



We develop the solutions you need to interpret data and transform them into better business decisions

Mirai Solutions is an independent consulting company with broad expertise in statistics, finance and IT. We have a proven track record in designing and developing solutions in the banking and insurance industry using R. Mirai Solutions was founded in 2009 and is based in Zurich, Switzerland.

Our interdisciplinary team of engineers and consultants combines state-of-the-art technologies – with a special enthusiasm for R – to build high-end reactive analytic applications. Our experts employ techniques from both classical statistics and advanced analytics, such as predictive modeling and machine learning, to turn your data into actionable insights.



Data Modeling and Reactive Applications

Modeling and data analytics



Models and data analytics are an invaluable way in which to enhance and inform the business process.

We believe that a sound and scientific approach, relying on techniques ranging from classical statistics to advanced machine learning and predictive modeling, is fundamental to the understanding of observed phenomena.

Our data scientists have extensive experience in data analytics and modeling in different domains, with more specific expertise in financial services (particularly insurance) and life sciences (bio-engineering).

End to end

At Mirai Solutions, we strive to clearly understand the business problem at hand and to deliver high-end analytical solutions – making use of the technology that best suits your needs.

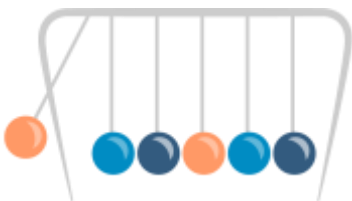
We help you from the very beginning to the very end: analyzing the data requirements needed to support your business, building the appropriate analytics, models and simulation framework, and critically interpreting the outcomes.



Reactive applications

Requirements for enterprise applications have changed in recent years. Users expect high responsiveness in a world where data volumes continuously grow and the service landscape becomes increasingly distributed.

At Mirai Solutions, we are committed to building state-of-the-art reactive solutions based on the world's leading *Typesafe Reactive Platform* (Play, Akka, Scala, Spark). This provides a resilient, event-driven foundation for solutions that can be scaled effortlessly to multicore and cloud architectures.



Mirai Solutions and R

Mirai Solutions has extensive experience in building generic risk management platforms using R. We believe that R is the correct choice for data analytics in the banking and insurance industry for a range of reasons.

R provides a rich set of utilities for package building, installation and management, and useful functionalities for modularization and deployment.

R package versioning and metadata naturally define dependencies between packages. This allows the linking of R package versions with the VCS revision of the underlying code, which is a key ingredient in achieving traceability and auditability.

R is integrated with a wide variety of DBMSs, technologies, and file formats supported by several packages from the R community. Mirai Solutions has been instrumental in closing the gap for Excel file formats by developing and maintaining the widely used XLConnect package.

R in a nutshell

- Modular reusable packages
- Unit/regression testing at package level
- Efficient deployment process
- Dependency management
- Traceability and auditability
- Transparency
- Maintainability
- Extensive integration capabilities
- R community support and know-how

R provides many ways in which to speed up resource-intensive calculations with large amounts of data or heavy computational requirements.

R is integrated with a huge number of reporting tools, both dynamic and static.

