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A global business solutions company dedicated to using the Microsoft platform to help enterprises achieve profitable growth. Additional information can be found at www.avanade.com.

Microsoft® Dynamics™ CRM As a Solution Platform

A Powerful New Paradigm for Application Development

Microsoft Dynamics CRM has grown in popularity with businesses and organizations of all types because of its ease of use and effectiveness as a traditional customer relationship management (CRM) application. But in an era of service-oriented architectures and object-oriented programming, Microsoft Dynamics CRM encompasses much more: a platform for easy-to-use, flexible, innovative, and collaborative business solutions that can be created more quickly and cost-effectively than if they were built using traditional development approaches. By using the Microsoft Dynamics CRM platform as a series of solution building blocks, development teams can increase the business value of new solutions by focusing a greater percentage of the solution investment on innovation according to their organization's unique business needs and goals, rather than focusing on generic software issues.

This means that whereas organizations previously had to compromise application functionality or defer specialized organization-specific functionality to a later funding cycle, they now can consider building new solutions that map far more closely to business needs from the initial stages of deployment.

This is significant because such solutions often deliver the greatest business value according to the organization's specific, unique, and innovative processes—and enabling them sooner via the solution drives a more rapid rate of return on investment. The potential benefit of creating a cost-effective business solution based on Microsoft Dynamics CRM as a development platform is significant, but an in-depth understanding of the platform is required for organizations to gain the greatest advantage from it.



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Value Characteristics of the Platform

Lower Cost

Many enterprises have moved to adopt technology based on the Microsoft .NET Framework because its reusable components and automated tools cut development time and cost compared to developing for Java® or for operating systems such as UNIX.

The independent Forrester Group, for example, found that developers prefer .NET to Java by 56 percent to 44 percent.¹ But while the .NET environment facilitates custom development, it doesn't eliminate the need for it. Simply stated, the generic .NET environment does not have the rich business framework and architecture that accelerates industry-specific or line-of-business solution development.

However, Microsoft Dynamics CRM is constructed with the building blocks necessary to jumpstart .NET-based business solutions development. Microsoft Dynamics CRM provides the common application components such as security, data access, and presentation logic in a familiar environment—the Visual Studio® development suite and a language such as C# or Visual Basic®.NET—where developers can apply the tools they already know to extend the application components in order to incorporate an organization's business innovation.

Building less of the required functionality from scratch saves time and money, and, in Avanade's experience, an organization using Microsoft Dynamics CRM as a platform on a large scale can realize savings that range from 30 to 50 percent of a traditional .NET project development budget.

While the Microsoft Dynamics CRM platform provides building blocks that jumpstart development, enterprise organizations that choose this approach are not limited to using those building blocks alone. The ability to create tailored solutions that reflect specific business processes remains, because the Microsoft Dynamics CRM platform is designed to be extended with organization-specific business logic, such as validation rules or unique workflows that a business uses to manage across sales and order-fulfillment processes.

Microsoft Dynamics CRM offers a platform for easy-to-use, flexible, innovative, and collaborative business solutions that deliver value to organizations, including lower cost, faster development, and greater return on investment.

Faster Development

Hand in hand with lower cost is faster time to benefit, realized from rapid deployment and the platform's inherent flexibility, scalability, and reliability. By taking advantage of these platform capabilities, projects can easily be approached in an iterative development cycle where core functionality is first delivered in a production-ready pilot phase, and additional functionality is quickly and easily delivered in subsequent phases of the project.

Using this approach, a typical pilot phase for a Microsoft Dynamics CRM-based solution can be delivered in one to two months, compared to a minimum of three or four months for a comparable pilot developed in the .NET environment with purely custom components. The time savings for developing a full-scale application, which might take a year or more in custom development, are similar.

The business benefit of this faster development goes beyond the associated budget savings. For example, it enables more frequent development updates, which offers a flexibility that enhances the effectiveness of solution deployments. This is especially valuable in environments where business requirements can change frequently with little warning.

