



Building a Better Solvency II Solution with IBM Insurance Information Warehouse

White Paper

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About this White Paper

The purpose of this paper is to illustrate the value of the IBM Insurance Information Warehouse (IIW) 8.4 release for your Solvency II (SII) project, to outline the components of IIW and how they assist insurance organizations to address the data management and data integration issues relating to the EU SII Directive.

This paper is divided into the following chapters:

- Chapter 1 describes some of the key design and implementation considerations for SII.
- Chapter 2 outlines the key benefits of IIW for SII, how IIW facilitates requirements gathering, solution design and implementation.
- Chapter 3 offers a brief description for each of the IIW components including how IIW can now accelerate SII reporting with sample reports.
- Chapter 4 describes briefly an overall functional and data architecture for SII solution and how IIW can provide support.

Who Should Read this White Paper?

Members of insurance organizations considering SII implementation approach including:

- SII program and work-stream managers and project managers
- Members of the steering committees of SII programs
- Functional business managers and business analysts involved in SII programs
- IT architects, data analysts and business analysts assigned to SII programs

Introduction

The proposed implementation date for the SII Directive is end of 2012. The directive aims to implement a consistent regulatory risk regime for the insurance industry across EU member states to enhance consumer protection, ensuring trust in and the financial stability of the insurance industry.

From January 2011, the European Insurance and Occupational Pensions Authority (EIOPA) assumed the responsibilities from its predecessor, the Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS). In the lead-up to SII, CEIOPS issued a large number of consultation papers including *Consultation Paper on Draft Level 2 advice on Supervisory reporting and Public Disclosure* (CP58). In June 2010, CEIOPS published its final technical specification for the *Fifth Quantitative Impact Study* (QIS5). Before the implementation date, when SII comes into force, EIOPA will be tasked with ensuring that member states and the insurance industry are prepared for SII implementation. Key milestones include:

The IBM Insurance Information Warehouse provides the necessary modeling tools and support for requirements gathering to accelerate Solvency II implementations and to build a flexible fit-for-purpose risk management warehouse.

- The final results of QIS5 published in March 2011
- Level 3: supervisory guidelines are expected to be published by the end of 2011
- From the beginning of 2012, the insurance industry will need to focus on embedding SII into business-as-usual activity. Insurance organizations will need to test the process, models and data over a twelve-month period to ensure certification of the models and process in advance of the SII deadline

Insurance organizations should adopt a proactive approach to SII, because although regulations have not yet been finalized, the workload involved in ensuring SII compliance is significant. There has never been a greater urgency for insurance organizations to act and prepare for SII, especially given the increasing scarcity of actuarial, project and IT resources needed for the implementation of SII projects.

IIW provides the necessary modeling tools and support for requirements gathering to accelerate SII implementations and to build a flexible, fit-for-purpose risk management warehouse. Over two decades, the IIW architecture and models have evolved into a flexible, scalable solution enabling the consolidation and integration of data from heterogeneous systems, providing a unified view of critical business data for risk

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management and support for the delivery of accurate, consistent and timely information for enterprise business reporting and business analytics.

The latest IIW release contains enhanced coverage for SII including full support for CP58 reporting templates and significantly enhanced coverage for QIS5. In total, more than 100 new IIW Analytical Requirements have been developed to facilitate SII data gathering and reporting requirements.

1. Strategic Enterprise Risk Management and Solvency II

Insurance organizations may already have the core of the infrastructure needed for SII, such as disparate data marts, data extracts, risk calculation engines, scenario generators that feed their reserving and actuarial processes and reporting. However, SII enforces a new discipline of a common and shared understanding of key business drivers that feed decisions at all levels, across all lines of business. This implies that insurance organizations must organize their processes and data management strategies differently. They need to have an integrated approach to the management of risk-related data and processes, to data quality and ownership and to the IT infrastructure required to achieve certification of their models under SII.

Solvency II emphasizes data governance and embedding a methodology for risk management and the application of consistent standards and definitions.

SII places the emphasis on data governance, embedding a methodology, risk management and the application of consistent standards and definitions. This mandates that the data feeding the reserving, actuarial and regulatory reporting processes can be:

- Classified according to shared, rigorous business terminology
- Interrelated according to the relevant underlying business relationships
- Properly tagged according to its sources, timing and life-cycle properties
- Stored in a uniform manner in an enterprise-class repository, from where it can be easily retrieved, repurposed, aggregated and disseminated

Evolving an insurance organization's infrastructure and processes to meet the needs of SII within the time frames set will prove difficult, but it is an attainable goal. A best-in-class and SII-compliant Enterprise Risk Management framework can be achieved with the following considerations in focus:

- Adopt a joint business and IT-led approach to the collection of data and reporting requirements for SII
- Manage data and reporting requirements centrally for all business units impacted by SII

- Understand the SII quantitative calculations and identify the data required as input to these calculations
- Understand the data interdependencies between calculations, processes and risk calculation engines
- Adopt an information warehouse design approach that allows for future flexibility, given that SII regulations and reporting are not finalized. The possibility of leveraging the SII implementation for future regulatory changes in the area of Assets Liability Management, for example, International Financial Reporting Standards (IFRS) 4 Phase II, should also be a consideration.
- Understand the importance of data governance and the need for adequate documentation for data and reporting requirements during all stages of the SII project
- Build a central SII data repository as a trusted source to support calculation and reporting. This approach brings a number of benefits including:
 - Support the development of new data repositories with the required consistency, quality, historical information or audit traceability for SII that may be available in existing repositories
 - Support different definitions of measures, segmentation and granularity specific to SII
 - Decouples source extraction from calculation and reporting to allow parallel solution development
 - Provides a trusted base of information that can be applied to a more widely defined SII ambition, such as Enterprise Risk Management
 - Replaces the complexity and cost of point-to-point integration with the simplicity of a hub-and-spoke pattern

Most importantly, choose a fit-for-purpose data-modeling tool that supports the needs and considerations of your SII project.

