Closed Loop Marketing : Operational Predictive Analytics – Pharmaceutical Case Study

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Overview

Customer analytics, campaign management, and for some even Closed Loop Marketing have been a reality for years. Industry leaders in health and life sciences are now using their datawarehouse, analytics and campaign management systems to operationalize predictive analytics. This is the ultimate end-state of closed loop marketing – a company using its breadth and depth of information to predict behavior and, automatically, respond to that behavior. This case study features a large pharmaceutical company and the end-state look at a closed loop marketing system.

What is Operational Analytics?

- Leveraging **real-time** events and **analysis** information to enhance sales, marketing and operations activity and customer satisfaction
  - Right offer, right channel, right time
  - Marrying customer's normal activity with current events
  - Predicting behavior, trends and outcomes and having the SYSTEM act on it

What it's not:

- *CRM application – rather, it's an emerging sub-set in that segment*
- *Process that is beyond the technology capability*

Examples of Operational Analytics

- Sales
  - Script writing change. System automatically generate an email to sales rep when a Doctor script writing habit changes.
  - Sales territory tracking. System generated email and territory mapping report when a sales rep covers less territory stops than trend (GPS based).
- Managed Markets
  - Patient Adherence. Alert to appropriate team when statistics indicate managed market dipping in patient adherence. Triggers managed market consumer education.
  - Insurance reimbursement. Alert to change in sales trend at the insurance company, geographic territory level. Alert trends future revenue loss.
- Clinical
  - Scenario analysis alert (Chaid, K2); based on full knowledge base

Approach to Operational Analytics

Simplify your infrastructure and exploit insights

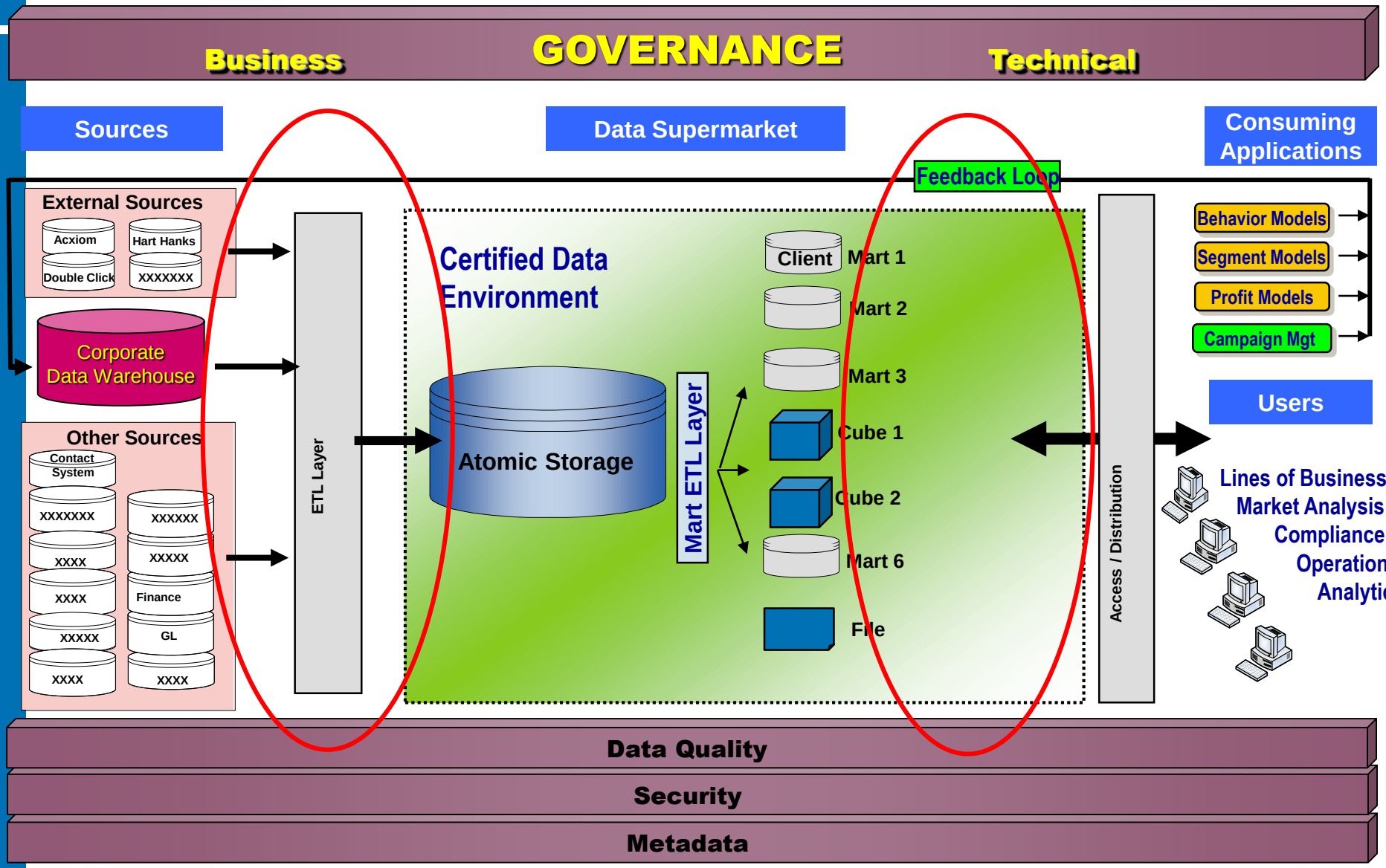
Consolidate	• Centralize data to improve the business experience • Create a single view of the data across lines of business • Reduce costs and increase performance
Analyze	• Marry historical trends with real-time transactional data • Understand customer behavior that indicates a specific need • Segment customers and develop a holistic contact strategy
Operationalize	• Deliver information in real-time across all touch points • Target the right treatment, right person, right place, right time • Dramatically improve response rates and campaign ROI

