

Achieving Operational Excellence
with
Office Business Applications

Ellen Terry
Solution Architect

Cory Dixon
Technical Architect

CompleteSolutions

www.complete-solutions.com

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Executive Summary

“Very rarely will individual companies gain durable advantages from the deployment of packaged applications.”

“Strategy is all about being different – it goes far beyond the pursuit of best practices. It involves the configuration of a **tailored value chain that enables a company to offer **unique value**. To be defensible, moreover, the value chain must be **highly integrated**.**

“Few companies have competed successfully on the basis of **operational efficiency. It is **necessary, but not sufficient**”**

-Michael Porter / Harvard Business School

Combining operational efficiency with the ability to configure a tailored value chain (*i.e.*, *Agility*) is a capability we call Operational Excellence (*OE*), and companies that achieve OE outperform in their industry¹. OE is not a small opportunity: Agile companies with tailored value chains outperform peers by two to one in revenue growth, and have profit margins 5 to 10 percent above competitors. To most of our clients, this translates to hundreds of millions of dollars per year – so, the idea of achieving operational excellence is worth looking into.

And strategy is not the hard part. Most of our clients know their industry and the opportunities to differentiate. The **high-level challenges** have been twofold:

- **Execution.** Supporting execution of differentiators has been difficult for several reasons:
 1. **End-to-End Execution.** Processes that differentiate are almost never within one functional unit – rather, they are cross-functional and cross-organizational. Even the cross-functional applications (*e.g.*, *SAP*) seldom support these processes – *i.e.*, end-to-end execution is rare (*recognizing this was one of the drivers behind SAP’s xApp program – you can only do so much*).
 2. **Uniqueness.** Nor do packages provide anything unique. As Michael Porter says above: “Rarely will individual companies gain durable advantages from the deployment of packaged applications”. Packaged applications are, by definition, non-strategic (*if we can buy it off the shelf, so can our competitor*).
 3. **Process Composition.** And another part of the execution challenge has been the composition of differentiating processes. They tend to be partially innovative and unstructured, and partially transactional and structured – and the result has been that they have been only partially managed.
- **Change.** Big applications that support transactional processes hate change. It’s not the process parameters (*e.g.*, *adding a field or changing an effective date*), it’s the **STRUCTURE** (*how the process flows*) that’s the challenge (*e.g.*, *we’re running this order through field scheduling before sales orders, but now I want to run it through operations and reserve inventory first, and then get our new external partner scheduled before I run it through our field scheduling*).

¹ “Smart Customization: Profitable Growth through Tailored Business Streams”, Strategy+ Business, Spring 2004

Office Business Applications (*OBA*) is an architecture that can address these challenges. It merges unstructured and structured data with unique processes that execute end-to-end, across applications. And these processes can be easily changed. There's big value in this. While we haven't achieved the 5-10% potential profit margin improvement anywhere yet, we started our OBA practice based on a project that created \$10,000/day to the bottom line, and subsequent projects have exceeded that business model.

So, recognizing that there is something here of value, let's discuss OBA.

Defining OBA

OBA is an architecture (*not a product*) that uses the entire Microsoft platform to integrate the Office System (*which includes SharePoint*) with business applications. **Office (integrated with) Business Applications... OBA**

The release of Microsoft Office SharePoint Server (*MOSS – the new name for SharePoint*) in 2007 was huge, the most significant piece of technology that Microsoft has released in a long time. And MOSS is at the center of OBA because of a few key technologies new to SharePoint:

Workflow and Business Rules. Just surfacing business application data in Office is nothing new – we've been doing that for years. But if we're going to create value, people have to **DO** something with the data – not just sit there and look at it. And in the past, people had to get out of Office and back into the business applications (*usually multiple*) to get something done, so execution broke down.

Workflow and Business Rules changes that. We can now execute, monitor and control the processes embedded in business applications from within Office (*which is where people like to work*) AND fill in the gaps that applications leave (this includes integration of unstructured data into structured process, as well as creating process extensions to connect applications and organizations).

