

Solutions for Life

Risk and actuarial transformation

Modular. Flexible. Integrated. Powerful.

Solutions for Life

Solutions for Life is a comprehensive, integrated portfolio of software tools and consulting services that provide cutting-edge solutions across all areas of the risk reporting process. They are designed to work together or individually within your existing eco-system and can either replace entire processes or just individual sub-optimal elements.

Broken processes not delivering

Demanding regulatory reporting timescales and governance requirements, cost pressures and new technologies are forcing insurers to work smarter and achieve more. However, for many companies, analytics processes are not fit for purpose today, not least the future, with legacy systems and processes having evolved in an ad hoc fashion resulting in inefficiencies, lack of governance and exposure to process failure. The future will require analytics that underpin timely decision making and support the transformation of day-to-day business.

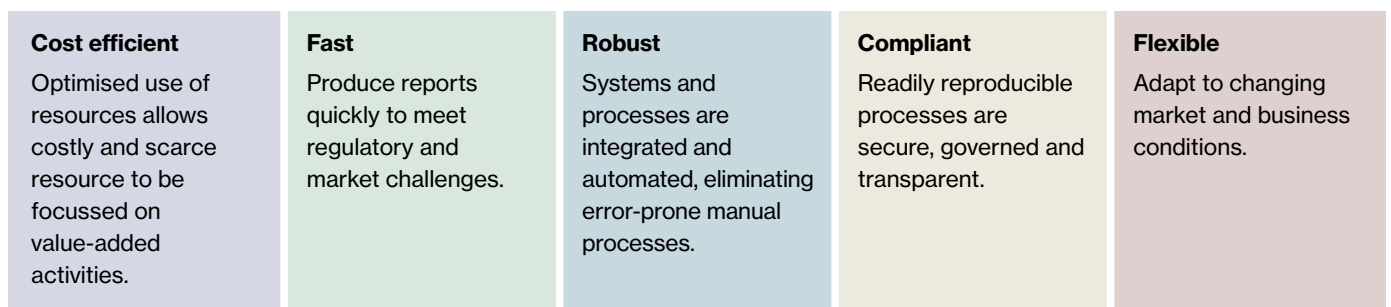
Life insurers need their business to be capital efficient, to produce increasing revenues whilst managing costs downwards, all whilst complying with current regulations and reporting requirements.

To support these ends, the actuarial function should be:

- Providing insightful analysis
- Using robust processes
- Cost efficient in its own right
- Able to respond quickly and adapt

However, in many cases a number of roadblocks are holding companies back, namely slow, inflexible, inefficient, unreliable processes with a focus on regulatory tick boxes.

