

An Introduction to Oracle Business Intelligence (BI) Platform

NYOUG

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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

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O V E R V I E W

Business Intelligence

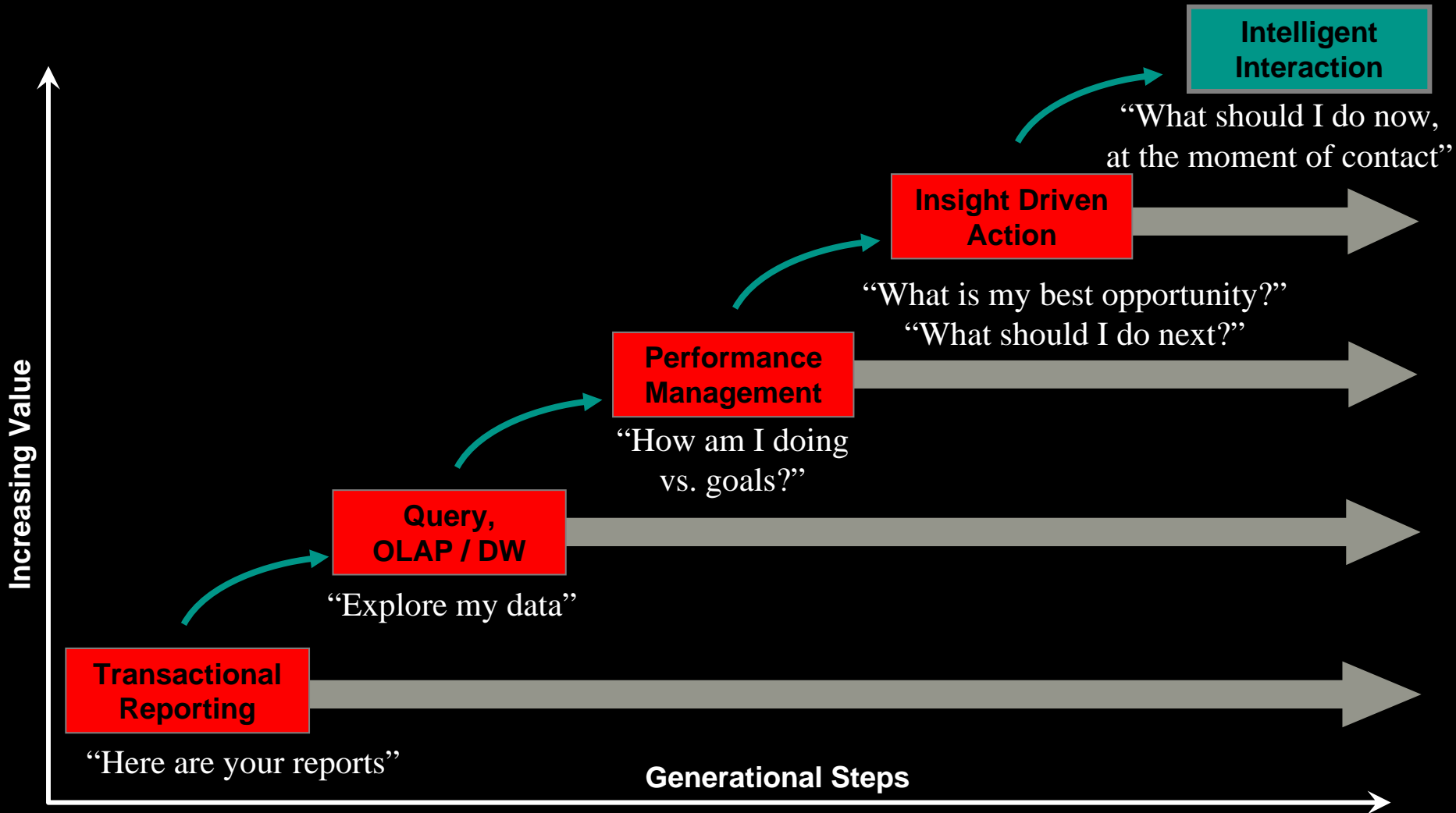
What is Business Intelligence?

- 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?

