



TBH

**CAPITAL
ADVISERS**

Schedule Risk Analysis Workshop

Mining and Infrastructure Focus

2 Day hands-on workshop applying a Risk Driver Approach using @RISK for MS Project

The workshop will provide a detailed introduction to Schedule Risk Analysis using @RISK for MS Project as well as providing an introduction to the Risk Driver approach to Schedule Risk Analysis. The Risk Driver approach focuses on understanding the contributions particular project risks (identified during the risk workshop/risk register development process) make to the overall project completion date risk, developing a risk based project schedule contingency as well as providing the framework and tools needed to develop and evaluate the impact of risk mitigation strategies on the overall project schedule.

- 9 & 10 March 2011, Sydney
- 16 & 17 March 2011, Perth
- 23 & 24 March 2011, Brisbane
- 27 & 28 April 2011, Melbourne
- 4 & 5 May 2011, Canberra

Exceptional value for money at \$1485 per delegate (excl GST)

By attending this 2 day workshop participants will :

- Understand the limitations of traditional scheduling techniques in assessing project completion risk and why schedule risk analysis is an important tool in managing schedule uncertainty.
- Understand how to apply schedule risk modelling methodology using @RISK for MS Project.
- Understand the Risk Driver approach to schedule risk analysis using existing project risk registers and the benefits this approach offers.
- Gain the ability to use risk outputs to determine schedule risk contingency at a specified confidence level and be able to apply the methodology to determine the cost benefit impact of specific risk mitigation strategies on the schedule risk contingency.

Workshop class sizes limited, early registration encouraged

Book before 25 February 2011 and receive an immediate early booking discount

Book for more than one delegate and receive a multiple attendee discount of up to 20%

Book for four delegates and the fifth delegate attends for free

Workshop Presented by Michael Brink - Principal, TBH Capital Advisers

TBH Capital Advisers is a part of the TBH Group which has a 45 year history of providing independent strategic and project management consulting services.

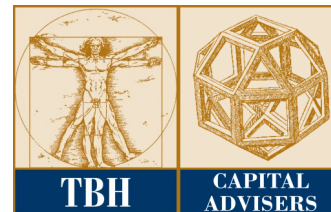
Michael is a Principal of TBH Capital Advisers responsible for delivery of financial modelling services and has over 20 years global experience in banking and finance and particularly structured and project finance and public private partnerships and had previously presented PPP Risk Modelling workshops in Sydney, Brisbane, Melbourne and Perth as well as at the 2010 Palisade risk conference in Sydney.

Michael has acted as an independent expert for TBH in relation to feasibility risk modelling claims and litigation. Michael has extensive experience consulting to the Asian Development Bank, international rating agencies and investment banks as a financial modelling specialist and has conducted numerous financial modelling workshops in Malaysia and Singapore as well as presenting PPP Risk Modelling workshop in Sydney, Brisbane, Melbourne and Perth in 2009. Michael has worked at a number of Australian Investment Banks including Macquarie Bank and AIDC Limited and was recently the Treasurer at a major non bank lending institution. Michael has a Civil Engineering undergraduate degree and an MBA from the Australian Graduate School of Management.



Schedule Risk Analysis applying a Risk Driver Approach

2 Day Hands-on Workshop



Who should attend the workshop

The workshop will be directly relevant to a broad range of mining and infrastructure participants including:

- ◆ Major Project Steering Committee members and Project Directors
- ◆ Mining and resource project development teams
- ◆ Managers and staff of Federal and State Government agencies supporting resource delivery activities through delivery of key infrastructure such as rails links, ports and bulk handling facilities
- ◆ Major Project sub contractors risk and technical staff who are expected to provide schedule risk data to head contractors
- ◆ Risk Managers from resource groups, lending institutions and construction companies

Organisations who sent attendees to previous TBH Capital Advisers Risk Modelling workshops include:

- | | |
|---|---------------------------------|
| • NSW RTA | • AbiGroup |
| • NSW Department of Commerce | • Boral |
| • WA Treasury Corporation | • John Holland |
| • NSW Treasury | • Seymour Whyte |
| • Dept. of Innovation Technology Industry & Science | • McCullough Robertson –Lawyers |
| • Water Corporation WA | • PANDI Group |
| • DownerEDI Rail & DownerEDI Engineering | • Sunwater |

Workshop includes course materials as well as MS Project templates

Attendees will receive a package of course materials prior to the course commencement that includes both hard and soft copies of the scheduling exercises to take away as a course reference.

Required level of MS Project proficiency?

The workshop has been constructed assuming that attendees have a basic to intermediate level of proficiency with MS Project 2007 or 2010. No prior @RISK experience is assumed.

Notebook and Software Requirements

The workshop is designed to be a hands-on schedule risk modelling experience and each attendee will need to bring with them a computer notebook with access to MS Project 2007 or 2010. Trial versions of @RISK for MS Project will be provided on CD ROM at the workshop, where possible participants should download and install a trial version at www.palisade.com prior to workshop commencement.

