



Microsoft CRM Simplifies Court Projects

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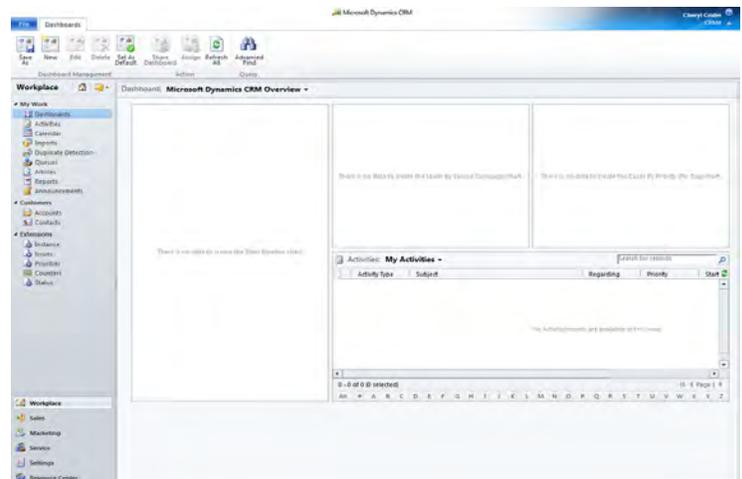
Recently, the Administrative Office of Pennsylvania Courts (AOPC) has begun to implement the Microsoft Customer Relationship Management (CRM) application for rapid development of internal projects. CRM is a role-based paradigm, and is intended to be used as a customizable tool for sales teams, marketing, sales campaigns, team building and customer tracking. AOPC staff has taken the CRM tool and re-engineered the approach to address the needs of some of its internal agencies and offices. The CRM application is fully customizable.

Specifically, AOPC is beta-testing implementations that staff developed as an Interpreter Database Solution for its Interpreter Certification process (PAIS) and for a Litigation Management Solution for internal AOPC legal staff (PALS). AOPC is also working on development of two other solutions to replace existing applications -- one for juvenile dependency hearing observation forms and one for a call management tracking system.

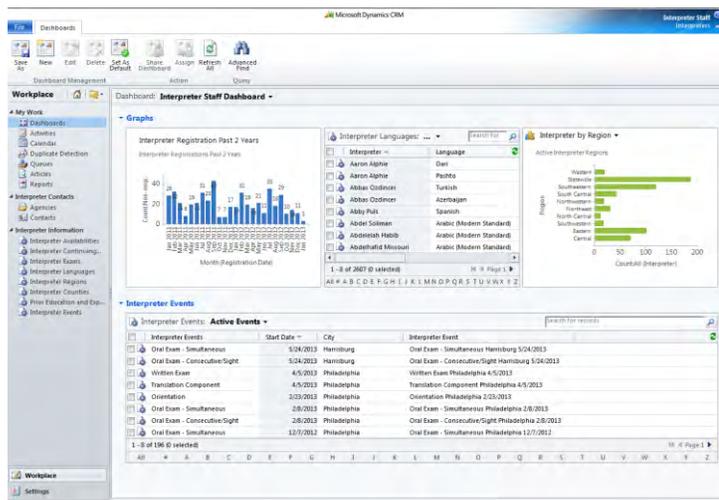
Using the person-based design of CRM, AOPC staff was able to envision and reuse the objects within the solution and re-think the logical associations behind the activities and use them to satisfy the needs of some of its internal agencies, such as the AOPC Interpreter Certification and the AOPC's Legal Staff offices. Both of these internal offices need to track individuals or cases involving people. AOPC decided to work the substance of the CRM application in ways to accommodate the business processes of the two offices. For technological solutions that can be translated into person-based terms, this methodology works well.

The CRM solution, as it exists out of the box, displays items (objects) that are specific to a marketing and sales team business application. The standard dashboard is comprised of different sections—panes for dynamic Sales Pipeline chart, Source Campaign chart and Cases by Priority (Per Day) chart. The Activities grid displays a sales team's actions and is designed to track their daily, weekly and monthly tasks. The Workplace is designed for the sales teams to identify salespeople, sales, marketing efforts, promotions, resources and issues.

In the hands of the AOPC staff, this standard dashboard was transformed into an area that is more relevant to the business processes of the internal agencies.



The AOPC design for the interpreter office staff is shown in the screen shot below.



The Ribbon Bar, displayed at the top of the screen, is also customizable for each of the screens in the new solution. Some icons and controls may be disabled or enabled as well, depending on the way the staff needs to use the screen.



