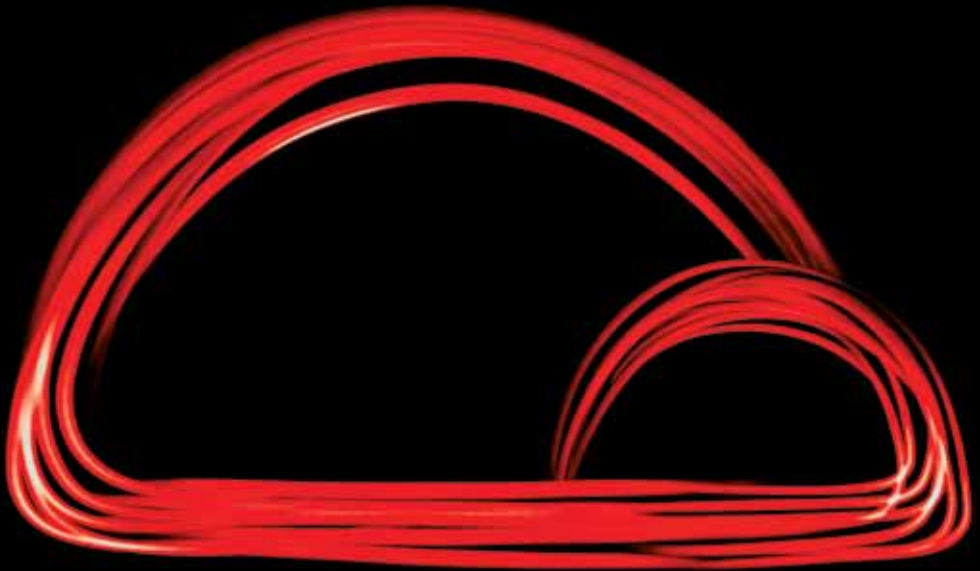




EMB Igloo™



The market-leading financial simulation software for risk modelling

“Igloo offered us the most flexible and transparent risk modelling tool. What gave us additional confidence is that EMB’s consultants really know their way around models and the insurance industry in general.”

**Dan Wilkinson, Head of Risk, Operations and Compliance,
Travelers UK**

Introducing the new EMB Igloo™ suite



EMB now offers the flexibility and control of Igloo in three editions, including the new Igloo Compact Edition (ICE) for companies wanting a convenient entry point to comprehensive risk modelling.

The global economic crisis has highlighted the importance of understanding risk within businesses. The Igloo financial modelling suite is specifically designed to enhance that understanding, from simple applications to a corporate level top-down view of a financial enterprise. It is used by a variety of organisations, including insurers, reinsurers, financial institutions and regulators.

Igloo users can quickly start to see how decisions might impact on the risk and performance of their business, and use model outputs to promote a wider understanding of risk within the business.

Igloo is already the insurance industry's market-leading modelling platform, noted for its transparency and scalability. The building block approach and the availability of a library of pre-built modules make it both flexible and easy to use and update. Our consultancy offers broad support to clients in the initial build phase and is available to support your modelling requirements on an ongoing basis.

The three editions of Igloo are designed to meet varying organisational and budget requirements. Igloo Compact Edition (ICE) is the entry level product for companies seeking to establish a modelling foothold. Igloo Extreme offers the user full customisation of the models while Igloo Enterprise additionally provides users with a distributed solution.

An Audit edition is also available to allow third parties to conduct independent audits of Igloo models.

Introducing EMB

Founded in 1993, EMB has built a reputation for first-class technical skills and has pioneered the development and use of high-performance software to complement its actuarial and business consultancy.

The combination of our knowledge, expertise and innovation helps our clients improve their business performance by managing and understanding risk, growing revenue and increasing profits.

With offices around the globe, we advise both insurers and reinsurers, large and small, including 28 of the world's top 30 non-life companies and many Lloyd's syndicates. Our partners and consultants are recognised as thought-leaders in the insurance market.

We don't just deliver numbers; we create understanding. Clients require more than just analysis. They want to know how it can be applied realistically to their businesses to make them more competitive, more secure and more capital-efficient.

At the heart of our philosophy is knowledge transfer. We actively help clients to acquire their own analytical and business skills, believing that this is in the best interests of productive long-term working relationships.

EMB software is developed by our team of software professionals and industry consultants working in collaboration with our clients. This combination of industry knowledge, software engineering expertise and end-user insight creates sophisticated, innovative and easy-to-use products.

We try to make the decision on whether a piece of software supports your organisation's objectives as easy as possible. Evaluation options include demonstrations, meetings with existing users and, typically, a short-term trial licence period.



Advantages of EMB Igloo

All editions of Igloo are built on a common set of features that help take account of the uncertainties of the real world in business decisions and forecasting.

