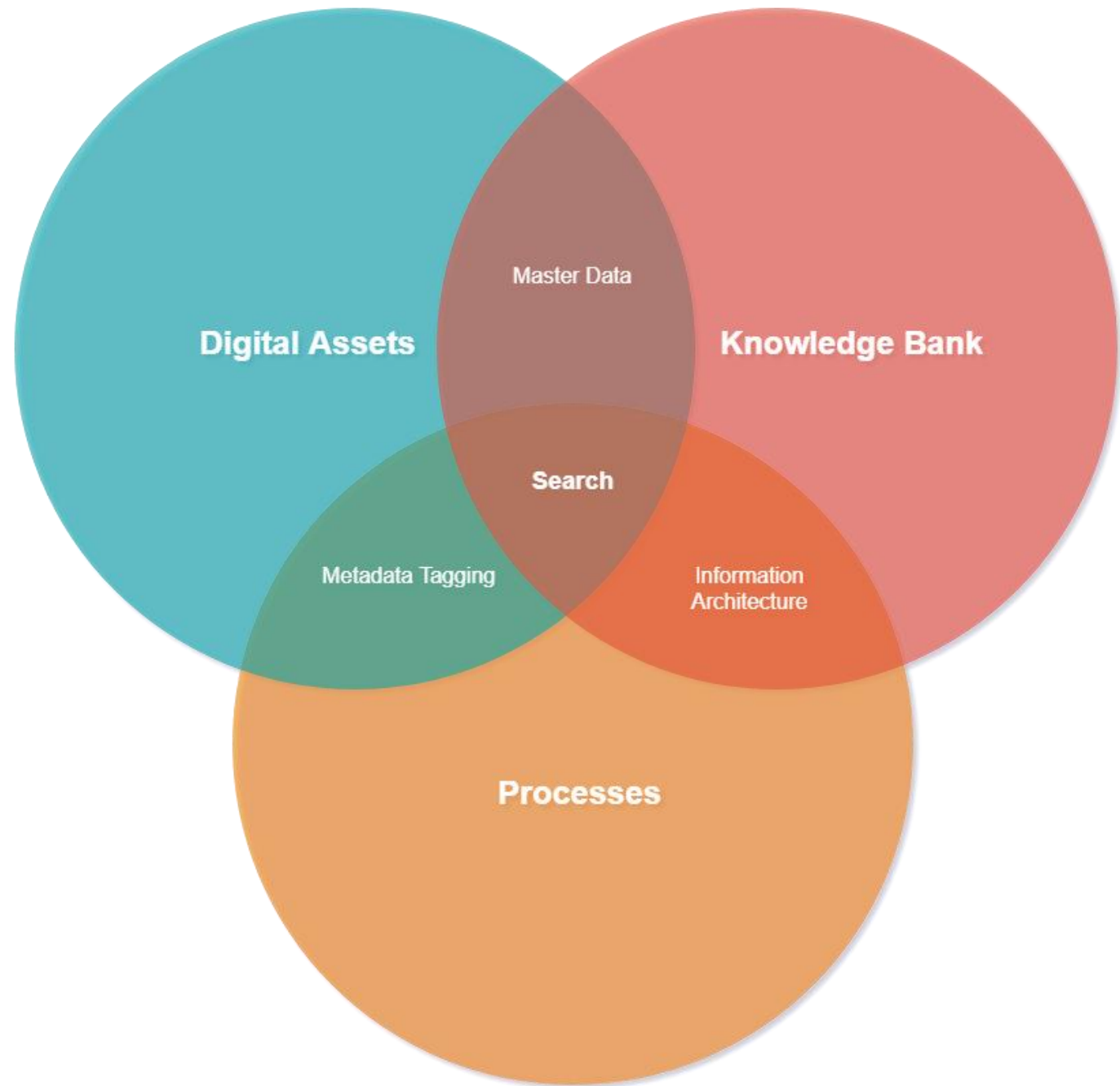


# The Big Picture



