

Kalido for Solvency II

To meet the urgent need for insurers and re-insurers to increase agility, speed and efficiency in their Solvency II programs, Kalido offers a flexible insurance business information model, an automated data warehouse design and build capability, master data management, and a data governance application to rapidly address the data management and governance requirements of the Solvency II directive. This solution delivers a fully governed, end-to-end process from data capture through to Solvency II reporting. The result is accelerating your Solvency II program at less cost and in dramatically less time.

The Challenge

European insurers of all types and sizes – as well as North American insurers who do business in Europe – have realized that compliance with Solvency II directives will require a substantial effort that will continue into the foreseeable future. The EIOPA Report on the fifth Quantitative Impact Study (QIS5) for Solvency II noted in Section 10.1 Practicability and Preparedness that “other areas that were commented on in almost all cases were improvements to data quality or data management and, sometimes linked to the latter, changes to IT.” Similarly, in a survey of insurance firms subject to Solvency II compliance, the UK Financial Services Authority’s IMAP thematic review of current efforts to comply found that data management appeared to be one area where insurance firms still have comparatively more to do to achieve the likely Solvency II requirements.

These surveys found five key data management topics that insurers needed to better address to be adequately prepared for Solvency II compliance:

- Support a **data framework** by a comprehensive data policy covering data quality and data updates, approved by senior management.
- Invest in a **data warehouse** as a way of addressing the various data management requirements, ensuring that the data can be used in destination systems in a meaningful way.

- Create a **data dictionary** as an approach to understanding and classifying data, with procedures to ensure timely maintenance and consistent use of the data dictionary across the firm.
- Ensure **data quality** so that data used in the standard model and the internal model is accurate, complete and appropriate.
- Ensure that spreadsheets outside the control of IT would be subject to the same controls as formal **IT systems** to reduce risk.

Kalido Solution for Solvency II

Kalido offers a software solution for data management that addresses the primary areas of concern with respect to an insurer delivering data that is complete, accurate and appropriate in their internal model.

Data Framework

Kalido offers a business-model-driven end-to-end process for capturing requirements, storing and processing data without gaps in how the data is sourced, controlled, defined and used. A data policy approach delivers a governance capability that allows you to develop data quality rules and standards, and monitor data quality compliance to policies over time. A master data management capability ensures consistent identifiers for claims, insured parties, locations, products, etc. used across multiple actuarial, claims, policy administration and broker

systems, which delivers high quality data used in Solvency II calculations. A workflow-driven process enables governance over the policies and rules as well as authorization and approval at the necessary management levels for your Solvency II program.

Data Warehouse

Kalido includes a data warehousing capability that is driven by a pre-built insurance business information model that you can customize for your precise needs. Both the model and the data are governed to ensure integrity. Developing and maintaining the data warehouse is done in an automated way, minimizing manual effort, enhancing agility and speeding time to value. Kalido also includes a capability to automatically generate and maintain the metadata to feed Business Intelligence reporting tools commonly used to deliver Solvency II reports and analyses.

Data Dictionary

The Kalido business information model acts as a common data dictionary and language between IT and business people, enhancing collaboration and understanding among both constituencies. Kalido business models include an ability to make annotations that serve as explanation and commentary on assumptions. The entire model serves as documentation as to what is in the data warehouse. Furthermore, the Kalido business information model directly maps to and drives the end-to-end process so that there is consistency and transparency for information management. As

Solvency II requirements mature and change, the business information model allows you to rapidly adjust the content so that your efforts to keep current with changing requirements are done with the least effort and the most accuracy.

