InfoSphere™
software

Trusted Information

Information Management software

The IBM InfoSphere Suite

Norbert Eschle   IBM
Henry Cook   IBM

We support activities at every stage of the life cycle, the end to end process and governance

Design Data	Acquire	Transform	Quality Assure	Store/Process	Metadata / MDM	Publish
Data Governance						

- **Activities**
- **Investigation**
- **Requirements gathering**
- **Design time**
  - Investigate best practice
  - 'Think Time' to consider alternatives
  - Collaboration and gaining agreement
  - Architect solution
- **Develop**
- **Test**
- **Design Data Structures**
  - Logical / Physical
  - Agree
  - Create definition
  - Add
  - Modify
- **Changing and maintaining**

- **Acquire**
- **Profile and understand**
  - Agree format, content and meaning
- **Transform**
- **Quality Assure / cleanse**
- **Publish, Access and maintain metadata**
- **Establish and Maintain Master Data**
- **Load and Store**
- **Process**
  - Analyse,
  - Query
  - Update
- **Backup and recover**
- **Capacity plan and manage performance**
- **Archive and retire**
- **Publish and Distribute results**

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IBM speeds the overall process to maximise business benefits. Accelerating time to results, reducing time, effort and cost

**Traditional Life Cycle Time Scales**

Accelerated Life Cycle Time Scales

| 50% | 50% | 50% | 50% | 50% | 50% | 50% |

Design Data	Acquire	Transform	Quality Assure	Store/Process	Metadata / MDM	Publish
Design data ▪ Predefined data models ▪ Proven in the field, less risk, less design time ▪ Support for fast customisation ▪ Supports changing hierarchies	**Data Acquisition** ▪ Support for interfaces to all common s/w h/w ▪ 100's of proven data acquisition connectors ▪ SOA support ▪ Support for common packages e.g. Peoplesoft ▪ Support for large range of both IBM and non IBM systems ▪ Federated access multiple systems ▪ Change Data Capture Oracle / MicroSoft etc	**Transformation** ▪ Most mature and comprehensive ETL tooling ▪ 1000's of prebuilt transformations ▪ 'Fast Track' process to enable collaboration ▪ Graphic design tools for ease of use ▪ Parallel processing to avoid processing bottlenecks ▪ Ease of re-use of components	**Data Quality** ▪ Most mature and comprehensive data quality tools ▪ 100's of data quality tests and routines ▪ Specific support for Data Quality (not just ETL adaptation) ▪ Sophisticated pattern matching ▪ Numeric and non-numeric data ▪ Quality reporting ▪ Support for correction processes	**Central Store and Marts** ▪ Market leading Data Warehouse capability ▪ Full support for 'massively parallel processing' for true scaleability ▪ Highly cost efficient ▪ Workload management for supporting many users ▪ Comprehensive Data mining and OLAP support ▪ Appliance, ease of install	**Metadata** ▪ Comprehensive support for business and technical data ▪ Business Glossary mechanism for publishing metadata ▪ Dedicated metadata server support **Master Data** ▪ Predefined master data model ▪ Support for change ▪ Dedicated server	**Presentation** ▪ Dashboarding ▪ Scorecarding ▪ Interfaces to all common s/w h/w ▪ Predefined templates and frameworks (blueprints) ▪ Mobile support ▪ Collaboration ▪ Easy report definition, generation ▪ Access to multiple heterogeneous sources

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Lower 'Time to Value' means greater overall benefit

Requirement worth £200,000 per month brought in 5 months earlier

Develop						£200,000

	£200,000	£200,000	£200,000	£200,000	£200,000	£200,000

← **£ 1m Extra Benefits** →
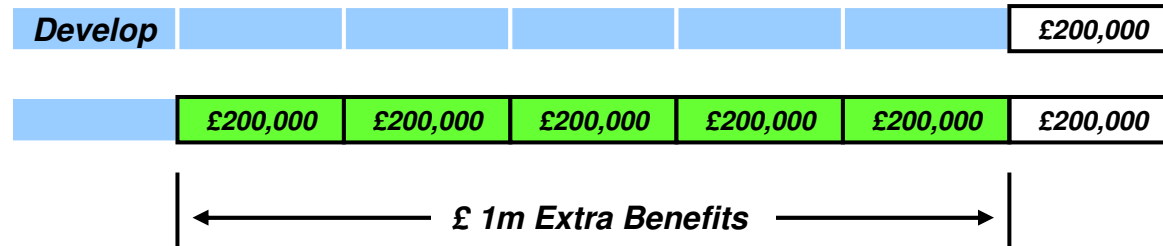
Meeting more requirements in the same time means more benefits

Priority	Requirement	Benefit
#1	Requirement	£500,000
#2	Requirement	£1,200,000
#3	Requirement	£2,300,000
#4	Requirement	£100,000
#5	Requirement	£1,500,000
#6	Requirement	£3,000,000
#7	Requirement	£400,000
#8	Requirement	£1,000,000
#9	Requirement	£1,000,000
#10	Requirement	£2,000,000

**£ 8.9m Extra benefits by being able to tackle more requirements**

Note: Requirements are prioritised by value and ease of implementation. If we can do requirement more easily then we may be able re-prioritise it.

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Typical savings through use of Information Server