2. Demonstrating the Value of IIW for Solvency II

IIW provides comprehensive data structures that enable insurance organizations to build an Enterprise Data Warehouse. Alternatively, and more often, IIW can be used to build a bespoke data repository designed to solve a particular need. It covers a broad range of the data storage and reporting requirements for an insurance organization, including sales analysis, product development, claims analysis, finance reporting, risk monitoring and compliance reporting, including SII.

The IIW insurance industry data models provide key benefits for SII projects, including:

- Facilitating SII requirements definition
- Contributing to better SII design and implementation of SII Solutions, including reporting

Accelerate requirements gathering by leveraging IIW's comprehensive glossary of insurance business terms to extend and agree common data definitions faster across your business.

SII Requirements Definition

- Predefined IIW SII content for data storage and reporting reduces the time, effort and errors involved in the information requirements gathering and scoping phase of a Solvency II solution
 - The IIW 8.4 release provides extensive coverage of SII data and calculations including more than 100 SII Analytical Requirements
 - The atomic mappings defined between the QIS5 and CP58, make it easier to identify the data required to support the SII measures and calculations
 - IIW supports standard model definitions for Minimum Capital Requirement (MCR) and Solvency Capital Requirement (SCR) and is readily customizable for internal model requirements
- IIW models support the principle of “one version of the truth”, consolidating your data to a single data source for external compliance reporting, internal risk management and strategic capital allocation:
 - Leveraging IIW's comprehensive glossary of insurance business terms to extend and agree common data definitions faster across your business lines
 - Promotes standardization across lines of business using uniform data classifications and relationships that are compliant with SII segmentation

Existing data sources and infrastructure can be leveraged and mapped to a common SII data definition within a new central data repository, leading to potential IT cost reductions and time savings.

- Facilitating the collaboration of business users and technical users by transforming business terms, dimensions and measures required by the business, through to the optimized design constructs within the data warehouse
- From a business perspective, IIW facilitates the transition to more automated risk monitoring and away from data management in offline spreadsheets using undocumented processes by providing a reference for both insurance industry terms and SII content
- IIW provides significant SII reporting coverage :
 - Preconfigured IIW SII Sample Cognos Reports, which can be used as part of a prototype to define SII reporting requirements. The product includes instructions on how to recreate samples. Sample data is also included.
 - SII CP58 Analytical Requirements including atomic mappings to the data required for reporting

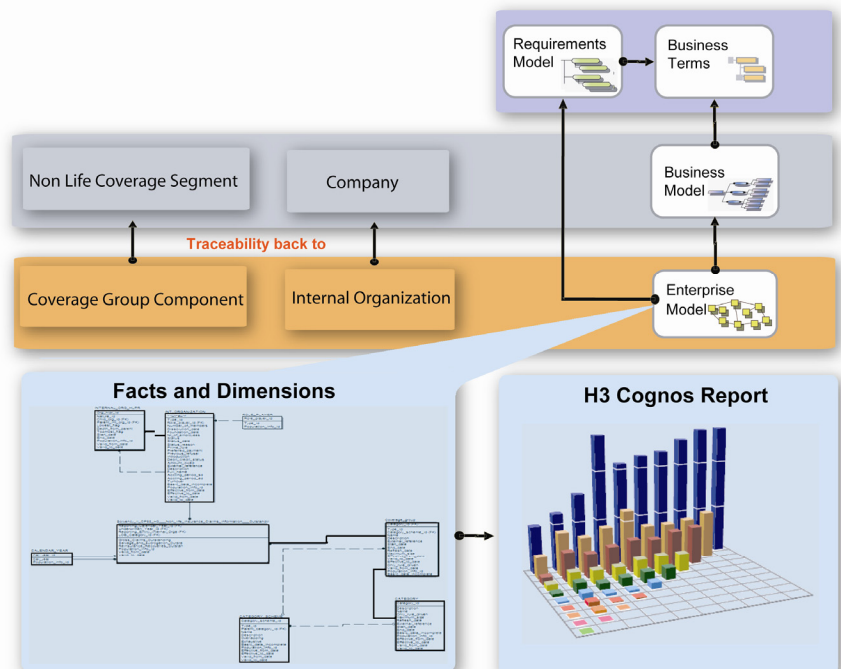
SII Implementation and Design

IIW addresses specific design and implementation challenges brought about by SII by:

- Leveraging and mapping existing data sources and infrastructure to a common SII data definition within a new central data repository, leading to potential IT cost reductions and time savings
- Promoting relationships between disparate functional data areas using associations and aliases
- Including content and data structures to feed risk calculation engines and to store the calculation results and assumption setting
- IIW models support the principles of clean, reconcilable and transactional data
- IIW's flexible design constructs provide best-practice modeling for the insurance domain, promoting:
 - Better management of subsequent customization and future extensions to a SII data repository in support of SII or other regulatory compliance requirements, such as IFRS
 - Improved ability to manage data requirements from a variety of data sources with different levels of data granularity
- IIW facilitates reporting development :

- Focus areas and Analytical Requirements provide pointers and guides to building SII data repositories, external and internal reporting data marts that can be interconnected by way of business definitions and data-flow mappings
- These templates can be further customized and transformed at report development stage. In modeling tools such as InfoSphere Data Architect (IDA) the templates are transformed into analytical views and can be further customized. Data Definition Language (DDL) for the required fact entities and dimensions can be generated from these views to accelerate reporting development

SII Analytical Requirement Example Illustrating the Value of IIW
 IIW now includes extensive coverage for SII with the addition of a large number of SII-related Analytical Requirements. Each of these Analytical Requirements contains a list of measures with definitions covering QIS5 and CP58. IIW SII Analytical Requirements can provide assistance to your SII project. The following example of the H3 Reinsurance Claims Outstanding Claims Cp58 report illustrates the value of IIW Analytical Requirements.



H3 Claims Outstanding Analytical Requirement can be found in the requirements model under the relevant project view or focus areas:

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1. The Analytical Requirement includes a definition of the measure(s) and dimensions, such as time, company or business line, in the report
2. The measures are mapped to the relevant business terms
3. These business terms then can be connected through the business data model to relevant data structures within the IIW enterprise model
4. Analytical Requirements are also transformed in the enterprise model into analytical views of facts and dimensions that can then be customized in your modeling tool and used to generate the DDL
5. This DDL can be used to create facts and dimensions tables that can form the basis of the report within your reporting development environment, such as Cognos

3. IBM Insurance Information Warehouse Components

IIW is a set of models that enables insurance organizations to build and deliver a business-oriented, enterprise-class data warehouse or data repository. IIW comprises the following components:

- **Requirements Model**
Consisting of the following:
 - **Project views**
Logical grouping of Analytical Requirements, atomic subject areas and business terms that solve a particular business problem
 - **Analytical Requirements**
Out-of-the-box, structured requirement templates providing extensive coverage of management information, operational and regulatory reporting designed to meet the needs of a particular business domain or implementation such as SII
 - **Glossary of Business Terms**
An enterprise-wide vocabulary of business concepts that provides an organization's view of itself and its industry
- **Conceptual Business Data Model**
A reference data model or normalized view of the insurance industry, adopted by over 150 insurers worldwide
- **Enterprise Warehouse Data model**
Defines how multiple sources of data can be consolidated into a single logical structure to enable real-time business analytics
- **New IIW SII Sample Reports**
A new component that was introduced in the latest release and includes preconfigured reports modeled on the CP58 Analytical Requirements within IIW

IIW now includes Solvency II sample reports.

IIW Project Views identify the relevant analytical requirements, measures, dimensions and atomic subject areas needed to address reporting requirements.

Project Views

IIW Project Views are business-subject-area views that span across all IIW models and components with the following functions:

- Provide a clear understanding of the data coverage required for a specific business requirement, such as SII
- Include pointers to SII data, focusing on IIW model constructs that contribute to solving the immediate business issue

- Identify the relevant analytical requirements, measures, dimensions and atomic subject areas needed to address particular reporting requirements
- Extend the scope of each IIW project view to include the relevant predefined mappings between the analytical requirements and the IIW Enterprise Data Warehouse Model

Analytical Requirements

IIW contains an extensive list of Analytical Requirements, reflecting the most common queries and analyses for business performance measurement and reporting, while supporting other analytical functions such as ad-hoc reporting, data mining and decision support. The

Analytical Requirements comprise three main components:

- More than 2,000 reusable business measures
- More than 30 reusable dimensions of analysis
- More than 300 collections of measures and dimensions in easily customizable reporting templates

These measures include the main reporting measures and key performance indicators (KPIs) for an insurance organization. Each measure is fully defined and can be used either in its own right or as a component contributing to one or more other measures. This promotes the consistent reuse and definition of measures across the organization and is a key aid in the business metadata activities of a business intelligence environment within an organization.

Analytical Requirements logically group existing and new measures and dimensions, which together capture and describe an analysis requirement in a given business area. The templates, measures and dimensions can be fully customized or extended. New Analytical Requirements, measures and dimensions can also be created using IIW, if required.

Some 30 industry standard dimensions are provided with all members fully defined. The dimensions support the following functions:

- Provide the headings under which measures can be broken down, compared and the organization's behavior is monitored and tracked.

Analytical Requirements logically group existing and new measures and dimensions, which together capture and describe an analysis requirement in a given business area.

- Are reusable across reporting and analysis templates, thereby enforcing conformity of dimensions used in different areas of analysis and ensuring uniformity of reporting

Specifically the regulatory compliance Analytical Requirements cover reporting requirements for IFRS and International Accounting Standards (IAS), such as IAS 18, IAS 32, IAS 37, IAS 39 and IAS 40, Sarbanes-Oxley Act (SOX), such as compliance sections 302, 404, 409, 802, 906 and 1001 and SII.

The IIW Analytical Requirements that support SII reporting and analysis requirements are described in the final chapter and listed in the Appendix.