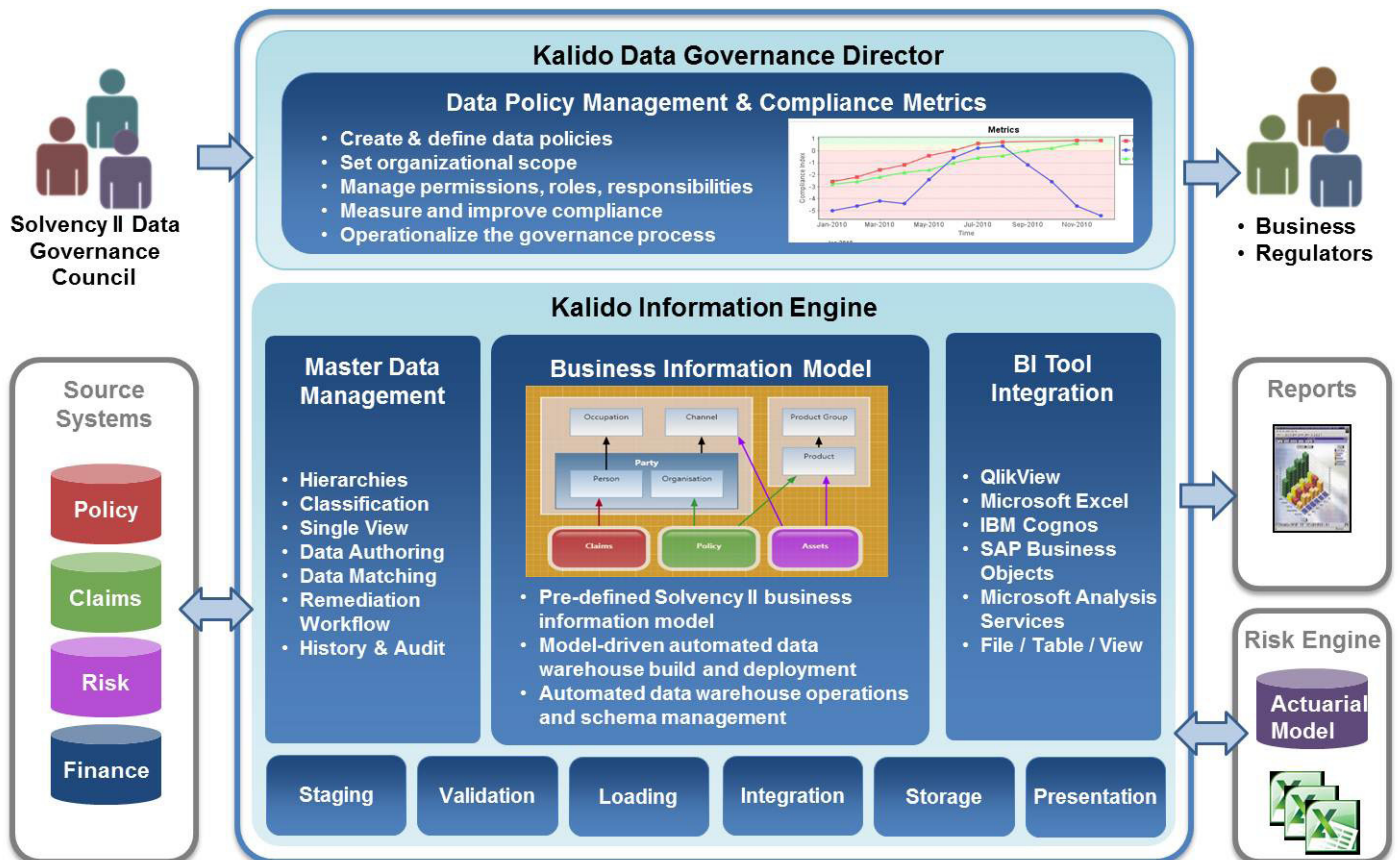
Data Quality

Your input data to the internal model will come from multiple source systems and it is likely that it will be different in each source. For consistency in Solvency II it is critical to develop data policies that dictate the level of data quality needed and to ensure a process is in place to track and measure compliance with those policies. If invalid data is found, it is then important to have a process in place to remediate that bad data so it does not infect your Solvency II models. Kalido Data Governance Director offers capabilities to create and manage data

policies at any level in the organization, operationalize the process of governing the data to conform to the policies, and measure and improve compliance to the policies. To remediate bad data, Kalido offers a master data management capability that allows you to set data validation rules, match data from multiple sources, and route invalid or mismatched data via workflow alerts to your data stewards for remediation. The process is fully configurable and can include multiple levels of approval and authorization, as well as escalations to ensure timely resolution. Additionally, an intuitive business user interface enables easy access to master data by non-technical participants so they can easily participate in the process of ensuring consistent, accurate and appropriate data.

IT Systems

The Kalido solution provides a business-model-driven, end-to-end process so insurers have a coordinated, structured solution for Solvency II data management. Kalido can enable companies to consolidate their spreadsheet-based data into a single environment to deliver enhanced control and governance over the data content and quality, while minimizing risk of bad data infecting the Solvency II compliance process. Additionally, reports can still be delivered in Excel and other environments familiar to business users. Using Kalido as the data management platform will deliver a more coordinated overall data management strategy that can increase an insurer's ability to provide trusted, consistent and accurate information to comply with the Solvency II directive.



Kalido Architecture for Solvency II

How Kalido Works

The Kalido for Solvency II solution leverages the modelling and data investments that you already have in place, and minimizes the disruption to existing business processes and systems. Initial deployment is normally completed within days, while customisation of the information model to meet the needs of a specific risk profile is a project of weeks. Mapping and loading data from existing operational systems goes on in parallel.

The Kalido solution is driven by the needs of the business, and is designed to grow as your business grows; with a robust, model-driven information engine you can support the business beyond your immediate Solvency II requirements.

Solution Architecture

The Kalido for Solvency II solution consists of the Kalido Information Engine™ and the Kalido® Data Governance Director™.

The Kalido Information Engine contains a pre-built insurance and Solvency II business model ready for calculating SCR. The product creates and maintains a data warehouse and also includes a master data management capability so that you can deliver accurate and consistent data from a variety of source systems. Additionally, the Kalido Information Engine

automatically creates BI metadata for leading BI tools including IBM Cognos, SAP Business Objects, Microsoft Analysis Services, Microsoft Excel and QlikView that you can use to produce market disclosure and internal reports.

Kalido Data Governance Director enables governance around the data used in Solvency II. Customers can set data policies, implement them by organizational scope and track compliance by monitoring data quality. Creating, approving and implementing policies is done via workflow and enables you to have control over the quality of the information used in the process.

Solvency II impact on your information infrastructure

The new requirements will have a profound impact on the information strategy of many insurance companies, intersecting operational applications, data management, data governance, data integration, business intelligence and analytics capabilities. Moreover, IT departments need to integrate data from customer facing, operational, finance, risk and line of business systems in to one consolidated, enterprise-risk repository so that the Solvency Capital Reserve SCR can be calculated. The Solvency II repository must include data on:

- Clients
- Policies
- Claims
- Reserves
- Risk
- Underwriting
- Reinsurance

Many insurance firms plan to use Solvency II as the impetus to build a lasting analytics and business intelligence infrastructure. The Kalido for Solvency II solution addresses the immediate data management issues of Solvency II and can easily evolve into a broader data warehouse to address additional business requirements across many different lines of business (P&C, Life, Specialty, etc.) or functional areas (actuarial, underwriting, broker management, etc.)

About Kalido

Kalido is the leading provider of business-driven data governance software. Kalido enables companies to manage data as a shared enterprise asset by supporting the business process of data management. Kalido software has been deployed at more than 300 locations in over 100 countries, including 20 percent of the world's most profitable companies as determined by Fortune Magazine. More information at: <http://www.kalido.com>

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