The new application provides AOPC non-technical staff with a tool that they can use to respond directly to business process changes without having to translate the business processes to a programmer or to a web developer. This helps to streamline the timeline for new development and maintenance as there is no development staff involved and analysts work directly with the clients. The AOPC staff can address modifications quickly and easily. There is also no need for system down time for deployments to the production environment. CRM users a SQL Server database that requires standard IT support, installation and maintenance. However, all querying can be done through CRM itself and even tasks such as data imports have a CRM wizard that makes the process more analytical than technical.

The CRM application is also designed to integrate fully with Microsoft Office products, so AOPC staff could take advantage of the familiarity with the user interface of Outlook to shorten their learning curve with the application. If an organization uses Outlook, its users will also be familiar with the 'look and feel' of solutions developed using CRM. Excel and

Word are seamlessly integrated, so simple tasks like cut, paste, copy and save are easy to find, and new users of the solution can be taught without devoting much training time on where to find the action buttons that they need to use. In addition, the integration allows for the clients to use familiar features such as mail merge seamlessly without leaving the application while the CRM application records are updated to record the action as taking place.

In combination with Microsoft's SharePoint and MS SQL Server Reporting Services (both may be integrated with the CRM application), AOPC analysts created custom entities with built-in document management, activity management and complex reporting and analytics to accommodate automation or facilitation of business processes for these internal offices.

AOPC staff are now able to replace more complicated small-scale applications developed for court agencies and internal operations that previously may have been developed using MS Access shared on a server. Often, these applications were conveyed to an MS SQL Server database with Access remaining linked as the front end, causing issues in stability and maintenance as the processes or storage demands grew larger.

The new solutions have the capability of eliminating some development bottlenecks and for creating more stable, scalable and highly customizable environments for these smaller-scale applications.

The CRM solutions are also equipped to provide for an abundance of concurrent users--up to 100,000. This capability extends far beyond many of the home-grown or smaller customized applications that currently exist for peripheral functions within the courts.

Now the staff is able to create tasks and ticklers that appear as Activities in the Dashboard. For instance, some of the tasks remind the interpreter staff to invite a newly registered interpreter to the next Orientation Event, with an alert date set prior to the Orientation Event. Staff receives the Outlook reminder and checks to ensure that the newly registered interpreter(s) have been invited to the Orientation sessions.

Integration with Excel permits the user to import or export data from the new solution, or to create reports and graphs using that same data. The icon in the Ribbon Bar (Export to Excel) enables

the user to put the on-screen list into an Excel spreadsheet to manipulate the data or to extract information for other purposes.

Integration with SharePoint enables version handling as well as storage. The step by step workflow process can be used for document handling using SharePoint as a plug-in.

AOPC staff is able to customize dashboards, actions and notifications that can be grouped by team structure. Notifications can be broadcast by distribution lists and by team. Dashboards can be customized by the type of actions that the teams perform. Data grids can be accessed from the Site Map to open a full screen of the grid/form instead of accessing it through the Contact screen.

Actions and notifications are real-time, depending on the network and hardware capabilities of the environment.

Workflows enable the staff to maximize individual efforts. Whether it is a chain of approval sign offs or a series of actions on a document, workflows make managing of these tasks seamless by behind-the-scenes logic that moves documents from one party to the next in a series of steps. These workflows can be developed with different teams in mind or with just one team where a document goes back and forth between the members for different types of updates or additions, using statuses as triggers. AOPC has implemented workflows to provide notifications, fill-in data across multiple entities and to hide records for the clients based upon actions and events within the application.

Reports are created with roles in mind. This is very useful in document handling and team-based environments. With clearly defined roles in a solution, reports are structured to describe team or individual efforts in a quantitative way. Graphics and charts can also be used to enhance the reporting for presentation purposes.

Users are able to design their own customized reports based on views within the solution. Using simple dropdown features, users can develop their own ad hoc reports and build new system reports.

Forms are created by dragging and dropping fields onto a form template screen. The fields maintain their properties from one form to the next and can be maintained in one central

location. If the properties of the field change, they change for every form that includes that field. So the users can enter the contact's information once to populate the appropriate areas of the record—as well as any forms or views that contain that information.

For any activity that is related to an individual contact or agency, the Activities list for that entity displays the items that have been delegated to that person or agency. This is an audit tracking feature that can be employed in any new solution. The audit tracking bit can be set on individual fields, and those fields can be tracked on an instance by instance level throughout the solution.

