

 vGrid

On-demand, scalable power to accelerate financial modelling





An efficient, scalable Software as a Service virtual grid solution for financial modelling challenges

vGrid places power directly in the hands of insurers — enabling them to scale compute resource to the changing demands of their business without the need to self-manage and maintain complex IT infrastructure.

vGrid is a flexible computational grid solution provided through a managed service to harness the power of our leading financial modelling software, RiskAgility Financial Modeller (FM), which enables life insurers to develop and run financial models to manage risk and safeguard solvency.

Managing large compute capacity can be expensive and complex, especially when demand is variable. vGrid simply delivers with no upfront costs; you only pay for what you use.

vGrid and Solutions for Life

vGrid is part of our Solutions for Life portfolio of integrated software, technology and consulting services — a holistic solution to managing the end-to-end risk reporting process.

For more information on Solutions for Life, turn to page 7 of this brochure or visit solutionsforlife.willistowerswatson.com.

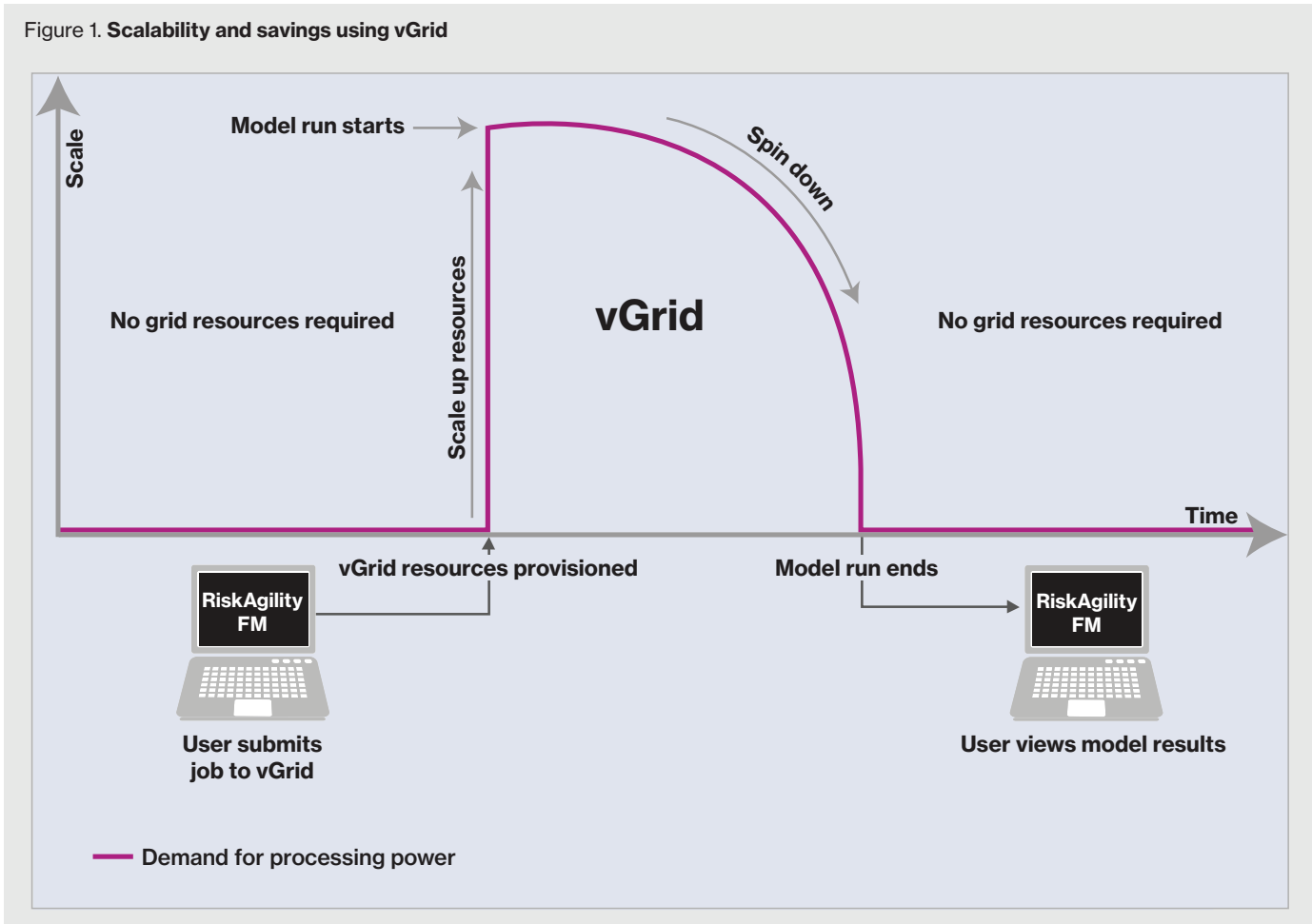
Why vGrid?

