Key Topic Lecture Series

A focused lecture series on implementing effective models & reports for finance professionals

The Key Topic Lectures Series is a set of 1 hour, ½-day and full-day lectures. The sessions that make up this series focus on key subjects in the areas of design & construction of models for financial forecasting & valuation and reports for financial analysis.

The lectures are designed to provide thought-provoking sessions which are relevant to those in finance, commerce & public practise, which demonstrate & showcase sound solutions to common issues.

The series of lectures is available both publicly and also for private training. It is ideal as ongoing training in client organisations for students who have completed our main course in this area (the five-day Financial Analysis Certificate), and for inclusion in industry & corporate conferences.

Modes of Study

- In class mode: sessions of ½-day,1 day & 2 day duration, public and private
- Public offerings are made for full-day sessions two to three times a year in major capitals.
- In-house, it may be offered as one-off training; or as a series designed to engage and inspire the employee in a process of improvement over a period of time; and it is ideally suited to inclusion as part of corporate and industry conferences.
- These lectures have been presented successfully & with exceptional feedback annually at the Chartered Accountants ANZ's Business Forum programs throughout Australia over the past eight years. Those sessions are open to non-members as well as members.

Key Outcomes

- Attendees gain advanced skills in key subject areas;
- Sessions are designed to inspire attendees to improve their skills, and to research new techniques;
- A manageable set of training that can be integrated into staff calendars, encouraging ongoing learning;
- Continuing professional education hours for accountants & other professionals.

Each Session Delivers

- A self-contained presentation, with specific training objectives which are met within the allowed time;
- Effective solutions that address key issues in model or report design;
- A demonstration of sound technique which should be used in working with Excel;
- Insights into sound methodologies & approaches to problem-solving;
- A demonstration of methodologies that lead to simpler & more transparent solutions;
- A set of companion materials with step-by-step instructions and fully-worked samples;
- Some technical depth through introducing the use of key functions, formulas & tools ; and
- Encouragement to the attendee to explore further the key areas of knowledge addressed, through revision of the provided materials & introducing them to effective & efficient methods of solving common problems.

Who Benefits

- Financial modellers & those building valuation & forecasting models;
- Business Analysts responsible for forecasting & performance analysis;
- Accountants, finance managers & financial controllers budgeting & analysing business performance;
- Fund accountants & managers in equity & property funds;
- Financial advisers, public accountants, management consultants;
- Procurement, project planning & logistical staff responsible for financial & logistical planning;
- Managers responsible for their own analysis & forecasting; and
- Anyone who uses Excel to perform their role, looking to improve their productivity & accuracy.

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Benefits for the Employer

- Demonstrates & proposes the key elements of an effective modelling & analysis methodology;
- All models & reports should be clearly designed with a focus on the next person in the chain, be it a manager, a client, an auditor or financier, so that they will be able to quickly understand the model's or report's workings and test its assumptions. This series demonstrates how to achieve these goals;
- This lecture series canvasses key issues in usability, reducing complexity, increasing flexibility, adding sensitivity analysis, improving maintenance & simplifying usage of models & analytical workbooks.
- It offers opportunities to provide ongoing training designed to challenge employees to review their approach to model & report building.

New Lectures

- New lectures are added regularly, responding to changes in Excel functionality and growing the subject areas to meet client demand.

- Where a suitable design can be agreed that will achieve appropriate training outcomes of a high professional standard that are in tune with the program, we are happy to add lectures to the series to address specific training needs for a client.

Course Materials

- The course materials vary depending upon the subject matter & technical references required, but each lecture's manual includes between 20 & 40 pages of material per ½-day of instruction.

- A full set of blank & worked sample workbooks as well as a number of reference documents are available for download online. For these sessions, the worked versions include versions saved as at the end of each task in the notes.

Excel Version

- The course materials are fully compatible with all versions of Excel from Excel 2010. Version specific instructions are given where these vary between versions.

- Public courses are conducted using Excel 2010, often with Excel 2013 and 2016 available. On student PCs, any version from Excel 2010 onwards may be used, but for lectures aimed at new features in Excel 2013 and 2016, a later version is required.

