

## THE INVESTIGATORS' BLACKBOX – QUICKSTART GUIDE

The Investigators' BlackBox software is a very straightforward and easy to use program. You can investigate relatively low risk incidents or accidents, analyse your findings and automatically produce a finished report with a cause tree and recommendations in about an hour, in most cases.

The program has been developed from, and is based on, the world renowned Kelvin TOP-SET® Incident Investigation System.

### What You Can Expect to Get

- A detailed, finished report with identified Failed Barriers, Direct Causes and Underlying Causes.
- A Cause Tree based on types of generic failures.
- A comprehensive list of SMART actions i.e. Specific, Measurable, Achievable, Realistic and Timely.

### Installation Guide

Start the Investigators' BlackBox installation by double clicking the 'Setup.exe' installation program. To proceed click 'Next'.

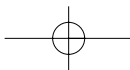
Then choose where BlackBox will be installed. A default folder is suggested, but you can use the 'Browse' button to select a different folder.

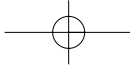
Then select the 'Everyone' option if you want the Investigators' BlackBox software to be installed for all users of the computer. Select the 'Just me' option if you don't want the program to be available for all users of the computer, just the user that is installing it. Press 'Next' to continue the installation, and then 'Next' to confirm. The installation program will install BlackBox to the chosen location.

If the installation is completed click 'Close' to close the installation program.

After installation start Investigators' BlackBox by selecting the program menu item in the Windows Start menu. You may also double click the BlackBox desktop icon.

Enter a new paragraph at the base of the page as follows: 'To activate the product, send the 'current host id' to activate@goblackbox.com (copy and paste it to avoid error) or call TOP-SET® Governors using the numbers above. On receipt of you activation code, paste this into the appropriate field to activate the software.'





## SECTION 1: REPORT TITLING / SECTION 2: INVESTIGATION BASIC INFORMATION

### Entering data

Entering your information is really easy. Just type into each box the information required e.g. at '1. Report Title'.

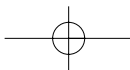
Dates are given automatically, but you can alter these by using the arrow key at the side of the box.

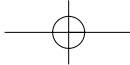
An important point – the program is designed to ensure that you fill in each box before you go the next box in the sequence e.g. you must complete '1. Report Title', before going on to '2. Date of Report', before going on to '3. Authors', and so on. This is to ensure that you think through the investigation logically.

Name	Job Title	Company
David S Ramsey	Managing Director	Sales TOP-SET

Selecting 'Help' will provide detailed support on the left of your screen (turn to pages nine and ten to refer to the same 'Help' information).

In these first two sections there are fourteen boxes to fill in. Once each page is complete, select 'Next' to move to the next page. Everything that you type in automatically goes to the final report, so take time to think as you go along as this will save you editing your report – a big time saver!

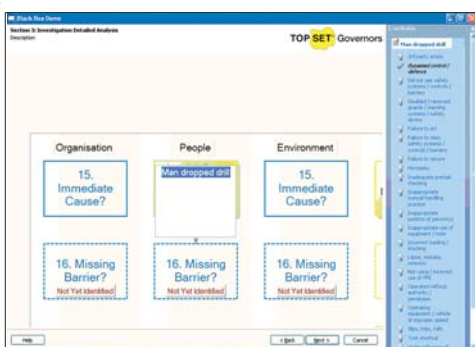




### SECTION 3: INVESTIGATION DETAILED ANALYSIS

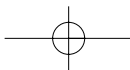
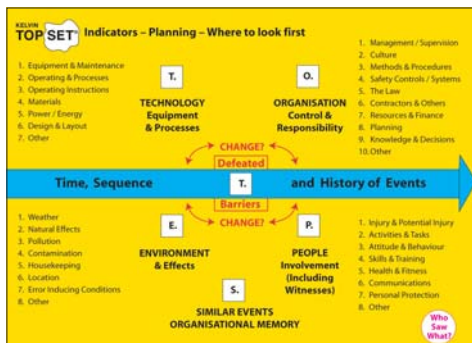
When you get to this stage you will be presented with four Immediate Cause boxes under the headings of 'Organisation', 'People', 'Environment' and 'Technology'. Enter, in free text, what you think is the Immediate or Direct Cause of the incident i.e. something without which an incident could not have happened. At least one of the four boxes must be filled in (although you may wish to use them all).

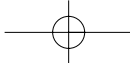
When you click on a box it expands to make it easier to see what you have typed.



Once you have typed in your Immediate Cause, hit return and the box will return to its original size, but its colour will now be red. This information you have typed in will be used by you later to write your actions.