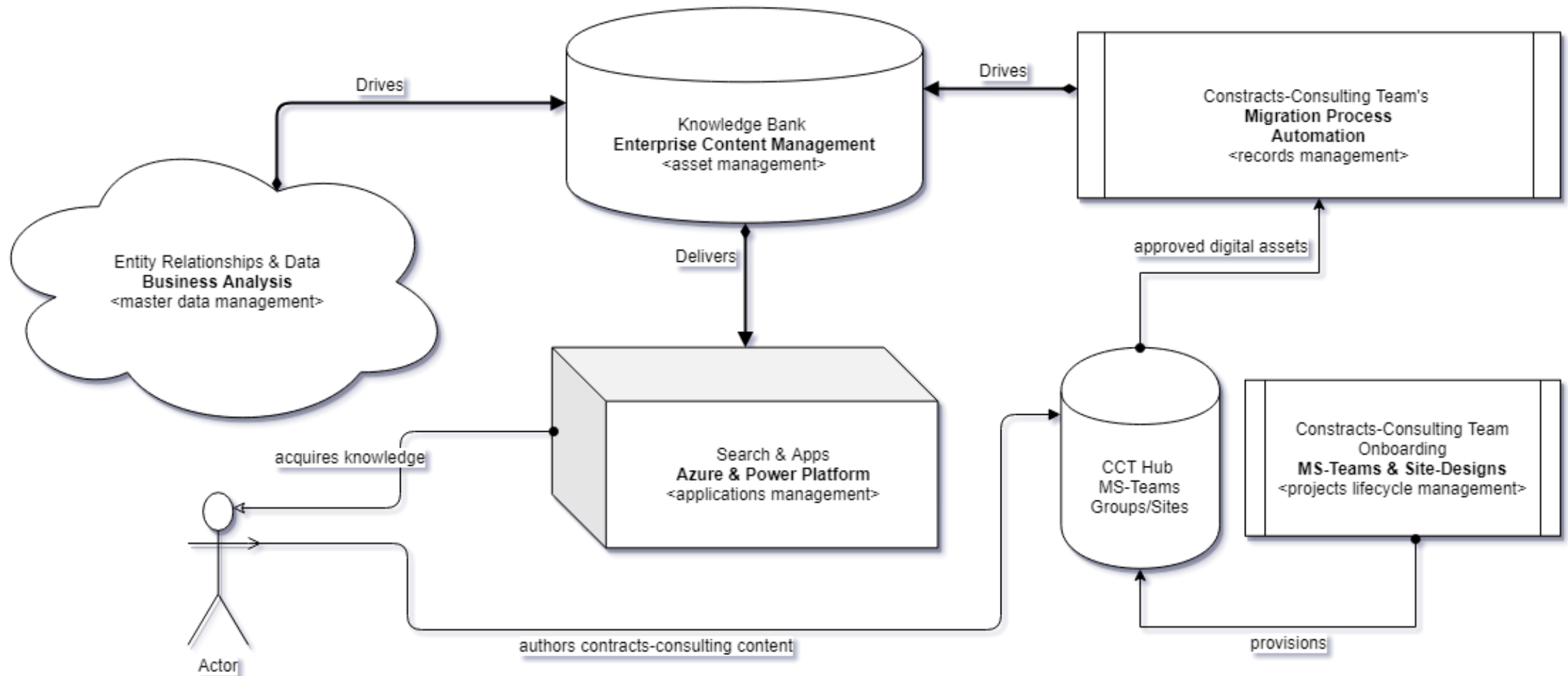
# Client

Demo – SharePoint Online Search and More..