- Some keyboard shortcuts taught are not available in the Macintosh versions of Excel (2011, 2016) but all formulas and techniques are applicable to the Macintosh, although some of the productivity tips are difficult to implement on that platform.

Public Courses

Public offerings of the Key Topic Lecture Series are available in Sydney, Melbourne, Brisbane, Adelaide & Perth. For details, visit our web site (www.clarksonitt.com/calendar) or call +61 (0) 417-777-750.

Private Courses

In-house offerings of the Key Topic Lecture Series can be arranged anywhere in Australia and we can assist with the hire of suitable training facilities where they are not available in-house.

We would recommend consideration of an ongoing series, and have tried to set pricing to make that a more attractive option than just a one-off engagement.

Requirements for facilities are discussed on our web site. For a quotation or to discuss your particular needs, call +61 (0) 417-777-750.

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Pros and cons of short programs

- As a training organisation, we have a reputation for delivering measurable outcomes in terms of changed approach & confidence, we therefore strongly favour the more immersive format of our longer courses, such as the Financial Analysis Certificate. Those courses allow us the time to cover a vast amount of important technical knowledge thoroughly as well as make the case for students to adopt the alternative techniques & methodologies we present.

- In the shorter format, such as this series, we can't hope to achieve all the things done in a longer course, nor do we have the luxury of time to drill participants in techniques in the hope of inculcating better habits. Neither do we have the time to deepen their technical knowledge right across the board. But we do have the opportunity to put a case, present sample solutions & demonstrate key techniques & approaches to solving the problems addressed.

- Even very experienced attendees at our sessions are surprised by the powerful yet simple approaches which are demonstrated & presented. Feedback indicates, that although we only get to show a small amount of what is on offer at our longer courses, that attendees find the training very worthwhile.

- We understand that not every potential student has either the available time or resources to commit to the longer form of training, but they do have a need to complete suitable training to address their CPE commitments, stay up to date & improve the work they do in this competitive environment. So we have addressed that by providing a tightly-structured series that focuses on delivering value for the time invested & we aim to showcase fundamentally important techniques and sound approaches to model and analytical report building.

About the Course Author and Lead Presenter

Following an early career in both public and commercial accounting, James Clarkson has more than twenty-five years' experience as a presenter of professional programs and more than thirty consulting & model building for corporate clients.

He has gained wide experience in model & analytical report design & development and also has wide experience in application development using Microsoft Office (especially Excel), Visual Basic & Visual Basic for Applications (VBA).

He is an outstanding educator, demonstrating the ability to clearly explain difficult and technical subjects and consistently rates above 90% for satisfaction across a number of measures on student evaluations.

Currently Available Modules

The following table shows the current set of modules available in the series. The numbering system merely identifies each lecture & allows us to show the interdependencies, it does not indicate order for study.

#	Lecture Title	Standard	Duration	Pre-requisite
01	Function & Formula Fundamentals	Intermediate	½ day	-
02	Fundamentals of Model Design & Development in Excel	Intermediate	½ day	-
03	Streamlining Performance Reporting in Excel	Intermediate	½ day	-
04	Streamlining Performance Reporting (Short Version) [1]	Intermediate	½ day	-
05	Something Old, Something New…	All audiences	1 hr	-
06	Questions a CFO Should Ask	All audiences	1 hr	-
07	Formatting & Rounding to Simplify Reporting	Intermediate	1 hr	-
08	Advanced Analytic Formulas	Advanced	½ day	01 or FAC[2]
09	Charting Master Class	Intermediate	1 day	FAC[2] or Std Adv[3]
10	Implementing Complex Scenarios in Cash Flows	Advanced	½ day	02, 03, 04, or FAC[2]
11	Building More Effective Models with Less Complexity	Advanced	1 day	-
12	Formula Auditing & Error Tracing & Handling	Intermediate	½ day	-
13	Date Sensitive Forecasting & Reporting	Advanced	½ day	-
14	Making Practical Use of the Macro Recorder	Intermediate	½ day	-
15	Understanding & Managing Spreadsheet Risk	All audiences	1 hr	-
16	Building Workbooks with Style	Intermediate	½ day	-
17	PivotTable Fundamentals	Intermediate	½ day	-
18	PivotTable Reporting	Advanced	½ day	17 or FAC
19	New Features Put to Work	Intermediate	1 hr	-
20	Building a Dynamic Chart	Advanced	1 hr	03 or 04
21	Dashboarding in Excel, A Practical Example	Advanced	½ day	08 or 20
23	Understanding Modelling Risks and Implementing Internal Strategies to Mitigate	Intermediate	½ day	-
24	Introduction to BI Tools in Excel	Intermediate	1 day	
25	BI Tools in Excel and BI Desktop	Intermediate	2 days	
26	Dashboarding Model Sensitivity Results	Advanced	½ day	

