

GOVERNORS


RISK MANAGEMENT & CORPORATE GOVERNANCE








Investigator 3


The Incident Investigation and Analysis tool

Software Manual and Training guide For version 3.2

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Installation Instructions

3.1 Installation

There are three types of download options that you can choose from, whether you download the software from the download page or from a memory stick (or CD). Most of the time you are provided with these three options:

- **Investigator 3 Installer** (msi, for automatic installation)

This installer will guide you through the process of installing Investigator 3 on your computer. This is the option most people should pick. Just download and double click this file to begin. To get an extensive explanation on how to install with the Investigator 3 installer, look at attachment A.

- **Investigator 3 Manual Installation** (zip, for manual installation)

If you would rather not use an .msi file, you can download a .zip file with the program. Just open this file, copy the contents to your Desktop or other suitable folder, then double click the Investigator 3 program icon to begin. To get an extensive explanation on how to install Investigator 3 manually, look at attachment B.


Note: You will need to extract the software from the .zip archive before it will run correctly. If you receive an error message (unhandled exception) please check to see if you have done this.

If, for any reason, the above options are not suitable, please download Investigator 3 with the .NET framework already included. As its name would suggest, this does not require the .NET framework to be pre-installed.

- **Special version for corporate networks** (no installation needed)

To help our corporate customers, we have designed a special version of Investigator 3 that *does not need the .NET framework to be installed*. This special version of Investigator 3 needs no installation, just open the .zip file, copy the contents to your Desktop or other suitable folder, then double click the Investigator 3 program icon to begin.

To install the software:

- Click on the download link or open the software from your memory stick or CD.
- A download window will appear that gives you the choice between running and saving the installer.
- Click on *Save*  to save the installer on your computer, otherwise click 'run'. Save the installer on the location of your choice. It is advised to save it on your desktop so that it can easily be found.
- When you are manually installing the software with the .zip file, first extract the zip file and save it on a location. Open the software then by clicking on the icon.
- When the download is completed, click 'run', the Investigator 3 Setup wizard window will appear now.
- The installer will offer to automatically save the software on a prefixed location, namely **C:\Program Files\TOP-SET Governors\Investigator 3**. You can change this location if you want.
- The software will be installed now.
- Open the software from the location where you saved it by clicking on the icon. You will be presented with the 'Investigator 3 Activation' window.

3.2 System Requirements

To install and run Investigator 3, the target system must meet the requirements set out in this section. Note that if your system is kept up to date using Windows Update it will most probably meet all of these requirements except the .NET framework, but they are listed here for completeness.

Supported operating systems are Windows 2000, Windows XP, Windows Vista and Windows 7.

You must be running Microsoft Internet Explorer 5.01 or later.

You must have at least 128 Mb of physical memory, 256 Mb is needed to run Investigator 3 comfortably.

You must have one drive with 50 Mb of free disk space.

You must have a minimum screen resolution of 1024x768 and a color depth of 16 bits, but considering the graphical nature of Investigator 3 – the bigger your screen the better.

Investigator 3 can interoperate with all Microsoft Word and Excel versions. The supported Visio versions are 2000, 2002, XP (2003) and 2007.

In order to run, Investigator 3 needs to have the .NET Framework 2.0 or higher installed on your PC. This is discussed in the next section.

3.3 The Microsoft .NET Framework

What is Microsoft .NET?

Microsoft .NET is the Microsoft strategy for connecting systems, information, and devices through Web services so people can collaborate and communicate more effectively. .NET technology is integrated throughout Microsoft products, providing the capability to quickly build, deploy, manage, and use connected, security-enhanced solutions through the use of Web services. Before you can run Investigator 3, your computer must have the Microsoft .NET framework version 2.0 or higher installed. Microsoft advises Windows users to install its .NET Framework because of the growing number of framework-connected applications on the market. Chances are it is already installed, as it is also delivered by Microsoft using Windows Update.

Is the .NET Framework already installed?

You can simply install Investigator 3 and try to run it. If the framework is missing, you will be notified and can install it then. You can also manually check to see if you already have the .NET Framework 2.0 or higher installed by clicking *Start* on your Windows desktop, selecting *Control Panel*, and then double-clicking the *Add or Remove Programs* icon. When that window appears, scroll through the list of applications. If you see *Microsoft .NET Framework 2.0* listed, it is already installed and you do not need to install it again.

If you are not allowed to install software on your PC

We have designed a special version of Investigator 3 for users who don't have installation rights, as is often the case on corporate networks. This version of Investigator 3 with integrated .NET Framework can be downloaded from the Investigator 3 downloads site.

Install the framework from the Investigator 3 downloads site

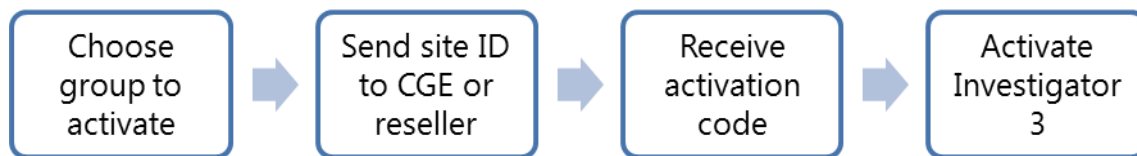
Browse to the Investigator 3 downloads site. Find and select the .NET Framework 2.0 Redistributable. When prompted during the download, choose "Open" and "Run" to install the Framework. You can also first save to disk and then open it.

Install the framework through Microsoft Windows Update

Browse to: <http://windowsupdate.microsoft.com> and choose to update your computer. Select the .NET Framework, if it is listed. You will probably find it under recommended updates. Before you can use Investigator 3, you must have the Microsoft .NET framework version 2.0 installed. Some computers already have this installed, some do not. If not you will get a warning while installing Investigator 3.

3.4 Investigator 3 site activation

Investigator 3 can be configured to activate all members of a global or universal domain user group. This is known as site activation. The site activation process is as follows:



First, choose the user group to activate. Investigator 3 creates a site id for this group, which must be sent to CGE Risk or another reseller so they can create an activation code for you. After entering this activation code into Investigator 3, it is activated and will run.

Note that the site id can also be retrieved in a different manner, and the codes can also be entered in a different manner. These alternate methods for site activation are described below the sections which show you the process to follow in the user interface. **Error! Reference source not found..**

Choosing a group to activate

Most domain computers will show a lot of groups to choose from. It is always possible to lock to the built-in "Domain Users" group. This group will be present in every domain. A better solution is for the computer administration department to create a special group to hold all the users which are licensed to use Investigator 3. By doing this it is easy to reassign licenses between users. After selecting the user group to activate, the site id for the selected group is shown. The "selected site id" should be sent to CGE or another reseller so an activation code can be generated.



Figure 1 Group activation

After receiving the activation code, it can be entered into the dialog to activate Investigator 3. See 3.5 User activation. Note that you must be a member of the intended group for this to function; otherwise access to the software will be denied and the newly entered activation code will not be saved. Also note that after changing group memberships, users will need to log off and on again for these membership changes to take effect.

3.5 User Activation

After downloading the software and opening it for the first time, you will be prompted with the window visible in Figure 3-2 Activation . In the window you get three choices in how you want to activate the software.

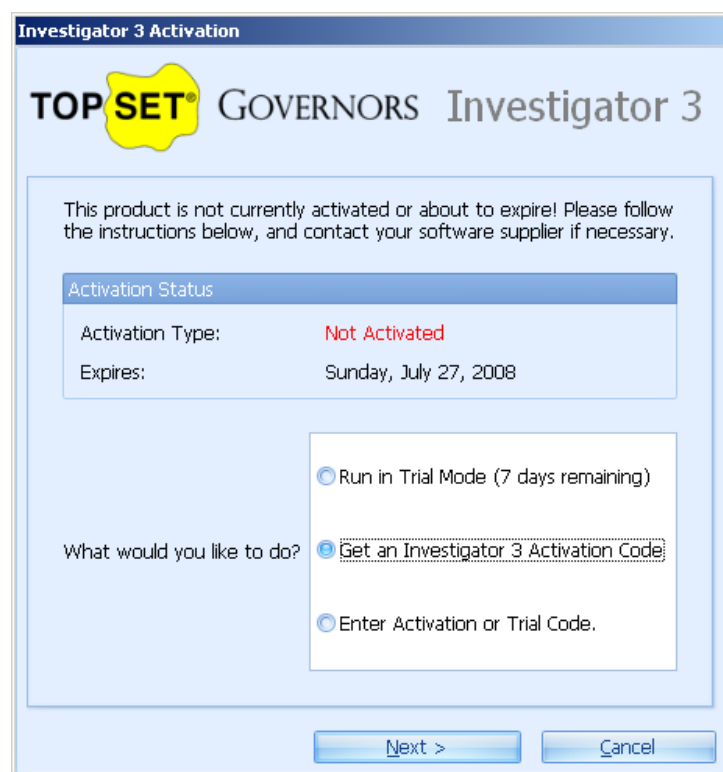


Figure 3-2 Activation Dialog 1

The first option is to enter a new activation key. Once you have received your activation key or trial code, you can fill the code in this window in. If you want to view the host id again you can click on the *Advanced...* button. When entering a correct code, the activation status will turn green and you can start the software (see Figure 3-4 Activation Dialog 3).