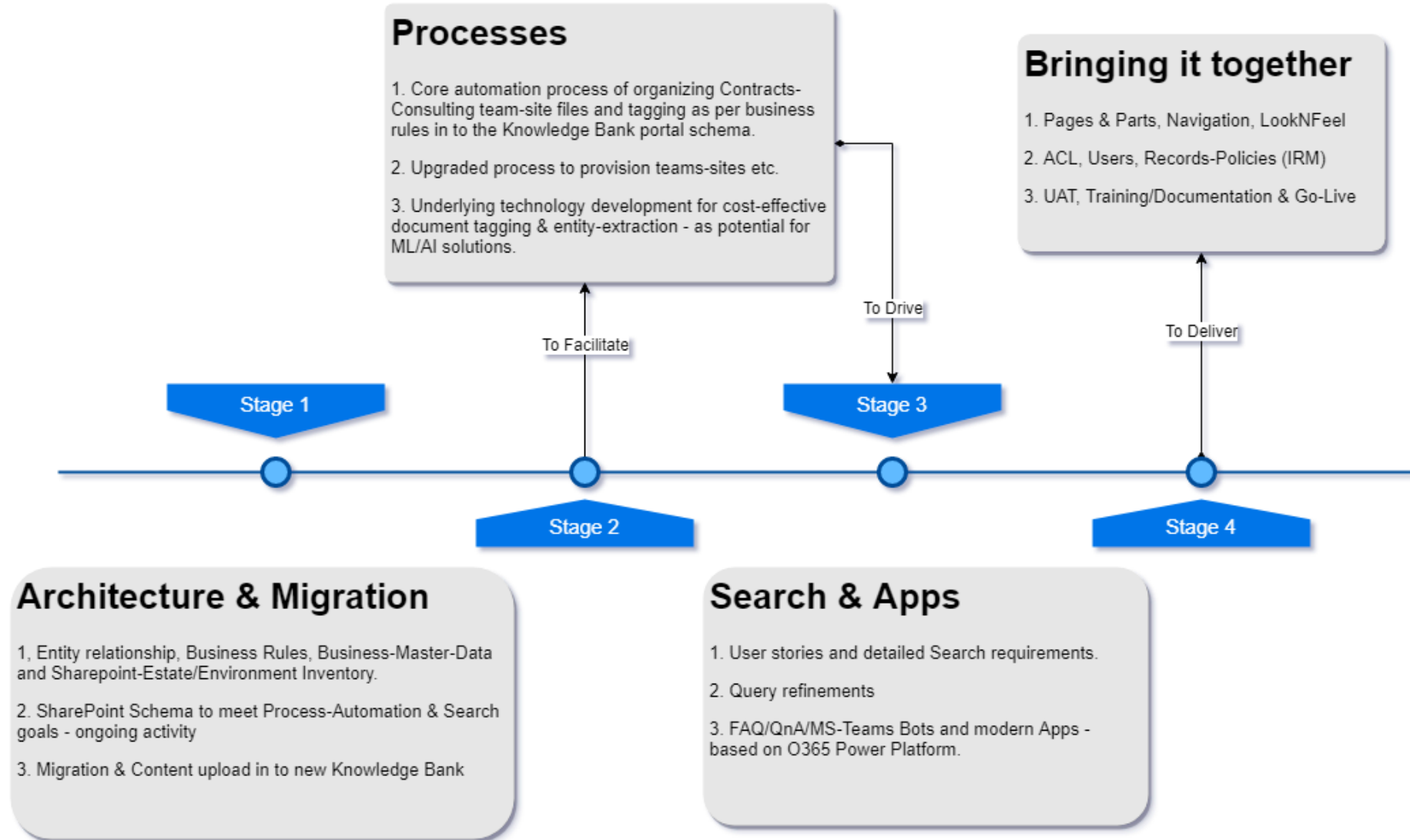
# Effort In – Demo Out

- [Exported/Analysed] Current State Datasets – Lists and Document-Library items.
  - “PickLists” mapped to Term-Sets/Lists And Sample use of SharePoint Migration Tool
  - Used PowerBI to analyse entity-relations.
- [Information Architecture] and site taxonomy
  - Created sites - Intranet-Hub | Bid Teams Hub | App Catalog site | Knowledge Bank (Modern) site | Search Centre (Classic) site
  - Created site level - content-types, columns, lists and libraries.
- [Installed] SPFX Solutions and setting up developer mode for advanced tooling and dev-environment readiness
  - Column Formatter | Site Design Studio | Modern-UI Search Web Parts
- [Flow] Pre-Process (All-Docs) Shared-Documents files including Text-Analytics (Key phrase extraction).
  - IRM Policies & Labels for marking files as records.
- [PowerApps] Form based on Bids-Register list to manage full-bids-lifecycle.
  - Invoking a Script/Flow that provisions MS-Teams-Group and Team-site.
  - Site-Design-Template – SPFX component and applying manually to a site.
- **Search – Classic Experience**
  - **Configurations with Schema (Managed-Properties), Result Scope, Result Types with Display Templates , Query Rules, and Refiners.**
- **Search – Modern Experience**
  - (Preview) PnP Modern-Search Webparts installed earlier and basic Result scopes
  - NLP/LUIS options for search query enhancements using Cognitive/AI/ML services to understand intent of search.
    - Honourable mention of Project Conversation Learner and Demo the BOT framework capabilities – QnA Maker sample.

