An Introduction to Oracle Business Intelligence (BI) Platform

NYOUG

Sep 21, 2006

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Oracle Corporation
Agenda

- Introduction to Business Intelligence
- Oracle components of BI
- A case study of Integrated BI platform
- Q&A
About me…

- Principal Consultant in Business Intelligence and Warehousing group at Oracle, also called the BI Practice
- Oracle Certified Professional, DBA track, since 1998 – Oracle database version 7.3 onwards
- Worked in industry domains like Finance industry, Telecomm, Healthcare, law enforcement etc.
- Speaker in Oracle Open world (2003), IOUG/Collaborate (2005-06), NYOUG (June), IEEE conferences etc
OVERVIEW

Business Intelligence
What is Business Intelligence?

- Business intelligence (BI) is a broad category of application programs and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions.

- BI applications include the activities of decision support, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining.
...cont. What is BI?

- Normally describes the result of in-depth analysis of detailed business data. Includes database and application technologies, as well as analysis practices.

- Sometimes used synonymously with “decision support,” though business intelligence is technically much broader, potentially encompassing knowledge management, enterprise resource planning etc.

- In other words BI is the process of gathering information in the field of business. It can be described as the process of enhancing data into information and then into knowledge.

- BI is carried out to gain sustainable competitive advantage, and is a valuable core competence in some instances.
Business Intelligence-Driven Enterprise

Generational Steps

1. **Transactional Reporting**
   - “Here are your reports”

2. **Query, OLAP / DW**
   - “Explore my data”

3. **Performance Management**
   - “How am I doing vs. goals?”

4. **Insight Driven Action**
   - “What is my best opportunity?”
   - “What should I do next?”

5. **Intelligent Interaction**
   - “What should I do now, at the moment of contact?”
Fusion Objectives

- Greater Business Insight
- Deep and Adaptive Industry Processes
- Superior Ownership Experience
BI on the Fusion landscape

Information-Driven Fusion Applications

Corporate Performance Management
Role-Based Dashboards

Analytic Components
- KPIs
- Queries

Business Triggers
- Events
- Actions
- Alerts

Business Activity Monitoring
- Data Mining
- Data Warehouses
- OLAP
- ETL
- Business Process Engine
- Data Quality

ERPs
- Database
- Syndicated Data
- Legacy System
What Is Greater Business Insight?

A level of business insight where every user throughout the organization is guided by relevant, timely, consistent, and accurate information to make the most informed decision at the moment that action should be taken.
Greater Business Insight Challenges

- Information fragmentation – no enterprise view
- Inability to incorporate external data
- Latency in decision making process
- Lack of alignment between strategy and operations
- Inability to continually monitor operational performance
Delivering Greater Business Insight

- Aligning Operational Decisions with Strategic Objectives
- Embedding Actionable Intelligence within Transactions
- Creating a Trusted Source of Business Information
Greater Business Insight in Action

Example: Production Management

Question → Insight → Action

Product Profitability

Product
A
B
C
Margin (%)
-8
-4
0
4
8

Re-allocate parts used in C to produce more A

Common part quantities are limited.

How should I allocate?
Oracle’s Strategy for Business Insight Applications
Role-Based Dashboards

Applications that enable users to monitor business performance, and drill down on exceptions to diagnose problems and take action.

Detect Business Issues and Opportunities  
Diagnose Problems  
Decide Course of Action

Sales  R&D  Mfg & Maintenance  Purchasing  Service  Human Resources  Finance
Next-Generation Dashboards

**Today**

Delivers daily information to management so they can stay informed and develop insight about the performance of their business

**Next-Generation**

Expands beyond information delivery to prescribe actions that users should take to improve performance
The Information Gap

What are my tasks today?
What are my current open opportunities, and proposals?
How much am I getting paid?
How are my accounts doing?
How can I quickly update my data and submit forecast?

Sales Rep Pain Points

- Cannot identify the immediate actions and records to focus on
- Lengthened and delayed data entry due to cumbersome navigation path
- No easy way to track progress of leads, opportunities, and proposals
- Require assistance from IT to generate reports (data security and sensitivity)

Reduced Productivity
Decreased Customer Satisfaction
Diminished Decision Making
Closing the Gap

Provide Dashboards With:

- Tight integration with transaction applications
- Quick links to overviews of sales actions and daily tasks
- Ability to track progress of leads and opportunities
- Role-relevant analytics spanning entire sales cycle
- Easily personalized data views

Improved Sales Effectiveness
Increased Customer Value
Empowered Sales Force
Oracle Sales Dashboard

