IMS and Cognos: Perfect Together

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IBM

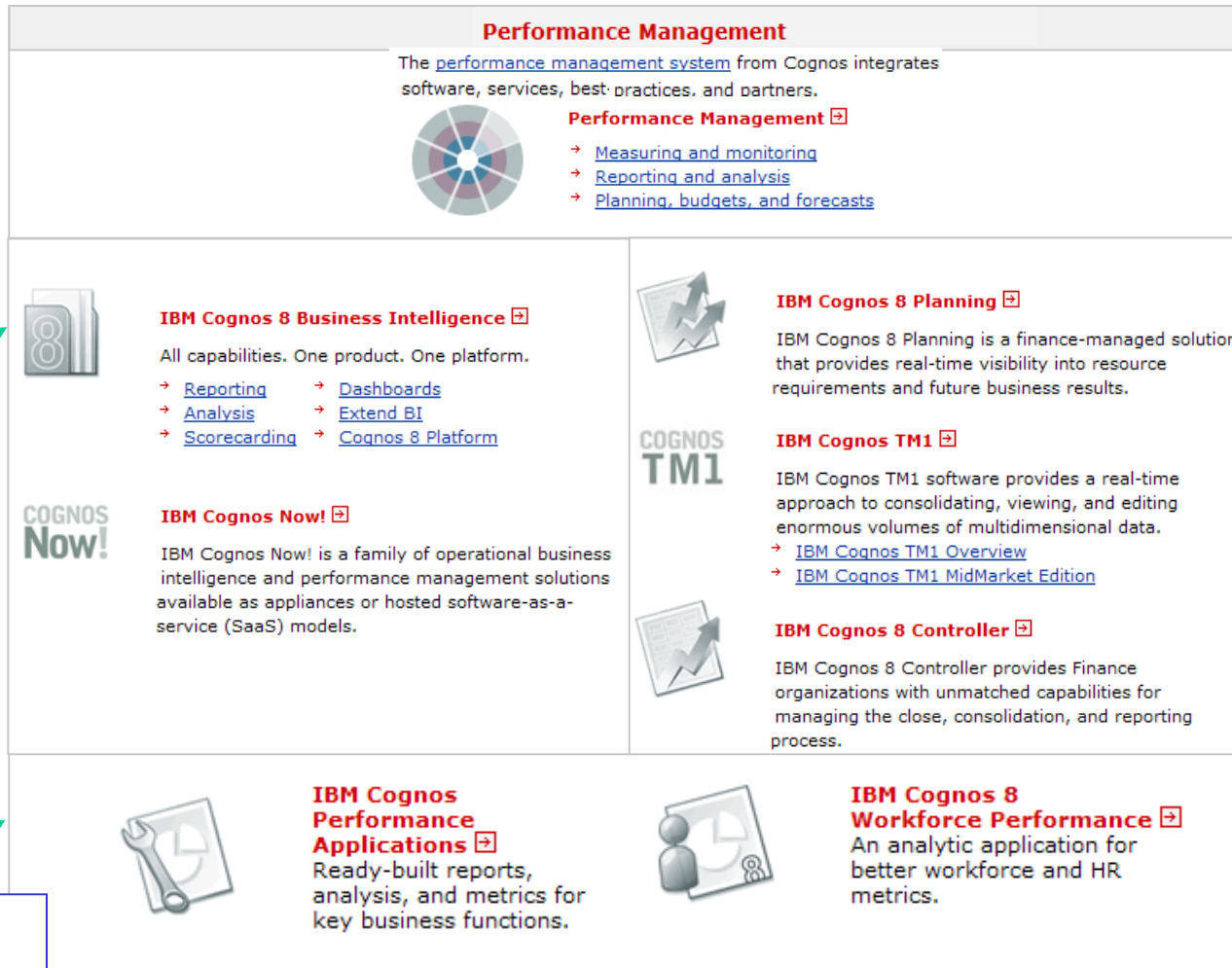Thursday - August 5, 2010
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Agenda

- What is Cognos?

- Cognos Overview

- The Value of Using Cognos and IMS for Enhanced Reporting and Operational BI

- Cognos and IMS examples

- Installation and operational considerations

- Summary and Next Steps

What is Cognos?

- An industry solution that facilitate business decisions through the implementation of business intelligence (BI) and financial performance management (FPM) software
  - Allows decision makers to aggregate data from transaction systems (SAP, Oracle,... and now IMS.) along with other sources across the organization to create a single, integrated business performance management framework

- Value
  - **Reduces the effort** needed to generate reports and address new business requirements
  - **Reduces complexity** through an accurate deployment strategy and the use of existing infrastructure
  - **Saves time** with proactive administration that enables you to resolve issues before they impact the business

- **With IMS**
  - **Allows IMS data to be integrated into this new environment**
    - **Using the Cognos generic JDBC driver interface**
      - **And the IMS universal drivers with ODBM**

Cognos Overview – Product Portfolio

Performance Management

The performance management system from Cognos integrates software, services, best practices. and partners.

Performance Management
→ Measuring and monitoring
→ Reporting and analysis
→ Planning, budgets, and forecasts

IBM Cognos 8 Business Intelligence

All capabilities. One product. One platform.

→ Reporting   → Dashboards
→ Analysis   → Extend BI
→ Scorecarding   → Cognos 8 Platform

IBM Cognos Now!

IBM Cognos Now! is a family of operational business intelligence and performance management solutions available as appliances or hosted software-as-a-service (SaaS) models.

IBM Cognos 8 Planning

IBM Cognos 8 Planning is a finance-managed solution that provides real-time visibility into resource requirements and future business results.

IBM Cognos TM1

IBM Cognos TM1 software provides a real-time approach to consolidating, viewing, and editing enormous volumes of multidimensional data.