Business Terms Glossary

The Business Terms glossary enables non-technical business experts to describe and define, in their own words, the concepts they use every day. As part of IIW, the glossary is a comprehensive list of terms pertaining to insurance, financial services and general business that includes:

- Definitions written in plain business language
- Detailed data elements that specify what each business term means for the insurance organization
- Terms that may be related to one another through relationships such as “more generic” or “more specific” or as synonyms or aliases

Business Data Model

The Business Data Model is a business view that excludes technical implementation considerations such as details related to any specific database. It is not concerned with reporting and analysis optimization, such as aggregations, derivations or denormalization.

The Business Data Model is a conceptual data model representing data requirements at a high level and from a technical perspective that is:

- Conceptual: “what”, not “how”
- Normalized to third normal form (3NF)
- Flexible
- Corporate-level standard across all functions and departments

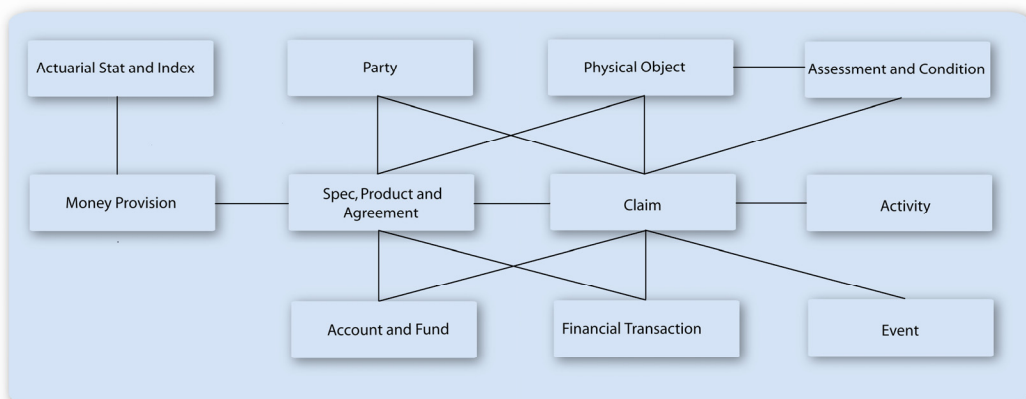
The Business Data Model is a business view that excludes technical implementation considerations, such as details related to any specific database

- Cleansed: reconciled and non-redundant business view of the atomic, elementary data concepts and elements needed by the enterprise in its operational functions.

The IIW Business Data Model connects with the Insurance Application Architecture's Business Object Model, used for process modeling.

The Business Data Model utilizes a standard and easy-to-use set of patterns to represent the core conceptual data entities of the organization. The entities are placed in a hierarchy based on generic or specific classifications, and are related through top-level relationships that link the major groupings in the hierarchy. The more specific relationships between data concepts are, in turn, placed in a complementary hierarchy, as specialized types of the generic relationships.

The following diagram shows some key concepts of the IIW Business Data model relevant for SII projects.



The IIW Business Data Model connects with the Insurance Application Architecture's (IAA) Business Object Model (BOM), used for process modeling. IIW represents data concepts using the Entity Relationship format, while IAA represents the same data concepts using the Unified Modelling Language (UML) format.

Enterprise Warehouse Model

The IIW Enterprise Data Warehouse Model is a customizable data model that provides the historical and atomic data needed for a data warehouse and business intelligence infrastructure supporting multiple lines of business and analytical functions within medium-to-large insurance organizations.

The IIW Enterprise Model is a design model that comes complete with technical elements to support full, historic versioning and reconciliation of the atomic transactional data loaded into the enterprise warehouse from various source systems. The model also can store summarized information as denormalized fact entities arranged in a dimensional star-schema pattern.

Step-by-step instructions are available in the IIW installation manual to enable you to recreate these preconfigured reports that come complete with sample data and charts.

The atomic elements of the IIW Enterprise Warehouse Model are mapped to the conceptual model elements included in the Business Data Model, while the analytical, summarized elements are mapped to Analytical Requirements, measures and dimensions.

The Enterprise Warehouse Model includes a default physical database design generated from the logical Entity Relationship Data Model. It is likely that this default model requires additional customization by a data warehouse design team comprising senior warehouse architects and database administrators to ensure optimal configuration for the financial institution's data distribution and performance characteristics.

The IIW Enterprise Data Warehouse Model contains data structures needed by an insurance organization to support a wide variety of business requirements such as IFRS/IAS, SOX and SII reporting requirements.

The Enterprise Data Warehouse Model does not imply the building of an Enterprise Data Model, but provides a default data model from which the relevant data for your SII project can be brought into scope.

New IIW Solvency II Sample Reports

IIW now includes sample reports based on the Analytical Requirements available in the IIW models. As described earlier, Analytical Requirements are not just used to physically represent the measures and dimensions to be included in a given report., but can be used to identify the data structures needed to support the reporting requirements and to generate the DDL to construct facts and dimension tables from which the report can be generated.

