft Office Excel®.

The solution integrates tightly with SQL Server Reporting Services, enabling quick access to more than 120 predefined reports and flexible ad-hoc reporting based on OLAP data cubes. Creating OLAP cubes is typically a complex, costly task, but Microsoft Dynamics AX 2009 includes a variety of data cubes that your people can use. These cubes include the most common business dimensions and measures, including KPIs, and they can be tailored to reflect your precise analysis needs.

For organizations with more sophisticated BI and forecasting needs, Microsoft Dynamics AX 2009 integrates with Microsoft Office PerformancePoint™ Server to deliver rich performance management and planning capabilities.

"I love the way that BI and reporting are becoming an even more integrated part of the ERP solution. Microsoft Dynamics AX 2009 makes BI easier for end-users and I think that we will start to see adoption of BI capabilities in phase one of implementations as opposed to later on in the process."

**—Claus Andersen, Team Manager,
Columbus IT**

Enhance Connectivity and Collaboration

As a comprehensive business management solution, Microsoft Dynamics AX 2009 helps you connect related data and functions, enhance collaboration, and automate processes across your business so people can work more efficiently.

Automate business processes using workflow

Enhance the productivity of process managers and others by standardizing and automating approvals and related business processes. Automated workflows, such as review and approval cycles for purchase requisitions, expense reports, or supplier payments, help ensure more efficient approvals and escalations.

Microsoft Dynamics AX 2009 includes workflows based on Windows Workflow Foundation, which supports management of end-to-end processes, such as order fulfillment, that span multiple business functions, improving efficiency and coordination between departments. You can create and document standard workflows with the flexibility to reassign approval authority or create new workflows as circumstances and your business change. The solution comes with a variety of workflow templates that can be easily configured or adapted to your needs based on roles and authority limits. Workflow actions appear in the unified Work Lists in the appropriate Role Center.

Document processes with the Task Recorder

You can also quickly document processes by using the Task Recorder. When activated, the recorder automatically tracks and records your actions in the application for a given business process. The output is a step-by-step guide describing the process, including a description of the actions with screen shots. You can choose the output you want, such as training documentation in Microsoft Office Word, presentation content in Microsoft Office PowerPoint®, or process-oriented documentation in Microsoft Office Visio®. With this integrated tool, you can easily provide training to new users or share critical business processes. In addition, the documentation can easily be made available in a Document Library or in the Compliance Center.

Simplify communication

Microsoft Dynamics AX 2009 works closely with the other Microsoft Office products your people already use, so they can easily share information inside and outside the organization. For instance, you can export business information, including list pages, to Excel. Then you can use PivotTable® views to analyze the data, generate charts, and quickly distribute the results by publishing to a shared team site. People using Word can access information in Microsoft Dynamics AX and link documents to business

records, such as a customer account. Relevant information is stored together and easily accessible to others.

Unified communications centralizes contact and presence information and integrates with Microsoft Dynamics AX 2009. All contact information is stored and maintained in a single location by several teams in the organization. Therefore, when you access customer or supplier contacts from Microsoft Dynamics AX, you can be sure that the data is the most accurate and up to date. Moreover, you can use unified communications to determine who is available, easily share information and documents, and collaborate on the spot.

Support collaboration from any location

You can also share other kinds of information, such as product specifications, marketing campaign milestones, or other working documents. Tight integration between Microsoft Dynamics AX 2009 and Microsoft Office SharePoint Server enables your people to collaborate efficiently with colleagues across the organization by using accessible team sites while maintaining version control.

Microsoft Dynamics AX can be extended to employees wherever they work with Enterprise Portal in Microsoft Dynamics AX. It offers convenient, security-enhanced Web access to Microsoft Dynamics AX, including Role Centers, so remote or offsite workers can stay connected regardless of location. In addition, you can use Microsoft Dynamics Client for Microsoft Office to extend the functionality of Microsoft Dynamics AX to all employees using the familiar Microsoft Office system or Enterprise Portal.