The cost of ignoring such changes may be that the new capability is already outdated upon implementation. Alternatively, making changes during typical development cycles may lead to project delays. The faster time to benefit in using applications based on Microsoft Dynamics CRM as a solution platform means that mid-term course corrections can be more easily accomplished, which can support the actual speed of business change in dynamic and competitive environments. Thus, when the solution is deployed, it can more fully meet the organization's needs and wants, regardless of whether those have changed throughout the development term.

¹ www.microsoft.com/forrester

Leveraged Upgrades

One of the biggest hurdles facing business applications is keeping up with advances in technology and new approaches to user interaction. Developing on the Microsoft Dynamics CRM platform allows the application to leverage these features from the platform itself as they become available.

The metadata architecture of the platform makes implementing the upgrades practically seamless, since most of the core application is configured on the platform vs. developed in platform-specific code. As a result, as the platform evolves and provides advanced capabilities, applications built upon the platform will inherit those capabilities.

For example, with the release of Microsoft Dynamics CRM 4.0, the platform now supports various improvements, including a multi-lingual user interface and a revamped workflow engine based on Windows Workflow Foundation. Applications developed on the Microsoft Dynamics CRM platform acquired these capabilities without the need for any additional development.

Greater Return on Investment

Looking beyond the date when an organization first deploys the application to the end-user community, faster time to benefit is also cost-effective because it facilitates iterative innovation and continuous improvement. Interface changes or business logic updates that might take days or weeks to implement with custom development can be made in a few hours.

As a result, updates can be made more frequently, so the application will enable the organization's approach to ongoing innovation and adoption of best practices. That extends the application's useful life and increases the organization's return on its investment compared to the outlay required for custom development. Subsequently, organizations gain from faster and easier maintenance and enhancement of their solution well into the future.

The Business Bottom Line

Businesses and organizations that adopt the Microsoft Dynamics CRM platform not only gain a less expensive and more quickly deployed business application, but they gain a common environment and tools that can be leveraged across the enterprise.

This means they can meet old demands in new ways—consider the multi-language support required for international expansion—as well as meet demands that haven't been identified yet. They gain the flexibility and business agility to align their infrastructures to support future growth and gain competitive advantage. These

organizations can dynamically change and add features to their solutions without extensive development and often without writing code, which boosts productivity and bolsters efficiency.

Of course, no solution really solves a business problem if people fail to adopt it. The user-adoption rate for solutions built on Microsoft Dynamics CRM is high, in part because of the platform's integration with the Microsoft Office software that millions of people already use every day as they do business. For example, Microsoft Dynamics CRM applications can use Outlook® as their user interface, so people can access them intuitively and confidently.

Additionally, out-of-the-box integration with Microsoft Word provides an easy mail-merge capability, and Microsoft Excel® offers a quick data-analysis tool. With the multiple user interfaces and devices supported, having access to customer information through the Web or through mobile devices further expands the usability of Microsoft Dynamics CRM-based solutions.

That makes these applications as easy for end users to access and use as they are for developers to design, create, and configure, given the time and cost savings that come from deploying these solutions in service-oriented architectures.

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Solution Selection

Business Considerations

Business decision makers considering a business application development project need to find ways to maximize the value of their budgets. An alternative to the Microsoft Dynamics CRM-based solution may be a proprietary niche solution that appears to short-circuit the need for development.

When considering such an option, leaders need to investigate the full range of skills and expertise that may be required to get the out-of-the-box solution to a business-ready state. Then, they need to consider the continuing cost of maintenance and support over the anticipated useful life of the solution.

They also need to consider the flexibility that may be lost in choosing a proprietary solution over one that is built to integrate both with the broader infrastructure that supports their company's business and with future infrastructure investments.

For example, a leading health-insurance provider chose the Microsoft Dynamics CRM platform as the foundation for a new customer-service solution, recognizing that the value of the platform for the provider's call centers outweighed the benefits of established industry solutions in that vertical market. The platform flexibility and benefits of the Microsoft Dynamics CRM-based solution enabled this provider to deploy a tailored solution without compromise in nine months—even faster and less expensively than the company estimated that it would have taken to deploy an existing alternative.