# Proposed Solution Scopes



# Development RoadMap



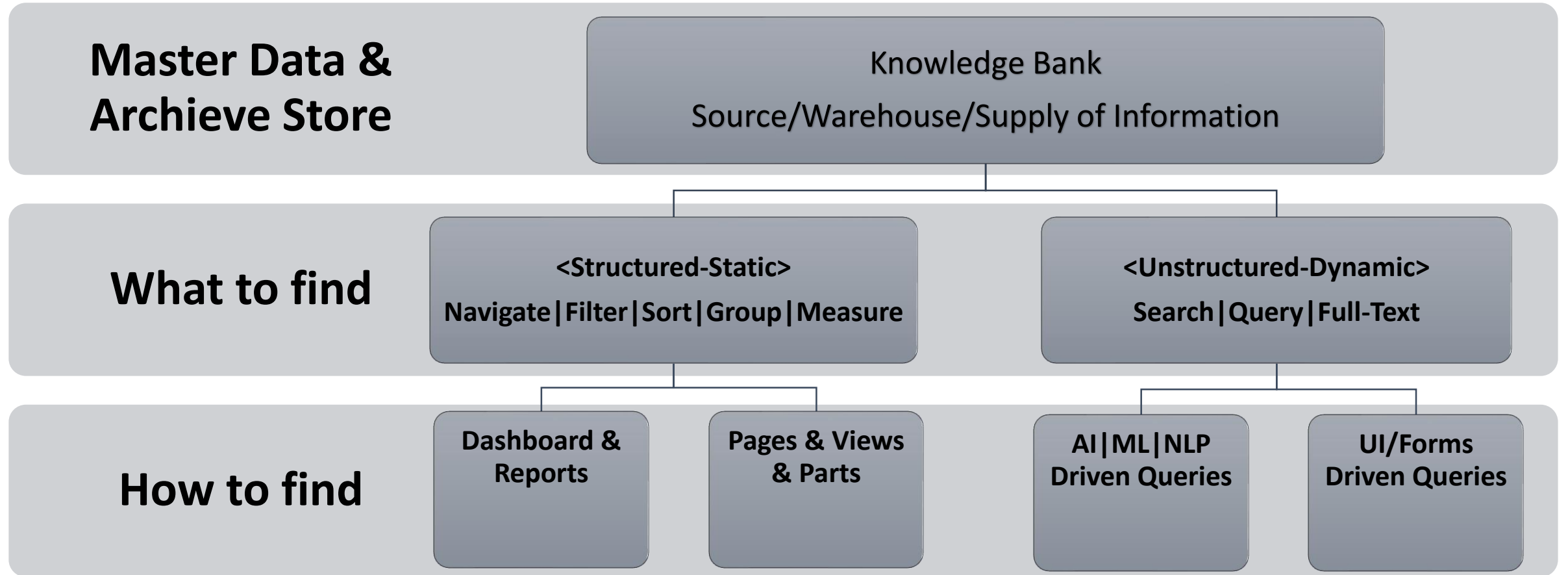
# Three Pillars

- **Master Data:** Create/Upload/Sync once - use everywhere.
  - **Search** – Purposed, contextual, intuitive, modern, facilitated by AI/Bots/API.
- **Schema:** Site Columns, Content types, Lookups, Lists & Libraries.
  - **Taxonomy** - Hub sites structures, Navigation, Page & Parts, Site-Designs.
- **Processes:** Workflows to organize, stabilise, scale & collaborate productively.
  - **Backend API:** Connectors - e.g. Open-XML-SDK for .docx ; others for .pdf files.
  - **PowerApps/Flow:** End-to-end Bid team-creation to Search-output pipeline.

# Master Data

- Search
  - Classic search experience
    - Search Centre: Verticals, Display templates and results tuning.
  - Modern search experience
    - AI/ML/Bots: NLP/Conversational intents with MS-Graph & Search API & Custom-UI
- Information Architecture
  - Sources of master data – as Line of business, existing Pick-lists..
  - Entity relations and exceptions, business rules, policies, best practices..

