



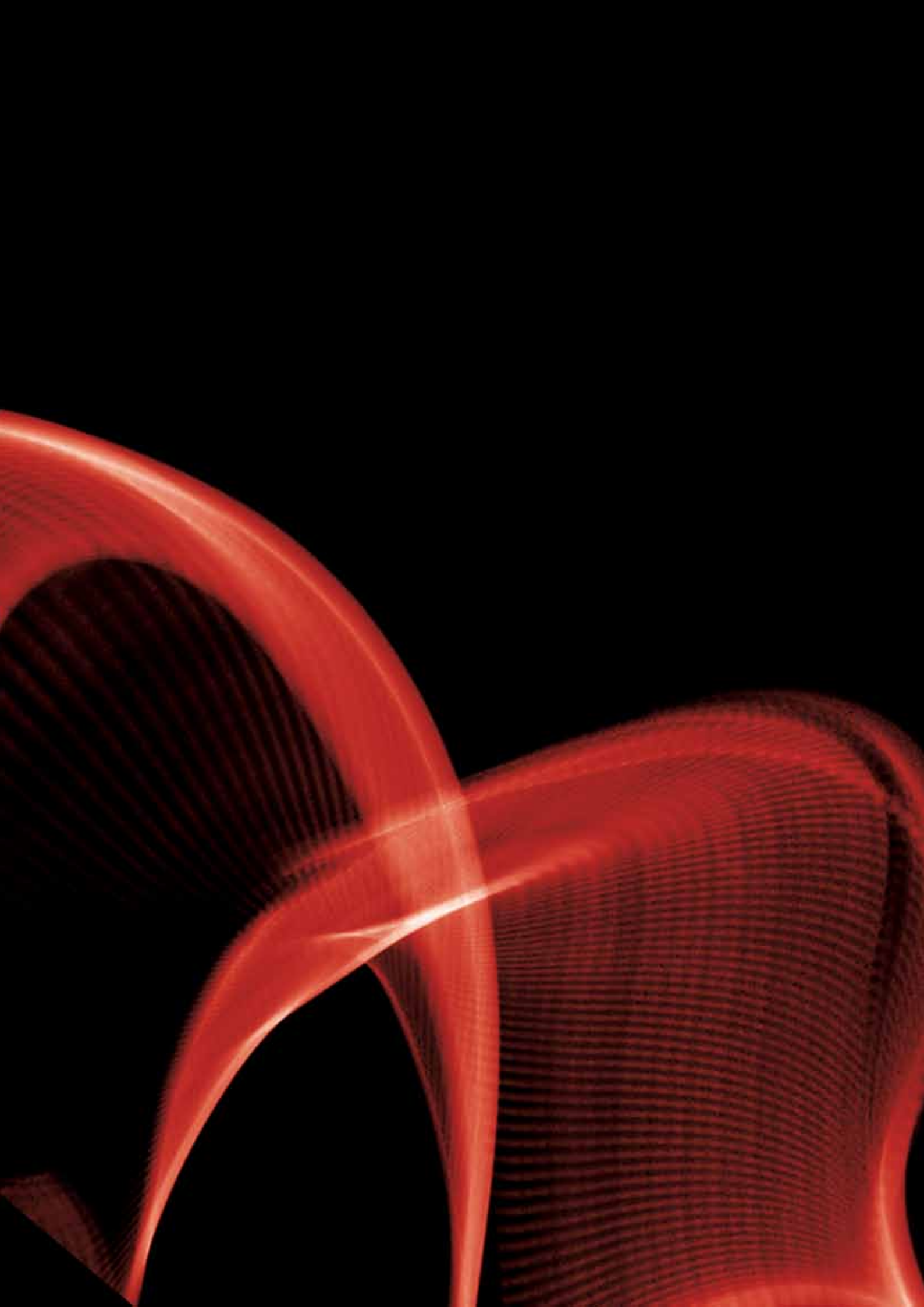
**MARKEL
INTERNATIONAL**

A Markel Company

Case Study: Markel

Markel takes a model approach





The starting point

Realising that the spreadsheet-based model used for its internal capital assessment (ICA) “would not stand the test of time”, Markel International selected EMB Igloo™ to upgrade its capital modelling capability. The availability of a faster-running, more flexible model has simplified ICA submissions, helped prepare for the arrival of the Solvency II Directive, and contributed to a wider enterprise risk management (ERM) approach within the business.