Sydney Workshop Venue Details

<h4>Workshop Schedule</h4> <table border="0"> <tr><td>Registration (day 1)</td><td>8.30am</td></tr> <tr><td>Start</td><td>9.00am</td></tr> <tr><td>Morning break</td><td>10.30am</td></tr> <tr><td>Restart</td><td>10.50am</td></tr> <tr><td>Lunch</td><td>12.30pm</td></tr> <tr><td>Restart</td><td>1.30pm</td></tr> <tr><td>Afternoon break</td><td>3.10pm</td></tr> <tr><td>Restart</td><td>3.30pm</td></tr> <tr><td>Finish for day</td><td>5.00pm</td></tr> </table> <p>Lunches and Coffee & Tea during breaks will be provided</p>	Registration (day 1)	8.30am	Start	9.00am	Morning break	10.30am	Restart	10.50am	Lunch	12.30pm	Restart	1.30pm	Afternoon break	3.10pm	Restart	3.30pm	Finish for day	5.00pm	<h4>Workshop Venue</h4> <p>Sydney TBH Offices, Level 7 15 Blue Street North Sydney (02) 9922 2511</p> <p>(Earlybird parking available nearby)</p> <p>Perth, Brisbane, Melbourne and Canberra venues to be advised</p>	<h4>How to find venue</h4>
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About TBH Capital Advisers and the TBH Group

TBH Capital Advisers is part of the TBH Group which has been providing independent strategic project management services in the construction and building sectors as well as in resources mining and infrastructure sectors for over 45 years to a broad range of public and private sector clients.

TBH Capital Advisers works closely with TBH servicing these sectors and offers independent, Infrastructure focused, financial advisory services with a particular focus on building robust financial cash flow models and developing robust risk models.

Schedule Risk Analysis applying a Risk Driver approach

DAY ONE AGENDA: Sydney, 9 March 2011

Registration and Coffee: 8.45am to 9.00am (for venue details see page 2)

Session 1: 9.00am to 10.30am

I. Introduction & Workshop Objectives

- Basic to intermediate MS Project experience as Pre-requisites for attendees
- Scheduling as key Project Management activity
- Benefits and Shortcomings of traditional Critical Path scheduling approach
- Factors driving Schedule Risk Analysis approach
- Risk Driver approach
- Objectives of Workshop: hands on experience with Schedule Risk Analysis and Risk Driver methodology

II. Dealing with Schedule Uncertainty around activity durations

- Uncertainty due to Estimation Error
- Uncertainty due to Project Risks
- Probability Distributions as better representations of activity duration

Morning Tea Break

Session 2: 10.50am to 12.30pm

III. Key Foundation for Schedule Risk Analysis is a high quality Schedule!

- Scheduling 101, common Traps/pitfalls
- Fundamentally a challenging discipline,
- Multiple sources of scheduling data
- Influence of management can lead to unrealistic deadlines
- No resource levelling applied
- Inappropriate or excessive use of constraints
- Dangling logic
- Inappropriate use of lags
- Key Procurement items ignored

IV. Development of a Simple Schedule using Schedule Risk Analysis

- What is Monte Carlo analysis
- Simple project example
- Number of iterations needed
- Interpretation of results
- Gathering relevant Risk data

Lunch Break

Session 3: 1.30pm to 3.10pm

V. Collecting Risk Data for Schedule Risk Analysis

- Sources of uncertainty
- Cultural and organisational bias to avoid
- Risk Interviews vs Risk Workshop
- Use of Particular Risk Distributions

VI. Further Schedule Risk Analysis Concepts and Techniques

- Risk arising from parallel paths merging
- Concept of Risk Criticality and how it offers enhanced management opportunities
- Importance of Correlation
- Probabilistic Branching
- Interpreting results
- Risk Mitigation

Afternoon Tea Break

Session 4: 3.30pm to 5.00pm

VII. Introduction to Schedule Risk Analysis Risk Driver Methodology

- Overview of Risk Driver approach
- Mechanics of applying Risk Driver approach
- Specifying 100% certainty risks
- Specifying less than 100% risk
- Applying uncertainty, estimating error
- Assigning risks to activities
- Interpreting results,
- Explaining risk derived Contingency
- Prioritising risks
- Developing and analysing risk mitigation strategies

Schedule Risk Analysis applying a Risk Driver approach

DAY TWO AGENDA: Sydney, 10 March 2011

Coffee: 8.45am to 9.00am

Session 1: 9.00am to 10.30am

I. Mega Mine Co Case Study: Schedule Risk Analysis using a Risk Driver Methodology for a greenfield resource project

The second day of the workshop is devoted to developing a Schedule Risk Analysis Case Study using a Risk Driver Methodology. This introduction session will focus on introducing a fictitious Case Study being the development of a new iron ore mine (Mega Mine Co) in which the developers have committed to a date for first ore shipments that will require development of the mine, procurement of long lead time mining equipment, completion of a new rail to port link and completion of a port expansion facility.

Prior to final project approval the Board of Mega Mine has requested a schedule risk analysis to understand the likelihood of not achieving shipping of First Ore by the contract date and would like to apply a Risk Driver methodology to understand the impact of key risks on the project schedule, understand the meaning of a risk derived contingency and the specific impact of mitigation strategies on the project contingency.