# Three Layers





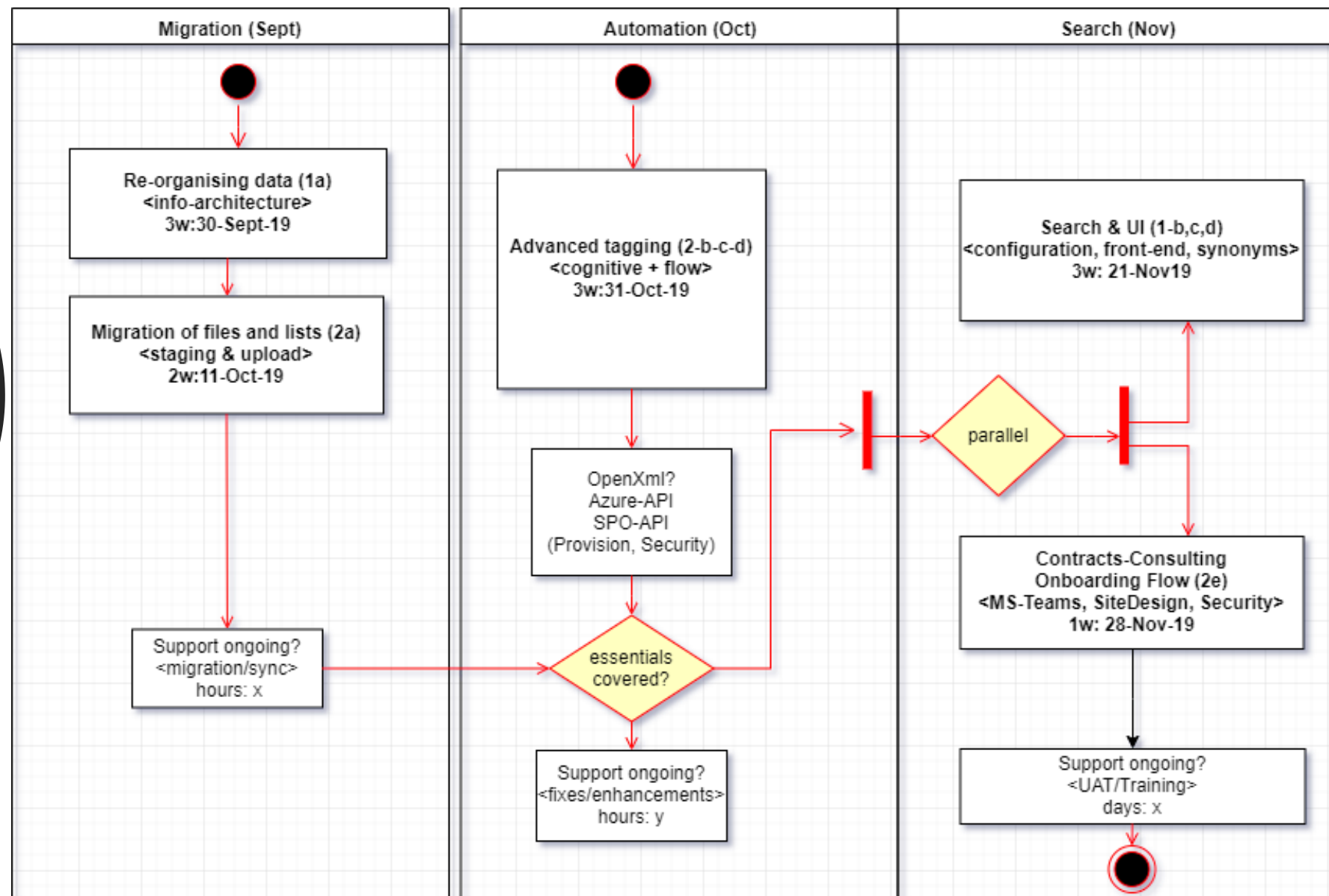
# Schema

- Site Columns, Content types & c-type-hub feature
- Sites Taxonomy
  - Intranet Home hub
    - News, Calendars, Events and such publishing, roll-up-views, feeds, dashboards etc.
    - Connects other hubs and sites via navigation and such other apps.
  - Bids-Team sites hub
    - PowerApps form, and other self-service apps hosted & contextual search/bot capabilities within each Contract-Consulting Team group-site
  - Knowledge Bank
    - Central Master data store – where structured as synced/created & unstructured as archived data and other operational information are processed/recorded.
    - Central Search aspect – where key application is to facilitate exploring, finding information therefore, NOT creating silos of unreachable/lost IP/knowledge.
- Pages, Parts, Views and Look-N-Feel
  - Modern pages, Out-of-box parts/add-ins, Formatted List-views, Styles-Themes etc.

# Processes

- Migration flow
  - Flow to manage migration of closed bids in to Knowledge Bank.
  - Processing of Microsoft documents and other file-types for Cognitive services and tagging/entity-extraction/machine-learning-model-training.
- End to End business process optimization/upgrade
  - Bid process steps from raising-request with master-data to review/approval to automagically setting up and configuring Group, Teams, Provisioning site-design and templates, structures and associations with Knowledge Bank for its full-lifecycle tracking [ initiation to archival ]
- Security & GDPR considerations – with processes designed to facilitate access-controls and their cascading effects on subject-requests and effecting records-retention and IRM policies etc.