- ⑩ Normally describes the result of in-depth analysis of detailed business data. Includes database and application technologies, as well as analysis practices.
- ⑩ Sometimes used synonymously with “decision support,” though business intelligence is technically much broader, potentially encompassing knowledge management, enterprise resource planning etc
- ⑩ 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.
- ⑩ BI is carried out to gain sustainable competitive advantage, and is a valuable core competence in some instances.

Business Intelligence-Driven Enterprise



Fusion Objectives

Greater Business Insight

Deep and Adaptive Industry Processes

Superior Ownership Experience

BI on the Fusion landscape



CFO



Controller



Purchasing Mgr



Plant Manager



Sales Manager



Order Clerk



HR Manager

Business
Insight
Delivery

Information-Driven Fusion Applications

BI
Applications

Corporate Performance Management

Role-Based Dashboards

Analytic
Foundation

Analytic Components

KPIs

Queries

Business Triggers

Events

Actions

Alerts

BI
Technology

Business Activity
Monitoring

Data Mining

Data Warehouses

OLAP

Fusion
Middleware

ETL

Business Process
Engine

Data Quality



ERP



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

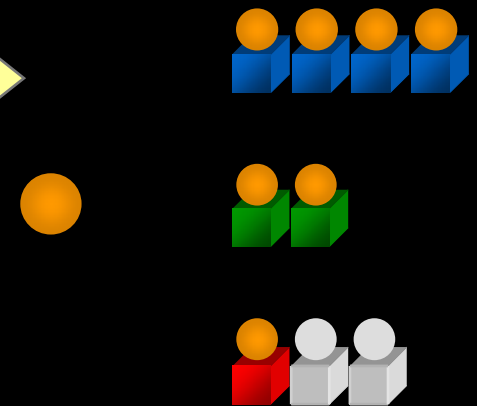
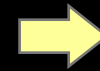
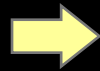
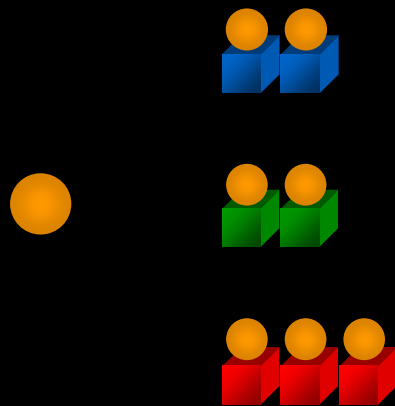
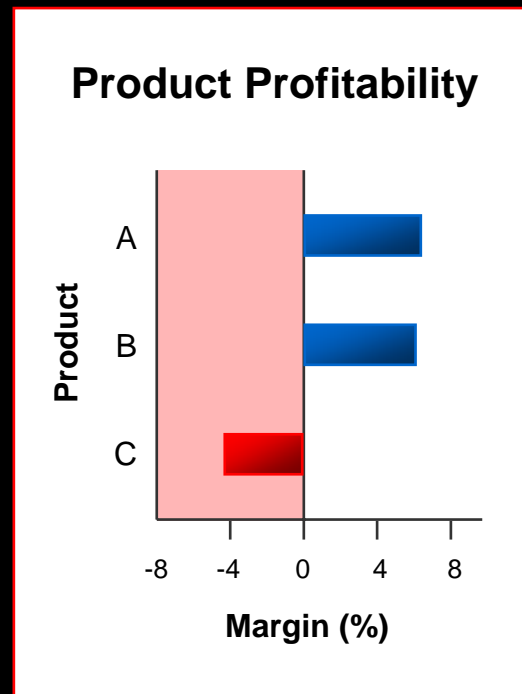
Delivering Greater Business Insight