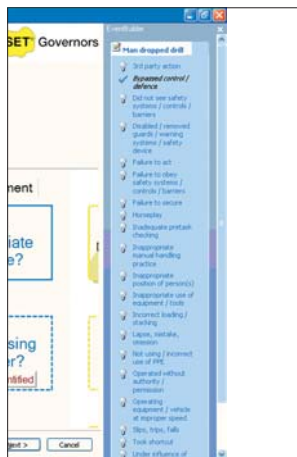
To help you fill in the boxes, look at the TOP-SET® Investigation Card. This has been developed to guide investigators through the possible causes of an incident.





## Event building

You will now see a picklist of information at the side, giving a selection of predefined possible Immediate Causes. Select the most appropriate by clicking on its light-bulb icon – this information is used to automatically build your Cause Tree in the report. The Immediate Cause box that you filled in will now change from red to yellow. It is important to select an item from the list before continuing.

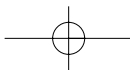


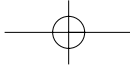
Now consider if the Immediate Cause happened because a Barrier or Defence had been bypassed, defeated or missing – type this in the box below the Immediate Cause box. If you cannot think of anything, click on 'Not Yet Identified'.

Now, move downward to the first Underlying Cause box. Type into this the first reason that you think led to the Immediate Cause i.e. Why did it happen? Again, the box will be red until you select a predefined possible Underlying Cause from the picklist on the right. The Underlying Cause box now turns yellow. Again, it is important to select an item from the list before moving down the chart.

Carry on doing this until you have described your incident. You can use up to four Immediate Cause boxes, four Missing Barriers boxes, and twelve Underlying Cause boxes. You must complete a Missing Barrier box and at least one Underlying Cause box beneath each Immediate Cause box into which you have entered text.

Once you have completed as much as required (try to fill as many boxes as possible) click 'Next' to move to the next page.





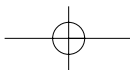
## SECTION 4 – ENTERING REMEDIAL ACTIONS

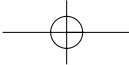
In this section the software helps you define remedial or SMART actions for each free text Immediate Cause, Underlying Cause and Failed Barrier that you have identified. Your findings are listed on the left side of each box.

Against each of your findings is a box marked 'Details...'. Click this, and a series of questions pops up. Answer these (in lower case text) and a detailed action is described in the final box – this may need a little editing. Do any editing now as the text is fed directly to your final report – editing now makes things easier later!

The screenshot shows a dialog box titled "Details..." with a blue border and a close button (X) in the top right corner. The dialog contains the following fields and text:

- Remedial Action for 'Man dropped drill'** (Title bar)
- What needs to be done to overcome this problem?**  
better planning and preparaion
- How will sucess of this be measured?**  
no falling objects
- What resources are necessary to do this?**  
time and training
- Who is responsible for this action?**  
Mr Andersen
- When can this action realistically be completed?**  
23 February 2006
- If necessary, correct the text below: it will appear in the final report**  
The investigation identified the need for better planning and preparaionso that there will be no falling objects. Mr Andersen is responsible for time and training by 23 February 2006
- Buttons:** Cancel, OK





## SECTION 5 – CONCLUSION

Click on the relevant box to either save or preview your report:

**Save Investigation** – Choose where to save your investigation. To open your saved investigation, you will need to return to the opening screen of BlackBox (or open the application again should you have closed it) and open the file by clicking on ‘Load Investigation’.

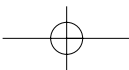
**Preview Report** – All of the information that you have entered will be displayed in a logical preformatted report layout for you.

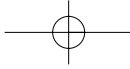
You may need to alter the size of the preview window (use the minimise / maximise buttons at the top of the scroll bar window) to make the report visible.

To edit the report you will need either to close the report preview window and go back into your earlier work by pressing ‘Back’ or export the document to a word processing program such as Microsoft Word.

**Exporting the report** – To export the report, go to ‘File’ on the task bar within the report preview window, select ‘Export to’ and choose your preferred format – for most word processing programs this will be ‘Rich Text Document’. Choose where to save the report. You should be able to open the exported file by clicking on it. If you export the report as a ‘Text Document’ you will need to open your word processing application first, and then open the exported file using the application.