# Sample Development Milestones



# Tech Stack

- Low Code Solutions
  - **O365**: SharePoint Modern sites, MS-Teams, PowerApps, MS-Flow, Power-BI
  - **Azure**: QnA service, other Cognitive/ML services, Adaptive-Cards-UI
  - **Tools**: SharePoint migration tool, other PnP (Community) Solutions
- More Code Solutions
  - **Frameworks**: PnP-SharePoint(SPFx, CLI), MS-Bot framework
  - **Azure**: Web-API/Functions, Logic-Apps, Storage, Service-Bus, MS-Graph API
  - **Programming**: PowerShell, C#, .NET Core, JQuery, React, Fabric-UI, Typescript/ES6

## FOR #SPESTATEINVENTORY, #ITREPORTING, #ESTIMATIONANALYSIS

- **Get-ListOf-AllDocuments-InAllSites (SQL, tried & tested)**
  - [https://github.com/appflowitdeveloper/AM\\_XWorks/blob/master/NEXTPlc/T.sql](https://github.com/appflowitdeveloper/AM_XWorks/blob/master/NEXTPlc/T.sql)
- **lookalike!? In PowerShell**
  - <http://blog.falchionconsulting.com/index.php/2010/08/getting-an-inventory-of-all-sharepoint-documents-using-windows-powershell/>
- **Inventory SharePoint Farm Content PowerShell Script (tried and tested)**
  - <https://gallery.technet.microsoft.com/office/Inventory-SharePoint-Farm-dc11fc28>
- **<https://www.picologicllc.com/insights/generating-a-sharepoint-content-inventory-with-powershell>**
  - <https://github.com/picologic/sp-scripts/blob/master/generate-content-inventory.ps1>

## For #DataStaging, #ContentExportImport, #DataMigration, #ManualUpload

### Option1: SharePoint Migration Tool

- <https://docs.microsoft.com/en-us/sharepointmigration/how-to-use-the-sharepoint-migration-tool>

### Option2:EXPORT-IMPORT : For SharePoint 2010/2013/2016

- **MS-Docs**
  - <https://docs.microsoft.com/en-us/sharepoint/administration/export-a-site-list-or-document-library>
- **Blogs**
  - <https://sharepointnomad.wordpress.com/2012/05/03/how-to-export-and-import-lists-and-libraries-from-a-sharepoint-2010-site-using-powershell/>
  - <https://guidesharepoint.wordpress.com/2014/11/21/how-to-export-and-import-all-lists-and-libraries-from-a-sharepoint-2013-site-using-powershell/>
  - <https://www.sharepointdiary.com/2014/07/export-import-all-lists-and-libraries-using-powershell.html>



## WHY CLASSIC SEARCH?

- Microsoft still recommends using Classic for custom app scenarios.
- Using Enterprise “Publishing Portal” site for Authoring and Enterprise “Search Centre” for Results Display
  - **Using Product Catalog Lists** (Cross-site publishing) + Metadata Terms Navigation + Cross-site Search
  - **Using Search Results webpart** – since CSWP is an Enterprise license only feature and there is less than 5-10% difference between CSQ-WP and SearchResults-WP
  - **Restricting** scope to documents/items of a base content-type found mainly/only in the Knowledge Bank and must be utilised/applied to any such document that needs to be displayed within search results.
  - Classic display templates integrated with **Adaptive Cards** (JS **renderer**), **Fabric-UI** (React), **Typescript**, Nodejs. This leads to smooth transition in to SPFX or such later.

## Why OpenXML and PDF (for word/excel/ppt/pdf)?

- <https://splucy.wordpress.com/2016/12/21/retrieving-document-contents-from-the-sharepoint-search-index/>
  - Unfortunately there is no way to ‘read’ from the ‘**Contents**’ or the ‘**ows\_body**’ field. Even if you mark the property as retrievable nothing will be returned. Mapping ‘**ows\_body**’ to a new managed field will also always return empty. Seems there is no default way of retrieving content from the index.
- Another reason is to create proprietary API and Connectors/Service for reuse
  - Since, Migration can be done on-premises initially but this is not a one-off activity → its better to put limited time/resource in to the

