



# **Oracle Retail Predictive Application Server**

**Whitepaper**

**By Quickborn Consulting LLC**

## Preface

This document describes the RPAS platform, its structure, best use and consequent advantages over other business solutions such as Excel.

### **About Quickborn Consulting:**

Quickborn Consulting is a provider of business consulting, IT systems integration, solutions development and support services for the global retail industry. The company supports retailers on their business and IT transformation programs to improve their performance and increase their competitiveness. Quickborn Consulting has local presence in USA, France, Germany, Hungary, India and Ireland, and is present globally through its international network. Read more about Quickborn Consulting at: [www.quickbornconsulting.com](http://www.quickbornconsulting.com)

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## What is RPAS

The Retail Predictive Application Server serves as a foundation for multiple planning and optimization applications as Oracle's Merchandise Financial Planning, Retail Demand Forecasting, Item Planning or any custom configured solution. RPAS supplies a multi-dimensional database platform and calculation engine for the configured solutions.

The key features of a multi-dimensional database:

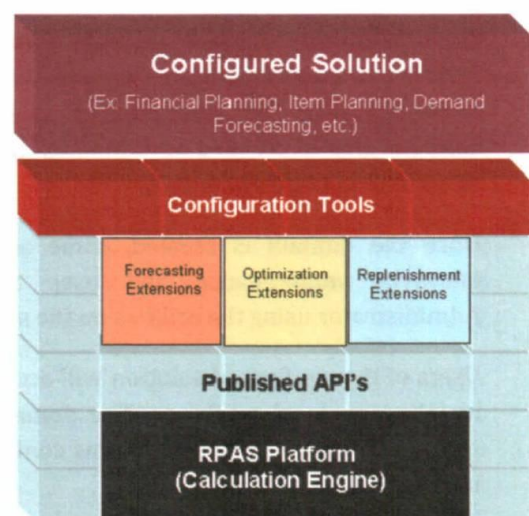
- The number of dimensions and positions can be immediately determined
- Supports the ability to Aggregate and Spread data
- Greatly speeds data analysis and retrieval by eliminating need to search each individual record in a relational database
- Allows for "slicing and dicing" of data

The calculation engine allows RPAS to calculate data using specified rules aggregate and spread down data along the dimensions of the different hierarchies. This is only done when the data is displayed.

## RPAS Architecture

The RPAS architecture consists of below components:

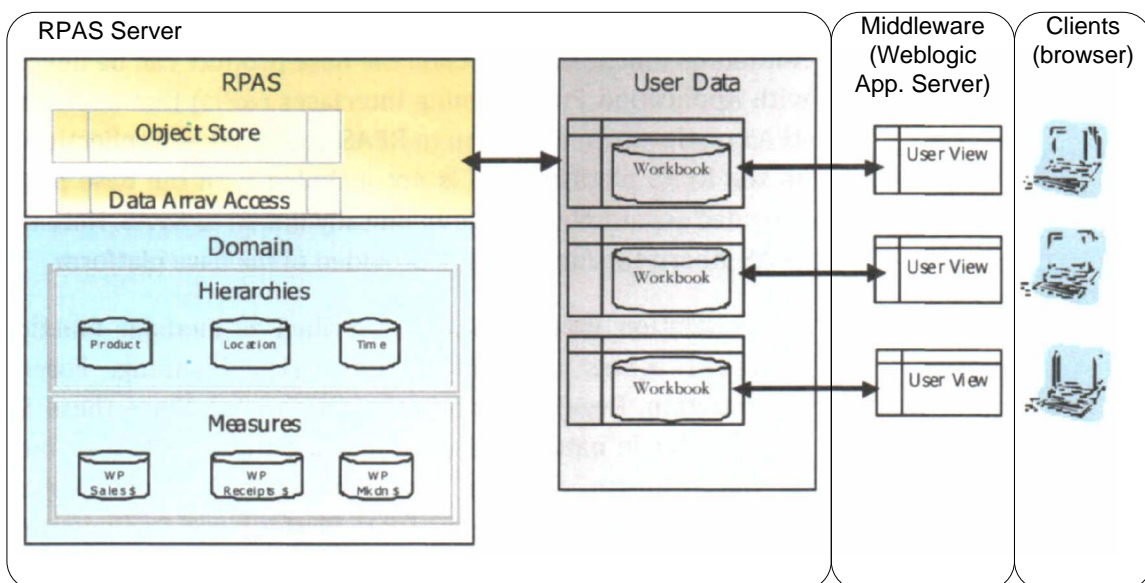
- RPAS platform:
  - Multidimensional database
  - Application server (contains calculation engine, workbook infrastructure, standard functions, command line utilities)
- Application and custom solutions (optionally with custom extensions to standard functions).
- Configuration tool: Graphical tool for configuring solutions to support specific business needs.
- Configured Solution:
  - Business process workflow
  - Hierarchies, measures and rules
  - User interface
  - Shared database



