Habanero Consulting Group

Building your employee portal or intranet in Office 365

A Habanero White Paper

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Habanero is passionate about helping people and organizations thrive. We are Canada's premier provider of employee, customer, and member portals.

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1. Introduction

The vast majority of enterprise organizations host their SharePoint infrastructure on-premise, in a co-located data centre, or in a private cloud. However, many are exploring the feasibility of leveraging Office 365, or more accurately SharePoint Online, to host their employee portals, intranets, and collaboration environments.

In Gartner's presentation, the *Hidden Gotchas of Office 365* they state, "If you're a Microsoft shop, you **will** be moving to Office 365 in the future. The questions to ask are: (1) which parts? (2) When? (3) In what order?" At Habanero we would whole-heartedly agree that all Microsoft customers will eventually move to Office 365.

Although Exchange and OneDrive for Business are often the first components organizations leverage within Office 365, we've seen companies take bold steps towards the Microsoft Cloud and implement their entire employee portal in SharePoint Online. This white paper is intended for business sponsors considering Office 365 and also architects and/or developers who are trying to reorient their teams to build solutions in SharePoint Online. We have pulled together a selection of key benefits, common concerns, important development differences, and lessons we have learned that we believe you should consider before creating an employee portal within Office 365.

SharePoint Online is extremely capable — any intranet we design today can be implemented within Office 365.

Although Office 365 presents new challenges, we believe companies have just as much chance of a successful employee portal implementation on SharePoint Online. As with all technology projects we encourage you to set clear expectations of what's possible with your internal stakeholders and believe that rather than abandoning branding and customizations, organizations consider the balance between value, adoption, and long-term manageability.

It is important to note that Office 365 is rapidly evolving and as such, the information should only be considered current as of the date of publication. We recommend discussing any specific issues with a trusted Office 365 expert to ensure you have the most accurate, and up-to-date information.

2. The benefits of Office 365

From our experience working with clients we've learned that Office 365 provides a number of benefits.

2.1 Licensing

The Office 365 licensing plans are based on the number of named active users. As such, it is easy to ensure your organization is compliant. Additionally, the Enterprise E3 and E4 plans allow each user to use the Microsoft Office suite on up to five PCs or Macs (including home computers).

Organizations that experience fluctuations in employee count, or are expecting to reduce their workforce may also find the Office 365 licensing terms beneficial as you can reduce the number of licensed users (true down) on your yearly anniversary date.

2.2 Cloud-only features

Due to the large number of on-premise installations Microsoft has committed to releasing another version of SharePoint (SharePoint 2016). The new version of SharePoint will better support hybrid (on-premise and cloud) deployments as organizations further migrate to the cloud. However, there are a number of cloud-only features as they rely on cloud capabilities such as machine learning. Cloud-only features include Yammer, Delve, Power BI, etc.

2.3 Infrastructure cost savings

There are significant cost savings in moving your employee portal to SharePoint Online. It is extremely expensive and time-consuming to install and maintain a high-availability SharePoint farm, which requires a team with specialized skills and knowledge to manage and maintain both the infrastructure and the solution. It is also worth noting that SharePoint 2013 introduced additional infrastructure requirements compared to earlier versions of the platform. As such, like-for-like upgrades from SharePoint 2010 or an earlier version of the platform to SharePoint 2013 often require additional infrastructure.

2.4 Automatic upgrades

Historically, Microsoft releases a new version of the on-premise version of SharePoint approximately every three years. There is often a significant investment of time and money required to upgrade an employee portal to the latest version of SharePoint. In Office 365, your portal will receive new features and updates as they are released — the concept of upgrading your portal to the next version of the product is diminished. Over the past year we have seen a number of new features from the Office 365 roadmap being released to our client's SharePoint Online tenants. Automatic updates can also be a challenge with cloud solutions, which we discuss further in this document.

At Habanero we are expecting revenue from SharePoint upgrades to fade, and clients will instead be able to use these resources to focus on

activities that drive more value, such as evangelism and education; implementing user experience enhancements; automating business processes through electronic forms, workflow and apps; and supporting document and records management initiatives — all much higher value activities than a platform upgrade!