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

Greater Business Insight in Action

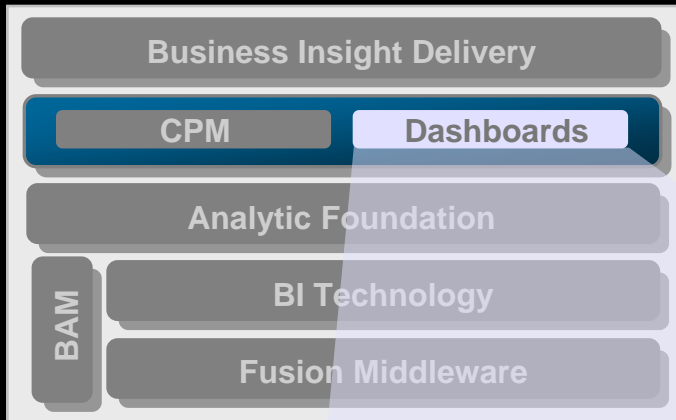
Example: Production Management

Question → Insight → Action



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

Continually Monitor Performance

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



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**

Calendar and Tasks

View

Appointments

Time Tuesday, July 20, 2004

8:00 AM	
9:00 AM	
10:00 AM	
11:00 AM	
12:00 PM	
1:00 PM	
2:00 PM	
3:00 PM	
4:00 PM	
5:00 PM	

Tasks

Subject	Due Date	Type	Status	Update
Check on latest implementation status	31-Jul-2004	Callback	Open	
Drinks with Nike CIO	06-Aug-2004	Happy Hour	Open	
Followup on open issues	14-Aug-2004	Callback	Open	

View of Calendar Events and Open Tasks

Quick Links to Critical Sales Actions

Shortcuts

- [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

View: My Open Leads (Sales Team) Go Personalize

Create Lead Export

Lead	Primary Contact	Customer	Rank	Status	Age (Days)	Local Time	Convert to Opportunity
Nike	Emma Wren	Nike	A	New	1	4:23 PM EST	
David Jones	David Jones	ETrade	A	New	2	1:23 PM EST	
Yahoo!	Cheryl Baron	Yahoo	A	New	3	1:23 PM EST	
Joseph Bernisky	Joseph Bernisky	Sun Microsystems	A	New	4	4:23 PM EST	
Benjamin Chang	Benjamin Chang	University of Florida	A	New	5	1:23 PM EST	

Quick Action

Opportunities

View: My Open Opportunities (Sales Team) Go Personalize

Create Opportunity Export

Opportunity	Customer	Stage	Win Probability %	Close Date	Sales Channel
Nike	Nike USA	4 of 4: Agreement and Close Deal		50 12-Mar-2003	Direct
New Database	Cisco Systems	4 of 4: Agreement and Close Deal		50 12-Mar-2003	Direct
Database Deal	Stanley Cleaners	3 of 4: Propose Value Proposition		25 11-Mar-2003	Indirect
New Alpaca Deal	Alpac Group	4 of 4: Agreement and Close Deal		40 11-Mar-2003	Direct
Deal	Nike	3 of 4: Propose Value Proposition		50 10-Mar-2003	Indirect

Quick Drill-Down

Quotes

View: My Approved Quotes Go Personalize

Create Quote Export

Previous 1-5 of 100 Next 5

Quote Name	Quote Number	Opportunity Name	Customer Name	Account Number	Contact Name	Status	Expiration Date	Amount	Order Detail	Duplicate
SFA Solution	999999	Big Coltrain Deal	Coltrain Records	7654321	Hens Hu	Draft	10-Oct-2004	120,000.00		
eBusiness Suite	984582	Coltrain Cross-sell	Coltrain Records	7654321	John Coltrain	Approval Pending	13-Oct-2004	695,066.00		
Hosting	981235	Coltrain Upgrade	Coltrain Records	7654321	Jane Doe	Order Submitted	17-Oct-2004	50,000.00		
Fast Forward	923689	Big Coltrain Deal	Coltrain Records	7654321	William Remis	Draft	20-Oct-2004	20,000.00		
Collaboration Suite	911189	Coltrain Upgrade	Coltrain Records	7654321	David Hill	Approved	30-Oct-2004	70,000.00		

Quick Drill-Down

Proposals

View: My Proposals (Sales Team) Go Personalize

TIP Although you can view all proposals, you can only update proposals in current language preference. Go to Preferences to change the language.

