

# Testing Methodology

## Pricing Data Lake Testing Approach

Price Optimization Tool for Navecare

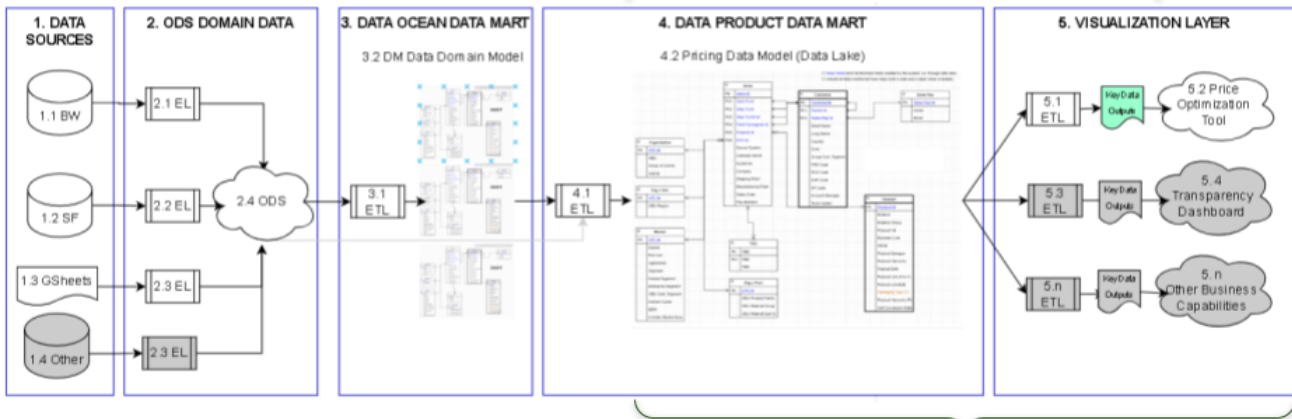


### Q3 - Unit Testing

1. Data Consistency across the flow
2. Data Completeness vs. Requirements
3. Distinct Values Recon vs. Key Data Output (prod data)

### Q4 - E2E Integration Testing

1. Key Data Output Detailed Recon (prod data)
  - a. Gap Explanation
  - b. Transformation Rules Accuracy



### Q4 - UAT

1. Key Data Output Quality
2. E2E Data Fitness & Accuracy

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Testing R&R	A) From Source to Data Lake	B) From Data Lake to Key Data Output	C) Key Data Output	D) Tool or Visualization Layer
<b>Data Architects</b>	<b>Prerequisite:</b> Complete mapping between data model and requirements	<b>Prerequisite:</b> Complete mapping of Transformation Rules Implementation	Support Pricing Analysts	-
<b>Data Engineers</b>	<ol style="list-style-type: none"> <li>1) Data Completeness</li> <li>2) Data Consistency</li> <li>3) Data Uniqueness</li> <li>4) Data Timeliness</li> </ol>	<b>Prerequisite:</b> Data Refresh with Production Data  Supports Squads Analysts	Support Pricing Analysts	-
<b>Squad Analysts</b>	<ol style="list-style-type: none"> <li>1) Requirements Matching Check</li> <li>1) Distinct Values Check</li> </ol>	<ol style="list-style-type: none"> <li>1) Data Accuracy</li> <li>2) Data Validity</li> <li>3) Transformation Rules Suitability</li> </ol>	Support Pricing Analysts	-
<b>Pricing Analysts</b>	-	[Transparency Dashboard Team]: <b>Prerequisite:</b> KDO Sample Refresh Production Data  Data Model Validation	[Price Optimization Tool Team]: <ol style="list-style-type: none"> <li>1) Data Accuracy</li> <li>2) Data Validity</li> </ol>	[Price Optimization Tool Team]: <ol style="list-style-type: none"> <li>1) Data Use or Visualization Validation</li> </ol>

# Testing Roles & Responsibilities



Testing Phase	Unit Test	Integration Test	User Acceptance Test
Environment	DEV	TEST	TEST
Prerequisites	<ul style="list-style-type: none"> <li>Acceptance Criteria are defined in the user story by the BA</li> </ul>	<ul style="list-style-type: none"> <li>The Data Engineer has signed off on their unit test</li> <li>The data model is available in the TEST environment</li> <li>The data has been refreshed with relatively recent PROD data</li> </ul>	<ul style="list-style-type: none"> <li>The Functional Analyst of the Data Squad has signed off on integration test</li> <li>The dataset is available in TEST and the dataset is described in the Catalog</li> </ul>
Key areas To test	<ul style="list-style-type: none"> <li>Data consistency across the flow</li> <li>Data completeness: confirm all columns are filled (non null values)</li> <li>Data uniqueness: no duplicate lines per primary key definitions</li> <li>Confirm number of records is in line with expected order of magnitude</li> </ul>	<ul style="list-style-type: none"> <li>Check distinct values between what's in the data lake and the KDO</li> <li>Check if calculations and other transformations are in line with agreed formulas and specifications</li> <li>The Data Squad is not expected to test integration with the final applications (e.g. Qlik, Optimization)</li> </ul>	<ul style="list-style-type: none"> <li>The Application BA is not expected to check if data is being refreshed correctly - they take the dataset "asis"</li> </ul>

Note: after testing by the Data Lake and Application Squads is completed, the Data Operations team confirms if data loads can be correctly operationalized. This test takes place in PRE-PROD.