2.5 Seamless digital workplace experience

Microsoft's cloud services are connected together via a consistent application navigation approach. Users can quickly switch between the Office 365 suite of services (such as Outlook and OneDrive for Business) in a consistent manner. Microsoft is also creating 'in context' integration between the services for an even more seamless experience. For example – the ability to have contextual Yammer conversations when authoring a Word document or browsing and attaching links to OneDrive files from within the Outlook interface.

Microsoft is investing heavily in the entire digital workplace experience. For example, the release of the iOS versions of the Office applications (Word, PowerPoint, Excel, and OneNote) in concert with OneDrive for Business has transformed the ease with which users can switch between operating systems, devices, and environments.

3. Common concerns

While there are many benefits, there are also number of common concerns and potential showstoppers when exploring the use of Office 365. These include:

3.1 Availability and outages

Microsoft provides a commitment to delivering at least 99.9% uptime for Office 365. According to the Microsoft Office 365 Trust Center the uptime for 2014 was:

Q1	Q2	Q3	Q4
99.99%	99.95%	99.98%	99.99%

In 2014 many organizations experienced outages of Office 365 services during business hours. During an outage communication from Microsoft can be lacking, and ultimately there is nothing you can do during an outage (other than vent your displeasure on Twitter).

It is important to note that the uptime numbers above refer to the solution's overall availability and do not include downtime you may experi-

ence due to service degradations. Service degradations we have experienced in the last year include search crawling issues, the managed metadata service being unavailable, and videos not being delivered properly. In our experience there can be a number of service degradations (visible on the Office 365 service health dashboard) throughout the year.

3.2 Legal and regulatory issues

The legal and regulatory landscape around data can be complex. Adding hosting and cloud computing to the mix, as well as the required contract negotiations introduces another layer of complexity and can be a concern for many organizations.

Things you will want to consider when exploring a cloud solution include:

- Who owns the data
- Who is liable in the case of data loss
- The laws of different jurisdictions with respect to access to data
- How server seizure is handled and the implications for all parties involved
- How the termination of a contract is handled and what happens with the data
- The process to migrate to a different provider
- The data center security policies and compliance monitoring systems

3.3 Support escalation

Navigating the basic Microsoft support organization requires patience, especially for highly skilled IT teams who are familiar with SharePoint. When initiating a support request you must first talk to a support engineer, who may not have advanced knowledge of SharePoint. These engineers often assist callers with basic end-user features and you may need to escalate your support request a number of times.

In order to have an issue escalated we recommend asking the support engineer for a Business Impact Statement. These are used when there is a critical impact to your business and is the fastest method to have an issue escalated.

Once you talk to a senior-level engineer we have found the Office 365 support to be of high quality. In addition, the engineers will often share their contact details and have you communicate with them directly, so they can build familiarity with your specific solution.

Microsoft also provides higher-tiers of the support for Office 365.

3.4 Perceived data privacy concerns

As Office 365 is a multi-tenant service your data is present on some of the same infrastructure as other Microsoft customers. As such, there is a reduction in the ability to provide detailed reporting or security auditing logs. However, the product has been architected from a security and privacy perspective and has been ISO 27018 certified, a new standard for cloud privacy. Office 365 also complies with HITRUST (The Health Information Trust Alliance).

3.5 Authentication for extranet users

Whether or not Office 365 meets your needs from an external collaboration perspective depends on how stringent your authentication requirements are. The default Office 365 extranet scenario requires external users (such as customers or partners) to sign-in to SharePoint Online using a Microsoft Account or Office 365 User ID. External users may find creating a Microsoft Account bothersome and may not have an Office 365 User ID. In addition, the user management tools for external users are not yet as robust as many organizations require.

There are third-party solutions that enable the use of SharePoint Online in an extranet scenario (with traditional user accounts and advanced management capabilities), but these solutions require each external user to be licensed.

