



# The IBM Insurance Information Warehouse - IIW

Andreas Peitz – Industry Models & Assets  
peitz@de.ibm.com

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## IIW Value Statements and ROI

...or why should I listen?



“From a Personal Benefits perspective, the impact of both higher sales volumes and better retention has a significant leverage effect on Liberty’s profitability. For the financial year ended in December 2002, **new business was up 23.5%, Liberty’s market share grew from 14% to 18%, and profitability of new business grew from 18.5% to 20.3%**”.

David Gnodde, Director of **Liberty Life Personal Benefits**, South-Africa, 2003

“Seeking to quickly range their ROI, **ING US Financial Services** first measured their world class (IIW-based) solution in terms of savings, where it **exceeded expectations by \$200 000 in the first year, reducing costs by more than \$450 000**”.

Data Management Review 2003 World Class Solution Award for Data Acquisition and Integration

“Before the (IIW-based) solution, our returns on any given marketing promotion were only about five or six percent. Our new data mining capabilities help us determine when to involve sales and distribution channels into campaign processes. **This has led to a 400% increase in responses in some cases.**”

Dr. Jean-Marie Schmid, leader of Customer Relationship Management (CRM), **Winterthur Insurance**, Switzerland

# There are a multitude of specific actions in the area of customer-facing strategies

This is driving many financial services firms to looking for a set of specific actions in the area of customer-facing strategies

## *Expanding the Customer Base*



## *Reducing the Cost and Servicing the Customer*



But where do I find the necessary Information?