vGrid provides a cost-efficient, scalable, no-nonsense option for distributed processing for RiskAgility FM users, those considering alternate grid solutions as part of migration from our legacy financial modelling software, MoSes, or those simply exploring different options to update or renew their existing hardware. With vGrid you are able to gain the extra compute power you need without the challenge of purchasing, implementing and maintaining an on-premise computational grid. With a 24/7 managed infrastructure and expert help on hand when you need it, you can be confident of a reliable and future-proof grid service. Plus, you only pay for what you use, making it a cost-efficient solution to your processing needs.

Key benefits of vGrid

- Fully integrated with Willis Towers Watson's RiskAgility FM
- Scalable and available on demand
- Built-in disaster recovery
- Reduced complexity and cost associated with hardware and ongoing maintenance
- Secure and compliant
- Controlled by end users with ability to size grid pools to your unique requirements
- 24/7 support service from our software experts

Figure 1. Scalability and savings using vGrid



Cost-effective flexibility

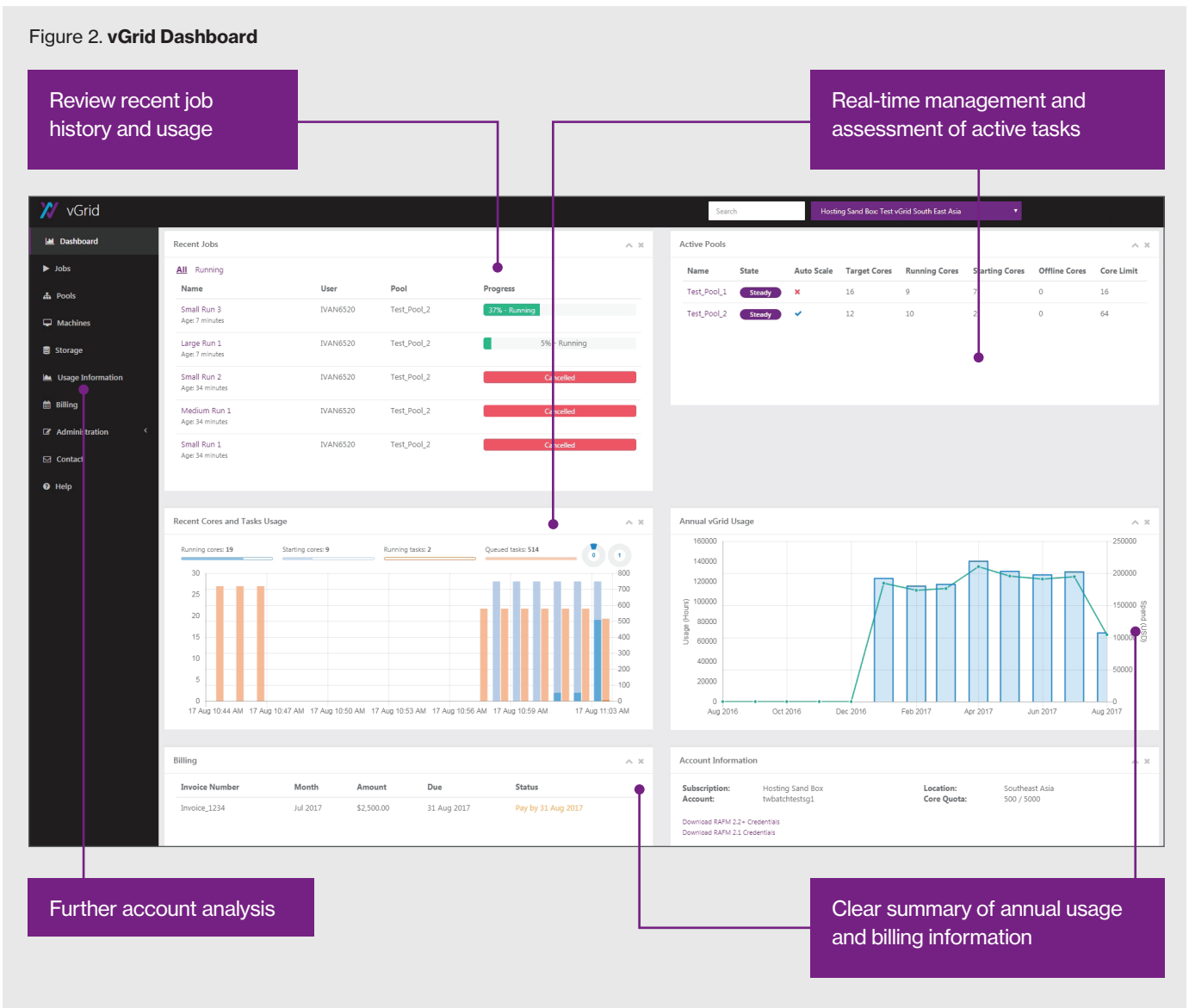
vGrid allows users to control the power they need to run models in RiskAgility FM. More resources can be drawn upon during exceptional demand periods (for example, during quarter ends) and then reduced when demand normalises (Figure 1). This gives insurers the flexibility to increase their processing power as and when they need it, without the high ongoing costs when they don't.