3.6 Identity management complexity

Office 365 has three primary identity management and user authentication options: having user accounts managed entirely in Office 365, using the Azure Active Directory Sync (Dir Sync) Tool, and using ADFS (with Dir Sync).

Each option has tradeoffs:

- Having user accounts managed entirely in Office 365 is the least complicated to set up, but is unattractive for most organizations, as your end-users must have a separate username and password for Office 365.

- Using the Azure Active Directory Sync Tool (without ADFS) reduces the on-premise infrastructure, as you only need a low-powered machine running the tool. Only one Dir Sync server can be running on a network, which creates a passive single point of failure. This option does not provide a single sign-on experience and passwords are stored (in a hashed form) within the Microsoft Cloud.

- SharePoint Online (when configured to leverage ADFS) requires infrastructure to be deployed within your corporate network. ADFS also requires the use of the Dir Sync tool. Microsoft supports these services being installed on the same servers, however this is not a best practice. We believe ADFS provides the best end-user experience for many organizations.

There are also third-party providers that provide identity services that leverage Office 365's SAML 2.0 support.

3.7 Lack of single sign-on

Using ADFS and Dir Sync for single sign-on will still present the user with a screen to enter their email address and password. Users must enter their email address and press the 'enter' or 'tab' key.

The user's email address is prefilled when they return to the sign-in screen and their authentication details are saved in a cookie. As such, they will not return to the sign-in screen until a timeout period is exceeded.

3.8 Control over backups

Backup and restore capabilities for SharePoint Online are limited to the site collection level and occur every 12 hours. The platform also provides out-of-the-box document versioning and recycle bin capabilities. In order to conduct a restore the Office 365 support team needs to be contacted.

There is a vendor ecosystem starting to mature around Office 365, including solutions that extend and enhance the backup and restore options for Office 365.

3.9 Troubleshooting and debugging

Troubleshooting options in Office 365 are limited and may require engaging the Office 365 support team**.** Even when the support team is provided with a specific error code (also known as a CorrelationID) they often cannot provide additional insight.

Debugging issues when developing customizations for Office 365 may require an on-premise development environment, as you don't have access to the same rich diagnostic tools and log files when testing your customizations in Office 365 that you would on-premise.

4. The pros and cons

Below we have provided a selection of detailed pros and cons of both SharePoint Online and SharePoint 2013.

4.1 Availability, backup and restore, and disaster recovery

Service level agreements (SLAs) should be defined for SharePoint environments and be periodically revisited and updated to align with how critical your SharePoint installation and the applications built upon it are.

The required backup granularity should be determined and implemented to enable you to restore data in the required timeframe. Periodic backup testing is recommended to confirm recoverability and to update disaster recovery and business continuity processes.

Two metrics should be defined for business continuity:

- **Recovery point objective (RPO):** The acceptable period of data loss at the conclusion of the data recovery process.
- **Recovery time objective (RTO):** The acceptable amount of time the service can be down before being brought back online.

Redundancy should be built within an on-premise farm and the implemented topology will require periodic validation to ensure it meets your business continuity requirements and plan.

On-premise implementation

Pros

- Ability to implement a large number of third-party backup tools to enable different granularity levels of data restoration.
- Full control to define backup types and backup schedules, schedule restoration activities, and backup validation.
- Full control to change tools and adjust a backup's retention policies based on the type of content and legal requirements.

Cons

- An environment for backup testing will be required. This environment should be configured similarly to the production environment and enough storage must be available to enable a full restore.
- It is necessary to have available IT resources familiar with the solution to complete the backup and restoration tasks and update the procedures.

SharePoint Online

Pros

- Microsoft provides the following SLAs for SharePoint Online implementations: an RPO of 45 minutes and an RTO of two hours.

Cons

- Backup and restoration capabilities without the use of a third-party product are limited to the site collection level (every 12 hours) and the out-of-the-box versioning and recycle bin features.
- Microsoft support must be contacted to execute a restore.

Note: you can implement third-party backup tools on-premise and transfer interim backup data from SharePoint Online, although bandwidth and data transfer volume would be a concern for larger sites.

