



**Workplace Transformation
Platform - A Strategy to
Succeed Migration (Lotus
Notes to Office 365)**

Email, collaboration and business process management tools have been integral to the modern IT estate and it was not unusual to see large estates of on-premises email and related servers making up a good proportion of organizations' server portfolio. However, over the last 3-5 years, this landscape has changed. Many organizations are now looking to or have already leveraged cloud-based SaaS solutions, such as Office 365 to replace their legacy on-premises solutions. It is time for a new culture of work. One that is marked by a shift to more open, collaborative environments and the ability for employees to work anywhere and anytime they choose.

Nurturing this new culture of work inside your organization requires a combination of cultural change, the right technology, and thoughtful workplace design. You will need to make available purpose-built tools to unlock creativity and innovation in your workforce, enable and accelerate teamwork, democratize data and analytics for constant improvement and address robust security and compliance requirements. Most importantly, it will require your leadership and commitment to act as a role model for a new way of working.

Traditionally, on-premises email services were provided by two primary solutions, Microsoft Exchange and Lotus Notes/Domino.

For organizations considering migrating to O365, the journey from Microsoft Exchange and related productivity tools, such as SharePoint are fairly well understood. However, the opposite is usually the case with Lotus Notes to O365 migrations.

As Email and the line of business applications typically deployed via Lotus Notes are integral to business communications and operations, and ensuring that the process runs smoothly, adheres to the deadlines, and has minimal end-user disruption is important to ensuring the smooth running of the organization. In that spirit, we offer this white paper to help you get the most from Office 365 and foster a new culture of work inside your own organization.

As such, our white paper on Lotus Notes/Domino migration to Office 365 aims to:

- Highlight important aspects to consider.
- Identify common issues which can arise during such migration.
- Contribute to the success of your migration project. We'll start at the beginning, before the decision to migrate has even been made.

“Cloud-computing adoption has been increasing rapidly, with cloud-specific spending expected to grow at more than six times the rate of general IT spending through 2020.”

McKinsey Insights

Business problem

For many organizations, email and related business application migration is the biggest obstacle to face before they're able to realize the full productivity and cost benefits of Office 365. Deciding to migrate the email ecosystem to a cloud-based service can bring up a lot of issues and questions for companies of all sizes, for the following reasons

- Migration procedures must be legally defensible. You've got to be able to immediately lay your hands on accurate, uncorrupted data at any point.
- The information must remain secure, and normal business operations should be able to carry on uninterrupted.
- There are technical challenges in converting file types, de-duplication, ensuring archive integrity, supporting e-forensics, and physically moving the data. It is crucial to plan around any bandwidth restrictions; you'll need to consider extended time-frames to physically transfer large archives.

Other aspects to consider include:

- Email is a corporate record, so before beginning any migration, you'll need to ensure fundamental audit trails can be preserved together with clear chain-of-custody, and that specific roles and policies can be defined to control administrator access.
- Except for the most basic projects, some level of automation will be essential. Automation helps manage resources, speed up the process, reduce errors, deal with exceptions and ensure everything remains defensible.
- The good news is that most migrations are performed from live mail, archive, and offline file and shared folder structures with well-known characteristics, so there shouldn't be any nasty surprises. With appropriate tools, sound project planning, and support from experts, there is no reason why your migration can't be a complete success.

Challenges

With some migration solutions, software may run in the cloud and you won't need any special hardware. However, the reliability of your wide area network (WAN) is even more important, as again you don't want to choke normal business data traffic.

- **Backup windows:** Backups are often run outside normal working hours, i.e. at the same time you'll want to be transferring data during migration. These need to be scheduled so that neither process compromises the performance of the other.
- **Permissions to access data:** Permissions need to be set on all source systems before data gathering commences. Where local files, such as PSTs, need to be accessed on individual machines, it's important to communicate with staff and explain the reasons for access.

- **Security issues:** Misconfigured proxies and firewalls can be blockers to migration, as can overzealous security procedures that mean extensive customization to the migration tools being used.
- **Specialist resources:** If some of the necessary skills are not available in-house, it's often necessary to employ external consultants to help with project governance or delivery activities. Appropriate planning and tool selection can often reduce the cost associated with hiring specialists.
- **Bandwidth Impact/Constraints:** Available Bandwidth has an impact both to migration velocity i.e. how quickly content can be migrated, as well as a wider impact to the available bandwidth for other business applications. There are also additional considerations which organizations need to be aware of, including that Microsoft can throttle transfer speeds from the service in certain scenarios, such as:
 - User throttling – affecting migration from non-Microsoft platforms such as IBM Lotus Domino and Novell GroupWise
 - Resource-based throttling – to manage incidents affecting critical services
 - DDoS – In the past Microsoft has interpreted large-scale migrations as an attempt to perform a DDoS attack and have responded by either throttling or suspending the underlying service.
- **Drive shipping:** The process of copying data files to a BitLocker-encrypted hard drive and then physically shipping the drive to Microsoft is a challenge to perform bulk transfer to cloud.

Beyond technology

Live email

Theoretically, it's easy to migrate live email as Microsoft provides basic tools that allow you to transfer data into your organizations' Office 365/Exchange Online environment, although large cutover migrations can be challenging. One of the challenges is that you need to consider more than your live email boxes. In many organizations, email is often the default 'database of record'. It's the only application that a vast majority of employees actively use in order to do their job. Not only does it provide an audit trail of correspondence, but it's also used by many users as a quick way of accessing other documents or content. The organization will need to find a way of integrating the live mailbox migration with other elements of the email ecosystem from the outset if you are to avoid difficulties further down the line.