- **Industry and experience reflects that business as usual IT Projects:**

  - Can take up to 10x as long with individual tooling

- **Unified Information Server Platform Benefits:**

  - Decreased risk by   53%

  - Improved business alignment   83%

  - Improve time to value by   75%

  - Reduce project staffing by   90%
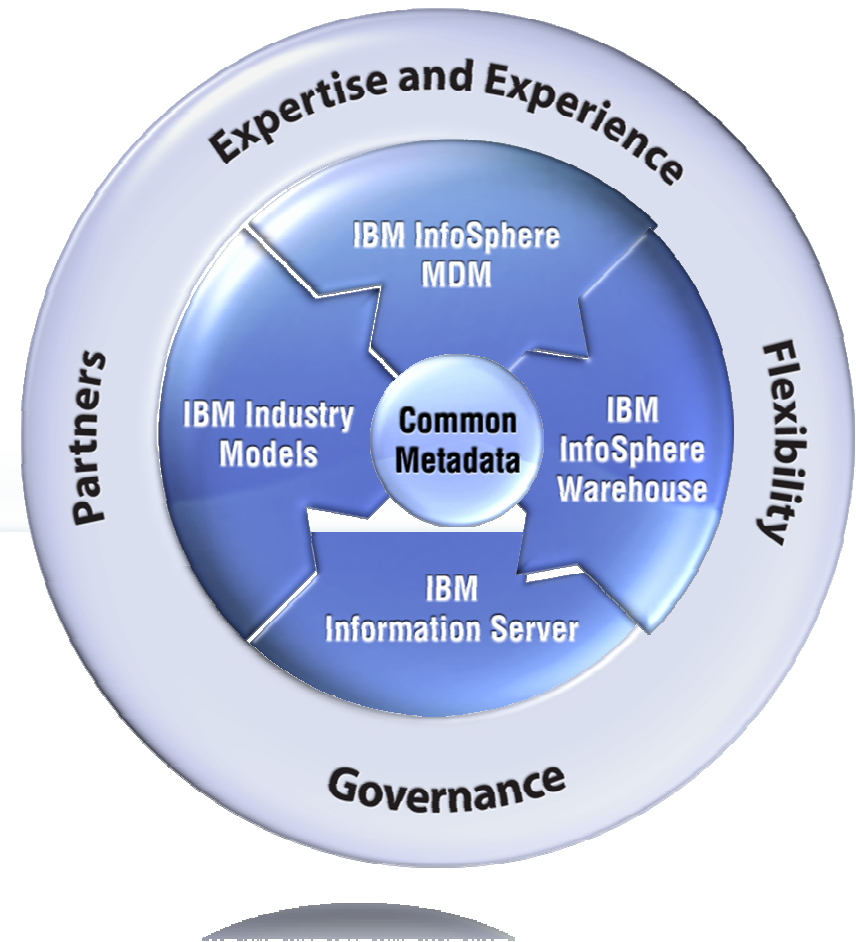
Source: Customer Case Studies, Industry Analyst Reports

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Time and effort savings using InfoSphere Balanced Warehouse

- **Before Balanced Warehouse**

  - Design   4

  - Build   6

  - Functional Test   3

  - Performance Test   3

  - Tune   3

  - UAT   1

  - **Total Weeks   20**

- **With Balanced Warehouse**

  - **Install   1 day**

- *Corresponding reduction in overall effort and risk*
- *Concentrate on business goals*
- *Takes machine issues 'off the critical path'*

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InfoSphere Portfolio

	Publish	Metadata
	Model	
Master	DW	
Capture	Integrate	
	Sources	

Industry Frameworks

Banking   Retail   Telco   Public Sector

Expertise & Accelerators

Business Strategy and Planning Services

Industry Models and Pre-Built Solution Assets

Integrated IBM Partner Components

IBM Cognos 8

Reporting & Analysis	Scorecarding & Dashboarding	Planning, Budgeting & Forecasting

Unified Performance System Platform

IBM InfoSphere MDM Server

Define	Manage	Transact

Party, Product, Account

IBM InfoSphere Warehouse

Reliable Real-Time Delivery

Manage	Analyze

IBM Information Server

Understand	Cleanse	Transform	Deliver

Unified Metadata Management

Parallel Processing   Rich Connectivity

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Analysts Recognize IBM Leadership

The Only Recognized Best Of Breed Portfolio Across Entire Information Value Chain

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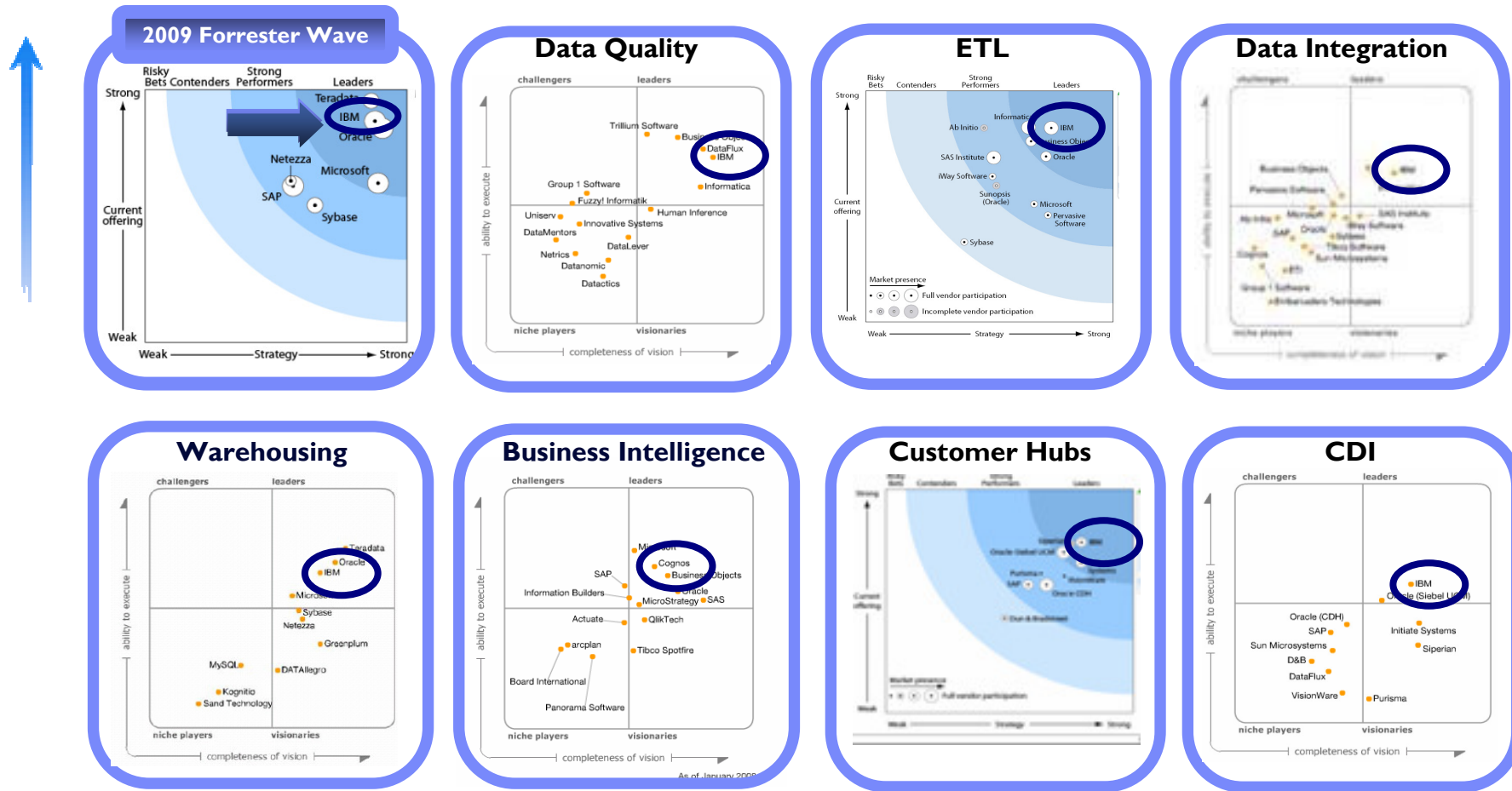
Reporting, Analysis, Dashboards, Scorecards
We use Cognos 8 to illustrate a simple Fraud Reporting Scenario