4.2 Deployments

Defining a deployment process, standardizing the tools used, understanding the impact and changes expected as a result of the deployment, and having access to proper troubleshooting tools to determine and fix issues are all key factors in having a deployment process based on best practices.

On-premise implementation

Pros

- Solutions can be packaged as farm solutions or sandboxed solutions, scripts can be created to automate the deployment, and full control over the SharePoint infrastructure enables easy and rapid troubleshooting.

SharePoint Online

Cons

- Deployment time is often longer in SharePoint Online (compared to an on-premise deployment) as everything must occur remotely, and there is often much greater latency (especially with the transfer of content).
- Troubleshooting is limited as a result of limited access to the SharePoint Online infrastructure, and occasionally you will need to engage Microsoft support.

4.3 Look and feel

On-premise implementation

Pros

- All branding artifacts such as custom CSS and JavaScript files can be deployed farm-wide. It is easier to apply branding to the site across the farm.

SharePoint Online

Pros

- Custom CSS files are fully supported.

Cons

- All branding artifacts such as custom CSS files must be uploaded to every site collection in order to provide unified branding across all site collections.
- Server-side logic is not allowed in SharePoint Online. However, most branding can be completed via CSS and JavaScript.
- Applying custom branding on personal sites is challenging as it requires building custom apps.
- The regular addition of new features or changes to existing features may inadvertently impact branding customizations.

4.4 Navigation

Office 365 and the on-premise version of SharePoint provide a different experience when customizing the employee portal's navigation experience.

On-premise implementation

Pros

- In some cases when the portal's information architecture is complex and/or deep, the out-of-the-box navigation experience may not be ideal. Farm solutions can support custom navigation components to provide an optimal navigation experience.

Cons

- If custom server-based navigation is implemented, it will be challenging to migrate the solution to SharePoint Online in the future (and may present upgrade challenges).

SharePoint Online

Pros

- The out-of-the-box navigation experience is adequate for many different portal types.

Cons

- Since the navigation components are usually implemented as server-side components, it much harder to introduce sophisticated navigation in SharePoint Online.
- Client-side navigation solutions may present a rendering delay, which may slow performance and thus negatively impact the user experience of the site.

4.5 Search

Search is an integral part of an employee portal. In addition to being directly accessed by end-users, many of the portals Habanero creates use the Content Search Web Part to display lists of content (e.g., showing the latest news and/or events on the homepage of the portal).

On-premise implementation

Pros

- You have complete control over search crawling and can define highly customized crawl schedules.
- You have full access to the search crawl logs to diagnose issues.

SharePoint Online

Cons

- In SharePoint Online there is no control over the search crawl schedules (you can't start your own crawls) and there is no indication of when full and incremental crawls occur.
- There is a somewhat challenging way to view the search crawl logs to see what was crawled, but if something isn't crawled properly, there is no indication of why.
- We have seen an issue in some tenants that are crawling pages with friendly URLs. If the connection between the crawl service and the managed metadata service (which is where friendly URLs are stored) fails, the crawl will fail silently and the page will never be crawled again.
- The CSOM provides no way to configure any search properties. This means crawled and managed properties have to be maintained manually. This also applies to result sources or any other search application-level configuration.

- Deleting a site or a site collection may corrupt the search index. The deleted content will never be removed from the index, resulting in search results being returned for items that no longer exist. Microsoft will remove the index entries manually if you provide a list, but this is likely not practical for most organizations.

4.6 Application development

Many organizations use a structured release management process to enhance their employee portal. Each release is planned, designed, built, tested, and approved for deployment to production. A release can include enhancements, new features, and bug fixes.

Best practices would suggest that the development of each release should be completed and tested on a system with an identical configuration and patch level.

On-premise implementation

Pros

- Full control over SharePoint upgrades and the rollout of new functionality, which provides time for proper change management and communication activities.
- Patches, service packs, and upgrades can be rolled out and thoroughly tested in a non-production environment. Typically, a development environment is upgraded, followed by a quality assurance environment, and finally, the production environment is upgraded.
- Code releases can be scheduled during low user impact periods and respect organizational blackout periods.