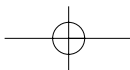
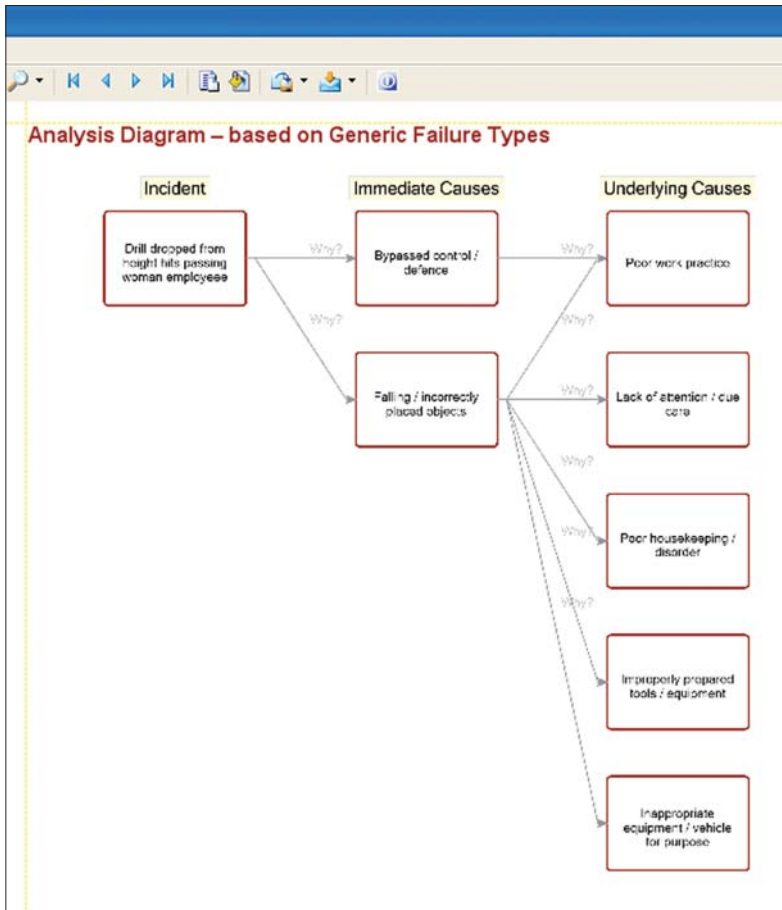
**Emailing the report** – from the preview window, the report can be sent to others as a pdf document via email by pressing the ‘Send email’ icon at the right-hand side of the tool bar on the top of the preview window.

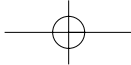




## Cause tree

You will have automatically generated a Cause Tree much like the example here. The information used to generate this came from the predefined generic failures picklists that you used with the analysis diagram.





## SMART actions

Based on what you have entered earlier you will have a list of SMART actions i.e.

Specific  
Measurable  
Achievable, and allocated to someone  
Realistic  
Timely – i.e. specified completion date.

## Example SMART actions

Remedial Action for ‘Drill not supported’:

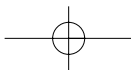
‘The investigation identified that a lanyard needs to be fitted so that tools will be restrained. The engineering department is responsible for fitting lanyards (for minimum expense) by 23rd February 2006.’

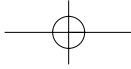
Remedial Action for ‘Poor resources’:

‘The investigation identified the need to purchase restraining equipment in order to ensure that there is no risk of objects falling from height. The maintenance department is responsible for the raising of a purchase order by 23rd February 2006.’

Remedial Action for ‘Working office area’:

‘The investigation identified the need for barriers to be used so that there will be a work exclusion safety zone. The maintenance department is responsible for the retraining of staff to ensure this occurs by 23rd February 2006.’





## Help

HELP: Information virtually identical to the information given below is accessible on screen by selecting 'Help' on the bottom left of the screen; this will display all the relevant information to the left of the section that you are working on.

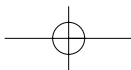
NAVIGATION: Throughout the Investigators' BlackBox software, move between the fields by pressing the 'Tab' key or by clicking with the mouse. See also the first paragraph in 'Section 3: Investigation Detailed Analysis'.

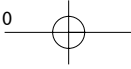
### Section 1: Report Titling

1. REPORT TITLE: Write a simple title e.g. 'Investigation into Falling Object'. This will appear at the beginning of the final report.
2. REPORT DATE: Select the date of when you are conducting this investigation and report e.g. 28 October 2005. This will appear at the beginning of the final report.
3. AUTHORS: Write your name and details and also those of anyone else working with you. These will appear at the beginning of the final report. Click 'Add' to add new names. You may enter or delete an author by first clicking his / her name.

