



Customization and Integration

Customize, integrate and extend Dynamics using industry-standard tools and technologies. With Dynamics, you not only have complete customization and integration control, you also have access to a suite of powerful industry-standard tools and technologies that millions of developers are already familiar with.

VBA allows you to customize, extend and integrate

Modifier with Visual Basic for Applications: The Modifier with Visual Basic for Applications (VBA) is the primary tool used to customize the Dynamics system to fit your organization's needs. You'll find the Modifier with VBA invaluable for customizing data entry windows to match how your users work, applying custom business rules and workflow, or extending Dynamics using commercially available ActiveX controls.

Unlimited resources for customizing Dynamics: The same version of VBA found throughout Microsoft Office is also built into Dynamics, making it easier and more cost-effective to leverage development resources for creating custom solutions. In addition, Microsoft based the customization environment of VBA on the popular development environment Visual Basic.

Streamline data entry for each user: Modifier with VBA provides extensive capabilities for altering the display of information in a Dynamics window, or changing the behavior of how information is entered and processed in the window based upon individual user needs.

Business rules integrity is maintained at all times: Dynamics, and VBA code cannot alter field values that don't meet Dynamics field-level data verification. In addition, VBA procedures can be written to provide field level security by locking access to fields, disabling buttons or hiding information in the window based on the current user and company.

Add business rules: You can also imbed business rules that adapt Dynamics to an organization's specific business practices. For example, if a user attempts to enter a transaction over a predefined limit, VBA code can check the value, then prompt the user to enter a password in order to proceed with the transaction. VBA's built-in support for message and dialog forms allows you to quickly build intuitive interfaces.

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Store and display additional data: You can quickly add new fields to Dynamics windows, and display additional data from several data sources. The Modifier with VBA uses the Dynamics User Object Store (DUOS), a powerful, user-definable database, to store and display custom data in windows, and print custom data on reports.

Custom form builder: For extending Dynamics through additional windows, the Modifier with VBA includes a custom form builder. With new forms you create, you can add custom controls and fields, then store and display data from any database accessible using data access tools such as ADO, Remote Data Objects (RDO) or Data Access Objects (DAO).

Add ActiveX controls: ActiveX controls are compact, reusable software components and represent the most widely used, most versatile component format available for the Windows platform. With VBA, you have access to thousands of industry-standard ActiveX controls that you can tie into Dynamics and meet the exact needs of your business. Common examples of ActiveX controls include bar code printers, credit card authorization controls, package tracking and cost calculators, and zip code databases.

Leverage Office and COM applications: Using VBA, you can tightly integrate Dynamics with applications through the use of Microsoft Automation (formerly referred to as OLE automation). Automation provides a powerful link between Windows applications. Any application written to Microsoft's Component Object Model (COM) standard can control or automate other COM applications using programming languages such as VBA. Applications such as Microsoft Excel, Word, Access and Outlook support Automation, allowing you to create direct links from Dynamics windows, reports and fields to any of these applications.

Integration Manager allows you to safely import your organization's existing business data into Dynamics

Initial setup or ongoing use: Use Integration Manager to safely convert data into a new Dynamics installation, or as an ongoing way to integrate data from your external business databases, e-commerce solutions and desktop applications with Dynamics. You also can easily create ongoing data integrations that safely port data from external business databases, e-commerce solutions or desktop applications into Dynamics.

Save valuable time: Integration Manager's intuitive user interface, combined with a tight integration to the Dynamics architecture, allows you to deliver integrations to all of your organization's business applications in hours instead of days or months.

Safely integrate data from throughout your organization. Integration Manager allows you to integrate data from virtually any database or desktop application into Dynamics. Integration Manager can import data from a variety of sources, including comma- and tab-delimited text files, or most ODBC data sources.

Integration Manager will continue to work with each Dynamics product release: Unlike database-level integrations, which are susceptible to changes in

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table structure during a product upgrade, integrations you define through Integration Manager are tightly integrated with pre-built Dynamics business objects, and existing integrations will automatically work with updated business objects.

Build integrations in hours, instead of days. Integration Manager saves you the countless hours you would normally spend researching and reviewing complex database queries, or navigating through massive data models trying to build an integration. Since Integration Manager interacts with Dynamics business objects, no knowledge of the Dynamics database structure is required.

Simplify the integration process: The Integration Manager interface simplifies the integration process by presenting Dynamics data objects from a level that is readily understandable. Fields in each Dynamics business object have the same descriptive field names as the Dynamics windows, giving users a familiar reference when defining integration. Once you define your data source, Integration Manager provides intuitive drag and drop tools that let you map fields in the Dynamics business object with fields in the data source.

Automatically produces default data behaviors and processing rules: As part of each integration you define, Integration Manager automatically produces default data behaviors and processing rules for the best results. In addition, you have hundreds of user-defined rules you can apply to alter or modify data to conform to a specific business need.

Integration Manager's Object Browser provides a system administrator quick access to all components of an integration, making ongoing maintenance a simple task. Extensive error checking and logging allows you to review the results of any integration quickly.

Fully automate and customize integrations: Once you've built an integration, you can launch the integration directly from the Dynamics environment, from a command line or from a batch file. In addition, Integration Manager supports any Windows NT-based scheduler for running integrations at specified times.

Robust access to data: Integration Manager also supports the ability to define advanced SQL queries for more robust access to data. In addition, Microsoft's VB Script is built directly into the Integration Manager environment, allowing you to define custom processing before, during or after an integration runs.