In the past, we built custom applications to execute workflows or we modified the LOB application. Both were complex, fragile, and resistant to change. Workflow structure is now developed, and changed, using graphical interfaces to the executing applications - some for technical people, but many for the business users. And we can change those workflows with a reasonable effort (*agility!*). Big difference.

Business Data Catalog (BDC). As mentioned, we have always been able to integrate business application data with Office, and we have discussed how workflow and business rules now allows execution from within office.

That change has not always been easy. One of the issues was that every time we wanted to bring a new dataset into Office, we had to build a new interface to the applications – usually from scratch. So, this added complexity, cost and time to implementation. The first round of solutions to this problem was called Information Bridge Framework (*IBF*), an early integration

meta-data repository and information server. That had some good capabilities, but it also had some real challenges.

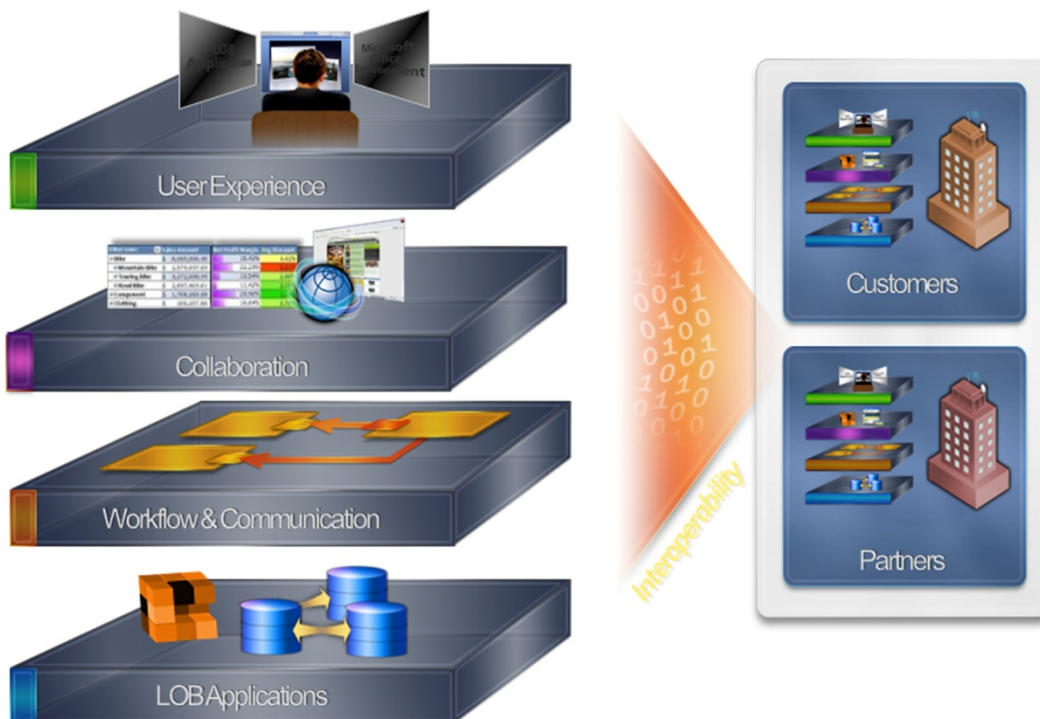
The BDC is a more mature and sophisticated metadata server. If we're going to just build a few integrated workflows then the BDC is going to increase the effort. But, if we want to build a lot of workflows and change those workflows, or if we want users to be able to integrate data into office ad-hoc (e.g., pick a customer / invoice and drop it into Excel), then the BDC makes a lot of sense.

Online/Offline, Mobility & Distributed Operations. Often, the key touchpoints of processes that deliver OE occur at the customer's site, at a convention, in the car... Being able to execute from those touchpoints can impact OE. MOSS has added a lot of features around Online/Offline and Mobility that get into OBA architecture to help deliver on OE.