The solution integrates with 19 of the provider's mainframe screens from five systems and presents all the data in a single, integrated interface that eliminates the need for customer-service representatives to jump between screens or monitors when serving customers. As a result, these representatives can handle customers' questions quickly and more efficiently without having to make repeated requests for the same information.

Business decision makers also need to assess the value of rapidly adopting innovative technology to address newly emerging needs and retain competitive advantage. For example, by choosing a highly cost-effective and flexible development platform such as Microsoft Dynamics CRM, mobile applications once considered a luxury typically can now be standard capabilities for improving business productivity and customer service.

Sales representatives, service technicians, delivery personnel, and others who interact with customers need robust, full-featured solutions that can deliver views to critical business data equally effectively, whether connected wirelessly or disconnected from the system. The Microsoft Dynamics CRM platform enables

Decision makers and planners can take advantage of the ability to quickly deploy a narrowly targeted version of the solution, measure the incremental business impact, and then add features and functions incrementally as appropriate.

organizations to create smart client applications that meet these needs faster and at lower cost than virtually any alternative.

Technical Considerations

The Microsoft Dynamics CRM development platform is based on, and takes advantage of, the Microsoft application development platform that many businesses already know and use. The platform also provides the exemplary support that leading technology organizations have become accustomed to.

That familiarity cuts development time and cost even further, while leveraging existing infrastructure investments. This increases the options for integration with the Microsoft enterprise platform, which includes:

- ➔ **The .NET Framework**, an integral component of Windows® that helps to build and run a variety of software, including enterprise solutions, Web-based applications, smart client applications, and Web services.
- ➔ **Tools**, such as the Microsoft Visual Studio development system, which provides an integrated development environment for maximizing developer productivity for both individual developers and development teams.
- ➔ **Servers**, including Microsoft Windows Server® 2003 and Active Directory® services, Microsoft SQL Server™ 2005, Microsoft Office SharePoint® Server (MOSS) 2007, Microsoft BizTalk® Server 2006, Microsoft System Center, Microsoft Internet Security & Acceleration Server 2006, that integrate, operate, and manage solutions.
- ➔ **Client software**, such as Windows Vista®, Internet Explorer®, Windows CE, and Microsoft Office 2007, that helps deliver a deep and compelling user experience across a family of computing devices and products.

It's more practical than ever to integrate these components to align to business needs, thanks to service-oriented architectures that treat services as interchangeable building blocks to be reconfigured as needed. Distributed computing architectures and broadband Internet connectivity—including wireless broadband—enable new computing models in which the traditional client/server architecture becomes one choice with self-hosted Web-based solutions and third-party application service provider–hosted solutions.

Microsoft Dynamics CRM supports these models as well as the Microsoft Dynamics Live CRM model, which extends the core platform so organizations can pursue high-volume hosting.

Microsoft Dynamics Live CRM is the customer relationship management software-as-a-service (SaaS) that offers a hosted version of Microsoft Dynamics CRM directly from Microsoft on a subscription basis. Alternatively, Live CRM can be customized and hosted for a particular vertical or business segment. Or a company may decide to integrate its self-hosted Microsoft Dynamics CRM solution with the Microsoft-hosted Live CRM through an SOA.

Whether hosted in-house, outsourced, or in some combination, the Microsoft Dynamics CRM platform enables organizations to migrate a solution among deployment models with minimal configuration, as their business needs change. These alternatives give the enterprise the ability to choose the deployment model or models that best fit its current technology strategy, infrastructure, and capabilities.

Implementation Considerations

User Experience

In creating an application based on the Microsoft Dynamics CRM platform, organizations realize the practical benefits of speed and low cost by taking advantage of the way that Microsoft Dynamics CRM implements functionality, from user interface elements to workflow. These organizations also retain the ability to go around that out-of-the-box functionality to create custom functionality that augments their Microsoft Dynamics CRM-based solutions to enable specific business processes.