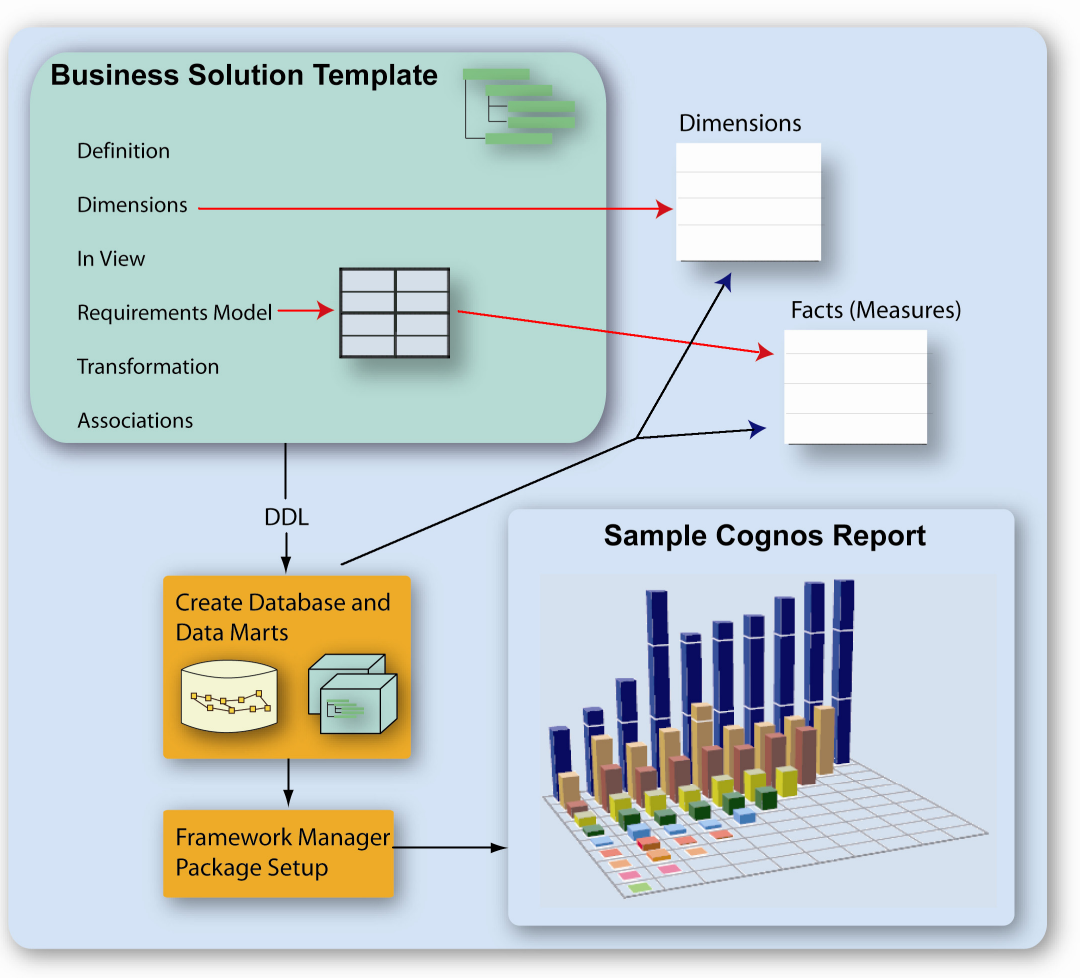
The 8.4 release provides some specific, additional assistance for SII reporting by including a selection of sample reports, preconfigured with IIW and modeled on the CP58 Analytical Requirements. These Cognos-based reports address 15 CP58 reporting templates and include 38 actual reports, covering areas such as SCR (market, operational, Life, Non-Life), MCR and Economic Balance sheet and Reinsurance.



For these selected CP58 reports, the DDL script was generated on the basis of the IIW model content and the corresponding fact entities and measure tables. Step-by-step instructions are available in the IIW installation manual to enable you to recreate these preconfigured reports that come complete with sample data and charts.

As demonstrated by the illustrated H3 example, the SII Analytical Requirements can, through a relatively simple process, support the creation of the dimensions and fact entities required for CP58 reports:

- Select and customize the IIW Business Solution Template
- Generate the DDL within your data modeling tool
- Create dimension and fact entities within your database using the DDL
- Configure and set up the Framework Manager Package
- Create the reports using Cognos Report Studio



