Azure SQL Server Managed Instance & IaaS Migration High Level Planning Workbook

This workbook was developed to assist with SQL modernisation and migration planning. It is intended to be used during initial discussions and function as a high level record of modernisation of applications and their databases.

1 – Decision Flow
Use this decision tree to assess and determine the target state and platform fit for your application and database.

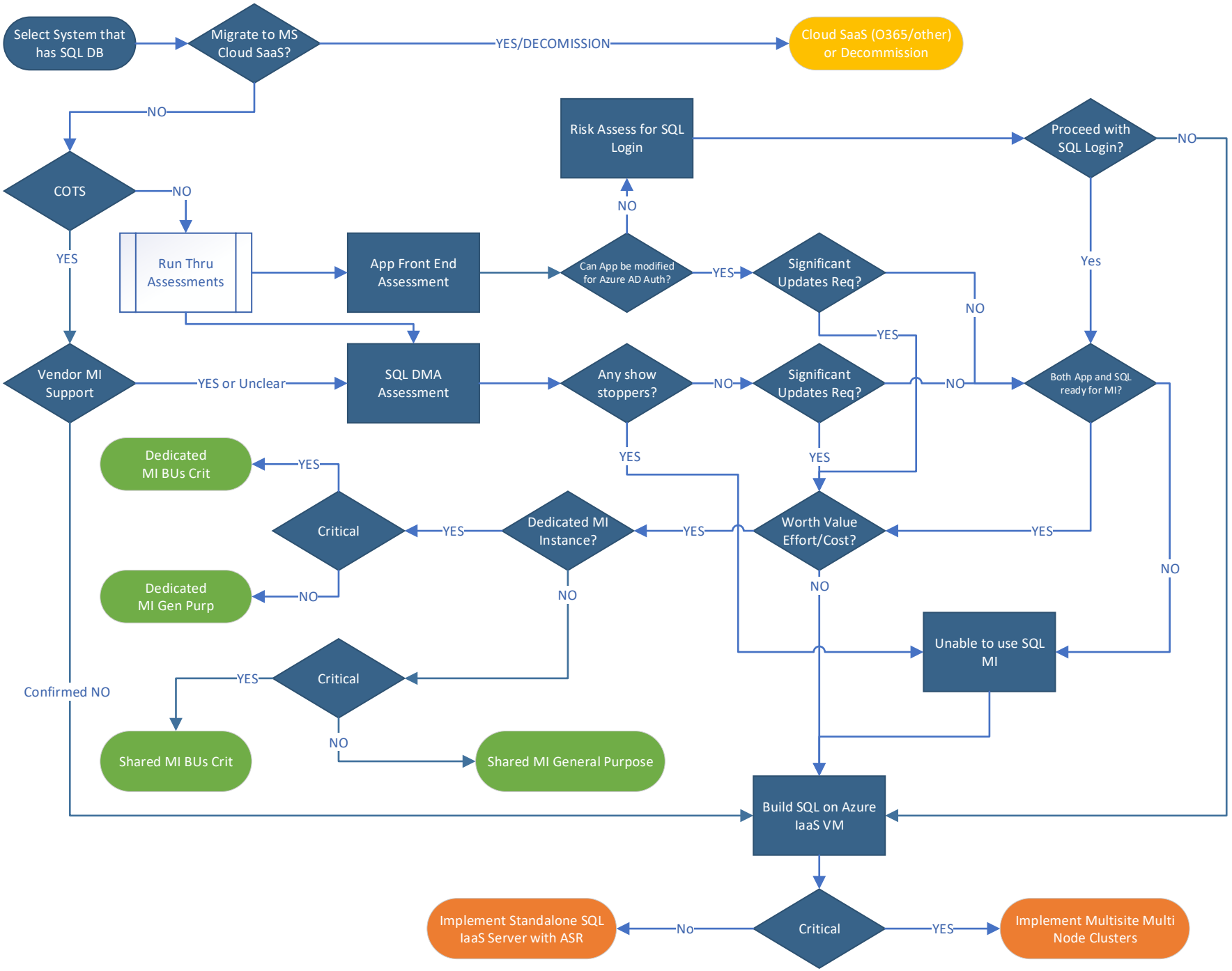
2 – Per DB Decision
Starting with the application and Database Migration Assessment (DMA) results work through the Decision Flow tree.
Record your decisions and what will be required to migrate to your application to your selected platform.

