Integrating SharePoint Into Your Business Cloud Strategy

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When evaluating applications, services and business processes that could be moved to the cloud, it's important to include SharePoint Online in your planning. SharePoint Online can function as a hub around which other cloud applications and services can be organized, as well as a resource other applications and services can utilize. As your legacy software applications reach their end of life, you have many options for extending and expanding by moving workloads to the right cloud technology.

Microsoft Azure and Office 365 offers services that challenge traditional business activities of standing up on-premises servers Microsoft Azure is now fully seven years old and features *hundreds* of distinct solutions, products and services. These features range from simple, low-level services like file storage and identity management to mid-level services like relational databases all the way to complete Windows Servers running in virtual machines. Visit http://azure.com and be prepared to be overwhelmed. Pretty much anything you are presently accomplishing with on-premises hardware and software can be done in the cloud. The challenge is to pick the right technologies for the right reasons and take deliberate steps that demonstrate a return on investment and risk.

SharePoint Online and your Business Cloud Strategy

- Azure is MATURE and COMPREHENSIVE
- SharePoint Online is a Solution Platform
  - Extensive Integration Possibilities
- Flow and SmartApps for Process Automation
  - Perfect for Legacy Apps

REAL WORLD, ALL-IN WITH THE CLOUD: I have a unique experience to be working with a completely new financial services company created as a spin-off from a much larger and established parent. They were given the opportunity to start fresh with no preconceived notions on how information technology was to be implemented and used. This organization is 100% in the cloud: their home office has a single on-premises server – a print server. Literally everything else is running elsewhere, including insurance line-of-business applications. The company came into existence using Office 365 and SharePoint Online is central to all business units.

Office 365 is also over seven years old and it has added a substantial number of products and services over that time and is much more than just traditional desktop Office products including Outlook, Word and Excel. Being cloud services makes it possible to perform amazing integrations between people and systems. I'll touch more on this in a moment.

SharePoint Online solutions can be created with minimal cost and effort and open up incredible possibilities for integrating with other online resources, products and services

Since its inception in 2001, SharePoint has been server and web-based, making it at least in principle possible to integrate with other resources both internal and external to the

organization. In practice, this was often technically challenging and very expensive to license. In my experience as a consultant and architect, I worked with many clients where SharePoint Server could have been an ideal platform for a business solution, but the organization was simply too small to take on the responsibility for multiple servers; even in some large organizations, sometimes they perceived that a SharePoint Server solution was too narrowly focused on a department or work team to justify installing new servers.

Things changed very substantially with the release of SharePoint Online. For just a couple of dollars per user per month, with no upfront investment, any organization large or small can afford a SharePoint-based solution. Organizations can create and demonstrate a proof-of-concept based on a free 30-day trial subscription and invest no more than a couple of hours.

Very significantly, being in the cloud means a SharePoint Online solution is securely accessible to any user, anywhere. Suddenly companies with remote offices, people working from home, staff on the road – everyone can collaborate from the same portal. And it gets even better – Microsoft offers free "partner access licenses" for individuals who are not part of your organization. Key customers, vendors, suppliers, subcontractors, and anyone who benefits from tighter integration with an organization's SharePoint Online solution can participate in using it.

Finally, and possibly even more significantly, being in the cloud means SharePoint Online can, in principle, integrate with any other product or service that is also web-based or offers web-connected services. As you might expect, actually accomplishing this varies widely from product to product. You'll find products like Dynamics CRM that can integrate with SharePoint Online right out of the box. Others involve more technical configuration steps but are still within the grasp of power users. Still others require custom integration programming and a correspondingly larger investment. The point is that it's at least *possible* and that's where deliberate planning and ROI justifications come into play.

Implement sophisticated process automation strategies with SharePoint Workflows, Flow and PowerApps

Integration takes two forms: data and process. Data integration has traditionally been the easier of the two. For example, it's long been straightforward to surface data from SQL Server, Dynamics CRM and similar products though SharePoint's Business Connectivity Services. Depending on the source of data, you can even support inserts, updates and deletes directly from SharePoint.
Process integration typically takes more effort. Over the years, SharePoint Workflows have gained powerful features enabling more sophisticated processes. A vibrant third-party market offers even more versatility but at a cost. One challenge is that workflows function entirely within the SharePoint Online context and while they can integrate with outside services and data sources, it's not always easy nor a natural fit.

