



Microsoft Dynamics AX 2012

A New Generation in ERP

Mike Ehrenberg
Technical Fellow
Microsoft Corporation
April 2011

Microsoft Dynamics® AX 2012 is not just the next release of a great product. It is, in fact, a generational shift in business software, delivering new levels of capability, unmatched agility, and a compelling and empowering user experience. At the same time, Microsoft Dynamics AX 2012 sets a new standard for simplicity. This paper does not pretend to capture every detail of the product, but instead highlights the key innovations that make Microsoft Dynamics AX 2012 powerful, agile, and simple.

POWERFUL

Many enterprise resource management (ERP) systems have never moved beyond managing the administrative dimension of your business, tracking general ledger, payroll, and HR, while the real operation of the business is managed elsewhere. Microsoft Dynamics AX 2012 is different, covering both the administrative and operational requirements. To do this, **Microsoft Dynamics AX 2012 delivers rich, prebuilt, industry-operational functionality out of the box**, with proven functionality for manufacturing (process, discrete, and lean), distribution, retail, public sector, and service industries. By delivering this capability, Microsoft Dynamics AX 2012 gives you more value faster, and establishes a strong platform for independent software vendors (ISVs) to more efficiently deliver the specialized vertical functionality unique to verticals within those industries. Stronger base functionality and a broad portfolio of specialized vertical solutions means a better fit for the needs of your business, more value, and more rapid time to value.

For example, for the public sector Microsoft Dynamics AX 2012 incorporates fund accounting as required by public sector entities. Historically this critical capability needed to be addressed as customization or as part of the workload delivered by an ERP ISV focused on specific public sector vectors. Delivering this level of functionality out of the box, as part of the Microsoft Dynamics AX 2012 industry capabilities, empowers public sector customers and dramatically simplifies the work of ISVs building for verticals in that industry. However beyond public sector, many private sector companies look for increased accounting control and are adopting fund accounting techniques. Because these capabilities are part of Microsoft Dynamics AX 2012 and not the addition of an ISV focused on public sector, they are available to private sector customers as well. The ability to combine capabilities from multiple industries for one customer is increasingly important—manufacturers often manage their own distribution and sometimes operate their own direct retail operation, and large numbers of customers in all industries have segments of their business that operate with the project structure of service industries. Microsoft Dynamics AX 2012 industry capabilities make the power of this functionality available to all customers.

Microsoft Dynamics AX 2012 is a truly global solution, designed to scale with your business. Simple enough to deploy for a single business unit in a single country, Microsoft Dynamics AX 2012 will support

the unique requirements for business systems in 36 countries—all from a single-instance deployment of the software. Multiple currencies, multiple time zones, multiple languages, and compliance with multiple banking and reporting standards and legislative codes give you the global coverage that you require. And a layered architecture and installable language packs provide the flexibility for future growth to other markets, including options for agile, partner-led localization.

Business software is powerful if it empowers users—increasing their productivity and providing strong insights that help them make better decisions. This is the heart of Microsoft Dynamics AX 2012, centered on the latest generation of its Microsoft Dynamics **RoleTailored user experience**.

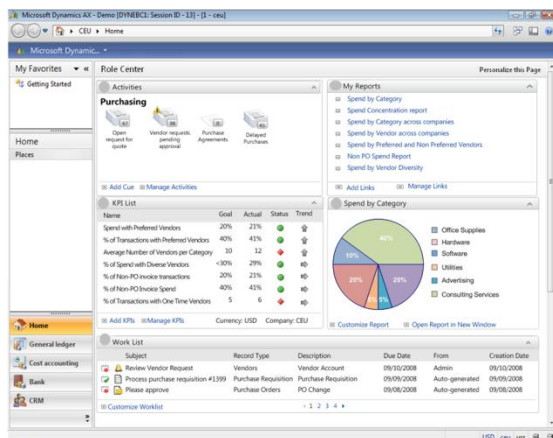


Figure 1: Familiar RoleTailored user experience

client-styled navigation is enhanced with navigation concepts from Windows 7, the contextual access to relevant functionality from the Fluent™ user interface pioneered in Microsoft Office 2010, and the use of Search metaphors to find information throughout Microsoft Dynamics AX 2012.