Drive incremental revenue through business intelligence

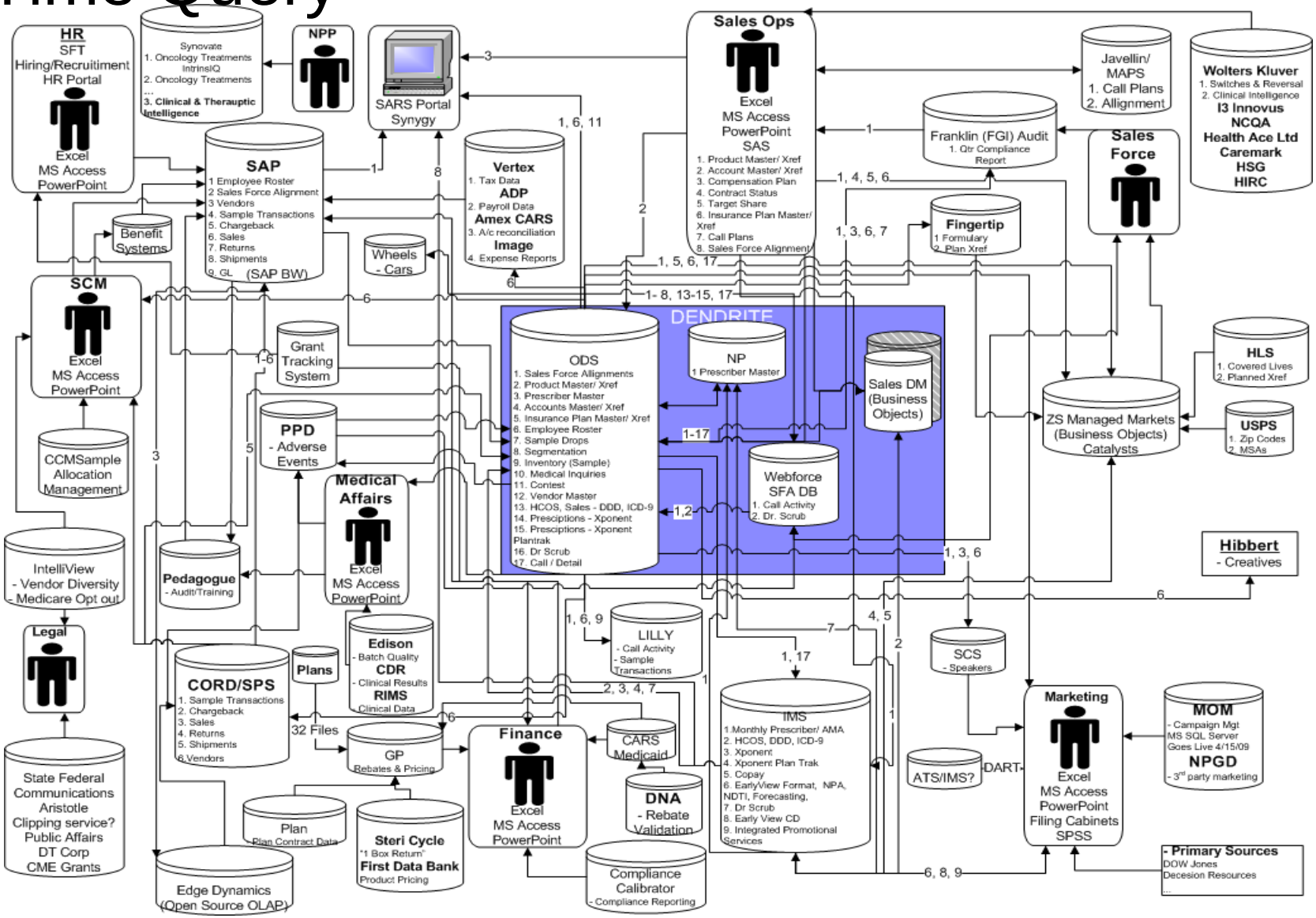
Customer Concerns (Pain Points)