There is also a capability within the Microsoft platform to take the workflow and business rules offline and that has a great deal of impact on achieving differentiators and OE. We refer to this capability as distributed operations.

MOSS Platform and OBA Architecture

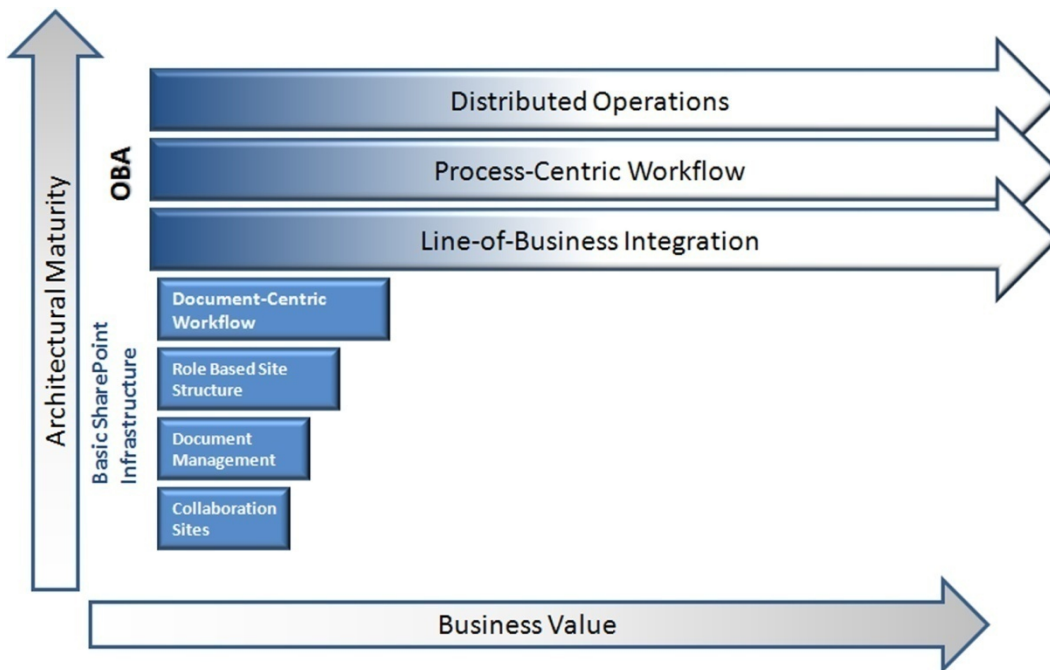
The three technologies discussed above - workflow & business rules, the BDC and distributed operations - are the focus of OBA, implemented across the layers of MOSS:



Looking at the illustration above and considering our earlier discussion, the “Workflow & Communication” and “LOB Applications” layers of MOSS are new. The Collaboration and User Experience layers are not new – but they have new functionality important to OBA (online/offline & mobility being one).

OBA, the architecture, ties the whole platform to OE. It merges structured with unstructured, routine with innovative, standardized with unique, scale with focused – all within the world’s chosen user interface. That’s where the power to create value lies (all of our projects kicked off during 2007 have eight figure targets).

The center of OBA architecture is MOSS, and it’s important to plan this into SharePoint infrastructure design, otherwise OBA applications may take a lot more effort later on. We think of OBA architectural maturity as illustrated below:



Moving up the architectural maturity dimension, we progress through site design and document management (lifecycle management, rights protection), through role-based site structure and into document –centric workflow.

Beyond these are the OBA maturity levels: Line-of-Business Integration centers around the BDC (which was discussed earlier); Process-Centric Workflow differs from document-centric, both in business impact and in technical requirement; Finally, distributed operations (which is the ability to work and execute workflows remotely or from customer / partner sites).

