



POS Revenue Assurance

12-10-2024

Agenda

Review of Business Requirements

- ❖ Summary of key points and action items from the last meeting

Current State of POS Revenue

- ❖ Presentation of current revenue metrics
- ❖ Comparison with previous periods

Identifying Revenue Leakages

- ❖ Discussion on common areas of revenue loss
- ❖ Case studies or examples of identified leakages

Strategies for Revenue Assurance

- ❖ Overview of proposed strategies to mitigate leakages
- ❖ Technology solutions and tools for monitoring revenue.

Implementation Plans

- ❖ Timeline for implementing revenue assurance strategies
- ❖ Assignment of responsibilities among team members

Project plan and Action Items

- ❖ Summary of key takeaways
- ❖ Assigning action items with deadlines



RA Summary

All the shopping centres, Malls and airports, and highways operators are faced a common challenge, they unable to track stores sales accuracy from retailers in real time while providing comprehensive visibility into their retail operations.

The goal of revenue safeguard was to enhance their retail management capabilities without the need to replace or upgrading their existing applications or infrastructure.

With our search and customer needs we have developed a solution that met these criteria, for Airports, Mall shopping centres, Highways etc., found their answer in Revenue safeguard system – is an advanced automated reporting solution specifically designed for retailers, Airport and shopping malls environments to safeguard revenue.

Revenue safeguard solution is the way for shopping centres, mall and airport and highways, handled their sales data. By implementing and automating the data capture process, Revenue safeguard provided a simple and meaningful and analytical approach that ensured consistent and real-time sales data collection.



Cont. RA Summary

This automation was important in eliminating manual errors, Influencing and inefficiencies, which often plagued traditional reporting methods .The Revenue Safeguard solution offered a web portal, which allowed the shopping centres , Malls , airports to easily access, analyze, and interpret their sales data. This user-friendly interface empowered the mall, shopping centres , airports and highways operators to gain valuable insights into their retail, hospitality operations. They could track, analysis the real-time sales, monitor store performance, and make informed decisions based on up-to-date information.

With Revenue safeguard solution, the shopping centres achieved their goal of Retail sales Intelligence. This advancement led to significant improvements in operational efficiency by reducing the cycle time for data reporting and accelerating the realization of revenue.

As a result, Operators experienced real time sales realization and enhanced cash flow and overall financial performance.

In summary, Revenue safeguard solution enabled seamlessly integrate, advanced data tracking into their existing systems, ultimately leading to better decision-making, increased operational efficiency, and a stronger financial position.



Key Features

- ❖ Database Integration: Effortlessly connects with existing databases for streamlined data management.
- ❖ Automated Data Capture: Minimizes manual entry errors, enhancing operational efficiency.
- ❖ Near Real-Time Reporting: Offers timely sales reports to boost efficiency and decision-making.
- ❖ Consistent Data Flow: Ensures reliable data transfer for uninterrupted operations.
- ❖ Guaranteed Accuracy: Delivers precise data for confident reporting and analysis.
- ❖ Facilitates timely billing to retailers based on revenue sharing.
- ❖ Monitors performance metrics for the entire shopping center and individual retailers.
- ❖ Enhances customer engagement and loyalty analysis when integrated with footfall systems.
- ❖ Seamless POS integration supports invoicing and ERP connectivity.
- ❖ Provides retailers with the flexibility to choose their preferred POS software.
- ❖ Available as a CAPEX-free solution on a SaaS model with managed services.
- ❖ Zero integration hassles ensure a smooth implementation process.



Overall Description

Product Perspective

- ❖ The POS data integration application is a standalone system that will integrate with various vendor POS systems and provide a unified data repository for analytical purposes.

Product Functions

- ❖ Integrate data from multiple vendor POS systems.
- ❖ Store integrated data in a NoSQL MongoDB database.
- ❖ Clean and transform data using an ETL pipeline.
- ❖ Persist cleaned data in a relational database.
- ❖ Provide a web-based interface for data management and monitoring.

User Interfaces

- ❖ The web-based interface shall allow users to manage and monitor integrated data and map it with any opensource analytical tool.

Functional Requirements

- ❖ The system shall integrate data from multiple vendor POS systems into a single NoSQL MongoDB database.
- ❖ ETL Pipeline:
- ❖ The system shall clean and transform the integrated data.
- ❖ The system shall persist the cleaned data in a relational database.
- ❖ The system shall provide a web-based interface for managing and monitoring data integration processes.

Non-Functional Requirements

- ❖ The system shall process data integration tasks within a specified time frame (timeframe can be in minutes and hours).
- ❖ The system shall encrypt data at rest and in transit.
- ❖ The system shall implement user authentication and authorization.
- ❖ The system shall scale to handle increasing amounts of data and users.