Client centricity

- A rapid model development environment - based on a range of reusable pre-built library modules and/or Igloo's building block approach to model components
- Transparency - within Igloo, the user can see every formula and investigate intermediate results
- The flexibility to update and amend specific model elements. The Igloo Data Flow diagram and Tree View enable you to keep track of the origin and usage of all variables, and to drill down to any level of detail
- Speed and performance - a number of our clients have benefitted from huge time savings when moving from alternative modelling systems to Igloo
- Future-proofing - the scalability of Igloo means that models can grow with your company
- The ability to generate reports and graphs during the development and analysis of your model

Proven modelling platform

- Many of our clients have used models developed in Igloo for the calculation of regulatory capital requirements
- Ease of integration - Igloo can accept and use output from third-party catastrophe models and economic scenario generators. It can also be linked to other software packages such as Microsoft® Excel®
- Igloo is trusted and is being used by regulators

Technical efficiency

- Model nesting - complex model structures can be simplified by nesting models within sub-models
- Distributed updates of standard components and modules
- Does not require knowledge of C++, C# or similar programming languages
- Connects to enterprise databases
- Supports international character sets

EMB Igloo editions

Using a common building block approach, the three editions of Igloo are tailored to meet evolving budget, scale and processing requirements with an easy upgrade path.

Igloo Compact Edition (ICE)

The perceived cost and complexity of integrated risk models has historically proved a barrier to entry for many smaller entities. Whilst addressing these issues, ICE offers huge accuracy, time and efficiency improvements over the most common alternative - spreadsheet-based models.

Specific benefits

- Offers standard library modules developed over a number of years
- Enables you to very quickly establish a modelling platform with the assurance that you can seamlessly upgrade to other editions of Igloo if you wish
- Reduces the risk of inadvertent error inherent in using spreadsheet models
- Provides a range of components that EMB can tailor to your company's needs
- Includes parameterisation for the standard modules

Igloo Extreme

The Extreme edition, as well as offering the standard modelling libraries, enables you to create flexible and sophisticated models that reflect the uniqueness of your business.

Specific benefits

All of the benefits of the Compact Edition and:

- You are not limited to pre-defined libraries and have complete flexibility to create your own
- The Extreme edition merges the capabilities of previous Igloo Professional and ExtrEMB modules to include full model parameterisation
- Enables optimisation of business strategies e.g. reinsurance purchase
- Can be scaled up, or provide a migration path, to a fully distributed model (Enterprise edition)

What EMB Igloo delivers

Igloo provides a strong technical foundation for your financial models.

Any number of business variables can be modelled together with any required dependencies between them. Igloo has a strong statistical basis and includes a wide range of statistical distributions, a choice of dependency structures between key risk factors and graphics capabilities to visually identify features of your data.

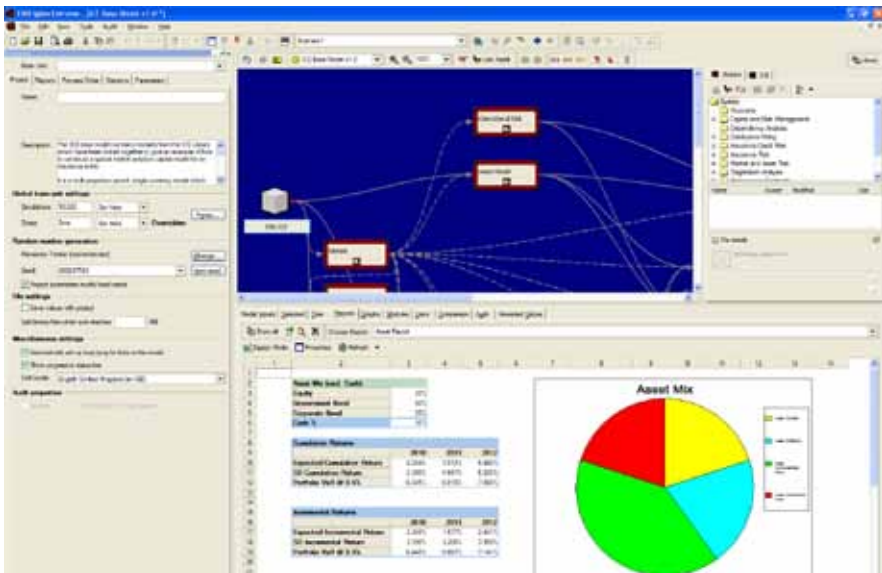
Components are developed using spreadsheet-type formulae, and can be linked together at the click of a mouse. Models can be updated in seconds by replacing one module with another.

And because all Igloo applications are scalable, the software can ease your journey towards models that are as sophisticated as your business requires.