About Markel

Markel International is the London-based subsidiary for the international operations of Markel Corporation, the international property and casualty insurance group headquartered in Virginia, USA, and wrote gross premiums of \$693 million in 2008. Markel International operates in the UK through two commercial entities. Markel International Insurance Company Limited, its London based insurance company, operates in the London company market, while Markel Syndicate 3000 is its Lloyd's 100 per cent owned corporate syndicate. The company also has seven regional offices in the UK and a growing number of international branches in countries such as Canada, Spain and Sweden.

Background

In five years, since the start of the ICAS regime in the UK, Markel has progressed from having virtually no models to the early stages of integrating a detailed Igloo model into a wider ERM framework.

It initially introduced a spreadsheet-based model for ICA purposes, but this was “creaking at the seams within a couple of years,” explains Finance Director, Andy Davies. “The major issues we had were the lack of clear auditability, the fact that you couldn't necessarily replicate the detail behind the results and the limitations in our ability to run scenarios across different classes of business.”

With the Solvency II Directive emerging on the horizon, the company wanted a future-proof modelling platform. It brought in external consultants to help it scope its requirements and shortlisted four platforms, including EMB Igloo.

Leading its list of requirements were transparency of the model parameters; flexibility in modelling capability; speed; and the availability of a strong support team.

Having decided that Igloo most closely matched its needs, Markel set itself the target of delivering its syndicate ICA submission within six months.

Developing the solution

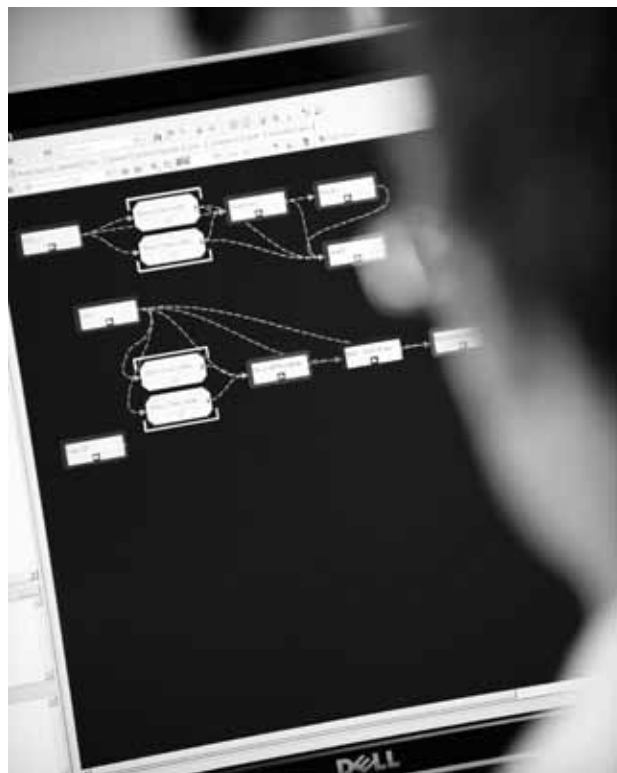
Markel's preferred approach was to develop as much of the model as possible itself. "But we couldn't have built the model within the required timeframe without EMB, and their project manager took an important role in keeping things on track - not being shy to remind us when action was needed," comments Chief Actuary, Nicholas Line.

A core team of three people within Markel set about building the model after two days of intensive Igloo training, supported on an ongoing basis by EMB actuaries who answered queries and did the analysis and modelling of specific components when external resources were required. Senior level leadership on the project came from Andy Davies and Nicholas Line.

In order to guide and prioritise their work, the team first carried out a high level scoping exercise, using EMB's expertise and experience to help arrive at what they wanted out of the model. Armed with this information, they were then able to determine what was realistic to achieve for the first regulatory deadline.

From this early stage, Markel has maintained the focus on future-proofing its modelling capabilities, in order not to shut off or delay its ability to interrogate aspects of its business over time.

After achieving the initial regulatory deadline, preparation for subsequent ICA submissions has become more efficient. With these efficiencies, time can now be devoted to making Igloo more central to Markel's ERM framework. EMB continues to support enhancements to the capital model and has been working in particular on peer reviews and helping Markel embed the model into the business as required by the Solvency II Directive.