## *Customer Share of*



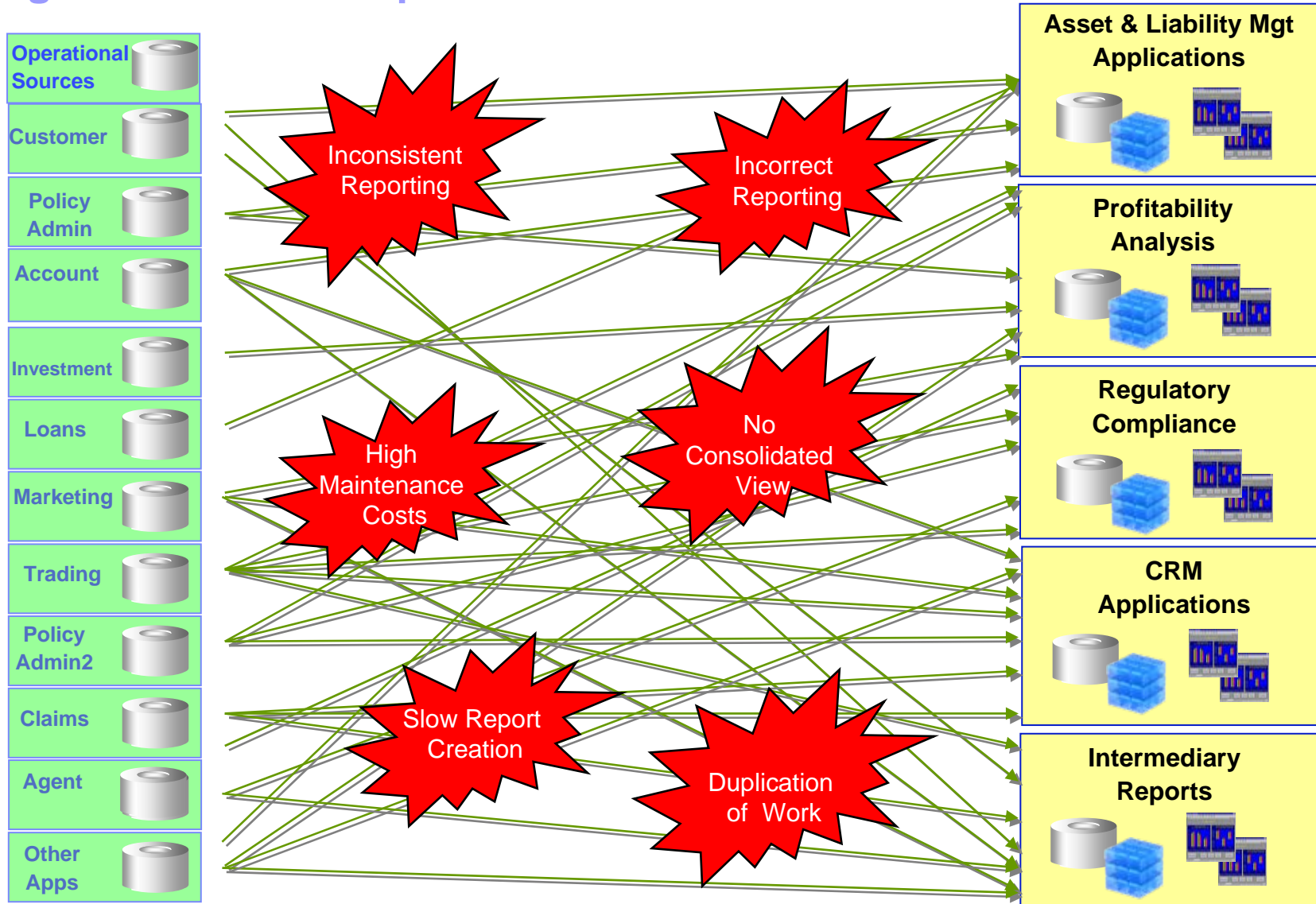
## *Increasing Customer Satisfaction*



## *Increasing Customer Profitability*



# Reporting without an Enterprise Data Warehouse

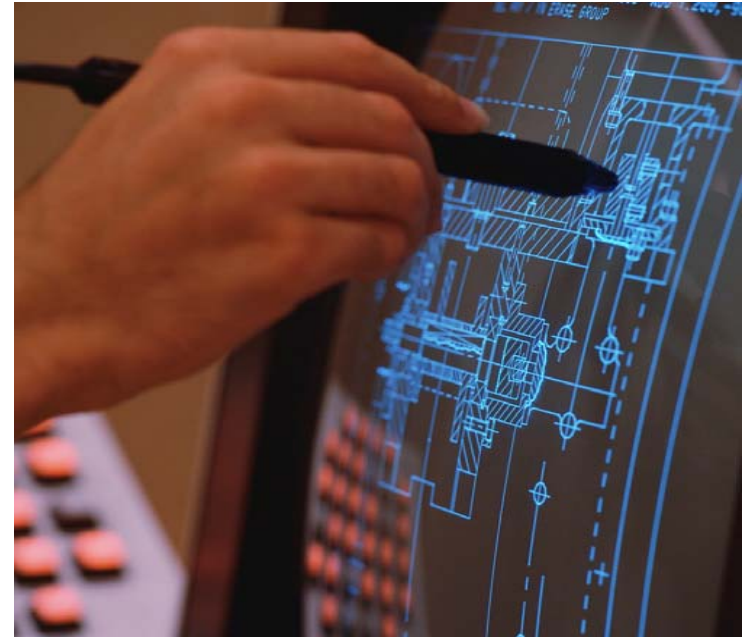


## The Solution – IBM Insurance Information Warehouse (IIW)

- IIW is an IAA-based enterprise-wide data warehousing solution for the insurance industry.
- IIW is engineered to consolidate data from disparate systems, helping insurers to build a comprehensive and accurate picture of the customer and business.

### For

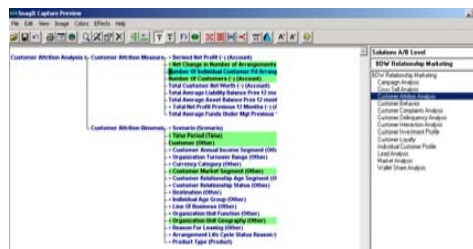
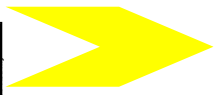
- Life Insurance
- General / P&C Insurance
- Health Insurance



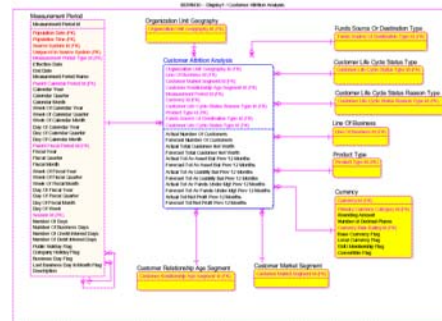
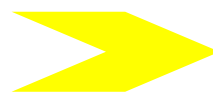
# Inside IIW- some essential components

CATEGORIES	KEY PERFORMANCE METRIC	DIMENSIONS/ENTITIES															
		Account	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts	Accounts
Account	Number of Accounts																
Account	Number of New Accounts																
Account	Number of New IRA Accounts																
Account	No Option Agmt on File																
Account	Changes to Number																
Account	No Margin Agmt on File																
Account	Changes to Name/Add File																

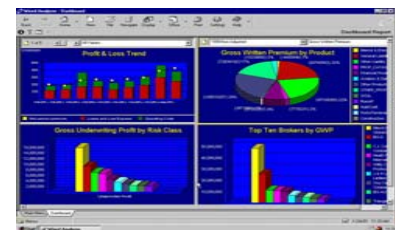
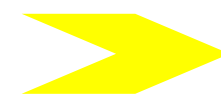
Identify Customer Reporting Requirements