Create Proposal Export

Name	Description	Language	Customer	Due Date	Owner	Status
Business Desktop Proposal	Business Desktop Proposal	English	Nike	02-Oct-2004	Sudhakar Raja	Draft
Business World Proposal	Business World Proposal	English	ETrade	02-Oct-2004	Sudhakar Raja	Final
Laptop Special Proposal	Laptop Special Proposal	English	Yahoo	02-Oct-2004	Sudhakar Raja	Draft

Oracle Sales Dashboard

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

Leads by Age

[Create Lead](#)

Rank	Total Leads	Open Less or Equal to 2 Days	Open 3-7 Days	Open 8-30 Days	Open 31+ Days	Closed	Converted	Converted %
A Leads	39	0	0	0	26	6	7	17.95
B Leads	46	0	0	0	24	9	13	28.26
C Leads	47	0	0	0	13	18	16	34.04
D Leads	65	0	0	0	20	18	27	41.54
E Leads	740	0	0	132	453	110	54	7.31
F Leads								

Top Customers (Organization)

Order By

[Full List](#) [Create Customer](#)

Customer	Industry	Total Under Contract	Total Ordered	Total Opportunity Amount	Currency	Open Opportunities
Nike	Apparel	1,517,500.00	17,500,000.00	535,000.00	US Dollars	1
Big 4 Rental	Equipment	777,500.00	1,100,000.00	1,500,000.00	US Dollars	2
Ryland Homes	Construction	1,505,000.00	750,000.00	275,000.00	US Dollars	1
AT+T Universal Card	Financial Services	525,000.00	635,000.00	840,000.00	US Dollars	2
Z-D Now	High Tech	350,000.00	500,000.00	170,000.00	US Dollars	1
Total Internet	High Tech	225,000.00	413,000.00	600,000.00	US Dollars	1
Bigmart	Retail	127,000.00	275,000.00	360,000.00	US Dollars	1
Home Depot Inc.	Retail	105,000.00	225,000.00	1,000,000.00	US Dollars	1
Business World	High Tech	95,000.00	150,000.00	2,500,000.00	US Dollars	1

Cross Sell/Up Sell Campaigns

Sales Campaign	Leads				Opportunities			
	No Action	In Progress	Dead	Converted %	In Progress	Lost	Won	Won %
Cross Sell 9iAS to Database Customers	7	10	12	50.0	10	11	8	18.9
eBusiness Suite UpRank	20	32	5	38.7	12	6	18	6.5
iStore Cross Sell to Order Management Customer	10	21	15	9.8	2	1	1	2.4

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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

OLAP

Data Mining

Extraction of detailed and roll up data

“Information”

Who are buying homes these days?

Summaries, trends and forecasts

“Analysis”

What is the average **income** of the home buyer, by region, by year?