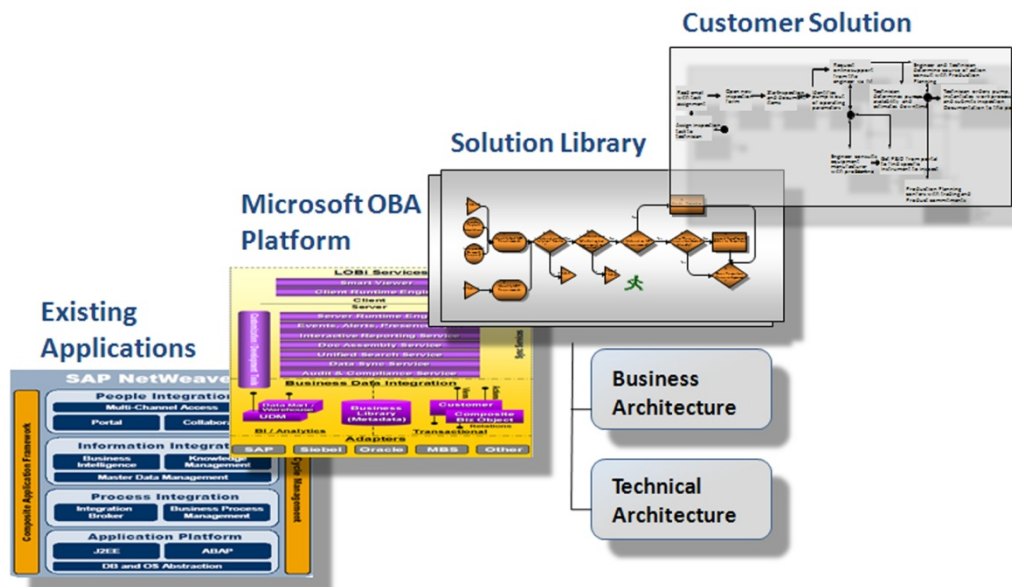
Again, we want to point out that projects can go for the highest level of OBA from the get-go. If there’s business value to be had with distributed operations – there’s no excuse not to go to this level immediately.

A few comments and caveats here:

- Our approach to Line of Business Integration is “think strategically and implement tactically” i.e., develop a strategy and architecture for application services / access and build interfaces as needed by the workflows. Some systems have sophisticated interfaces (*SAP comes to mind*) and others are quite a challenge. If there’s a SOA initiative being considered or in progress, then OBA ties naturally as a related initiative.
- Process-Centric workflow may sound odd. The SharePoint team, with an Office background and a document-centric view of the world, implemented workflow in a document-centric model. For example, a document can have multiple workflows, but a workflow can have only one document. We have yet to see a business define its processes around documents – so our experience is that document-centric workflow is inadequate. Therefore, a process-centric workflow architecture is necessary and we have developed the architecture and components for our library.
- Distributed Operations (*taking workflows, data and rules offline and executing outside of the network*) has a great deal of value potential in many organizations. In fact, the business case required distributed operations in the very first OBA project we encountered. For further information on Distributed Operations Architecture – see the OBA Reference Architecture Pack (RAP) for Price Management on MSDN (<http://msdn2.microsoft.com/en-us/architecture/bb467601.aspx> for the general site and <http://msdn2.microsoft.com/en-us/library/bb508937.aspx> for a business focused whitepaper (*also note that this was led by Ellen Terry while at Microsoft – and she is an author of this paper and she leads CSI’s OBA Solutions*).