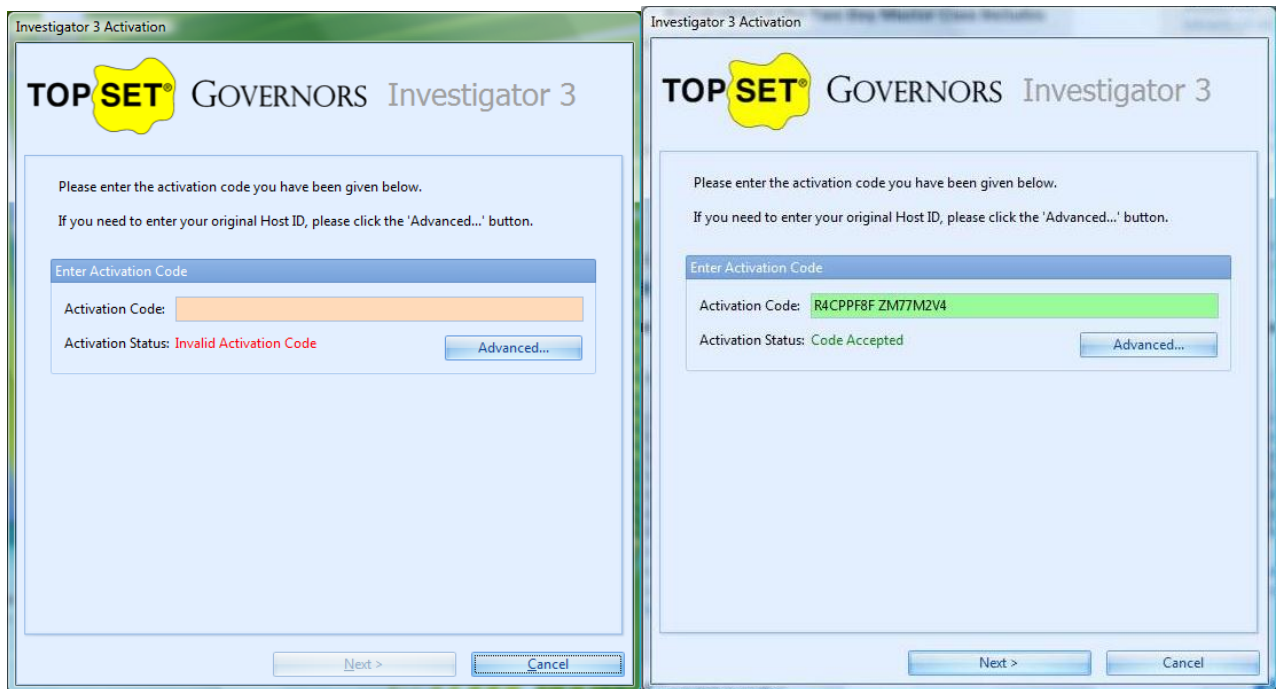


Figure 3-3 Activation Dialogs 2

When you want to change your Activation settings, for example when you use a trial code and now you have received a permanent code, you need to go to Tools > Reset...> Reset Activation. The next time Investigator 3 opens the Activation window will appear and you can change your code.

The second option is to get an activation key. When selecting this option a new window opens (see Figure 3-3 Activation Dialogs 2). This screen shows you the host id, which you will need to receive an activation key. You can email this host id to Governors support@governors.nl or copy it to clipboard and email it then. We will then send you a trial key or an activation code, depending on whether you bought a license or not.



Figure 3-4 Activation Dialog 3

The last option 'Continue' is to run the software in trial mode. Choose this option when you did not receive an activation key. This option will give you the opportunity to work and evaluate the software for 30 days. After 30 days the activation automatically expires.

3.6 Network Installation

To install the software on a network, you first need to create a Windows user group in your Windows domain, say Investigator 3 Users. Then add licensed Windows domain users to the user group. Run Investigator 3 under an Administrator account. In the Activation Dialog (see Figure 3-2 Activation Dialog 1) upon first start and choose 'Get an Investigator 3 Activation code'. In the next dialog (see Figure 3-4 Activation Dialog 3) click on the Show Groups button and a list of all User Groups on your domain will show. Choose your User Group, the one that contains the Investigator 3 users, and choose: 'Copy details to clipboard'. This will copy the Current Host ID shown to the clipboard. Paste the Activation details into an e-mail and send your request to support@governors.com. We will then send you an activation code and an activation.dat license file that can be put next to the executable by hand or in an installation script. This license file will auto-activate the software for any user who is a member of the user group.

Methods Used in Investigator 3

Investigator 3 has been developed by investigators for investigators. It has been developed for the professional investigation of large-scale incidents. It is the latest in a series of innovative incident investigation software tools developed by TOP-SET® Governors BV. Investigator 3 is a totally new product which builds on the structure of the previous Investigator tool developed by Kelvin TOP-SET®. On top of that the incident analysis method Tripod Beta is also included in the software. This way the two best practice methods in incident investigation are brought together. The TOP-SET® incident investigation method uncovers more relevant facts during an investigation by pointing out every factor that could have played a role. This solid investigation basis is required for sound Tripod Beta analysis by providing better quality data.

Investigator 3 has been built to replicate as closely as possible the paper-based TOP-SET® incident investigation methodology. Investigations are traditionally carried out by a team using large A0-size paper charts (the Planning chart, Storyboard chart and Root Cause Analysis chart) and Post-it notes. Here, this method of working is recreated using easy to use graphical interfaces that replicate the flexibility of using paper charts and Post-its. We would encourage that the software is used by a group working in collaboration, and in tandem with the paper-based method, so that the open thinking vital to the methodology is encouraged and enhanced.

The software acts as a repository for all of the information gathered during an investigation. Without the software, organizing all of this information would be a cumbersome and time-consuming task. Furthermore, using the software means that the information gathered during an investigation can be easily communicated amongst the investigation team members and to senior staff. People in different locations can also work together on the same investigation.

4.1 TOP-SET® Incident Investigation Methodology



The TOP-SET® incident investigation methodology is used by major blue-chip clients all around the world. It is taught on 1-day or 3-day senior courses held throughout the world, and are the basis of several incident investigation products for professional incident investigators (Further details are available at www.kelvintopset.com).

TOP-SET® was developed in 1989 to provide a comprehensive incident investigation methodology that would take users from the start of the process of investigation right through to the end. Users are educated in planning an investigation, visiting the scene and gathering data, interviewing witnesses, creating a Storyboard of events incorporating as much information as possible, analyzing the information to discover the causes, creating recommendations, and reporting.



Figure 4-1 TOP-SET Planning Card

Step 1. Planning

Planning the investigation and gathering data involves using the TOP-SET® indicators, a set of 600+ prompts which are arranged according to six categories: Technology, Organization, People, Similar Events, Environment and Time. This set of prompts or indicators is what leads to the success of any TOP-SET® investigation. The TOP-SET® Planning card shows a summarized version of the full set of indicators (see

Figure 4-1 TOP-SET Planning Card). This card is shown in the software (The Investigation Planner). The indicators are used as prompts to help the user to think of as many events or issues as they can that may have contributed to the incident. The indicators can be revisited as often as necessary.

Step 2. Storyboard

The issues identified are then investigated and the resulting data lay out on a Storyboard chart, organized by TOP-SET® category and time.

Step 3. Analysis

At the analysis stage of the investigation, which comes after the investigation has been planned, carried out, and all of the contributing events have been investigated and laid out on the Storyboard. Following the TOP-SET® method a Root Cause Analysis Diagram is made. In this diagram the causes of the incident are analyzed until the root causes are known.

Step 4. Reporting

All of the information that the user enters into the software is automatically forwarded to a report, which is set up in a standardized format. The automatic creation of the report saves the user from having to write a report about the investigation and its findings from scratch, as would be the case if they were carrying out a paper-based investigation.

4.2 The Tripod Incident Analysis method

Investigator 3 contains a full Tripod Beta Incident Analysis implementation. Tripod Beta distinguishes itself from other incident analysis methods through the Human Behavior model that is used to analyze the reasons of failure of a Barrier. The Tripod Beta Analysis looks at what caused the sequence of events in an incident. The aim of the analysis is to show:

- What was the sequence of events?
- How the incident happen, what barriers failed?
- Why these barriers have failed?

The core of a Tripod analysis is a 'tree' diagram representation of the incident mechanism which describes the events and its relationships. The Event in a Tripod Beta Diagram is the result of the Hazard acting on an Object. A Barrier is something that's preventing the meeting of an object and a hazard.

When such a barrier fails, a causation path is made to explain how and why this happened. The Tripod method presumes that incidents are caused by human error, which can be prevented by controlling the working environment. The Causation Path displays this by starting with the Active Failure of the barrier, then under what Precondition or in what contextual state this happened and at last the Underlying Failure of the barrier. The aim of Tripod Beta is to uncover the hidden deficiencies in an organization; the Latent Failures. These can be classified into eleven Basic Risk Factors (BRF's), these are categories that represent distinctive areas of management activity where the solution of the problem lies. All the items of the Tripod Diagram are visible in the basic Tripod tree diagram in Figure 4-2 Tripod tree.

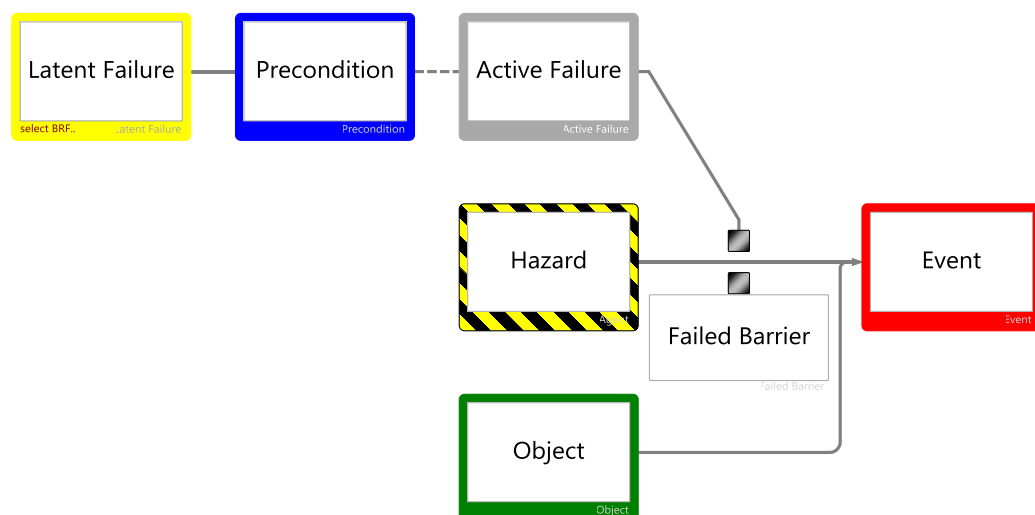


Figure 4-2 Tripod tree

Introducing Investigator 3

Investigator 3 is a software program for the professional investigation and analysis of incidents. It can be used for incidents of any scale. Investigator 3 is based on the TOP-SET® incident investigation methodology and the Tripod method. Most of the information in this user manual is also available in the Help section of Investigator 3.