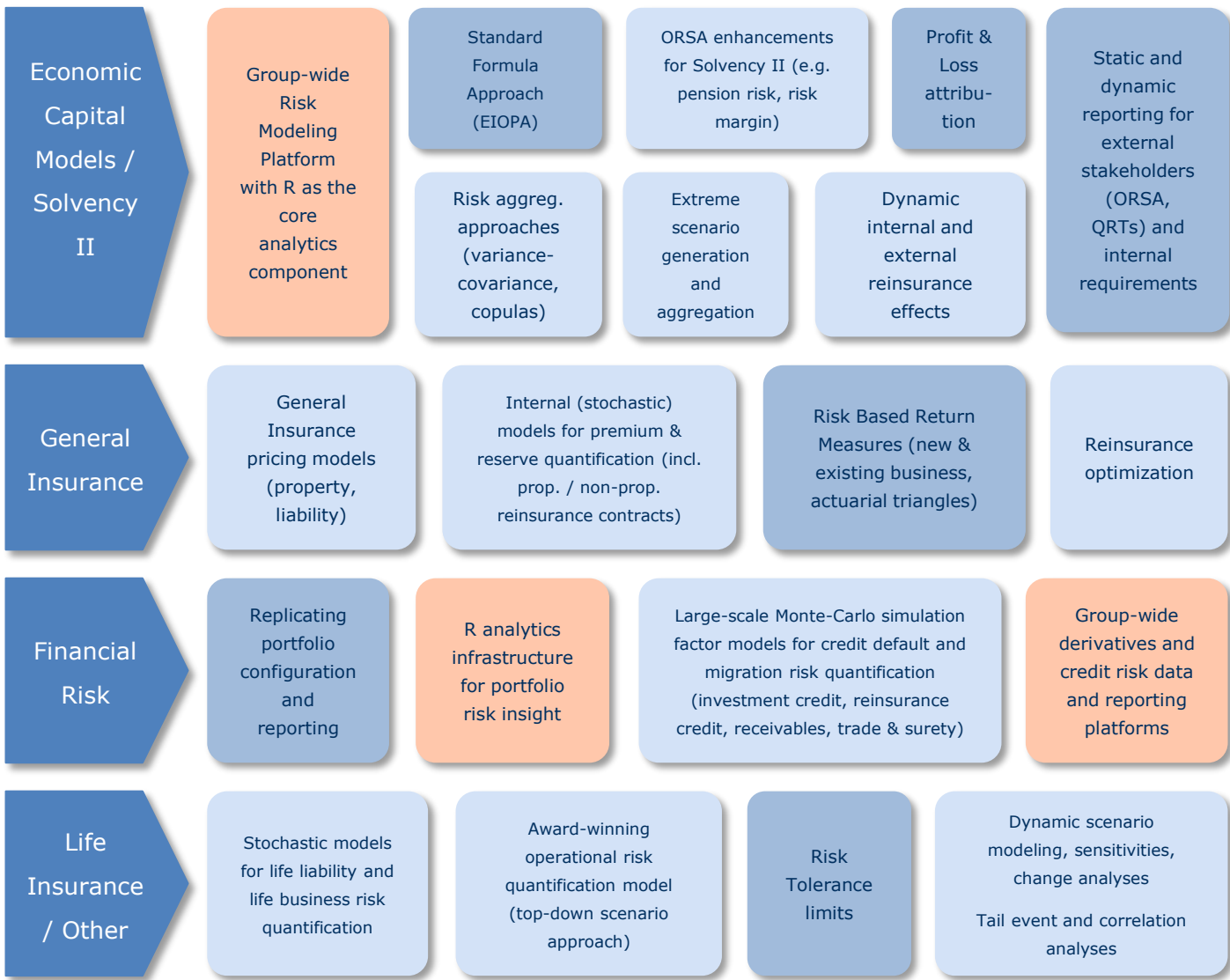
RStudio, along with Shiny, have greatly enhanced the user experience – and, used together, provide a real dynamic interaction which is much appreciated in the context of portfolio optimization, scenario analysis, etc.



Mirai Solutions has close connections within the R community. We are not only the proud developers of XLConnect, but also a benefactor of R and have acted as an RStudio contributor. We are happy to be actively involved within this network of engaged individuals and companies, including, in particular, the provider of the optimization package RNuOpt as well as TIBCO (Spotfire) with whom we have a long-standing partnership.

Mirai Solutions in Insurance

We have designed and implemented solutions for large multi-national banks and insurers, particularly in the following areas:



Do not hesitate to contact us!

Our agile team is happy to help you in your business analytics problems – big or small. Just get in touch to discuss options for a successful collaboration.

<https://github.com/miraisolutions>

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