Customer Reporting Needs Mapped to Business Solution Template



Generate Data Model

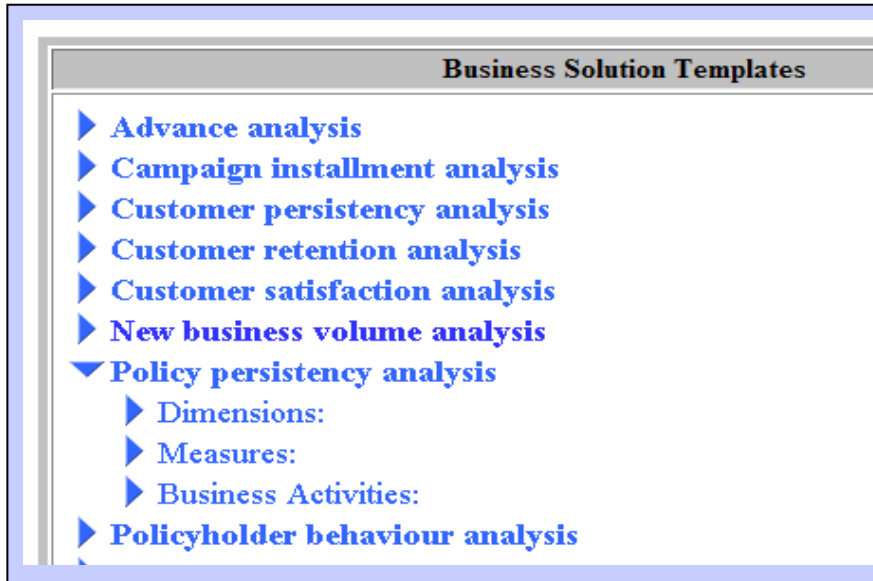


Build Reports

- (1) Business Solution Templates
- (2) Business Model
- (3) Enterprise Model
- (4) Implementation Roadmap

# (1) Business Solution Template Component

Characteristics



- Comprehensive set of reporting templates
- Covers all major direction setting and controlling business issues faced by financial institutions
- Measures and Dimensions
- Each KPI and summary level mapped back to the IIW Model to enable accurate scoping of the data structures needed for a specific business issue

Specific Benefits

- For **accurate scoping** and to address the particular business needs of an Insurer
- Ability for Insurers to **create their own reports** by customizing existing templates or building them from scratch from the lists of existing KPIs and report summary levels
- Promotes **conformity of Key Performance Indicator (KPI)** and report summary levels across the enterprise, to assist in greater ease in consolidated management and regulatory reporting.
- Ability to define star schema and DB2 OLAP Server physical structures enables the **rapid prototyping** of the business requirements

# (1) Use of Business Solution Template Component



Focus Area FAB0010 – Financial reporting

Business Solution Template

- ▶ Admissible Assets Analysis
- ▶ Liabilities Analysis for P&C (Non-Life) Insurance
- ▶ Liabilities and Margins Analysis for LT Insurance
- ▶ Net Assets Analysis
- ▶ Profit & Loss Analysis for P&C Insurance : Technical Account
- ▶ Profit And Loss (non-technical account) analysis
- ▶ Solvency Analysis for Long Term Insurance
- ▶ Solvency Analysis for P&C (Non-Life) Insurance
- ▶ Solvency Analysis for Supplementary Accident & Sickness Ins
- ▶ Valuation An

Business Solution Template

- ▶ Admissible Assets Analysis
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- ▶ Net Assets Analysis
- ▶ Profit & Loss Analysis for P&C Insurance : Technical Account
- ▶ Profit And Loss (non-technical account) analysis
- ▶ Solvency Analysis for Long Term Insurance
- ▶ Solvency Analysis for P&C (Non-Life) Insurance
- ▼ Dimensions:
- ▶ Measures:
- ▶ Excess (deficiency) of available assets over the required minimum margin
- ▶ Gross New Claims
- ▶ Gross New Claims by Reference Period
- ▶ Gross New Claims by Reference Period (Annual Basis)
- ▶ Gross New Claims Net of Reinsurance
- ▶ Gross Premiums Receivable
- ▶ Minimum Guarantee Fund for P&C
- ▶ Number of Months in reference period
- ▶ P&C Solvency Result (Claims Basis)
- ▶ P&C Solvency Result (Premium Basis)
- ▶ Premium Taxes and Levies
- ▶ Premiums Receivable
- ▶ Reinsurance Recoverable within Gross New Claims
- ▶ Required Margin of Solvency for P&C
- ▶ Required Minimum Solvency Margin for P&C
- ▶ Solvency Proportion of Gross Claims in Reference Period
- ▶ Solvency Proportion of Premiums Receivable

KPIs and reporting summary levels that are embedded within the BSTs are defined and commonly used by financial institutions around the world.