The first screen (see Figure 5-1 Start page) gives the user the option to start a new investigation or open a saved one.

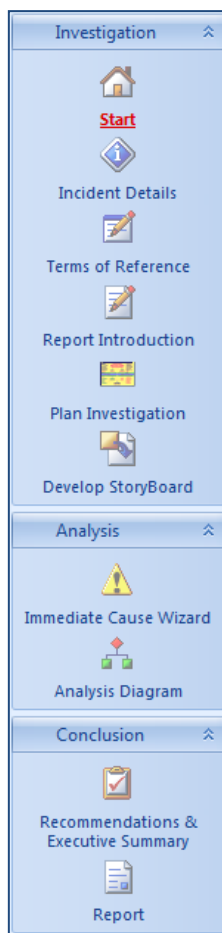


Figure 5-2 Navigator

After starting a new investigation or opening a saved one, Investigator 3 leads the user through a systematic nine-step approach which covers the entire investigation process. This process is referred to as the Investigation Workflow (see Figure 5-3 Investigation Workflow) and is presented on the first screen. During the process this workflow is also available on the left-hand side of the screen, the navigator (see Figure 5-2 Navigator). This menu will stay visible throughout the


program. The section where you are working in is highlighted in red in the menu. You can jump through this menu in whatever order you want. Sections can also be skipped. The Start-button  will always bring you back to the Investigation Workflow. In the Investigation Workflow you can select your choice between the two analysis diagrams; Root Cause and Tripod Beta. You can also click on 'Analysis Diagram' in the navigator. You will then also be able to make your choice between the two analyses methods. The left-hand menu is divided in three sections: Investigation, Analysis and Conclusion.



Figure 5-1 Start page

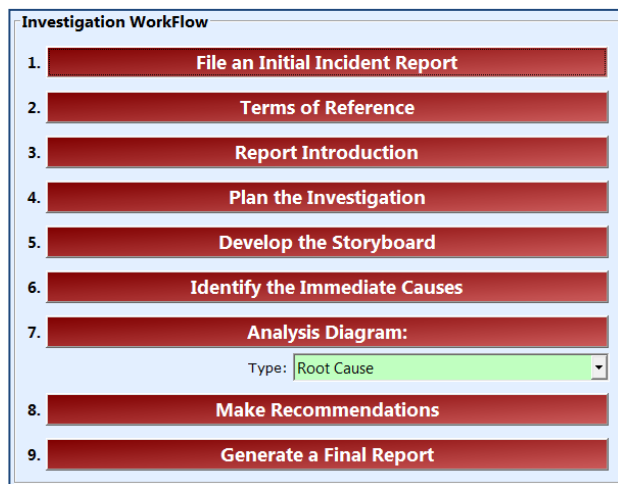


Figure 5-3 Investigation Workflow

Each step in the Investigation Workflow has its own interface, some of which feature graphics and tools that will help you to thoroughly investigate and analyse the incident while others offer a way of adding textual information. The information you enter into Investigator 3 will automatically be entered into the report which is generated as the final step in the process. At the end of the process, besides the final report, all of the information you have entered will be stored in the saved file, enabling you to keep all of the information in one place, making the whole process of investigation much less cumbersome.

The software was created to lead you through the process from the receipt of initial information about the incident, all the way through to the reporting process. The steps should be completed in the correct order. However, you are encouraged to move back and forth between the sections as much as you like to refer to information you have already entered.

General shortcut keys

Ctrl + N	New File
Ctrl + O	Open File
Ctrl + S	Save File
Ctrl + Shift + N	Hide or Show Navigator
F1	Open help file
Alt + F1	Introduction help file
F2	Go to Incident Details
F3	Go to Terms of Reference
F4	Go to Report Introduction
F5	Go to Plan Investigation
F6	Go to Develop Storyboard
F7	Go to Analysis Diagram
F8	Go to Recommendations & Executive Summary
F9	Go to Report
F11	Full screen
Alt + F4	Quit application

6

Top menus & Toolbars

6.1 Top menus

Within Investigator 3 the top menu bar remains available throughout the program. Most menu items are similar to the standard 'Microsoft Office' tasks such as *new*, *open*, *save*, *special characters*, *help* and *about* see Figure 6-1 Top menus.

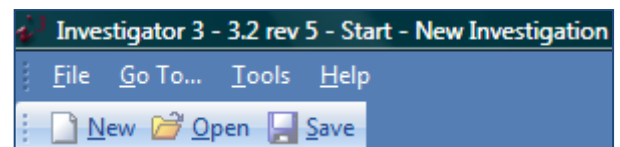


Figure 6-1 Top menus

In the *File* menu consists of the options to manage your files, like *New*, *Open*, *Save* and *Save as*. But also the option *Recent Files* which will give you an overview of all the files you recently worked in.

The *Go To...* menu items are the third way of getting access to your workflow and features the same elements as the navigator. All the sections of the software are accessible in this menu.

Within the *Tools...* menu you can select or change all the options in the software. The first option '*Show Navigator*' is to show or hide the navigator on the left-hide side of the screen. It is also possible to select special characters from the default windows special character pallet. In the Tools menu you can also reset settings; reset the Investigator 3 setting, reset the windows and toolbars and reset the activation. You can also edit several options for Investigator 3 from this menu (see Figure 6-2 Options Overview). Options that can be changed are:

General: Application appearance, currencies, files and image settings

Diagram: Diagram size and font, layout options

Storyboard: Time period, sizing, categories/actors

Report: Fonts and watermarks

Word Export: Report options, image size options

Terminology: Terminology options

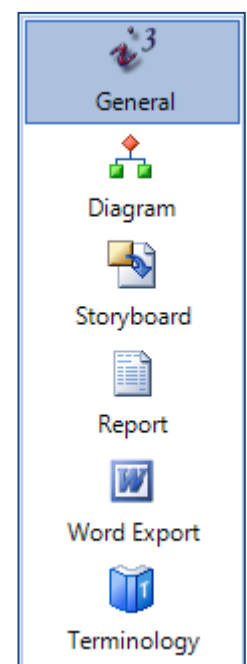


Figure 6-2 Options Overview

In the *Help* menu you can find the Help file *Contents*, the newest Investigator 3 download links under *Online* and the option to *Collect the error report*.

Menu shortcut keys

Ctrl + N	New File
Ctrl + O	Open File
Ctrl + S	Save File
Alt + P	Go to People Involved
Alt + F	Go to Menu > File
Alt + E	Go to Menu > Edit
Alt + D	Go to Menu > Diagram
Alt + V	Go to Menu > View
Alt + G	Go to Menu > Go to...
Alt + T	Go to Menu > Tools
Alt + H	Go to Menu > Help

6.2 Toolbars

Throughout the software you will find the same toolbar. Only the Analysis Diagram section has other new buttons in the toolbar. The usual New, Open and Save buttons are visible here (see Figure 6-3 Basic Toolbar). The next two buttons are *Preview & Export* and *Print*. With the preview & export button you can view how your work will look in the report. In this window you can also export the overview to other applications, like Word, Excel, and Adobe, etc.

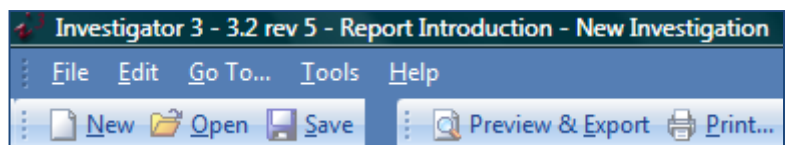


Figure 6-3 Basic Toolbar

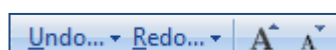
The following toolbar buttons apply to the analysis sections:



Copy to Clipboard: Copy the whole diagram or copy a selection to clipboard to be able to paste to other applications

Export Metafile: To export a picture (.emf) of the diagram

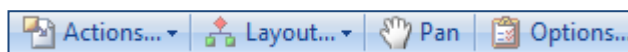
BRF Profile: Basic Risk profile, an overview of all the BRF's (only applicable to the Tripod Diagram)



Undo: Undo all you past actions (Ctrl + Z)

Redo: Redo all your actions (Ctrl + Y)

Letter size: Increase and decrease letter size



Actions: All the actions that apply to the item that is selected

Layout: Layout the children of the selected item (Ctrl + L)

Pan: Pan option to be able to move your diagram around

Options: Increase or decrease the diagram and item size



Zoom: Zoom in and out in your diagram

Lock: Lock the zoom level

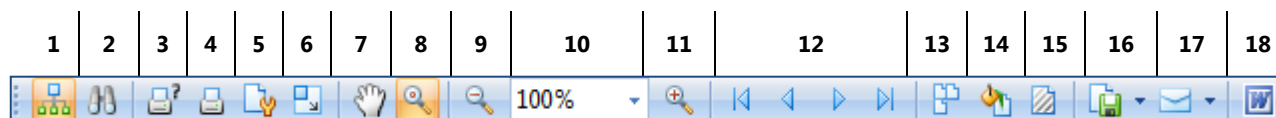
Fit: Bring the diagram back to a full overview

Show All: Show all the hidden items

Hide Causation Paths: Hide the causation paths in the diagram (only applicable to the Tripod Diagram)

Hide Balloons: Hide the narrative and recommendation balloons

Preview & Export and Report Toolbar



1. Document Map: Show the Document Map next to the report or not
2. Search: Use the Search functionality
3. Print: Select printer
4. Print: To print the overview
5. Page setup: To get an overview of the page before printing
6. Scale: Choose the scale to view the report with

- | | |
|------------------------|---|
| 7. Hand tool: | Pan option to be able to move the overview of your diagram around |
| 8. Magnifier: | To zoom in on your overview |
| 9. Zoom Out: | Zoom out of the overview |
| 10. Zoom Level: | Drop down list with different zoom levels |
| 11. Zoom In: | Zoom in on the overview |
| 12. Navigation: | Navigate through the report by going to next and previous pages |
| 13. Multiple pages: | Show multiple pages at the same time |
| 14. Background colour: | Choose a colour for the background of the pages |
| 15. Watermark: | Opens the watermark window to show watermark colour, text, etc. |
| 16. Export: | Export the document in several formats |
| 17. Email: | To email the report in a certain format |
| 18. Word: | to export the file directly to Word |