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[1] Short Version allows inclusion of an extra 1-hour session into the same ½-day

[2] Those who have completed FAC have required knowledge

[3] *Std Adv* means a standard two-day advanced course from desktop trainer or equivalent knowledge

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Module 01:   Function & Formula Fundamentals   *½ day   Intermediate*

The core knowledge needed to effectively use formulas in Excel, removing complexity & redundancy is presented in this lecture. Many potential participants would assume that this course is beneath them & that they understand the subject area it covers. But most users cannot properly explain exactly how formulas & functions work in Excel; the order of precedence of operators; identify all operators; nor describe the data types and conversion rules. Typically, they cannot properly explain how conditional expressions operate; how arguments are passed & resolved in functions; nor how Excel resolves ambiguous references.

They might still be doing quite advanced work & working quite effectively with Excel, but this lack of key technical knowledge means that tasks are often over-complicated; too many steps are included in calculations; & formulas become needlessly redundant and complex.

This session is designed to correct those misconceptions, as a necessary step to building simpler, more effective formulas for forecasting & analysis. It is suitable for those who need to improve their technical knowledge & as a revision for those who want to focus on the finer points. Participants should be familiar with Excel & comfortable working with formulas & functions such as IF, SUM, COUNT, SUMIF, VLOOKUP, ISERROR.

Module 02:   Fundamentals of Model design & Development in Excel   *½ day   Intermediate*

For finance professionals who are looking to improve the flexibility & functionality of their financial models, this hands-on workshop will canvass important techniques for simplifying & improving the development of forecasting models in Excel using practical examples.

It demonstrates the rapid design & development of a forecasting model from scratch, given a number of key assumptions, implementing design elements to facilitate model maintenance and then a powerful technique for sensitivity analysis is introduced, incorporating a number of scenarios in the one model. Participants should be familiar with Excel & comfortable working with formulas such as IF & VLOOKUP, basic numeric formatting & the use of data validation.

Module 03/04: Streamlining Performance Reporting in Excel   *½ day   Intermediate*

Targeted at finance professionals aiming to improve reporting processes, remove common time-consuming bottlenecks & reduce manual intervention in data update, this session demonstrates changes in workbook design to meet these objectives.

It canvasses techniques for structuring reporting workbooks; properly segregating data; implementing flag- or switch- formulas to simplify reporting & aggregation formulas & to streamline the reporting process. It introduces techniques for designing user-configurable reports. It includes the construction of Waterfall & Bridge charts which will automatically classify items, & shows a simple, yet sophisticated technique to build the chart so the scale will be adjusted automatically.

Participants should be familiar with Excel & comfortable working with formulas such as IF & VLOOKUP, basic numeric formatting, the use of Data Validation & basic charting features in Excel.

Module 04 is a shortened version of *Module 03 Streamlining Performance Reporting in Excel*, requiring an hour less tuition. That enables one of the one-hour lectures to be incorporated into the program in the same ½-day & provides flexibility in scheduling sessions in conference programs with differing length session times.

To achieve this, it uses a slightly simpler report design with more standardised inputs & is not as ambitious in the charts included in the report. It still includes all the essential aspects of the report design & implementation & manages to effectively communicate & demonstrate the key elements of the lesson.