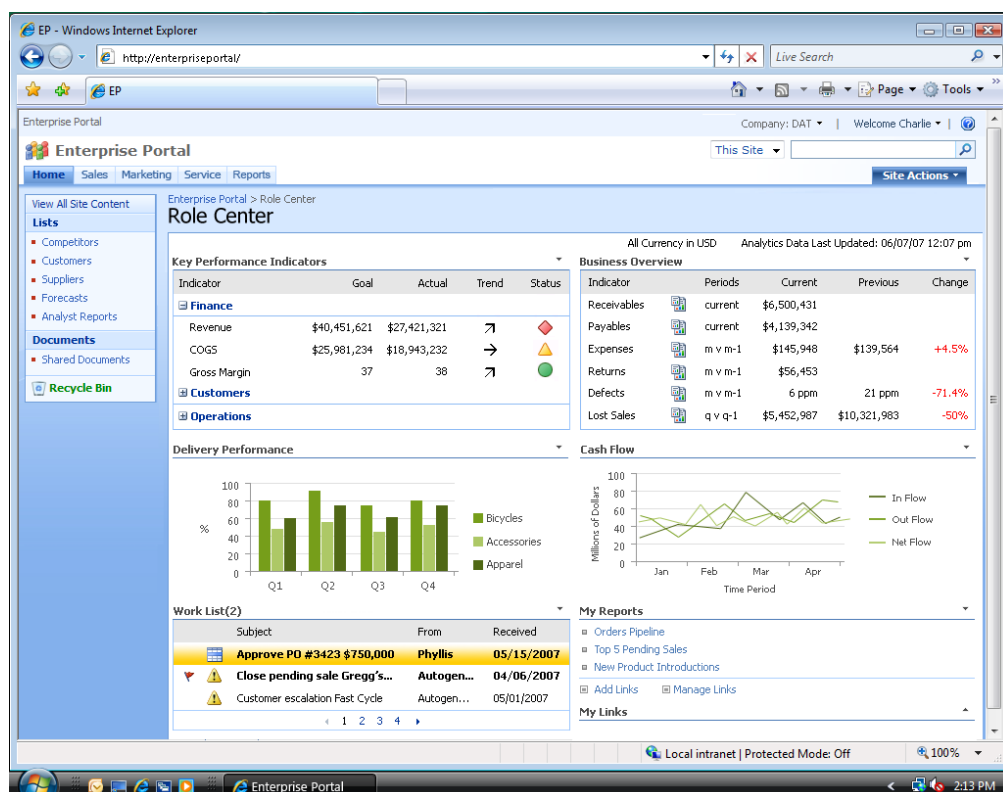


Figure 7. Role Centers are also available over the Internet with Enterprise Portal in Microsoft Dynamics AX.

Improve Agility with an Adaptable, Long-Term Solution

Microsoft Dynamics AX 2009 provides the flexibility you need to optimize user productivity, improve organizational agility, and accommodate future growth. Role Centers and the RoleTailored user experience can be easily personalized for individual users to streamline tasks and speed decision-making. A variety of options for accessing business information, including Microsoft Dynamics Snap, Enterprise Portal in Microsoft Dynamics AX, and the Microsoft Dynamics Client for Microsoft Office, make it easy to extend Microsoft Dynamics AX functionality and productivity tools to workers across the entire organization and throughout the supply chain.

Full integration with Microsoft technologies and products helps you maximize existing IT investments and minimize user training time, resulting in a low total cost of ownership (TCO). The flexible, scalable platform gives you the ability to easily add users or functionality as your business expands. In addition, the solution is readily tailored and easily extended by Microsoft Partners to adapt precisely to your needs now and in the future.

Conclusion

Empower your people with a business management solution that places them at the crux of business operations and frees them to exercise the creativity, agility, and collaboration that can drive success. Microsoft Dynamics AX 2009 can help you realize the potential of your people by delivering enhancements in every one of the six dimensions of user productivity according to Keystone Strategy: usability, familiarity, flexibility, collaboration, business insight, and transactional efficiency (see table 1).

Role Centers streamline daily work and boost personal efficiency by providing quick access to critical business information and tasks, while tight integration with familiar Microsoft desktop productivity tools can help reduce training time and increase user acceptance. End-to-end systems integration with other Microsoft products, such as SharePoint Server, can help to improve overall organizational productivity for a greater ROI.

As an end-to-end business management solution built on the Microsoft technology stack, Microsoft Dynamics AX 2009 provides an adaptable, scalable solution with familiar tools to help you improve productivity, automate business processes, achieve the insight needed to drive success, and manage growth and change.

Table 1

Business Productivity Factors and Microsoft Dynamics AX 2009						
New Features	Collaboration	Business Insight	Flexibility	Usability	Familiarity	Transactional Efficiency
User Interface <ul style="list-style-type: none"> Action Panes List Pages Area pages Visualizations 				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Role Center <ul style="list-style-type: none"> 30+ Roles Dashboard views Personalization tools Alerts 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
Business Intelligence <ul style="list-style-type: none"> Performance indicators Data cubes RoleTailored reports Export to Excel and PivotTable views 		<input checked="" type="checkbox"/>				
Integration <ul style="list-style-type: none"> SharePoint Server/Microsoft Windows SharePoint Server Unified communications Microsoft Office 2007 SQL Server 2008 	<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	

For More Information

- To find out more about the Microsoft People-Ready Business, visit www.microsoft.com/business/peopleready/default.aspx.
- For more information about RoleTailored design, read the white paper, [Microsoft Dynamics RoleTailored Business Productivity: "Software Designed For Your People."](#)
- For more information about Microsoft Dynamics AX, visit www.microsoft.com/dynamics/ax.

About Microsoft Dynamics

Microsoft Dynamics is a line of integrated, adaptable business management solutions that enables you and your people to make business decisions with confidence. Microsoft Dynamics works like and with familiar Microsoft software, automating and streamlining financial, customer relationship, and supply chain processes in a way that helps you drive business success.

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