Availability

vGrid allows for a high degree of elasticity within a robust and secure fully managed service, available and supported 24 hours a day, seven days a week by our experts. It can replace an existing grid solution, or it can run in parallel to help you manage workloads more effectively during peak times and avoid competing needs from the business with minimal user intervention.



Figure 2. vGrid Dashboard



Greater transparency and control

Through the vGrid dashboard, users can review a summary of pricing and usage information (Figure 2), which can then be viewed in more detail on separate feature pages (Figures 3 and 4). This helps them to review historical activity to enhance planning efforts and ensure their computational grid is fully optimised. The dynamic provisioning capability allows RiskAgility FM to control the scale of the computational grid during a run to ensure unused compute resources are turned off to better manage costs.

vGrid is offered through a subscriber service with a simple integration process to connect RiskAgility FM quickly and efficiently. Separate user roles permit oversight of use so procurement, management and modelling teams can control operation effectively.



Experience your analytics and modelling software in the cloud for maximum business results

vPlace is our Software as a Service (SaaS) online analytical and modelling workspace. It overcomes limitations of legacy systems to provide an alternate IT environment to host, manage and run your Willis Towers Watson analytical software and supplementary programs – optimising software performance, reducing IT complexity and improving operational efficiency. Combined with vGrid, it provides the ultimate flexible, efficient and cost-effective solution to meet your model processing needs. For more information on vPlace, visit willistowerswatson.com/vPlace.