## Business Reports

**Profitability Analysis for the Top 100 Customers Joining between July 1998 and December 1998**

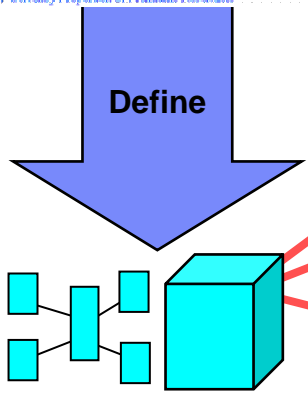
Customer Number	Name	Date Joined	Account Number	Effective Date	Home Branch	Product	1998	1999	1999	1999	1999	Rank	Target
TR0001	WILLIAM W. EVERTS	04/20/98	TR0001	04/20/98	MetLife	Regular Shares	102.00	102.00	102.00	102.00	102.00	1	100.00
TR0002	BARBARA BETH PATTON	04/20/98	TR0002	04/20/98	MetLife	12 Month Leverage	50.25	54.81	52.64	55.02	57.62	216.02	100.00
TR0003	PROCTOR J. D'AMICO	04/20/98	TR0003	04/20/98	MetLife	12 Month Leverage	54.17	53.81	50.12	54.00	58.77	100.00	100.00
TR0004	PROCTOR J. D'AMICO	04/20/98	TR0004	04/20/98	MetLife	12 Month Leverage	14.02	9.81	4.20	9.81	10.80	100.00	100.00
TR0005	ROSEMARY BETH PATTON	04/20/98	TR0005	04/20/98	MetLife	Regular Shares	10.25	0.25	10.25	0.25	0.00	100.00	100.00
TR0006	STEPHEN Y. GARDENBERGER	04/20/98	TR0006	04/20/98	MetLife	Regular Shares	11.25	11.25	11.25	11.25	11.25	100.00	100.00
TR0007	STEPHEN Y. GARDENBERGER	04/20/98	TR0007	04/20/98	MetLife	Regular Shares	01.16	04.00	00.11	07.75	00.00	100.00	100.00
TR0008	RONALD W. RUTLEDGE	04/20/98	TR0008	04/20/98	MetLife	Regular Shares	17.00	50.21	54.86	64.52	100.00	100.00	100.00

**Product Overview**

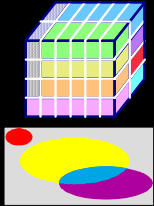
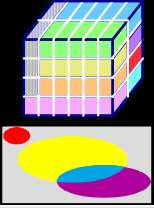


Analysis by Derived Profit From 1st Quarter 1998 to 1st Quarter 1999

Analysis by Average Arrangement Balance From 1st Quarter 1998 to 1st Quarter 1999

Data structure designs created from the BSTs for star schema and DB2 OLAP Server databases

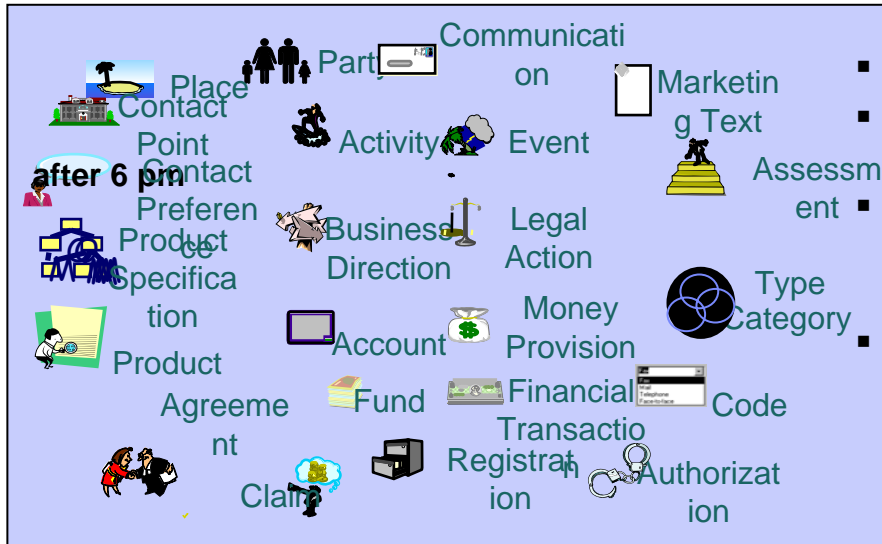


**(1) IIW provides analytical capabilities across critical insurance subject areas organised as focus areas**

<p><b>Business Profitability</b></p> 	<ul style="list-style-type: none"> <li>■ Underwriting Analysis</li> <li>■ Claims Analysis</li> <li>■ Intermediary Performance Analysis</li> <li>■ Persistency analysis</li> <li>■ Predictive modeling (fraud detection, lapses, ...)</li> </ul>
<p><b>Analytical CRM</b></p> 	<ul style="list-style-type: none"> <li>■ Customer Segmentation</li> <li>■ Lifetime value Analysis</li> <li>■ Campaign Management and Performance analysis</li> </ul>
<p><b>Financial Reporting &amp; Compliance</b></p> 	<ul style="list-style-type: none"> <li>■ MIS (Dashboard)</li> <li>■ Regulatory reporting (emerging Solvency II, IAS)</li> <li>■ Cost &amp; Performance Management</li> </ul>
<p><b>Risk Management</b></p> 	<ul style="list-style-type: none"> <li>■ Risk Analysis</li> <li>■ Risk Monitoring</li> <li>■ Stochastics Modelling</li> <li>■ Asset Liability Management (ALM)</li> </ul>