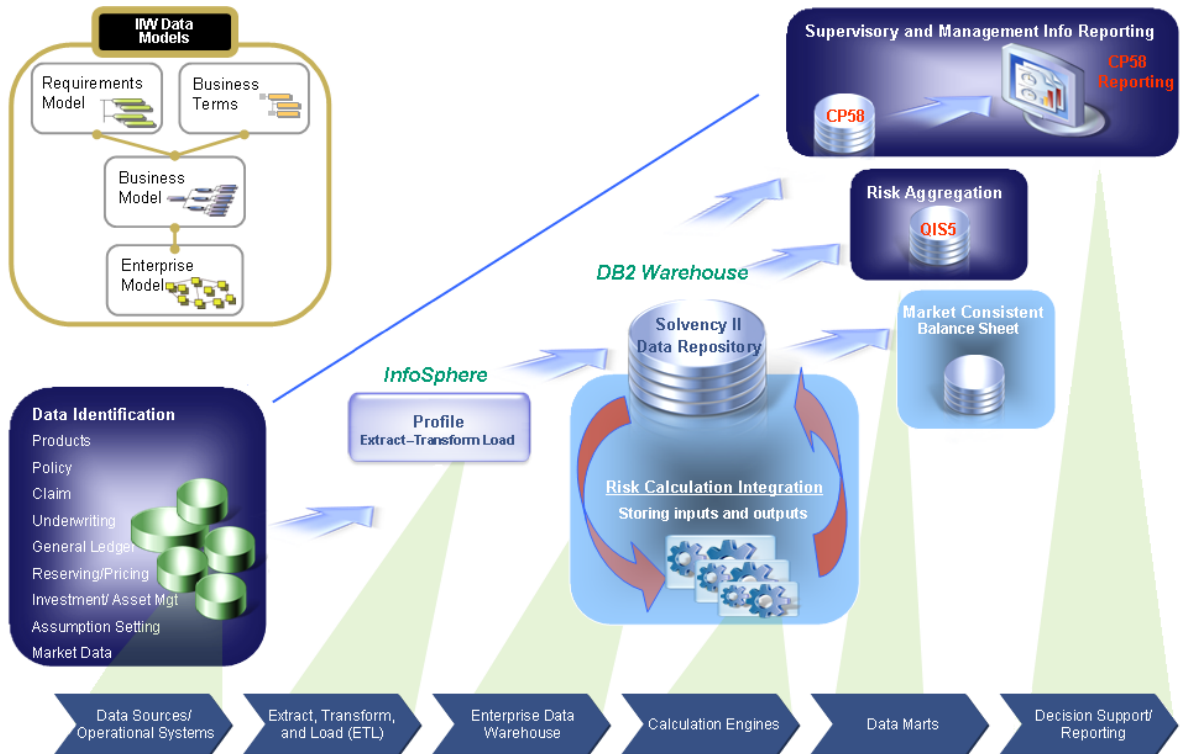
4. IIW Components and Solvency II Solution Architecture

The architecture and design of SII solutions depend on factors such as business complexity, number and quality of data sources and the integration requirements for processes and systems.

Various functions impacted by SII, will have new information requirements:

- **Actuarial Services**
Need to automate the collection, reconciliation and cleansing of data from source systems to feed risk calculation engines. They may also require the storage of intermediate and final results of risk simulations and calculations for greater transparency, such as best estimate.
- **Internal control and compliance**
Need to ensure transparency, quality and reconcilability of the inputs to processes and calculations, the data transformations and outputs to SII processes with the appropriate checks and balances.
- **Enterprise Risk Management**
Need to form a view of risk, not only for a given risk component within SII, but also form a view across many risks and multiple entities within group structures, where applicable.
- **Risk Analysis and Supervisory Reporting functions**
Not only require new reporting to meet the public disclosure requirements for SII. They also require new management information reporting to ensure risk is embedded in decision making.
- **Financial Reporting**
Requires the alignment of IFRS and SII with some degree of reconciliation.

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IIW provides a flexible methodology for modeling SII data structures that can be customized and configured to the needs of your solution design. The diagram shows a possible SII implementation and the key areas supported by IIW.

- Central SII Data Repository
- SII Data Marts and Reporting
- Integration with Risk Calculation Engines

During the design phase of SII projects, it is important to determine the appropriate design that fits the insurance organization's system infrastructure, processes and SII ambition to build a model environment that meets the approval of the regulator.

SII Central Data Repository

SII requires a central, trusted data repository, containing not only data originating from core administration systems such as policy administration, claims, reinsurance, asset management etc but also external data from third-party service providers, benchmark data, investment data, etc.

IIW supports the construction of a central data repository with accelerators including:

- Industry standard definitions and SII content to accelerate the identification of SII data requirements. IIW Analytical Requirements for QIS5 and CP58 can also help to identify the SII data elements

required, and include mappings to the relevant IIW enterprise model data area.

- A requirements model to structure new or restructure preexisting data sources to meet the new SII requirements.
- A logical model developed specifically for the insurance industry with flexible design constructs that allow for different data configurations required under SII, such as alternative SII business line definitions, such as Health Similar to Life Techniques (SLT).
- In support of data model management, IIW includes Multi Model Mapper (MMM) and can be readily integrated with IBM InfoSphere Data Architect and with other modeling tools, including ERwin.

SII Data Marts and Reporting

During the design phase of SII projects, it is important to determine the appropriate design that fits the insurance organization's system infrastructure, processes and SII ambition to build a model environment that meets the approval of the regulator. Examples of possible IIW applications that can contribute to your solution design:

- **Risk Aggregation**

IIW supports the collection of complex calculations that provide the information source for supervisory and management reporting through:

- Extensive QIS5 coverage that has been included in the 8.4 release to accelerate the underlying calculations that feed public disclosure and management information. For key MCR/SCR measures mappings exist from CP58 measures to QIS5 measures as shown in the diagram.
- SII parameters and data structures for risk aggregation highlighted within the requirements model (best estimates, valuations, correlation and other parameters).
- The enterprise model includes logical design coverage as well as the data structures types required for consolidating and aggregating risk across the organization.

- **Supervisory and Management Information Reporting**

The latest IIW release extends SII reporting coverage with:

- The full suite of CP58 reports in Analytical Requirement format to aid SII report development.
- Mappings between QIS5 and CP58 measures for MCR/SCR.