- Technical
  - Data load performance results in data latency issues
  - Query performance issues result in event trigger issues
- Cross-sector
  - Data mart consolidation
  - Pro-active and cross-functional analytics
  - Ability to reduce inventory costs, pro-active supply/demand plans
  - Profitability by customer, brand, product group, sales org, etc.
  - Complex financials (multi-country, joint venture, licensing)
  - Safety data testing and FDA trials
- Specific
  - Integration of high volume, granular data (demographics, POS, quality) into ‘normal’ sales and finance reporting
  - Data history for patient tracking, supply and demand planning
  - Regulatory requirements (FDA, IRS, SEC, legal, etc.)

Technical Obstacles - Historical

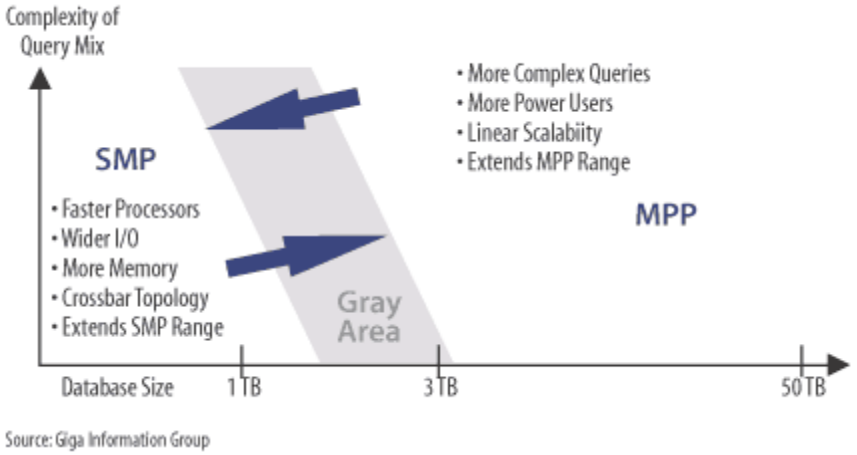


Performance Obstacle – Data Loads/Real Time Query

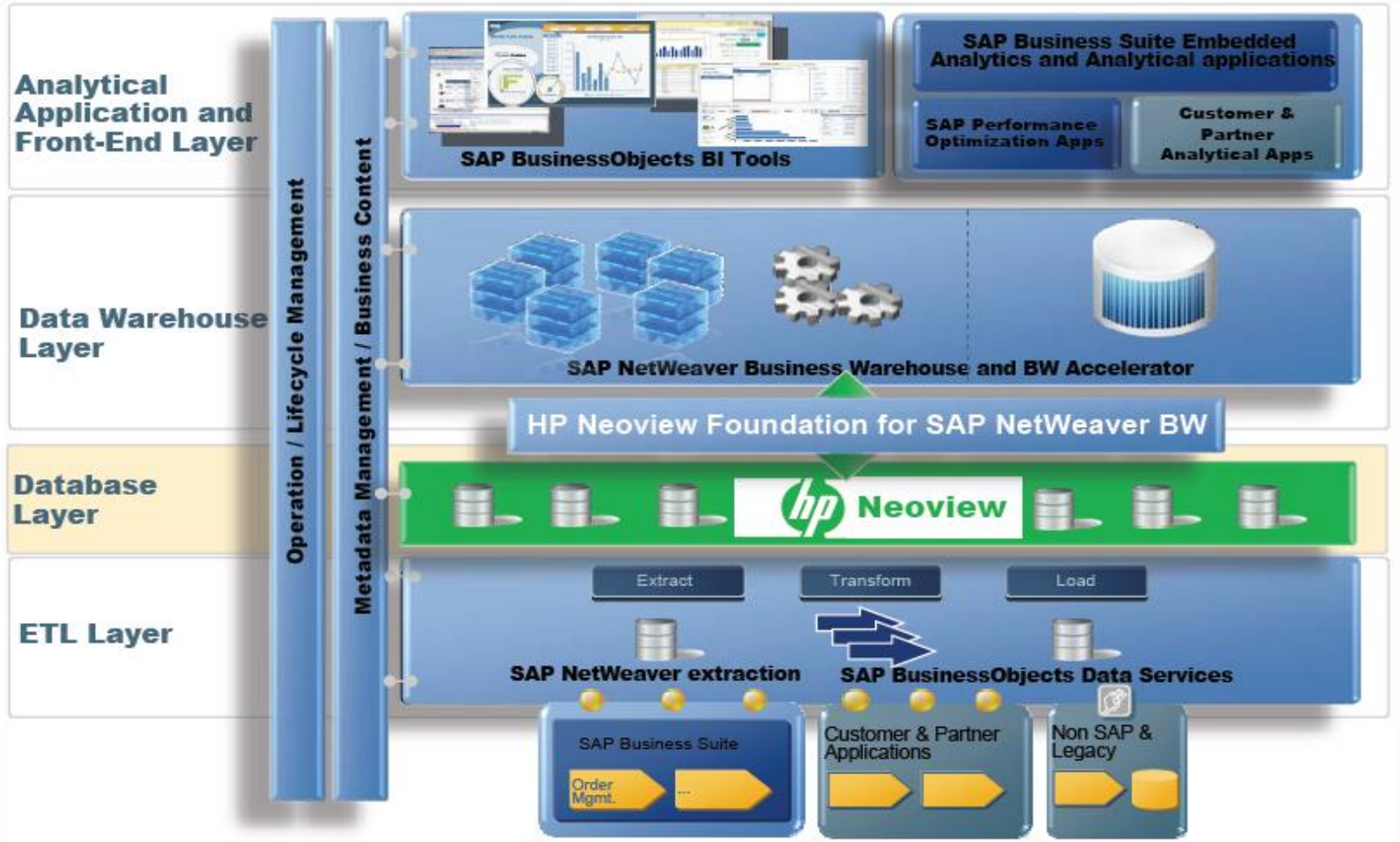


Definition of SMP and MPP. MPP Solves.

- SMP. An acronym for symmetric multi processing.
  - Finite number of CPUs based on capacity of server;
  - Scales by buying a “bigger box” – more CPUs, more powerful CPUs up to the limit of server technology at the time
  - Shares memory and disk.
  - One query is processed as one work package. Single request handled by single CPU