Integration Assistant for Excel

Provides a new level of integration between Dynamics and Microsoft Excel: Using comprehensive, intuitive tools that are designed to be used by non-technical staff, your organization can easily integrate existing or new Excel business applications with Dynamics.

The Integration Assistant for Excel is easy: The Integration Assistant for Excel is the easiest way to integrate Microsoft Excel business applications and reporting tools into your financial management system. Non-technical users will find it easy to use the Integration Assistant for Excel—no knowledge of ODBC or the Dynamics system tables is required. Users who are comfortable working in

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Excel will be able to continue using their application of choice, with information transferring cleanly into Dynamics. And Excel workbooks can be transferred easily from workstation to workstation, making it easy to share data and processes throughout your office.

The Integration Assistant for Excel is secure: While the Integration Assistant for Excel gives you powerful integration capabilities, the internal business logic in Dynamics ensures only valid data types are passed to your financial management system.

Point and click capability: Combined with Visual Basic for Applications (VBA), Excel's built-in customization and development environment, the Integration Assistant for Excel's Build Desktop Application Integration Wizard provides you with a "point and click" capability to automatically generate all the VBA code required to integrate Dynamics windows, fields and controls with Excel cells, spreadsheets and workbooks.

The Integration Assistant for Excel takes advantage of industry-standard technologies: The Integration Assistant for Excel exposes specific Dynamics objects, such as windows, fields and controls, to Microsoft's Component Object Model (COM), Microsoft's standard for Windows application communication. Since the Integration Assistant for Excel is based on industry-standard technologies, Excel applications delivered with the Integration Assistant for Excel can continue to be modified with new versions of Excel. As industry-standard technologies such as COM and VBA grow and add new functionality, Excel applications you deliver using the Integration Assistant for Excel will automatically inherit that new functionality.

The Continuum family of products allow you to use your tool of choice for extending your Dynamics financial management solution.

Extend Dynamics with custom vertical applications: The Continuum family of products provides intuitive, comprehensive tools that let you quickly extend Dynamics with existing or new business applications written in Visual Basic or Delphi. In addition, Dynamics support for Microsoft's Component Object Model (COM) provides limitless methods of tying COM-based applications with Dynamics window, control, report and database objects.

Deliver quick, cost effective integrations: The Continuum wizards that are installed as add-ins for the Visual Basic or Delphi environment provide application programmers with the fastest, most cost-effective means for extending Dynamics using their tool of choice.

The Continuum wizard: Takes the developer through all the steps required to integrate an application with Dynamics. The wizard provides an "integration mode" where the programmer uses point-and-click tools to choose the Dynamics windows, fields and controls to integrate with, and the Continuum wizard generates the code necessary to complete the integration.

Since the Continuum wizard automatically generates the code required for integration with Dynamics, developers don't need to be intimately familiar with

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the Dynamics data schema, programming API, or the financial management system to integrate applications with Dynamics. Your programmers can spend more time developing custom solutions using industry-standard tools they're familiar with.

Leverage industry-standard technologies: Continuum also includes a set of programmable Dynamics objects written to Microsoft's standard for application interoperability, the Component Object Model (COM). Dynamics COM objects provide programmers with direct access to Dynamics tables, windows and reports, giving you unprecedented levels of application integration.

Since COM is standard across so many development environments, programmers can build custom applications using any development environment that supports the COM standard, then tie them into Dynamics COM objects.

Continuum for Visual Basic includes wizards that build all the code necessary for integrating Dynamics with applications written in Visual Basic. Continuum for Delphi includes wizards that build all the code necessary for integrating Dynamics with applications written in Delphi.

The Dynamics architectural foundation

Every business management solution attempts, with varying degrees of success, to deliver customization and integration capabilities to its customers. At the foundation of this relative success or failure, is the product's architecture.

The Dynamics architecture is designed to provide Dynamics customers with a rich, steady stream of product functionality, while also allowing for the rapid adoption of the latest technologies.

Four strategic architectural imperatives guide our development efforts, ensuring we meet our objectives of delivering functionality, upgradeability, customizability and integration. These four imperatives are:

Built to Last: Our development cycle spans multiple years, which means our architecture must facilitate the rapid and systematic inclusion of a constant stream of new technologies that extend the life and value of our products. By keeping our business logic separate from the technology layer, we have been able to rapidly adopt new technologies throughout the life of the product development cycle.

Built to Grow: In order to successfully add new functionality and technologies, we need to begin with exceptional product quality and employ industry-best practices for software development. Because Dynamics is built to grow, we have been able to rapidly incorporate additional functionality, adding value to our customers' solutions on a consistent basis.

Built to Leverage: Financial and business management processes must be integrated not only within Dynamics, but also throughout the organization. Our architecture ensures the "business engine" can be leveraged by custom and industry-specific applications through the adoption of leading integration technologies. Financial information and business processes can be leveraged

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throughout the business to increase the accuracy and timeliness of all financial-related business decisions.

Built to Fit: Most important to the customization and integration topic, Dynamics is architecturally designed to allow significant customization and open integration, without sacrificing its other architectural goals. Our customization tools and technologies enable organizations to rapidly adapt Dynamics to their business practices, and our integration tools create seamless ties between Dynamics and other mission-critical applications throughout the organization.

Together, these architectural underpinnings create an environment in which we can develop a solution that is technologically extensible, with a continuously improving feature set, that can be leveraged throughout your corporate business applications, with the ability to be customized to fit your current and changing business practices.