Figure 3. vGrid Jobs

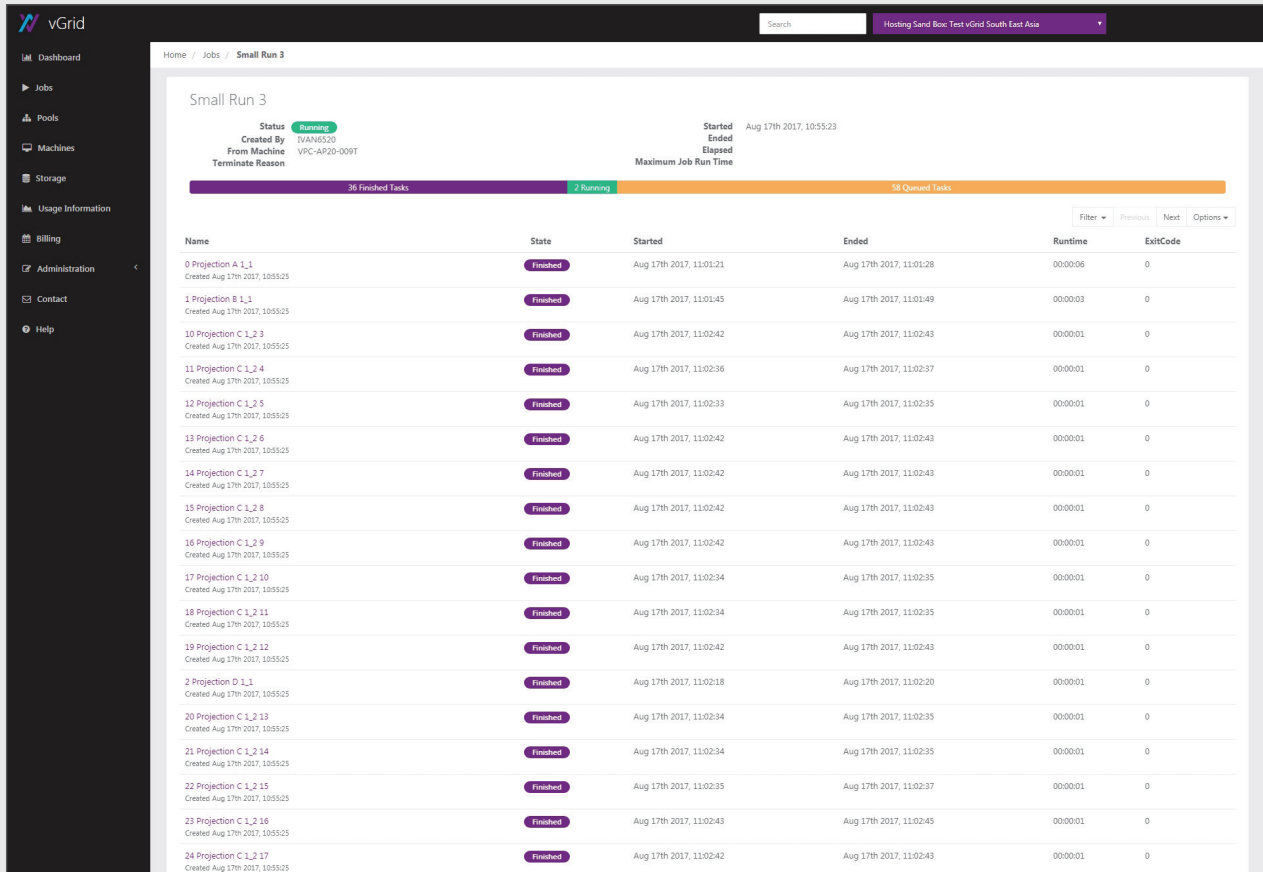
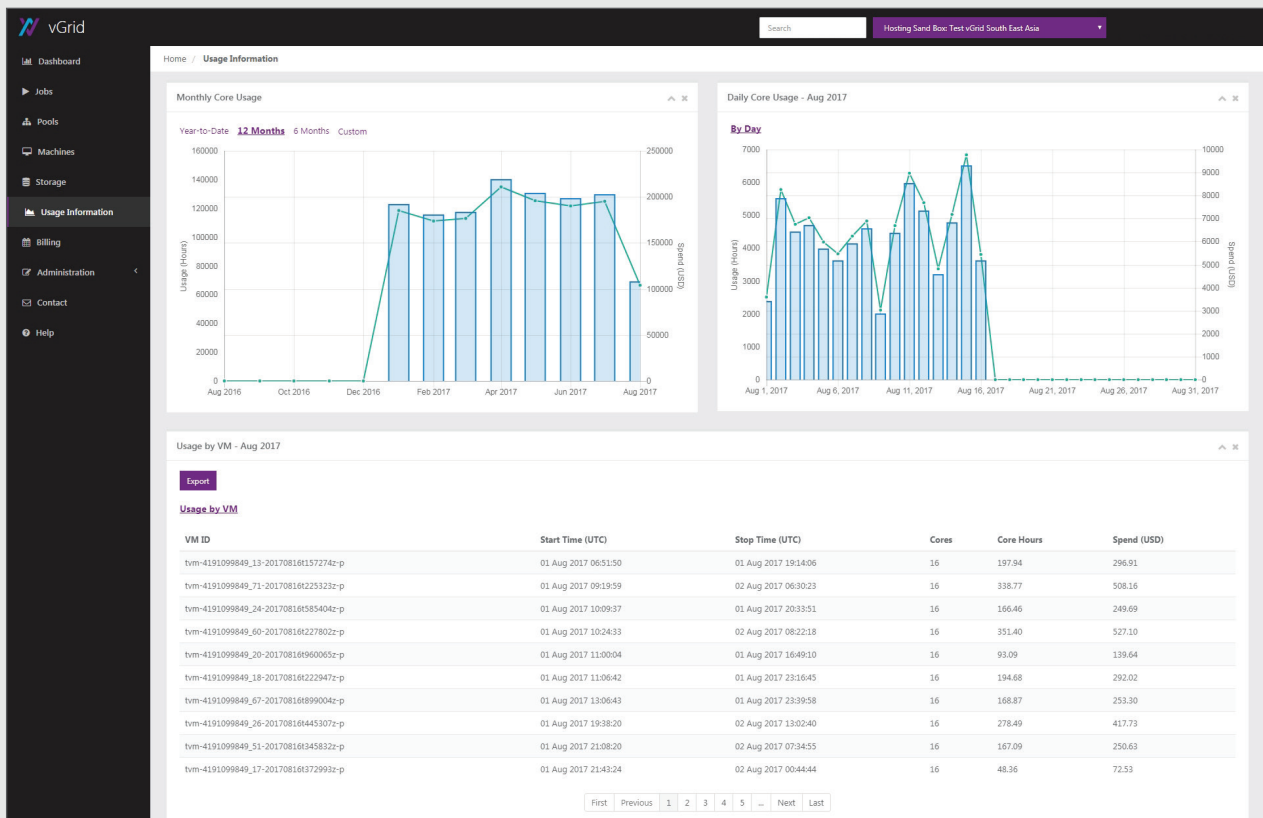


