

# **Better than Buy, Better than Build: How to Reduce Software Costs with xRM**

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### ***Overview***

Your budget is tight, your staff stretched thin, but the business demands that IT deliver new capabilities, new features, new software. Buy and you pay for licensing, training, maintenance, and specialized consulting for installation and configuration. Build and you pay for business analysis, programming, testing, documentation, training, and endless modifications. Buy or build and you lose flexibility—will whatever you choose today meet tomorrow's demands?

To cut through the buy-build dilemma, to deliver the capabilities demanded by the business at dramatically lower costs in licensing and development, make your IT strategy agile with eXtensible Relationship Management (xRM), a platform for the rapid creation and adaptation of web-based line-of-business applications.

### ***The Hidden Costs of Business Software***

The obvious cost of business software is the licensing: one license per user per application. Add to that the high rates of specialized consultants required to install, configure, customize, and integrate. Moreover, each application presents users with a distinct user interface, driving up training and support costs with each new application.

Though hidden and hard to quantify, the greater cost of packaged software is the loss of flexibility. If the business demands a new feature unsupported by the application, you must wait for the vendor to include it in its upgrade path, over which you have no control, neither of the timetable nor of the priorities. Indeed, that cool new feature, which promises to make a real difference for your business, seems eternally over the horizon, coming soon in the next version. You would add it yourself but your programmers cannot access to code; it is locked up in a proprietary black box. While another application out there has the features you need, the cost of switching to a new vendor—licensing, migration, retraining—are just too high to consider.

### ***The Never-Ending Costs of Build-it-Yourself***

To avoid this loss of flexibility and create unique, innovative solutions, solutions that achieve competitive advantage, businesses continue to invest heavily in custom application development. Unfortunately, application development requires teams of business analysts, architects, programmers, testers, and technical writers, the costs of which can far exceed the price of a packaged solution.

Moreover, most organizations build applications inefficiently—it is just not their core strength. Projects exceed budgets and schedules; results fall short of expectations. Bugs and change requests transform even simple applications into quagmires, endless drains on money and resources.

And in the end, even the desired flexibility proves elusive. The business confronts you with new requirements well outside those anticipated by the initial design. That vacuum cleaner you built is now

expected to wash clothes, sending you back to the drawing board. Worse yet, the programmers who wrote the application are no longer available, the documentation is nowhere to be found, and perhaps even the source code is lost. Or the new programmers cannot make sense of the spaghetti code left behind and recommend starting anew, using their language and tools of choice. Or you forge ahead, modify the application, and the support phones start ringing: that feature—which was working yesterday!—is now broken.

Software is complex, filled with moving, interdependent pieces. Every change, no matter how small, requires regression testing, that is, the testing of every feature all over again. The complexity can all too easily result in rigidity rather than flexibility, defeating the very purpose of custom software.

### ***Industry Directions: In Search of the Software Magic Bullet***

Seeking to reap the benefits of custom programming without the pain, the IT industry has tried one approach after another, each of which has delivered benefits, but none of which has ultimately solved the problem.

#### *Software Development Frameworks*

To reduce the pain of software development, the software industry has been moving toward ever more complete platforms, platforms that include built-in components for common functionality such as transaction processing and database connectivity. As early as 1969, IBM introduced a transaction processing system, CICS, for mainframes. The standard C library, in development since the late 1960s, was standardized in 1989, providing standard components to speed development. The Java platform, released in 1995, contained an ever richer set of components for everything from building graphical user interfaces to encryption. In 2002, Microsoft followed with the .Net Framework.

While it is hard to imagine just how long it would take to develop even the simplest application without these frameworks, the software development process remains difficult and risk prone. Consequently, the industry has sought other means to control costs and manage risks.

#### *Software Development Processes*

In 1998, Watts Humphrey published *Managing the Software Process*, which introduced the Capability Maturing Model, a rigorous approach to the software development process intended to reduce errors and risks. While the US government requires contractors to adhere to the model and Indian outsourcing firms advertise their capability levels as a means to attract business, few firms outside of these spheres adhere to the model, perhaps because they perceive it as too complex and doubt its effectiveness.

More popular these days are the many flavors of Agile: Scrum, Extreme, Feature Driven Development, Open Unified Process. Agile proponents reject the possibility of estimating time and cost for an entire application. Rather, they advocate building software in iterations, iterations that continue until the

application is complete. While there is much to say in favor of Agile, if you cannot determine the cost of an entire project at the outset, it is impossible to calculate the ROI of an investment, which fails to completely solve the problems of risk and cost control.