## (2) IIW Business Model Component

### Characteristics



- Enterprise Business Data Model
- Normalised Structures to provide enterprise wide reference point for data.
- Describes the business concepts relevant to the financial services industry and how these concepts relate to each other
- provides a vehicle for merging requirements of existing models and is designed for stability, flexibility and reusability

### Specific Benefits

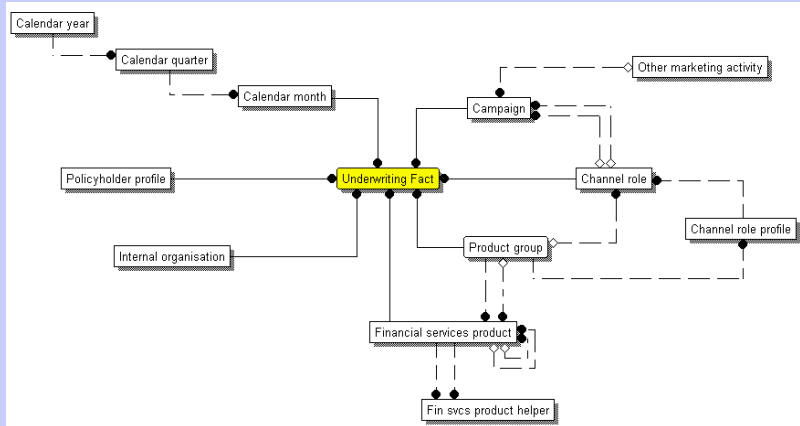
- Provides complete enterprise data structure for financial institutions
- Enables financial institutions to address the infrastructure and storage issues across multiple projects, both operational and informational
- Provides highly effective communications tool between business and IT
- Promotes the standardization of data across the enterprise

## (2) The IAA models cover the Insurance industry



### (3) IIW Enterprise Model Component

#### Characteristics



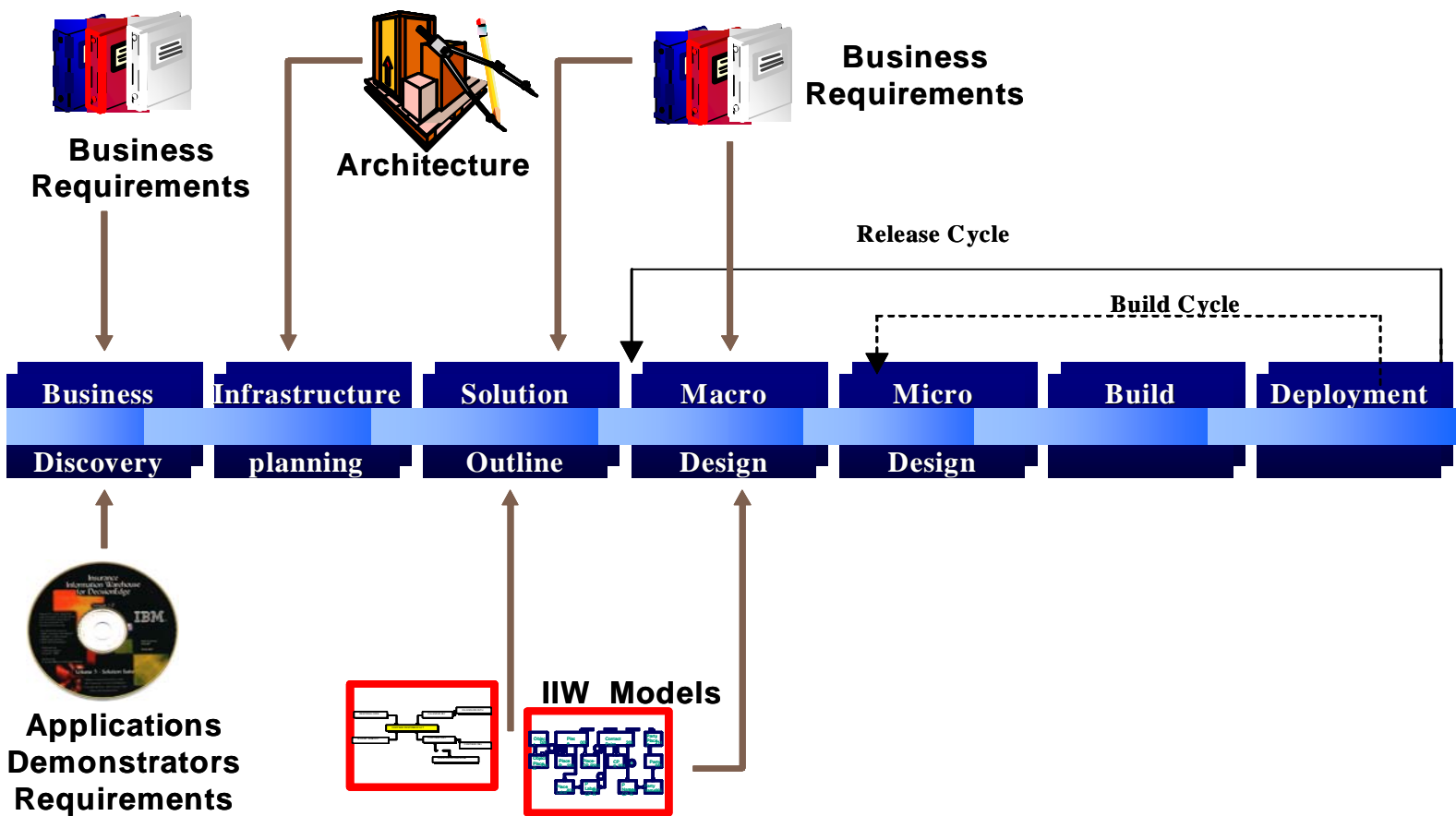
- Structures to handle the storage of raw detailed data from many sources
- Insurance specific structures to handle claims, intermediaries, customer and premium/payment details
- Pre-defined aggregations to support key indicators in areas such as delinquency, profitability, asset and liability management
- Scalable to address increased data volumes