Email archives

Over time, archiving of older emails in purpose-built electronic systems like Veritas Enterprise Vault often becomes essential to retain performance of the main system or for regulatory compliance. During a migration, it's easy to break the interactive shortcuts (or 'stubs') that users rely on if just the live mail system is moved. Many organisations are now migrating archives into Office 365 – which creates the risk of incredible throughput bottlenecks and business interruption – while others must remap their live mail and archive systems completely if a hybrid Office 365 with on-premises archive is the target solution. Both scenarios can be achieved painlessly if the right approach is taken from the outset.

Line of business applications

One of the key features of Lotus Notes is the ability to host business applications within the Notes client, providing a single common location for a multitude of business applications, most of which may be considered as business critical. As these applications tended to grow organically and/or to meet specific business requirements (sometimes for specific teams/business units) it is likely that this application portfolio will have grown to include complex, integrated systems. As a result migrating to a service like Office 365 will inevitably involve the identification and migration of this application portfolio.

User adoption

Moving from Lotus Notes to Office 365 is not just a technology change. As users are moved away from their traditional desktop Lotus application to the new Office 365 based platform, users will be presented with a new user experience, Outlook 2019/Pro Plus has a different look and feel and will require both training and usage for the users to fully leverage and adopt the new features available to them.

Successfully managing this change is one of the key components of a migration to Office 365, especially when considering some of the additional components available in Office 365, such as SharePoint Online, Microsoft Teams etc.

Advantages of O365

Compliance: Able to meet regulatory and legal standards for retention and discoverability . Ensure data resides in appropriate location/ geography . Reconcile files with correct users (even if they have left the organisation).

Security: Prevent local 'PST' files being created, lost or stolen. Improve protection against email-based viruses and attacks. Centralize control over live and archive mailboxes.

Performance: Enable VDI and multi-device roll-out, and improve employee mobility. Improve utilization of existing network and system resources. Improve business continuity and disaster recovery capability.

Cost control: Prevent expensive third-party remediation for unsupported products. Improve management of licensing. Reduce internal support cost of email administration and intervention.

Service enhancement: Enable adoption of cloud services that complement Office 365. Improve scalability of email services against business requirement. Consolidate systems following acquisition or merger.

Remediation: Standardize for future portability between email service providers. Mend broken and neglected email archives containing critical records. Fix problems with lost, corrupted, oversize and duplicated files . As you see, there are plenty of reasons for migrating to Office 365. And although not all may apply in your situation – it is likely you'll recognize some familiar issues. Let's move on and begin giving some thought to your compliance framework.

Economic impact

Microsoft Teams (Teams) is a shared workspace that brings many of the collaboration and communication solutions within Office 365 into a focused workspace. It integrates with other solutions from Microsoft, third-party vendors, and in-house development to facilitate faster and smarter working — both within and outside of the organization.

Companies reported significant time savings in collaboration activities for both information and firstline workers by adding Teams to an existing Microsoft 365 implementation. This included time saved on co-authoring and version control, and the time spent seeking out the right information and colleagues. Companies also reported a reduction in emails sent because users could request and share information in the Teams focused workspace using conversation threads. “One big advantage of using Teams is mobility. It is easy to use on smartphones and has improved collaboration for people on the move.”

Microsoft commissioned Forrester to analyze the Total Economic Impact of adopting Office 365 across several organizations. Its findings included:

- Co-authoring saved users 1.5 hours per week. Time was reduced by 14.9% in North America, 16.2% in EMEA, and 17.4% in Asia Pacific.
- Better document and coworker search saved 7.8 minutes per day.
- Improved version control saved 18.9 minutes per day.
- Conversation search saved 20.9 minutes per day.
- The average user received 89 emails per day; Teams reduced this by 17.3%. The number of emails ranged from 83 per day in Asia Pacific to 96 in North America. The percentage reduction was similar in North America and Asia Pacific, but only 16.5% in EMEA. For information workers, Forrester assumes that:
 - Users save 15 minutes per day on co-authoring and version control activities. Half of this benefit is realized in Year 1 as workers get used to distributed real-time coauthoring.

Planning your migration.

Once the analysis, categorization of the estate has been completed, it is time to plan the migration, rationalization and transformation of the identified applications. This white paper will not attempt to provide a one-size-fits-all plan, as this is not possible. However, it will endeavour to provide some pointers and areas for organizations to consider.

What does success look like?