Figure 1. **Moving actuarial systems to an efficiency beyond regulation**



Meeting your needs

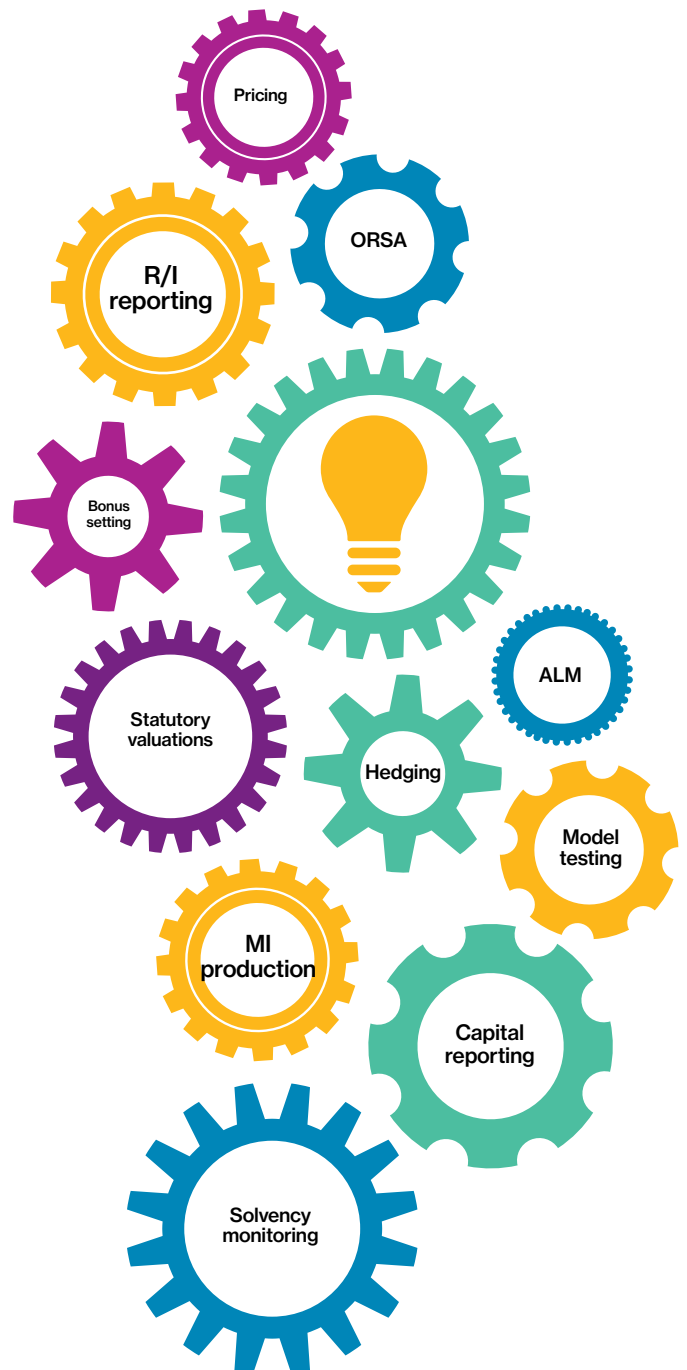
A pathway to overcoming these obstacles is not easy. A life insurer is a web of interconnected systems and processes. In order to understand where efficiencies can be realised, connections between these processes need to be considered. That way, an insurer is able to see which individual components need to be improved and give priority to the most important elements. By taking this approach, an insurer can make improvements incrementally in a consistent and coherent way, and achieve the ultimate goal of transforming the whole analytical landscape.

A compelling vision

Our vision is an integrated analytical systems architecture, building from where an insurer is today to transform and deliver solutions that address the whole risk and actuarial risk reporting process to enable them to deliver in a challenging marketplace. Solving the whole problem requires an end-to-end integrated approach, not just point solutions. However, this can be a daunting and challenging concept, with many projects failing to deliver on their promised benefits. To ensure success, software tools and processes should be integrated so that they work seamlessly together, and they should be hosted on appropriate infrastructure, underpinned by world-class services.