→ IBM Cognos TM1 Overview
→ IBM Cognos TM1 MidMarket Edition

IBM Cognos 8 Controller

IBM Cognos 8 Controller provides Finance organizations with unmatched capabilities for managing the close, consolidation, and reporting process.

IBM Cognos Performance Applications
Ready-built reports, analysis, and metrics for key business functions.

IBM Cognos 8 Workforce Performance
An analytic application for better workforce and HR metrics.

Business Intelligence

Monitoring of business processes and workflows

Financial Performance Management

Financial metrics and outcomes – helps create "what if" business scenarios

BI and PM Solutions

Using Cognos with IMS
for Enhanced Reporting and Operational BI

- Customers interested in Cognos want:

  - Lower cost, single platform solution for DW and/or BI
  - New BI operations such as real-time and/or Operational BI
  - Require assured 24x7 operation
  - Consolidate distributed servers
  - Standardization on one or fewer BI tools
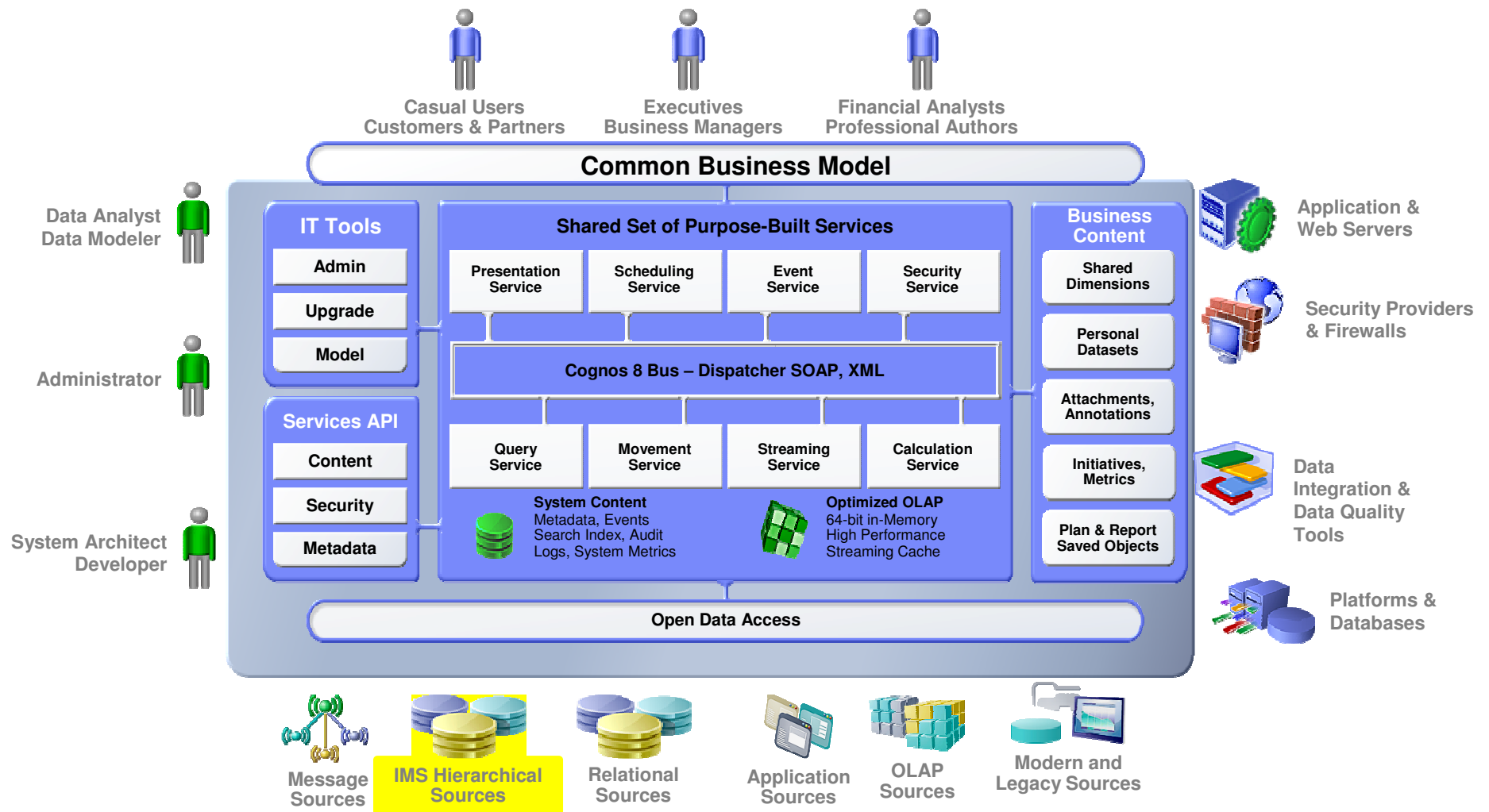 - Data security rules

Bottom Line:

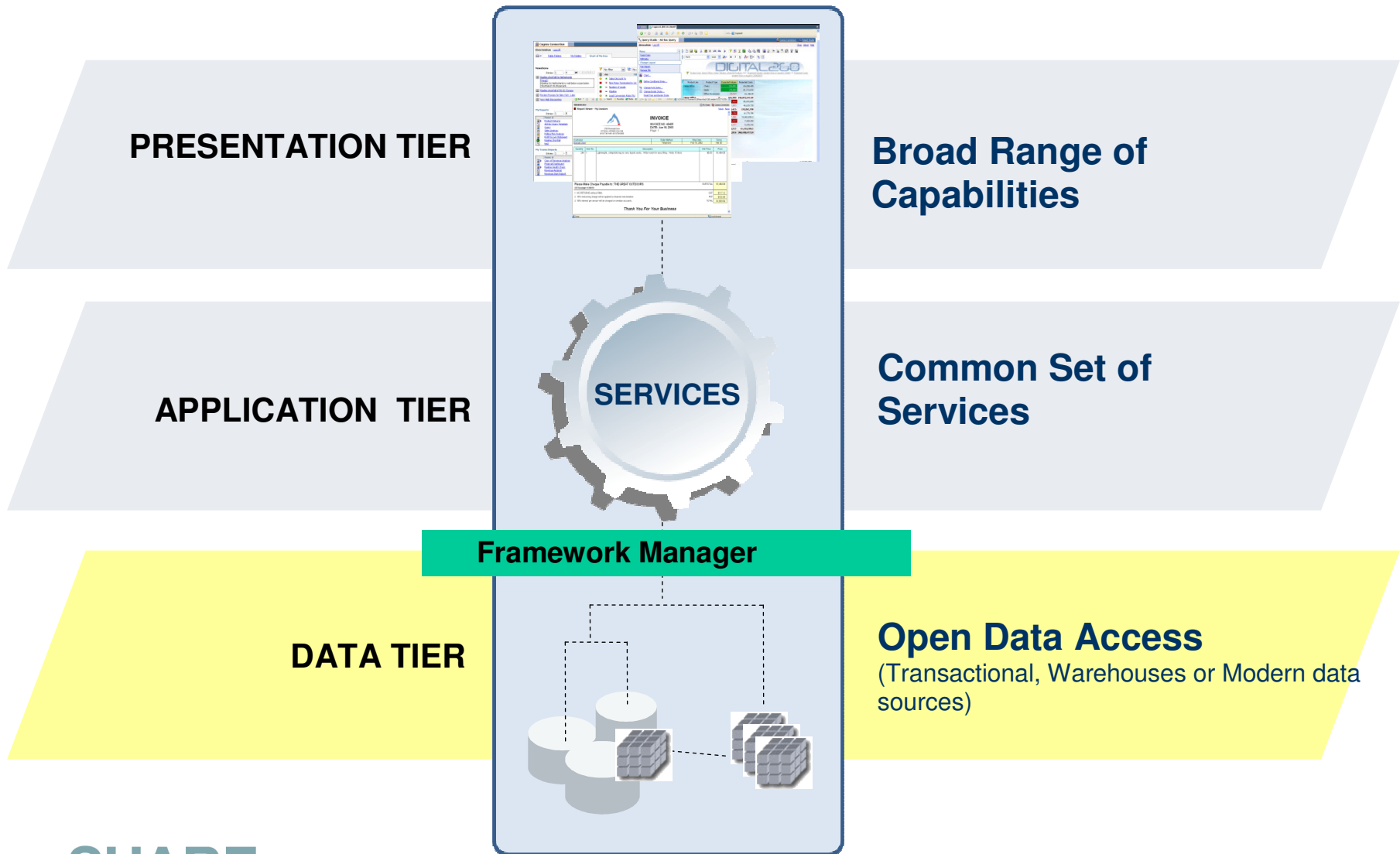Cognos 8 delivers capabilities (such as reporting, analysis, planning)

where and how our customers needs them (over the web, to a mobile device via search or MS Office)

through a common set of services that provide access to all data, where ever it resides.

Easily Fitting Into IBM's BI SOA Model

Casual Users Customers & Partners — **Executives Business Managers** — **Financial Analysts Professional Authors**

Common Business Model

Data Analyst Data Modeler

Administrator

System Architect Developer

IT Tools
- Admin
- Upgrade
- Model

Services API
- Content
- Security
- Metadata

Shared Set of Purpose-Built Services

| Presentation Service | Scheduling Service | Event Service | Security Service |

Cognos 8 Bus – Dispatcher SOAP, XML

| Query Service | Movement Service | Streaming Service | Calculation Service |

System Content
Metadata, Events
Search Index, Audit
Logs, System Metrics

Optimized OLAP
64-bit in-Memory
High Performance
Streaming Cache

Business Content
- Shared Dimensions
- Personal Datasets
- Attachments, Annotations
- Initiatives, Metrics
- Plan & Report Saved Objects

Open Data Access

Application & Web Servers

Security Providers & Firewalls

Data Integration & Data Quality Tools

Platforms & Databases

Message Sources — **IMS Hierarchical Sources** — Relational Sources — Application Sources — OLAP Sources — Modern and Legacy Sources

The IBM Cognos 8 platform

PRESENTATION TIER

Broad Range of Capabilities

APPLICATION TIER

SERVICES

Common Set of Services

Framework Manager

DATA TIER

Open Data Access
(Transactional, Warehouses or Modern data sources)
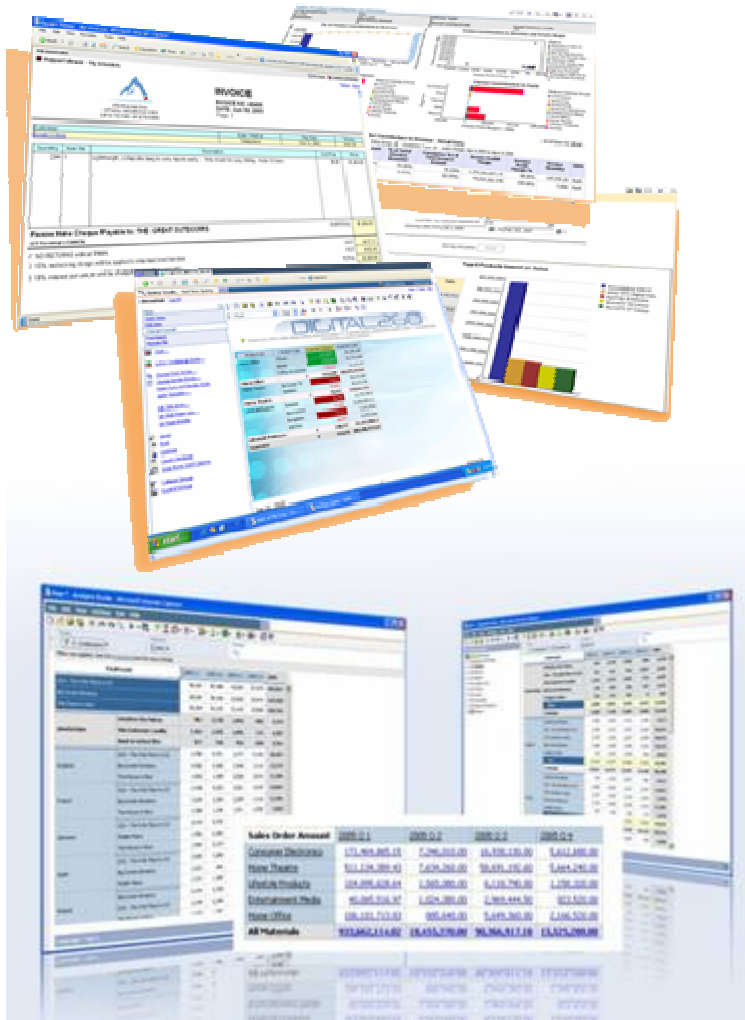
Reporting & OLAP