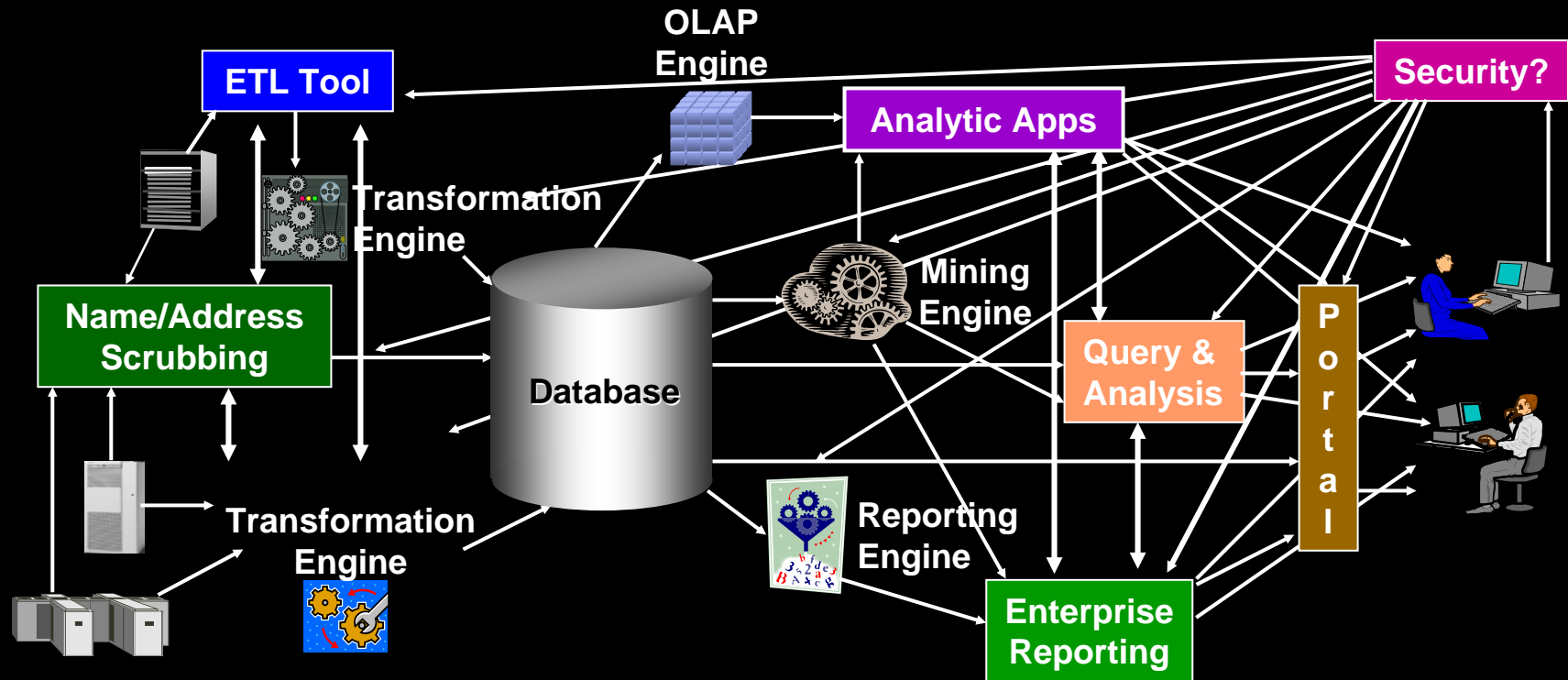
Knowledge discovery of hidden patterns

“Insights & Prediction”

Who **will** re-consolidate loans in the next 6 months and why?