- All Analytical Requirements can be readily integrated with Cognos reporting.
- 15 preconfigured IIW CP58 sample Cognos reports, including sample data.
- **Market Consistent Balance Sheet**
 - Atomic data coverage for storing and tracking balance sheet movements between periods, which could then be aligned to financial reporting and IFRS-compliant financial statements.
 - SII Balance Sheet coverage.
 - Support for IFRS analytical requirements that can be linked to the equivalent analytical requirements for the SII Balance Sheet.

Integration with Risk Calculation Engines

- **Model Point Transformation for Risk Calculation Engines**

The definition of model point files for risk calculation engines can vary by risk calculation engine and customer depending on configuration. However, IIW can support the construction of model point transformation files with the logical design coverage within the enterprise model. In addition to supporting source system data requirements, IIW can, for example, support the storage of parameters, assumption settings, historical data, data required for economic scenario generation, market data for statistics and valuations.
- **Scenarios Stress Testing and Intermediate Results**

It may be required to keep track and maintain a history on assumptions, scenarios, experience data related to the final reported results. The enterprise models provide logical design coverage for the storage of this type of data within data stores (using the “Actuarial Statistics” and “Index” core data concepts) and include support for data such as economic assumptions and correlation factors between scenarios, including history and versioning capability.

5. IIW Support for Solvency II Pillars

IIW provides direct support for two of the three pillars under SII.

- **QIS5 Analytical Requirements**

Cover the quantitative data and measures under Pillar 1, based on the standard formulas or internal models. Where the standard formula is adopted, the IIW model acts as a reference model to guide these requirements.

- **CP58 Analytical Requirements**

Cover the measures detailed in the SII consultation paper on public disclosure reporting.

The Requirements Model includes three new focus areas of interest to SII practitioners:

- Solvency Quantitative Requirement (Pillar 1)
- Solvency Reporting and Public Disclosure (Pillar 2)
- Solvency Risk Modeling (Pillar 1)

At the time of writing, the 8.4 IIW release includes 115 new Analytical Requirements covering both QIS5 and CP58, which can be found within the “Solvency Quantitative Requirement” and “Solvency Reporting and Public Disclosure” focus areas respectively. For the QIS5 Analytical Requirements, the measures can be easily referenced to the associated definition within the QIS5 technical specification.

An additional focus area has been provided for “Solvency Risk Modeling”, which includes pointers to the relevant atomic data areas needed for Solvency, such as assumptions, correlation factors and market data.

The appendix includes a full list of Analytical Requirement coverage in the latest release.

Appendix

Listing of the IIW Solvency II Analytical Requirements

These Analytical Requirements are available in the 8.3 release, but may have been updated in the 8.4 release.

CP 58 Reporting Analytical Requirements

Solvency II Consultation Paper 58 - MCR Tabs

- Solvency II CP58 B4A and B4Q - Final MCR calculation*
- Solvency II CP58 B4A and B4Q - Life MCR calculation*
- Solvency II CP58 B4A and B4Q - Life MCRx calculation*
- Solvency II CP58 B4A and B4Q - Non Life MCR calculation*
- Solvency II CP58 B4A and B4Q - Notional Life and Non-life MCR calculation

Solvency II Consultation Paper 58 - SCR Tabs

- Solvency II CP58 B3B - Reinsurance exposures
- Solvency II CP58 B2A - Basic SCR charges for firms on standard formula or partial internal models *
- Solvency II CP58 B2B - Solvency Capital Requirement - for firms on Full Internal Models
- Solvency II CP58 B3A - Basic SCR charges for market risks*
- Solvency II CP58 B3B - Basic SCR charges for counterparty default risks*
- Solvency II CP58 B3C - Basic SCR charges for life underwriting risks*
- Solvency II CP58 B3D - Basic SCR charges for health underwriting risks*
- Solvency II CP58 B3E - Basic SCR charges for non life underwriting risks*
- Solvency II CP58 B3F - Solvency Capital Requirement - Operational risk SCR

Solvency II Consultation Paper 58 - Tab A

- Solvency II CP58 A1 – Coversheet

Solvency II Consultation Paper 58 - Tab B1

- Solvency II CP58 B1 – Own Funds

Solvency II Consultation Paper 58 - Tab C

- Solvency II CP58 C1 - Balance Sheet
- Solvency II CP58 C2 - Profit and Loss Account

Solvency II Consultation Paper 58 - Tab D

- Solvency II CP58 D1 - Investment Data Portfolio List
- Solvency II CP58 D2 – Counterparties
- Solvency II CP58 D3 - Property Held for Investment
- Solvency II CP58 D4 – Derivatives
- Solvency II CP58 D5 - Collective Investment Schemes

Solvency II Consultation Paper 58 - Tab E

- Solvency II CP58 E1 - Life Technical Provisions
- Solvency II CP58 E2 - Non-Life Technical Provisions
- Solvency II CP58 E3 - Life - changes in own funds
- Solvency II CP58 E4 - Valuation basis - Non-life
- Solvency II CP58 E5 - Valuation assumption – Life

Solvency II Consultation Paper 58 - Tab F

- Solvency II CP58 F1 - Life revenue analysis – Claims
- Solvency II CP58 F1 - Life revenue analysis – Expenses
- Solvency II CP58 F1 - Life revenue analysis – Premiums
- Solvency II CP58 F2 - Life Premium
- Solvency II CP58 F3 - Non-life technical account – MVM
- Solvency II CP58 F3 - Non-life technical account per LOB
- Solvency II CP58 F4 - Distribution of profits for with profits funds
- Solvency II CP58 F5 - Non-life Insurance Premium Information
- Solvency II CP58 F6 - Non-life Insurance Gross Expense Information