### Section 2: Investigation Basic Information

4. DATE OF INCIDENT: Select the actual date of the incident even if this is the same as the report date i.e. it is done on same day.
5. TIME OF INCIDENT: Type in the actual time that the incident occurred.
6. LOCATION OF INCIDENT: Type in the location of the incident e.g. 'Base of Number 1 Spray Drier'.
7. WHAT HAPPENED?: Type in one line describing what happened. This is important as it defines the investigation. The need here is for a simple statement e.g. 'Person hit by falling object'.
8. CONSEQUENCES OF INCIDENT: Type in one line describing the consequences of the incident e.g. 'Person slightly hurt by falling drill'.
9. POTENTIAL CONSEQUENCES OF INCIDENT: Some incidents have a potential for more serious consequences e.g. 'Person could have been seriously hurt'. If you think this was not the case just type 'None'.
10. INCIDENT DESCRIPTION: Everything that you enter into this program is written to the final report, making things very easy for you. The reader of your report will want to know some of the detail of what happened. Write a paragraph here that describes the incident. Be aware that this is different from Step 7. where what is required is a single line description to help you define what you are investigating.
11. WHAT IS DIFFERENT OR HAS CHANGED: In every incident there has been a change; something is different from before. Type what you have found that has changed e.g. the weather, rust, new contractors etc. If you cannot find a change at the moment, tick the box marked 'Unsure'.
12. PEOPLE INVOLVED: People are at the heart of every incident. Type in here the names of everyone who was involved. You may find it helpful to include their age, work title etc and any effect on them e.g. 'Broken finger'.
13. SEQUENCE OF EVENTS: Every event has a history. This might just be a short series of events over minutes or hours, but whatever it is you need to know what the sequence is if you are to make any sense of the incident.
14. SIMILAR EVENTS: We can all learn from something similar that has happened before. If you can think of a Similar Incident then type it into this box. Do not restrict your thinking to just your own company; there will almost certainly be learning points from within the wider industrial sector or beyond.





### Section 3: Investigation Detailed Analysis

**NAVIGATION:** In this section, to help you enter data, the boxes expand when you click on them. Move between the boxes by pressing the cursor keys or by clicking with the mouse. Pressing 'Enter' will let you edit the text; press 'Enter' again to accept your changes. You may also cancel your edit with 'Esc'.

The information entered in this section will be used by you to later write your recommendations.

15. **IMMEDIATE CAUSE:** No incident can occur without an Immediate or Direct cause e.g. 'Touched live wire', 'Dropped tool' etc. Without this there would be no accident. Consider each of the four boxes – Organisation, People, Environment, Technology – and in at least one box write an Immediate Cause. You may feel that you will fill in more boxes, perhaps all four, but one at least must have text to enable you to proceed to the next step. Once you have typed in your Immediate Cause, hit return and box will return to its original size, but its colour will now be red; you must select an appropriate Generic Cause from the Event Builder list to the right of the screen. Select the most appropriate by clicking on its light bulb icon – this information is used automatically to build your Cause Tree in the report.

N.B. Once you have selected your first Immediate Cause and associated Missing Barrier you can choose to move to other Missing Barriers on the page.

16. **MISSING BARRIER:** For an event to occur usually means that a control or barrier has been bypassed, is missing or has failed. Consider for each Immediate Cause that you have identified what the failure was and type this in e.g. 'No physical barrier in place'; 'Hatch left unlocked'. In the unlikely event of you being unable to identify a barrier failure tick the 'Not yet identified' box.

17, 18 & 19. **UNDERLYING CAUSE:** For each Immediate Cause and Failed Barrier that you have identified analyse why this occurred in the three boxes underneath. The key question is, Why did the item in the box above occur? The box will remain red until you select a predefined Generic Cause from the Event Builder picklist on the right, by clicking on its light bulb icon. The box now turns yellow.

### Section 4: Enter Remedial Actions

20, 21 and 22: Defining SMART Actions i.e. Specific, Measurable, Achievable (and allocated to someone) Realistic and Timely (completion date). On the left of each field are the Immediate Causes, Underlying Causes and Failed Barriers that you typed in earlier. In each case click on 'Details...' and a series of questions pop up. Answer these questions (in lower case text) and you automatically get a detailed action in the bottom field. This may need a little editing; it feeds directly to your final report.

**NAVIGATION:** Additional actions can be entered by selecting 'Add'. To remove actions select 'Delete'.

### Section 5: Conclusion

Select 'Preview' to look at the entire completed report including the automatically generated Cause Tree and SMART Actions. If you need to change anything, close the preview window and select 'Back' until you find where you want to make the change.

If you want to have the report in a word processing format, go to 'File' on the toolbar and select 'Export to' and you will be offered a number of options. Choosing 'Rich text format' should create a report file using your word processing program e.g. Microsoft Word.