II. Case Study Continued: Developing the Underlying Schedule

Following the day one discussion, the objective of this session is to develop in a workshop format an underlying project schedule as the first step in conducting a robust Schedule Risk Analysis. Particular Scheduling issues that will be covered include:

- long lead time procurement,
- impact of 3rd party infrastructure delivery and
- ensuring the schedule picks up key activity interrelationships

Morning Tea Break

Session 2: 10.50am to 12.30pm

III. Case Study Continued - Risk Identification/Quantification: Interview and Risk Workshop Process

Session 2 is focused on applying the Risk Driver approach to the Mega Mine Case Study Schedule developed in Session 1. The first stage is to complete a risk identification and quantification exercise which will rely in large part on a Risk Register that is assumed to have been completed. Step 1 is to apply overall estimating error uncertainty to all activities. Step 2 is to assess probability and impact factors for identified risks.

IV. Assigning Risks to activities and completing Monte Carlo simulation

The final step in the Risk Driver Schedule Risk Analysis approach to the Mega Mine Case Study is to assign one or more or no risks to each activity in the schedule. Completion of this will allow commencement of Monte Carlo simulation and generation of Schedule Risk Analysis output.

Lunch Break

Session 3: 1.30pm to 3.10pm

V. Analysing Results, Explaining Contingency and Risk Mitigation strategies

This session will focus on the task of analysing the outputs of the Schedule Risk Analysis and Risk Driver analysis. In particular the session will generate a priority listing of the key risks driving the overall schedule completion risk, how each risk driver contributes to schedule contingency and importantly providing the tools to test the cost benefit impact of mitigation strategies on schedule contingency in a explicit manner i.e. implementing a specific risk mitigation strategies (at a specific cost) that result in the schedule contingency being reduced by a defined number of days.

Afternoon Tea Break

Session 4: 3.30pm to 5.00pm

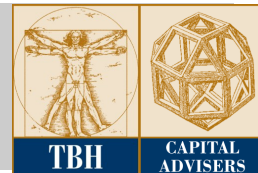
VI. Advanced Schedule Risk Analysis Topics

The final topic for the workshop will discuss some more advanced Schedule Risk Analysis topics including incorporating schedule contingency which allows the schedule to respond (during the Monte Analysis) to specific events and delays, in effect automating the ability of the project manager to respond to uncertain events e.g. during a Monte Carlo iteration a key procurement delivery date may not be achieved in which case the schedule may need to trigger a new schedule sub branch (which would otherwise not apply) in which a mitigation to this risk is incorporated for that iteration only.

VII. Workshop Wrap-Up

Please register the following attendees for the Schedule Risk Analysis Workshop in this location:

Sydney Perth Brisbane Melbourne Canberra



Registration Steps

Step 1: Select number of attendees

Register & pay before 25 February 2011

Register & pay after 25 February 2011

	Rate	Save	Net	Inc GST	Rate	Save	Net	Inc GST
<input type="checkbox"/> 1 Attendee	\$1650	\$165	\$1485	\$1634	\$1650	0	\$1650	\$1815
<input type="checkbox"/> 2 Attendees	\$3300	\$660	\$2640	\$2904	\$3300	\$330	\$2970	\$3267
<input type="checkbox"/> 3 Attendees	\$4950	\$990	\$3960	\$4356	\$4950	\$495	\$4460	\$4906
<input type="checkbox"/> 4 +1 Attendees	\$6600	\$1320	\$5280	\$5808	\$6600	\$760	\$5840	\$6424

Fill applicable amount in box **A**

Or fill amount in box **B**

Step 2: Provide Attendee details

Full name	Title	Contact number	Email
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Step 3: Provide Invoice details and select payment method

Payment is required 7 days prior to the course start date.

AMOUNT OWING = Box A or Box B

TOTAL OWING

Contact for Invoicing/Payment:

Name:

Email:

Phone:

Option 1: Credit Card

VISA

MasterCard

Name on card:

Card number SID

Expiry

/

Signature

Option 2: EFT payments to:

National Australia Bank

BSB: 082 201 A/C No: 170040187

A/C: TBH Capital Advisers Pty Ltd

Step 4: Fax or email filled in form to TBH Capital Advisers or call Maria (02) 9922 2511

Phone: +61 2 9922 2511

Email: register@tbhcapitaladvisers.com.au

Fax: +61 2 8072 1372

Mail: Level 12, 15 Blue Street, North Sydney, NSW, 2060

TERMS & CONDITIONS

Cancellation Policy: If you are unable to attend personally a substitute attendee may take your place. If a substitute is unable to attend and cancellation is made within the notice period below TBH Capital Advisers will provide a full refund of the Workshop fee.

To be eligible for a full refund you must inform us in writing 20 days or more prior to the start date of the course. Cancellations made less than 20 days prior to the start date of the course are not refundable. TBH Capital Advisers reserves the right to amend any part of the published agenda or speakers due to factors beyond its control and in the event of cancellation by TBH Capital Advisers its liability is limited to the refund of the course registration fees only.