Solvency II Consultation Paper 58 - Tab G

- Solvency II CP58 G1 - Life Liability Analysis
- Solvency II CP58 G2 - New Life Business Analysis – Incr
- Solvency II CP58 G2 - New Life Business Analysis – New
- Solvency II CP58 G3 - Non-Life Insurance Premium Information
- Solvency II CP58 G4 - Projection of Future Cash Flows - Present Value

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Solvency II CP58 G4 - Projection of Future Cash Flows – Undiscounted

Solvency II Consultation Paper 58 - Tab H

Solvency II CP58 H1 - Non-life IBNR

Solvency II CP58 H2 - Gross Claims Outstanding (RBNS)

Solvency II CP58 H3 - Non-life Insurance Claims Information – IBNR

Solvency II CP58 H3 - Non-life Insurance Claims Information – Outstanding

Solvency II CP58 H3 - Non-life Insurance Claims Information – Paid

Solvency II CP58 H4 - Non-Life Insurance Claims Annuities and life-like liabilities

Solvency II CP58 H5 - Non-life Insurance Exposure & Claim Numbers – Exposure

Solvency II CP58 H5 - Non-life Insurance Exposure & Claim Numbers – Outstanding

Solvency II CP58 H5 - Non-life Insurance Exposure & Claim Numbers – Settled

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Solvency II CP58 J1 - Risk profile – Life

Solvency II CP58 J1 - Risk profile - Non-Life

Solvency II CP58 J2 - Loss profile – Life

Solvency II CP58 J2 - Loss profile - Non-Life

Solvency II CP58 J3 - Facultative Risk – Life

Solvency II CP58 J3 - Facultative Risk - Non-Life

Solvency II CP58 J4 - Share reinsurers

Solvency II CP58 J5 - Outgoing Reinsurance Program – Life

Solvency II CP58 J5 - Outgoing Reinsurance Program - Non-life

QIS5 Analytical Requirements

QIS5 Balance Sheet

QIS5 Balance Sheet Solo

QIS5 Balance Sheet Solo - Assets and Liabilities Valuation Analysis

QIS5 Balance Sheet Solo - Own Funds Liabilities

QIS5 Balance Sheet Solo – Participations

QIS5 Cost of Capital Risk Margin

QIS5 CoC RM - summary CoC RM calculations

QIS5 CoC RM helper - full calculation future SCR

QIS5 CoC RM helper - imported data

QIS5 CoC RM helper - intermediate duration

QIS5 CoC RM helper - intermediate risk volume

QIS5 CoC RM helper - RM full calc

QIS5 CoC RM helper - simplification - life UW risk

QIS5 CoC RM helper - simplification - non SLT health UW risk

QIS5 CoC RM helper - simplification - non-life UW risk

QIS5 CoC RM helper - simplification - SLT health UW risk

QIS5 CoC RM helper - simplified calc of RM, CDR

QIS5 Risk margin and TP - life business

QIS5 Risk margin and TP - non-life business

QIS5 Current situation

QIS5 - Current Solvency I position

QIS5 Technical Provisions

QIS5 Detailed TP - Life Business

QIS5 Detailed TP for Non-Life direct business

QIS5 Detailed TP for accepted NP reinsurance

QIS5 Insurance Obligations

QIS5 segmentation of Health insurance provisions

QIS5 Best Estimate of TP - non-Life business

QIS5 Best Estimate of TP - Life business

QIS5 Additional TP data for MCR calculation

QIS5 Allocation of TP - Non-Life Direct

QIS5 Allocation of TP - NP reinsurance

QIS5 Allocation of TP – Life

QIS5 Risk margin and TP - life business

QIS5 Risk margin and TP - non-life business

QIS5 Minimum Capital Requirement - Standard Formula (MCR)

QIS5 MCR - Overall MCR calculation

QIS5 MCR - Life MCRLife

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QIS5 MCR - Non-Life MCRnl
QIS5 MCR - composite calculation

QIS5 Premiums

QIS5 Premium and expense data
QIS5 Premiums for health (SLT) business
QIS5 Premiums for life business
QIS5 Premiums for non-life

QIS5 Solvency Capital Requirement - Standard Formula (SCR)

QIS5 SCR - Standard Formula
QIS5 SCR - Operational Risk
QIS5 SCR - Market Risk
QIS5 SCR - Market Risk Concentration analysis by counterparty
QIS5 SCR - Market Risk Spread analysis by exposure
QIS5 SCR - Counterparty Default Risk
QIS5 SCR - Life Underwriting Risk
QIS5 SCR - Non-Life Underwriting Risk
QIS5 SCR - Non-Life Underwriting Premium and Reserve Risk
QIS5 SCR - Non-Life Underwriting Lapse Risk
QIS5 SCR - Non-Life Underwriting Catastrophe Risk
QIS5 SCR - Health Underwriting Risk
QIS5 SCR - Health Underwriting SLT Risk
QIS5 SCR - Health Underwriting Non-SLT Risk
QIS5 SCR - Health Underwriting Catastrophe Risk



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