With the introduction of Flow to the Office 365 product suite, you have an amazing integration tool that extends your reach across over 100 online services including OneDrive, Dropbox, Salesforce, Google Calendar/Tasks/Docs, WordPress and much more. Additionally, you have lower-level services like email, push notifications and data collection that operate inside Flow, independent of the services you're integrating.

With Flow, SharePoint Online is truly a hub around which business processes can operate. Or, you can reverse your frame of reference and say that your other business processes see SharePoint Online as a source or destination for data, or possibly an event trigger or collaborative decision-making stage that is just a part of a larger process.

Similarly, PowerApps is another option for business process integration and automation in the Office 365 suite. As the name implies, PowerApps are more focused on building functional applications that can integrate with all members of the Office 365 product suite as well as any data source that supports the Microsoft Common Data Model. Flow is more about coordinating processes *between* applications. As such, you may well end up using both technologies in a solution.

About Those Legacy Applications – SharePoint Online and Azure offer a great opportunity to refactor and leverage cloud services

Application software does not last forever. At some point, some combination of challenges and opportunities make it clear that it's time to retire, replace or retrofit an application. The premise of this article is that cloud services coupled with SharePoint Online offer you a unique opportunity to completely refactor your application's relationship with your internal IT infrastructure and external resources.

A move to the cloud does not have to be an all-or-nothing proposition – it's completely reasonable to continue using legacy software applications for the portions of your business where it continues to do an acceptable job or where its simply too expensive or risky to justify a migration, and leverage cloud services when they add significant value or solve otherwise intractable problems.

Here are some idea generators taken from my experiences with customers faced with such challenges.

- *Your custom inventory management application is old and has very weak contact management features – so old it doesn't know about that newfangled "email" thing and you're recording it in the spouse's name field! It's too expensive to completely re-write the app yet you can't compete without more sophisticated sales and marketing capabilities.*

  Solution: use Dynamics CRM for marketing campaigns, accounts and contacts, sales leads and opportunities. Use SharePoint Online for collaborating on proposals and sales quotes. Leverage Flow, PowerApps and Business Connectivity Services to populate the small number of fields required by the inventory system. Perform a one-time migration of existing contact data to CRM. If SharePoint Online feels like overkill for your style of collaboration, Office 365 Groups and Microsoft Teams offer similar functionality with less structure.

- *Your beloved Microsoft Access application works great inside your home office LAN but is not accessible outside. Supporting users in remote offices involves a VPN that's complex to configure and support and doesn't always perform very well. A new business requirement is that key customers need to be able to conduct business with you via the web.*

  Solution: migrate the database to SQL Azure in the cloud. The existing application continues to work as before, so that investment is protected. Users in remote offices now connect to the same database as everyone else so they're fully supported. Performance can be improved through a few clicks of the mouse in the Azure management portal, adding more CPU cycles and memory as needed. Customers are granted access to a SharePoint Online site where their activities trigger alerts and

notifications for your staff.

- *Your employees are frustrated that they have to return to the office and use a full-size desktop computer to record data they've collected in the field. They'd be way more productive, not to mention happier, if they could record data right on scene as it is gathered and skip the tedious travel and re-keying process.*

  Solution: support tablets and smart phones through an app connected to Azure services and SharePoint mobile app, or possibly Office 365 Groups or Microsoft Teams.

  If offline access is required, cache the data locally on the device to support offline activity when Wi-Fi or network connectivity is poor or non-existent and sync when it becomes available again. Bonus: management benefits from real-time updates instead of waiting days for data entry to catch up.

Cloud services and SharePoint Online are a powerful combination that should be considered in your planning process.

About Me

Craig Yellick is Alto Consulting's vice president and senior application architect with over 30 years of business systems design and implementation experience. Craig is the author of over a dozen technical training classes. Lately he's been focusing on Office 365 as an application platform and enjoys solving customer challenges with innovative and often out-of-the-box solutions.