SharePoint Online

Pros

- New functionality will be rolled out automatically as part of scheduled releases and new features are made available to tenants automatically.
- All software upgrades and patches are completed by Microsoft, reducing the burden of keeping your solution up to date.

Cons

- Software upgrades and patches will be rolled out on a regular basis (based on a schedule defined by Microsoft) with no ability to schedule them ahead of time and allow for proper testing.
- Because all patches are rolled out by technicians unfamiliar with the customizations deployed, some customizations may be impacted by upgrades or patches. As a result, downtime or a non-optimal user experience may be encountered.

5. Forms and automated workflow in Office 365

The inclusion of forms and automated workflow within your employee portal to create business apps can make your portal more useful and relevant. SharePoint 2013 and SharePoint Online have limited workflow capabilities. Depending on the complexity of the processes you are trying to automate we often recommend leveraging a third-party tool, or creating a custom solution.

Nintex and K2 are two of the leading workflow technologies and both have an on-premise application and Office 365 apps. The on-premise version of Nintex runs on your existing SharePoint infrastructure and leverages the SharePoint workflow engine. K2 requires its own infrastructure and integrates with SharePoint.

Both products have unique strengths and weaknesses, but both have something in common — their Office 365 apps are lacking. Currently the apps have nowhere near the feature parity with their on-premise siblings and creating workflows and forms typically takes longer than building an on-premise equivalent, due to performance issues. Nintex and K2 are both committed to improving their Office 365 apps and we expect them to dramatically improve in the upcoming months and years.

When hosting your employee portal in Office 365 there are a couple of common options for workflow and forms:

- **Cloud:** Office 365 and a Nintex/K2 Office 365 app
- **Hybrid:** Office 365 and K2 on-premise or an on-premise SharePoint Server installation with Nintex installed (this scenario may also leverage Azure to host the workflow solution)

As of this writing, there are no workflow and forms products in the Office Store (Apps for SharePoint) that can rival these on-premise options. As such, unless your needs are basic and there is a willingness to wait for the products to mature we would recommend considering a hybrid approach (i.e. leveraging Office 365 with an on-premise workflow and forms product).

5.1 Considerations

When examining your approach to forms and automated workflow there are a number of considerations, which may help guide your approach (cloud vs. hybrid):

Business importance and availability

How important are the business processes that are going to be automated? Are they critical to the function of the business? If the answer is

yes, consider an on-premise or hybrid approach. The online apps are updated frequently, which can be a challenge when you rely on your forms and automated workflows being highly available.

User experience may suffer

Will the workflow and forms product support a great experience? Can an end-user move seamlessly from one screen to another and yet still have the information they need at any given point in the process? Is the workflow easy-to-understand and use with little training? Some workflows may require a design that cannot be achieved in a usable way using the Office 365 apps.

Integration needs

How important is it for the workflow and forms product to support integration with other systems? On-premise workflow products often provide the capability to connect to Web services or SQL Server databases. In some cases adapters are provided to connect to SAP, Dynamics CRM, or other line-of-business systems. You may also need to consider integration with the data collected by the workflow engine itself.

Reporting requirements

Workflow technologies usually provide information about individual workflows (e.g., when the workflow started, completed, how long an approval took, etc.). We find this information of limited use and recommend creating a central reporting repository and populating it as part of all workflow processes. This can help future migrations as the metrics provided by the tool on the running workflows becomes less important.

Auditing and surfacing historical information

One advantage to leveraging a workflow technology is the ability to track and retain historical information of what occurred at any given time in the process. Typically workflow technologies have this capability built in. The challenge is if someone wishes to move away from the product, there is no easy way of surfacing the historical information without the product. Our recommendation is to track auditable information outside of the workflow product itself and leverage the SharePoint versioning functionality. There are limited options for this in Office 365.

Support differences

The workflow products are extremely sophisticated and rely on a completely stable infrastructure. If something happens to the infrastructure, a workflow will sometimes fail. It is important to have a mitigation strategy to determine what must happen if this scenario occurs. It is also important to have the ability to troubleshoot and correct an issue if (when) it arises.

