Microsoft Power Platform

Power Platform Testing Strategy

Speaker Name
Title
Company
Other information

Agenda

- Overview – Why is this needed?
- Testing Approach
  - Focus and Approach
- Testing Strategy
  - Scope and Requirements
  - Key Test Types
  - Solution Lifecycle
- Test Execution
  - Cycles, Plans and Cases
  - Tracking Changes
  - Monitoring Execution
  - Examining Results

Why is testing important?

Why is testing important?

Execution rehearsals on mission critical business operations

Testing is imperative to a solution that is being deployed to production. Testing provides the quality checks and guarantees allowing organizations to avoid costly challenges.

Safety and Efficiency

Detection of defects as soon as possible in a systematic way.

Testing Approach

How to approach testing

Scope

A clear testing scope defined by your business processes and requirements.

Plan

Clarity to when, why, who, how and where to test.

Test Type

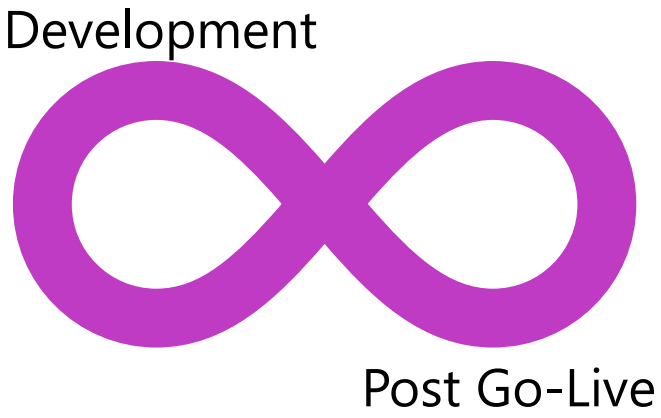
Clear objectives allowing you to monitor overall progress and pass/fail rates.

Testing Strategy

Strategy Overview

During development, the testing scope will increase as more and more features are added to the solution.

Post go-live, we focus on regression testing existing features.