CSI OBA Implementation Approach and Assets

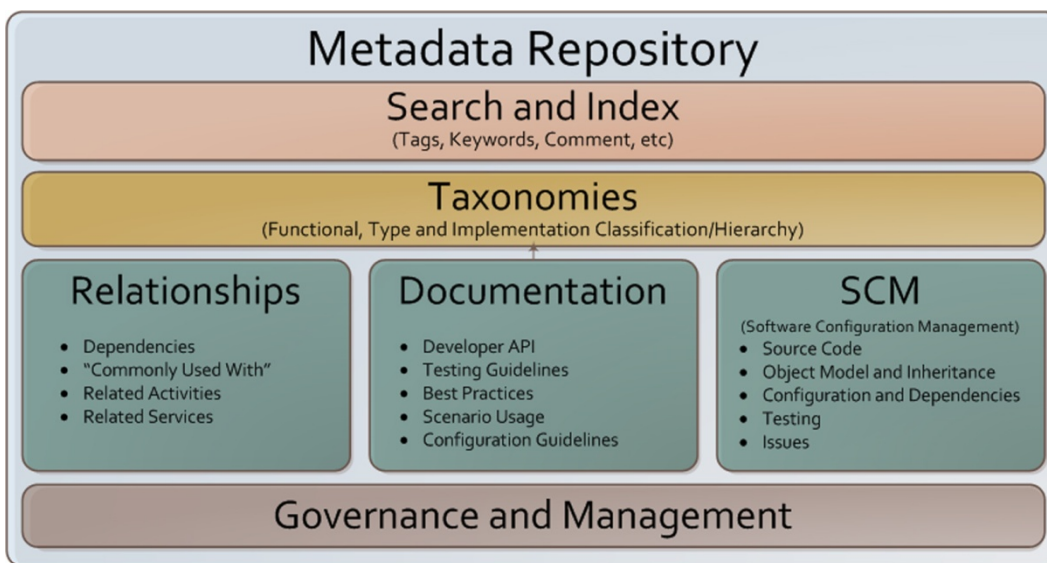
OBA is the key part of Microsoft’s vision for delivering industry specific solutions to customers and the CSI OBA team is aligned with Microsoft and that vision:



The solution library that was originally envisioned by Microsoft hasn't developed as planned. Ellen Terry (*now with CSI*) and Atanu Banerjee developed RAPs for the Manufacturing vertical. Today, the burden for this lies with the partner channel – they have the SME's and the implementation experience.

And CSI is taking a leadership position here. As mentioned earlier in the architectural maturity discussion, we're building a solution library of OBA application components (*workflows, activities, objects & classes, models & metrics, forms & templates, practices, etc.*) that we see as filling the gap between the MOSS platform and OE. Some of these are clearly obvious and some emerge as we implement OBA at clients – in which case we generalize a component and add it to the library.

