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Adrian is a qualified actuary with diverse experience of applying risk modelling in the insurance market sector. He has worked at executive level in both non-life insurance as well as life insurance, and in both the UK and South Africa. Prior to co-founding Dynamo Analytics, Adrian was the chief actuary at Argo International, a senior manager at Deloitte and headed the reserving function for Swiss Re Africa.

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Hannes is a qualified actuary with a strong technology and analytical background. He has a broad range of experience in the areas of dynamic financial modelling and the development of risk management and insurance underwriting software tools. Prior to co-founding Dynamo Analytics, Hannes was a consultant in the “Risk Consulting and Software” division of Towers Watson and a pricing actuary at Zurich Global Corporate insurance company in London.

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**ANDREW TINKLER BSc**

Andrew Tinkler is a database specialist and software developer with over 25 years’ experience in building business software solutions across a range of industries, most notably financial services. He led the development of the very first Basel Capital Requirement calculator for an international investment bank.

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# Standard Formula Application

## Part of the DynamIT modular framework

**DynamIT** is a cutting edge, modular software platform which streamlines the actuarial and financial processes within your organisation. In addition to reducing the resource requirements to run your processes, it provides a wealth of analytics and management information to better understand and steer your business.

The platform consists of a series of modular applications, which operate either on a stand-alone basis or through seamless integration with each other. Due to the advanced technology supporting the platform, it is able to link into your data systems to populate the applications and can push calculated results back to your data stores.

The “Standard Formula” module in DynamIT calculates the Solvency II standard formula based on the data you use to run your business. It provides a robust environment for the calculations, stores the results in a single location, and enables easy reporting and detailed analytics that are not possible in a spreadsheet environment.

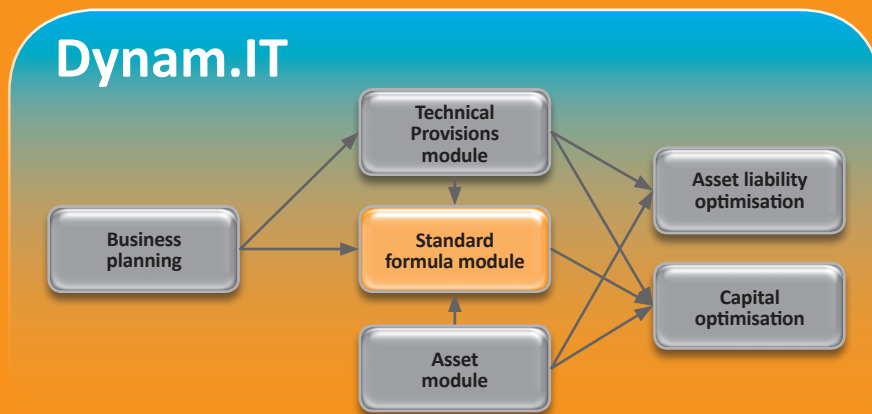
# The Dynam.IT framework

The applications within the DynamIT framework are modules aimed at simplifying logistically difficult financial and actuarial processes, and at giving organisations concrete information to make better decisions.

All reporting and analysis can be customised to suit your requirements, and can integrate with your internal business analytics.

The unique over-arching platform design means that we can perform rapid prototyping of new applications and quick updates after updated legislation or new client requirements.

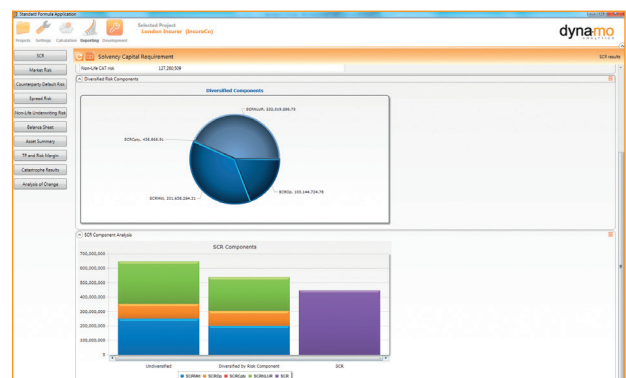
Our applications can integrate tightly into your enterprise architecture to enable rapid and automatic data population of the modules, and can push calculated results into your data stores or data warehouses. All modules are tightly integrated within the DynamIT platform, enabling data to flow between the applications.



## The Standard Formula Application

Our standard formula application provides an environment for you to calculate the Solvency II SCR in a robust, accurate and user-friendly manner. It provides detailed management information reports and allows comparisons between valuations to give insight into the drivers of regulatory capital.