3 – Database Map
Prioritise and map out the end state to assist with sizing and planning.

4 – Migration Process
An overview of how the migration process may work - who does what when.

Morgan Price – Cloud Solution Architect (Data & AI) – Microsoft
David Graham – Cloud Migration Consultant – Peppertree Cloud Consulting

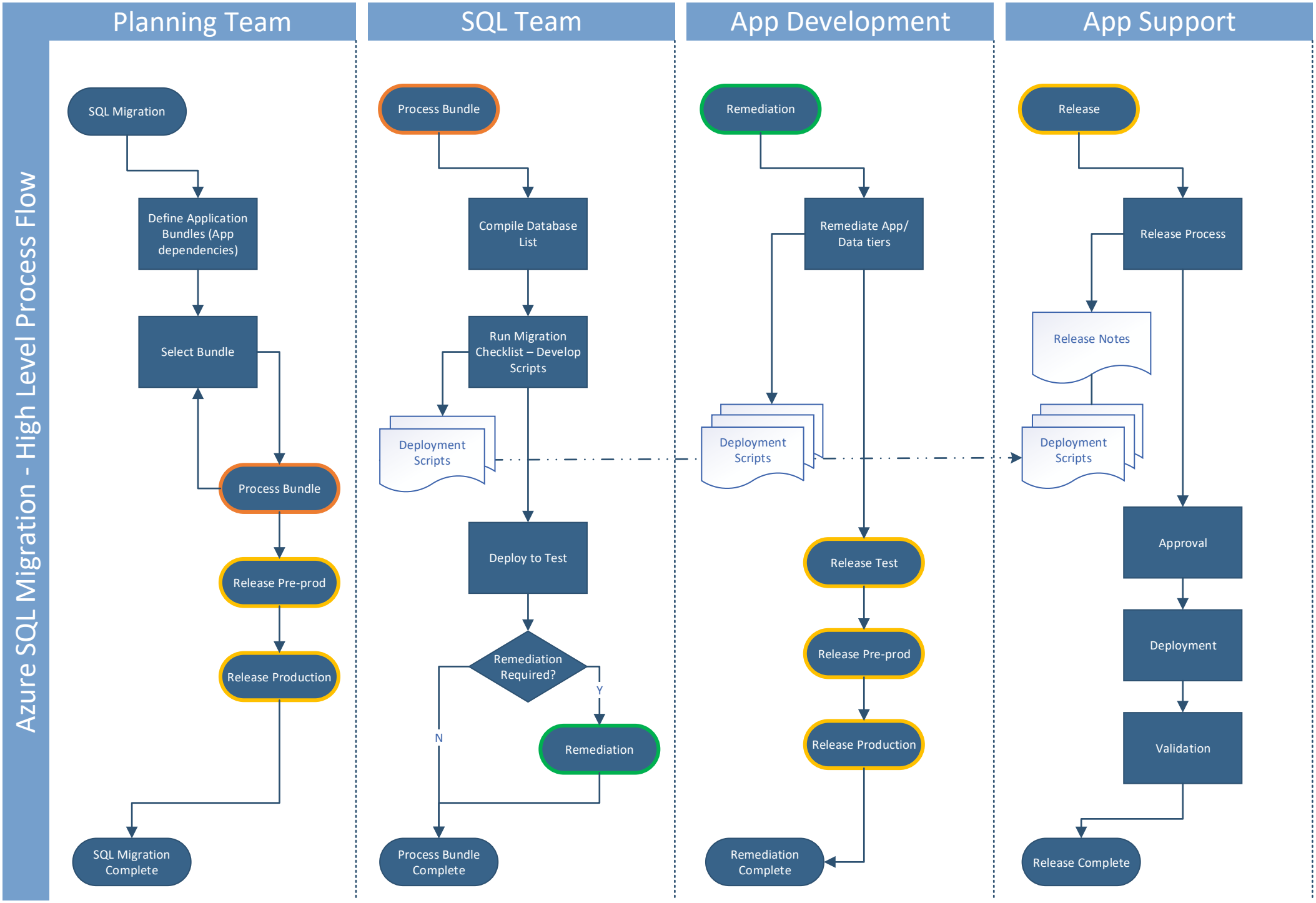
Azure SQL MI vs Azure IaaS Decision Tree