- The familiar experience extends even further to drive productivity—for analysts working with data from Microsoft Dynamics AX 2012, interoperability with Microsoft Excel® spreadsheet software and PowerPivot brings that data into those tools that analysts expect, with a native, natural experience enabling rapid, effective access to business system data.
- Workflow automation, built on the .NET Workflow Foundation, brings user tasks to a central task pane, including tasks assigned to an individual, their role, or a specific functional queue. Tasks and input queues of documents are combined in the RoleTailored user experience of Microsoft Dynamics AX 2012 to help users quickly prioritize the work they should be doing. The system is not just there to record transactions when users finish their work; it is helping them follow consistent processes and focus on their most important tasks.
- The value of a business system is not about putting transactions in; instead it is about turning those transactions into information—into business intelligence (BI)—to help users make faster, better decisions. To do this, business intelligence must be an embedded part

of the application, not a separate tool that requires users to take extra steps and switch contexts. Rich, embedded BI is at the core of Microsoft Dynamics AX 2012 with:

- More than 30 Role Centers shipped out of the box, to provide the right BI for each user's job role
- 11 SQL Analytics Server Cubes behind those Role Centers
- Key performance indicators tailored to each process and role based on those cubes
- Over 800 out-of-the-box reports, all delivered through SQL® Server Reporting Services
- Rich interoperability with Microsoft Excel to surface report output and enable analysis
- Standards-based data interoperability with PowerPivot for ad hoc slicing and dicing
- InfoParts providing in-context BI fully embedded throughout the Microsoft Dynamics AX 2012 user experience

And of course these are all developed using tools that enable extensibility to rapidly add the unique requirements of ISV vertical solutions and individual business customers.

Microsoft Dynamics AX 2012 further innovates to capture business intelligence about workflow and process together with transactional information to enable rich analytics about process effectiveness, with a focus on empowering business process optimization. Strong administrative ERP functionality, combined with industry-

operational functionality, a scalable global system, and a familiar, empowering user experience with embedded BI to keep information in context, define Microsoft Dynamics AX 2012 as a truly powerful business application.

AGILE

Excellence for a business application begins with two primary challenges: how well does the software model the real world, and how quickly can I make it fit my business in a rapidly changing world? If the fidelity between software model and reality is high, then implementation is straightforward and the software is able to provide strong insight, empowering efficient business execution. If it's not, then implementation is filled with compromises and workarounds and using the software is filled with challenge and complexity. It's that simple, and it's the beginning of why Microsoft Dynamics AX 2012 is different.

The heart of Microsoft Dynamics AX 2012 is a set of **unified, natural models that let you see, measure, and change your business**. In developing this release, every application concept involved in representing the business in software was reexamined. In each case, limitations that forced workarounds and compromises in older ERP products were lifted, and new capabilities were added to provide an even richer software representation of a business and its structure, processes, and policies. Unified, natural Microsoft Dynamics AX 2012 models make modeling simple businesses fast and easy and yet still provide the richness and

flexibility to represent the most complex organizations.

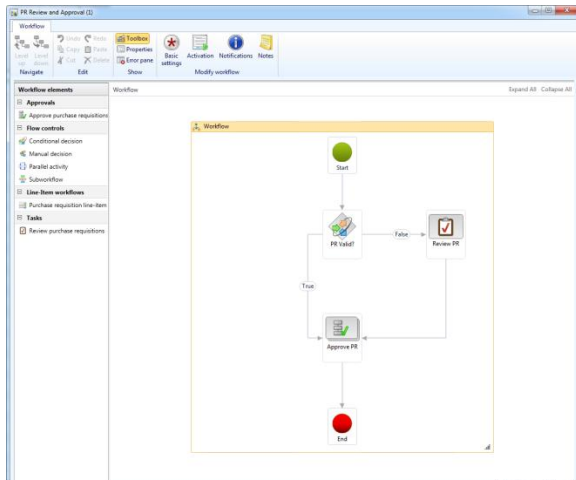


Figure 2: Graphical design of declarative workflows

Fundamental elements of the unified, natural models in Microsoft Dynamics AX 2012 include:

- Flexible business organization modeling, allowing you to capture the physical locations of your business, legal entity structure, and business reporting structure.
- People, with separate modeling of the person, their reporting hierarchy, and their role.
- Declarative representation of business workflow, policies, and dollar limits—and the ability to specialize that policy for different parts of the organization model, without writing code. For example, as a business analyst you have the ability to grant different purchase order approval rules to different legal entities within a graphical workflow editor, with no coding required.

- Unlimited financial dimensions, allowing categorization and analysis of transactions across multiple axes.
- Date effectivity for data and models at the framework level, with additional security control on future effective information, to streamline the definition of “to be” organizational structures, hierarchies, processes, and policies, and to enable before-and-after reporting across organizational changes.
- Support for multiple hierarchies—for example, one based on HR reporting and another based on legal entity, with the ability to designate one hierarchy for one approval process and another for a different process—all without writing code.

These same capabilities that drive the agility of the core of Microsoft Dynamics AX 2012 have been implemented so that they can also be leveraged by ISVs building solutions that extend the core product. The result: richer solutions and consistent customer experiences spanning core product and partner extensions.

