



Nati Turtledove



Aligning QA with Power Platform Pipelines



Nati Turtledove

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THE PLAN

The start, middle and end



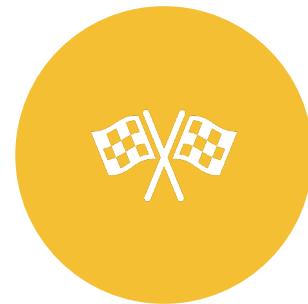
Quality Assurance

What is QA



Power Platform Pipelines

The details



The Demo

What else needs to be said...

What is Quality Assurance



Quality Assurance (QA) is the process of ensuring that a software product meets its specified requirements and quality standards through planning, designing, executing, and reporting tests to detect and prevent defects or errors in the software.

-ChatGPT

What is Quality Assurance



Requirements &
Standards



Code Review &
Testing Prep

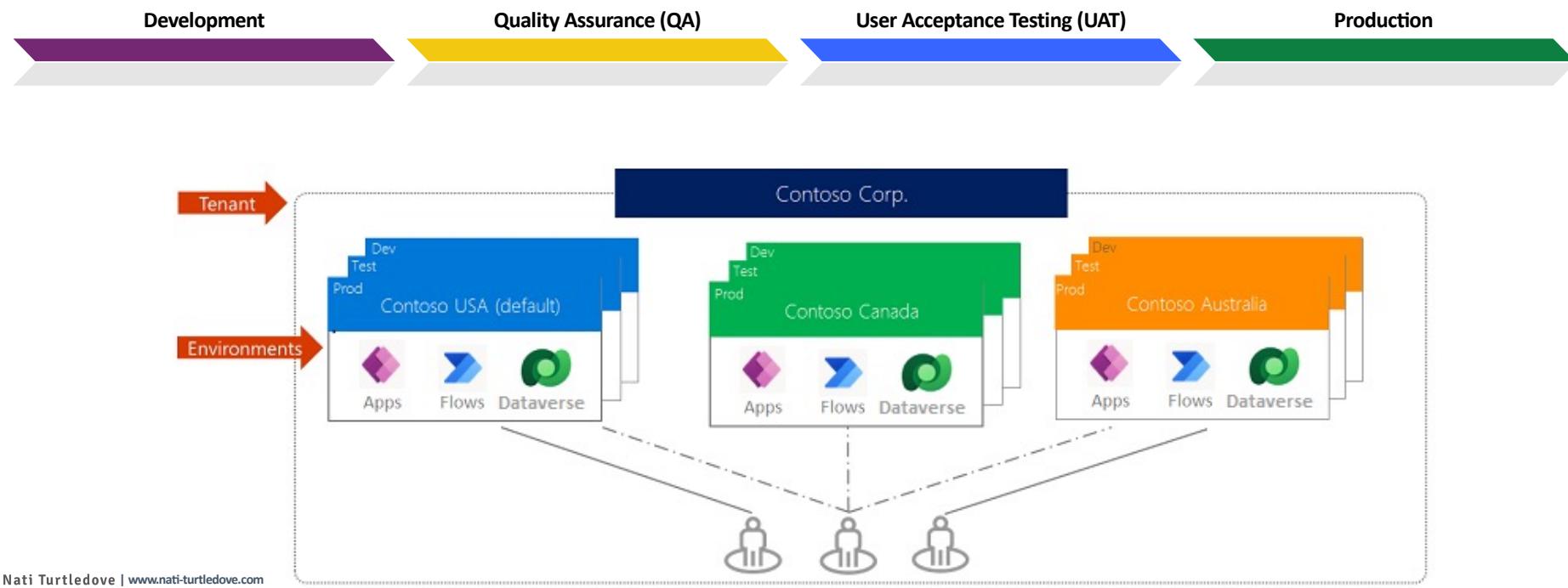


Performance,
Usability & Security

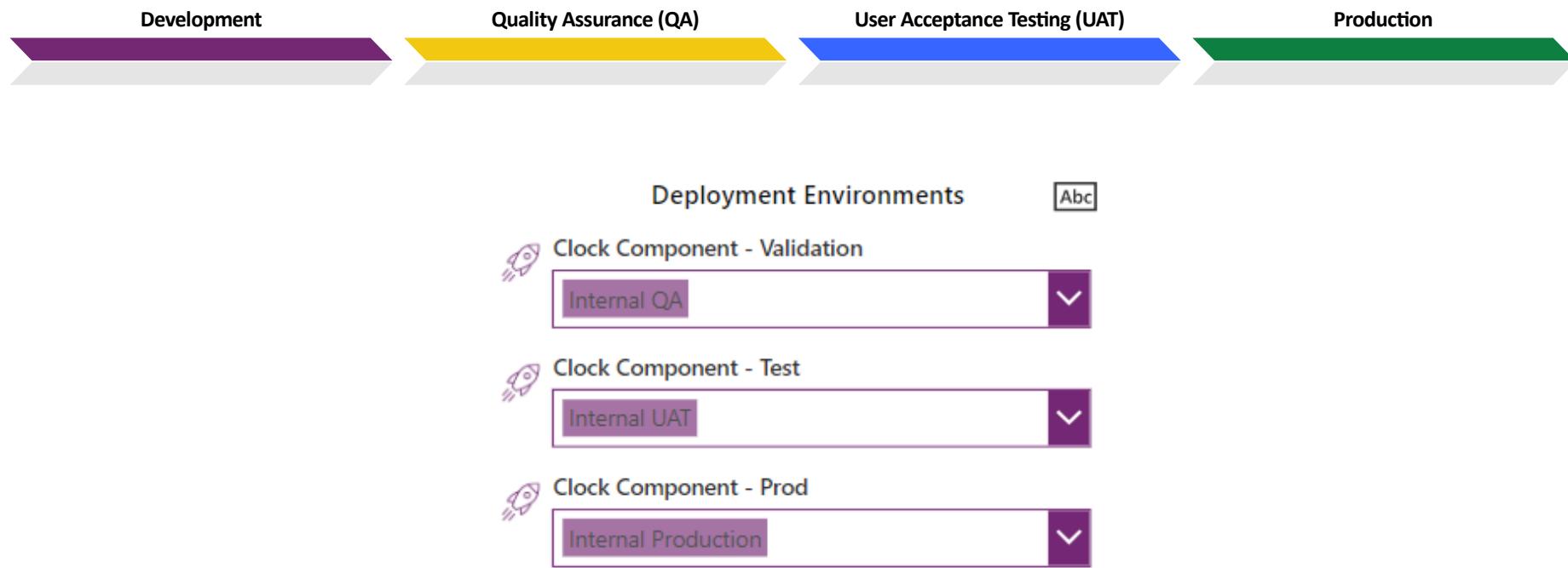


Standards &
Procedures

When & Where?



When & Where?



When & Where?

Quality Assurance (QA)



User Acceptance Testing (UAT)



When & Where?

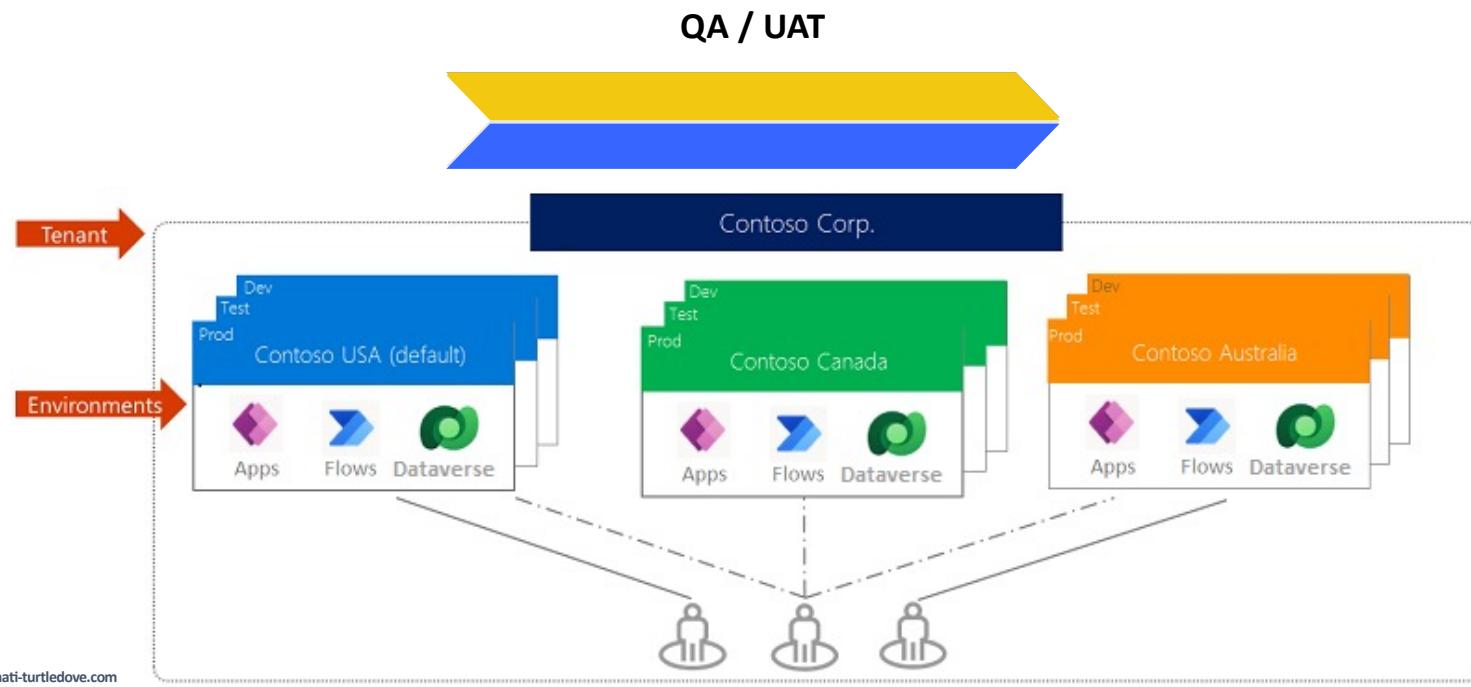
User Acceptance Testing (UAT)



Quality Assurance (QA)



When & Where?