Court Context

The Administrative Office of Pennsylvania Courts Judicial Automation department has been responsible for development of case management systems for Magisterial District Judges, the Court of Common Pleas Criminal Division, and the Pennsylvania Appellate Courts—Supreme, Superior and Commonwealth courts. This office has also been responsible for development of software for the Pennsylvania Board of Law Examiners (PABLE) and for internal administrative services and human resource tracking.

AOPC-developed systems also include web interfaces for District Attorney Offices' production of Bills of Information, online bar applications, warrant tracking for arresting agencies and other secure users, online secure and public docket sheets for appellate and criminal cases, a scheduling interface for the Court of Common Pleas Criminal Division, among others.

Judicial Automation at the AOPC employs a full development staff. In over 20 years of developing software packages, beginning with the Magisterial District Judge (MDJ) System, AOPC has refined a repeatable process for software development, enhancement, and acquisition that involves an iterative lifecycle, joint application development (JAD) with user groups, screen prototyping, cross-disciplinary software development teams, and structured testing.

Tips for Implementation

- 1. Understand that an analysis of the business requirements is still key to the process.**
- 2. Thoroughly read administrators' manuals and other information available to determine the best implementation of the technical environment.**
- 3. Custom entities are usually best.**
- 4. Look for already-built plug-ins that may meet your needs.**
- 5. Develop Lookup Entities rather than using Option Sets.**

Tip 1: A thorough analysis of the business requirements is still key to the process.

Though the development time may be shortened, it is still necessary to thoroughly understand the business process and to plan entities and attributes before diving into the process of development. However, experimenting with the creation of custom entities may lead to better ideas about how to build the system.

Tip 2: Thoroughly read administrators' manuals and other information available to determine the best implementation of the technical environment.

A thorough understanding of the integration points of Sharepoint, MS CRM, and MS Reporting Services will help to make your project more successful. Get advice from Microsoft when needed. AOPC is also looking at integration with Team Foundation Service.

Tip 3: Custom entities are usually best. MS CRM comes with prebuilt entities, the primary of which are the Accounts and Contacts. You may wish to reuse Accounts and Contacts as they come with some basic functionality that is useful. However, you will usually hit a road block when trying to reuse entities such as Invoice if you attempt to morph these into some court based functionality. It is usually better to build your own entities, with the exception of Contact and Account.

Tip 4: Look for already-built plug-ins that may meet your needs.

AOPC staff has been able to use existing plug-ins to help facilitate the growth and use of the CRM—these include such things as a Site Map and Navigation Editor as well as some user facing plug-ins. As AOPC develops customized

solutions for use in the court system, more is discovered about the versatility of working with the packaged programs that are available from other developers and from our own resources. The solution designs are portable and can be reused, where appropriate, and tweaked to accommodate different needs of other users.

Tip 5. Develop Lookup Entities rather than using Option Sets.

CRM allows fields to be set up as Option Sets. However, these sets are stored in a single "Type, Value" entity. If you need to write reports or views across entities, joining to this entity for more than one field can be a performance issue. It is better to set up specific entities that can be used as lookup values. Then, any field that requires a list can be designated as a Lookup Value based field rather than as an Option Set.

Other considerations

AOPC is beta-testing implementations that staff developed as an Interpreter Database Solution for the Interpreter Certification process (PAIS) and for a Litigation Management Solution for internal legal staff (PALS). AOPC is also working on development of two other solutions to replace existing applications --one for juvenile dependency hearing observation forms and one for a call management system.

Summary

Using Microsoft CRM as a tool for rapid development of projects, AOPC has re-engineered the role-based paradigm and implemented two separate browser-based applications for use by AOPC internal agencies. These two pilot solutions provide a new standard for development that would otherwise require mid to large-scale schedules, along with the resources and the budget to support it. Using SharePoint and MS SQL Server Reporting Services, analysts created customized solutions with interactive dashboard navigation, built-in document management, activity management and complex reporting and analytics.

Without the need for complex coding, these solutions were developed in a very short period of time by non-technical staff using views, workflows and dialog processes. Seamless

integration with Outlook and other Microsoft Office applications provided immediate recognition of screens and access to information within a customized workplace.

By reducing the development costs and integrating electronic document handling controls, AOPC has discovered a way to deliver affordable, scalable, and highly customizable solutions within a more stable environment for court users and agencies.

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Disclaimer: The advice and opinions represented in this bulletin are based on the experiences of the Administrative Office of the Pennsylvania Courts. Such recommendations may not be suitable for other jurisdictions, and are only offered in the spirit of sharing experience as information to others considering the installation of similar technologies.

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