EMB support

Building an accurate and effective model is a complex process. EMB's actuarial and modelling experts provide as much support as you require throughout the build phase and as you develop your use of Igloo. We provide hands-on additional resource for scoping, building and peer reviewing models and insight into issues such as data specification, parameterisation and regulatory compliance.

Screenshot showing the full screen in split screen mode



EMB Igloo main features

	Igloo Compact Edition	Igloo Extreme	Igloo Enterprise
Standard library modules	▲	▲	▲
Transparency of results and calculations	▲	▲	▲
Control over all model variables	▲	▲	▲
Auditable	▲	▲	▲
Ability to integrate with office applications	▲	▲	▲
Connectivity to enterprise and desktop databases	▲	▲	▲
Distributed updates of standard components and modules	▲	▲	▲
Support of international character sets	▲	▲	▲
Suitable for desktop or shared server installations	▲	▲	▲
Supports use of dashboards	▲	▲	▲
Supports creation of dashboards		▲	▲
Create own libraries		▲	▲
Full optimisation capability		▲	▲
Linking of multiple projects		▲	▲
Distributed application			▲
Browser controllable			▲
System monitoring and administration tool			▲
Extended configuration options			▲
Model run scheduler			▲

Igloo in practice

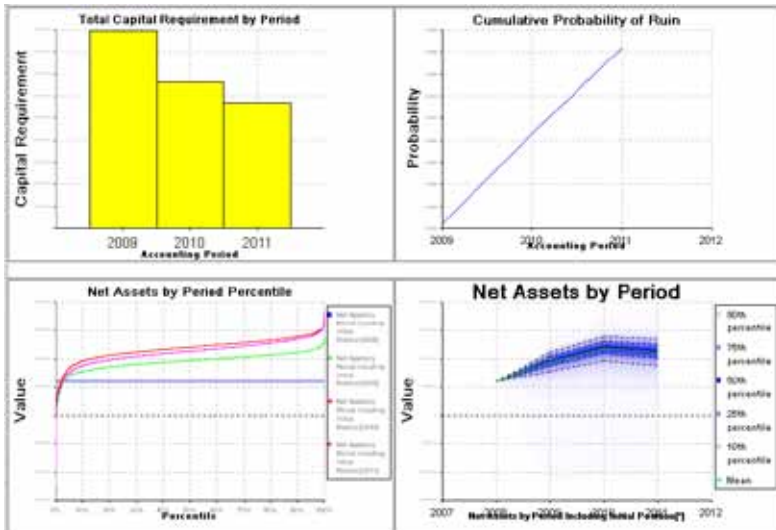
EMB Igloo is licensed by insurance companies and, increasingly, other types of financial institutions around the world. It helps them to meet a range of business and compliance objectives.

Much of the discussion about capital models in recent years has focused on compliance issues. Whilst important, for many of our clients this is only half the story.

In many cases, EMB Igloo is the platform on which to build a more risk-conscious business culture, encompassing capital, assets, liabilities and operations. It also provides the technical analysis to support strategic planning and management.

EMB's broader actuarial, business consultancy and professional development services are an important part of the package offered to Igloo clients, helping not only to build, maintain and improve the financial model, but to support work to embed the cultural changes that true ERM involves.

Screenshot showing the graphing functionality



Case studies

EMB Igloo is already used successfully by many hundreds of organisations around the world.

Case study - Allianz

Allianz has licensed Igloo since 2002 over which time it has used it for a range of tasks including worldwide reinsurance optimisation, reserve uncertainty, complex reinsurance covers and natural catastrophe exposure.

More recently, Allianz selected EMB and Igloo to develop a common framework for reporting non-life risk and capital requirements in each of its worldwide

entities. As well as continuing with current modelling applications, Allianz is extending the generic model to integrate non-life premium and reserving risks.

By developing this model, the company will provide individual country subsidiaries with a more granular approach to assessing risk and a means for collating business risk information at global level on a more consistent basis.

Case study - Travelers UK

Travelers UK selected Igloo to drive wider risk management and strategic planning in the business while streamlining regulatory capital submissions. With support from staff seconded from EMB, it built the initial model to support its regulatory submission for its Lloyd's syndicate in just six months.

In moving from its previous spreadsheet model, within 12 months it had started to utilise what-if scenarios for influencing reinsurance purchase decisions and had reduced processing time by a factor of seven. Igloo's open architecture has also opened up avenues for integrating asset management and economic scenario generation analyses that are driven by its US parent company.

Solvency II and ERM

EMB Igloo provides an end-to-end solution for meeting the requirements of Solvency II and improving risk-based decision making. It also gives a stronger foundation for relationships with ratings agencies.