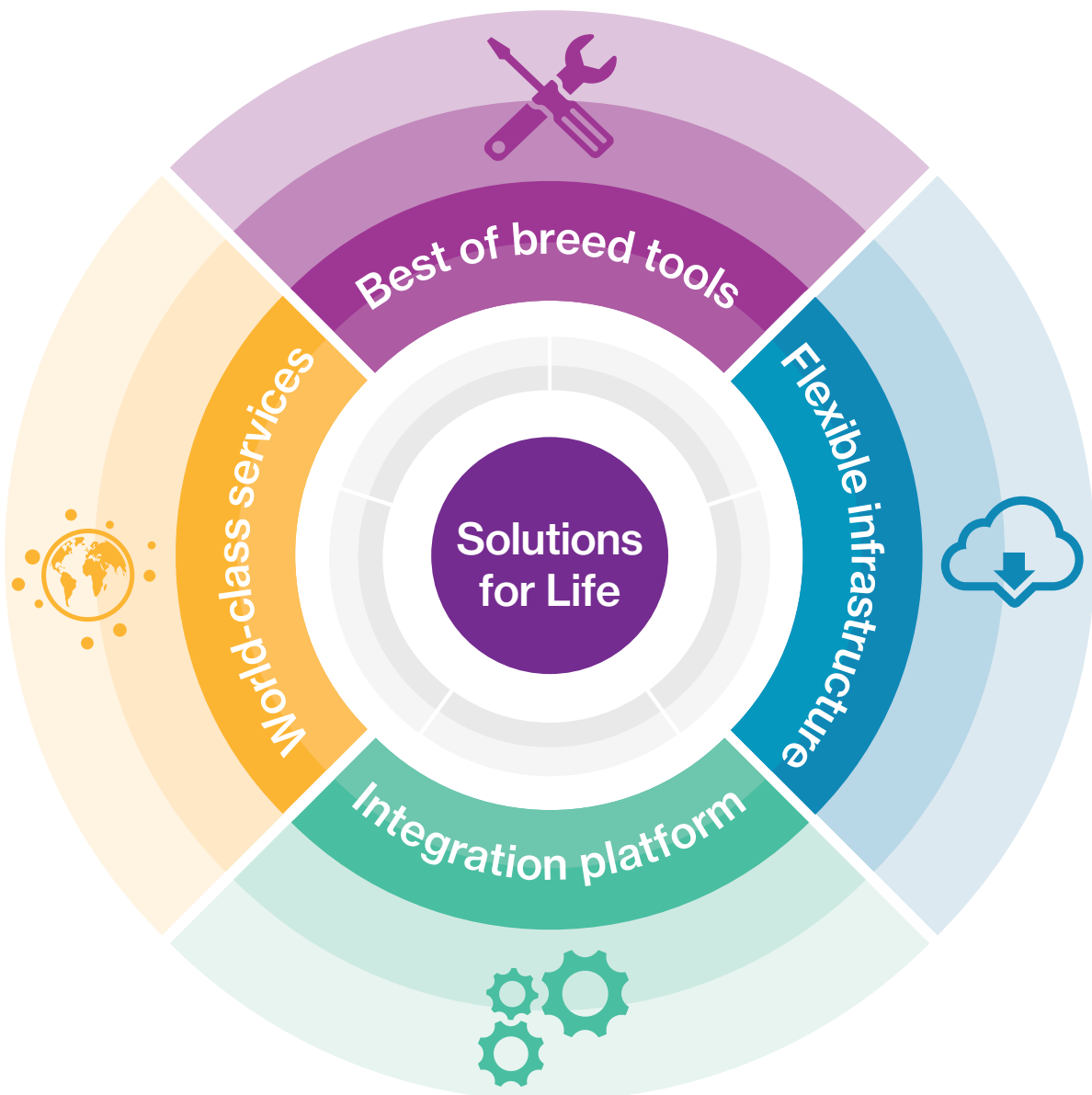
A complete solution available now

In response to these challenges, we have developed Solutions for Life, a comprehensive portfolio of integrated software, technology and consulting services that provide cutting-edge solutions across all areas of the risk reporting process. Individual elements are designed to work together or stand alone within existing eco-systems and so can either replace entire processes or just sub-optimal elements. It allows an organisation to save time and money, comply with regulatory demands and optimise legacy systems.



Solutions for Life is made up of four main components:

- Best of breed software tools
- Flexible infrastructure
- An integration and automation platform
- World-class advisory and support services