Module 05:   Something Old, Something New…   *1 hour   All audiences*

Originally, this session was designed for finance professionals who are making the transition or have recently made the transition to Excel 2007 or 2010. A tight session which explains why the product has changed & the things you need to know to quickly get up to speed and embrace the changes.

But as the product has evolved to online versions of Excel has opened up the need for another short session to cover the new elements in Excel, when using and collaborating online. It also covers key new formulas and how they can significantly reduce complexity in common modelling & analytical tasks. Even those who already feel somewhat comfortable in the new interface will find useful productivity tips.

Module 06:   Questions a CFO Should Ask   *1 hour   All audiences*

In financial modelling & forecasting, complex analyses are conducted. Sometimes very detailed & complex plans are constructed & subjected to sensitivity analysis. Yet, since we are only human, the risk of errors in those models is significant, & that can be exacerbated by poor technique & commonly adopted approaches which court errors.

This session canvasses key issues around standards adopted in an organisation to manage modelling tasks & manage the error risk, both in construction, usage & the maintenance & evolution of the models.

It raises some issues which need to be addressed if this vital aspect of management planning is not to founder on poor technique; complex & error-prone formulas & a lack of standards and testing. It proposes some straight-forward approaches to better manage these risks and address governance concerns.

Module 07:   Formatting & Rounding to Simplify Reporting   *1 hour   All audiences*

This one-hour workshop demonstrates how to use the formatting & rounding features in Excel to present properly rounded reports that add through their sub-totals & totals, without the need for manual adjustment. It also demonstrates how to make the level of precision a dynamic feature available to the report user via a drop-down menu.

Module 08:   Advanced Analytic Formulas   *½ day   Advanced*

The use of dynamic references, dynamic names, advanced conditional expressions, array formulas is canvassed in this session. Techniques to avoid redundant & complex calculations which directly impact on model size & performance are discussed and demonstrated. It also presents techniques for working with formulas to build more flexible analyses of performance data & structuring workbooks to facilitate these analyses.

Participants should be familiar with more complex formulas such as MATCH, INDEX, INDIRECT, OFFSET & have some knowledge of array formulas. Completion of *03/04 Streamlining Reporting Performance in Excel* and *02 Function and Formula Fundamentals* or prior attendance at the Financial Analysis Certificate is recommended.

Module 09:   Charting Master Class   *1 day   Intermediate/Advanced*

The Charting Master Class, which is a full-day seminar also offered separately in its own right, can be included as part of this program. A separate brochure for that course is available.

A unique and practical one-day hands-on master class designed to improve the reporting & presentation of key performance & financial information in reports, including dashboards. It appeals to those in finance or management who need to increase the effectiveness & accuracy of the reports they generate & reduce the amount of effort required to generate them.

This course delivers: practical guidance on the layout and structuring of data to facilitate & vastly simplify charting; methods to save on chart building time & to allow for re-use of regularly created charts; techniques that allow for the automatic changing of chart settings without resorting to VBA; techniques to facilitate the re-use of charts with minimal editing, & creating templates; a thorough grounding in the features of the Excel charting interface; techniques to design & construct reporting dashboards, using the chart types presented; a wealth of practical information on the design & creation of advanced chart types. It delivers measurable improvements in the accuracy & productivity of attendees.

Module 10:   Implementing Complex Scenarios in Cash Flows   *½ day   Intermediate*

Aimed at finance professionals seeking techniques to manage sets of complex criteria in models, this workshop demonstrates techniques for implementing complex table-driven assumptions for cash flow type models.

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Given some starting assumptions, it builds a sample construction cash flow from scratch, implementing scenarios in which the costs are variable as to amount, timing, phasing & in which the cash flows can be automatically allocated on an S-Curve basis. Finally it implements sensitivity analysis to allow the comparison of all scenarios within the one model.

Participants should be familiar with more complex formulas, the use of Data Tables, data validation, IF, MATCH & INDEX functions. Some familiarity with array formulas would be an advantage. Completion of *02 Fundamentals of Model Design & Development in Excel* or *03/04 Streamlining Reporting Performance in Excel* or prior attendance at the Financial Analysis Certificate is recommended.