### *Outsourcing of Software Development*

Frustrated with the cost and complexity of custom software development, organizations have sought to reduce costs by outsourcing development to less expensive countries. But outsourcing works poorly for developing custom business software because knowledge of the business is so critical to success. And in recent years, the outsourcing industry has contracted, with many organizations bringing IT work back in house. (See [http://itmanagement.earthweb.com/career/article.php/11067\\_3885751\\_2/IT-Outsourcing-Trends-Slow-Growth-Cloud-Computing.htm](http://itmanagement.earthweb.com/career/article.php/11067_3885751_2/IT-Outsourcing-Trends-Slow-Growth-Cloud-Computing.htm).)

### *Cloud Computing*

The latest IT trend, cloud computing, does little to reduce the cost of software development or remove the risk of vendor lock-in. Software built for the cloud is as complex as software built for the enterprise. Monthly usage fees for cloud software, usually set by annual or multi-year contracts, may exceed the cost of enterprise software licenses. While cloud computing reduces the upfront costs of infrastructure, it is not possible to solve the problems of software cost, risk, and complexity merely by relocating applications from the enterprise datacenter to a vendor's datacenter.

### **xRM: A Platform for Reducing Software Costs**

eXtensible Relationship Management (xRM) solves the buy-build dilemma by extending the concept of the software platform to nontechnical users. xRM reduces costs by enabling non-programmers, with minimal training, to create surprisingly powerful line-of-business applications. With little or no code involved, the need for testing, other than user acceptance testing, becomes minimal. And non-programmers can modify applications, keeping them in line with changing business requirements.

The user builds an application by creating entities representing those things in the business that require tracking: insurance claims, service complaints, building inspections. For each entity, the user creates a set of attributes such as name, age, title. Then the user adds these attributes to a form, which will depict the entity in the application's user interface. Next, the user connects the entity to other entities in order to show relationships. An entity representing a conference room might relate to an entity representing a meeting so that a person scheduling a meeting can associate it with a particular conference room.

Behind the scenes, the xRM platform does all the work that programmers used to perform: creates database tables and columns, web services, web pages, and security configuration settings.

Current xRM platforms include wizard-based business intelligence tools that make it possible for nontechnical users to build filtered lists, reports, and dashboards. While there are limits to the complexity of

reports users can build, these tools solve most end-user reporting needs. Users go in and build their own reports without even calling the IT department. Contrast this to the current situation: a user wants an immediate answer to a question, they call IT to request a report, and IT puts the request in a queue that might delay it for weeks. The reporting features of xRM remove this major point of tension between business users and IT.

xRM platforms also provide workflow tools that enable users to automate business processes. Again, as with business intelligence, there are limits to the complexity of workflows that non-technical users can build, but non-technical business users will be able to build the majority of simple workflows common in business scenarios such as approvals, scheduled alerts, and escalations. Putting this power in the hands of users reduces further the demands placed on IT.

While results may vary according to the complexity of the requirements, non-technical users can build the majority of a most application, as much as 80-85% or more, all without writing a single line of code. And even if you decide to keep control in the hands of the IT department, perhaps even with a developer, the ability to create the majority of an application rapidly without coding saves time and money.

But there are limits to what can be created without code, especially when integration with existing systems is required or the business requirements are particularly complex. In these cases, xRM platforms provide extension points that enable a programmer to insert custom code to achieve the desired results. And while this does raise the specter of complexity associated with custom programming, xRM dramatically reduces the quantity of custom code required, which subsequently reduces the cost and risk.

xRM is not a panacea: excellent applications, applications that make substantial improvements to business processes, require thought, both in the business analysis, making sure you thoroughly understand the business process, and in the design, making sure you map the needs of the business to the platform. The strength of xRM is its protean capability to meet the needs of business processes and do so rapidly, saving time and money and delivering functionality according to specification within days or even hours of a requirements session, a turnaround so rapid that it makes the process truly agile.

### ***Benefits of xRM***

xRM increases the ability of IT to execute on business strategy by delivering these key benefits:

**Develop Rapidly.** xRM enables you to create applications far more rapidly to meet urgent business requirements. With xRM, IT moves at the speed of the business.

**Save Money.** xRM reduces the money spent on programmers and consultants, focusing their time on the few truly unique and complex requirements of your business.

**Reduce Risk.** By reducing the need for custom programming, xRM dramatically mitigates risk, enabling you to deliver solutions that work as expected on schedule and within budget.

**Gain Flexibility.** Avoid vendor lock-in. Deliver features on a schedule of your choosing rather than depend on the priorities of a software vendor. And avoid custom programming solutions, which are complex, rigid, and incapable of keeping up with the needs of the business.