Natural models simplify system administration as well. Microsoft Dynamics AX 2012 manages security based on roles and tasks—users are mapped to roles and given access to the tasks that they are responsible for. The system knows which low-level technical assets are required to complete those tasks—administration happens at the level that the business naturally thinks about their people, roles, and responsibilities. Microsoft Dynamics AX 2012 is simpler to set up and simpler to

change because the software reflects the real world in a natural way.

Beyond the horizontal system, the investment in unified, natural models extends even further into the Microsoft Dynamics AX 2012 industry capabilities. For example, the system supports traditional discrete, process, and lean manufacturing modes. Historically most applications supported only one of these models. Companies, on the other hand, are often not purely one mode or another. A process manufacturing company often has some operations that are discrete, and in some cases, a single company may blend all three modes. This impedance mismatch between software and the real world forced users to either work with multiple applications or create awkward workarounds to use an application to represent a process that is outside its capabilities. Microsoft Dynamics AX 2012 breaks through this limitation—in a single instance it is possible to model production processes of each type. The software is able to represent the manufacturer's real world with high fidelity, simplifying operation and improving results.

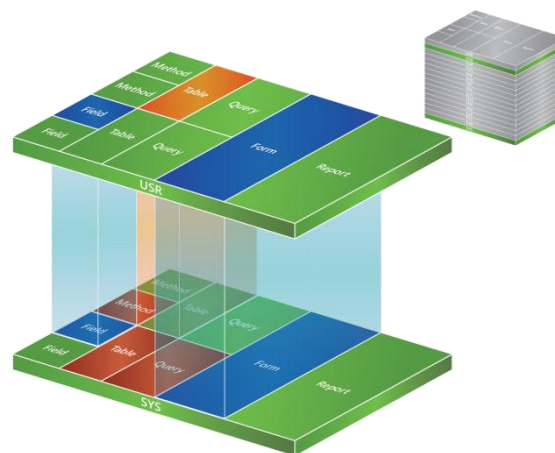


Figure 3: Elements in layered model store

Enabling these unified, natural models, Microsoft Dynamics AX 2012 architecturally provides a **model-driven layered architecture (MDLA)** that makes company-differentiating changes easy to execute. As more and more of the system is defined through models, unique requirements can be addressed declaratively without writing code. For example, Microsoft Dynamics AX 2012 enables list pages—an important vehicle for accessing system data—to be defined completely declaratively, with a single model covering delivery of those pages on both client and portal experiences. Beyond pages, models are used to define data, process, and policy—enabling business users to directly express their requirements, reduce complex coding, and simplify upgrades. Layered models enable customer-specific requirements to build on top of vertical, local, and base system capabilities in an ordered structure. The combination drives overall system agility—speeding the process of fitting the software to the business at implementation, and more importantly, enabling rapid system evolution in the face of

changing business conditions and requirements.

System deployment represents another critical dimension where businesses demand agility—growth, or even consolidation, will change a business's needs. Evolving technology may change the most effective way to meet those needs. Microsoft Dynamics AX 2012 enables **flexible deployment alternatives that support your business today and tomorrow**. Microsoft Dynamics is committed to enabling deployment choice—that includes on-premise deployment and partner private cloud hosting today, and a roadmap to Microsoft cloud capability in the future—all with a single application solution. Deployment of a model at a specific moment in time should not lock a customer into an application that should be the heart of their business for a very long time; customers can choose Microsoft Dynamics AX 2012 because it is the right solution for their business.

SIMPLE

As business applications evolve, the natural tendency is for complexity to increase. Instead Microsoft Dynamics AX 2012 makes an intentional commitment to simplicity—focusing specifically on explicitly engineering to simplify every aspect of the system, from installation through deployment, implementation, customization, user experience, and upgrade.