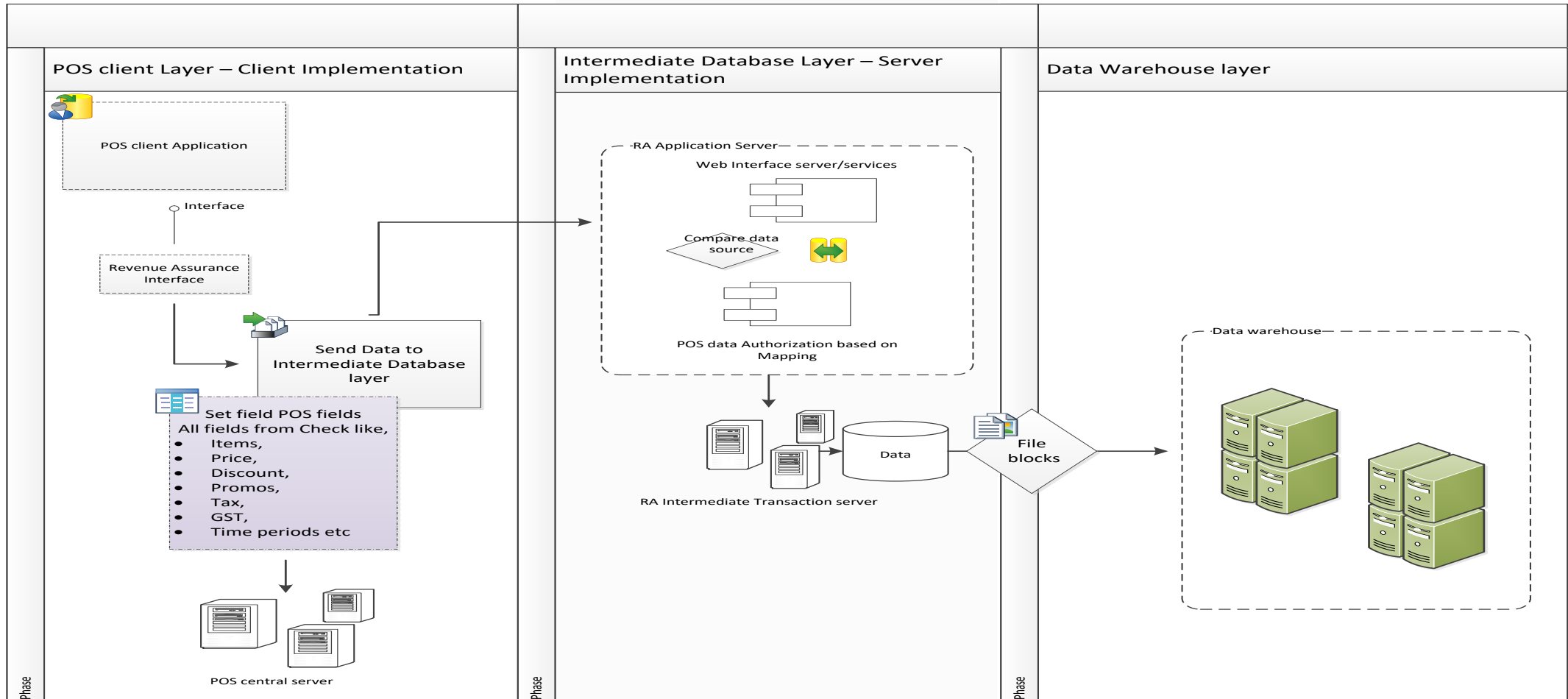


Overview of data patterns and trends

- ❖ Comprehensive brand overview.
 - ❖ Yearly sales performance assessment.
 - ❖ Sales comparisons with month-to-date figures and variance tracking.
 - ❖ Monthly performance evaluation.
 - ❖ Weekly sales reviews.
 - ❖ Growth analysis.
 - ❖ Trading density assessment
- ❖ Time Series Analysis
 - ❖ Campaign Performance Evaluation
 - ❖ Holiday Impact Assessment
 - ❖ Weekend Sales AnalysisSales
 - ❖ Moving Annual Total (MAT)
 - ❖ Trade Revenue Contribution Analysis
- ❖ Filter options by Trade Category and Subcategory.
 - ❖ Annual Sales Performance.
 - ❖ Year-over-Year sales analysis with month-to-date and year-to-date variance comparisons.
 - ❖ Month-over-Month performance evaluation.
 - ❖ Weekly sales analysis.
 - ❖ Growth assessment.
 - ❖ Trading density metrics.
 - ❖ Top 5 gainers and losers based on growth and sales.
- ❖ Summary of key findings and trends.
 - ❖ Overview of data patterns and anomalies.
 - ❖ Highlights of performance metrics.
 - ❖ Actionable recommendations based on analysis.
 - ❖ Implications for future strategies.
 - ❖ Sales summaries Daily, monthly , item wise , promotion etc.