- MPP. An acronym for massively parallel processing.
  - Infinite number of CPUs
  - Scales by adding “daisy chain” another box/w CPU
  - Does not share memory or disk.
  - Individual queries are split into multiple work packages that can be processed simultaneously and then glued back together.
  - Single request handled by multiple CPUs

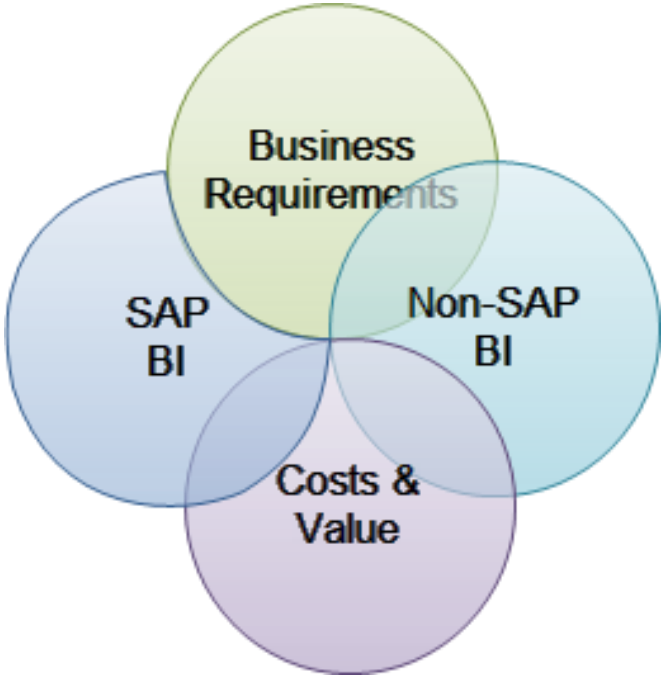


MPP Architecture – Achieve Operational Analytics



Customer Value

- ***Provides all enterprise data*** on a single, scalable MPP platform.
- ***Reduce infrastructure and data complexity*** with fewer data instances, repositories, staging areas, simpler transformation process.
- ***Reduce infrastructure costs*** with a consolidate HW and SW infrastructure under one platform.
- ***Provide mission critical support*** across the business units from a single COE.
- ***Lower risk*** through a tightly integrated solution supported.
- ***Increase load and query performance*** by leveraging MPP technology with unlimited scaleability
- ***Support more users*** with a MPP platform that can handle thousands of concurrent users running variety of queries.
- ***Enable ad-hoc queries*** with the MPP mixed work-load abilities.