|		
Publish		**Metadata**
Model		
MDM	**DW**	
CDC	**Integrate**	
Sources		
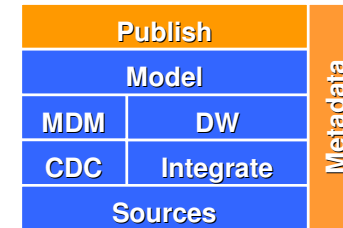
- **'Events' are reported**

- **Fraud Investigation unit can analyse suspicious events**

- **At High or Low level**
  - Drill Down into detail as necessary

- **Data Definitions available in Metadata / Glossary**
  - E.g. for Fraud Types – see dictionary

- **We'll track through simple example and show what kind of support is being given under the surface**

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Before I can act I need to know "Can I Trust the Data?". Here we see how we can know what is behind the data

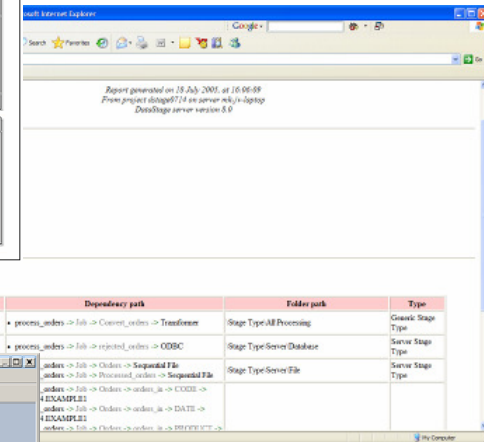|	Publish	
	Model	Metadata
MDM	DW	
CDC	Integrate	
	Sources	
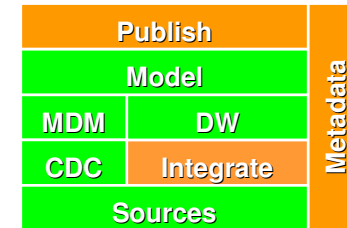
- **Understand the Meaning of data – Business Glossary**

- **Looking at the *Lineage* of data**
  - Where it came from?
  - What's been done to it?

- **We find a 'Job abort'**
  - From <u>Operational</u> metadata

- **Ops issue, or suspicious ?**

- **Able to make *informed* choice about trusting this data**

- **Can also be confident of all aspects of the Data Quality**

- **Primary components supply metadata: Publish, Metadata, Integrate**
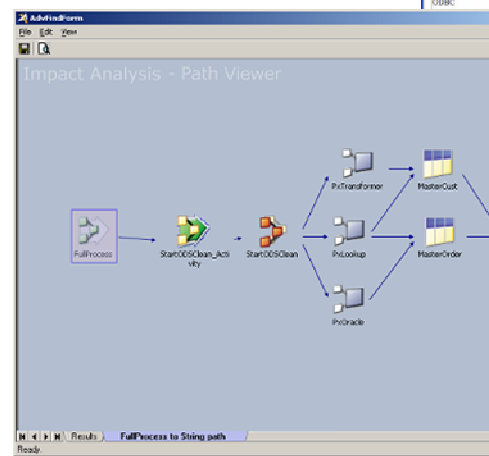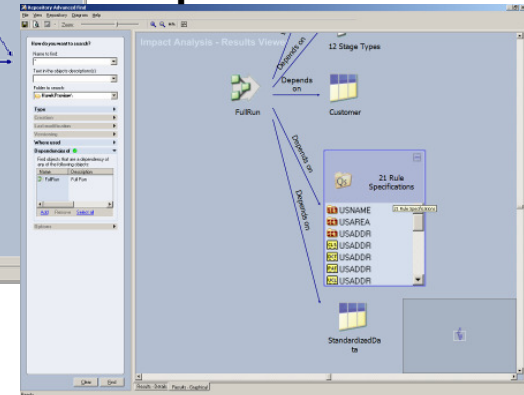
- ***All* components contribute input**
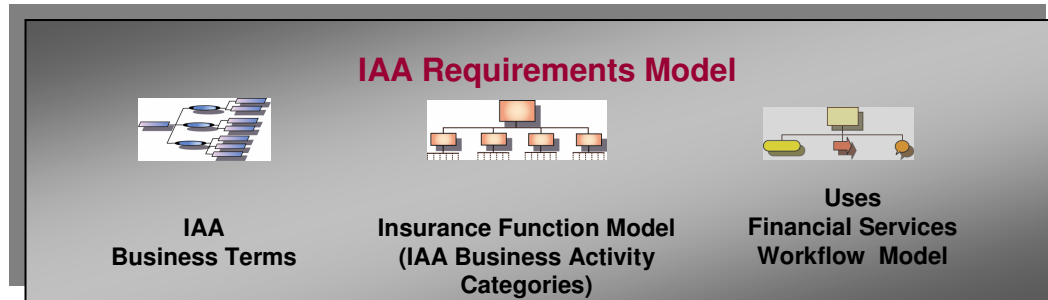
Report