A superhero character with a red cape and yellow 'QA' letters on the chest, flying towards the right.

QA

A superhero character with an orange cape and green 'Test' letters on the chest, flying towards the left.

Test

Test

QA



- Performed by QA team or peers (peer reviews are more subjective)
- Meets specified requirements
- Meets quality standards
- Prevent/Detect defects or errors
- Internal testing (functional, design, security & integration)
- Objective approach





- Performed by end-user/product owner
- Usually after QA
- Can be done through automation and Test Plans
- Vetted against user stories
- Meets technical requirements
- Formal approach



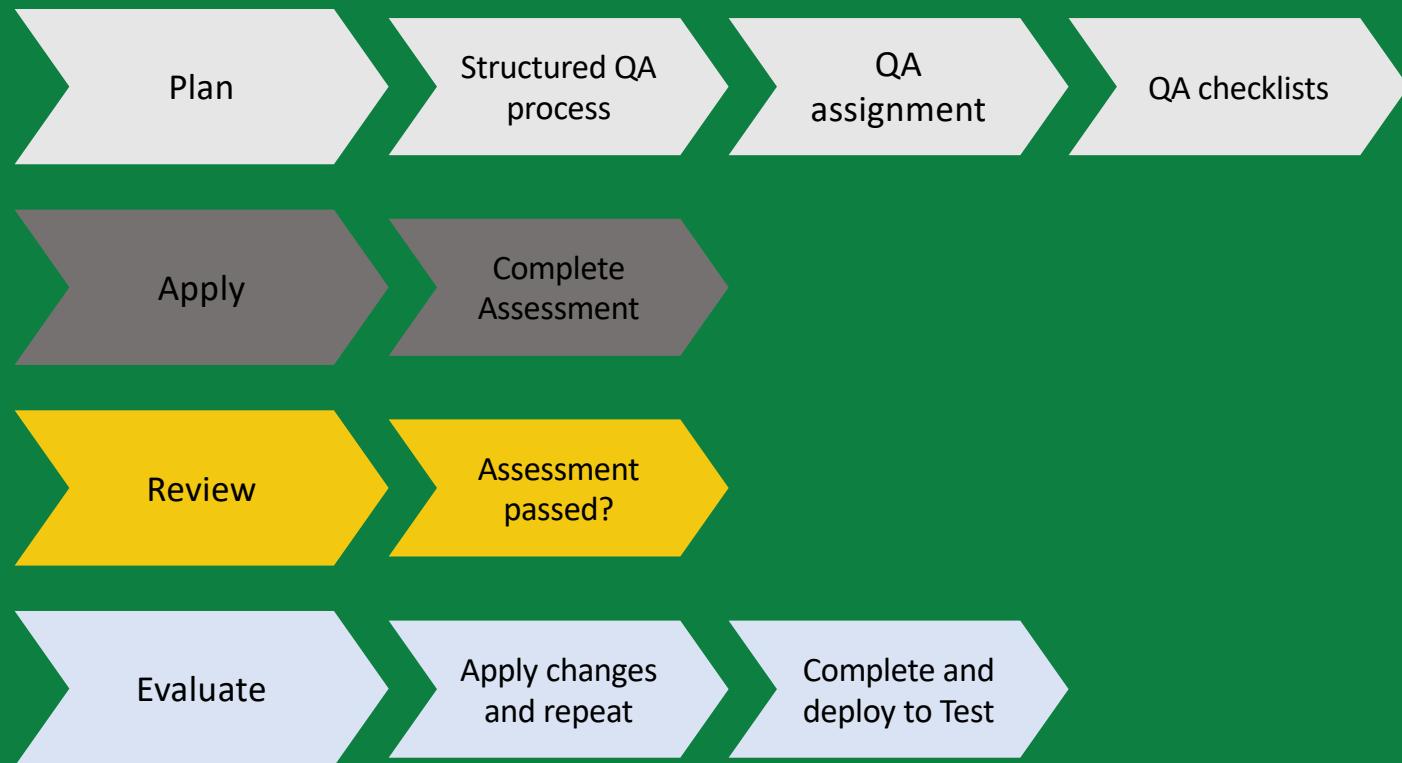
Peer Review



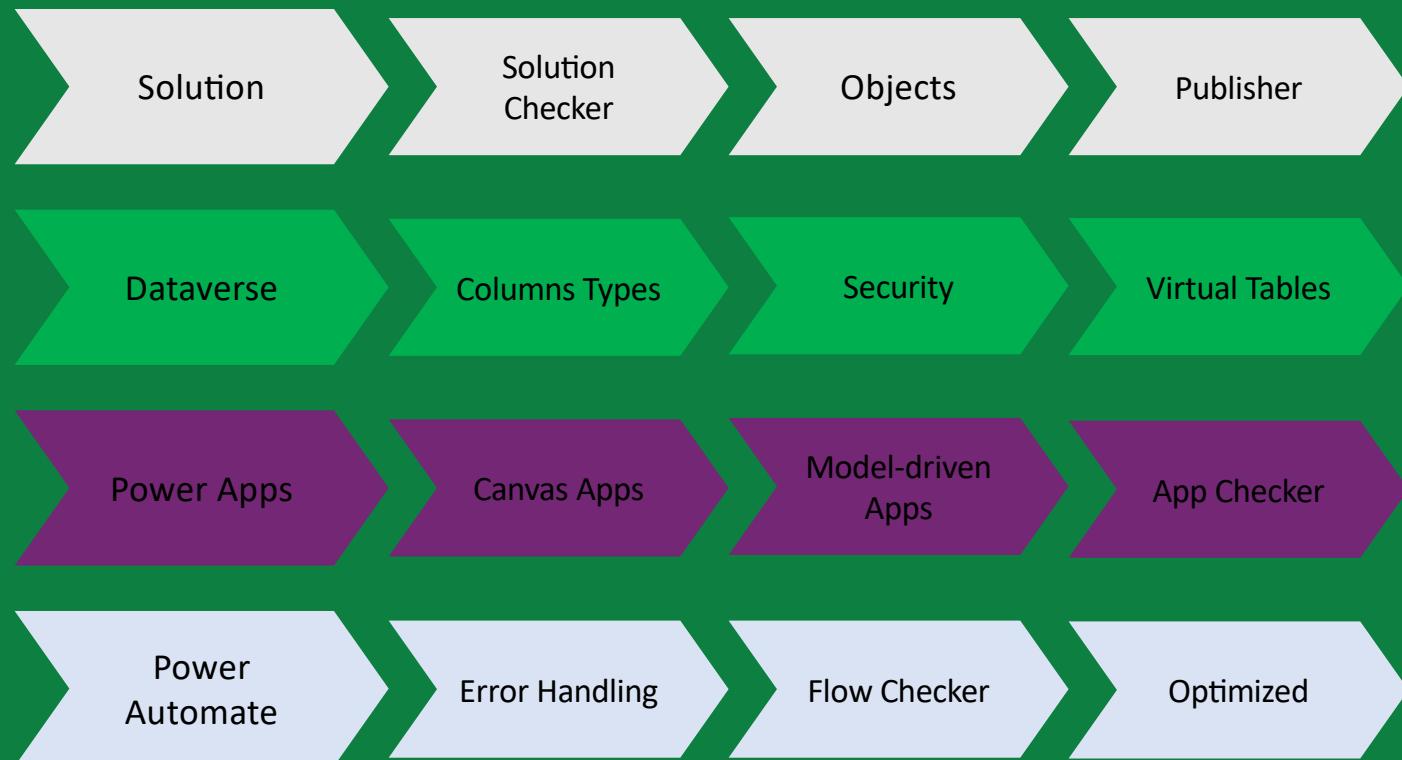
- **Performed by peers**
- **Usually before QA**
- **Quick checks/advice**
- **Feedback**



Building a Quality Assurance



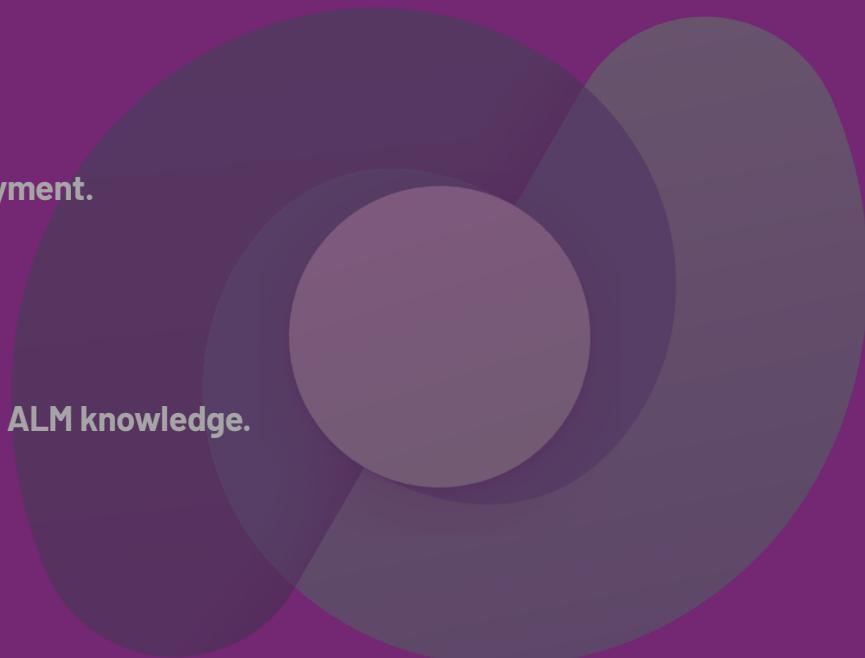
Building a Quality Assurance



Power Platform Pipelines



- ALM tool by in the Power Platform.
- Dynamics 365 application tool for cross environment deployment.
- Consists of a Model-Driven App for configuration.
- Simplified ALM process for makers to deploy with minimum ALM knowledge.
- Pipeline security role
- Built in Dataverse