For each application in the programme, an idea of what success looks like should be identified. This can draw on the information identified in the assessment phase, but should be something that can be easily measured, and can include elements such as:

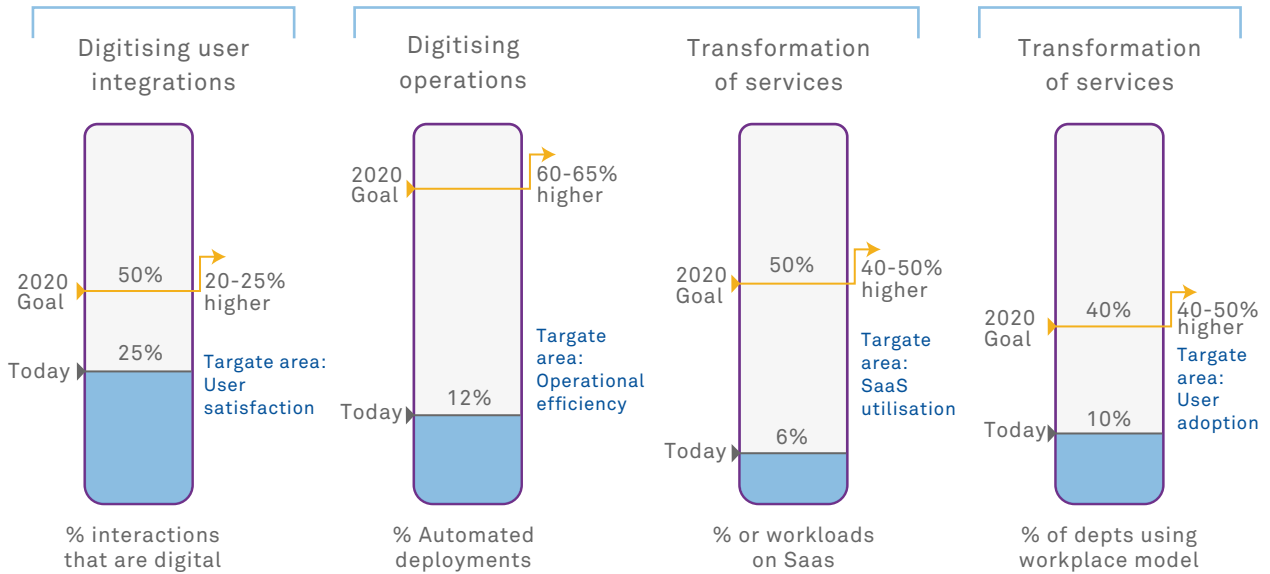
- Solving a specific business problem
- User adoption
- Performance
- Reliability
- Cost reduction
- Global availability

Solving a specific business problem should be a straightforward task. However, some of the other metrics may be more difficult to identify or quantify. Having said that, it is still important to understand what this may look like.

User experience and services

Operations

Workplace



The above should be applied to each application in the programme, as it is entirely likely that the metrics may not be consistent across the estate.

Start small

Especially important for organizations that are in the early stages of their cloud journey, but still important for mature companies. It is also important to note that start small is a relative term, and combines size, with complexity and risk.

For example, a good target for an initial migration to the cloud would be either a development or non-production environment. These environments, typically do not have a large business impact, should not contain personal or business critical data and can be moved with little or no impact to the business.

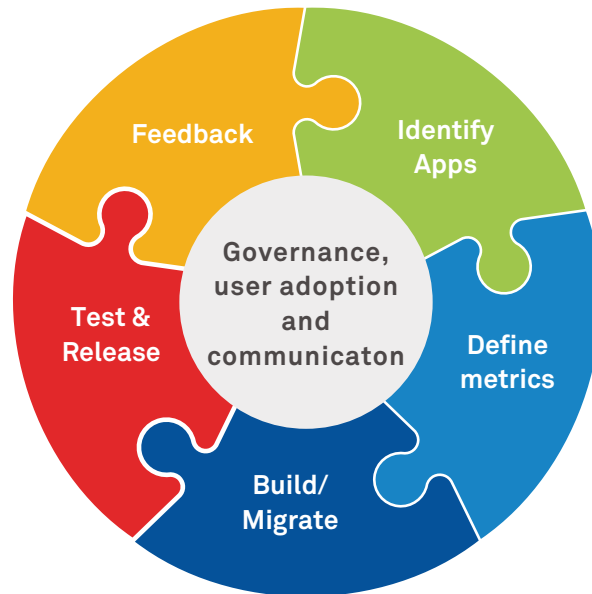
Other potential targets are small, disconnected systems with limited daily use, business data etc.

Focus on quick wins

In conjunction with the above, it is a good idea to focus on applications where the organization can quickly realize one or more benefits.

Using the same non-production environment example, once migrated to the cloud, the environments can be downsized or switched off when not in use, and only scaled up or switched on when a particular activity is required, reducing costs associated with running the services in the cloud and allowing for the decommissioning of the on-premises environments.

For transformation or rationalization type projects, using a minimal viable product (MVP) strategy can allow for subsets of functionality or smaller apps to be transformed and published in a rapid cadence, with each iteration providing quantifiable business value.



Iterate quickly

Having a regular cadence of modernized or rationalized applications provides the appearance of rapid progress and allows for feedback received by the business to be incorporated quickly into the cloud applications.

Publish successes

Ensure that the metrics & KPIs are published so that the business is aware of the progress of the programme. This not only helps with user adoption, but also encourages the feedback and continuous improvement cycle, which is key to providing an engaging experience and driving

Repeat & Scale up

Once there is a catalogue of applications moved to the cloud, the organization can start to scale up or expand the volume and or size of the migration/transformation activities. This can be safely achieved due the experience gained by the relevant teams, but also due to the previous iteration identifying issues early, which can then be factored into any additional activities.

Why Wipro?

Regardless of where your organization is within their cloud journey or how mature the organization is, Wipro is excellently positioned to assist you in that journey leveraging its award-winning in-house solutions **Workplace Transformation Platform® (WTP)** for collaboration.