Application Architecture





Sample Data Set

STORE_CODE	STORE_DISPLAY_NAME	TRANS_DATE	TRANS_TIME	TRANS_NO	TILL_NO	DISCOUNT_HEADER	TAX_HEADER	NET_SALES_HEADER_VALUES	quantity	TRANS_TYPE	ID_KEY	TENDER	DM_LOAD_DATE	DM_LOAD_DELTA_ID	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:08:28	00IDB-1000021978	POS2	0	0	910	1	0	1398249674	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:09:53	00IDB-1000021980	POS2	0	0	925	1	0	1398249675	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:28:15	00IDB-1000021981	POS2	0	0	925	1	0	1398249677	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:33:03	00IDB-2000167566	POS3	0	0	0	1	0	1398251548	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:33:48	00IDB-2000167567	POS3	0	0	0	1	0	1398251549	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:35:36	00IDB-1000021983	POS2	0	0	920	1	0	1398249678	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:37:34	00IDB-1000021984	POS2	0	0	925	1	0	1398249679	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:44:22	00IDB-2000167570	POS3	0	0	910	1	0	1398251550	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:50:52	00IDB-2000167571	POS3	0	0	920	1	0	1398251551	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	0:56:18	0DBLR-3000073250	POS4	0	0	925	1	0	1398270168	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	1:05:40	00IDB-2000167573	POS3	0	0	910	1	0	1398251552	NULL	38:00.6	6883	
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BIAL0128	TFS BLR Lounge-East Pier	9/13/24	1:10:36	00IDB-2000167575	POS3	0	0	910	1	0	1398251554	NULL	38:00.6	6883	
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BIAL0128	TFS BLR Lounge-East Pier	9/13/24	1:18:33	00IDB-1000021986	POS2	0	0	920	1	0	1398249680	NULL	38:00.6	6883	
BIAL0128	TFS BLR Lounge-East Pier	9/13/24	1:22:03	00IDB-1000021987	POS2	0	0	925	1	0	1398249681	NULL	38:00.6	6883	
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BIAL0128	TFS BLR Lounge-East Pier	9/13/24	1:24:18	00IDB-2000167578	POS3	0	0	0	1	0	1398251557	NULL	38:00.6	6883	
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BIAL0128	TFS BLR Lounge-East Pier	9/13/24	1:28:49	00IDB-2000167581	POS3	0	0	925	1	0	1398251560	NULL	38:00.6	6883	
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BIAL0128	TFS BLR Lounge-East Pier	9/13/24	1:32:29	00IDB-2000167584	POS3	0	0	910	1	0	1398251563	NULL	38:00.6	6883	



AI Analytic System approach

The Importance of Data Analytics in Revenue Assurance

All businesses are data driven and customer centric with complex financial structures, data analytics is crucial for ensuring revenue integrity. By using sales data, and artificial intelligence (AI), companies can understand entire shopping, center, airport revenue and strengthen their revenue streams and prevent financial losses.

Understanding Data Analytics in Revenue Assurance

Data analytics works in revenue assurance, detailing the processes involved, the types of data used, The impact of new technologies. A solid understanding of these analytics helps businesses manage their revenue more effectively.



Benefits of Revenue Assurance

Significantly enhances revenue assurance

It analyzes past data patterns to spot irregularities before they become serious problems. This technology can detect billing errors and fraudulent activities, constantly improving its effectiveness.

RA – Helps to understand sales trends

RA goes beyond traditional analysis by predicting current and future trends and recommending strategies, can analyze item sales, identify inconsistencies, and suggest improvements. This proactive approach allows businesses to anticipate challenges rather than just react to them.



The Process of Data Analytics in Revenue Assurance

Identifying Data Sources:

Businesses collect data from customer transactions, billing records, and external datasets, which helps them understand their revenue streams.

Data Preprocessing and Cleaning:

This step ensures data accuracy by fixing inconsistencies and standardizing formats. Clean data is crucial for reliable analysis.

Abnormal Detection:

By using RA interface POS sale and Revenue assurance comparison with business sales can spot unexpected changes that may indicate revenue loss or fraud, allowing for quick action.

Predictive Modeling:

This technique forecasts future trends based on historical data, helping businesses prepare for potential issues.

Real-Time Monitoring:

Continuous monitoring of transactions enables businesses to detect problems immediately, helping to maintain financial integrity.



POS DSR Field

I am waiting for DRS report



Key Project Updates

Q1	Q2	Q3	Q4



New 2025 Initiatives

Future plans on product enhancements and upgrade

- Fraud Detection System
- Contract and agreement Management
- AI analytics
- Sales Budget vs sales Forecasting
- Revenue Optimization

Aspirations

WHAT IS YOUR BIG IDEA
FOR THE COMING YEAR?

TO MAKE THIS
APPLICATION SUCCESSFUL
FOR



Thank you