Flexibility and speed

A key benefit, given Markel's structure, is the ability to produce separate insurance company and syndicate regulatory submissions and then pool the information from those models for wider business planning purposes.

“One area where we have focused some attention and seen some particular improvements is management information on natural catastrophe exposures. It has really enhanced our understanding of our CAT data,” notes Andy Davies.

Stability and run-time improved considerably over the previous spreadsheet model. Full runs of the Igloo model now take about two hours.

“One of the frustrations of the old system was that it was hard to fully analyse changes from previous versions. Igloo has no ‘black boxes’, meaning that we can see exactly what’s going on when we alter some of the model inputs,” says Andy Davies.

From a senior management perspective, he says there is greater assurance that the company is heading down the right path for Solvency II. Also, management information has become easier to review and understand, whilst the platform stability has allowed those working with it to focus on the results and the data that goes in, not the technology.

“Igloo has no ‘black boxes’, meaning that we can see exactly what’s going on when we alter some of the model inputs.”

**Andy Davies, Finance Director,
Markel**

Building for the future



While still in the early days of harnessing the value of the model for wider business purposes, Markel has done some work on reinsurance pricing and capital allocation. Ultimately, it wants to get to the position of having an integrated planning and capital model which would involve running its business plan through Igloo.

This is indicative of the evolving ERM approach within Markel. The company's blueprint for ERM is very much business-driven, but also takes account of meeting the requirements of Solvency II.

With this approach comes the need to involve more people within the business and the company is addressing this. As a first step, it organised a series of seminars for underwriting divisions focused on the link between risk and capital and to provide a layman's guide to how modelling helps understand holistic risk. "Our underwriters price risk every day, but they're not necessarily so aware of how the decisions they take may affect things like our credit, liquidity and operational risks," notes Director of Risk Management, Greg Shepherd.

Just as important is feeding underwriting knowledge into the model and each team is supplying two people to work with the modellers on required inputs and how to validate the output. "Eventually, we would like to get to the position of being able to model some large individual risks or programmes within Igloo, but that's something of a leap at the moment," says Greg Shepherd.

In summary, he says: "EMB and Igloo are helping us build momentum behind our implementation of ERM, but we are having to lay the tracks immediately ahead of us as we go."

The challenge

To launch a future-proof modelling platform that meets evolving regulatory requirements and lays the foundation for business-wide ERM. EMB's project management and hands-on actuarial support enabled the achievement of an initial regulatory deadline within six months.