Wipro's proprietary Workplace Transformation Platform® (WTP)

Our Workplace Transformation Platform is a unique, revolutionary solution designed to accelerate digital adoption in organizations and to deliver improved customer and worker experience. The platform has been developed based on Wipro's experience as a digital transformation partner over several engagements.

WTP® brings transformation engines, processes and toolset for consultants, developers while providing customers with self-service capabilities for enhancing end-to-end services for them.

Benefits of Workplace Transformation Platform

- Improved collaboration across the organization which drives improvements to employee productivity
- Wipro offers up to 20% effort savings & up to 30% productivity improvement through automating the assessment, pre-migration and post-migration validation activities leveraging the following list of Wipro in-house utilities
 - Proven migration processes
 - Highly optimized for large migrations - architecture specifically addresses large volume migrations, leveraging Wipro's vast experience in migrating large amount of content and portals
 - Assurance- In-built tracking, monitoring, metering and dashboard functionality of Workplace Transformation Platform assures a successful migration program
 - Flexibility- WTP® is customizable for customer scenarios having specific requirements on compliance, validations, testing and transition approaches. Following is one such customer testimonial.

Efficient collaboration

I would like to take this opportunity to recognize everyone on the team for their contribution and I appreciate team dedication in making this project successful! The team has especially done well hading complex migration, finding solutions to difficult problems and completing the tasks in a timely manner keeping the same momentum of many months with very high motivation, I know this is attributed to the efficient collaboration in almost every step of the way. Wipro have successfully developed & adopted the WPT tool according to KONE requirements.

Bolukbasi Dil Inci,

Program Manager

Kone – Lotus Notes to SharePoint Migration



WTP provides components designed to support the migration through all the phases of the project from assessment to communications and adoption.

Phase	Workplace Transformation Platform® (WTP) - Utility
Assessment	WTP - Advanced Assessment for Lotus Notes Applications
Pre-Migration	WTP - Prepare Migration Batch
	WTP - Bulk Site Provisioning
Migration	WTP - One Touch Migration
Post-Migration	WTP - Post Migration Validator
	Error Management
Migration Process	WTP - Governance Manager
	WTP - Site bookmark manager
Communication	WTP - Communication Bot

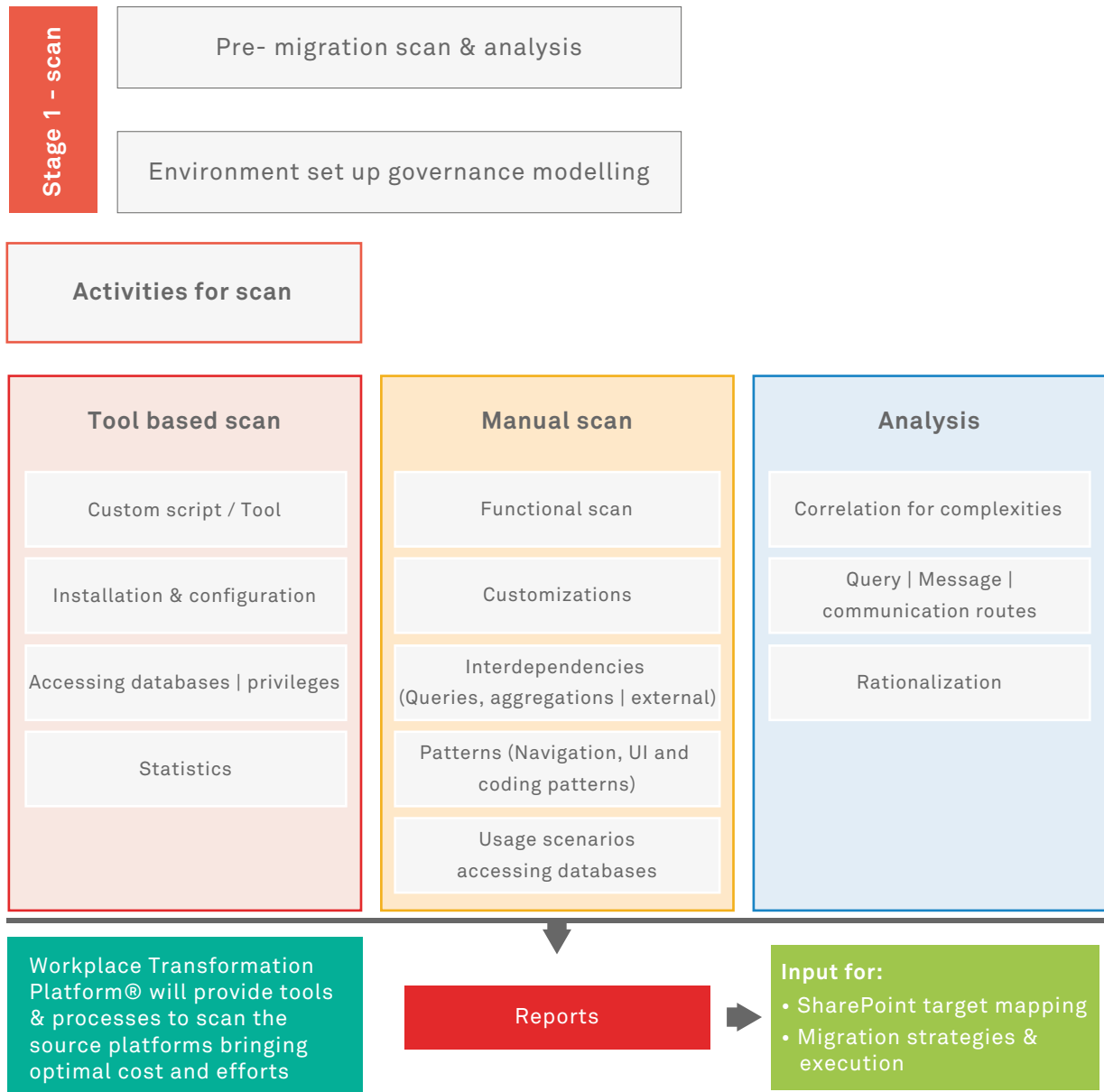
Stage 1: Pre-Migration scan and analysis of lotus notes applications