Figure 4. vGrid Usage Information



vGrid in practice

A combination of regulatory change and internal pressure to ever increase business performance has triggered many of our clients to assess their current and future computational requirements. Having identified vGrid as a solution, they are already benefitting from the power of vGrid.

Future solution

A European insurer that was an existing user of RiskAgility FM had already implemented an on-premise 96 core HPC grid. However, in order to achieve the run times needed to meet required demand, it realised it would need to have a grid over five times the size. This would have required heavy investment in the insurer's current on-premise system. vGrid provided the firm with a perfect solution: a flexible system that can achieve shorter run times at a lower cost, while still utilising its current IT infrastructure, making the most of its existing investment. Having felt the benefits of vGrid, the firm is looking into future options to retire its current on-premise system and move fully into vGrid.

27% cost saving

The cost efficiencies of vGrid are best demonstrated by an independent assessment we carried out in conjunction with another insurance industry client. Based on the client's current usage throughout a prior calendar year, we calculated a 27% cost saving by switching to vGrid versus

running and maintaining its current on-premise system (Figure 5). The solution also provided 33% more grid at peak use times; therefore timing of runs could be reduced, thus adding further cost reduction.

Ultimate model efficiency

Further efficiencies of vGrid were realised during an outsourced actuarial consulting project, where we combined vGrid with our systems integration platform, Unify, to automate the modelling process via user-defined workflows. Using this combination, our team was able to achieve 69% improvement in the overall end-to-end reporting timetable.

Other benefits reported were:

- Easy setup
- Removal of dead time – model runs start as soon as inputs are available, even if overnight
- No need to maintain costly and inefficient grids
- No grid conflict with other users holding up important runs

Figure 5. Client scenario: annual cost of running vGrid versus on-premise

Real client on-premise example with a 96 core on-premise HPC grid

Cost item	Annual expense
Total software amount including distributed computation licensing	€85,000
Hardware	€50,000
Disaster recovery	€40,000
Data centre general cost	€25,000
Total cost of ownership	€200,000

vGrid scenario delivering more scale when needed across a variable use pattern

Month	Grid scale (cores)
January	128
February	32
March	96
April	128
May	32
June	96
July	128
August	32
September	96
October	128
November	32
December	96
Total annual spend	€145,536

A holistic approach to the wider risk reporting process

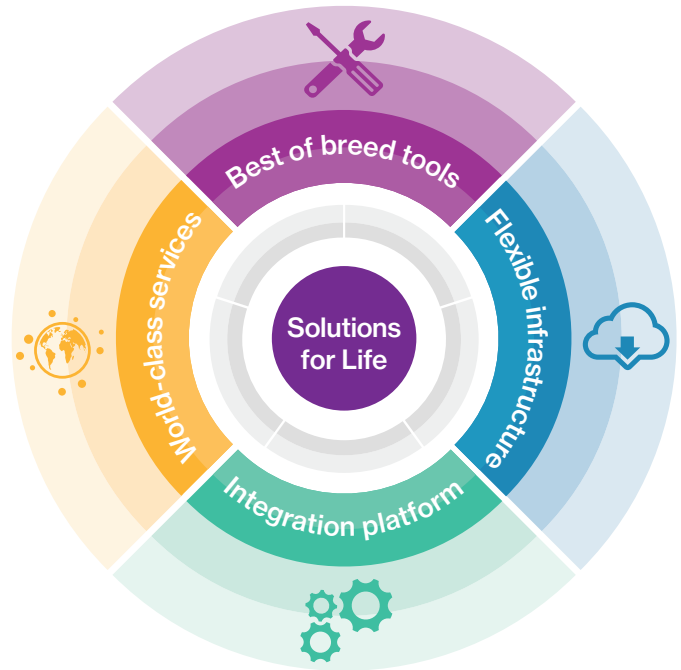
Solutions for Life

Solutions for Life is a portfolio of integrated software, technology and consulting services for life insurers that ensures your risk and actuarial processes adapt to meet changing business requirements – enabling you to save time and money, comply with regulatory demands and optimise legacy systems.

