Analytical Approaches in Insurance – How to assure profitable business

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Insurance Market Dynamics

Market Pressure

Revenue and Margin Pressure

Management and Regulatory Requirements
Adapting to Market Dynamics
Actionable data for operational and analytic needs

- Speed time to market
- Better manage risk
- Assume greater control
- Optimize product development
- Manage and Regulatory Requirements
- Improve profitability
- Enhance policy lifecycle visibility
- Revenue and Margin Pressure
- Market Pressure

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Business Imperatives to Technology Imperatives

- **Manage profitability**: Aggregate data from disparate systems to identify profitable and unprofitable products, suppliers, channels and customers.
- **Speed time to market**: Link policy and claim activity together to gain a complete workflow view of your business.
- **Ensure compliance and auditability**: Business users empowered to configure LOB datamart requirements.
- **Improve policy lifecycle visibility**: Setup alerts and BPEL processes with the BI system to trigger rules that let company to manage risk.
- **Assume greater control**: Assess performance versus plan by product, customer, channel, geography or LOB within a single system/platform.
- **Optimize product development**: Enables business users to participate in the product development process.

**Business Imperatives**
- Optimize product development
- Improve policy lifecycle visibility
- Improve policy
- Speed time to market
- Manage risk
- Assume greater control

**Technology Imperatives**
- Ensure compliance and auditability
- Assume greater control
- Optimize product development
- Speed time to market
- Manage risk
- Assume greater control

**Link policy and claim activity together to gain a complete workflow view of your business**

**Business users empowered to configure LOB datamart requirements**

**Setup alerts and BPEL processes with the BI system to trigger rules that let company to manage risk**

**Assess performance versus plan by product, customer, channel, geography or LOB within a single system/platform**

**Enables business users to participate in the product development process**
Management Processes Are Too Fragmented To Deal With These Challenges

- Lack of business alignment
- Low predictability in performance
- Inconsistency in business decisions
Achieving Management Excellence

• Smart: Rationalize your management systems
• Agile: Integrate with operational systems
• Aligned: Share insight across the enterprise
Oracle Provides Key Capabilities
Complete, Open & Integrated

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<th>EXTERNAL REPORTING</th>
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<td>INTEGRATED BUSINESS PLANNING</td>
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<td>SCORECARDING, MONITORING &amp; ANALYSIS</td>
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<td>FINANCIAL &amp; MGMT REPORTING</td>
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| BI TOOLS & BI APPLICATIONS, REAL-TIME MONITORING |
| OLAP, DATA WAREHOUSE, DATA MINING |
| DATA INTEGRATION, APPLICATION MANAGEMENT & MASTER DATA MANAGEMENT |
Oracle’s Insurance EPM System

Insurance Workspace

Performance Management Applications

Business Intelligence Foundation

BI Applications

Fusion Middleware

- Insurance Policy and Claims Management
- Insurance Sales, Marketing & Services
- Data Warehouse
- OLAP
- Data Mart
- SAP, Oracle, Siebel, PeopleSoft, Custom
- Excel
- XML
- Business Process
Pervasive Information Access Through a Unified Insurance Workspace

<table>
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<th>INSURANCE WORKSPACE</th>
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<td>Desktop</td>
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- **Performance Management Applications**
- **BI Applications**

**Business Intelligence Foundation**

**Fusion Middleware**

- Insurance Policy and Claims Management
- Insurance Sales, Marketing & Services
- Data Warehouse Data Mart
- OLAP
- SAP, Oracle, Siebel, PeopleSoft, Custom
- Excel XML
- Business Process
Analytic Activities Support the Entire Enterprise
Analytic Activities Support the Entire Enterprise

Profiles and Identifies customers for target marketing, analyze affinity, reasons for attrition

Insured Base
Monitor and inform channels of market changes to attain more business

Channel/Marketing/Agent Management
Critical component of claims management, helps fraud detection, monitoring, claims estimation

Claims
Improves product development and book of business understanding

Policy/Product Dev

Reinsurance

Underwriting
Complete overview of strategic business indicators

LOB Management

Executive Management

Analytics provide crucial information that cements relationships with clients, provides insight to cost overruns and profitability possibilities.
Single Window into Performance

- Web-based Dashboards
- Microsoft Office Integration
- Google or Oracle secure search
- Mobile devices
**Market Leading Applications**

- **Insurance Workspace**
  - **PERFORMANCE MANAGEMENT APPLICATIONS**
    - Strategy Management
    - Business Planning
    - Profitability & Cost Management
    - Financial Reporting & Compliance
    - Customer & Product Profitability
    - Operational Risk & Compliance