Incident Details

In this first step of the Investigator 3 software, you will enter the basic and detailed information about the incident. You start with details such as the date and time of the incident, and then expand on these to include a short incident statement, a list of the incident's consequences, and a detailed description of the incident. Here, you also add information about the people who were involved in the incident. It is important to be thorough with this step. As with all the information you enter, these details will be used to populate your report. It is important that the Incident Statement describes the exact incident you are investigating, as it will provide the starting point for your analysis. There are three sections: Basic Information, Detailed Information and People Involved. You can click on the tabs to select on or you can use the 'Previous' and 'Next' buttons:



7.1 Basic Information Tab

 The screenshot shows the 'Basic Information' tab of the Investigator 3 software. At the top, there are three tabs: 'Basic Information' (selected), 'Detailed Information', and 'People Involved'. The main content area is divided into three sections:


- 1. Titling Information:** Contains a 'Report Title' field with the text 'New Investigation' and a 'Report Version' dropdown menu set to 'Draft 1.0'. Below these is a table for 'Authors' with columns for 'Name', 'Job Title', 'Company Name', 'Category', and 'Edit'. There are 'Add' and 'Remove' buttons above the table. A message says 'Click the Add button to create a new Person.'.
- 2. Incident Details:** Contains a 'Date and Time' dropdown menu set to '14 October 2009 14:14' and a 'Location' text field.
- 3. Type and Severity:** Contains a list of checkboxes under the heading 'Tick all that apply'. The options are:
 - ☒ Breached Security
 - ☐ Damage to Business Performance
 - ☐ Damage to Property or Equipment\Damage to Reputation
 - ☐ Environmental Damage
 - ☐ Fatality or Serious Injury
 - ☐ Near Hit or Miss
 - ☐ Other Injury
 At the bottom of this section is a checkbox labeled 'Check if reportable under law' which is also checked.

 At the bottom right of the window is a 'Next' button with a green circular icon containing a right-pointing arrow.

Figure 7-1 Basic information Tab

On this first tab, you need to enter the basic details about the incident, see Figure 7-1 Basic information Tab.

Titling Information:

- Add a report title
- Add the names of the authors of the report, press the *Add*  button to add new authors
 - Add job title information
 - Add employer information

Incident Details:

- Add the date and time of the incident
- Add the location of the incident

Type and Severity:

- There is a list of possible outcomes that occurred as a result of the incident. Check the boxes that apply.
- Make sure to click on the Check if reportable under law checkbox if this applies to the incident.

7.2 Detailed Information Tab

The screenshot shows a web application interface with three tabs: 'Basic Information', 'Detailed Information' (which is selected and highlighted with a dotted border), and 'People Involved'. The 'Detailed Information' tab is divided into three main sections:

- 1. What Happened?**: Contains a single text input field labeled 'One-line Incident Statement'.
- 2. What Were the Consequences?**: This section is further divided into two sub-panels:
 - Actual Consequences**: A large text area with a light yellow background. At the top, there is a small input field with an asterisk icon and the text 'Click here to add a new Consequence'. Below this, the text 'No consequences have been added.' is centered. At the bottom of this panel is a blue bar with a '+' icon on the left and a '-' icon on the right.
 - Potential Consequences**: A smaller text input field located below the 'Actual Consequences' panel.
- 3. Detailed Description of Incident**: A large, empty text area on the right side of the tab, with a vertical scrollbar on its right edge.

Figure 7-2 Detailed Information Tab

On this tab, you will enter more specific information about the incident; see Figure 7-2 Detailed Information Tab

What Happened?

- Condense the incident down to a specific one-line sentence. Make sure that you decide at this point what specific incident you are investigating. Take care not to describe a more general incident in error.

What Were the Consequences?

- Add the consequences of the incident. Click on the uppermost field in the consequences area, enter your text, and press Enter to add each consequence. Delete consequences by placing the cursor at the end of the text you want to delete, and use Backspace. Click outside the field to continue.
- Add any potential consequences that could easily have occurred if circumstances had been a little different.

Detailed Description of Incident:

- Enter a narrative which explains the entire incident in more detail. This will be the main incident description in the report, so the text should cover the incident in as much depth as you think will be required.

7.3 People Involved Tab


On this tab, you will enter information about all of the individuals with some involvement in the incident (see Figure 7-3 People Involved Tab). There are two tables, one for the Investigation Team and one for the People Involved in the Incident.

The screenshot shows a software interface with three tabs: 'Basic Information', 'Detailed Information', and 'People Involved'. The 'People Involved' tab is active and contains two sections:


- 1. Investigation Team**: A table with columns 'Name', 'Job Title', 'Company Name', 'Category', and 'Edit'. Above the table are '+ Add' and 'X Remove' buttons. Below the table is a scroll bar and the text 'Click the Add button to create a new Person.'
- 2. People Involved in Incident**: A table with columns 'Name', 'Job Title', 'Company Name', 'Category', and 'Edit'. Above the table are '+ Add...' (with a dropdown arrow) and 'X Remove' buttons. Below the table is a scroll bar and the text 'Click the Add button to create a new Person.'

Figure 7-3 People Involved Tab

Investigation Team:

- Click the *Add*  button to add a new team member and to fill in all the information about that person.
- Show if the person is a team member
- Attachments can also be attached to the person, see below

People Involved:

Click the **Add**  button and choose which category the individual you wish to enter details about belongs. This will bring up the 'New Person' dialog box. Individuals can be added in four categories: Injured Person; Witness; Team Member; or Other.



- **Injured Persons:** In the 'New Person' dialog box, you can enter details about any people injured as a result of the incident. Besides being able to enter personal information about each injured person, you can use the 'Injury Details' tab to thoroughly document injuries. You can fill in details about the nature of the injury, part(s) of the body and the source of injury.
- **Witnesses:** In the 'New Person' dialog box, you can enter details about any witnesses to the incident.
- **Other Persons Involved:** In the 'New Person' dialog box, you can enter details about anyone else involved in the incident or investigation that doesn't fall under the earlier categories.

In the 'New Person' dialog box, you can also add notes, and drag and drop images and other attachments (for example, Word documents), using the Attachments area.



Attachments

In the People Involved section you can add attachment to the persons, see Figure 7-4 Attachments.

Adding Notes:

- Click the plus symbol  icon to create a new note.
- Provide the note with a title and add your note text in the field marked 'Notes', or copy and paste your note text from another document into this field. (NB Please note that it can be very useful to add interview notes in this way.) The text you enter into this field can be shown in the report or left out by clicking the 'Show in Report?' checkbox. You can then move back to a list of the notes, images and attachments you have added by clicking the small arrow  icon.

Adding images and other attachments:

- Adding images and other attachments by locating the relevant file on your computer: You can add images and other attachments (for example Word documents) by clicking on the small open folder  icon. You can then select an image or other attachment. You can rename it in the 'Title' field, and elect whether or not the attachment should be shown in the report by clicking the 'Show in Report?' checkbox. You can then move back to a list of the notes, images and attachments you have added by clicking the small arrow  icon.
- Adding images and other attachments using drag and drop: You can add images and other attachments by physically dragging the relevant file from its location on your computer into the

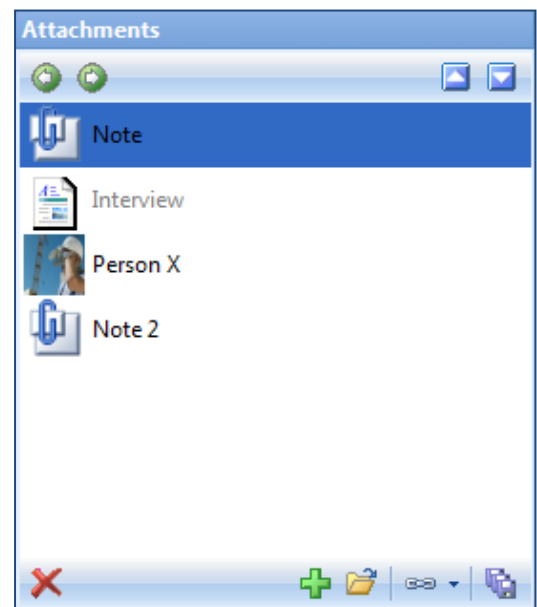






Figure 7-4 Attachments

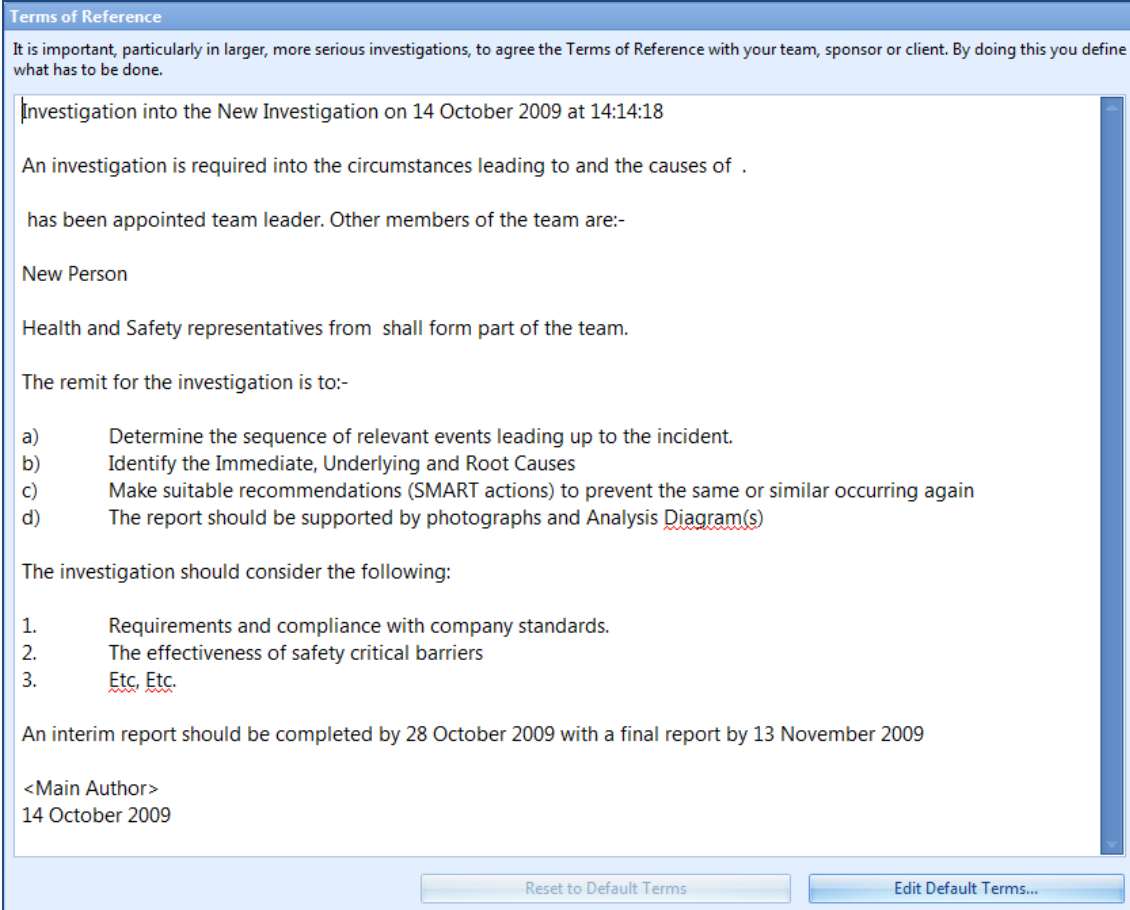
Attachments field using your mouse. You can then move back to a list of the notes, images and attachments you have added by clicking the small arrow  icon.