- ■ **Enterprise Reporting**

  - Supports multiple report types: Production, Managed, Ad-hoc, Financial, etc

  - Operates from a single metadata layer

  - Can be personalized and targeted

  - Can be distributed via email, portal, MS-Office, search application and mobile device

  - Can assist in the management and optimization of daily business operations

  - Capable of reporting on real-time data

  - Presents complex data in a business way so it is easy to understand

- ■ **Analysis**

  - Enables the guided exploration of information that pertains to all dimensions of your business

  - Moves from summary level to detail levels of information effortlessly

  - Analyzes and reports against online analytical processing (OLAP) and dimensionally aware relational sources

  - Gets to the "why" behind an event or action to improve business performance.

  - Identifies potential problems and recognizes business trends

The Solution

Why use Cognos with IMS?

- IMS runs core business processes – critical to the running of the business
  - Manages data that reflects the most current state of the business

- Before IMS 11, often difficult to directly access IMS data
  - No built-in ad hoc query capabilities in IMS
  - Standard tools often did not support hierarchical data; left to write own interfaces and reports or had to purchase bridging tools
  - Must be skilled in IMS to integrate with IMS and write reports

- Many installations periodically copy IMS data to relational store/data warehouse to run reports
  - They then only have access up to the point of copy, not current business state

The Value of Using Cognos and IMS for Enhanced Operational BI

Operational Business Intelligence

- A type of BI that helps drive and optimize business operations on a daily basis
  - **Value**
    - Extends the use of BI to a much wider user audience
    - Enables more timely business decisions; in relation to real time or right-time BI Processing
    - Allows business users to report on, analyze and optimize business operations
    - Reduces time between discovery of problems/opportunities and taking action on them

- **Cognos and Operational BI**
  - **Cognos Now!**
    - Offers operational dashboards for real time monitoring of key performance indicators and operational metrics across different data sources

Using Cognos with IMS Business Case

Cognos with IMS Improves Functionality by:

Delivering a scalable, efficient technology that is quickly refreshed with current data

Enhancing the value of an existing IMS-centric infrastructure while containing costs

Performing business reporting against both operational and data warehousing environments

Generating reports from other data sources outside of IMS

No longer requiring the move of IMS data to a relational store to do Business Intelligence

Using Cognos with IMS

AND ..Provides quick answers to commonly asked business questions

- Enables users to integrate data from multiple systems and data sources to create reports, dashboards and scorecards
  - Directly accessing IMS data allows visibility to current state of business

- Allows a common context for decision making that scales and adapts to all roles within an organization
  - Can be used for everything from simple reporting to analytical processing

- Improves management and operational processes to increase revenue, reduce costs, or both
  - Provides relevant information on the hows, whens, and wheres of the business

- Grants report authoring capabilities to all employees of a company
  - Enabling companies to quickly and easily get the right information at the right time to the right people

Using Cognos with IMS

Discovering New Business Value in Existing Data

Cognos Data Source Supports:

- **_Generic JDBC Driver_**
- DB2
- Oracle
- Informix
- Sybase
- MS SQL Server

IMS!
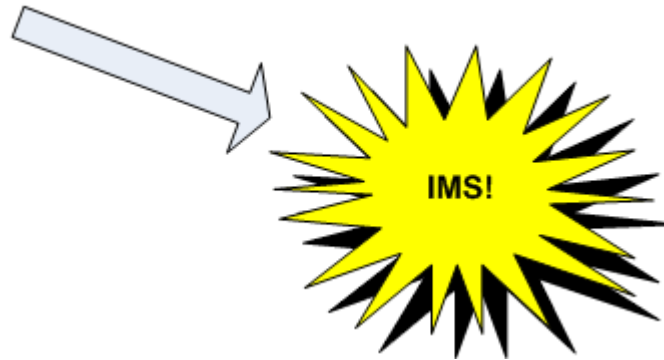
IMS Integration with Cognos

Three Steps to Building Cognos Application with IMS

Cognos
Business
Intelligence

Framework
Manager

3. Deliver and view the
information

Virtual View
Manager
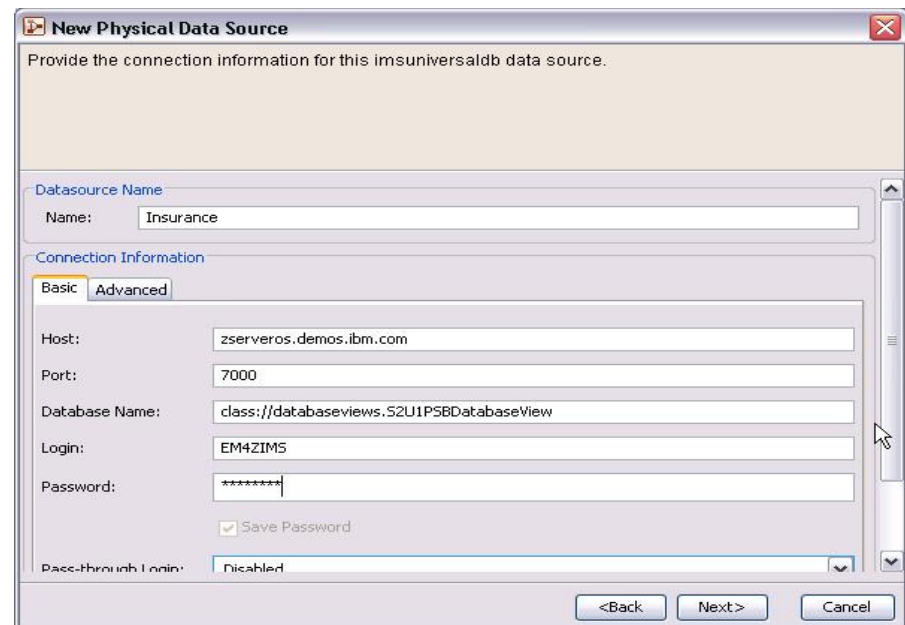
2. Build and publish the
content

IMS

1. Locate and prepare IMS
data sources and models

Operational Data
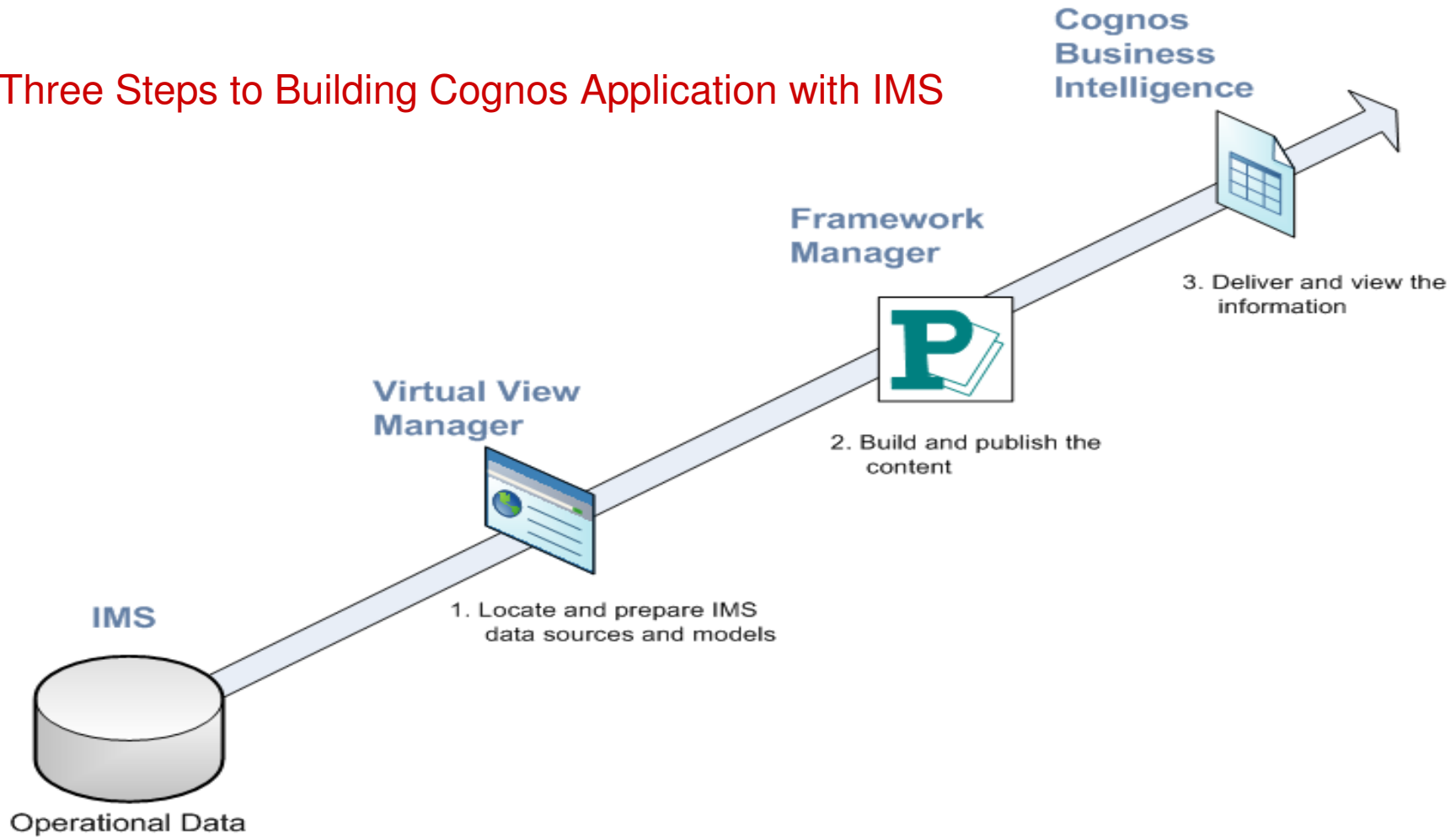
Step 1: Setup Virtual View Manager

- Stop Virtual View Manager

- Copy IMS JDBC driver (imsudb.jar) and IMS database views* to:
  - \cognos\vvm\conf\adapters\ ims

- *Database Views are generated using the DLIModel utility

- Start Virtual View Manager

- Add New Adapter

- Add New Data Source

- Publish IMS Segments (Tables)

Step 2: Framework Manager Meta Data

- Import the ODBC Data Source(s)