HTML View

Path View

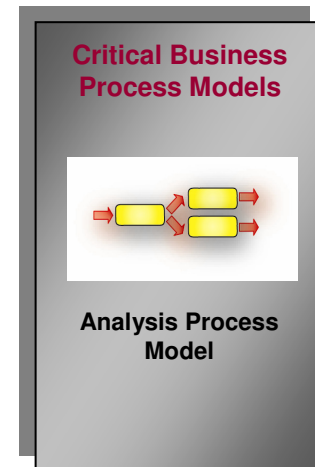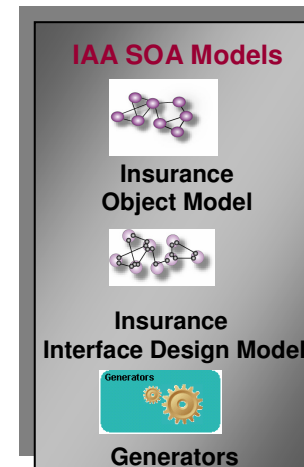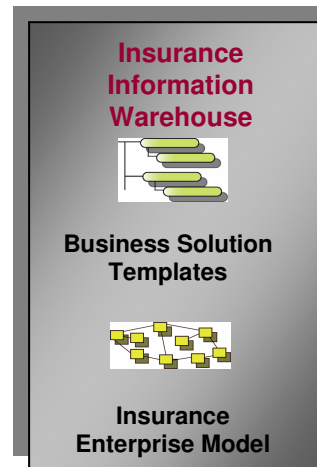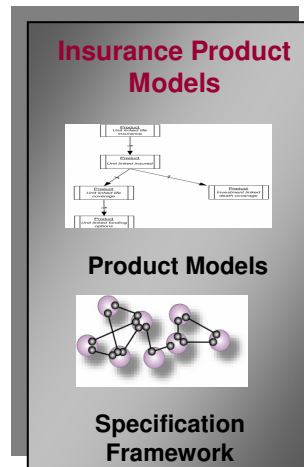**Graphical Tree View**

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All analytical systems need to organise the data to be reported upon. We have multiple *Enterprise* Data Models available

Publish		Metadata
Model		
MDM	DW	
CDC	Integrate	
Sources		

- **Pre-built Data Models**

- **Multiple Industries**
  - Insurance
  - Banking
  - Retail
  - Telco
  - Healthcare

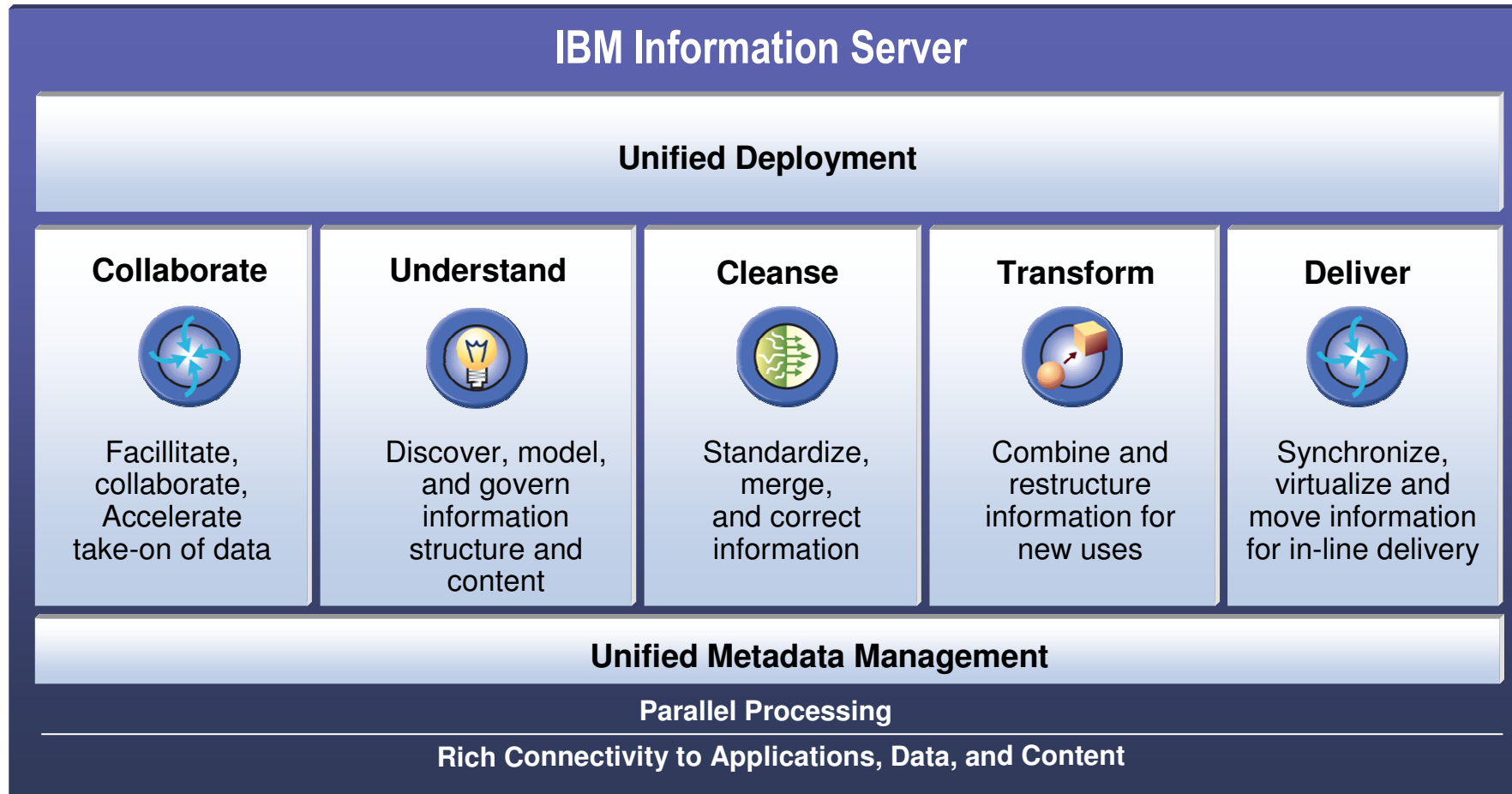- **Reduces**
  - **Risk, Time, Effort, Cost**

- **Built in support for common industry issues**
  - Solvency II
  - SOX
  - Basel II
  - IAS

IAA Requirements Model

IAA
Business Terms

Insurance Function Model
(IAA Business Activity Categories)

Uses
Financial Services
Workflow Model

Insurance Product Models

Product Models

Specification Framework

Insurance Information Warehouse

Business Solution Templates

Insurance Enterprise Model

IAA SOA Models

Insurance Object Model

Insurance Interface Design Model

Generators

Generators

Critical Business Process Models

Analysis Process Model

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We need to obtain, understand, transform and quality assure data, and use these capabilities in concert; this is the purpose of Information Server