The solution

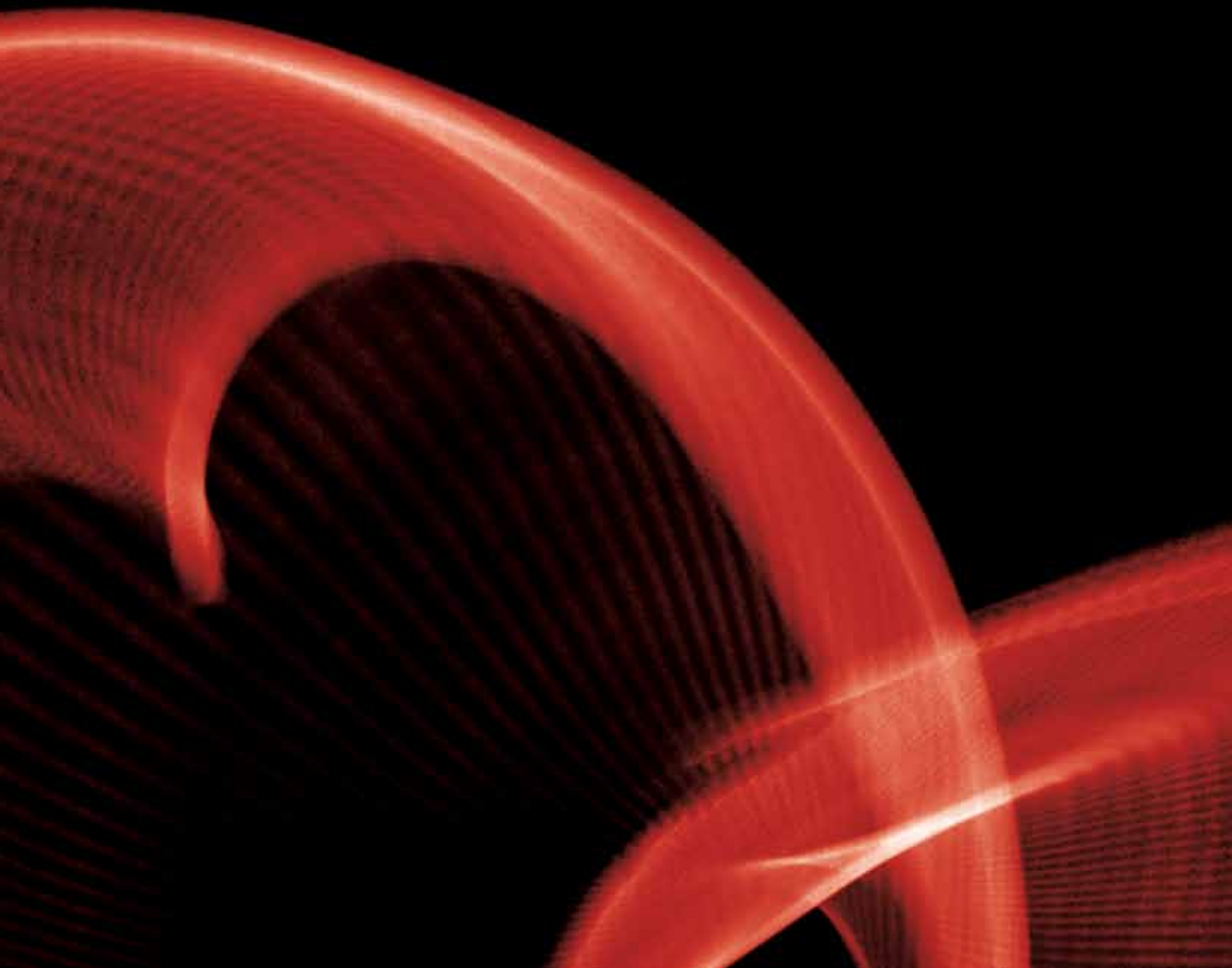
Using Igloo, Markel has identified a path to achieve its ambition of integrated financial, management and capital planning. Along the way, and with EMB's support, it is improving business management and understanding of issues such as natural catastrophe exposure, reinsurance purchase and capital allocation.

The benefits

- A stable, transparent modelling environment on which to base future business assumptions
- Huge time and efficiency savings on the previous model environment
- Improved capital allocation to risk increases the likelihood that Markel can reduce its required regulatory capital
- A modelling environment that supports Solvency II compliance
- Clearer management information
- Supports holistic understanding of risk within the business

“Igloo is helping us build momentum behind our implementation of ERM...”

Greg Shepherd, Director of Risk Management, Markel



EMB Worldwide

For more information contact your local EMB office or email us at info-uk@emb.com

Europe

United Kingdom,
Epsom
Cambridge
London
+44 (0)1372 751060
info-uk@emb.com

Germany,
Köln
+49 (0)221 35 66 26 0
info-de@emb.com

France,
Paris
+33 (0)1 42 68 52 23
info-fr@emb.com

Norway,
Bergen
+47 93 00 88 50
info-no@emb.com

The Netherlands,
Amsterdam
+31(0)20 820 00 60
info-nl@emb.com

North America

San Diego, CA
+1 858 793 1425
info-us@emb.com

San Antonio, TX
+1 210 826 2878
info-us@emb.com

Chicago, IL
+1 312 986 1425
info-us@emb.com

Chargin Falls, OH
+1 440 725 6204
info-us@emb.com

Norfolk, VA
+1 312 261 9631
info-us@emb.com

Stamford, CT
+1 203 604 2930
info-us@emb.com

Latin America

Brazil,
Sao Paulo
+55 11 2711 1500
info-br@emb.com

Africa

South Africa,
Johannesburg
+27 11 728 7651
info-za@emb.com

Asia-Pacific

Japan,
Tokyo
+81 3 5942 5901
info-jp@emb.com

India,
New Delhi
+91 124 410 1018
info-in@emb.com

Australia,
Sydney
(The Quantium Group)
+61 2 9292 6400
info@quantium.com.au

emb.com

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