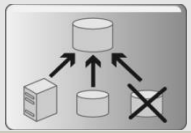
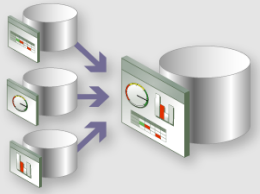


Q & A

Why SAP BW & HP Neoview?

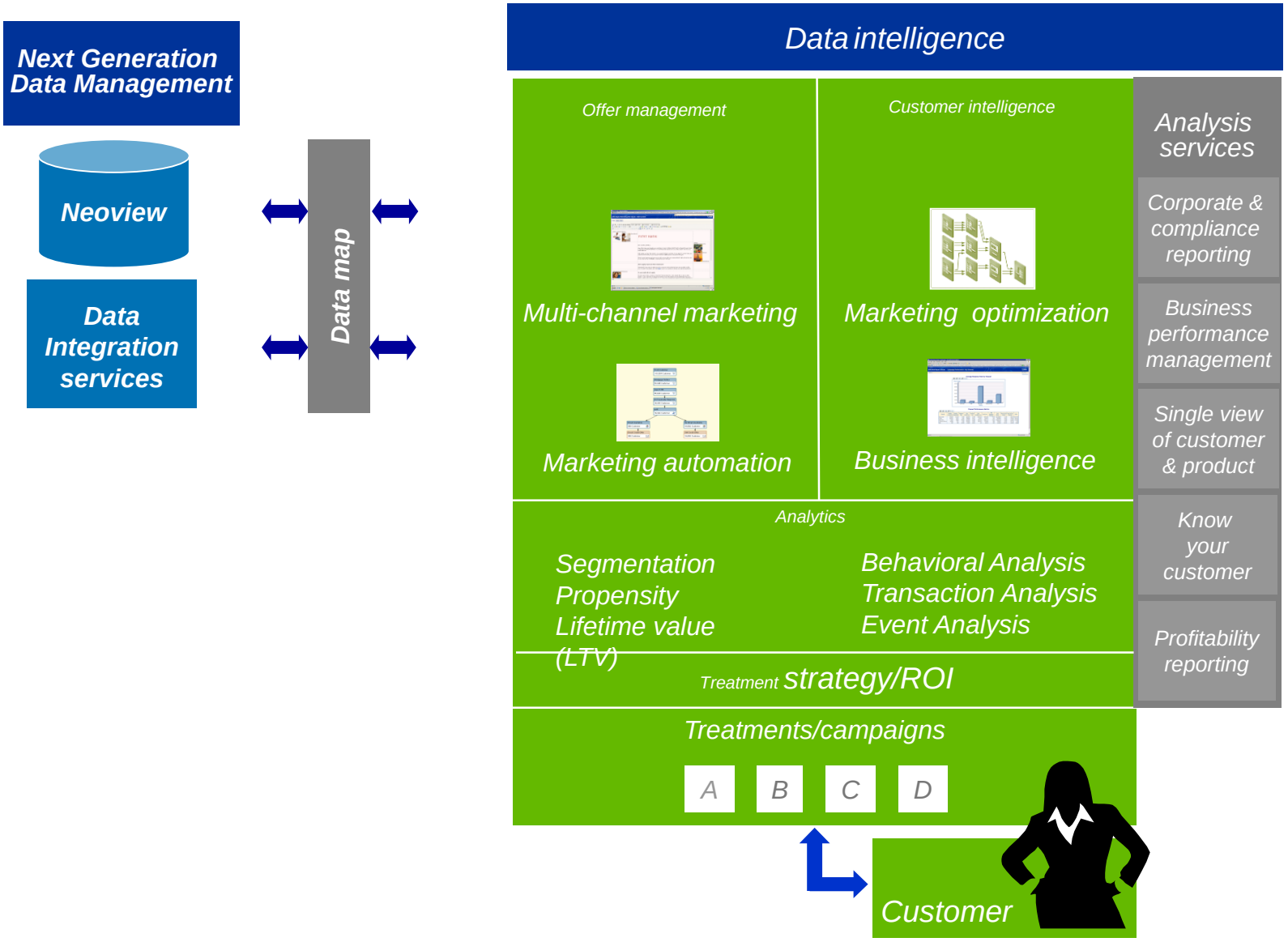
HP Neoview + SAP NetWeaver BW

+ SAP NetWeaver BWA + SAP BusinessObjects

Data Mart Consolidation	Exploding SAP NetWeaver BW Data Store	High-Volume Mixed Workloads
• Consolidate SAP and non-SAP data into a single enterprise data warehouse (EDW) • Expand SAP NetWeaver BW to include EDW for SAP and non-SAP data • Leverage existing SAP UI, Connectors, Controls, etc. providing seamless access to Neoview as data engine • Leverage BusinessObjects Data Services for enhanced BI value	• Support very large NetWeaver BW instances with aggressive growth forecasts • Provide solution for current SAP NetWeaver BW customers whose requirements have changed or expanded	• Support vertical industry solutions requiring high volumes of real time data • Demand Signal Repository for Retail and CPG • Smart Grid/Smart Meters for Utility Industry • Leverage both SAP and non-SAP data to deliver on vertical solutions
		