Quick access to what you need to **KNOW** and what you need to **DO**

**View of Calendar Events and Open Tasks**

**Quick Links to Critical Sales Actions**

- Calendar
- Customers
- Contacts
- Leads
- Opportunities
- Quotes
- Proposals
- Sales Campaigns
- Forecast
- Reports
- Tasks
- Commission Statement
- Commission Year to Date Summary

**Latest Submitted Forecast**

- Last Submitted: 12-Mar-04 19:42:25
- Best Case: $125,000.00
- Forecast: $120,000.00
- Worst Case: $15,000.00
### Oracle Sales Dashboard

**Tracking and drill-down into transactional details**

#### Leads

<table>
<thead>
<tr>
<th>Name</th>
<th>Primary Contact</th>
<th>Customer</th>
<th>Rank</th>
<th>Status</th>
<th>Age (Day) Local Time</th>
<th>Convert to Opportunity</th>
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<td>Nike</td>
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<tr>
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<td>2:13 PM EST</td>
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<td>Cheryl Bocan</td>
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#### Quotes

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<tr>
<th>Quote Name</th>
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#### Opportunities

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<thead>
<tr>
<th>Opportunity</th>
<th>Customer</th>
<th>Stage</th>
<th>Win Probability</th>
<th>Close Date</th>
<th>Sales Channel</th>
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<td>4th of April Agreement and Close Deal</td>
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<td>5/12/2003</td>
<td>Direct</td>
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<td>New Colleague</td>
<td>John Colleague</td>
<td>4th of April Agreement and Close Deal</td>
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<td>5/12/2003</td>
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<td>Conference Deal</td>
<td>Stanley Cleaners</td>
<td>3rd of April Value Proposition</td>
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<td>New Alcatel Deal</td>
<td>Alcatel Group</td>
<td>3rd of April Value Proposition</td>
<td></td>
<td>5/10/2003</td>
<td>Indirect</td>
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#### Notes

- Quick Action
- Quick Drill-Down
Oracle Sales Dashboard

Relevant analytics that span the entire sales cycle, plus integration with DBI for additional analytics

### Leads by Age

<table>
<thead>
<tr>
<th>Rank</th>
<th>Total Leads</th>
<th>Open Loss or Equal to 2 Days</th>
<th>Open 3-7 Days</th>
<th>Open 8-30 Days</th>
<th>Open 31+ Days</th>
<th>Closed</th>
<th>Converted</th>
<th>Converted %</th>
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<td>0</td>
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<td>26</td>
<td>6</td>
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<td>24</td>
<td>9</td>
<td>13</td>
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<td>C</td>
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<td>13</td>
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<td>15</td>
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<td>D</td>
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<td>0</td>
<td>20</td>
<td>18</td>
<td>22</td>
<td>41.54</td>
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<td>E</td>
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<td>16</td>
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<td>19.19</td>
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<tr>
<td>F</td>
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<td>0</td>
<td>20</td>
<td>18</td>
<td>15</td>
<td>18.75</td>
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</table>

### Top Customers (Organization)

<table>
<thead>
<tr>
<th>Customer</th>
<th>Industry</th>
<th>Total Under Contract</th>
<th>Total Ordered</th>
<th>Total Opportunity Amount Currency</th>
<th>Open Opportunities</th>
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</thead>
<tbody>
<tr>
<td>Nike</td>
<td>Apparel</td>
<td>1,517,500,000</td>
<td>17,500,000,000</td>
<td>636,000,000 US Dollars</td>
<td>1</td>
</tr>
<tr>
<td>Big &amp; Rental</td>
<td>Equipment</td>
<td>777,500,000</td>
<td>1,100,000,000</td>
<td>1,500,000,000 US Dollars</td>
<td>2</td>
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<tr>
<td>Ryland Homes</td>
<td>Construction</td>
<td>1,505,000,000</td>
<td>275,000,000</td>
<td>275,000,000 US Dollars</td>
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<td>AT&amp;T Universal Card</td>
<td>Financial Services</td>
<td>525,000,000</td>
<td>635,000,000</td>
<td>640,000,000 US Dollars</td>
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<td>Z.D. Now</td>
<td>High Tech</td>
<td>350,000,000</td>
<td>500,000,000</td>
<td>170,000,000 US Dollars</td>
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<td>275,000,000</td>
<td>380,000,000 US Dollars</td>
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<td>150,000,000</td>
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### Cross Sell/Up Sell Campaigns