- Using the 'Link'  icon: If you have added an attachment previously to one individual's details, and you wish to add the same attachment to another individual's details, you can do this by using the 'Link'  icon. Use the small arrow  icon next to the icon to see the attachments you have already added elsewhere shown as a drop-down menu.

NB Please note that only plain text can be viewed in the report. This means that only text that has been copied and pasted into the 'Notes' field can be viewed in the report. Pictures can also be viewed in the report. However, it is not possible to view attached documents (for example, Word documents) in the report. Your investigator 3 file will then get inconveniently large. Investigator 3 saves the location of your document. You must save these attached files separately.

Terms of Reference

Particularly in bigger, more serious incidents, the Terms of Reference can be useful to make certain appointments. For example, who will be on the team, what methods are used and how we describe the incident. In the Terms of Reference (see Figure 8-1 Terms of **reference**), information from the Incident Details section is automatically inserted where relevant into the upper portion of the text. Then, a basic remit for the investigation is displayed. You should edit the Terms of Reference to suit your own investigation.



Terms of Reference

It is important, particularly in larger, more serious investigations, to agree the Terms of Reference with your team, sponsor or client. By doing this you define what has to be done.

Investigation into the New Investigation on 14 October 2009 at 14:14:18

An investigation is required into the circumstances leading to and the causes of .

has been appointed team leader. Other members of the team are:-

New Person

Health and Safety representatives from shall form part of the team.

The remit for the investigation is to:-

- Determine the sequence of relevant events leading up to the incident.
- Identify the Immediate, Underlying and Root Causes
- Make suitable recommendations (SMART actions) to prevent the same or similar occurring again
- The report should be supported by photographs and Analysis Diagram(s)

The investigation should consider the following:

- Requirements and compliance with company standards.
- The effectiveness of safety critical barriers
- Etc. Etc.


An interim report should be completed by 28 October 2009 with a final report by 13 November 2009

<Main Author>
14 October 2009

Reset to Default Terms Edit Default Terms...

Figure 8-1 Terms of reference

To edit the Terms of Reference:

- Simply edit the text as you wish; the existing text is just for guidance.
- If you wish to start again, click the button '*Reset to Default Terms*'.
- Be sure to save your work using the Save  button so that you do not lose your edited text.

If you wish, you can edit the default terms so that they appear as you wish them to each time you use the application:

- Click on the '*Edit Default Terms*' button to edit the existing text.
- Edit the default Terms of Reference in the 'Default Terms of Reference' window so that they appear as you wish them to.
- If you wish to start again, click 'Reset'.
- Once you are finished, click 'OK'.
- You must restart the application for the edited Terms of Reference to be displayed.

If you wish to reinstate the default terms:

- Click on Tools, then Reset User Settings.
- You must restart the application for the default Terms of Reference to be reinstated.



Report Introduction

In this section, you can create a Report Introduction and a Method of Work (see

Figure 9-1 Report Introduction & Method of Work) which will be displayed near the start of the report. Use the 'Preview & Export' and the 'Print' buttons in the toolbar to export and print the Report Introduction and Method of Work.

Report Introduction

Write your introduction in the box below. Include any extra notes or images in the Attachments section.

Attachments

Add a new note or drag and drop images or other attachments here.

Method of Work

Write your Method of Work in the box below, using the text as a guide. Include any extra notes or images in the Attachments section.

The investigation used the Kelvin TOP-SET Incident Investigation methodology.

(Specify more information using the following items as a guide)

Forming the investigation team...

Planning...

Site visit...

Interviewing...

Attachments

Add a new note or drag and drop images or other attachments here.

Reset to Default Text Edit Default Text...

Figure 9-1 Report Introduction & Method of Work

9.1 Report Introduction

To enter a Report Introduction:


- Simply enter text in to the Report Introduction field that is appropriate to your investigation.

- You can also copy and paste text in from other applications
- Add attachment in the Attachments window next to the Report Introduction section (for help see 13.3.3 Attachments).

9.2 Method of Work

The Method of Work should provide a summary for the reader of how you undertake the investigation. It should detail the methodology used, what the various steps were, and what these entail. The TOP-SET methodology is already put in here as the standard method. Off course, you can alter or remove this text if you like.

To edit the Method of Work:

- Simply edit the text as you wish; the existing text is just for guidance.
- If you wish to start again, click '*Reset to Default Text*'.
- Be sure to save your work using the *Save*  button so that you do not lose your edited text.
- Add attachment in the Attachments window next to the Report Introduction section (for help see 13.3.3 Attachments).

If you wish, you can edit the default text so that it appears as you wish it to each time you use the application:

- Click on '*Edit Default Text*' to edit the existing text.
- Edit the default Method of Work in the 'Default Method of Work' window so that it appears as you wish it to.
- If you wish to start again, click 'Reset'.
- Once you are finished, click 'OK'.
- You must restart the application for the edited Method of Work to be displayed.

If you wish to reinstate the default text:

- Click on Tools, then Reset User Settings.
- You must restart the application for the default Method of Work to be reinstated.

10

Plan Investigation

In this section you will plan the investigation and investigate to gather evidence or data.

10.1 Investigation Planner

The Investigation Planner (see

Figure 10-1 Investigation Planning Card) is a representation of the TOP-SET® Planning card, used on TOP-SET® courses and worldwide by professional investigators. The colored graphic shows the Investigation Planner in its typical form so that users are aware of its usual appearance. Behind the colored graphics you will see that the Investigation Planner has been recreated as an interactive user interface for the purposes of the program. Click on the Planner to go to the digital format of the planner, visible in

Figure 10-1 Investigation Planning Card. You can choose to hide this picture in the future by selecting the 'Do not show this again' option.

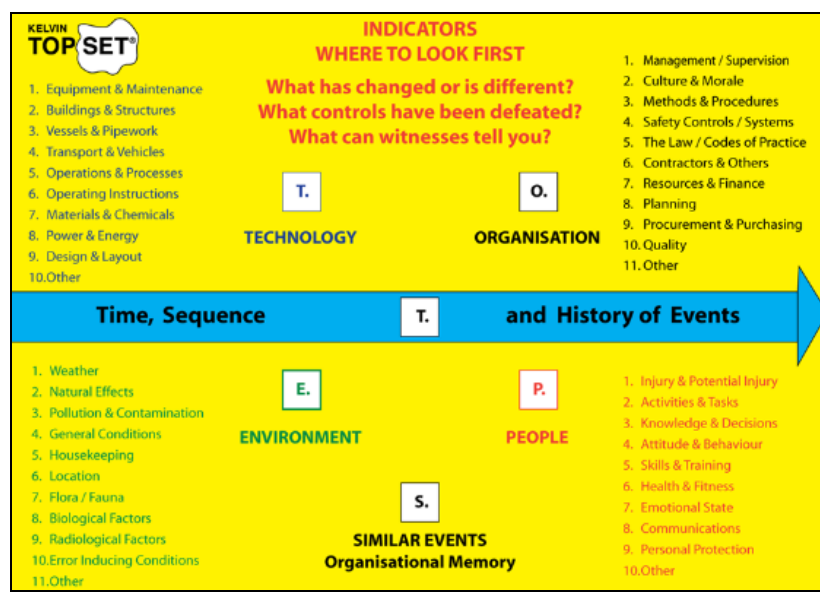


Figure 10-1 Investigation Planning Card

The investigation planner is broken down into six categories:

- **T**echnology
- **O**rganisation
- **P**eople
- **S**imilar Events
- **E**nvironment
- **T**ime

As you can see the first letters of these words make the word TOP-SET®. The meaning of the Planning Card is to plan your investigation taking into account the different categories. The indicators in the lists are reminders. The indicators are there merely to stimulate discussion and to foster an open minded in the investigator. Four of the categories have a more detailed list of indicators underneath the main heading. Users can go through the list and make actions on the indicators they think or have a feeling that might have played a role in the causation of the incident. Double-click on any indicator to add an action to the Planning / Action List using the Action / Planning Issue Editor (see



Figure 10-2 Investigation Planning). In this editor you can define the action that needs to be done with all the additional information, like who has to do it, the due date, priority, etc. You can assign the action to an individual, add a priority and due date, and mark it as complete. If necessary, you can add a new individual to the investigation team. The box at the bottom of the editor is to put the investigation findings. You can fill these in later when you have the answers to the questions of the planning items after the investigation.

Figure 10-2 Investigation Planning

On the right-hand side of the page there is a box with 'Other Planning Items' and 'Action Points'. Here, you can add actions to your investigation that may not be represented in the given lists. Continue to do this to build a Planning / Action List of things to investigate. You can still open the TOP-SET® Planner Image by clicking on the 'Show TOP-SET Planner Image' button.