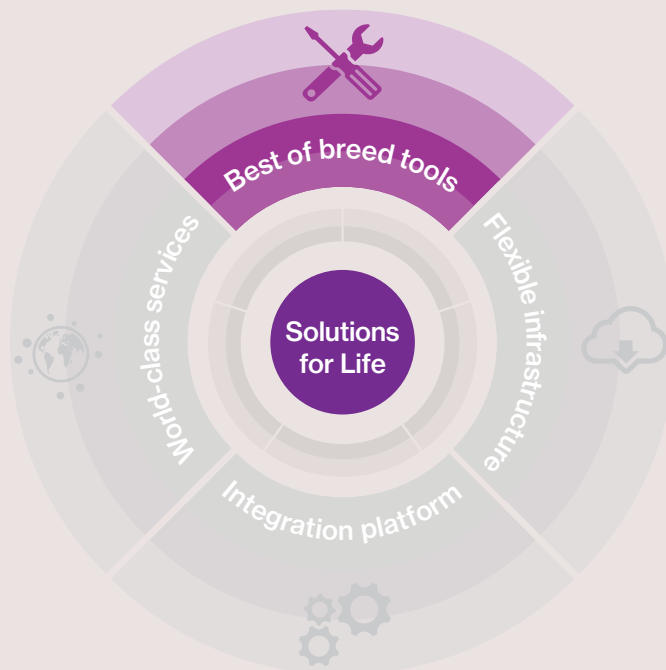


Our software vision is an integrated, automated and fully governed end-to-end risk reporting process.

Best of breed tools

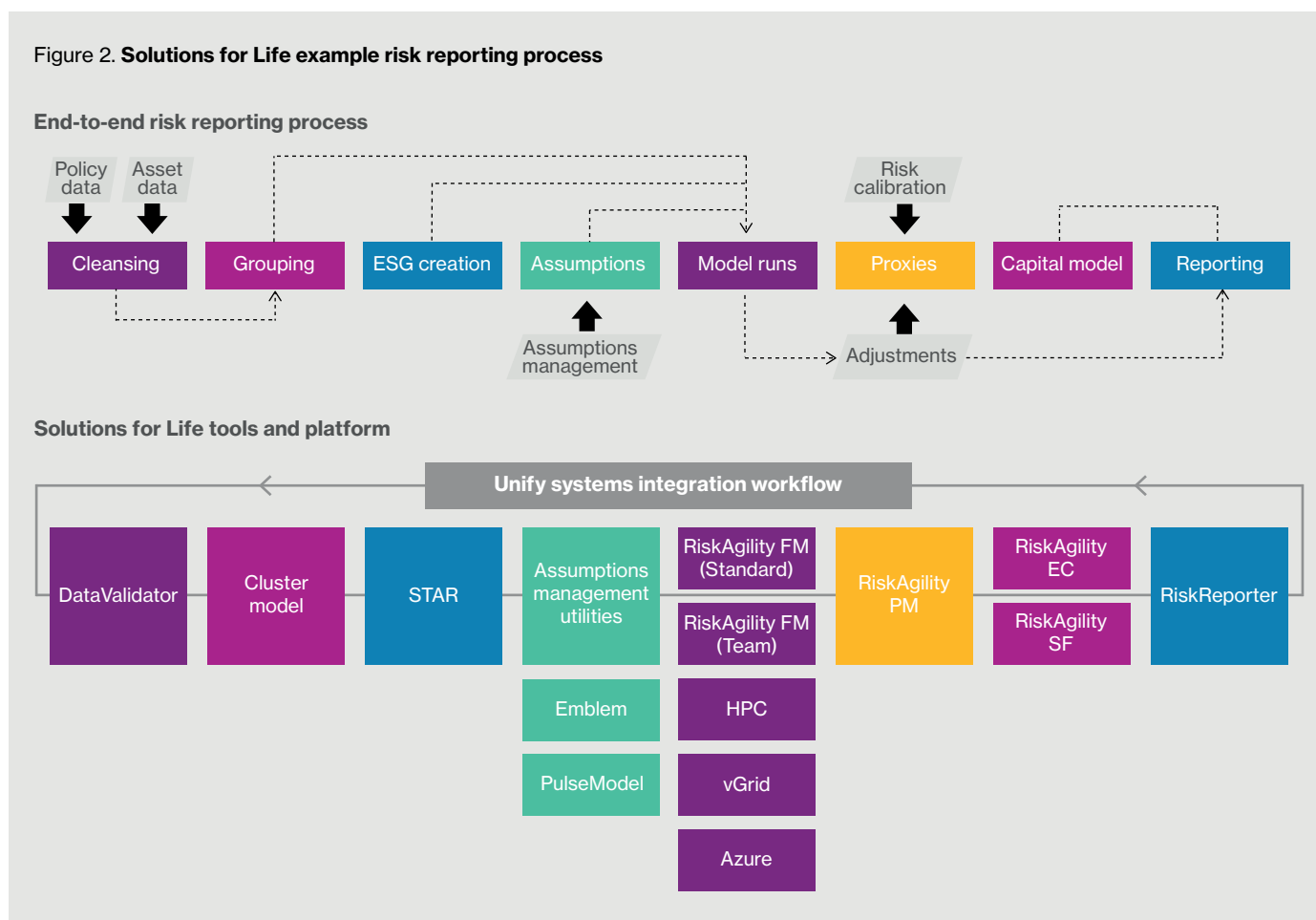
Flexibility is a key consideration when choosing the right software solution. It is important to build upon components already in place and only select new tools where existing systems are not fit for purpose or where gaps exist.