Dynamics 365 Post Go-Live Maintenance Strategy

Solution Health

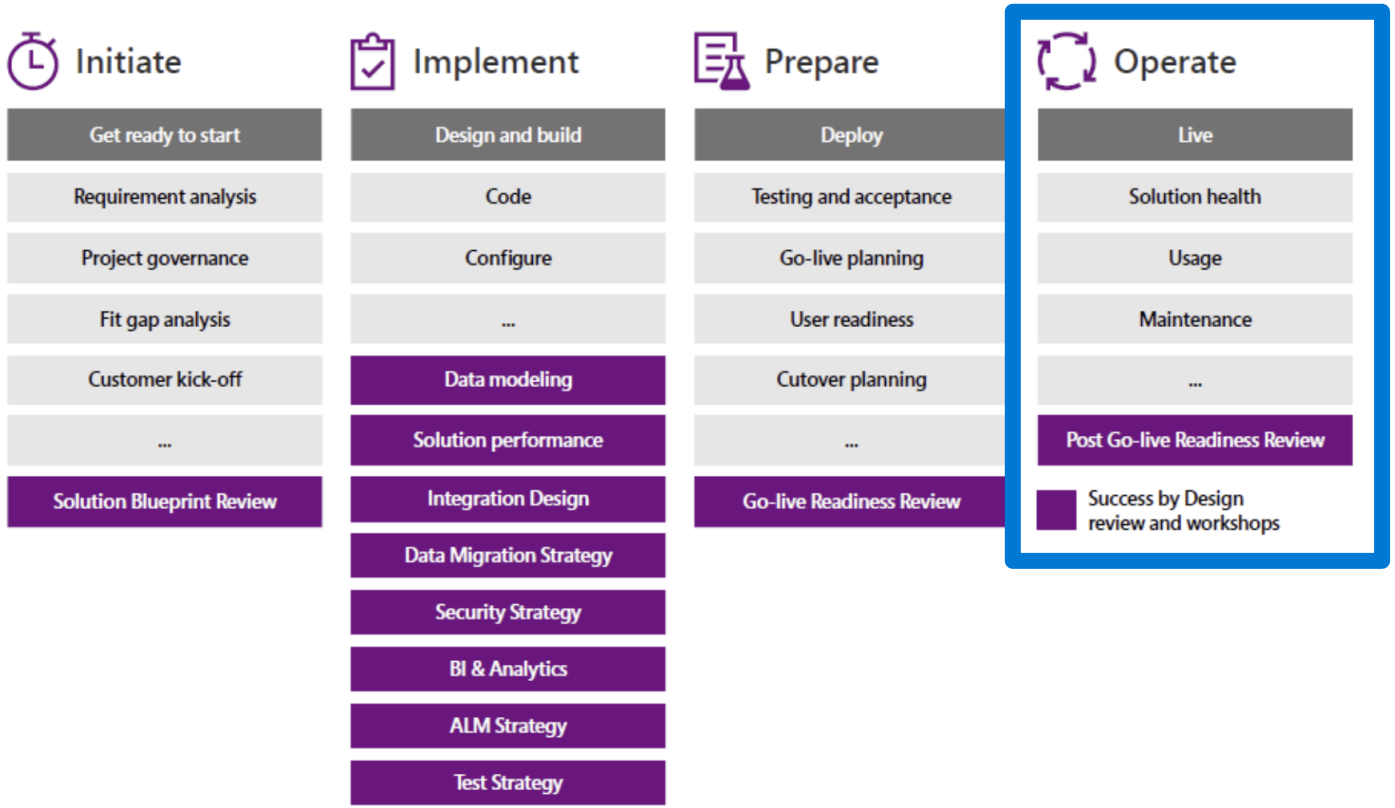
- FRE and early testing
- Functional testing

Usage

- Non-functional tests
- Feedback
- Assessments

Maintenance

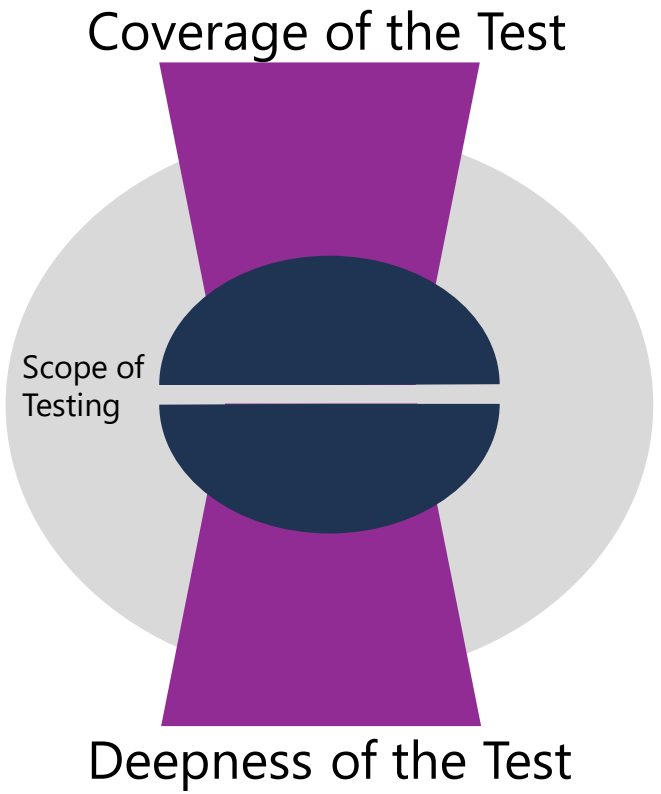
- Regression tests
- Code and Performance Review



Scope of Testing

Test Coverage: How much of your code is exercised by running the test.