Power Platform Pipelines



Deployment Artifacts Table



Deployment Environment Table



Deployment Pipelines Table



Deployment Stage Table



Deployment Stage Run Table



Deployment Stage Run Suboperations Table

ALM Accelerator



Deployment Environment Table



Deployment Profile Table



Deployment Request Table



Deployment Step Table

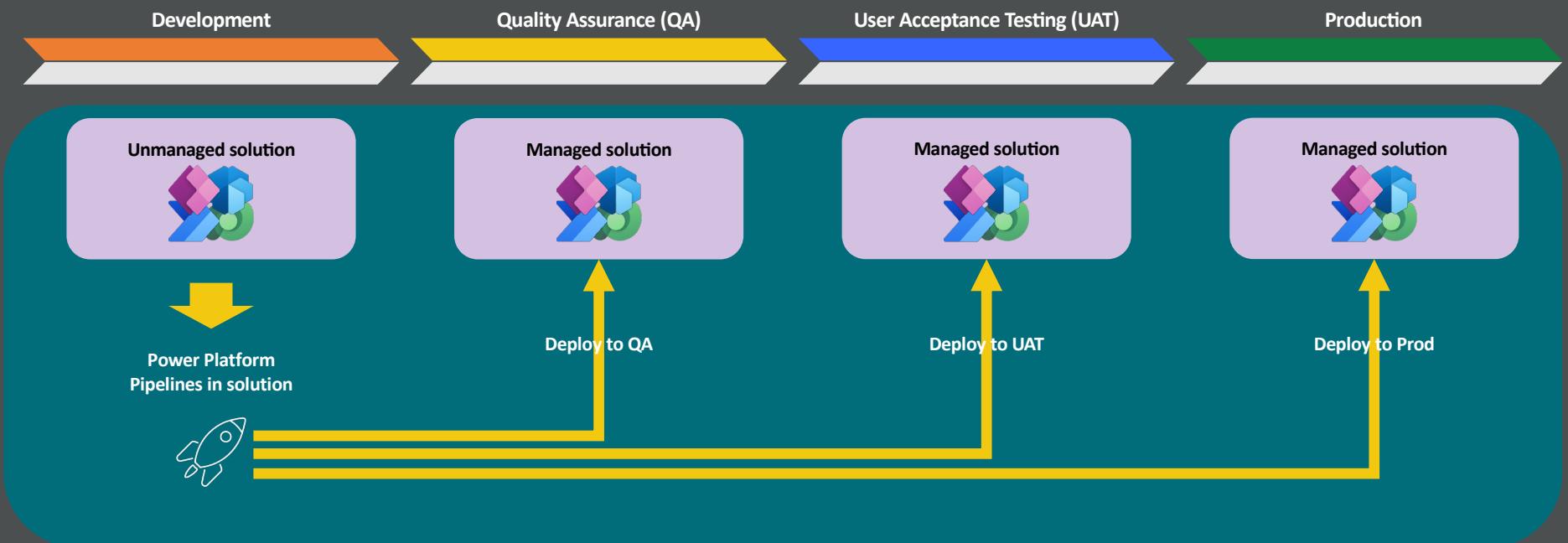


Deployment User Setting Table

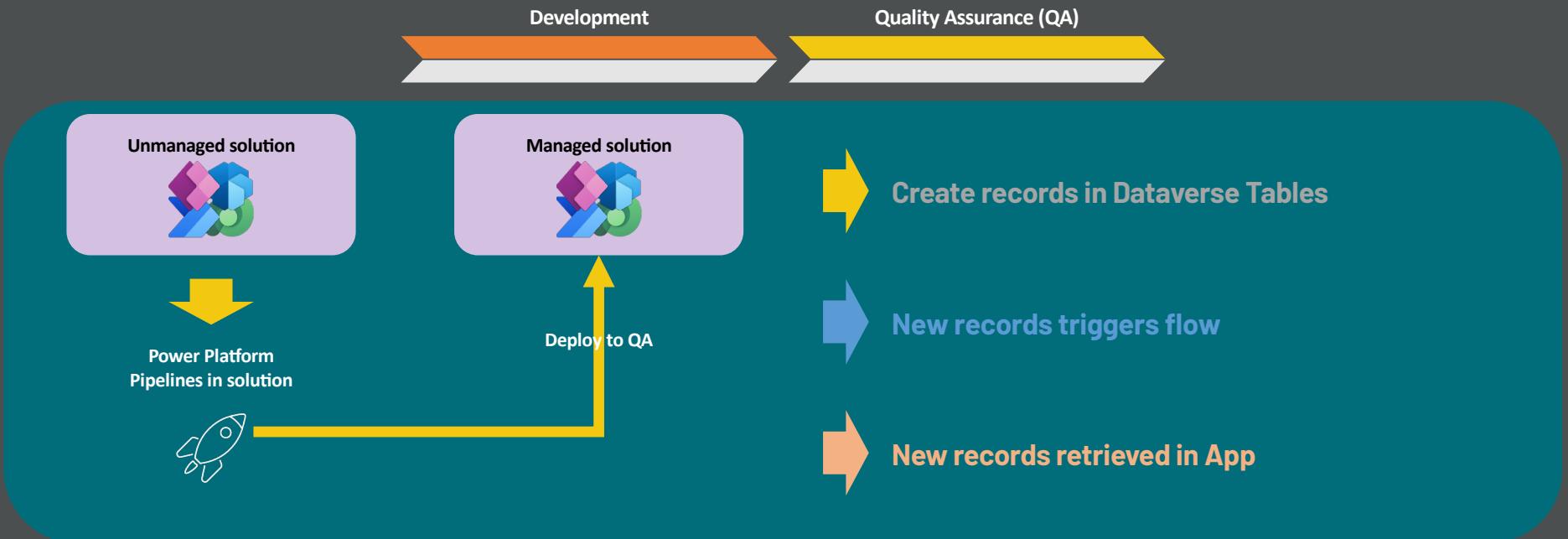


Release History Table

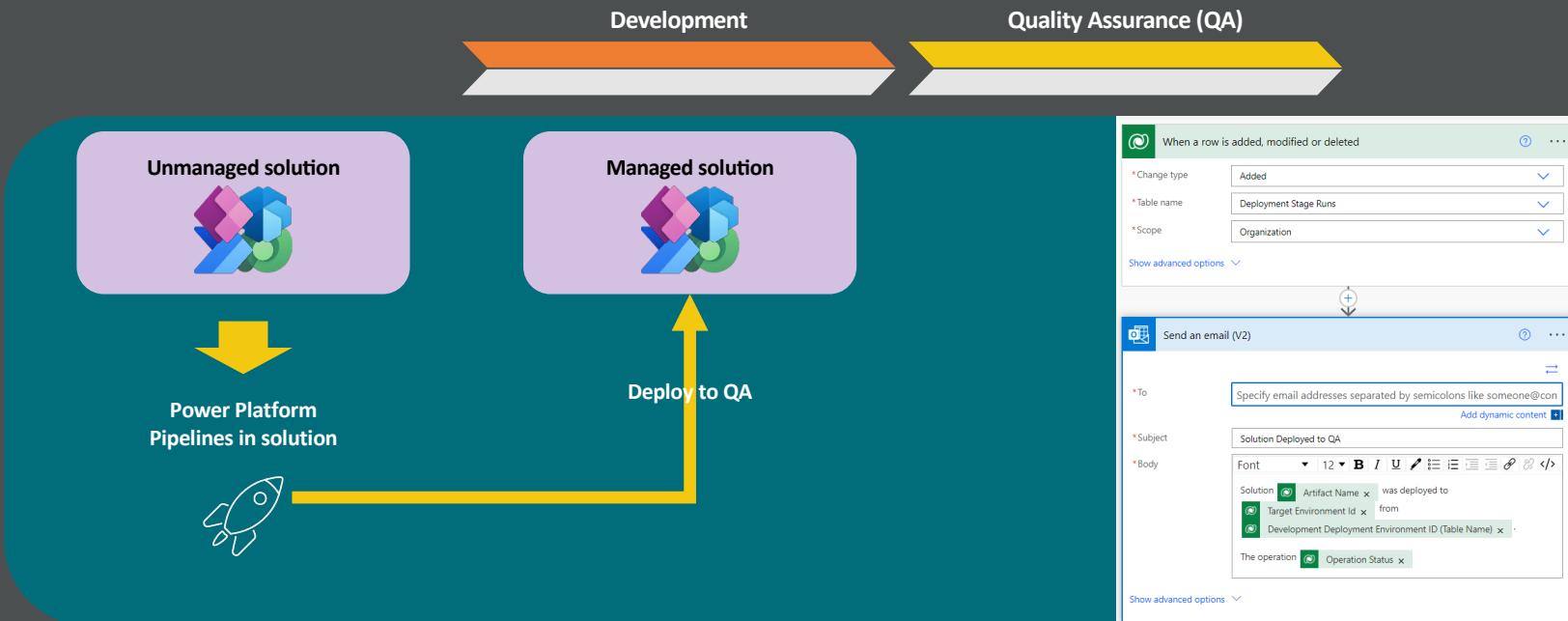
The Basic Process



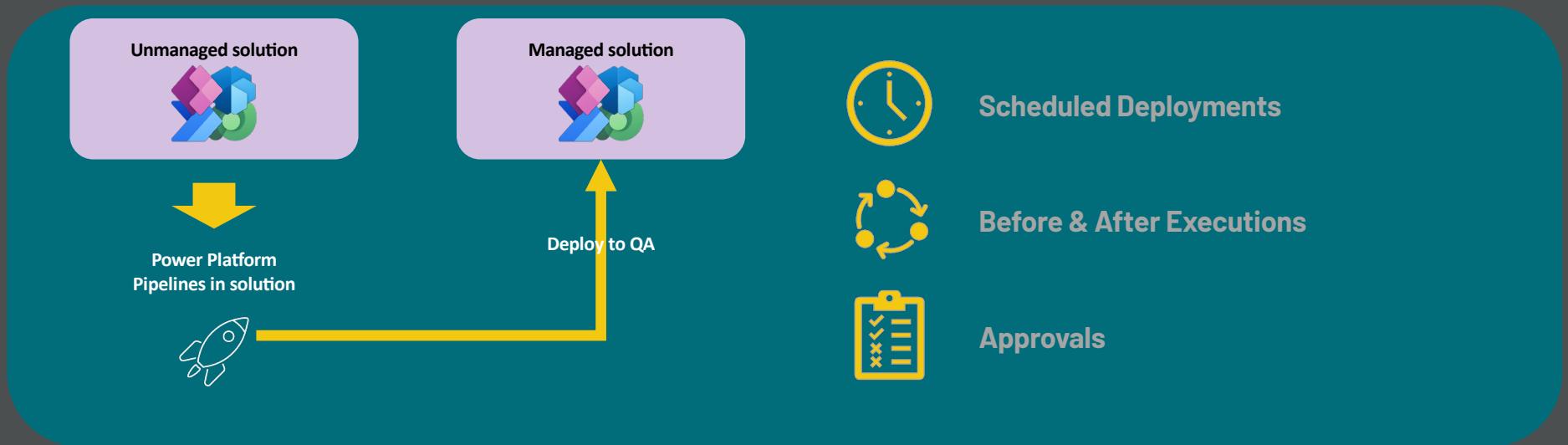
The Basic Process



The Basic Process



What's to come

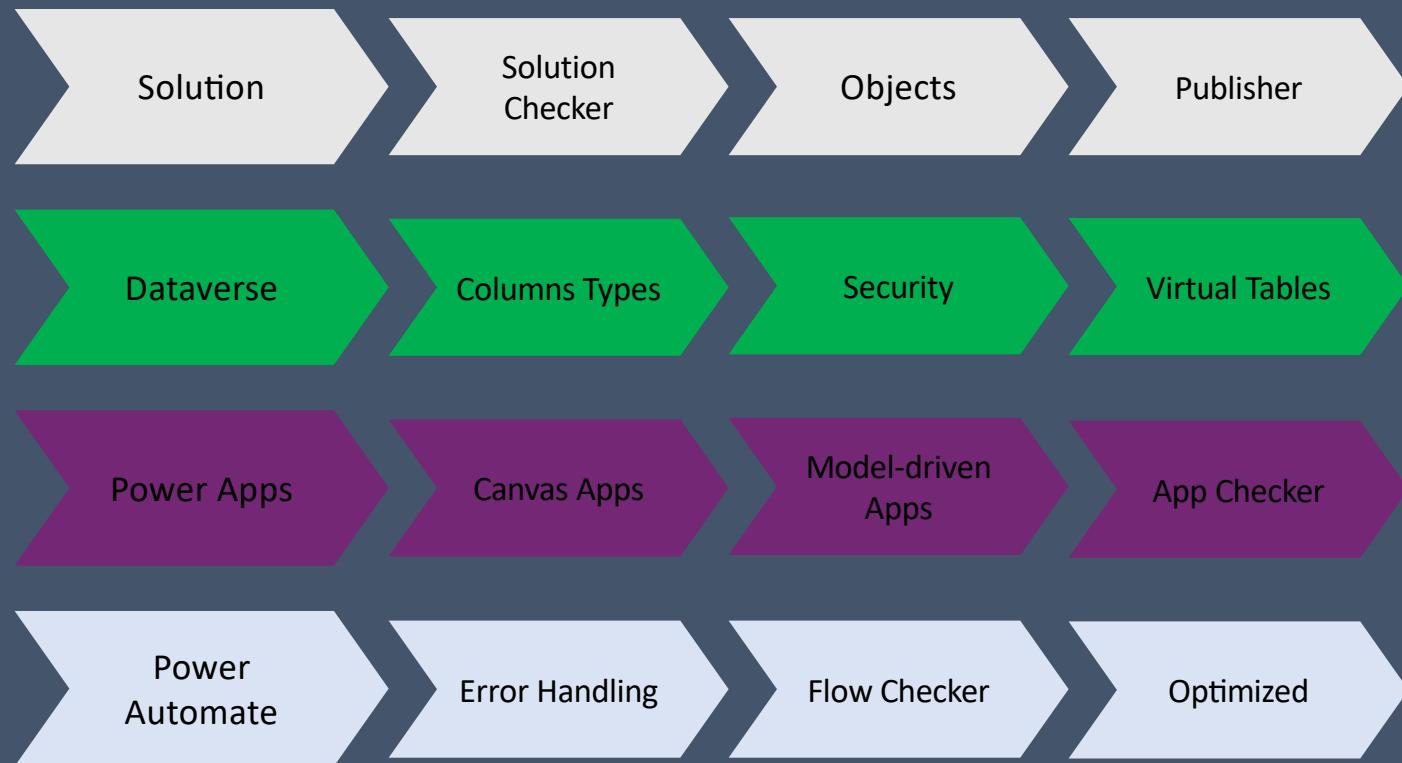


Yay, a demo



SQL

Building a Quality Assurance



The Build



QA Assessment Choices Table



QA Assessment Items Table



QA Assessment Details Table



QA Assessments Table



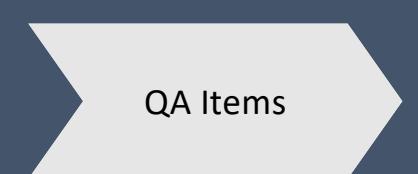
Deployment Environment Table



Deployment Stage Table



Deployment Stage Run Table



What's To Come

- Multiple QA Environments
- Assessment Notifications
- Additional Security
- ALM Accelerator Version
- Assessment Approvals
- Deployment Automation (with PPP extensibility)