#### Specific Benefits


- Consistency between Data Marts
- Keeps core data with full history
- Conformed facts and dimensions for standardized information

## (4) IIW Roadmap to support your projects

- A structured methodological guidance relating to the use of the Insurance Information Warehouse (IIW) framework
- A help in the efficient management of an IIW project.



## Summary of the Insurance Information Warehouse IIW

- 
- Proven insurance industry model, reduces risk
  - Business Solution Templates (BSTs) that enable fast deployment of insurance business applications
  - Performant and scalable enterprise-wide DW solution
  - Implementation Roadmap and Project Management capabilities, supported by Accelerators and Risk Reducers
  - Significant cost savings (up to 75% in analysis and design)



## *Karlsruher Versicherungen deployed IBM's Integrated Insurance Warehouse (IIW) solution to improve its customer profitability, satisfaction and service quality*

### CLIENT PROFILE:

- Major European Insurance Company, founded in 1835
- Owned by Munich Re
- Euro 2.5 Billion per year of net contributions
- 3 million contracts in existence
- More than 4000 employees (1700 internal/2300 field service)

### CLIENT ISSUES:

- Fragmented businesses (Life, Property & Casualty, Legal) in Germany and France which all dealt with customers independently as silos
- Costly and complex system and application landscape due to duplications and the poor management of fragmented customer data
- Segmented customer and product data bases were hindering the company from achieving its goals

### CLIENT NEEDS:

- Deliver a centralised, consolidated and integrated single view of customer data across the multiple line of business to eliminate duplications, control costs, enhance cross selling opportunities and reduced cancellation ratios
- Separate customer and product databases located on various disparate systems across the company hindered the achievement of strategic objectives
- Facilitate field service employees and internal planners analyses and diagnoses through rationalised reporting

### SOLUTION:

*IBM Insurance Information Warehouse (IIW) data warehouse and data marts solution provided a consistent and consolidated One Single View Of Customers and Contractual Information across the company's business units, improving customer service and cross selling opportunities*



### BENEFITS:

- Speed to deployment
  - Design and modelling phase delivered in 6 months
  - Implementation phase delivered in 1 year and 2 months
- Achieved time and effort savings of 75 percent over in house data modelling efforts
- Achieved time and effort savings of 50 percent over in house implementation efforts
- Improved the organisation view of its individual business performance for strategic a decision making view point (Supported innovations based on market demands – Improved Know Your Customer capabilities – Ensured the re-use of pre-existing flagship offerings in new markets and of marketing information across business units)
- Improve enterprise wide data management and scalability through the use of a centralised and integrated set of capabilities
- Improved profitability of existing customers through improved satisfaction from enhanced service quality

Source: IBM IAA/ IIW customer references

## ING Hungary improves customer relationships and resulting sales by deploying IBM's Integrated Insurance Warehouse (IIW) solution

### CLIENT PROFILE:

- Global financial service provider in more than 50 countries
- # 6 financial institution in Europe in 2005 (Bloomberg)
- Market value of Euro 48.8 Billion
- More than 113,000 employees
- Market leader life insurance (#1 with 28% market share) and pension (#2 with 12% market share)

### CLIENT ISSUES:

- Organic growth < organic losses
- Number of maturing life policies were expected to more than doubled between 2004 and 2007
- Loss of 1,000 customers per month due to market competitiveness
- Sales agents (1,800) owned the customer relationship – ING only owned basic information on each client limiting up/cross sales