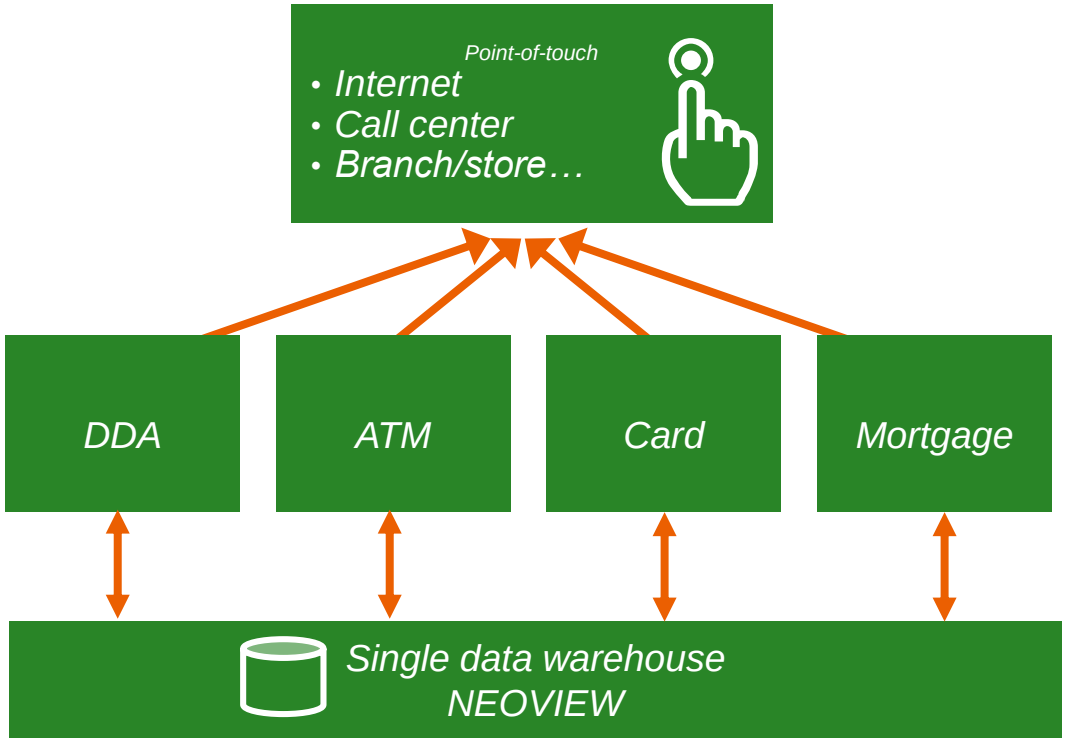
Flexible delivery options: onsite, managed, hosted