- Configure the Table relations
  - Required for usage of joins in Cognos

- Publish the Package for use in Cognos

Step 3: Generate the Reports

- Open Report Studio

- Select the published Package

- Drag the Data objects into the Widgets provided by Cognos

Performance Dashboard
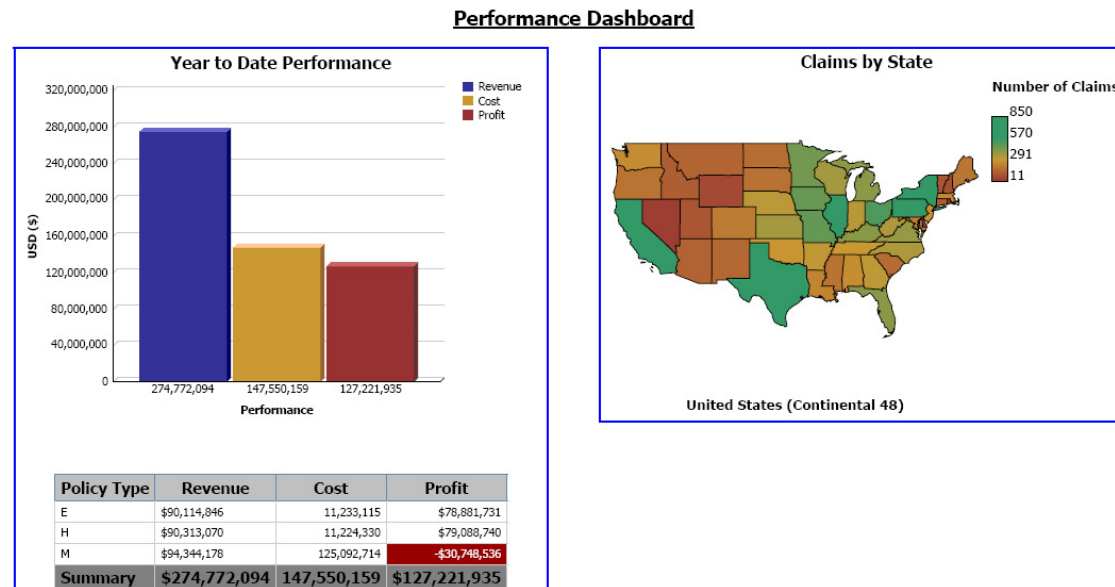
# Using Cognos and IMS for Enhanced Operational BI

Software Requirements

- HTTP Server (Apache HTTP Server 2.2)

- Cognos 8.4.1 Business Intelligence Modeling
  - Framework Manager (FM)

- Cognos 8.4.1 Virtual View Manager (VVM)

- IMS V11
  - IMS Open Database Solution to access IMS data
    - IMS Connect – TCP/IP endpoint for Type 4 database access to IMS
    - ODBM – IMS component used for processing Type 4 database requests

# IMS Integration with Cognos

Topology
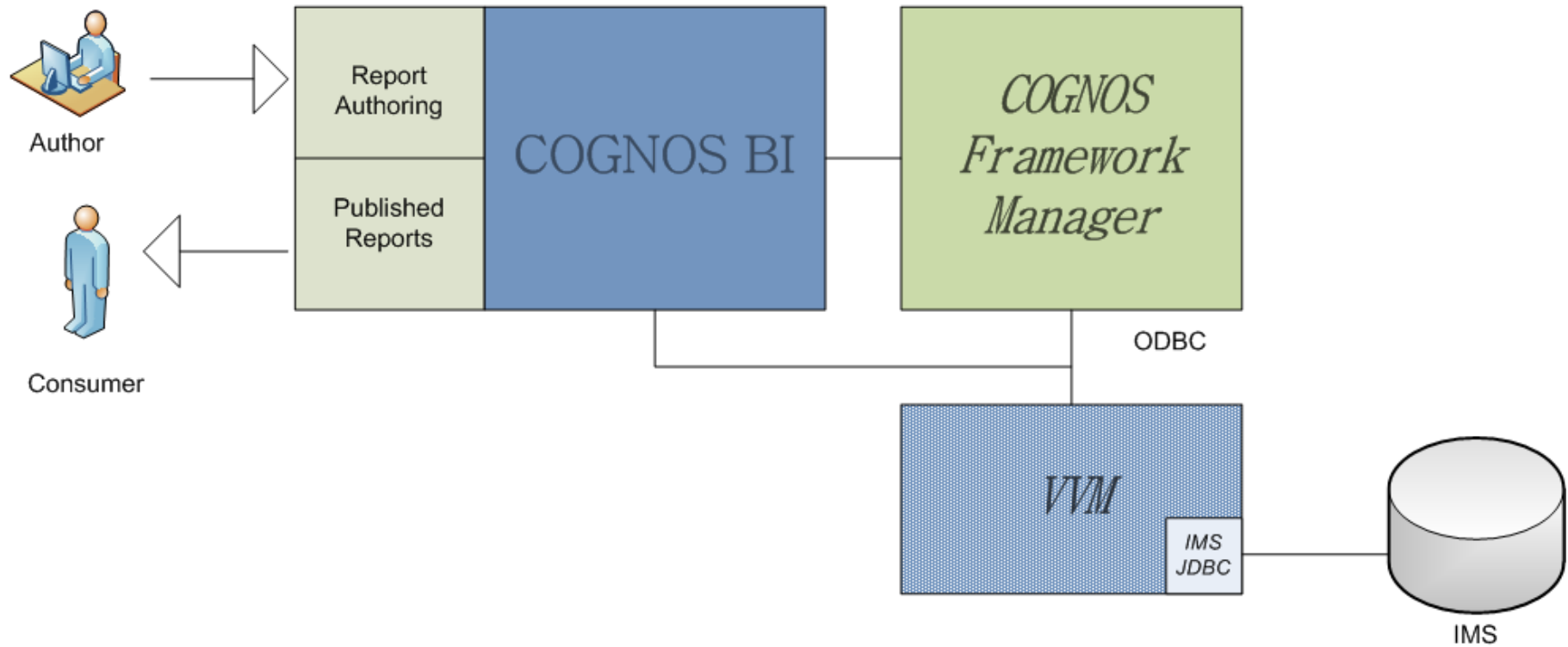
IMS Integration with Cognos

The IMS Environment:

- IMS V11 allows distributed access over TCP/IP using the IMS Universal Database Driver (JDBC)

- IMS Connect and Open Database Manager now work together as a DRDA server for IMS data
  - Shipped with IMS V11 – requires System Programmer for initial setup

Windows, Linux, Unix, and zLinux   **z/OS**
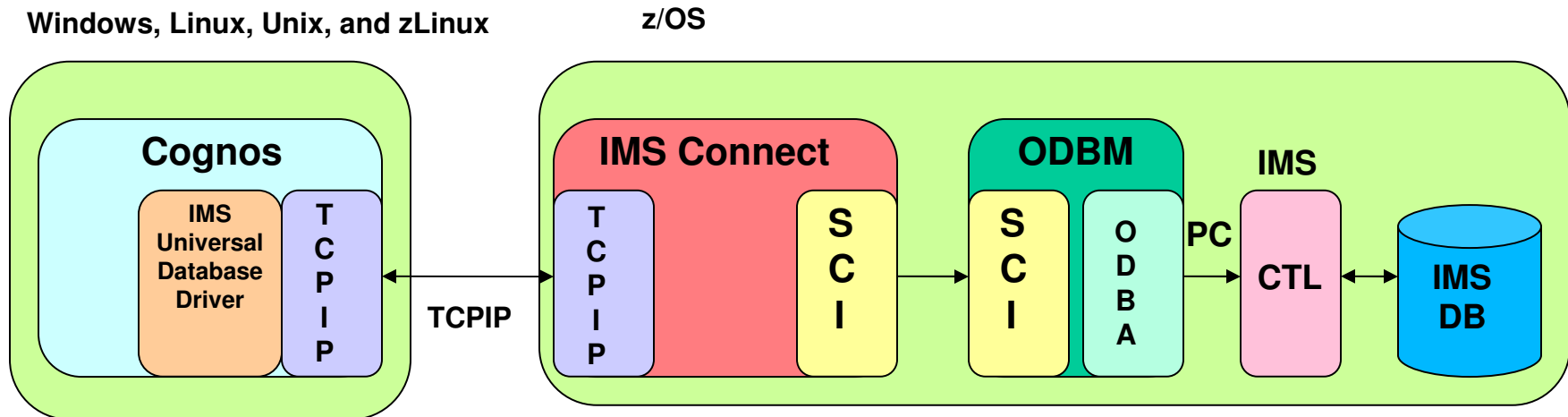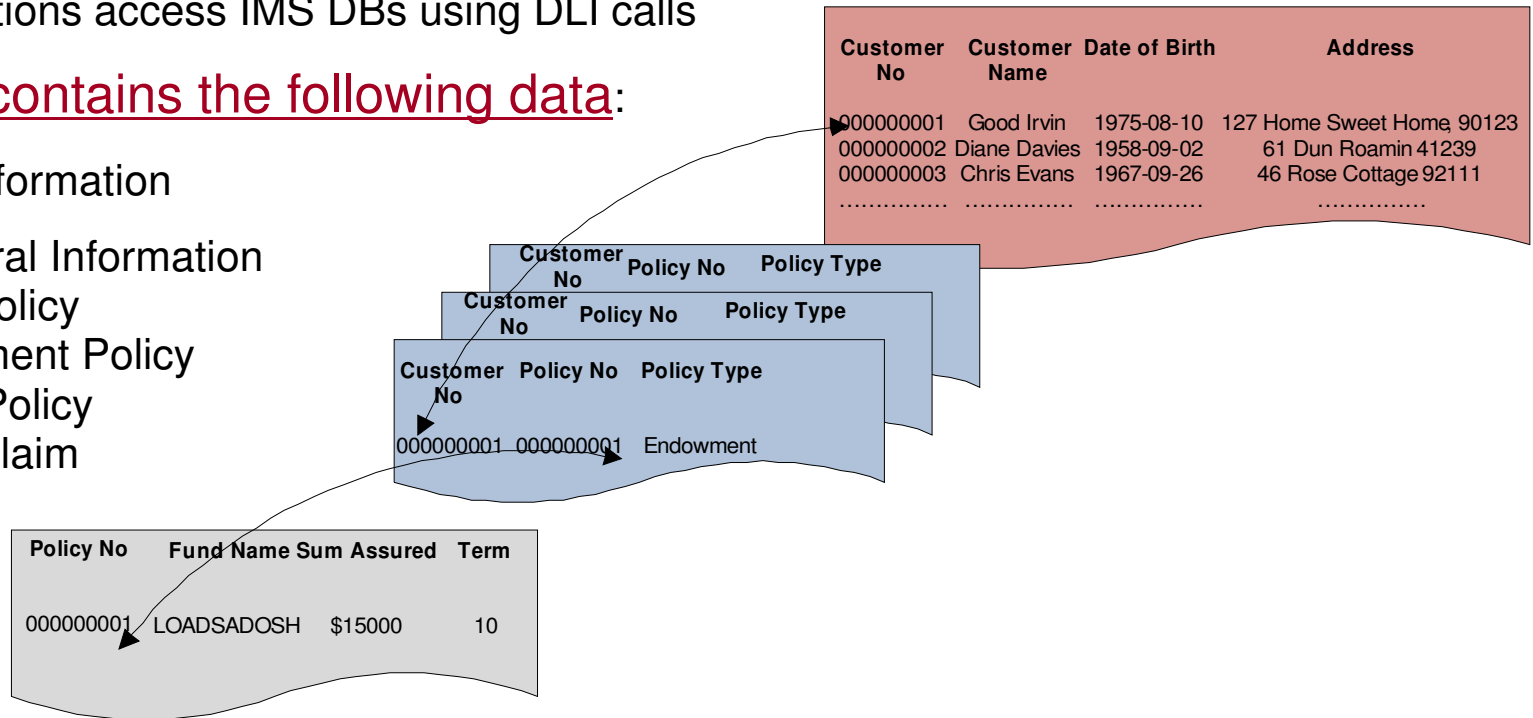
Cognos and IMS Examples

The Application:

- An insurance claims processing application written in a combination of different programming languages (COBOL, PL/I, JAVA).