10.2 Planning / Action List

In this section, a Planning / Action List of all the actions you defined in the Investigation Planner are listed, see

Figure 10-3 Planning and action list. You can arrange the items in the list by grouping them by category, or by filtering them according to the information you have entered under each category. You can move the columns simply by grabbing the title bar with you mouse and moving the column to the position you desire. You can also add or remove items on the list by clicking on the appropriate Add  or Remove  buttons.

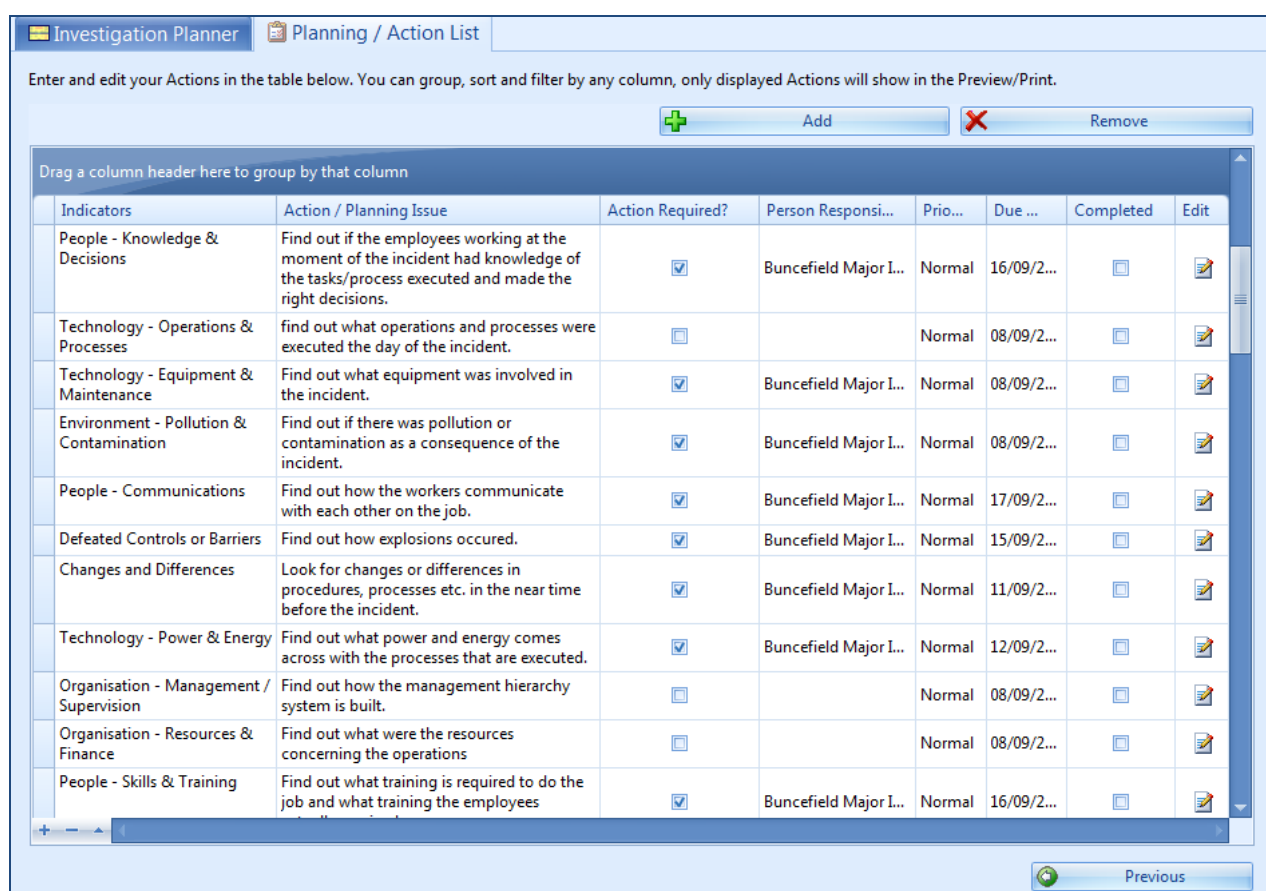


Figure 10-3 Planning and action list

To group actions (e.g. by Person Responsible):

- Grab the 'Person Responsible' title bar.
- Drag it to the dark blue box at the top of the list. Investigator 3 will automatically group your actions according to the people responsible for those actions.
- Click on the plus or minus nodes to expand or hide the details under each item in the list.
- You can 'Preview & Export' or 'Print' out these organized actions by using the print buttons on the toolbar.

Follow the same steps above to arrange by the other available categories.

To filter items:

- Arrange the items in the list the way you desire (i.e. by Person Responsible)
- In the title bar of each category there is a little pin icon.

- Click on the pin, and you can filter your results. For example, you can use the pin in the *Person Responsible* title bar to show all of the actions for which a particular individual is responsible. Only the action items that are visible in the action list will be exported or printed.

11



Develop the Storyboard

After making all the action items, the investigation is executed. When all the answers to the questions of the action items are answered, they can be collected in the Storyboard. The Storyboard is a platform where all the facts and information can be gathered. On the Storyboard platform you can place yellow sticky notes represent the different events that contributed to the incident and show the timeline involved (see Figure 11-1 Storyboard). The Storyboard is divided into five categories: Technology, Environment, Organisation, People, and Similar Events, and is organised by Time from left to right with the time the incident occurred at the very right-hand side of the graphic.

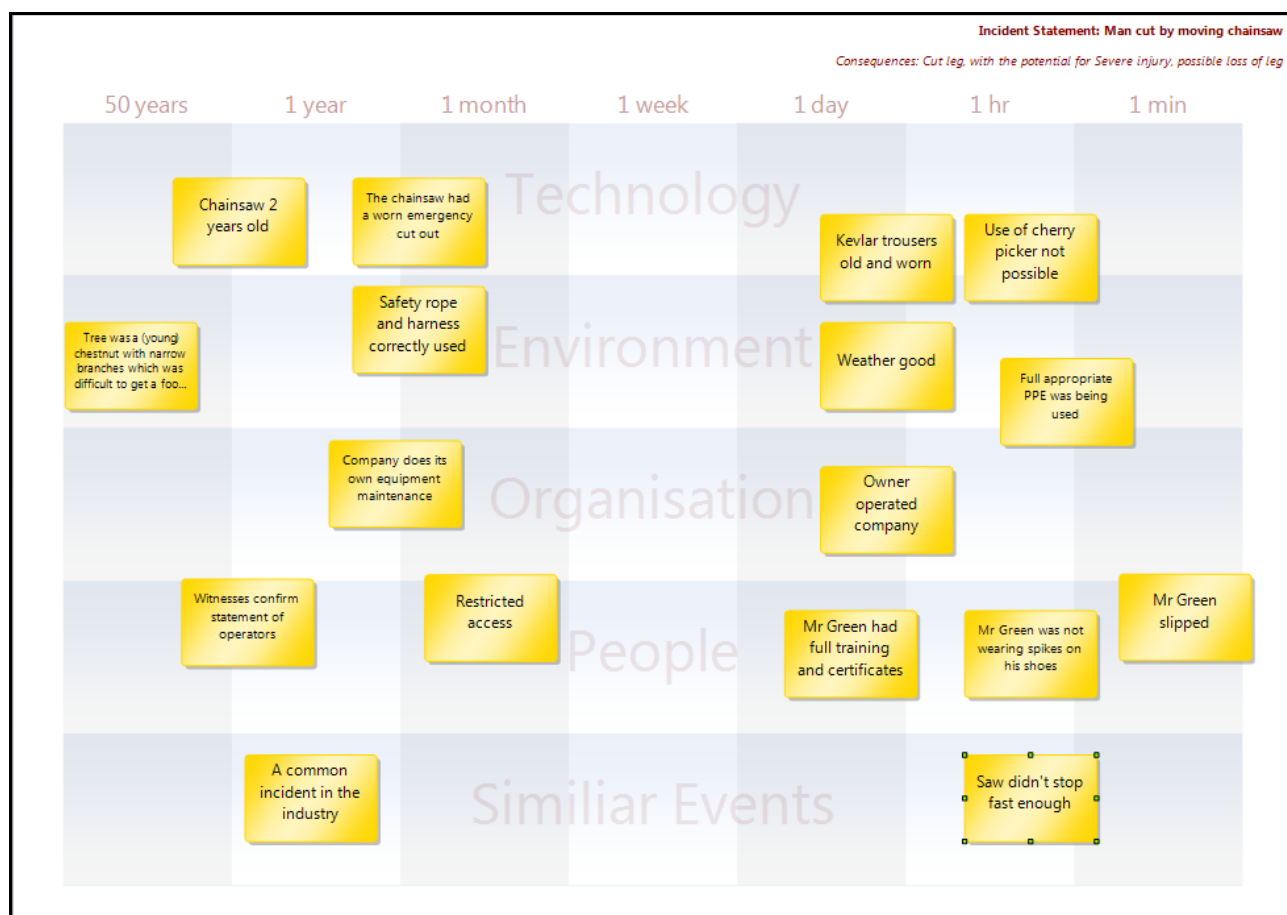

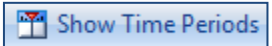



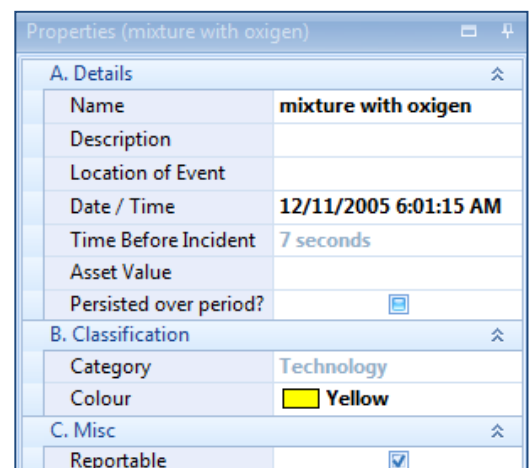
Figure 11-1 Storyboard

Sticky Notes:

- You can add sticky notes to the Storyboard by double clicking in the background. A new blank item will appear. When clicking in that item you will be able to add text. You can also right-click in the background of the storyboard to add the investigation findings which you filled in at the Planning editor. Those are the results of your investigation using the Action/Planning List.
- To create a sticky note, go to the *Actions* menu and select *Add Item*, right-click using your mouse and select *Add Item*, or simply double-click on the graphic.
- To add or edit text, double-click in the sticky note to zoom in and add or edit text. Click in the background of the Storyboard to zoom out again or press enter. To do this you have to deselect the option '*Enable single-click editing of shapes*' in Tools > Options > Diagram.
- You will see at the top-right of the graphic that the Incident Statement and Consequences of the incident are shown. This is to remind you of the specific incident you are investigating, so that you do not get too side-tracked by the events you are working with.
- Right-click on the sticky note items to delete them.
- You can modify the sizes of the sticky notes by selecting the '*Free sizing of shapes*' option in Tools > Options > Diagram. You can also modify the text size by using the big A and small a  buttons in the toolbar.
- You can position the sticky note according to when the event occurred and which category it belongs to. Turn on the timeline by clicking on the '*Show Time Periods*' button in the toolbar and just click on the sticky note to grab it and move it around the Storyboard. 
- You can change the time on the items in two ways. First, you can change the time in the Properties window > Date & Time. If you move the item around you see that time in the mouse over of the item. You can also let the time change when you reposition the item on the storyboard. For this you need to go to Tools > Options > Storyboard, then select the option '*Change date and time...*' Now when you reposition the item on the storyboard the time changes too.
- You can change the time periods when you enable the timeline on the Storyboard in the options. Go to Tools > Options > Storyboard and append and delete items with the + and –  buttons. If you make a new item, indicate how many seconds before the incident the item takes place. This way the software knows exactly where the item will be located.

Item Properties (Figure 11-2 Properties window):

- When you click on a sticky note on the Storyboard, the details associated with that note appear in the *Item Properties* window.
- Information is grouped by type: *Details (A)*, *Classification (B)*, and *Miscellaneous (C)*.




Properties (mixture with oxygen)	
A. Details	
Name	mixture with oxygen
Description	
Location of Event	
Date / Time	12/11/2005 6:01:15 AM
Time Before Incident	7 seconds
Asset Value	
Persisted over period?	<input type="checkbox"/>
B. Classification	
Category	Technology
Colour	Yellow
C. Misc	
Reportable	<input checked="" type="checkbox"/>

Figure 11-2 Properties window

- You will see that the event name appears next to *Name*.
- As you move the sticky note, the date and time of the event and the category will change depending on where you position the note.
- You can color-code sticky notes using the drop-down menu next to 'Color' in the 'Classification' section. (Click in the field to activate the drop-down menu.)
- Under *Miscellaneous*, you can choose whether each event should be included in the report (the events you select from the Storyboard will be shown in the *Timeline: Sequence of Events Leading to the Incident* subsection of the report).

11.1 Overview & attachments

- To aid in navigating the different items/sticky notes it is possible to switch between the attachments window and the overview window. You can find these windows underneath the Properties window at the left bottom side of the screen. The overview window is used to navigate the entire storyboard with. It shows you a bird's eye view of the entire Storyboard. It is a good way to navigate a complex Storyboard and zoom in on portions you wish to edit or move. To select a portion of the Storyboard, use your mouse to drag the green box over the area you wish to focus on. The Storyboard will snap to the selected section. Use the 'Fit'  button on the toolbar to show the whole Storyboard again. To find out how the Attachment window works, see 13.3.3 Attachments).

12

Identify the Immediate Causes

When you are planning to do a Root Cause Analysis, the Immediate Cause Wizard can help you identifying your Immediate Causes. This dialog box will appear in the lower right-hand corner of the Storyboard window. This wizard prompts you with relevant questions, trying to find the immediate causes of the incident. You go through the wizard with the button 'Next' and by answering 'Yes' or 'No' to all the questions. When answering yes you will identify what that immediate cause is. These immediate causes will then automatically appear in your Root Cause Diagram. You can exit the Wizard at any time by clicking the cross icon in the top-right of the Immediate Causes Wizard window, or by answering 'No' to further questions and finally 'Finish' to complete the Wizard. It is recommended that you enter no more than three or four events into the Wizard so that it is used maximally and does not become laborious.

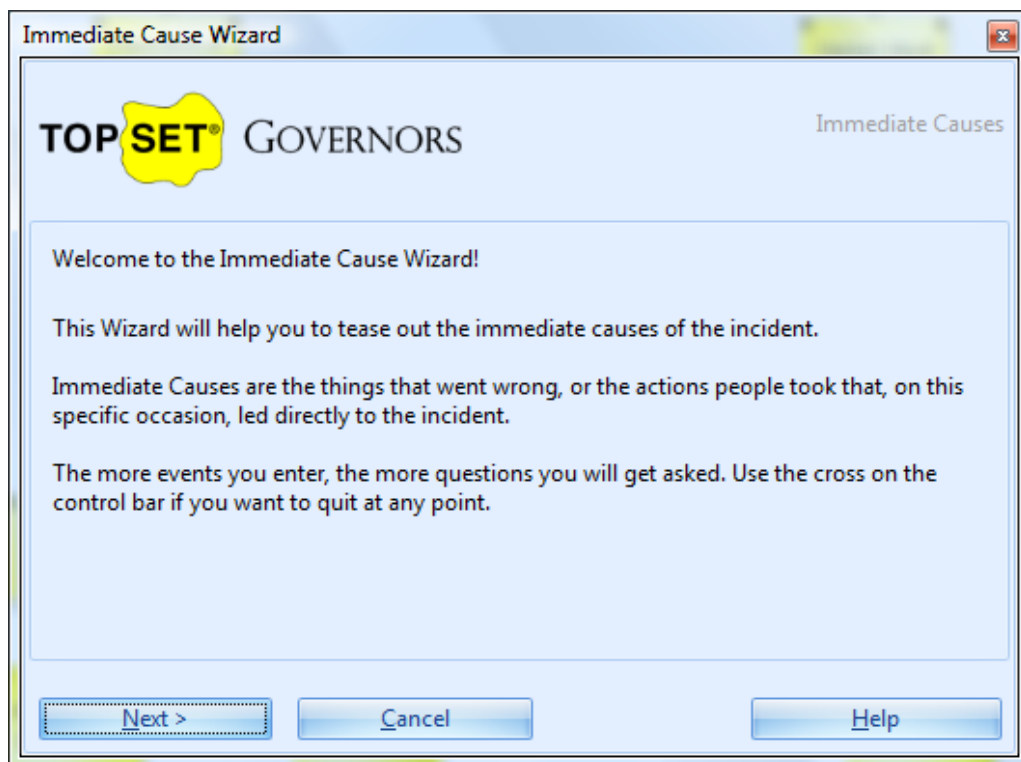


Figure 12-1 The 'Immediate Cause' wizard

13



The Analysis Diagrams

When clicking on the Analysis Diagram in the navigator you will get the choice between making a Root Cause or a Tripod Beta Diagram (see Figure 13-2). You can also make the choice at the start page in the workflow. If you want to change your choice, you will have to save a new file. You cannot save both analysis diagrams in one file.

13.1 Root Cause Diagram

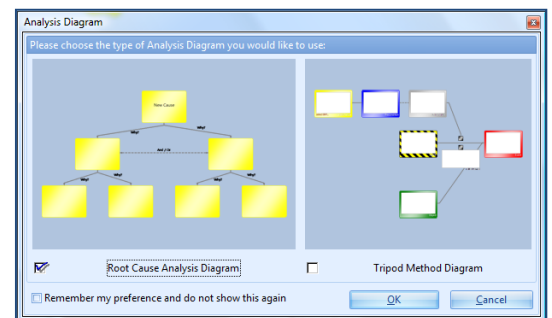


Figure 13-1 Analysis choice

The Root Cause Diagram is divided in three parts: the Immediate Causes, Underlying Causes and Root Causes (see Figure 3-2 Activation Dialog 1).

