



SUNGARD iWORKS PROPHET

The Next Generation
Risk Management
Platform for Insurers

iWorks Prophet

Have you fully embedded an ERM initiative into your organization?

Are you using accurate data in your models?

Are you making predictions based on outdated principles?

Is your company well positioned to weather a financial storm?

Are your models based on your view of the markets as they are today, not as they will be?

Can you produce your period-end results in a reasonable time frame using a complete end to end process?

Are you in compliance with all regulatory requirements?

Volatile financial markets and changes to solvency regulations are driving the need within insurance companies for robust Enterprise Risk Management (ERM) systems. Increasingly more complex actuarial modeling techniques are at the forefront of the response. Many risk managers are now building models that look at risk across the entire enterprise and encompass the entire corporate structure across geographic regions as well as product groupings. As these sophisticated initiatives take shape, it has become essential that a comprehensive risk management technology platform play a crucial role in the overall strategy.

At the heart of an effective risk management platform, insurers must have sound strategies for modeling, categorizing, quantifying, and analyzing the full range of risks. Such platforms must build models that support the whole enterprise, as well as automate and facilitate complex run-time processes.

SunGard has taken iWorks Prophet, one of the world's leading actuarial modeling systems, and invested in moving from a desktop actuarial tool to an enterprise technology platform which will support insurers' ERM needs. The new platform is available today and will provide you with the foundation for a complete risk management solution.

iWorks Prophet combines advanced actuarial modeling with a powerful production platform

We understand that you face many challenges as you implement an effective risk management strategy. One of these challenges is the need to increase management efficiency, and improve business performance and depth of business insight across the enterprise. To do this, you require systems that:

- Quantify substantial risk factors
- Identify and prepare for emerging risk
- Develop a comprehensive risk profile
- Provide clear vision for risk tolerance and risk appetite
- Make information accessible to all in real time
- Monitor internal control activities to measure effectiveness of the risk response strategy and gauge if goals are met.
- Optimize cost of managing risk

It's also important to support enterprise-wide decision making by:

- Effectively communicating results of risk modeling
- Improving the quality of the analysis used
- Strengthening analytic capabilities

In addition, it's imperative to establish a state-of-the-art risk management technology infrastructure that:

- Increases efficiency of models
- Supports sophisticated, more complex actuarial models
- Achieves scalability
- Supports implementation of mission critical systems
- Improves hardware utilization
- Improves throughput
- Streamlines end to end standardized processes
- Shortens reporting time
- Supports secured and auditable environment

In order to capitalize on resource investments, you need to better align actuarial operations with technology staff and encourage greater collaboration across both groups.

Lastly, you must keep pace with regulatory demands and comply with increasingly stringent regulatory compliance accounting and reporting requirements for control and governance, including:

- Solvency II
- IFRS Phase II
- Risk Based Capital
- Principle Based Approaches (PBA)
- Sarbanes Oxley
- GAAP accounting
- EEV / MCEV
- Economic capital

The Face of Risk Management is Changing

The face of risk management is changing. To keep up, actuarial modeling must be:

- » Automated
- » Sophisticated
- » Predictable
- » Credible
- » Controlled
- » Auditable
- » Documented

Models must consistently and efficiently produce accurate results that are:

- » Transparent
- » Actionable
- » Timely



iWorks Prophet provides a solid foundation for your Risk Management platform by:

Promoting the Power of Business Intelligence

Business Intelligence is at the heart of the iWorks Prophet framework. iWorks Prophet enables the management, analysis, transformation and interpretation of data resulting in advanced reporting capabilities. It provides insight into complex financial risk and other factors that impact an organization's business performance and strategic success. It also integrates with other solutions or data warehouses for a broad look at enterprise data. To support increasingly complex reporting needs, data may be compiled to create executive dashboard and other needed documents to empower C-Suite with real-time analytics.