- By importing the data used to run your business, the application can calculate the SCR on different bases, and perform projections of the capital requirement at different points in time in the future.
- Where you are using other Dynam.IT applications (such as the Technical Provisions application), information is automatically shared between them to avoid having to copy or store data multiple times. Alternatively the application can link into your data hubs or business applications, or data can be imported by completing a pre-defined excel template.
- All input and calculation files are stored within the robust SQL database for ease of comparison and analytical investigations.
- The application removes data duplication by feeding the relevant exposure information into the various components required. For example, once premium cashflows are imported, the application would use that information to calculate both the premium risk as well as all the relevant catastrophe risk components which use the same information.
- The application has built-in analytics and reporting tools allowing you to dig into the key drivers of the capital requirements for the business. All outputs can also be exported into Excel for further manipulations. We can customise reports so that they are tailored to what you want to see and to what will be most beneficial to your decision making process.
- There is the capability to perform stresses and scenarios on different components of the standard formula e.g. allowing you to see how a change in reinsurer credit has an impact on the Counterparty Risk default component and the overall SCR.
- There are substantial synergies when the application is integrated with other applications in the Dynam.IT framework or with user's internal data warehouses. For example, data is automatically shared between the Technical Provisions Application and the Standard Formula Application, meaning there is no re-keying of data, or cutting & pasting. This makes getting information into the applications very easy – whether it be calculating exposures by territory for the Cat Risk component, or calculating the Risk Margin to complete the Technical Provisions.



# Reporting and Analytics

Some examples of the reporting and analytics capabilities of the Standard Formula module of the Dynam.IT framework are given below. All reports are also customisable, so additional management information can be produced in line with your personal requirements.

## Analysis of Change

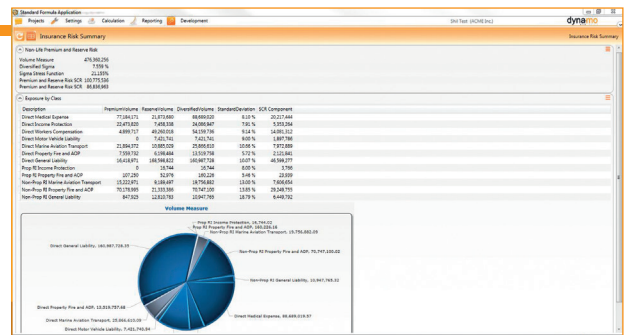
The Analysis of Change is a very powerful tool that is often computationally complex to perform accurately and concisely in a spreadsheet environment. The Dynam.IT analysis will highlight to management the key drivers of the change in Solvency II capital requirements between any two submissions.

The report will show drivers of capital at a component level e.g. Underwriting Risk or Market Risk. Then, it is just a case of clicking any component to drill down into the details to identify the underlying drivers of change e.g. when investigating movements in Market Risk, management can easily assess if it is a change in bond duration or investment currency that is causing the key difference between submissions.



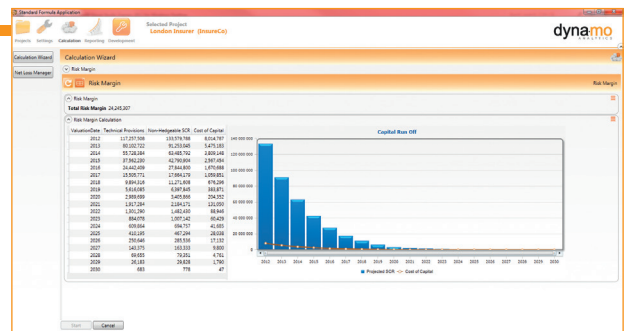
## Reporting capability

Each SCR component has a report which summarises the key information and provides an intuitive graphical representation of the output. For example, the Catastrophe Risk Module summarises the exposure, specified losses and gross and net SCRs by peril and by region. It also provides a graphic of the contributors to the net SCR by peril to get an instant snapshot of exactly where the key exposures lie. Likewise the Insurance Risk module shows the breakdown of premium risk, reserve risk, diversification and contribution to SCR by Solvency II line of business.



## Risk Margin

The Risk Margin is integrated as part of the calculation process in this application. The report provides a graphical representation of the capital run-off. The Standard Formula Application integrates with our Technical Provisions application allowing the Risk Margin to be calculated once and shared with all other calculation components. Changes to the Technical Provisions are automatically updated in the Standard Formula, after which the Risk Margin is automatically calculated to complete the Technical Provisions. This process is very simple, robust, and saves you time.



Apart from the analyses highlighted above, the application also allows easy projection of the Standard Formula from any time period to any other time period, granular breakdowns of the calculation in each area and stress & scenario testing of the results to changes in the assumptions.

# Demonstration

Contact us for a demonstration of the DynamIT framework and the Standard Formula application. Our team will take you through the key benefits, show you how it can be integrated into your operations and talk you through a case study of how we have implemented the framework at a Managing Agency