- The environment mimics a real-world insurance company

- CRUD functions access IMS DBs using DLI calls

The IMS DB contains the following data:

- Customer Information

- Policy General Information
  - Motor Policy
  - Endowment Policy
  - House Policy
  - Policy Claim

Customer No	Customer Name	Date of Birth	Address
000000001	Good Irvin	1975-08-10	127 Home Sweet Home, 90123
000000002	Diane Davies	1958-09-02	61 Dun Roamin 41239
000000003	Chris Evans	1967-09-26	46 Rose Cottage 92111
....	....	....	....

Customer No	Policy No	Policy Type
000000001	000000001	Endowment

Policy No	Fund Name	Sum Assured	Term
000000001	LOADSADOSH	$15000	10

Cognos and IMS Examples

Scenario 1:

Accessing detailed information regarding customer accounts

- View basic account information regarding policies with the company

- Drill down capabilities into policies and claims

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Cognos and IMS Examples

Scenario 2:

Obtaining a high level overview of key performance measures essential to the organization

- Year to date performance of the insurance firm based on revenue, costs, and profit
- A nation map that displays the number of claims files by state during the current fiscal year
- Drill down capabilities into monthly performance
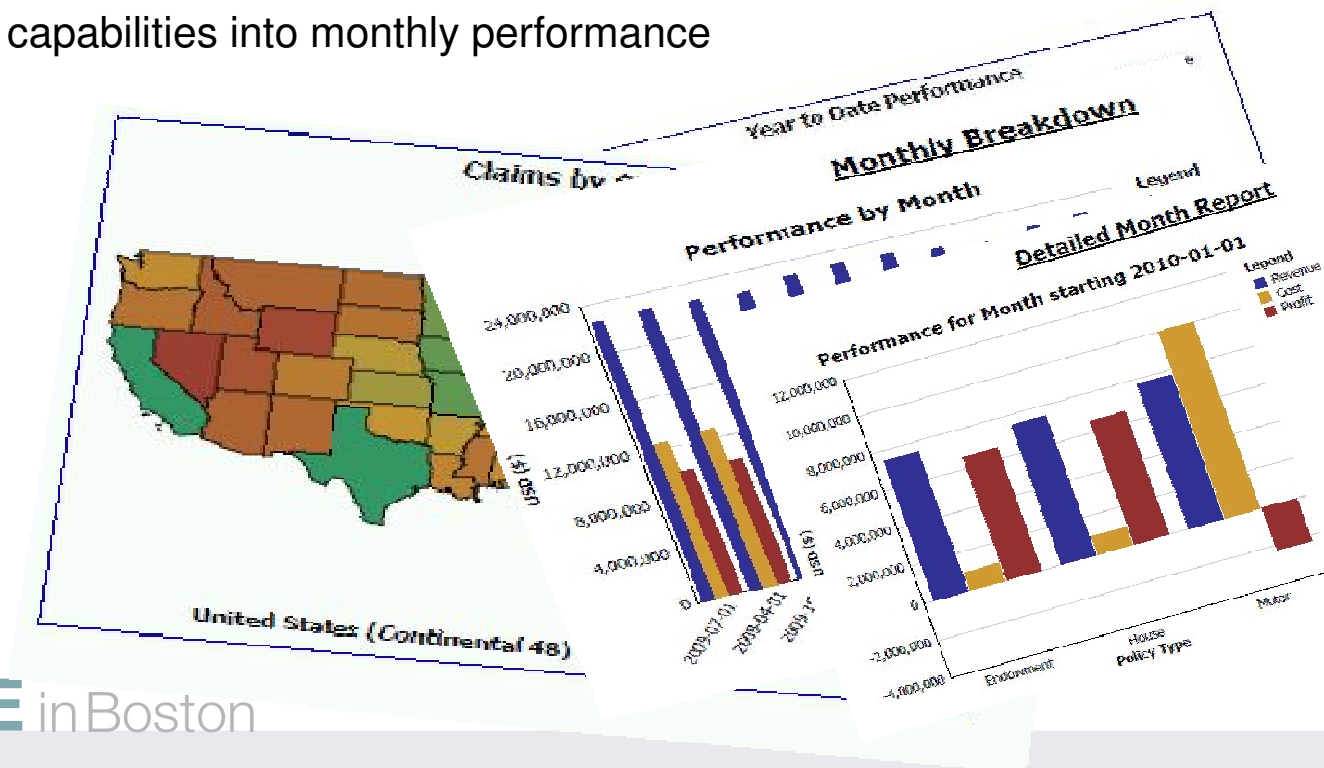
Cognos and IMS – Summary and Next Steps

- Extending your Reporting and BI capabilities to IMS provides:
  - Real-time access to IMS data for report generating
  - Advantages of creating and managing business-related metadata and translating it into visual presentations
  - Knowledge to help decision makers know sooner, understand faster, and react more quickly than competition
  - Ability to compare performance across dimensions to spot trends and anomalies over time

- Next Steps
  - On-site demo? POC?
  - askzcognos@us.ibm.com

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