- **BI Applications**

- **Fusion Middleware**

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- **Insurance Policy and Claims Management**
- **Insurance Sales, Marketing & Services**
- **Data Warehouse**
- **OLAP**
- **SAP, Oracle, Siebel, PeopleSoft, Custom**
- **Excel**
- **XML**
- **Business Process**
Comprehensive BI Applications

Insurance Workspace

Performance Management Applications

Business Intelligence

Fusion Middleware

BI APPLICATIONS

Horizontal, Departmental Analytics

Insurance Industry Analytics
(Insurance data model, metrics & dashboards)

Insurance Policy and Claims Management

Insurance Sales, Marketing & Services

Data Warehouse Data Mart

OLAP

SAP, Oracle, Siebel, PeopleSoft, Custom

Excel XML

Business Process
One of the biggest challenges for insurers in implementing business analytics has been the lack of adequate data models and repositories. Solutions that are designed to deal with the complexities and unique characteristics of insurance data can help insurers address these challenges.

Single View of Enterprise Information

- Dashboards
- Pre-built integration
- Pre-built metadata mapping
- Pre-built metrics
- Pre-built data model
- Heterogeneous data sources

The “BI Development Quandary”

Why is it so difficult?

- Separate entities or people responsible for each item
- Projects can take years and fall short of expectations
- Models don’t match business
- ETL is difficult to maintain and doesn’t represent business practices

Business needs can get lost in translation among each entity
The 80/20 Rule in Insurance

80% of an insurer’s data structures are similar to every other insurer.

20% varies greatly between insurers.
The 20%

What differs insurer to insurer

- Product Definition
- Rating/Underwriting
- Lines of Business
- Channels
- Marketing
- Business Processes
- The Data
Answer: Power of Adaptive BI
Contrast Between Traditional & Adaptive Models

Traditional Approach

Define
- Business User: Establish Requirements
- Developer: Perform LOB Data Modeling

Develop
- Developer: Develop DB Structures, Develop Warehouse ETL, Develop Data Mart ETL

Configure
- Developer: Develop Dashboards, Develop Reports
Power of Adaptive BI
Contrast Between Traditional & Adaptive Models

Define

- Business User
  - Define LOB

Generate

- System
  - Auto Generate DB Structures
  - Auto Generate Warehouse ETL
  - Auto Generate Data Mart ETL

Consume

- Business User
  - Configure Dashboards
  - Configure Reports

Adaptive Approach
Power of Adaptive BI
Contrast Between Adaptive & Traditional Models

Adaptive Approach

Define
- Business User:
  - Define LOB

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- System:
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  - Auto Generate Warehouse ETL
  - Auto Generate Data Mart ETL

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Traditional Approach

Define
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- Developer:
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  - Develop Data Mart ETL

Configure
- Developer:
  - Develop Dashboards
  - Develop Reports
Oracle Insurance Insight Architecture

Business users leverage warehouse palette for configurability

Oracle Insurance Insight
Data Model and Data Design

Interface Definition Engine | Warehouse Definition Engine | Mart Definition Engine

Line Templates (Pre-Built Lines)

Warehouse Palette (create new attributes, change attributes)
# Oracle Insurance Insight Metrics

## Example Oracle Insurance Insight Metrics

### Premium
- **Base Premium**
  - Cancelled Premium
  - Earned Premium
  - Effective Premium
  - Expired Premium
  - Future Written Premium
  - Inforce Premium
  - Processed Premium
  - Retained Premium
  - Written Premium

### Paid and Recovery Amts
- **Combined Paid**
  - Combined Expense
  - Combined Loss and Expense
  - Combined Loss and Recoveries
  - Combined Loss, Expense and Recoveries
  - Deductible Recovered
  - Salvage Recovered
  - Subrogation Recovered Paid Amounts
  - Loss
  - Allocated Expense
  - Unallocated Expense

### Incurred Amounts
- **Combined Incurred**
  - Combined Expense
  - Combined Loss and Expense
  - Combined Recovery
  - Combined Loss and Recovery Incurred Amounts
  - Allocated Expense
  - Deductible
  - Loss
  - Salvage
  - Subrogation
  - Unallocated Expense

### Ratios
- **Premium Ratios**
  - Cancelled to Written
  - Earned to Written
  - Inforce to Written
  - Premium Renewal Retention

- **Paid Ratios**
  - Combined Paid Loss
  - Paid Loss
  - Expense (allocated/unallocated)