The pre-migration analysis will collect, categorize and provide understanding of the complexity and the feasibility of migrating Lotus Notes applications to SharePoint online based applications based on a set of pre-defined and relevant parameters.

Activities for scan

This will include both manual and automated activities, functional and technical categorization and analysis and will also include pre-migration assessments to inventory and assess applications for complexity and business need.

The figure below shows the various components of the discovery process, categorization and results sets.



Stage 1 - Scan approach for Lotus Notes

WTP 0365 Suite for lotus notes migration – Utility mapping & details:

WTP offers variety of tools sets, pre-canned templates to address the successful Assessment and pre-migration needs

Phase	WTP utility	Details
Assessment/ analysis	<p>WTP - Advanced assessment for SharePoint On-Premise/Lotus notes and 0365 SharePoint Online</p>  <p>WTP Assessment tool</p>	Assesses the readiness of both the current Lotus Notes applications and databases as well as the target site collections & sites by selecting required site objects to be assessed. A report gets generated after the assessment, which helps to identify the complexity of the site
Pre-Migration	<p>WTP - Prepare Migration Batch WTP - Bulk Site Provisioning</p>	The utility, which will help to provision the site collections in SharePoint online, is also responsible for migrating SharePoint features and regional settings. The utility helps to prepare user migration data as an input to migration for given migration batch

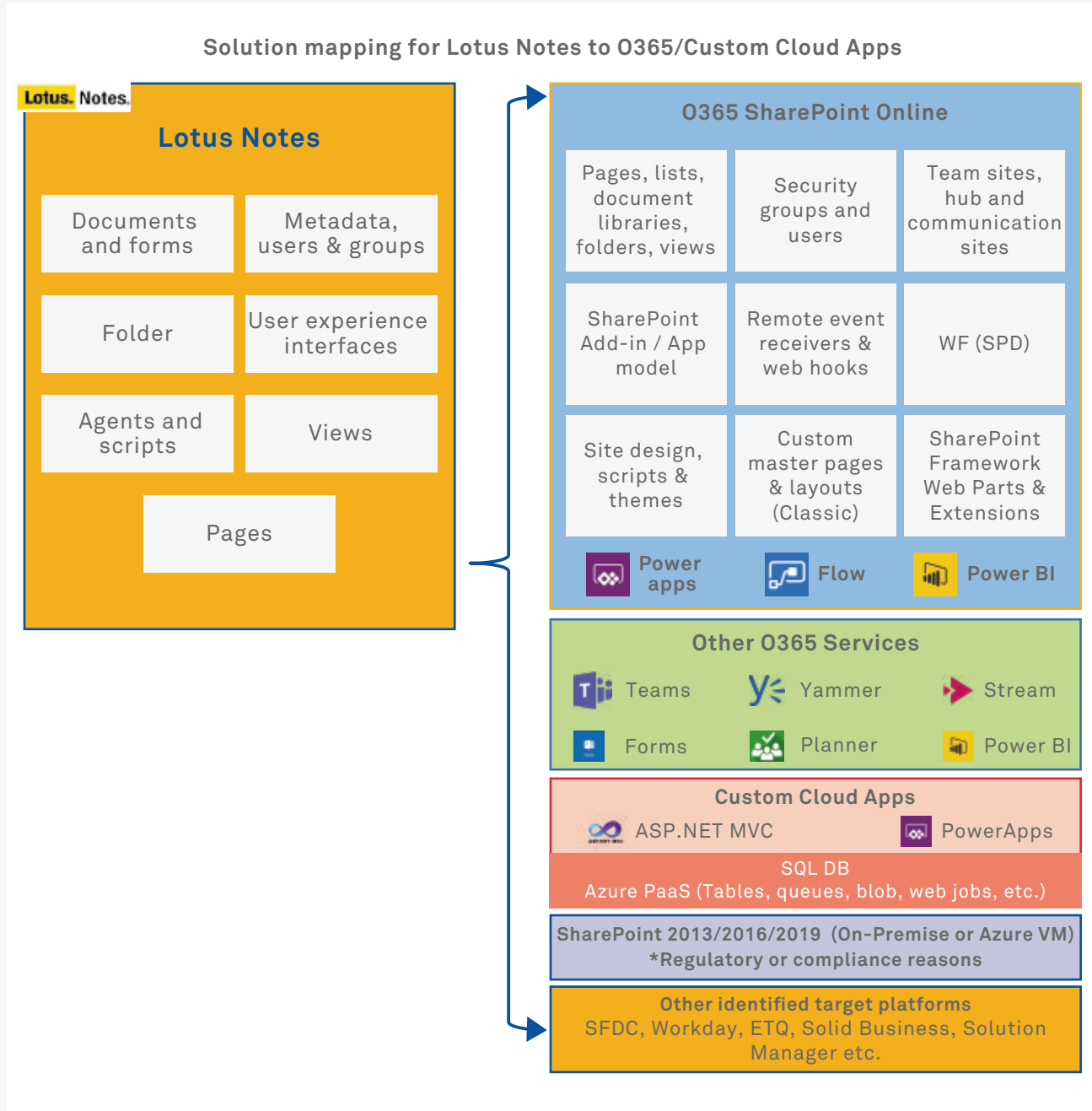
Stage 2: Information architecture validation to accommodate lotus notes taxonomy