Code Review Tool



My Inspection App Review Score: 71%

Code Review Checklist Can't find a review pattern? Add it here

Category	Description	Add comment	View Details	Status
Performance	Delegation Ensure ClearCollect and Filter operations are delegatable.		VIEW DETAILS	PASS ▾
Performance	Asset Optimization Review embedded asset compression/size optimization.	Remove unused image	VIEW DETAILS	FAIL ▾
Performance	App Settings flags Review app settings. Ensure Delayed Load and Explicit Column Selection is On.	Turn on the following flags: Formula-level prefetching, Enhanced performance for hidden controls and Use non-blocking OnStart rule	VIEW DETAILS	FAIL ▾
Performance	N+1 Database or API requests N+1 query often observed in galleries can trigger too many requests to servers. This happen when one or more controls within a gallery are bound to a LookUp/Filter operation on a data source.		VIEW DETAILS	PASS ▾
Performance	Nested Search, Filter or LookUp operations in formulas Consider changing nested filter such as Filter(Filter or Search(Filter ... to a single Filter. It would lead to a more compact/concise formula and perf improvement		VIEW DETAILS	PASS ▾
Performance	Use of Concurrent function Consider using concurrent function for parallel independent data request.	Consider re-arranging the order of certain calls so that u can make use of Concurrent call.	VIEW DETAILS	FAIL ▾
Performance	LookUp vs Filter Usage - First(Filter(...)) Consider using LookUp instead of First(Filter		VIEW DETAILS	PASS ▾
Performance	Control Optimization Ensure galleries are use for repeating UI control patterns. E.g Menus can be use galleries instead of copy pasting elements. Read-only DataCards can be simplified by using galleries.		VIEW DETAILS	PASS ▾
Performance	Patch Formula Optimization Ensure the 2nd parameter is not using a LookUp. Instead use ThisItem if in a gallery or { id: userId } whenever possible		VIEW DETAILS	PASS ▾



Code Review Tool



Power CAT

My Inspection Code Review

Code Viewer

17 reference(s)

All Screens TopCRs

Screen Dashboard → Control ReviewStatus_DB → Property OnChange

Search Data Source

- default.cds
- Repair Orders default.cds
- Locations default.cds
- Condition Report Pictures default.cds
- Environment Variable Definitions default.cds
- Environment Variable Values default.cds
- TopCRs CollectionDataSourceInfo