Module 11:   Building More Effective Models with Less Complexity   *1 day   Advanced*

This session is targeted at model builders or management responsible for modelling supervision. It canvasses key approaches to laying out models effectively to assist the end user to comprehend them & to make them easier to audit and review.

It constructs a high-level business valuation model which includes a discounted cash flow analysis. It allows for multiple scenarios in which a variable number of historical years can be entered and in which assumptions for future years can be keyed only where a change is required. It demonstrates an approach that permits multiple scenarios of two dimensional assumption sets to be managed. Sensitivity techniques involving the use of Data Tables are demonstrated.

An emphasis is placed on using consistent layout & formatting, naming conventions & simplified formulas to simplify construction, audit & use. It is a hands-on session that builds a simplified sample model & demonstrates & discusses the techniques & methodologies used.

Ideally, participants will already have experience building flexible forecasting or business valuation models.

Module 12:   Formula Auditing & Error Tracing & Handling   *½ day   Intermediate*

This session demonstrates both basic & more advanced built-in approaches to formula auditing & tracing the flow of values through a worksheet. It also demonstrates built-in techniques for identifying constants & inconsistent formulas.

It presents key information to aid in understanding the cause of errors, how to identify their sources & how to manage errors in modelling & analytical projects without sacrificing clarity & without making formulas more difficult to trace or audit. Having demonstrated why many common approaches make tracing or auditing difficult to undertake, steps to implement better approaches are canvassed & demonstrated to aid in the testing, checking, audit & maintenance of future models. Error checking approaches & error checking reports are also discussed.

Participants should be familiar with Excel & comfortable working with formulas and functions such as IF, SUM, COUNT, SUMIF, VLOOKUP, ISERROR.

Module 13:   Date Sensitive Forecasting & Reporting   *½ day   Advanced*

Excel provides a rich set of functionality to manage date-sensitive calculations. Yet in spite of this, it is common that issues in models & analyses that revolve around this fundamental area become needlessly complex. One alternative to working with dates in detail is demonstrated in *10 Implementing Complex Scenarios in Cash Flows*.

In this session the examples deal with implementing models with variable financial year-ends; those with variable reporting periods; & demonstrate techniques to deal with the apportionment of transactions into different reporting periods. The samples presented provide some simple yet very effective techniques that can be re-used in ongoing model construction.

Participants should be familiar with how dates are stored and calculated in Excel, and should be familiar with the functions DATE, YEAR, MONTH, DAY, EDATE and EOMONTH. They should also be familiar with custom formatting of dates. An understanding of array formulas would be an advantage.

Module 14:   **Making Practical Use of the Macro Recorder**   *½ day*   *Intermediate*

This session shows how code can be recorded with the macro recorder which does not rely on lots of fixed, hard-coded ranges nor formatting being recorded. It demonstrates how a knowledgeable user of Excel can take a first step in creating useful & effective automation, by building on effective end-user techniques.

Unfortunately, when using the macro recorder, as its title suggests, it records macros that repeat a user's actions, recorded while they carry out a sample task. If the actions that are recorded do not anticipate the changes in data and the reports or models, the attempt to reduce the effort of using the workbook can be defeated by introducing a constant series of changes & updates that must be made in the code. Worse still, the recorded results may cause more problems than they solve.

We strongly believe that the calculations & results derived in a workbook should be solely dependent upon its inputs & formulas, & so we do not encourage the wanton use of macros to derive the results. However, there are many simple tasks which might enhance a workbook's usefulness by making it easier to print reports, place data into presentations, filter data, update PivotTables or import data. Provided that a good approach is used in recording & designing these macros (which is demonstrated in this session), many effective enhancements can be made to existing workbooks by the judicious addition of some helpful macros.

Module 15:   **Understanding & Managing Spreadsheet Risk**   *1 hour*   *All audiences*

This session discusses the role of spreadsheets in planning and management reporting. It asks the questions, what is the business risk and how do you manage & ameliorate those risks? It identifies the key sources of error & their impact & contribution to spreadsheet risk.