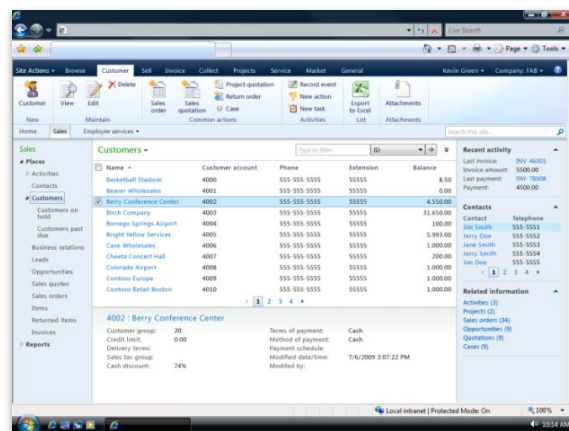


Figure 4: Familiar user experience also in Microsoft SharePoint®

- For users, simplicity begins with a **familiar interface that makes the application simple to learn and intuitive to use**, and continues with explicit work to streamline every step in high-velocity transaction processes like order entry.
- Microsoft Dynamics AX 2012 also brings the power of software to more users in the business, adding rich functionality for supplier relationship management (SRM) and a rich set of employee self-service functionality for HR data, procurement, and travel expense management.
- Through interoperation with Microsoft collaboration technologies from Microsoft SharePoint, Windows® Azure™, and Microsoft Lync™, Microsoft Dynamics AX 2012 brings collaboration directly into context through the application, **making it simpler to connect employees, customers, suppliers, and partners**.
- For system administration, Microsoft Dynamics AX 2012 automates **application lifecycle management**,

making the system simpler to deploy, manage, and upgrade for customers, implementers, and ISVs. For example, in Microsoft Dynamics AX 2012 every step of the product installation process was examined, and the entire process was overhauled to remove steps, eliminate opportunities for error, and streamline the interaction between IT and application roles, dramatically shortening and simplifying the process.

Simplicity drives adoption and ensures that customers truly get the benefit of the system's power and agility.

MICROSOFT DYNAMICS AX 2012—A BUSINESS SOLUTION FROM MICROSOFT

The anchor point for Microsoft Dynamics AX 2012 is that it is a business solution *from Microsoft*. That heritage brings with it an obligation and a commitment to bring the full breadth and depth of Microsoft research, development, and innovation investment to business customers in a unified solution. This commitment manifests in four key pillars for Microsoft Dynamics AX 2012 customers and partners:

- First Microsoft Dynamics AX 2012 is delivered on a platform of **familiar, high-value, low-total cost of ownership (TCO) technology**. Whether IT is managed directly by the customer or by their partner, Microsoft technology means access to a broad universe of people and resources that already understand the technology platform.
- Next the Microsoft Dynamics AX 2012 solution delivers **pervasive**

interoperability with Microsoft Office, SharePoint, and Lync, whether on-premises or in the cloud, to bring users the familiar, productive experiences they expect—empowered with access to Microsoft Dynamics AX data and functionality. For example, BI accessed naturally through Microsoft Excel, documents stored in SharePoint visualized in business context through Microsoft Dynamics AX, Microsoft Dynamics data available for seamless inclusion in Microsoft Word documents, and presence and click-to-communicate capability delivered through Lync interoperability.

- In addition, Microsoft is committed to bringing the latest innovations across social, mobile, visualization, machine learning, and natural user experiences to business users, in context, today and tomorrow.
- Perhaps most importantly, the commitment to bring Microsoft technology to business users is not a one-time event at a single point in time—it is a commitment to continuously renew that technology from generation to generation. Renewable technology, delivered through an upgradable application—power and productivity on-premises today, with Microsoft Dynamics AX 2012 evolving to include the cloud tomorrow with the next major Microsoft Dynamics AX release.

In December 2010, Microsoft Dynamics AX was recognized as a leader for both vision and execution in ERP by Gartner. Microsoft

Dynamics AX 2012 delivers the next step in that vision—the beginning of a new generation of business application productivity. A core principle for Microsoft Dynamics products is a commitment to continuous customer care, ensuring a path forward to future product versions. Microsoft Dynamics AX 2012 is no exception, with tested, proven tools, capabilities, and processes to help customers transition from earlier Microsoft Dynamics AX versions to Microsoft Dynamics AX 2012. The new version delivers *revolutionary* new capability in an *evolutionary* way.

Microsoft Dynamics AX 2012 is here. Welcome to the new generation of business application productivity.

© 2011 Microsoft Corporation. All rights reserved.
Microsoft, Windows, Windows Vista and other product names are or may be registered trademarks and/or trademarks in the U.S. and/or other countries. Other names and brands may be claimed as the property of others.

Microsoft Dynamics AX 2012 is a pre-release product under development. The information herein is for informational purposes only and represents the current view of Microsoft Corporation as of the date of this presentation. 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 provided after the date of this presentation. All pre-release product release dates and features specified are preliminary based on current expectations, and are subject to change without notice. Microsoft may make changes to specifications and product descriptions at any time, without notice.

Sample code included in this presentation is made available AS IS. THE ENTIRE RISK OF THE USE OR THE RESULTS FROM THE USE OF THIS CODE REMAINS WITH THE USER.

This content is provided “as-is”. Information and views expressed in this content, including URL and other Internet Web site references, may change without notice. Some examples depicted herein are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred.

MICROSOFT MAKES NO WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, AS TO THE INFORMATION IN THIS PRESENTATION. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS PRESENTATION. Microsoft products are not intended for use in medical, lifesaving, or life sustaining applications.