- CurrentCRs CollectionDataSourceInfo
- CRDetails CollectionDataSourceInfo
- CRDetailsVendor CollectionDataSourceInfo

```
Reset(FilterCR_D8);
Reset(GlobalCRSearch);
If(
SelectReviewStatus,
If(
IsBlank(ReviewStatus_DB.SelectedText.Value),
If(
IsBlank(CRStatus_DB.SelectedText.Value),
If(
CRStatus_DB.SelectedText.Value = CompleteExceptionText,
ClearCollect(
CurrentCRs,
Filter(
TopCRs,
'Review Status' = ReviewStatus_DB.Selected.Value And 'Status (new_conditionreportstatus)' = 'Status (Condition Reports)':'100000004'
)
),
ClearCollect(
CurrentCRs,
Filter(
TopCRs,
'Review Status' = ReviewStatus_DB.Selected.Value And 'Status (new_conditionreportstatus)' = CRStatus_DB.Selected.Value
)
)
),
ClearCollect(
CurrentCRs,
Filter(
TopCRs,
'Review Status' = ReviewStatus_DB.Selected.Value
)
)
)
```

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Code Review Tool

- Customizable checklist
- View on App Checker results
- Free search code reviewer
- Dataverse solutions or msapp upload
- Solution results

Code Review Tool



QNA





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Solution Download



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