It introduces simple but effective built-in techniques for identifying errors, & canvasses some commercially available tools available to assist with this task. It suggests some strategies and standards required within an organisation to manage the risks in model construction, maintenance and usage. It proposes some straight-forward approaches to better manage these risks and address governance concerns.

Module 16:   **Building Workbooks with Style**   *½ day*   *Intermediate*

A hallmark of well-designed models is the use of styles to manage the formatting & appearance of a workbook. This allows the modeller to apply consistent formatting to key elements of a workbook, such as input, calculation, error checking, output/report cells & consistent headings.

The use of styles is an effective yet simple approach which builds user confidence, assists in the maintenance & audit of models & reports; makes it easier for users to understand & navigate complex calculations; & improves client confidence. It allows for the ready reconfiguration of the livery of a workbook which may be required to deal with accessibility issues & colour-blindness & can give management & other users a greater deal of confidence when using a well-structured workbook.

The process of building effective templates is surprisingly easy & the key techniques are demonstrated in this hands-on session in which a template with all of the key elements including title page, index to worksheets, error checking sheet, input styles, rounded reporting styles, advanced error checking styles & key navigation elements are all built from scratch.

Module 17:   **PivotTable Fundamentals**   *½ day*   *Intermediate*

The PivotTable, introduced into Excel in the 1990s, allows for the dynamic cross tabulation of data from within workbooks & from external data sources to allow for the easy aggregation & analysis of data by end-users. This session covers all the fundamental knowledge about how PivotTables work, how to build & manage them, how to add calculations & control the outputs from the analysed data.

It covers important issues which are not well understood by many users which address problems with the formatting & analysis of data in the PivotTables. Useful filtering & sorting techniques are demonstrated.

The extraction of data from PivotTables using the GETPIVOTDATA function is demonstrated, including how to make the references more dynamic, enabling the use of a standard block of formulas for a range of reporting

needs. Custom sorting and formatting of the PivotTable outputs is demonstrated. It also covers the use of Slicers, introduced in Excel 2010 & Timelines introduced in Excel 2013.

Module 18:   PivotTable Reporting   *½ day*   *Advanced*

Building on *Module 17: PivotTable Fundaments*, this session explores advanced calculations & data analysis settings available in the PivotTable interface which are not utilised by many users, but which provide essential analytical outputs. It also demonstrates some useful solutions to common date-related issues in summarising & collating data by quarter, half year & financial year, other than the built-in calendar-year-based calculations provided by Excel.

The extraction of data from PivotTables using the GETPIVOTDATA function is demonstrated, including how to make the references more dynamic, enabling the use of a standard block of formulas for a range of reporting needs. Custom sorting and formatting of the PivotTable outputs is demonstrated.

It also covers the use of Slicers, introduced in Excel 2010 & Timelines introduced in Excel 2013.

Module 19:   New Features Put to Work   *1 hour*   *All audiences*

This lecture reviews new tools & features added in Office 365 and recent versions of Excel, showing how they can be quickly & effectively deployed to solve analytical & reporting tasks. It covers key new formulas & how they can significantly reduce complexity in common modelling & analytical tasks.

Module 20:   Building a Dynamic Chart   *1 hour*   *Advanced*

Presentation of data in charts is highly desirable to aid in the comprehension of trends, relationships & progress against targets. However, when executed manually, the preparation of charts can be a significant roadblock at critical times in the reporting cycle.

This workshop demonstrates a technique for building a dynamic chart that allows a user to select the data to be charted & the date range for which the chart should be drawn for one or more data series to vastly improve the flow of work at critical reporting times, & to simplify the incorporation of data from changing data sets.

Module 21/22:   Dashboarding in Excel, a Practical Example   *½ day*   *Intermediate/Advanced*

This hands-on session demonstrates the preparation of a reusable dashboard that allows the user to filter & drill-down on the data presented. It is based on a set of financial data extracted from a management accounting system & some averages and KPIs derived from that data.