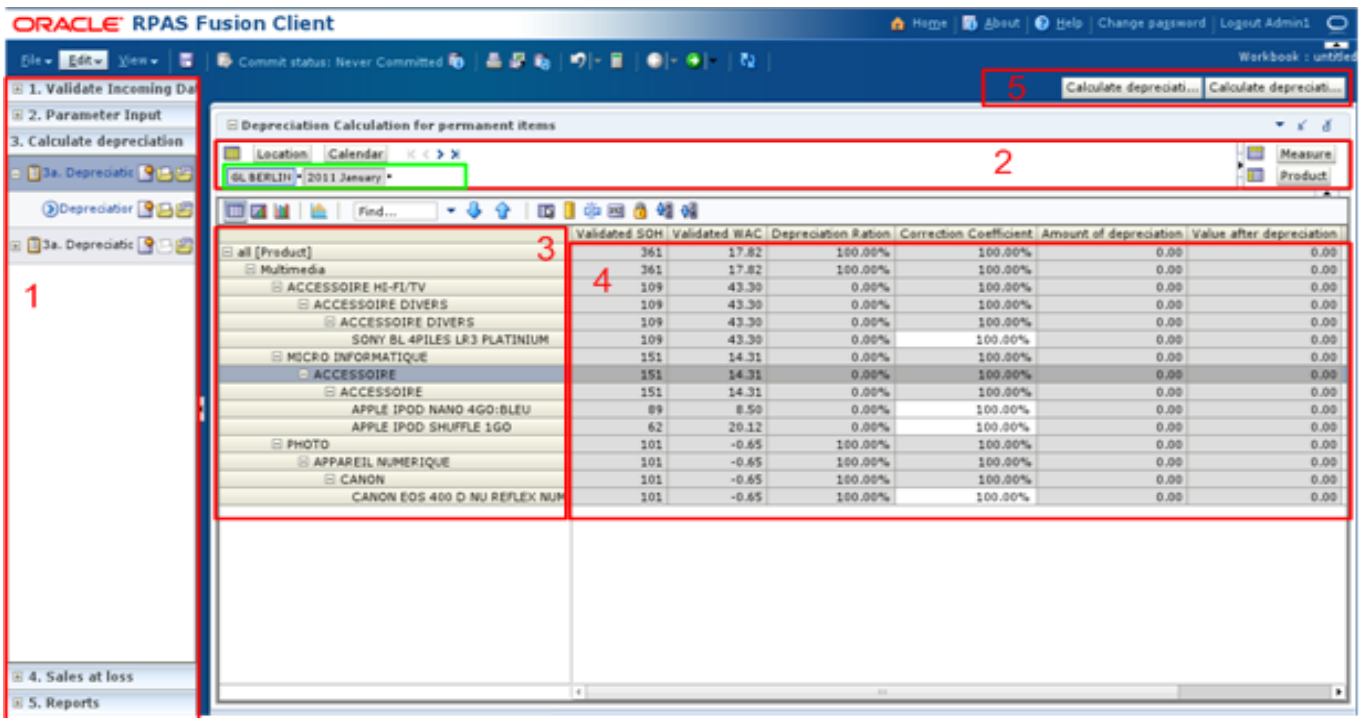
## RPAS Operational Architecture

A RPAS Domain is the collection of server-side directories and files containing data and procedures for the RPAS solution. A domain is built using the Configuration containing the business process and hierarchies and measure data. All data, including user workbooks are stored on the server in the domain.

The built domain stores data in two separate logical locations, the master database contains the full set of data in the domain. When a user establishes a workbook a copy of a subset of data is transferred to the user's own space. This way multiple users can be working on the same subset of data, without restricting access to it. The calculations and planning done by a user on a workbook is not reflected in the domain's master database until the workbook is committed. Also a saved workbook will only contain data input/calculated by the user and data that were in the master database at the time of the workbook creation, to update the data in the workbook it can be refreshed. Rules can be specified to define which measures should be committed to the master database or queried when a refresh command is executed.



Users can access the domain using thin (Fusion Client) or thick (Classic Client) GUI client. A workbook on the GUI is a multidimensional view of the data. Where the axes can be moved and swapped and the displayed level of the hierarchies can be changed. This can be done dynamically by any user on the GUI, there is no need to modify the configuration. Aggregation and spreading of data is redone on the fly when rearranging the axes.



The screenshot shows the Oracle RPAS Fusion Client interface for a depreciation calculation. The interface is divided into several sections:

- 1. Taskflow:** A vertical list on the left side showing steps: 1. Validate Incoming Data, 2. Parameter Input, 3. Calculate depreciation, 4. Sales at loss, and 5. Reports.
- 2. Parameter Input:** A top section with fields for 'Location' (set to 'BL BERLIN') and 'Calendar' (set to '2011 January').
- 3. Product Hierarchy:** A tree view on the left showing product levels: all (Product), Multimedia, ACCESSOIRE HI-FI/TV, ACCESSOIRE DIVERS, MICRO INFORMATIQUE, ACCESSOIRE, PHOTO, and APPAREIL NUMERIQUE.
- 4. Data Table:** A table with columns: Validated SOH, Validated WAC, Depreciation Ration, Correction Coefficient, Amount of depreciation, and Value after depreciation. It lists various product categories and their corresponding values.
- 5. Custom Menu Buttons:** Two 'Calculate depreciat...' buttons located in the top right corner of the main window.

Legend:

1. Taskflow: Contains the steps of the planning business process (the workbook templates for the steps).
2. Area for rearranging axes. On this example there are two hierarchies (location, calendar) on the 'Z' axis. The current position on the 'Z' axis is shown in the green marked area. The level in each hierarchy can also be changed here.
3. The 'Y' axis showing multiple levels of the hierarchy
4. The data in the workbook. On higher levels of the product hierarchy the data is aggregated from the levels below.
5. Custom menu buttons for specific planning tasks