Implementing a state-of-the-art Risk Management Technology Infrastructure

The iWorks Prophet Architecture is designed to boost computing power and reduce modeling runtime. Some of the key business benefits are:

- Multi-user environment
- Fully automated processes
- Highly scalable and flexible distributed processing
- Optimized calculation engine
- Comprehensive scheduling capabilities

Additionally, the iWorks Prophet Enterprise architecture promotes improved computing power by focusing on the following technology benefits:

- Follows Microsoft guidelines for rich user interface design
- Open, modular architecture based on Microsoft .NET framework
- Client-Server architecture using Service Oriented Architecture (SOA)
- 64-bit calculation engine
- Data-optimized C++ code generator to boost performance
- Multi-threaded to make full use of the latest multi-core and hyper-threading 64-bit processors.
- Supports clustered environments for high availability
- Supports Microsoft HPC Server
- Software as a Service (SaaS) compatible

The enterprise architecture supports system performance and stability through the use of job automation and scheduling tools designed to improve resource management. It is robust to perform mission critical tasks and designed to avoid points of failure.

A key component to managing the infrastructure is the ability to exert greater control over the risk management technology environment. iWorks Prophet supports:

- Separated development and production environments
- Advanced data security and auditability features
- Protected models for reproducibility
- Version control to ensure reliability of audit data
- Management console allows administrators ability to manage a protected and auditable environment

Optimizing Use of Actuarial Resources

Consolidate your actuarial business operations with the iWorks Prophet enterprise environment. The client-server architecture supports remote access, so global actuarial resources may collaborate, enabling delivery of business value across the entire organization. iWorks Prophet promotes streamlining your actuarial practice by allowing actuaries to focus on financial modeling and analysis, and not on technology concerns. Your IT staff can be easily trained to execute modeling runs, freeing up key actuarial resources particularly during critical period-end reporting.

The iWorks Prophet reporting engine empowers actuaries with graphical, intuitive executive dashboard reports that will enable them to effectively communicate risk exposure to upper management.

The iWorks Prophet framework provides the following business benefits:

iWorks Prophet offers support for insurance products such as life, non-life, and permanent health. Actuarial libraries also support products modeled for the financial services industry as well as insured pensions. The iWorks Prophet actuarial calculations manage the financial models used for:

- Embedded and appraisal valuations
- Sophisticated Asset/liability modeling
- Deterministic and Stochastic cash flow and financial projections
- Net premium, gross premium and discounted cash flow valuations
- US GAAP Cashflow Testing
- Surplus and bonus strategy analyses
- Product pricing and design
- Analysis of surplus and movement in embedded values
- Current and projected contribution requirements for group pension schemes.
- Dynamic solvency testing
- Stochastic projections
- Stochastic on Stochastic projections
- Risk Based Capital
- Economic Capital
- Replicating Portfolios
- Principle Based Internal Models

Comprehensive actuarial libraries covering an extensive range of businesses, regions, reporting methods, and actuarial methodologies minimize the time and resources needed to implement actuarial models. The libraries provide several interfaces for manipulating data and inputting assumptions. An intuitive user interface allows you to design your financial models easily. The system is designed specifically for actuaries, so programming expertise is not required in order to effectively use the system.

Once the models are created, you are able to execute and run the required calculations. The calculation engines are optimized for high performance using compiled C++ code. The result is a highly scalable and flexible environment which supports parallel processing across networked and multi-processor PCs. Each multi-purpose model can be optimized separately for internal or regulatory requirements. Calculation engines also support advanced options for repeating subsets of the calculations using different data or assumptions making it simple to change inputs and parameters. Lastly, the calculations support progressive accumulation of results, enabling the development of more complex multi-layered models.





The most important step in the modeling process is reporting the results. iWorks Prophet supports a flexible reporting environment to meet all your needs. The rich Excel-based reports allow full access to the underlying data generated by models thus enabling the user to further manipulate and present data as required. Diagram View is a unique market leading tool which gives the actuary a powerful representation of the formula dependencies and results. This allows you to track forwards or backwards through each step of the calculations offering you a view of all the intermediate results.

Risk Management Modeling Platform

Sophisticated actuarial models and technology platforms that support the high-level risk vision of an organization are integral to risk management implementations. iWorks Prophet is a market-driven solution, designed specifically with the goal of supporting ERM initiatives that require a highly sophisticated modeling platform. At the heart of the iWorks Prophet modeling platform is the Asset Liability Strategy (ALS) library.