Publish		Metadata
Model		
MDM	DW	
CDC	Integrate	
Sources		

IBM Information Server

Unified Deployment

Collaborate	**Understand**	**Cleanse**	**Transform**	**Deliver**
Facillitate, collaborate, Accelerate take-on of data	Discover, model, and govern information structure and content	Standardize, merge, and correct information	Combine and restructure information for new uses	Synchronize, virtualize and move information for in-line delivery

Unified Metadata Management

Parallel Processing

Rich Connectivity to Applications, Data, and Content

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IBM

Publish		Metadata
Model		
MDM	DW	
CDC	Integrate	
Sources		

Bringing IT and Business Together.
FastTrack, part of Information Server helps IT and Business personnel collaborate and speeds the process of using new data

InfoSphere FastTrack

Business Requirements

Data Integration Job

Data Warehouse

SAP

MDM
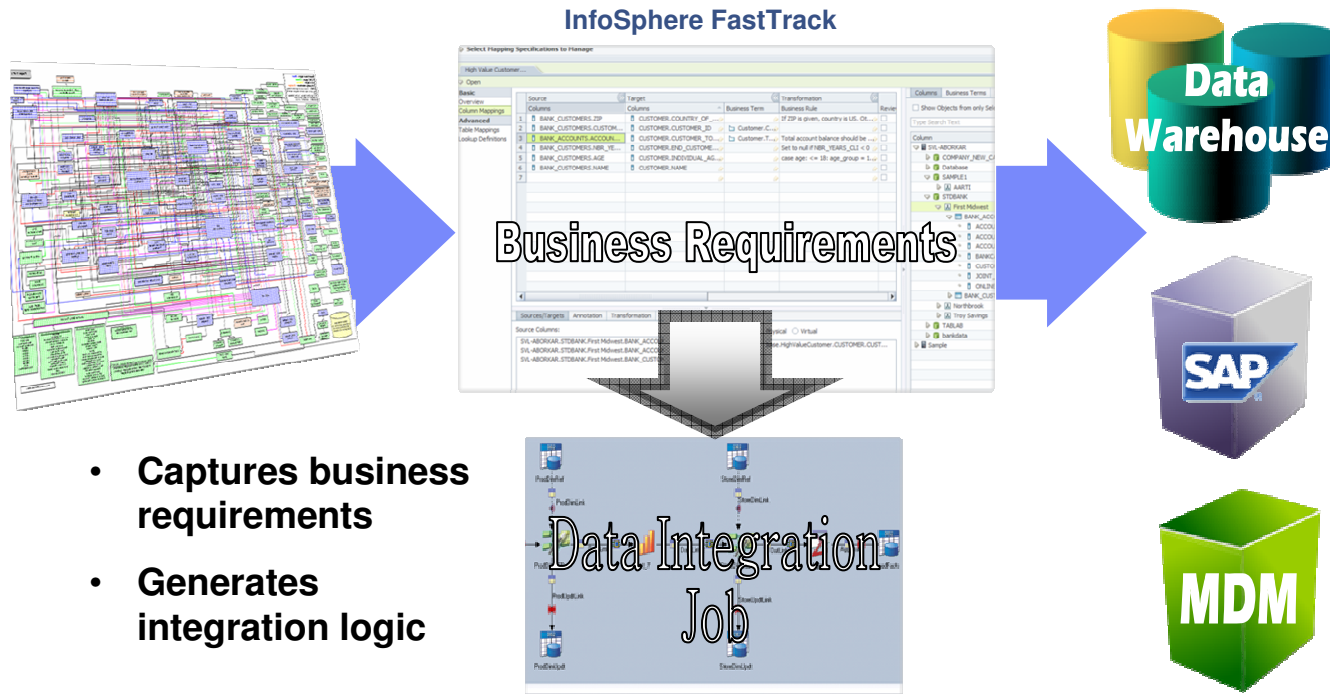
- Captures business requirements
- Generates integration logic

- **Help with migrating new data into the system**

- **Uses Business Terminology and Data Model definitions**

- **Identify candidate source to target mappings**

- **Component used : Information Server FastTrack**

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Once FastTrack has helped IT and Business personnel collaborate in understanding and defining new data it can *automatically generate* the jobs needed to extract, transform and load it into the system

Publish	
Model	
MDM	DW
CDC	Integrate
Sources	
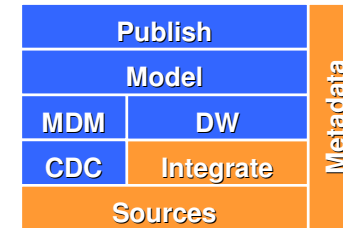
- **Central Shared Repository**

- **'Excel-like' interface**

- **Automatic generation of transformation jobs**

- **Direct access to metadata**

- **Complex transforms possible**

- **Ideal project progress tracking tool**

- **High Volumes of data can be supported**

- **Common package support, SAP, Oracle, Infor etc**

- **Benefits**
  - Much quicker > 2x
  - Less effort – 50%
  - Reduced errors
  - Reduced risk

Define mapping specification with business rules and terms

Flexible reporting and tracking

Auto-generate DataStage jobs

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The IBM Balanced Warehouse Appliance. The central repository for all data within the InfoSphere Data Architecture.

Scalable, Powerful, Integrated Tooling, Low Cost

Publish		Metadata
Model		Metadata
MDM	**DW**	Metadata
CDC	**Integrate**	Metadata
Sources		Metadata

Integrated Design Center

DBA

Data Architect BI Designer

Data Design Tool	SQL Warehousing Tools	Data Mining	OLAP Enablement	Analytic Support