Solutions for Life draws upon market-leading tools specifically designed to support end-to-end risk reporting needs, using a modular system to facilitate a best of breed approach, enabling an organisation to leverage new capabilities whilst protecting the investment in existing products that have already been made.














An end-to-end solution

Our software vision is an integrated, automated and fully governed end-to-end risk reporting process. *Figure 2* outlines an example end-to-end risk reporting process with our best of breed software tools available at each stage.



The Solutions for Life software portfolio:

	DataValidator	Validates and cleanses data to prepare it for use in downstream financial modelling and reporting processes, providing easily auditable reports to bring a level of rigor and governance to your data processes
	STAR	Generates economic scenarios and asset returns under risk-neutral or real-world bases in a globally consistent framework
	Emblem	The industry standard for robust predictive modelling, delivered in a fast, highly efficient, user-friendly environment
	PulseModel	A stochastic multistate mortality/morbidity model informed by detailed medical research combined with expert medical opinions; allows firms to rate business based on various medical risk factors
	RiskAgility Financial Modeller (FM)	Enables life insurers to run financial models that accurately reflect their company's products and to run them in ways that are easily adapted to their business processes
	RiskAgility Proxy Modeller (PM)	Standardises and automates all stages of the proxy modelling process, reducing the manual effort in what can otherwise be a resource-intensive process
	RiskAgility Economic Capital Aggregator (EC)	Calculates and embeds flexible economic capital models in day-to-day risk management with greater speed and precision
	RiskAgility Standard Formula (SF)	Aggregates the solvency capital requirement using the EIOPA Solvency II standard formula for life, health and PC business across single entities and groups
	RiskReporter	Transforms raw data from multiple internal and external sources to produce validated reports and XBRL in the format required for regulatory reporting, such as Solvency II Pillar 3
	Unify	A systems integration workflow platform that helps automate and govern the end-to-end financial modelling and reporting process by incorporating a wide variety of software applications into user-defined workflows
	Customised applications	Applications and libraries to accelerate model implementation: country- and product-specific applications, ALMs and model pointing tools



Flexible infrastructure

Infrastructure options have evolved. The evolution started by moving from desktop to data centre, but now the data centre is moving into the cloud. The cloud delivers on-demand, flexible performance so that model runs and process times become a choice rather than a constraint. There are a number of infrastructure options an insurer can choose to complement our tools, and we are on hand to advise the right solution to suit your business needs. These options include:



Microsoft HPC

Access to a fixed, on-premise, high-performance computing (HPC) grid for distributing model calculations across calculation cores in a physical data centre. Software can scale processing demand to utilise all in-house grid computing infrastructure, efficiently handling many thousands of cores. Standard Microsoft technology means that companies can utilise their own IT support staff, with the necessary Windows software administration skills, to manage the data centre rather than putting the burden of managing the actuarial computing resources on the modelling teams. Windows HPC Server is simple to deploy and operate, and is as secure and stable as a single system. It automatically handles failed jobs without user intervention. If more power is required, additional capacity can be added with ease.