### CLIENT NEEDS:

- Provide deep analysis of existing clients and business data to gain new business information to develop and realize new relationships
- Efficiently manage existing client portfolio much to maintain existing relationships and generate new one fruitful ones
- Push organic growth – support sales with hot leads
- Meet the “Know Your Customer” requirements
- Help sales agent to up sell and cross sell to replace maturing life policies with new ones

### SOLUTION:

*Marketing Data warehouse build using IBM IIW assets. Data were transferred the company's 3 key areas: Life 400, Agent Portal, Mortgage interface*

*Transfer included 330.000 life clients and 14 years historical data*



### BENEFITS:

- Improve the company's soft data collection capabilities: In 12 months gained ownership of 30% (100,000) life client data by sharing ownership with sales force
- Improved agents productivity, motivation, extra commission
- Improved customer retention through better data management: If agent leaves the client data remain with ING
- Improve customers' product gap analysis (based on new knowledge of client needs from fact finding questionnaires)
- Improve up/cross selling and lapse ratio: Moved from 1.2% to 3.2% cross selling, 17% conversion rate in hot leads and increased re-contracting of maturing policies
- Improved lead generation and management capabilities by creating new lead management standards and innovation (e.g. SMS to agent about new arrivals, 5 days to follow up, random checks through call centres to enhance efficiency)
- Differentiate client service based on client value: Segment clients based on their life time value to customise propositions, focus relationship management and quality of services

Source: IBM IAA/ IIW customer references

# ING Americas was awarded “World Class Solution Award” from its use of IBM’s Integrated Insurance Warehouse (IIW) solution

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## CLIENT ISSUES:

- Rapid expansion through acquisitions resulted in data locked in multiple unconnected silos, on proprietary legacy systems
- Costly and inefficient batch processing model needed to be removed
- Corporate performance needed to be improved
- Unable to leverage internal data into valuable knowledge

## CLIENT NEEDS:

- Boost corporate/ process performance by ensuring that staff had the most complete and up to date information available
- Integrate data across divisions to achieve a unified customer view, better target sales campaign and marketing efforts, and equip service agents with complete information
- Ensure compliance with Sarbanes Oxley, HIPAA and Patriot Act
- Replace current processing model with a near real time model which can be deployed in the other regions (Mexico, Chile, etc..)
- Consolidate resources in order to improve productivity and costs

## SOLUTION:

*Deployed an Enterprise Information Infrastructure (EII) solution used by more than 5,000 employees and processes millions of US\$ of transactions in real time each day*

*Common information hubs to ease the transformation of raw data into actionable information to provide a single and shared vision for the enterprise*



## BENEFITS:

- Improved corporate performance through the use of a normalised, standardised and repeatable project delivery model (\$450,000 savings)
  - Several projects delivered > 100% IRR by avoiding delivery duplication
  - Estimated re-use of the IT architecture – 50% to 65% resulting in cost efficiencies and shorter implementation cycles
  - Estimated value creation through the implementation of the EII solution \$35 to \$50 million through re-use over 3-year period
- Reduced labour intensive regulatory compliance by 20%
- \$450,000/ year in staff cost savings through the automation of processes and consolidation of resources (\$200,000 1<sup>st</sup> year)
- \$500,000 savings in mail returns and duplicated mailings
- Reduction in data error rate from 14% to 5% (validated by 3<sup>rd</sup> party)
- Reduced storage duplications (\$1.5m saving estimate per year)
- Improved customer survey deployment from 3 months to 2 days as well as the accuracy of the population samples
- Improved customer retention ratio
- Ensure the alignment of Business goals and IT implementation through the sharing enterprise wide of common technology language
- .....

Source: IBM IAA/ IIW customer references

# Wüstenrot Verisicherung *delivers consistent enterprise wide access to information*

## CLIENT PROFILE:

- European Insurance company founded in 1976
- Based in Austria
- Linked to Bausparkasse Wüstenrot AG one of the major building societies in Austria
- Offers life, health, property and casualty insurance products

## CLIENT ISSUES:

- Owned separate customer and contact databases
- Slow and complex claims and intermediary analysis
- No comprehensive view of operations and clear insight on claim and contact trends at the executive level
- Fragmented customer management made targeting marketing activities difficult
- Complicated risk management processes

## CLIENT NEEDS:

- Create a single and centralised data source of the company intermediaries, clients and contacts, including data marts that would make the retrieval and analysis of a wide range of company, contract, claims, intermediary and client information easily accessible across the organisation

## SOLUTION:

*Integrated IBM Insurance Information Warehouse Solution to consolidate and create consistent enterprise wide access to information*

*Included reference models and consistent storage of meta data for the design of an insurance data warehouse*

*Consolidated information on key topics, claims, productivity, and company financials*