The session includes practical tips & advice on layout, design & construction of dashboards & demonstrates the use of styles to standardise & create a coherent view. Some advanced concepts are used & demonstrated, but full instructions are provided in the handout, so Intermediatt users should be able to apply the content.

Module 22 is a shortened version of *Module 21 Dashboarding in Excel, a Practical Example*, requiring an hour less tuition. That enables one of the one-hour lectures to be incorporated into the program in the same ½-day & provides flexibility in scheduling sessions in conference programs with differing length session times.

To achieve this, it uses a slightly simpler report design with more standardised inputs & is not as ambitious in the charts included in the report. It still includes all the essential aspects of the dashboard design & implementation & manages to effectively communicate & demonstrate the key elements of the lesson.

Module 23:   Understanding Spreadsheet Risks and   *½ day*   *Intermediate/Advanced*
Implementing Internal Strategies to Mitigate

This session begins with a lecture based on module 15 which lays out the areas of concern in the use of spreadsheets in modelling and analysis in financial functions. This part of the session canvasses some of the server based solutions that can be deployed to enforce policies on spreadsheets within an organisation and identify changes and malfeasance.

The session then moves to a hands-on lecture in which various standardised prepared elements can be simply deployed to assist in documenting and managing the lifecycle of key models and analyses within an

organisation. This represents a lower cost simpler implementation, that can be quickly deployed. It includes recommendations around building modelling policies, deploying and policing them.

Finally, the session ends with some hands-on examples of using tools built-into Excel to identify modelling issues. Some of this part of the session relies on audit tools available in Excel 2013 or later.

Module 24: Introduction to Excel BI Tools   *1 day*   *Intermediate/Advanced*

This hands-on session demonstrates the use of Power Query in Excel 2016 and later to import data, prepare and transform it for analysis in PowerPivot tables in Excel, making use of and introducing the Data Model features introduced in Excel 2013. The data is then used to prepare a PowerView (2013) or and 3D Map view (2016) of the data.

The features demonstrated in this session are only available from Excel 2013 onwards, and so this session requires Excel 2013, Excel 2016 or Excel 365. Excel 2016 or Office 365 is preferred.

Module 25: BI Tools in Excel and BI Desktop   *2 days*   *Intermediate/Advanced*

This hands-on session demonstrates the use of Power Query in Excel 2016 and later to import data, prepare and transform it for analysis in PowerPivot tables in Excel, making use of and introducing the Data Model features introduced in Excel 2013. The data is then used to prepare a PowerView (2013) or and 3D Map view (2016) of the data.

It goes into much more depth on the use of the Power Query tool and the formulas used to transform the data than is possible in Module 24. Examples including the consolidation of data from multiple source files, the handling of common issues in data, especially that sourced from systems using American date formats are covered.

In addition, this session includes a brief recap of the PivotTable reporting functionality included in modules 17 and 18 of this program, as it is important the participant be familiar with the use and workings of PivotTables, if they are going to add functionality.

The DAX analysis language used in PowerPivot is introduced as part of more advanced analysis and summary reporting.

The final session is devoted to the use of the separate BI Desktop which allows for the building of reports and dashboards to be shared within an organisation. The use of BI Desktop to either build the reporting independently using similar data sources, or to rely on the analysis already undertaken in Excel will be introduced and explained.

The Excel features demonstrated in this session are only available from Excel 2013 onwards, and so this session requires Excel 2013, Excel 2016 or Excel 365. Excel 2016 or Office 365 preferred. In addition, the participant should have installed the BI Desktop in advance of the training. There is a free version of this tool which will suffice for this course, although it will not allow for the publishing of reports within an organisation.

Module 26: Dashboarding Model Sensitivity Results   *½ day*   *Advanced*

This hands-on session demonstrates how to add sensitivity to an existing model, provided it meets certain fundamental requirements. It shows how to setup the sensitivity analysis to enable the presentation of the results of the sensitivity analysis in dashboards, including charts and KPIs. This session will be of particular interest to those who review and use models which they did not build but received from colleagues or third parties.

Module 12 is an excellent companion to this module, as it covers issues in tracing and auditing a workbook, especially one prepared by another user.