Decision makers should consider the faster and more cost-effective development possibilities within the standard Microsoft Dynamics CRM environment. Of course, additional custom development may be warranted if the business sees great enough benefit. A benefit of the Microsoft Dynamics CRM platform is that it enables organizations to consider and make tradeoffs so they get the mix of custom and prebuilt functionality that best meets their needs.

Decision makers should investigate the advantages and disadvantages of each approach as they consider implementation of their solutions. Additionally, if custom development is selected, IT and business personnel should maintain close communication so that the combined custom/prebuilt approach delivers a strong return on investment.

Technology Management

Because using Microsoft Dynamics CRM as a platform may accelerate the software development lifecycle (SDLC) of an organization, management must be

prepared to change its approach to, and understanding of, that lifecycle. To take maximum advantage of the platform and new development paradigm, the organization should focus on developing the appropriate skills regarding the platform and paradigm before and during the development process. Because this new development model can be substantially different from the traditional model, it's especially important that management remain highly engaged as an active sponsor to ensure success.

Similarly, management should reconsider the application of its existing SDLC methodology in light of the new paradigm of software development. Most SDLC methodologies for custom development are rigorous, as they should be when creating custom code from scratch. But some steps mandated by such methodologies—for example, extensive documentation of basic functionality—are approached differently when taking advantage of prepackaged components. Conversely, the processes focused on the application of business rules will be largely unchanged.

Traditional software development may also involve fewer builds containing larger feature sets for a given release. This is especially true in environments where software releases would unduly disrupt the business by taking the application offline to add and test new functionality once deployed.

However, with Microsoft Dynamics CRM as a platform model, incremental changes are faster, easier, less costly to adopt, and don't cause the same level of business interruption. Decision makers and planners can take advantage of this ability to quickly deploy a narrowly targeted version of the solution, measure the incremental business impact, and then add features and functions incrementally as appropriate.

Making the Model Work For Your Business Needs

Avanade is a global IT consultancy specializing in the complete Microsoft enterprise platform. We have unparalleled expertise and hands-on experience designing, configuring, and deploying Microsoft Dynamics CRM systems. Our ongoing investments in research, development, and training enable us to deliver a best-in-class platform so you can more easily implement a solution that enables your differentiated innovations and maintain competitive advantage.

By combining our business insight with our technical acumen, Avanade has developed a rich toolset that helps our customers leverage Dynamics CRM as a platform in this new development paradigm.

Additionally, we leverage our deep expertise in the entire Microsoft enterprise platform to further enrich and extend the development platform with tools and reusable architectures such as the Avanade Productivity Platform for Dynamics CRM (which includes functionality like auditing, alerting, and relationship tree) and the Avanade Federated Architecture. Our unique relationship with Accenture and Microsoft further enhances our ability to develop and deliver effective, mission-critical solutions.

Avanade can help you decide if Microsoft Dynamics CRM as a solution platform is the right development paradigm for you—and then help you realize the benefits of that model. We can evaluate your business and technical requirements using our methodology and planning tools in a discovery process that determines the potential of the Microsoft Dynamics CRM platform for your organization. We can work closely with you every step of the way from pilot to deployment. The result is a solution that can deliver unprecedented value today, while ensuring the flexibility to deliver value well into the future.

Contact Avanade for a customized technology assessment to determine if a solution based on the Microsoft Dynamics CRM platform is right for your organization.

To learn more about Avanade's approach to Microsoft Dynamics CRM solutions, please see:

- ⇒ Laying the Foundation for Long-Term CRM Value
http://avanade.com/_uploaded/pdf/layingthefoundationforlongtermcrmvalue038385.pdf
- ⇒ Secrets to Building Successful Customer Relationships
<http://www.avanadeadvisor.com/campaign/crm/default.asp>

- ⇒ Scaling Microsoft Dynamics CRM
http://www.avanadeadvisor.com/reportregistration/docs/Scaling_Microsoft_Dynamics_CRM_308SC08-06.pdf

- ⇒ Avanade Federated Architecture for CRM
http://www.avanade.com/_uploaded/pdf/federatedarchitecturepov03fa1006271306.pdf

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