Common Customer Environment

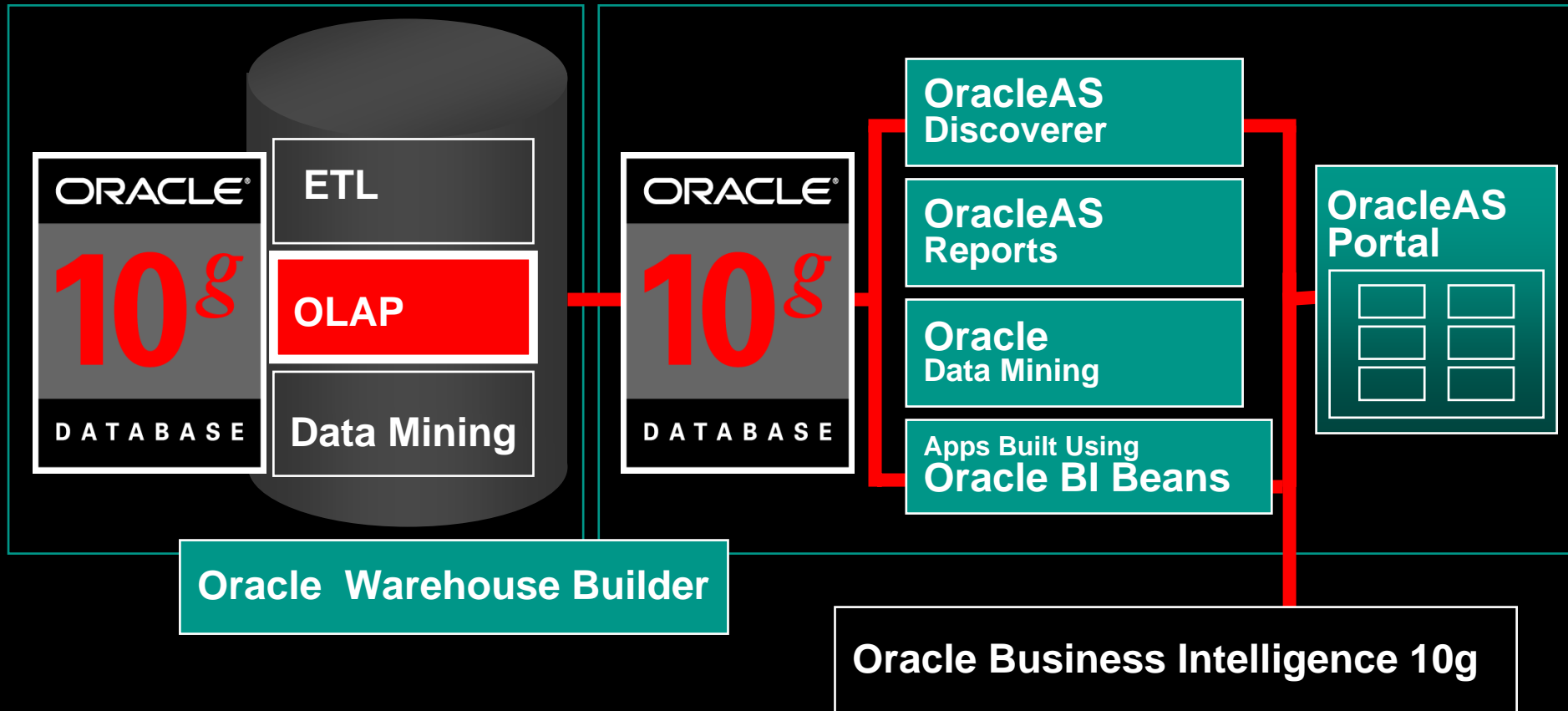
Multi-Vendor, Un-integrated



- Protracted and complex implementation
- Escalating maintenance costs
- Poor and incomplete BI solution
 - Promotes information silos