Microsoft Azure Cloud

Provides fully scalable, on-demand, access to compute resource in conjunction with a Microsoft Azure Cloud subscription. It enables in-house computing infrastructure to handle typical base workloads and then seamlessly expand available resources on demand to include cloud services. This option is both highly reliable and available with a 99.95% service-level agreement in which Microsoft takes care of the Windows Azure server infrastructure. It enables automatic operating system and service patching, built-in network load balancing and resiliency against hardware failure. Data are exchanged using Internet security protocols commonly used in banking and other sensitive online computing scenarios.

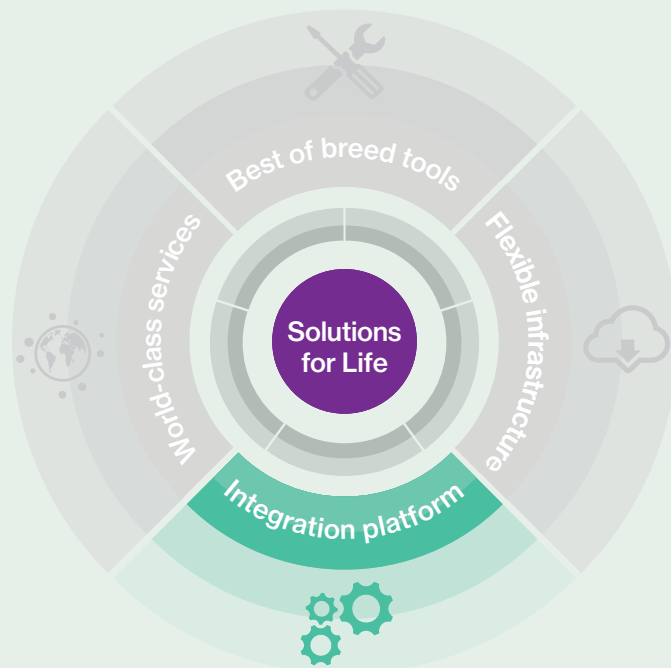


vGrid

For RiskAgilty FM users, vGrid provides a provision of fully scalable, on-demand access to compute resource, delivered as a fully outsourced service by Willis Towers Watson. This is a straightforward option for distributed processing as an alternative to purchasing and maintaining an on-premise computational grid or managing a Microsoft Azure account. This is a pay-as-you-go service with a single price per core/hour of use. There is no upfront investment, no on-premise hardware is needed and no additional annual maintenance or distributed licence fee. vGrid is reliable, secure and provides a user-friendly interface that makes compute usage transparent and easy to manage.

Integration platform

A complete solution requires a level of integration and automation to orchestrate the end-to-end reporting process and should be subject to mandatory levels of governance. Only then can genuine efficiencies and new capabilities be delivered to provide an assurance around analytics that can truly drive business decisions. In response to this issue, we developed Willis Towers Watson Unify.



Unify: A transformational solution

Unify is an enterprise risk and actuarial systems integration platform. Unify will enable your company to fundamentally change your financial modelling and reporting processes by implementing a comprehensive integration, automated process management and governance solution:

- **Integration.** The Unify framework can manage your company's end-to-end financial modelling and reporting processes and incorporate a wide variety of software applications into the workflow.
- **Automation.** With Unify, user-defined workflows can be used to fully automate an end-to-end modelling and reporting process, which can be scheduled in advance or executed at the press of a button.
- **Governance.** Role-based permissions can be defined to create a custom security and access framework. All models, inputs, outputs and processes are locked down and versioned within Unify's secure database, providing for robust audit trails and reproducibility of results.