The information architecture (AI) validation would address automated migration targets, opening interfaces for the tool/scripts to access and manage content in SharePoint 201x/0365 SharePoint online platform

Typical IA validation tasks will include:

- Common functions consolidated for re-use
- User groups synchronization
- Storage quota and constraints
- Deployment guidelines - SANDBOX
- Libraries, navigations & site hierarchies
- Leveraging out of the box features

Solution Mapping for Lotus Notes to O365/Custom Cloud Apps:



- The driving factors for target fitment are code complexity, design complexity and domain requirements (such as CRM can move to SFDC, Finance, and HR to Workday etc.)
- Code complexity depends upon no. of Lotus Scripts/formulas/JavaScript & design complexity on no. of forms/views/pages/agents/ manual inspection
- O365 has a suite of products to improve productivity like SharePoint, OneDrive, Yammer, PowerApps, Flow, Groups, Teams,

Planner, Exchange Online, etc. The outcome of the Assessment will drive the best target fitment O365 component

- In scenarios where old data needs to be archived/ preserved SharePoint is well placed to be the target application
- For scenarios involving Complex LN DB, they can be redeveloped to ASP.NET MVC with SQL DB, NoSQL etc.as the backend
- Based upon Assessment best target fitment for a specific LOB, COTS platforms like SFDC, Workday, ETQ etc. can be recommended as well

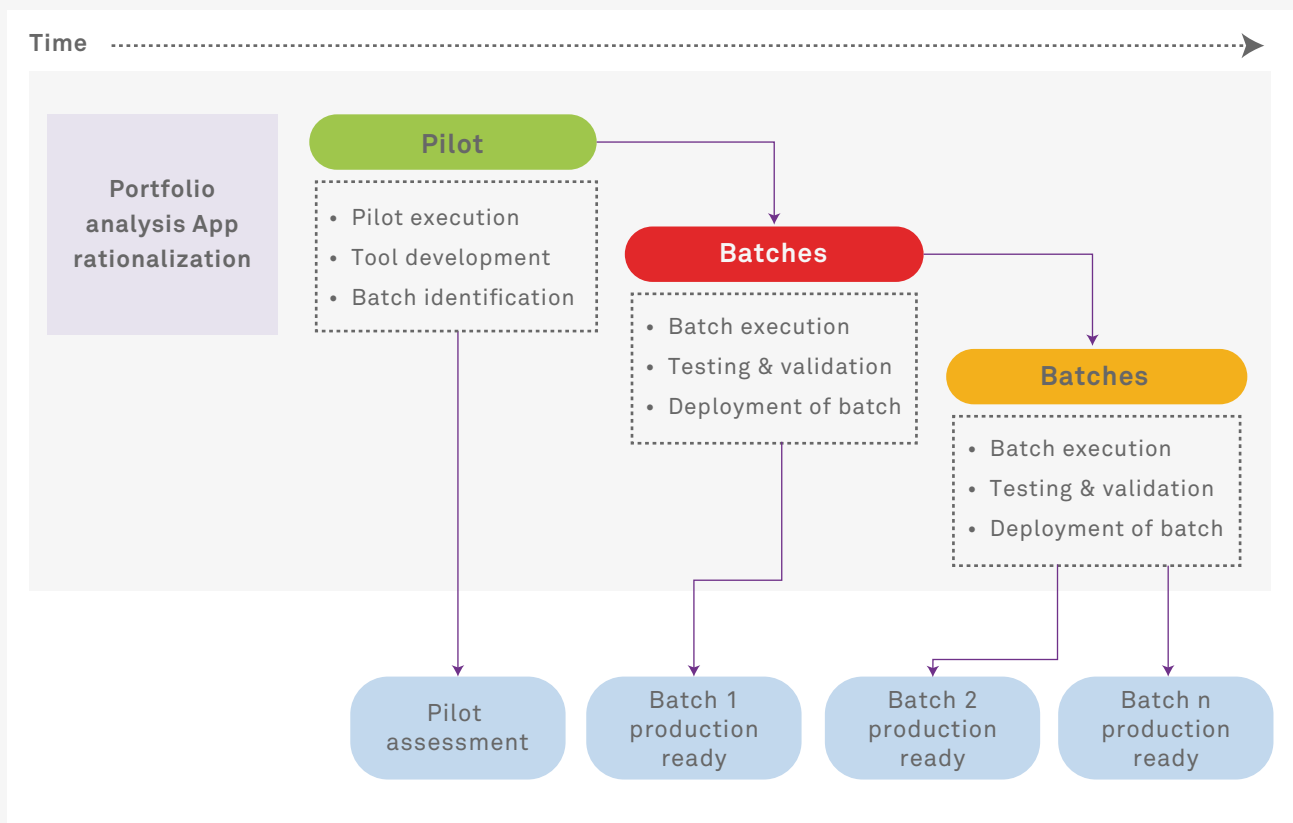
Stage 3 – Pilot and content migration

The pilots and proof of concepts will enable the customer and Wipro to understand the constraints, technical roadblocks, possible risks and applicable mitigation step. This will be followed by **full blown** batch wise migration or factory migration leveraging **Workplace Transformation Platform® (WTP)**