Oracle Business Intelligence Solution

Complete, Integrated, and Open



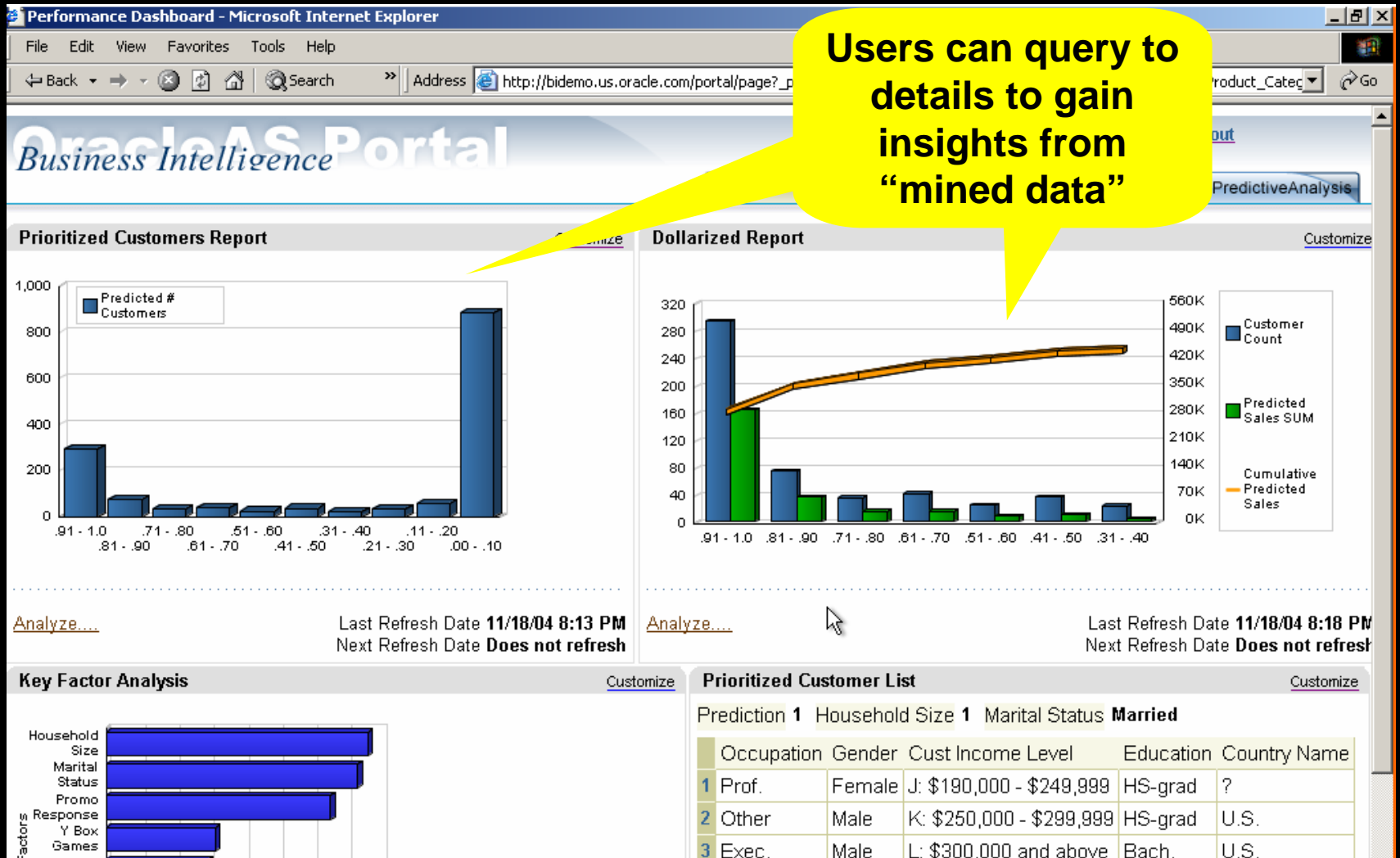
Oracle Business Intelligence

"Predictive Insights Reports"



Oracle Business Intelligence

"Predictive Insights Reports"



Components of Oracle BI Platform

- OWB
- Discoverer/Oracle Reports/XML Publisher
- Siebel Analytics Dashboard
- Portal
- OLAP
- Data Mining
- BI Beans

(clips)

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A Case Study of

Business Intelligence based Solution

Oracle Protect Architecture Overview

PROTECT Dashboards – Portal / Disco Based



PROTECT Crime Analysis



- Discoverer Ad-Hoc
- Excel based OLAP
- XML Publisher

Dashboard / PROTECT Warehouse Integration Layer

- OLAP Support for
- Dashboard Metrics
 - Compstat

- Workflow for
- Alerts
 - Approvals



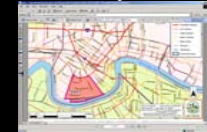
PROTECT Justice Data Repository



- Dimensional Model
- Flexible
 - Extensible
 - Advanced Analytics

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

- Spatial Support for
- Visualization
 - Proximity Searches



- Grid / RAC for
- Scalability
 - High Availability
 - Manageability



ETL-OWB Processes



Industry Compliant Integration Layer

XDB interface

XML Message Layer



Source Data



Transactional (Records Management) v/s BI System



...Police Report of the Incident

J.P.S.O. Electronic Police Report Item: Victim

Victim #: 001 INDIVIDUAL Insurance Only: Business Name:

MAKE REPORTING PERSON VICTIM

Last	First	MI	Suf	Address Nbr & Name	City	ST	Zip	AC	Nbr	Ext
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	LA	<input type="text"/>	504	<input type="text"/>	<input type="text"/>

Employer/School	Address Nbr & Name	City	ST	Zip	AC	Nbr	Ext
<input type="text"/>	<input type="text"/>	<input type="text"/>	LA	<input type="text"/>	504	<input type="text"/>	<input type="text"/>

Race	Sex	Ht	Wt	DOB	Age	Res.	Ethnicity	Driver's Lic	ST	SSN
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	LA	<input type="text"/>

Aggravated Assault	Homicide Circum.	LEOKA	Added Homicide	Weapon Implication	Gang Related
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>

Under Influence	Gun Permit	ID Suspect	Vol. Strnt	Domestic Violence	Injuries
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Go To Domestic Violence

Previous Victim
Next Victim

Admin	Victims	R.S.	M.O.	Susp.	Wit.	Prop.	Insure.	Nar.	Veh	Relate	Scene	Final
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BI Application Demo slides

Q&A

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