Unify is a comprehensive integration, automated process management and governance solution.



World-class services

Our world-class consulting services inform our tools – meaning they continue to be leading edge and remain at the forefront of the insurance industry’s latest thinking. This same capability ensures that solutions can be bespoke to fit your needs.

Our services continue to expand as the business reacts to new challenges and opportunities in the market. This means that Solutions for Life moves beyond the traditional actuarial services, encompassing IT integration services and Software as a Service (SaaS) to bring you an innovative solution for your risk technology demands.



Our services



Software as a service (SaaS). An efficient, scalable software delivery model, providing easy access to Willis Towers Watson software as a robust and securely managed service 24/7. It makes use of the latest Azure and cloud technologies to deliver exceptional user experience without the burden associated with running sophisticated software solutions. Willis Towers Watson manages the infrastructure, software updates and patches, backup and disaster recovery, removing reliance on overstretched in-house IT or outsourcing agreements. Available as a subscription or pay-as-you-go consumption model.



Technology consulting services. A complete solution to the design, implementation and optimisation of risk management software provided by specialists, not IT generalists.



Actuarial consultancy. A global community with the strategic and analytical skills to solve practical business problems, applying the latest techniques and software solutions to help you measure and manage risk and capital, grow revenue and create a competitive advantage.



Technology support services. Willis Towers Watson’s global IT unit is dedicated solely to specialised insurance risk solutions rather than general IT. Tied directly into Willis Towers Watson software development and linked into Willis Towers Watson actuarial consulting, our experts understand the actuarial business, risk software and IT. They are able to deliver the skills to address the specific issues required to manage insurance risk software, implementing unique solutions by leveraging technology appropriate to meet your needs.



Tailored hosted solutions. An expansion on SaaS where client data and models are also hosted at the Willis Towers Watson data centre. A range of tailored solutions are available to meet individual needs, designed to completely remove the reliance on in-house IT, with the same benefits of Willis Towers Watson managed infrastructure, software updates and patches, backup and disaster recovery.

Solutions for Life – transforming your business

By taking a holistic approach through four main components – best of breed tools, flexible infrastructure, integration platform and world-class services – Solutions for Life provides an answer to the full analytics delivery problem. It opens up possibilities to a very different future, a future where models and processes work seamlessly as an enabler of analytics, driving better business decisions where resources are freed up to think, analyse and act in a more efficient and effective way.

The Willis Towers Watson difference

Solutions for Life is developed, maintained and supported by Willis Towers Watson, a leading global professional services company with expertise in risk, financial management, software and information technology.

With our combination of software and actuarial expertise, we are uniquely qualified to deliver a fully integrated business technology solution that will satisfy your company's needs for best practice risk and financial modelling, reporting and management.

Our consultants are active in actuarial societies around the world and have worked extensively with leading insurers to provide pricing, financial reporting and modelling advisory services.

Our technology consulting services staff can guide you in determining a proper configuration for your company's financial modelling and reporting compute environment. Let our experts work with your IT department to make deployment a smooth, easy process.

For more information

Visit our microsite solutionsforlife.willistowerswatson.com

Read our blog willistowerswatson.com/solutions-for-life-insights

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About Willis Towers Watson

Willis Towers Watson (NASDAQ: WLTW) is a leading global advisory, broking and solutions company that helps clients around the world turn risk into a path for growth. With roots dating to 1828, Willis Towers Watson has 40,000 employees serving more than 140 countries. We design and deliver solutions that manage risk, optimise benefits, cultivate talent, and expand the power of capital to protect and strengthen institutions and individuals. Our unique perspective allows us to see the critical intersections between talent, assets and ideas – the dynamic formula that drives business performance. Together, we unlock potential. Learn more at willistowerswatson.com.

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