Migration methods - Batch wise

Lotus Notes applications can be segregated into multiple batches. Each batch would have pre-defined timeline and effort associated with them, that results in deployments in specific schedule

- Customer's preferred categorization of Lotus Notes applications can be employed in defining batches
- A typical batch of nearly 50 Lotus Notes applications provides better manageability
- Multiple batches can be executed in parallel, resulting in controlled deployments
- **Advantages:** Synchronous, time-bound delivery
- **Disadvantages:** Inability to accommodate deviations resulted in plan or technical approach



Migration methods - Factory delivery

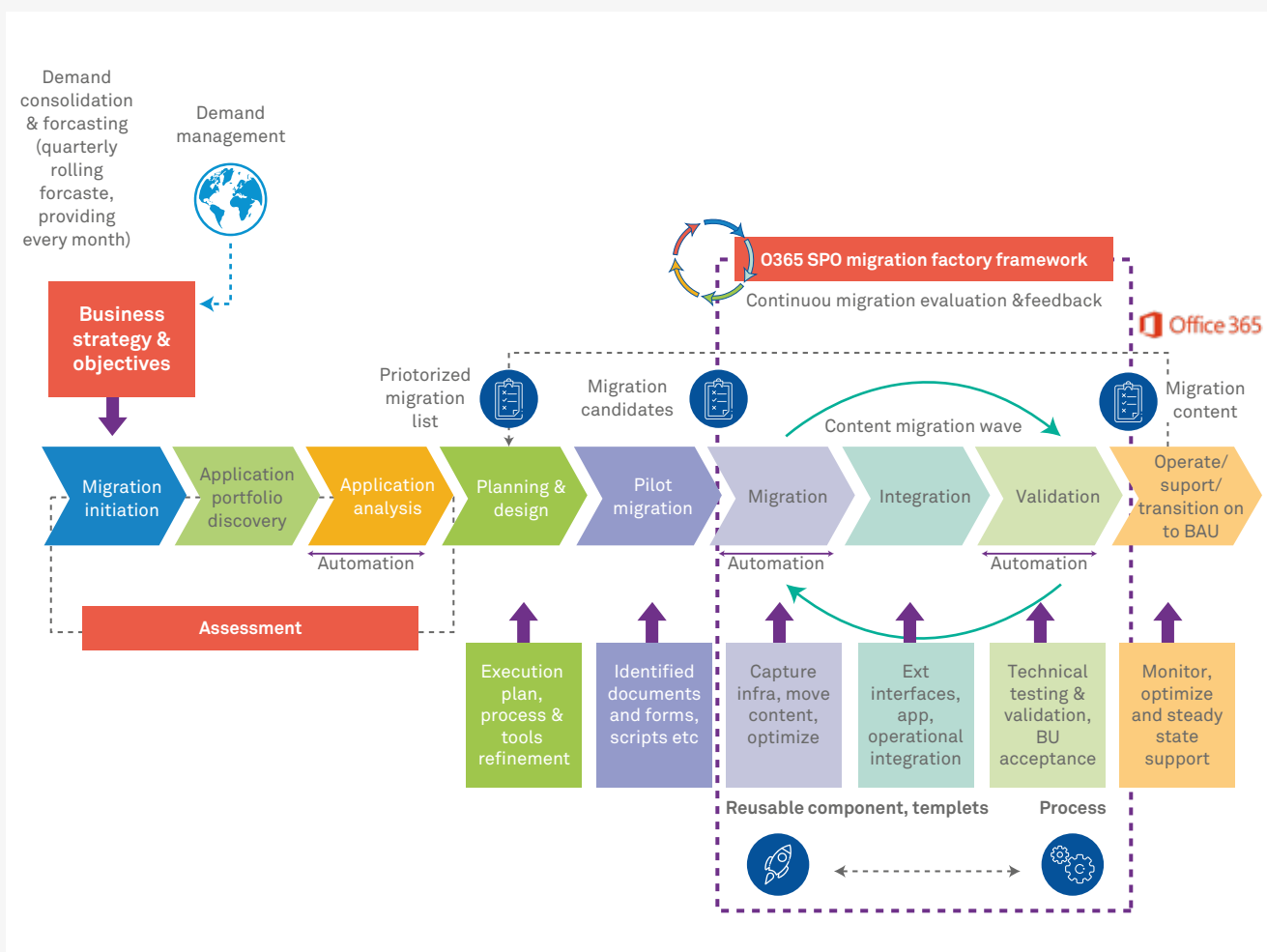
The Lotus Notes applications can be migrated asynchronously, delivering per customer's plan. This option will add more flexibility in terms of cost optimization, reduced technical risks.