With an on-premise solution you have the ability to be more proactive in the event of an error and the logs are easily available to troubleshoot the issue. On Office 365 with a workflow app you are reliant on the alert mechanisms provided. When an issue does occur there is a reliance on

both Office 365 support and the workflow vendor to determine the issue and provide a resolution.

6. Customizing SharePoint

Over the years there has been much debate in the SharePoint community around the topic of customization. Some individuals have taken a no-customization stance, whereas others have stated that customizations are required to deliver the greatest value to an organization and its end-users.

At Habanero we have been building solutions on SharePoint since the first version and believe that customizations can enable organizations to provide additional capabilities and deliver a better end-user experience — essential ingredients in end-user satisfaction and portal adoption.

In earlier versions of SharePoint the end-user experience was poor and frankly, customizations were necessary to provide an acceptable experience to end-users. However, customizations caused headaches during SharePoint upgrades. Organizations that had heavily customized SharePoint implementations would often need to design a new employee portal or intranet for each version of SharePoint and migrate content into the new portal. This was a time-consuming and expensive endeavor.

SharePoint's user experience has improved dramatically over the years and as such, Microsoft has stated that you should "Use SharePoint as an out-of-box application whenever possible"[1]. We still believe that customizations are an important technique that can be used to get a lot more value out of your SharePoint investment and provide a better end-user experience, but recommend organizations adopt our Responsible Development techniques to reduce the risks around customizations.

6.1 Responsible Development

There is no one right way... only a Sith deals in absolutes. (Star Wars)

At Habanero we believe in the value of customizing SharePoint, but understand that customizing the platform must be done in a responsible way to enable organizations to migrate their portals to Office 365 (when they are ready) and ensure that ongoing feature upgrades are low-risk (or as low risk as possible).

There are a number of common customization and/or development approaches you can use to customize SharePoint including:

- The SharePoint app model(s)
- Direct-embedded client-side REST/CSOM API

[1] The New SharePoint, SharePoint Team <http://blogs.office.com/2012/07/17/the-new-sharepoint/>

- CSOM API via PowerShell or C#
- Office365 API

Note: farm solutions are supported within the on-premise version of SharePoint but are not supported by SharePoint Online. Additionally, Microsoft has recommended that developers move away from feature frameworks and no longer leverage sandboxed solutions. As such, we do not reference either technique below.

6.1.1 The golden rules

No matter what customization technique is selected we have a number of golden rules when building solutions on top of Office 365.

Providing a great user experience is paramount

No single factor (other than the fact that the system actually works) is more paramount to adoption than user experience. Your portal's user experience should help your end-users achieve their goals, reinforce your organization's brand, and where appropriate add delight. We believe employee portals shouldn't be tolerated, but rather be loved.

Responsive design is a must

With the proliferation of mobile devices in the enterprise responsive design is a must. A responsive portal enables employees to access the information they need from any device, anywhere.

Don't mess with the Office 365 suite bar!

The suite bar is located at the top of the screen. Unlike the on-premise version of SharePoint (which only uses the suite bar for SharePoint), it is shared across each of the Office 365 services. Microsoft has updated the suite bar in Office 365 a number of times. If you customize the suite bar your solution will likely break when an update is released.

Site structure and navigation impact performance

The structure of your SharePoint Online site has a major impact on page loading performance. In our experience, the time it takes to process every additional visible sub-site in SharePoint Online is somewhere between 30-300 milliseconds. As such you should be able to figure out the maximum number of visible sub sites you can have before the page loading time for your site exceeds the desired threshold.[2]

Avoid custom Web Templates

Without feature stapling, your templates will miss out on new features that are rolled out to Office 365.

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[2] Managed navigation in SharePoint Online, Larry Lau <http://www.habaneroconsulting.com/insights/managed-navigation-sharepoint-online>

Build all of your scripts with CSOM

Build your development and deployment scripts using CSOM so they can be used on-premise and in Office 365. CSOM is getting better, but there are still a number of gaps — updating web properties can fill some in, others can be fulfilled by the deprecated ASMX services for the time being.