It is made up of four main components:

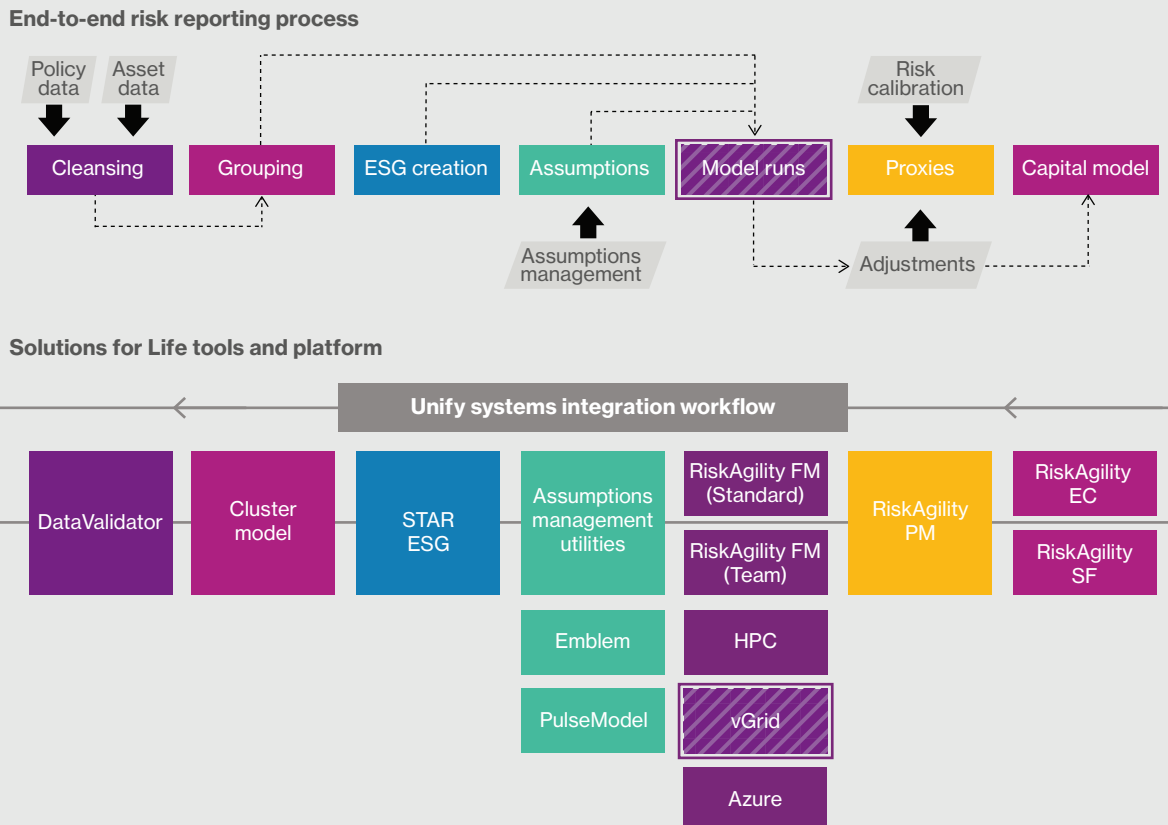
- Best of breed software tools
- Flexible infrastructure
- Integration capability
- World-class advisory and support services

Solutions for Life breaks down barriers, solves problems and provides confidence through accuracy, performance and control, by employing industry thought leadership and advanced technology. For more information, visit solutionsforlife.willistowerswatson.com.



Solutions for Life end-to-end risk reporting process

Figure 6. How vGrid fits within the Solutions for Life example end-to-end risk reporting process



For more information

Visit: willistowerswatson.com/vgrid

Contact: software.solutions@willistowerswatson.com

Follow us on Twitter: [@WTW_ins](https://twitter.com/WTW_ins)



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, optimize 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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