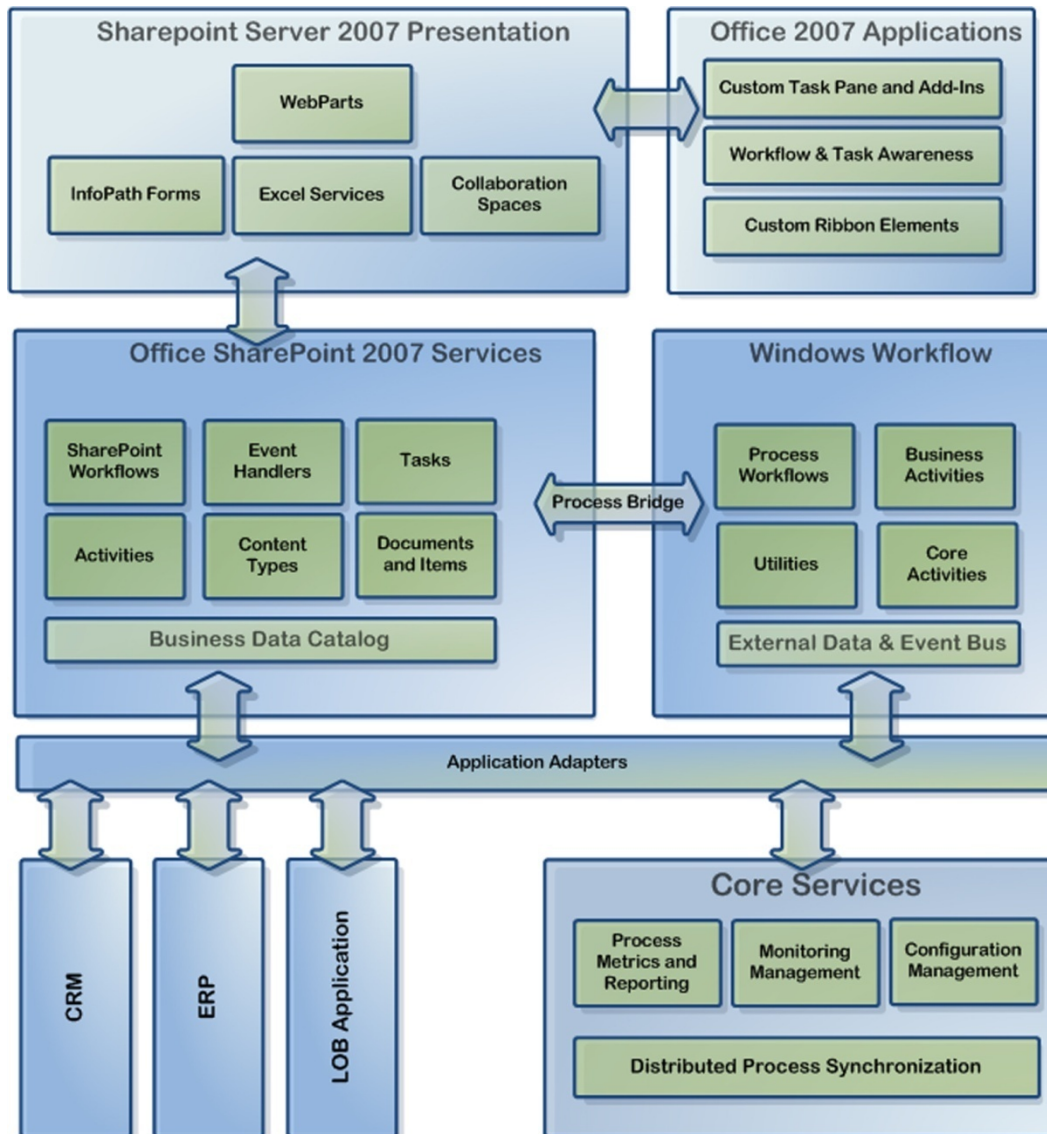
The management structure of the library is illustrated below:



This allows us to apply components to customer solutions consistently and efficiently. We think there are substantial benefits to this approach. On the technology side, the idea is to reduce time to implementation, cost and risk. On the business side, there's far more value: as we integrate our experience across industries into the library, it also becomes a repository of OE strategies operationalized. You could compare this to the APQC Knowledge Base (*American Productivity and Quality Center – which, btw, is a great resource based in Houston*) where practices / process / benchmarks / metrics are collected. The difference is that our models / metrics / processes / workflows are EXECUTABLE – at least at the systems level.

So, keeping in mind that the library has a business and technical view, let's take the business view to describe how this works. We use a Value-Chain Taxonomy that stores processes, workflows, models and metrics within industry value chain models, as illustrated below:

The technical view of the library follows a high-level architecture illustrated below:



As we have discussed throughout, OBA centers around MOSS or SharePoint Server 2007. Most of our effort, and resulting library components, is in connections between platform components.

For instance, we have touched on the limits of the SharePoint workflow model to support most business scenarios – so, we utilize Windows Workflow, which gives us the necessary functionality – consequently, this requires that we have a ‘process bridge’ to handle correlation and communication between Windows Workflow and SharePoint Workflow.

By complimenting SharePoint with Windows Workflow, the document-centric constraints, among others, are shed.

Next Steps

OE is achievable, at least key segments in the value chain where you can recognize the most value. We've yet to see an enterprise without opportunity to create hard dollar value in a surprisingly short period of time. In keeping with our process-centric view of things, we've had the best results by taking one key process and automating that with OBA – then extending through the value chain, process by process.

The next step is to contact a member of the CSI OBA team. We can work with you to assess the value opportunity and build a business case for OBA. Please contact
Elle Terry (eterry@complete-solutions.com)