BI Specialist

Web-based Administration Console

IBM Balanced Warehouse Appliance
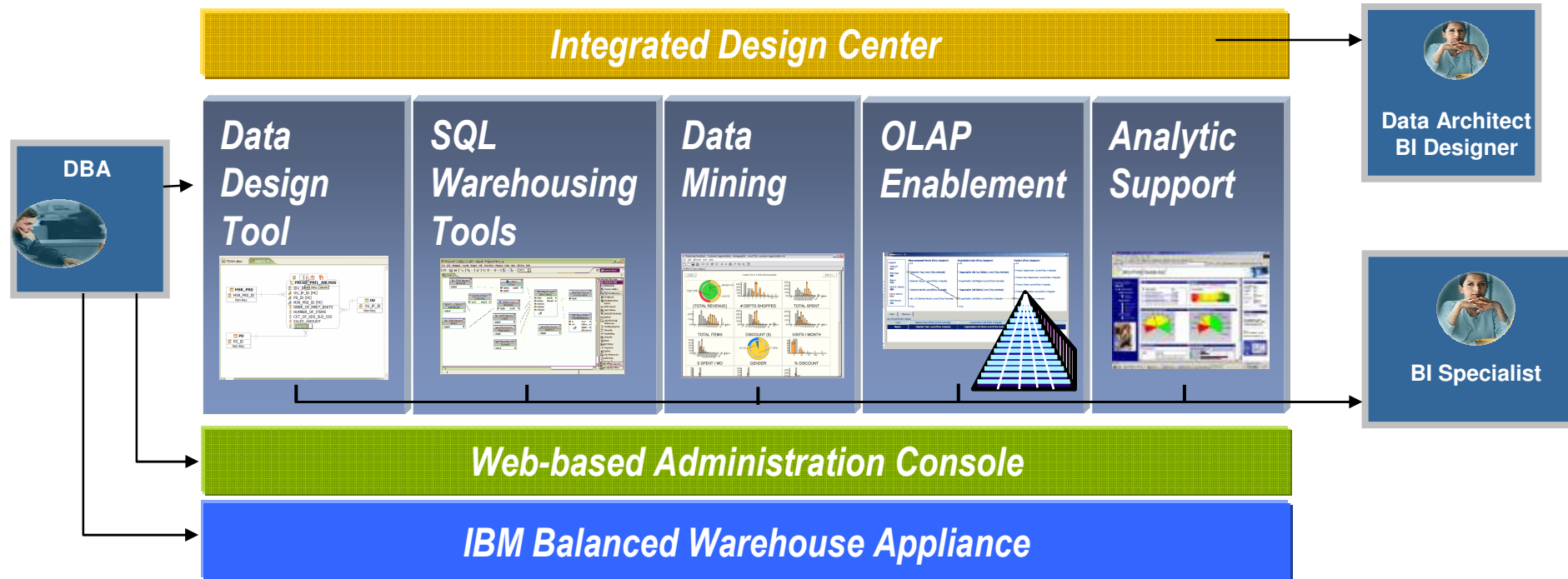
- **Tools Accessible from Cognos**
  - Data Design
  - **Data Mining** (segmentation, market basket analysis etc)
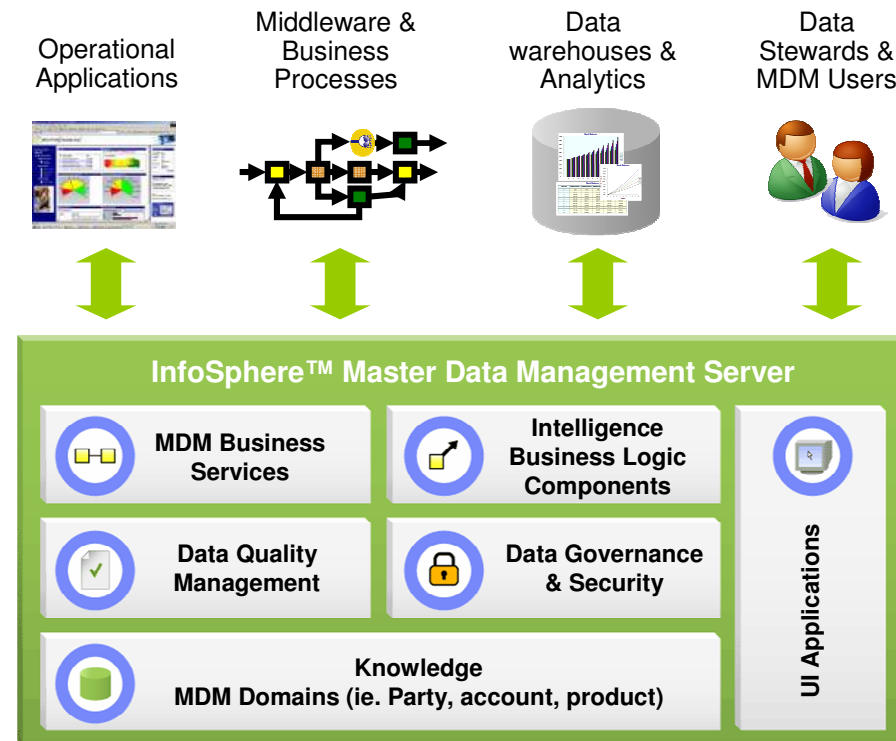 - **Cubing Services**, MQ Integration, Federated Access*

- **Data Warehouse Appliance**
  - Scalable parallel processing, 250Gb to 100's of Tb
  - Ease of design, install and administration
  - Market leading pricing

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IBM InfoSphere Master Data Management

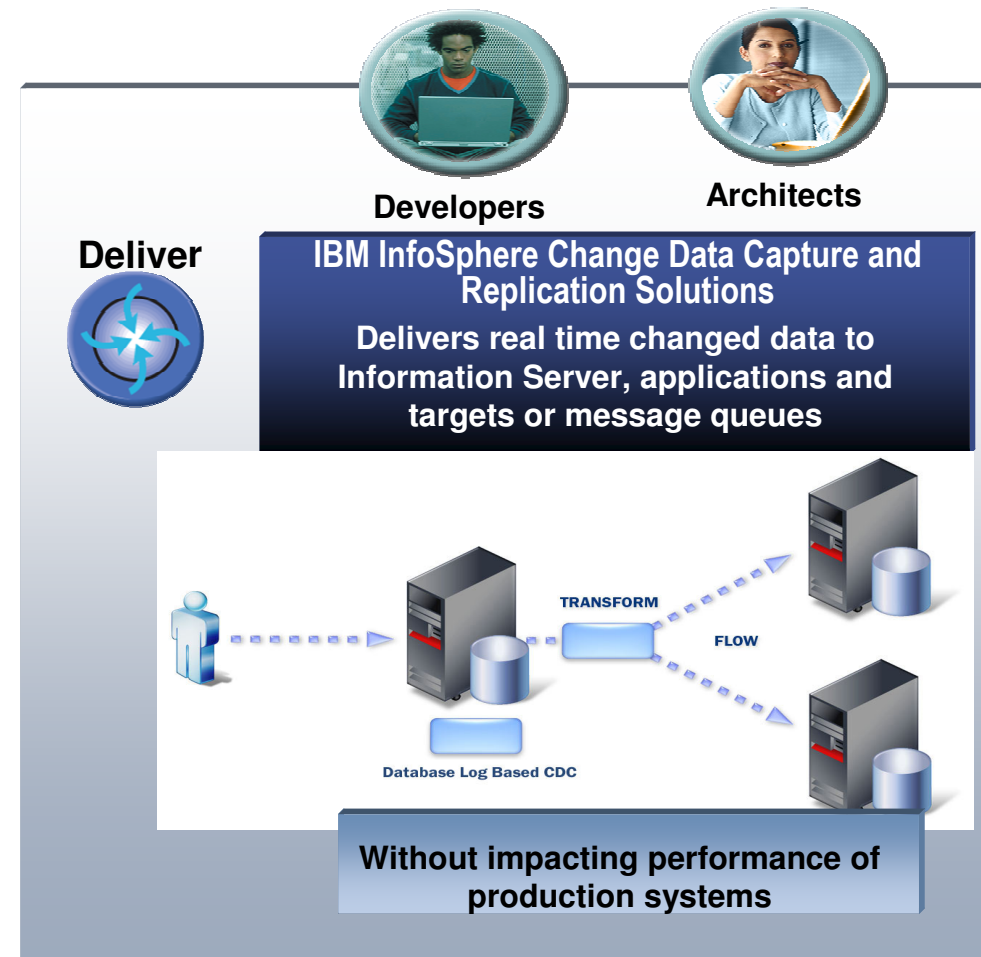| Publish		Metadata
Model		
MDM	DW	
CDC	Integrate	
Sources		