<table>
<thead>
<tr>
<th>Sales Campaign</th>
<th>Leads</th>
<th>Opportunities</th>
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<tbody>
<tr>
<td></td>
<td>No Action</td>
<td>In Progress</td>
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<td>Cross Sell GAS to Database Customers</td>
<td>7</td>
<td>10</td>
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<tr>
<td>eBusiness Suite UpRank</td>
<td>20</td>
<td>32</td>
</tr>
<tr>
<td>Store Cross Sell to Order Management Customer</td>
<td>10</td>
<td>21</td>
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</table>
ENTERPRISE PLATFORM FOR

Business Intelligence
Oracle Business Intelligence Vision

Oracle approach …

- Single database
- Single server
- Tight Security
- Standard interfaces
- Simplified environment
- “Analytical Database”
- Fast conversion of data to information
# Business Intelligence

## Query and Reporting

<table>
<thead>
<tr>
<th>Extraction of detailed and roll up data</th>
<th>Summaries, trends and forecasts</th>
<th>Knowledge discovery of hidden patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Information&quot;</td>
<td>&quot;Analysis&quot;</td>
<td>&quot;Insights &amp; Prediction&quot;</td>
</tr>
</tbody>
</table>

- Who are buying homes these days?
- What is the average **income** of the home buyer, by region, by year?
- Who will re-consolidate loans in the next 6 months and why?
Common Customer Environment
Multi-Vendor, Un-integrated

- Protracted and complex implementation
- Escalating maintenance costs
- Poor and incomplete BI solution
  - Promotes information silos
Oracle Business Intelligence Solution
Complete, Integrated, and Open

Oracle Warehouse Builder

Oracle Business Intelligence 10g

OracleAS Discoverer
OracleAS Reports
Oracle Data Mining
Apps Built Using Oracle BI Beans

ETL
OLAP
Data Mining
Oracle Business Intelligence
“Predictive Insights Reports”

Response Analysis Report created via Oracle Data Mining and ability to query to details.
Oracle Business Intelligence
“Predictive Insights Reports”

Users can query to details to gain insights from “mined data”
Components of Oracle BI Platform

- OWB
- Discoverer/Oracle Reports/XML Publisher
- Siebel Analytics Dashboard
- Portal
- OLAP
- Data Mining
- BI Beans
  (clips)
A Case Study of Business Intelligence based Solution
Oracle Protect Architecture Overview

PROTECT Dashboards – Portal / Disco Based
- Executive Dashboard
- Regional Crime Analysis
- Detailed Crime Report
- Enterprise Resource Dashboard
- CompStat Dashboard

Dashboard / PROTECT Warehouse Integration Layer

OLAP Support for
- Dashboard Metrics
- Compstat

PROTECT Justice Data Repository
- Dimensional Model
  - Flexible
  - Extensible
  - Advanced Analytics

Workflow for
- Alerts
- Approvals

Grid / RAC for
- Scalability
- High Availability
- Manageability

Data Mining Support for
- Trends, Patterns, Hot Spots
- Narrative Text Mining

Spatial Support for
- Visualization
- Proximity Searches

Industry Compliant Integration Layer
- XDB interface

ETL-OWB Processes
- ETL Repository

Source Data
- RMS
- Pawn Shop
- DMV
- Criminal History
- Incident Report
- Property & Evidence
- Field Interviews
- Other...

PROTECT Crime Analysis
- Discoverer Ad-Hoc
- Excel based OLAP
- XML Publisher

PROTECT Crime Analysis
- Discoverer Ad-Hoc
- Excel based OLAP
- XML Publisher

PROTECT Crime Analysis
- Discoverer Ad-Hoc
- Excel based OLAP
- XML Publisher
Transactional (Records Management) v/s BI System
...Police Report of the Incident

![Police Report Form](image)

**J.P.S.O. Electronic Police Report**

<table>
<thead>
<tr>
<th>Field Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Victim #</td>
<td>001</td>
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<tr>
<td>Victim Type</td>
<td>INDIVIDUAL</td>
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<tr>
<td>Insurance Only</td>
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<tr>
<td>Business Name</td>
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<tr>
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<tr>
<td>First</td>
<td></td>
</tr>
<tr>
<td>MI</td>
<td></td>
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<tr>
<td>Suffix (MI, ST, Ext)</td>
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<td>ST</td>
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<td>Employer/School</td>
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<td>Domestic Violence</td>
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<td>Injuries</td>
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**Go To Domestic Violence**

**Previous Victim**

**Next Victim**
BI Application Demo slides
Contact information:
Shyam.Nath@Oracle.com
(954) 609 2402 cell