Every insurance business in Europe has some work to do to prepare for how it will meet the requirements of Solvency II from 2012. The trend for greater risk-based regulation is also gathering pace around the world.

EMB Igloo is the state-of-the-art tool to help you do the necessary jobs effectively and to future proof the models used in your compliance function and the business at large. Specifically for Solvency II, it can be used to build and embed internal models to meet both the SCR and ORSA requirements. The standard library modules include the QIS 4 capital calculations.

Solvency II and risk-based regulation in general is not just about building models or technical quantification. It is about understanding your business better. While Igloo permits your actuarial and compliance teams to analyse issues to precise levels of detail, the user-friendly reports and graphs functionality also gives all your management team easy access to key performance and risk indicators.

ERM approach

All editions of Igloo, including the Compact, can be uniquely tailored to your business, whether this is done by EMB or by you in-house.

Igloo also supports the development of the business processes and controls around the model that are key to the successful execution of a Solvency II project. For example, it has a full audit facility to enable a user to show that a formula and set of numbers have been checked. Igloo can also interface via ODBC link with the full information architecture of a company including enterprise level databases.

More advanced risk management of this nature is increasingly a concern for ratings agencies. With Igloo, the internal model you use to make more risk-informed business decisions will help you to demonstrate to rating agencies that you are staying at the cutting edge.

Model implementation services

EMB's broad mix of actuarial, project management and software-related expertise delivers a range of optional added-value services for the implementation and development of your models.

Training

Most EMB Igloo clients want their in-house actuaries and compliance teams to be able to do the majority of modelling work and analysis themselves once the model is built. Therefore, training is an important part of model implementation assignments, not only covering use of the software, but techniques that will enable clients to get the most from the model. As clients develop their use of models, we offer options for further software and technical training.

Model design

EMB's modelling specialists can take a lead or supporting role in the initial design of the model. Many clients continue to work with us to add to their modelling capability as part of a structured programme or on an ad hoc basis.

Bespoke model libraries

While all editions are supplied with standard library modules, we can tailor any of these to your specific requirements or create new ones to meet your needs. Extreme and

Enterprise edition users have the capability to create new libraries themselves and EMB can support successful outcomes for these projects.

Peer reviews

Because we work with models every day and invest a lot of time in research and development, EMB consultants are well placed to advise on the efficiency of model design and what constitutes market best practice. EMB also offers an audit service on in-house developed Igloo models.

IT infrastructure support

We can advise you and work with your in-house IT teams to ensure that your desktop and servers are configured to optimise the use of Igloo.

Help desk

All Igloo clients have access to specialist support via our telephone and on-line help desk.

User forum

Igloo clients can share ideas and learning experiences in our regular user forums that are held in countries with significant numbers of licence holders.

EMB's Software Portfolio

EMB is the world's leading provider of non-life actuarial software.



EMB Igloo™ is the insurance industry's leading financial modelling platform, allowing companies to model multiple business scenarios. EMB Igloo is known for its power, flexibility and transparency and comes with an extensive library of components. This includes economic scenario generation, claims generation, reserving, reinsurance, financial reporting and capital calculations.



EMB ResQ™ is the market-leading non-life reserving package. ResQ Professional and ResQ Enterprise build on more than a decade of development and innovation. They both combine powerful modelling and reserving methods with flexible, high-integrity data management capabilities. The optional 'Bootstrap' feature is for estimating reserve variability based on leading-edge stochastic techniques.



EMB Emblem™ builds robust predictive models of claims, retention, conversion and other customer behaviour. Its powerful and flexible analytical capabilities allow the most sophisticated models to be fitted to large datasets rapidly.



EMB Classifier™ analyses the effect of geographical area on risk through a range of sophisticated spatial analysis methods.



EMB Rate Assessor™ combines technical and customer behavioural models, competitor, distribution and customer information to support the rate selection process. By comparing price levels, rating structures and emerging experience trends, users can identify and validate pricing options through interactive scenario testing.



EMB Optimiser™ extends the capabilities of Rate Assessor using state-of-the-art mathematical algorithms to derive optimised premiums at the individual or ratebook level.



EMB Prism is a pricing application that allows you to technically rate insurance and reinsurance contracts typically sold in the London Market. It can help you with both experience and exposure modelling for a range of classes covering property, casualty and speciality lines.



EMB Repro is an application for graphically analysing reinsurance data. Users can quickly identify where they are covered, where they are exposed and any gaps. It can be used for multiple purposes including audits of insurance and reinsurance data.



EMB Media Optimiser™ is a web-based solution that enables companies to maximise the return on investment from marketing budgets.

“Iglu was good when we bought it, but has developed hugely since. It is robust, fast and very well-structured. It allows us to investigate issues in a way and to a depth that was unimaginable ten years ago.”

Phil Ellis, Amlin



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