- **The first multi-domain, multi-function MDM capability in the market**

- **First Multi-Role and Responsibility Based**
  - User Interface Generator

- **Packaged to address all types of MDM implementations**
  - From small entry-level projects through to strategic transaction-hub deployments
  - Allows clients to grow as required by implementing existing functionality
  - Significantly lowers client risk and time/cost to implement

- **SOA Library - 800 pre-packaged business services**
  - Significant out of the box product functionality
  - Reduces total cost of ownership

- **Performance & scalability**

Operational Applications

Middleware & Business Processes

Data warehouses & Analytics

Data Stewards & MDM Users

InfoSphere™ Master Data Management Server

- MDM Business Services
- Intelligence Business Logic Components
- Data Quality Management
- Data Governance & Security
- Knowledge MDM Domains (ie. Party, account, product)
- UI Applications

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InfoSphere CDC (Change Data Capture) enables the real time capture of data with low impact on existing infrastructure from multiple Databases & Hardware platforms

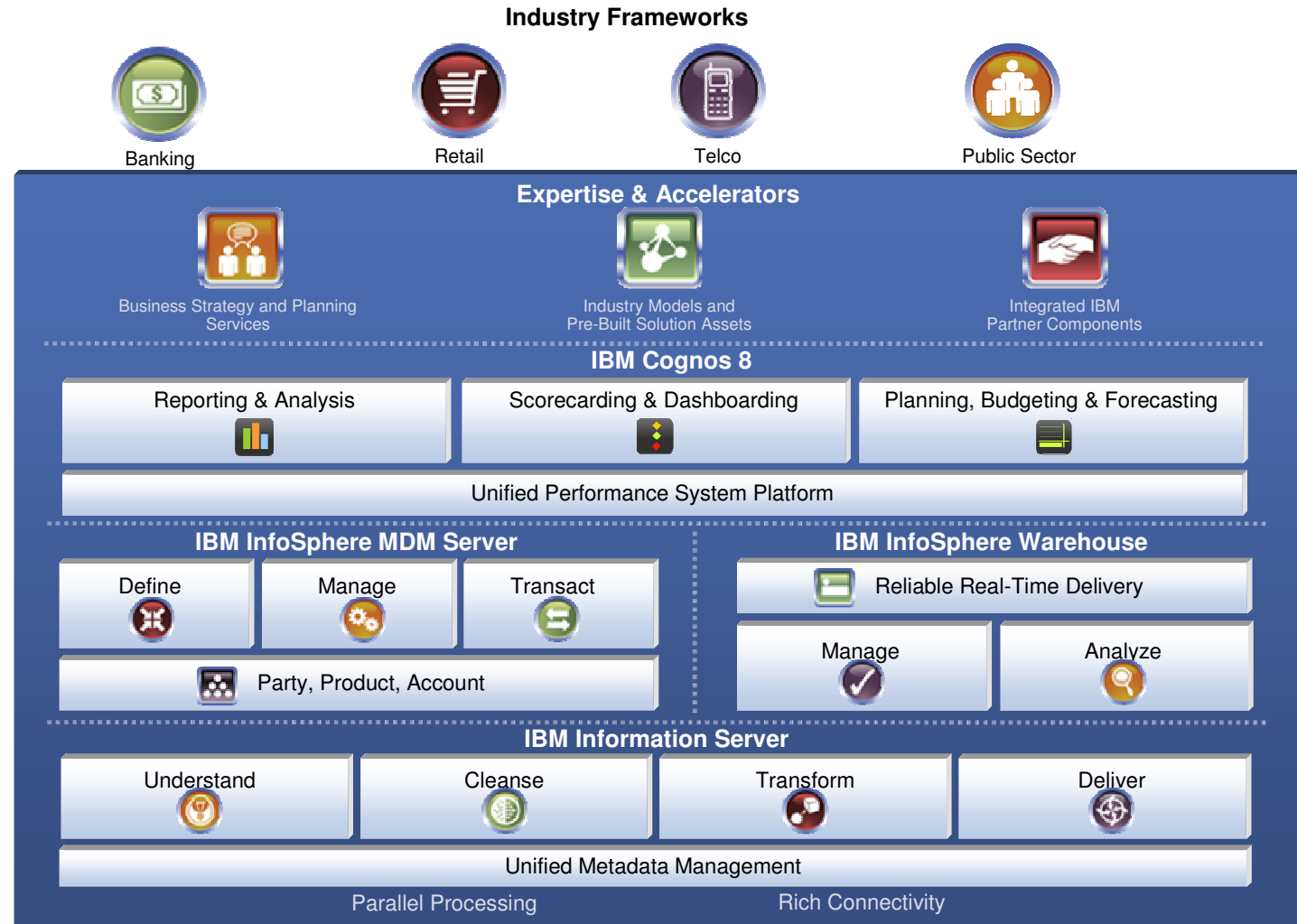| Publish		Metadata
Model		
MDM	DW	
CDC	Integrate	
Sources		

- **Captures changes real-time DATA direct from the database logs**

- **Supports natively DB2/SQL/Oracle/Informix & Sybase**

- **Low resource impact on existing hardware**

- **NO Application impact**

- **REAL time mirroring or mix and match to suit the business needs**

- **VERY short Implementation projects achieving beneficial ROI's**

- **FULLY integrated into InfoSphere portfolio and metadata**

- **Simple way of making data available to DW, MDM, Information Server, Cognos – with full metadata**

- **Speed of Implementation**
  - Install in an hour
  - Choose data and be receiving it within hours
  - Project 2-10 days

Developers   **Architects**

Deliver

IBM InfoSphere Change Data Capture and Replication Solutions

Delivers real time changed data to Information Server, applications and targets or message queues

TRANSFORM

FLOW

Database Log Based CDC

Without impacting performance of production systems

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Example Customer Benefits Achieved with CDC

- Cost savings of $400,000, reduced the monthly and quarterly financial reporting cycle by 80%

- Improved on-time delivery of orders by more than 10% and the number of late orders has dropped by 80%.