- **Incurred Loss Ratios**
  - Incurred Loss Ratios

- **Expense Ratios**
  - Expense Ratios

- **Exposure Ratios**
  - Exposure Ratios

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## Possible Dashboards/Reports built from core metrics

### Underwriter
- Average Premium per policy
- Exposure Summary
- Premium Summary

### Actuary
- Loss Triangulation
- Loss vs. Premium
- Premium
- Reserve

### Claims
- Claims in Subrogation
- Claims counts
- Claims by Adjuster
- Reserve Summary

### Production
- Claims by Producer
- Premium/Loss by Agent/Agency
- Written Premium

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Faster Time to Analytics
Configurability and Insurance-Specific

Configurability

- Pre-built, entity-based interfaces
- Reduce IT delays and data inaccuracies
- Business user configuration of reports/dashboards
- Reports and metrics by user role
Highly Scalable BI Foundation
Providing Insights Across the Enterprise

Insurance Workspace

Performance Management Applications

BI Applications

BUSINESS INTELLIGENCE FOUNDATION

Common Enterprise Information Model

Essbase
BI Server
Predictive Analytics

Fusion Middleware

Insurance Policy and Claims Management
Insurance Sales, Marketing & Services
Data Warehouse
Data Mart
OLAP
SAP, Oracle, Siebel, PeopleSoft, Custom
Excel
Business Process

Oracle
Pervasive Information Access
One Platform, One Model, Multiple Delivery Methods

- Reporting & Publishing
- Ad-hoc Analysis
- Interactive Dashboards
- Essbase
- Desktop Gadgets
- Proactive Detection and Alerts
- Disconnected & Mobile Analytics
- MS Office & Outlook Integration

Common Enterprise Information Model
Integrated Security, User Management, Personalization
Multidimensional Calculation and Integration Engine
Intelligent Request Generation and Optimized Data Access Services

- OLTP & ODS Systems
- Data Warehouse
- Data Mart
- OLAP
- SAP, Oracle, PeopleSoft, Siebel, Custom Apps
- Files, Excel, XML
- Business Process

ORACLE
Leverages Fusion Middleware

Insurance Workspace

Performance Management Applications

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FUSION MIDDLEWARE

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<tr>
<th>SOA</th>
<th>Data Quality</th>
<th>Data Integration</th>
<th>MDM</th>
<th>Identity Management</th>
<th>Content Management</th>
<th>Business Process Management</th>
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Insurance Policy and Claims Management

Insurance Sales, Marketing & Services

Data Warehouse, Data Mart

OLAP

SAP, Oracle, Siebel, PeopleSoft, Custom

Excel, XML

Business Process
Hot-Pluggable With Existing IT Investments

PORTALS
- Any JSR 168 Portal

DATA MINING
- Oracle Data Mining, SPSS, SAS

APPLICATIONS
- Oracle EBS, Siebel, SAP, PeopleSoft, JD Edwards...

DESKTOP TOOLS
- Excel, Outlook, Lotus Notes...

Oracle Enterprise Performance Management System
Oracle Business Intelligence Foundation

SECURITY
- Oracle Kerberos
- iPlanet
- MSFT AD
- Novell
- Custom
- Others...

DATA ACCESS
- Oracle RDBMS
- Oracle OLAP Option
- Microsoft SQL Server
- Microsoft Analysis Services
- IBM DB2
- Teradata
- Essbase
- SAP BW
- XML, Excel, Text

DATA INTEGRATION
- Oracle Data Integrator (Sunopsis)
- Oracle Warehouse Builder
- Informatica
- Ascential
- Ascential
- Others...
Oracle’s Differentiators in EPM

• **Comprehensive Solutions and Architecture**
  - Most complete performance management applications
  - Broadest coverage of pre-packaged BI applications
  - Most comprehensive semantic layer

• **Hot Pluggable into Any Environment**
  - Open to Oracle and non-Oracle platforms and applications
  - Modular system that can plug and play with IT infrastructure
  - Leverages Fusion Middleware

• **Power Beyond Dashboards**
  - Most powerful BI Foundation
  - Only integrated master data management technology
  - Easy to use financial and predictive modeling
Announcing

Oracle Exalytics In-Memory Machine

- First Engineered System for Analytics
- Best Visual Analysis with No Limits
- Smarter Analytic Applications
Oracle EPM in Life and P&C Insurance

[Logos of various insurance companies]
Oracle EPM in Health Insurance
ORACLE IS THE INFORMATION COMPANY