Make your CSOM scripts re-runnable

The ExecuteQuery method on the ClientContext object clears all of the actions you've batched, regardless of whether or not they are successful. When you have deployments that can take upwards of an hour, it is not fun having them fail part way and having to restart your process!

Use the development model that is the most suitable for the task at hand

As we will illustrate below there are a number of different development models you can use to customize SharePoint. Select the one that is the most appropriate for the specific task at hand.

6.1.2 Which development model should I use?

Below we have provided some guidance on when we believe each model is the most appropriate. Note that this section is likely more relevant for a developer audience:

SharePoint apps

SharePoint apps can be hosted in SharePoint Online (both App Parts and immersive apps) or be provider hosted (on-premise, Microsoft Azure, or in another environment). SharePoint Online apps only allow client-side script and are fairly limited, whereas provider-hosted applications allow for server-side hosting.

You should use the provider-hosted model when the app contains substantial business logic (immersive or full-page) or when integrating with internal systems that:

- Access a secured file system using a specific Windows account
- Make a Web service call to a line-of-business system such as SAP using a Windows Service Account
- Connect to SQL Server
- Query Active Directory to discovery user membership of a certain group or distribution list

You should note that there are some significant user experience issues with App Parts:

- Animation: you must kick off a postMessage for every pixel move

- Style inheritance: you can reference core CSS but none of the custom CSS from the parent, which makes sense for SharePoint Store Apps but not when you're building a custom solution for your portal

- Responsive behavior: you often want different behavior at certain breakpoints of the parent page; even if you copy the CSS into your app it evaluates the size inside of the frame

Direct-embedded client-side REST/CSOM API

Direct-embedded client-side scripts run directly on the page being viewed (not in an iFrame). This is often recommended over SharePoint hosted apps as you don't have the restrictions that come from running your app within the iFrame and deployment is straightforward.

You should use this model when:

- You are dealing with Web and document-centric content including publishing content and document libraries.

- A highly responsive design experience is required.

- You are using many out-of-the-box SharePoint Web Parts (e.g. the Content by Search Web Part).

- You have content rollups with display templates.

- You are customizing using JSLink.

CSOM API via PowerShell or C#

Your solution will run outside of Office 365 and you will use the API to get data in and out of Office 365.

You should use this model when:

- Provisioning initial site structures

- Provisioning page layouts, content types, fields, and lists

- Reading and/or writing SharePoint data in scheduled batch process using a Service Account. (e.g. when transferring employee information from SAP to SharePoint Online)

- Migrating content

- Handling long running processes

Office 365 API

The Office 365 API enables you to work with SharePoint Online data in almost any application or service.

You should use this model when:

- You wish to integrate with Exchange Online and Lync Online.
- You would like to develop native mobile apps that leverage SharePoint content.
- The SharePoint app model is not suitable.
- You don't want to launch your item from SharePoint.

We believe the Office 365 API has great potential and are very excited to see how the API matures.

7. What next?

If you are interested in moving your employee portal, intranet, and/or collaboration sites to Office 365 we recommend that you first conduct a SharePoint Online suitability analysis.

During the analysis you should:

- Conduct a detailed review of your current portal or your future portal design. Can the features be implemented within SharePoint Online? Are modifications required? Do certain features require a hybrid scenario?
- How will each feature be implemented (ensure that you are leveraging our Responsible Development techniques)? Can the portal's brand be implemented as designed or does it need to be modified?
- How will users be authenticated? Do you have ADFS installed and configured?
- What integration is required with line-of-business or other external systems? How will this integration occur?
- What mobile device support is required? Does your development team have the ability to create a responsive design in SharePoint Online?
- What kind of data currently resides on your existing solution? Are there constraints to certain data residing in a multi-tenant cloud environment?
- Is there a requirement for clients and/or partners to access the portal? How will you manage these users? Is a third-party authentication tool and/or service required?
- Investigate your current usage of third-party tools and products. Are they still required in Office 365? If so, do they provide Office 365 support and is that support adequate? Do certain features require a hybrid

scenario? Pay special attention to forms, workflow, and enterprise content management scenarios.