Test Deepness: Depth and Detail related to the types of testing (*Edge, Key, Negative*)



Dynamics 365 Testing Strategy

Project Scope

Areas	Questions
Business Processes	What are the business processes in scope and how are they identified, prioritized and planned to be validated and not just a set of fit/gap requirements?
Business Requirements	What are the business processes in scope and how are they identified, prioritized and planned to be validated?
Design Requirements	How will the design level requirements be identified, prioritized, and validated across all the various design areas such as functional, integrations, reporting, etc?
Data	What are the data requirements for data migrations, for integrations and reporting and how is this validated?
Geography	How will the tests represent specific requirements related to language, regulations, etc?
High Risk Areas	Which areas of the platform need special attention?

Business Processes Testing Strategy

What are the business processes in scope and how are they identified, prioritized and planned to be validated and not just a set of fit/gap requirements?

Solution Blueprint Review Test Plan Strategy

Have you defined the test strategy?

Who is responsible for testing the solution?

Who will create the test scripts?

Solution Blueprint Review Test Plan Strategy Review

Per the discussions, while test scripts are being written by the QA teams, there are validation steps in place to ensure the business/process owners have vetted the test scripts to ensure accuracy and thoroughness.

- Test scripts have been created for each requirement captured and those test scripts, written by the QA engineers, have been validated by the respective stakeholders from the business team.

Additional scripts have been created for each individual process and for the end-to-end process that connects one or more individual processes.

Solution Blueprint Review Test Execution Strategy Review

How are test executions tracked?

How are bugs and issues related to failed test executions tracked?

Test Execution

Types of Tests

Automated Test Tool	Test Type	Purpose
	Unit - PCF	It is done by developers and is the lowest level component of the testing. In this test type, the developer verifies the requirements, validates the function, improves the code design, and finds and fixes defects.
	Unit - JS	It is done by developers and is the lowest level component of the testing. In this test type, the developer verifies the requirements, validates the function, improves the code design, and finds and fixes defects.
	Unit - Plugin	It is done by developers and is the lowest level component of the testing. In this test type, the developer verifies the requirements, validates the function, improves the code design, and finds and fixes defects.
	Functional	Verify the configurations of the solution or any custom code being released by the developers. The primary objective is to validate the design as per the requirements.
	Process	The objective is to verify that the solution allows us to operate business scenarios, and the testing needs to be done in a test environment.
	End to End	Run this test with a full set of migrated data from legacy systems. Migrated data is likely to present data patterns that have not been accounted for in demo or test data. This test is key to validating the entire solution works in conjunction with other systems that are part of the business, and testing is done by having role-based access control enabled so it validates a real end-to-end test.

Types of Tests

Automated Test Tool	Test Type	Purpose
	User Acceptance	This test is manually executed, never automated. It is executed with customer data, including migrated data, and with the latest solution version. This test is the closest to being like running live operations, it is an actual business operation simulation. The objective is obtaining business sign-off of the solution, collecting end user feedback, helping to manage organizational change, and it is done in a dedicated and integrated test environment.
	Regression	A regression test should be conducted whenever you have changes in the code, or any configuration or new solution pattern that can impact different processes. This test type is done by testers, developers, and end users.
	Non Functional	The objective of this test is to ensure the solution performs while focusing on critical processes that require scaling with load and growth. Not all the processes are involved in this test.
	Code Analysis	
	Code Coverage	

Solution Blueprint Review Test Execution Strategy

How are you regression testing?

How are you conducting exploratory testing?

Solution Blueprint Review Test Execution Strategy

How are you maintaining existing tests?

Are you removing tests that are no longer relevant?

Solution Blueprint Review Test Execution Strategy

How many Valuestreams do you currently test in UAT?

How do you verify that the test environment data and configuration is ready and available?

How do you collect feedback from the UAT testers?

Solution Blueprint Review Test Execution Strategy

How are you monitoring your test results?

Are you capturing artifacts (screenshots, recordings, notes, etc) from each test?

Microsoft Power Platform

Thank you

Speaker name
Contact information