### ***The Ten Things to Look for in an xRM Platform***

To gain these benefits, IT must make a strategic decision to select a powerful, user-friendly xRM platform. In your selection process, consider these key criteria:

- 1) Ease of use for non-programmers. Make sure that the user interface for building applications is usable by the people whom you intend to perform the work.
- 2) Flexible deployment options. Look for a vendor that provides its own cloud-based hosting, hosting through partners, as well as on-premise deployment. While a cloud deployment might work for you now, you never know when changing business requirements or regulations will demand that you bring an application into the datacenter. It is always in your interest to have choices, if only as a negotiation tool.
- 3) Flexible service options. Look for an xRM platform supported not just by the vendor but by multiple, well-established service partners. If you require assistance with advanced customizations, data migration, or systems integration, you want reliable options.
- 4) Out-of-the box integration with desktop applications. If your users spend their day in Microsoft Outlook, Word, and Excel, make sure the xRM platform integrates with these applications out of the box.
- 5) Well-documented. Look for an xRM platform that is well-documented by the vendor and third-parties. Make sure the documentation covers the needs of both non-technical and technical users.
- 6) Business Intelligence for the non-technical and the expert user. Look for an xRM platform that provides easy-to-user wizards for the non-technical user as well as rich, powerful tools for more advanced users.
- 7) Unlimited extension points for programmers. While non-programmers should be able to get you 80-85% of the way, the business may require a few customizations that go beyond what the non-programmer can accomplish. In these cases, it is important to have a platform that programmers can extend in an unlimited way to meet specific requirements. You do not want a platform that will box you in.
- 8) Extensible workflow. Look not only for a tool that lets non-programmers automate their own processes, make sure the platform enables programmers to extend the workflow capabilities by adding custom activities that perform work specific to your business.

- 9) Flexible security. Look for an xRM product with a flexible security model, easy to manage and as granular as necessary.
- 10) Reliable, committed vendor. Look for an xRM vendor that is solid, reliable, and committed to its xRM platform.

### ***Microsoft Dynamics CRM: A Leading xRM Platform***

Most xRM products on the market began life in the guise of customer relationship management applications, and Microsoft CRM is no exception. While the Microsoft team that built Dynamics CRM intended it as an xRM platform, a toolset for the rapid development of web-based line-of-business applications, the concept of xRM was little understood in the IT community and the CRM market was strong, so Microsoft built CRM functionality on top of its xRM platform and named the product CRM. Eventually, customers recognized that if Microsoft could so readily build CRM on the platform, they too could build their own applications on the platform, applications that have nothing to do with traditional CRM, which brings the platform back to the intentions of its designers.

First released in January 2003, Dynamics CRM has matured into a powerful platform, now in version 4.0 with 5.0 scheduled for release the second half of 2010. The 4.0 release introduced multi-tenancy, multi-currencies, a richer workflow model, and support for more complex relationships between entities. The 5.0 release is expected to include out-of-the-box support for SharePoint integration, stronger dashboard support, and richer options for user interface design. Forrester, a leading independent research firm, declared Dynamics CRM as a leader for both medium-sized and large organizations. Forrester praised Dynamics CRM for its flexibility. (See the The Forrester Wave Report: CRM Suites for Large Organizations Q2 2010 and the Forrester Wave Report: CRM Suites for Large Organizations Q2 2010.)

Microsoft's commitment to the product, as well its integration of Dynamics CRM into the Office suite, SharePoint, and Office Communications Server, makes Dynamics CRM a compelling choice.

### ***The Advantages of Dynamics CRM***

- Dynamics CRM offers an intuitive interface for business users seeking to design their own applications, which dramatically cuts the time of building applications.
- Dynamics CRM integrates out-of-the-box with the Microsoft Office products, Word, Excel, and Outlook, increasing the productivity of business users. People who live in Outlook can access any application you build using xRM right from within Outlook, eliminating the need to switch back and forth between applications. The platform, with no additional work required on your end, lets users export data to Excel for analysis and to Word for mail merge.
- Microsoft hosts Dynamics CRM, enables third-party partners host Dynamics CRM, and provides Dynamics CRM for on-premise deployment.

- Microsoft provides great productivity tools to business users and developers alike, enabling programmers to extend the platform using the full power of Visual Studio and the .Net Framework, which is a tremendous advantage whenever that power is necessary to meet the specific needs of your business.
- Dynamics CRM has a flexible, easily-configured security model that applies equally well to any application that you build on the platform. The model is so powerful that it supports adherence to HIPAA, the complex regulations governing personally identifiable healthcare data.
- Dynamics CRM scales to meet the needs of large enterprises. For details, see the Dell whitepaper on Dynamics CRM performance and scalability at <http://www.dell.com/downloads/global/products/pedge/en/poweredge-11g-microsoft-dynamics.pdf>.
- Dynamics CRM meets the needs of IT for manageability. Microsoft provides a Dynamics CRM Management Pack for System Center Operations Manager, providing all of the data needed for effective IT operations.

### ***Getting Started***

Get started right away by viewing demos, reviewing case studies, and signing up for a free trial at <http://crm.dynamics.com>. Follow the Dynamics CRM team blog at <https://community.dynamics.com/blogs/crmteamblog/default.aspx> for the latest news.

### ***About the Author***

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