Approach: Perform migrations & deployment as and when sites are ready based on individual estimates

Advantages: Asynchronous, flexible, agile, optimized cost due to offshore leverage

Disadvantages: The number of Lotus Notes application to be migrated may be less for making a factory operate optimally



The factory-based migration model (as depicted in the image below) provides a structured approach for the entire migration program lifecycle



- The factory optimizes the migration process by reusing people, process, technology & Infrastructure assets imbibing factory concepts & providing the customer with execution flexibility and cost benefits
- 10% cost reduction over traditional outsourcing model and a 10-15% decrease in lead time from demand to delivery
- The factory model would enable wipro and the customer with a solution that takes advantage of using similar kind of tools and processes
- which are used in a stream of similar O365 SharePoint online migration projects thus leading to lower lead times, greater flexibility in requirements and greater control on which projects get completed when
- Resources in the factory model would have experience in similar multiple migration projects across customers and hence would take lesser time, which is the principle of the assembly line in factories

WTP O365 Suite for Lotus Notes migration – Utility mapping & Details:

WTP offers a variety of tools sets, pre-canned templates to address successful migration needs

Phase	WTP feature	Description
Migration	<p>WTP - One touch migration</p>  <p>Run migration job utility</p>	<p>Tool helps to automate manual activities to reduce total migration efforts up to 80%. migration governance also incorporated within the tool. (E.g. the tool will not allow migration engineer to migrate the site which is migrated already)The utility generates the migration scripts for given site, it can be scheduled as JOB in windows task scheduler. Utility which helps to perform the delta (incremental) migration with one click</p>
Migration process	<p>WTP - Governance manager</p>	<ul style="list-style-type: none"> Utility which helps to make site read-only and non-read only during delta migration for given migration batch Utility which helps to update banner (migration communications) in the site for given migration batch Utility to check-in the checked-out files before delta migration
	<p>WTP - Governance manager</p>	<p>Set of tools helps to manage the URL redirection to target sites after migration (E.g. users source reference links as favorites in IE)</p>
Post migration	<p>WTP - Post migration validator</p>  <p>Post migration validator utility</p>	<p>The tool helps to compare the source and target objects after migration (Like users, lists, libraries etc.)</p>
	<p>Post Migration validator utility</p>	<p>While migrating the data from Lotus Notes to O365 SharePoint online, detailed logging mechanism will be in place</p> <ul style="list-style-type: none"> All the transactional records will be logged for future reference In case of any failures, those details will be logged in log files in a highlighted format Those failure records will be managed separately

In action

State street engaged Wipro to deliver a migration from Lotus Notes to O365. The existing landscape included over six thousand applications, developed over several years and spanned over 20 servers. These applications varied from simple database-based applications to complex multi-stage forms based workflow applications.

The business lacked support from the existing vendor and was experiencing both performance and stability issues. The organization also had concerns around future roadmap, cloud strategy and costs.

Additional business considerations included:

- Lack of support from vendor and being deployed in older version of windows servers, which is out of support period from Microsoft and unable to extend the business functionality. Lotus Notes support team terminates their support by the end of 2019.
- Not aligned with business for future proofing systems/platform(s) like cloud, mobility and NextGen external integrations.
- Lotus Notes is a legacy tool and maintenance of domino Servers is not economical.

Engagement highlights

- Drive efficient operations through the enterprise adoption of Office 365/Share Point online.
- Clarifications of the applications: “Decommission, archive, migrate” based on various business and organization-level decisions
- Define the complexity and priority of the applications for replacement to SharePoint & O365
- Using in-house Wipro Transformation tool and along with internally developed PowerShell script, data was archived in SQL server.
- Analyses of the existing Lotus Notes forms and development of custom Apps / SharePoint Online-customized pages / Power Apps forms to achieve the required functionalities
- Appropriate replacement of workflows by Microsoft Flows.

Benefits envisioned

- Alignment with business requirement and customer’s cloud technology strategy for future proofing
- Scalable design solution for efficient manageability
- Reusable accelerators and utilities built in this program are getting used across other application development which are saving considerable amount of the development/migration efforts
- This Program execution governance is beginning to get used across Wipro for similar executions



About the authors

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Saikat is a TOGAF certified architect and Microsoft Certified Professional (MCP), with 16+ years' experience in analysis, design, development, testing, support and maintenance of enterprise applications in Microsoft cloud and native technologies for global clients. He currently plays the role of Practice Manager in the Microsoft presales team and leads the FS and Tech BU.

Vipin jain

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Vipin is a cloud leader and Microsoft certified Azure Solution Architect with 20+ years' IT experience in cloud migrations, governance, security for Azure infrastructure space, application modernization space and Dev-ops tool chain, along with enterprise architecture experience in analysis, design, development of enterprise applications around Microsoft cloud technologies for global clients. He currently plays the role of Director-Cloud in the Azure ecosystem unit to support and lead Azure engagements for CBU, MFG, TECH and communications BUs.

Richard hogan

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Richard is an experienced cloud consultant/architect and holds Microsoft certifications in Microsoft Azure, Microsoft exchange Online, Office 365 and SharePoint. He currently heads the Azure ecosystem service line in the UK and EMEA regions, and is responsible for delivering large, complex transformation projects for Wipro's global clients. He has over 20 years' experience in IT specifically for consultancy or global service providers such as Microsoft, IBM and most recently Wipro. His experience spans across development of custom solutions utilizing to architecting and consulting on complex programmes which leverage Microsoft's cloud services including Azure and Office 365. Prior to joining Wipro, Richard was part of the Microsoft Office 365 consultancy team based in the UK and worked on numerous large-scale Office 365 implementations including several divestiture and Lotus Notes to O365 migrations.



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