The Asset Liability Strategy (ALS) library provides code for a rapid calculation engine in a stochastic modeling environment. It is also designed for rapid implementation and supports:

- All types of asset liability studies
- Stochastic pricing
- Realistic Balance Sheets
- Risk based capital exercises, including Internal Capital Assessments (ICA)
- Economic Capital
- Replicating Portfolios
- Product pricing
- Business planning
- Strategy work

Additional Features include:

Standard interfaces are available for economic scenario generators (ESGs). We provide seamless integration with leading ESGs providers with an option of liability modeling methods covering the complete spectrum of financial products.

The libraries support an extensive range of asset types and captures:

- The dynamic links between assets and liabilities, particularly powerful in evaluating path dependent liabilities influenced by potential management actions.
- Dynamic Reserving
- Stochastic mortality improvement
- Dynamic lapse rate investigations
- As well as many other dynamic linkages as standard

iWorks Prophet stochastic solutions are licensed by over 300 customers worldwide. ALS allows for the design and development of comprehensive internal models. It is a flexible library with extensive functionality and support for many regional variations and is used globally. The library uses and interfaces with best of breed partners.

More than 2,500 customer sites use SunGard's iWorks solutions

More than half of the top 50 life insurance companies ranked in the Global Fortune 500 use SunGard's insurance solutions.

SunGard's iWorks solutions are used in more than 55 countries.

SunGard's iWorks solutions are used by nine of the top ten life insurers in the U.S. as ranked by AM Best.

Partnering for Your Success

Support for your Global Risk Management Initiatives from the leading Actuarial Consulting Practices

iWorks Prophet has a comprehensive network of partnerships with a large number of the world's leading actuarial consultancies. Our partners are committed to providing the skills, and experience to provide Prophet expertise worldwide. Actuarial Consultancies will work alongside iWorks Prophet experts to deliver a broad range of services to our clients.

Professional Services

The iWorks Prophet Professional Services team offers options to assist with the deployment and implementation of the iWorks Prophet Development and Production environments. Our team brings together a wealth of iWorks Prophet experience from both the life insurance industry and consultancy backgrounds. You can count on our expert team to ensure you have a deployment and implementation strategy that meets the expectations of end users and the management team.

In addition to the iWorks Prophet Professional Services team customers can also leverage the power of the SunGard Consulting Services team. SunGard is one of the leading software providers in the world with consultants specializing in:

- Data Management and Compliance Solutions
- Business Process Optimization
- Project Management
- Data Warehouse
- Business Intelligence and Dashboard Reporting
- System Integration

“ Our relationship with SunGard means that we will have a lot of future benefits from iWorks Prophet...It is faster, more robust, flexible, standardized and able to be controlled from head office. It has proved to be a very successful investment. ”

Laszlo Hrabovszki,
Group Chief Life & Health Actuary
Generali Germany

About SunGard

SunGard is one of the world's leading software and IT services companies. SunGard serves more than 25,000 customers in more than 70 countries, including the world's 25 largest financial services companies.

SunGard provides software and processing solutions for financial services, higher education and the public sector. SunGard also provides disaster recovery services, managed IT services, information availability consulting services and business continuity management software.

With annual revenue exceeding \$5 billion, SunGard is ranked 472 on the Fortune 500 and is the largest privately held business software and services company on the Forbes list of private businesses. Based on information compiled by Datamonitor*, SunGard is the third largest provider of business applications software after Oracle and SAP. *Continuity, Insurance & Risk* has recognized SunGard as service provider of the year an unprecedented five times. For more information, please visit SunGard at www.sungard.com.

*January 2009 *Technology Vendors Financial Database Tracker* | <http://www.datamonitor.com>

About SunGard iWorks

SunGard iWorks is a business-driven IT product family for the insurance industry in each of the following major business lines: life/health/annuities/pensions, property and casualty and reinsurance. iWorks offers a range of products and services including front-office tools policy administration, reinsurance, actuarial calculations, financial and investment accounting and reporting. SunGard partners with customers to deliver products and services that align with your changing business and regulatory needs.

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