**wüstenrot**

**Wozu hat man Freunde**

## BENEFITS:

- Consolidated view of companywide data
- Reduced the cost of information gathering
- Helped analysts focus on data analysis than data gathering
- Improved accuracy and speed of intermediary and claim analysis
- Provided a platform for financial reporting and an internal source for trend analysis and market research
- Increased sales opportunities
- Improved customer services

# Questions and answers

# IIW Business Solution Templates – Sample Content

## Profitability and Business Performance

### Business Performance



400 KPIs for all processes in the insurance value chain, focusing on Grow revenue, Improve profit margin, and Optimize capital efficiency and manage enterprise risk:

- Product development
- Marketing
- Sales and distribution
- Underwriting
- Contract management
- Billing and collection
- Long Term benefit payment
- P&C claim management
- Asset management
- Customer service

### Intermediary Performance

- Agency continuous professional development
- Agent performance based on competency
- Agent training analysis
- Customer feedback on intermediaries analysis
- Intermediary compensation analysis
- Intermediary persistency analysis
- Intermediary production analysis
- Intermediary sales performance analysis
- Policy delivery analysis

### Claims Efficiency

- Claim handling performance analysis
- Claim incoming recovery payments analysis
- Claims audit analysis
- Claims monthly close off analysis
- Claims statistical analysis
- Claims value variation analysis
- Late claims analysis
- Loss event analysis
- Year-to-date claims comparison analysis

## Analytical CRM



- Campaign answer analysis
- Campaign communication analysis
- Campaign contact analysis
- Campaign cost analysis
- Campaign installment analysis
- Campaign profitability analysis

- Campaign sales analysis
- Campaign analysis by customer
- CRM event analysis
- Cross-sell strategy analysis
- Cross-selling forecasting analysis
- Policyholder behaviour analysis

- Household value analysis
- Customer persistency analysis
- Customer profitability analysis
- Customer prospect optimization analysis
- Customer satisfaction analysis
- Customer risk analysis

## Risk Management & Regulatory Compliance

### Solvency II



- Liabilities analysis for P&C insurance
- P&C Claims, expenses and technical provisions Analysis
- Expenses for Long Term Insurance
- Premiums for Long Term Insurance
- Liabilities & margins analysis for Long Term Insurance
- Admissible Asset Analysis
- Net Asset Analysis
- Profit & Loss Analysis
- Summary of Premiums & Claims for P&C
- Solvency Analysis for P&C
- Solvency Analysis for Long Term Insurance
- Statement of Solvency

### Sarbanes-Oxley Act

- Consolidated Financial Statements Analysis
- Consolidated Statement Of Cash Flows
- Consolidated Statement Of Changes in Shareholders' Equity Analysis
- Consolidated Balance Sheet Analysis
- Consolidated Statement Of Income Analysis
- Management's Discussion And Analysis Of Financial Condition and Results Of Operations

### IAS/IFRS

- Balance sheet classified approach analysis
- Balance sheet net assets approach
- Balance sheet order of liquidity approach
- Balance sheet portfolio basis approach
- Cash flow direct analysis
- Cash flow direct financial institution analysis
- Cash flow indirect analysis
- Cash flow indirect FI analysis
- Income statement by function analysis
- Income statement by nature analysis
- Income statement FI approach analysis
- Statement of changes in equity analysis

# IIW Content – Relationship Marketing

## Consolidated View of the Customer

- Single View across the Organization
- Customer Behaviour/Loyalty Indicators
- Demographic Information
- Data From External Sources
- Lifetime Value Analysis

## Segmentation

- Householding
- Campaign Management

## Premium & Payments Analysis

- Sources & Destinations of Funds
- Spatial Analysis
- Data Mining

## Responsiveness

- Inquiries
- Complaints



## IIW Content – Risk & Reporting

- Liabilities analysis for P&C insurance
- P&C Claims, expenses and technical provisions Analysis
- Expenses for Long Term Insurance
- Premiums for Long Term Insurance
- Liabilities and margins analysis for Long Term Insurance
- Admissible Asset Analysis
- Net Asset Analysis
- Profit & Loss Analysis – Technical and Non-technical accounts
- Summary of Premiums & Claims for P&C
- Solvency Analysis for P&C
- Solvency Analysis for Long Term Insurance
- Statement of Solvency for all lines of business



- Performance Analysis (ratio basis)
- Risk Pricing Analysis for P&C
- Overall profitability Analysis for P&C (ratio basis)
- Financial Analysis of Claims
- Claim Handling Performance Analysis
- ...

## IIW Content - Profitability

- Flexible Structure - enable storage of all necessary profitability Components
- Treat each relationship/product as a business in its own right
- Complete “General Ledger” for : Party, Product, etc
- Profitability Summarizations
- Standard commonly used Profitability Aggregations
- Encourage Standardized profitability across Financial Institution
- Underwriting Analysis
- Claims Analysis
- Intermediary Performance Analysis
- Persistency Analysis