Event-based Marketing Solution Components



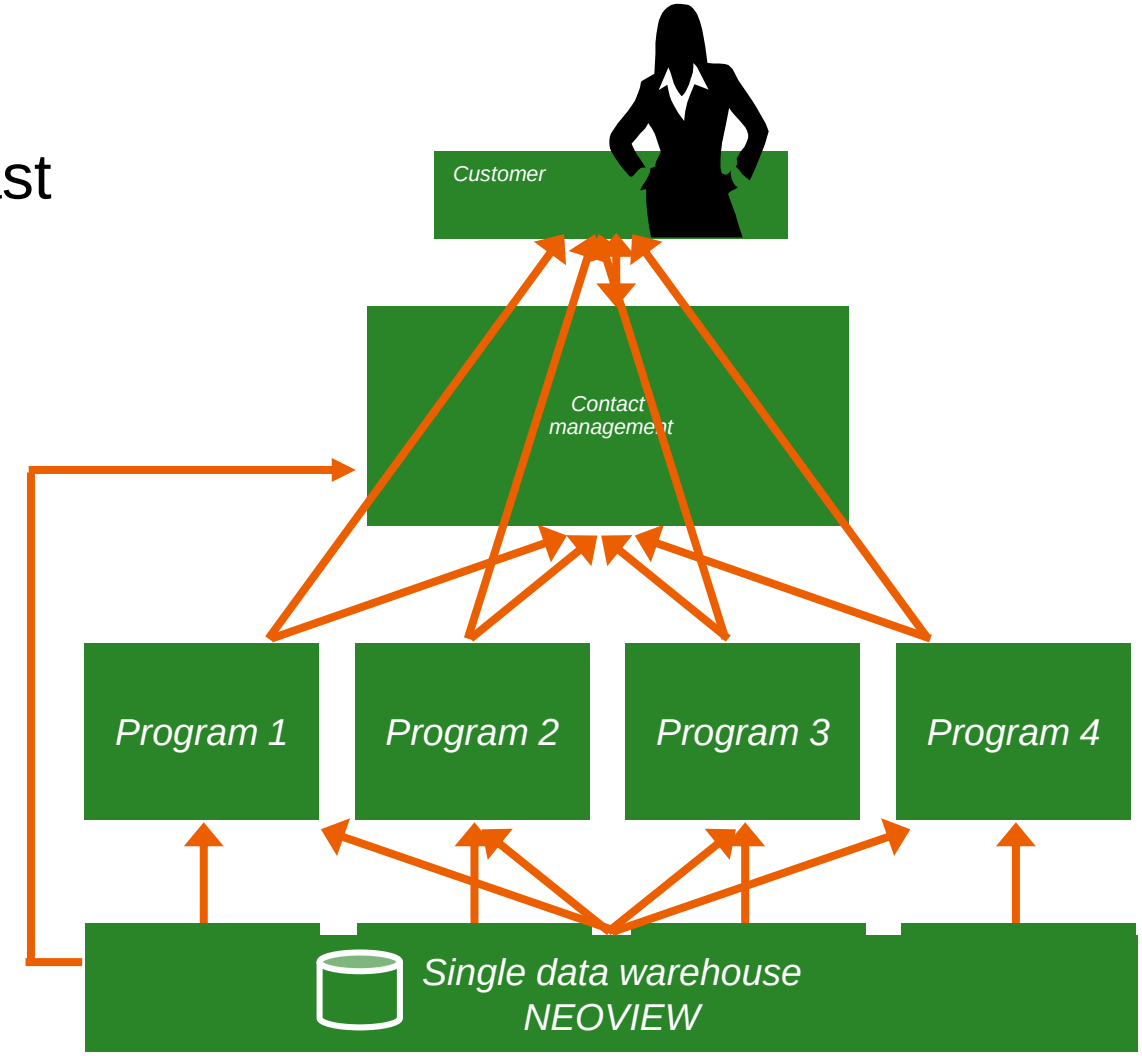
Consolidate customer data

- Rationalize silo'd customer information across the enterprise
- Reduce your technology footprint to decrease operational expenses
- Streamline management and improve efficiency



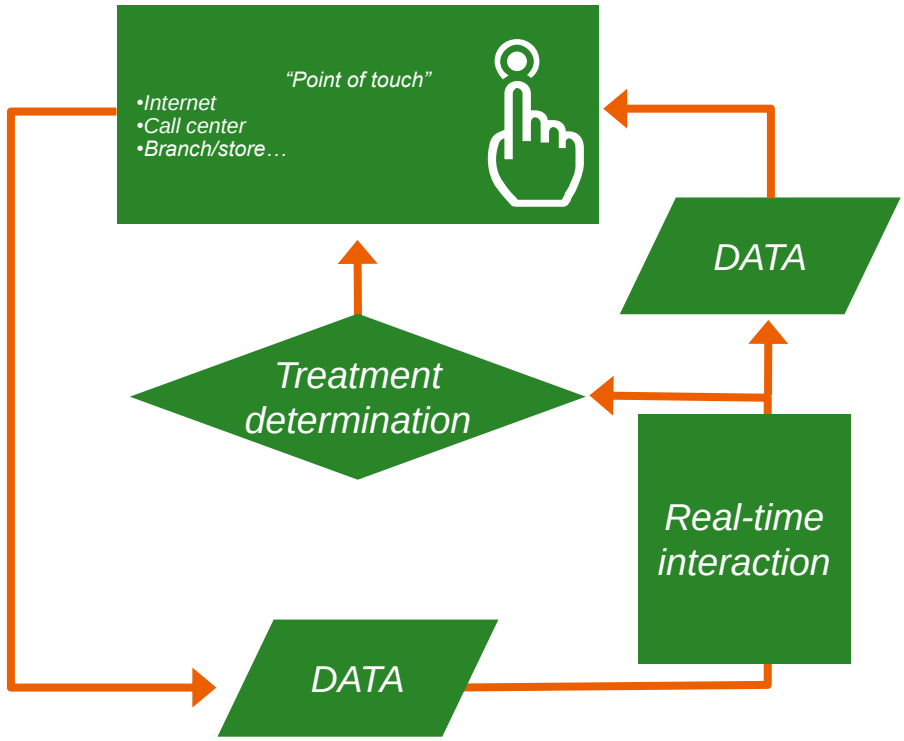
Analyze customer behavior

- Create predictive models based on past activity
- Segment and target customers based on propensity
- Develop a holistic, customer-centric contact strategy across all lines of business