- Deliver sales analysis up to 400% faster and with more confidence.

- Reduced batch window by 70%.

- By enabling a separate reporting system improved both operations and reporting, increasing their bottom line and improving customer service.

- One customer reduced its overall IT spending by nearly 20% by implementing InfoSphere CDC

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In summary, InfoSphere provides Infrastructure support for all of the common information problems in an integrated stack

Industry Frameworks

Banking Retail Telco Public Sector

Publish

Metadata / MDM

Store/Process

Quality Assure

Transform

Acquire

Design Data

Expertise & Accelerators

Business Strategy and Planning Services | Industry Models and Pre-Built Solution Assets | Integrated IBM Partner Components

IBM Cognos 8

| Reporting & Analysis | Scorecarding & Dashboarding | Planning, Budgeting & Forecasting |

Unified Performance System Platform

IBM InfoSphere MDM Server

| Define | Manage | Transact |

Party, Product, Account

IBM InfoSphere Warehouse

Reliable Real-Time Delivery

| Manage | Analyze |

IBM Information Server

| Understand | Cleanse | Transform | Deliver |

Unified Metadata Management

Parallel Processing   Rich Connectivity

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Comments: Cognos + IBM

"Cognos users would get access to a much more solid infrastructure, middleware and data service. IBM would get a well-branded BI and performance management product set"

"The combination of IBM Information Server, MDM Server and the DB2 Warehouse infrastructure as a foundation for Cognos and its analytical and visualization layer is a strong entry in the market"

"Through the acquisition, the product sets of the two vendors show only insignificant overlap and constitute a good fit"

"In the BI and performance management markets, IBM Software Group is now going into a head-to-head battle with SAP and Oracle, almost leapfrogging over them"

"IBM's data management infrastructure is superior to Oracle's and SAP's offerings, and more importantly, IBM does not need to integrate Cognos with any other BI platform"

IBM Aims for the Business Intelligence Endgame With Cognos
Andreas Bitterer, David W. Cearley
Gartner Research
16 November 2007 ID Number: G00153478

Trusted Information

Publish		
Model		Metadata
MDM	DW	
CDC	Integrate	
Sources		

Following this session

- **We're happy to talk more about the InfoSphere stack – come and see us afterwards**

- **Re-runs of this demo**

- **Plus – the 'JK Insurance' Flash Demo**

  - JK Financial assesses credit risk exposure and seamlessly integrate various business and IT functions.

  - http://www-01.ibm.com/software/info/television/index.jsp?cat=clients_software_info&media=video&item=xml/L135107Q57342C89.xml

- **Also copies of the Cognos / InfoSphere Book**

  - 100 pages

  - The complete end to end story

  - Easy to read and for reference – great 'train and plane' reading

Driving Business Optimization with Trusted Information

Leveraging IBM InfoSphere and Cognos Solutions

Learn about the latest innovations from IBM Information on Demand:
• Information Agenda
• InfoSphere Software
• Cognos

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InfoSphere Warehouse Introduction Proof of Technology

Dates: 16 July, 23 September, 7 October, 10 November, 9 December 2009
Time: 9:30 AM – 4:30 PM
Location: IBM Hursley, Hampshire

Significant business benefit is obtained from providing timely and relevant data analysis.

Come and see how InfoSphere Warehouse enables you to achieve more
benefits sooner thus increasing your return on investment.

Proof of Technology days are classroom based events where you can gain practical experience of IBM technology and how it can help you.

Why Attend?

Attend this event to learn how you can use InfoSphere Warehouse to:
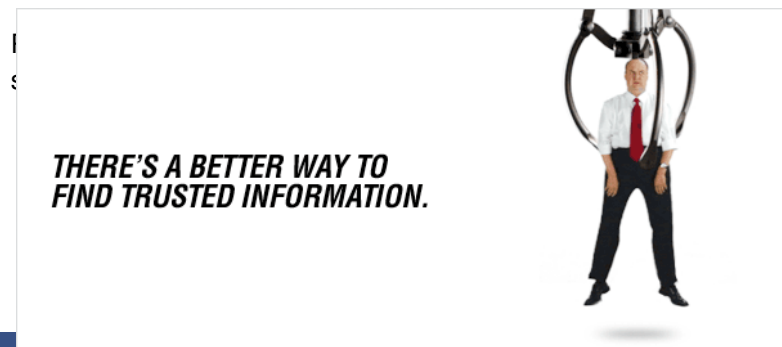
- **See how the tooling enables you to reduce the time to value for warehousing projects**

- **Design and deploy warehouse solutions via a single design interface**

- **Utilise the built-in physical data modelling capabilities**

- **Use the powerful data transformation capabilities to pull data from multiple sources into the warehouse**

- **Design and build OLAP reporting structures for your users providing enhanced sharing performance and scalability**

- **Understand how to use the built-in data mining and text analytics features that enable you to get more value out of your data**

- **Understand how InfoSphere Warehouse provides all the** provides all operation
  features you need from a warehousing software solution

Who Should Attend?

Business Analysts and Decision makers

Data Warehouse and Business Intelligence developers

Data Architects and Analysts

Database and Data Warehouse Administrators.

Agenda

An introduction to data warehousing and overview of InfoSphere Warehouse

Hands on exercises

Demonstration showing how to discover hidden facts in your business

Other considerations and tools

THERE'S A BETTER WAY TO
FIND TRUSTED INFORMATION.

Trusted Information

	Publish	
	Model	
MDM	DW	Metadata
CDC	Integrate	
	Sources	

Thank You

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