- Review your required SLAs. Is some amount of downtime an acceptable trade-off for reduced cost and infrastructure complexity? Do your stakeholders understand this trade-off? Do you have retention and/or other specific backup / restore requirements?

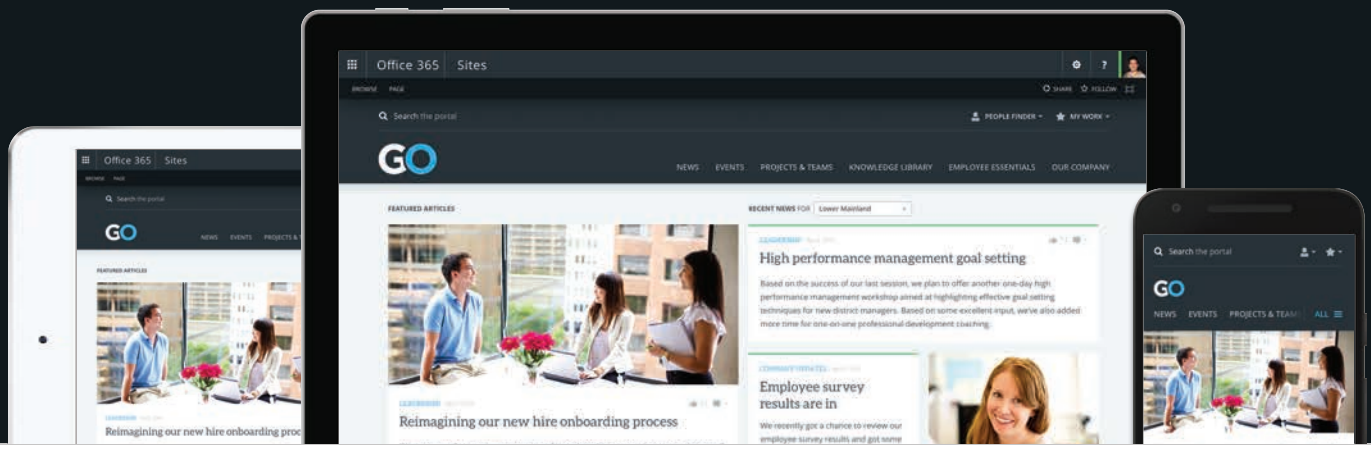
- Create a portal roadmap for the next two to three years. Will Office 365 support the requirements outlined in the roadmap? If not, how will you support these requirements?

We're extremely excited about the potential of Office 365 and believe that for some organizations Office 365 and SharePoint Online provide a compelling business case to move to the Microsoft Cloud today. As with any employee portal project we recommend you prioritize the end-user experience and focus on adoption. Great information architecture, user experience design, and training and change management are as important as ever in Office 365 and are an essential ingredient in a successful project.

GO

Intranet Accelerator

The world's best SharePoint intranet experiences start with Go.



Do more. Spend less. Go.

Build a better workplace

Rich communication and collaboration features help your entire organization stay connected and engaged.

Don't get trapped in a box

Unlike a pre-built intranet product, you aren't limited to basic features and stuck with an inflexable product.

Be supported

Each Go intranet includes Habanero's industry-leading intranet consulting services to ensure success.

Adopt Office 365 on your terms

Move to the cloud when you are ready. Go supports SharePoint Online, SharePoint 2016, and hybrid models.

Leverage the building blocks of a successful intranet

Go offers a set of modular components we believe every great intranet should have.

Empower your IT team to get more out of Office 365

Go includes a simplified development framework and automated deployment tools that make it significantly easier for in-house teams to create solutions in Office 365.

Make it your own with a flexible design system

Go includes a design foundation that can be customized and extended to reflect your unique brand identity.

Learn more and request a free 30-day trial at ***connectwithgo.com***