High Level SQL Migration Plan - EXAMPLE

	Database / App	App Front End	Database Eval (DMA)	Vendor	Effort/Risk Recommendation	End State
Inhouse Developed Apps	Critical Apps • App 1 • App 2 • ...	Modify App to allow Azure AD and update connection string	Passed DMA		Modify Front End Move DB to MI	Move to Critical SQL MI
	Non Critical Apps • App 1 • App 2 • ...		MI Failed Filestream unsupported		Migrate to IaaS SQL	DB Server 1 SQL Instance 1 Not Clustered Shared Instance
	Non Critical Apps • App 3 • App 4 • ...	Modify App to allow Azure AD and update connection string	MI Failed Polybase unsupported		Refactor Polybase to OPENROWSET	Move to Critical SQL MI
COTS Products	COTS APP 1	Front end Connection string cannot be changed. Use SQL Login	Passed DMA	Not Officially Supported, but advised it "should" work.	Accept Risk and move to MI to gain RPO / RTO benefits not otherwise achievable	Move to Critical SQL MI
	COTS APP 2			Microsoft explicitly advise not to use on SQL Azure in any form		DB Server 1 SQL Instance 2 Not Clustered Dedicated Instance
	COTS APP 3			Fully Supported		Move to GP SQL MI
	COTS APP 4	Upgrade to version that supports Azure AD	Passed DMA	Fully Supported		Move to Critical SQL MI
	COTS APP 5		Oracle Database		Migrate using MS SQL Server Migration Assistant (SSMA)	Move to Critical SQL MI
	COTS APP 6	Front end Connection string cannot be changed. Use SQL Login	Passed DMA	Fully Supported		Move to GP SQL MI
	COTS APP 7		Oracle Database	Vendor Provides Azure SQL Alternative	Migrate data using Azure Data Factory (ADF)	Move to GP SQL MI
Cloud Ready Apps	Sharepoint					Migrate to Sharepoint Online
	CRM					Move to Dynamics Online
	TFS	All Apps to be replaced by equivalent SaaS offering in Microsoft Office 365				Move to DEVOPs
	Email Archive / EV					Move to Exchange Online
Apps not to Migrate	Citrix					Replacing with Microsoft Online App Portal
	Symantec AV					Replacing with Microsoft Defender and EDR
	SCOM	Migrating to Cloud Offering within another App. These apps/DB's will no longer be required				Replacing with Azure Monitoring
	Blackberry					Replace with Outlook App with Intune
	ADFS					Replace with B2C and Azure AD PTA


Multi Site – Multi Node Cluster IaaS
Standalone SQL IaaS Server with ASR
Dedicated MI BC
Dedicated MI GP
Shared MI BC
Shared MI GP
HAGPCLUSTER01
Instance 1
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2
Instance 2
Application 1
DB 1
DB 2
SAGPSERVER01
Instance 1
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2
Instance 2
Application 1
DB 1
DB 2
BCMI<APP>01
Application
DB 1
DB 2
GPMI<APP>01
Application
DB 1
DB 2
BCMISHARED01
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2
GPMISHARED01
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2
HAGPCLUSTER02
Instance 1
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2
Instance 2
Application 1
DB 1
DB 2
SAGPSERVER02
Instance 1
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2
Instance 2
Application 1
DB 1
DB 2
BCMI<APP>02
Application
DB 1
DB 2
GPMI<APP>02
Application
DB 1
DB 2
BCMISHARED02
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2
GPMISHARED02
Application 1
DB 1
DB 2
Application 2
DB 1
DB 2


Azure SQL Migration - High Level Process Flow
Planning Team
SQL Team
App Development
App Support
SQL Migration
Define Application Bundles (App dependencies)
Select Bundle
Process Bundle
Release Pre-prod
Release Production
SQL Migration Complete
Process Bundle
Compile Database List
Run Migration Checklist – Develop Scripts
Deployment Scripts
Deploy to Test
Remediation Required?
Y
N
Remediation
Process Bundle Complete
Remediation
Remediate App/ Data tiers
Deployment Scripts
Release Test
Release Pre-prod
Release Production
Remediation Complete
Release
Release Process
Release Notes
Deployment Scripts
Approval
Deployment
Validation
Release Complete