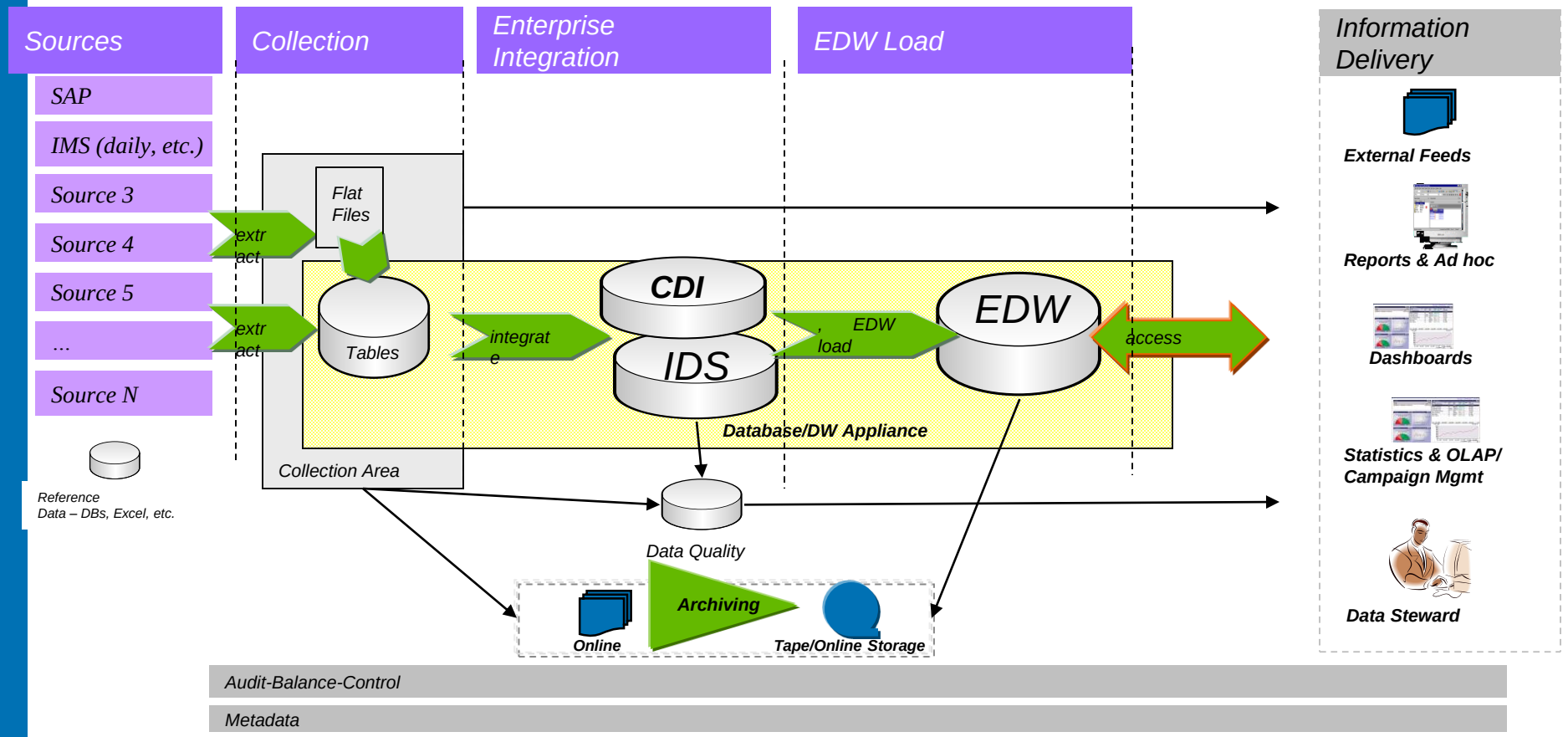


Operationalize customer insights

- Drive business growth with highly effective, targeted communications
- Arm representatives with the information they need to transform issues into opportunities
- Increase customer satisfaction with timely, relevant communications that add value



End State Architecture Recommendation



The End State Architecture Supports A Proven EDW Structure and Process that meets the Solutions Drivers and DSI Needs