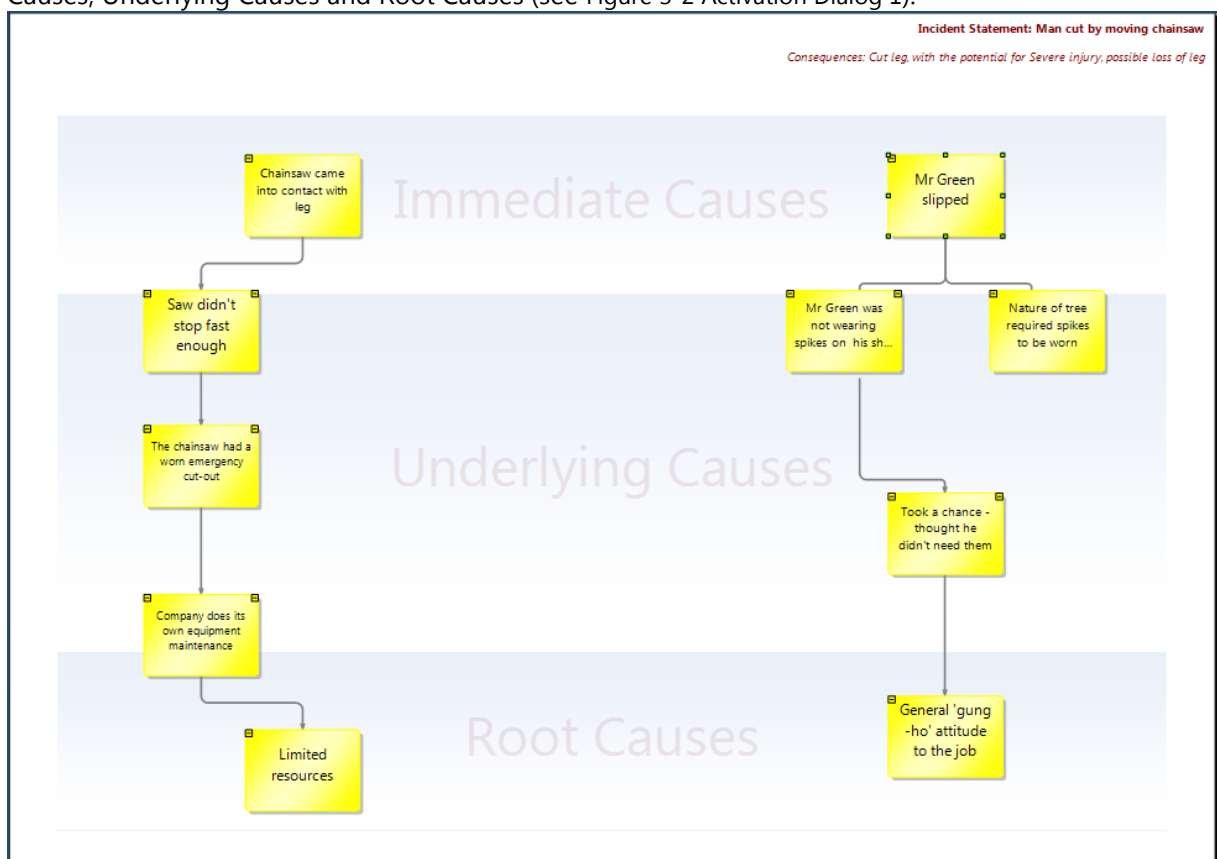


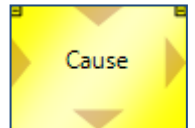



Figure 13-2 Root Cause Diagram

Building a Root Cause Diagram

- Like in the Storyboard you can double-click in the background to add new Causes. You can also right-click to add items from the Storyboard.
- When double-clicking on a previous Cause, a new Cause with a linked line will appear. Vertical lines will get the 'Why?' label and horizontal lines will get an 'And/or' labels.
- When hovering over a cause four red triangles appear in each corner of the item. You can use these triangles to draw lines in between causes. Just click in the triangle and drag a line to a triangle of another item.
- To create a new Cause, you can also go to the Actions button in the toolbar and select Add Item, right-click using your mouse and select Add Cause, or simply double-click on the graphic.
- There are several options to export your diagram. Go to Diagram > Export, here you see you can export your diagram to Visio or export it as a metafile. You will then save your diagram as a picture (.emf file). There is also a button in the toolbar  Export Metafile... you can also export your diagram by clicking at the Preview & Export button in the toolbar. A new window opens with an overview of your diagram. You can export the diagram with the export  button.
- When clicking f11 you change the window toggle mode. Press it once you get full screen, press it twice the windows and navigator disappear.



Layout options

- To add or edit text, double-click in the Cause to zoom in and add or edit text. Click in the background of the Storyboard to zoom out again or press enter. To do this you have to select the option 'Enable single-click editing of shapes' in Tools > Options > Diagram.
- When you drag and move an item, the 'children' of that item will move as well. This makes the customization of the layout easier. When you want to move just one item press the 'alt' button on your keyboard while moving the item.
- To redraw the layout of the diagram automatically, right click on any item and click on the option 'Layout Immediate Children' or 'Layout all Children'. You can also click on the *Layout* button in the toolbar.
- You can modify the sizes of the sticky notes by selecting the 'Free sizing of shapes' option in Tools > Options > Diagram. You can also modify the text size by using the big A and small a  buttons in the toolbar.
- You can color-code Causes using the drop-down menu next to 'Color' in the 'Classification' section. (Click in the field to activate the drop-down menu.)
- To select a particular part of your diagram, drag a square with your mouse over the items you want to select. The selected area will then be highlighted. This is also a way to increase or decrease letter sizes

of the text of the items at the same time or copy the selection to clipboard (when you hit the 'Copy to Clipboard' button only the selection will be copied).

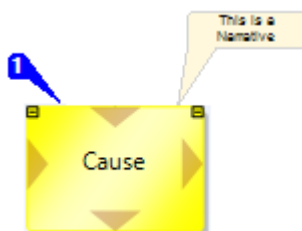
Presentation options

- When you have built a big tree and you want to present it to an audience, you do not want to show the complete tree all at once. Therefore we made it possible to 'hide' certain parts of your tree to be able to build it step by step. Right-click on a cause and you see the options '*Hide Child Elements*' and '*Hide Parent Elements*'. With these options you can hide or show the child and/or parent element attached to the selected item.
- To select a particular part of your diagram, drag a square with your mouse over the items you want to select. The selected area will then be highlighted. When you hit the 'Copy to Clipboard' button only the selection will be copied and you can export for example to PowerPoint.
- You can collapse and expand you Root Cause tree by clicking on the little yellow minuses in the upper left and right corner of the items. The right minus will collapse the parents of the item, the left minus collapses the children of the item. Then the minuses turn into plusses and you can expand your selection again.

Right-click options

When right clicking on any of the items, you get a number of options (see Figure 13-3 Right mouse click menu).

- When right clicking on a Cause the first option is to add the next Cause can be added.
- When right-clicking on a Cause you see that there are several options. You can add a Recommendation and a Narrative. When adding a Recommendation a new window opens where you can fill in all the information about that



recommendation, like who is responsible, the priority, the due date, etc. A blue balloon with the recommendation code will then appear on the item. In the narrative balloon you

can place comments or extra information.

- Then there is a Delete option, to delete the item.

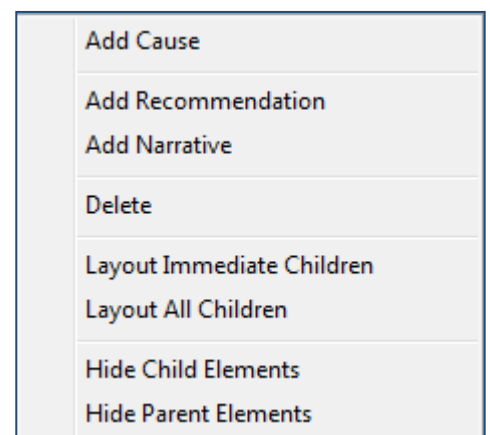


Figure 13-3 Right mouse click menu (Root Cause)

- The next options are for the layout of the children (items evolving from the selected item) of the item:
- Layout Immediate Children
- Layout All Children
- The last option is to hide child or parent elements of that particular item.

Diagram shortcut keys

Ctrl + F	Fit Diagram
Ctrl + L	Layout Diagram
Ctrl + A	Select all
Ctrl + B	Layout all Children
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + Shift + P	Pan
Ctrl + Alt + N	Hide or Show Balloons

13.2 Tripod Method Diagram

To make a Tripod diagram choose this when you get the *Analysis choice* (see Figure 13-4 Tripod Analysis Diagram) or choose 'Tripod Beta' in the drop down list under *Analysis Diagram* in the *Investigation Workflow* at the start page.

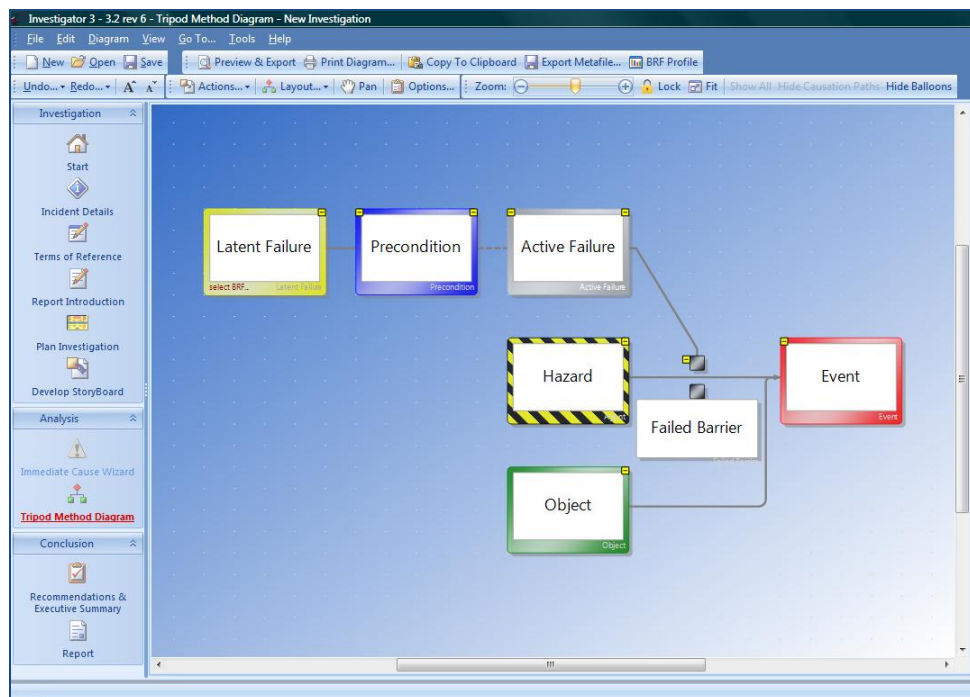


Figure 13-4 Tripod Analysis Diagram

When the Tripod Diagram opens the main Event is already defined from the one line incident statement. From this starting point you can enter, arrange, and connect the pieces of your investigation using the shapes and definitions associated with the Tripod Method (Figure 13-4 Tripod Analysis Diagram):

- Event
- Object
- Hazard
- Barrier
- Active Failure
- Precondition
- Latent Failure

To start your Tripod Diagram:

- Double-click in the Event item to create a Hazard and an Object for your first trio. (Make sure to deselect the option '*Enable single-click editing of shapes*' in Tools > Options > Diagram).
- You can continue double-clicking on every item in the diagram to create the next most logical step of building your Tripod tree. The items will automatically be connected.
- You can create additional items by using the *Actions* button in the toolbar, double clicking on existing items, or by double clicking on a blank area of the diagram.
- To add or edit text, double-click in the item to zoom in and add or edit text. Click in the background of the Storyboard to zoom out again or press enter. To do this you have to select the option '*Enable single-click editing of shapes*' in Tools > Options > Diagram.
- To connect items hover over an item and four red triangles appear in each corner of the item. You can use these triangles to draw lines in between items. Just click in the triangle and drag a line to a triangle of another item, then click and drag to the item to which you want to connect.
- When clicking f11 you change the window toggle mode. Press it once you get full screen, press it twice the windows and navigator disappear.

To add a Barrier and Causation path:

- Double-click on the line between the Event and the Hazard and/or the Event and Object to automatically add a Failed Barrier.

- To add a Missing Barrier and/or an Effective Barrier right-click on the line. You can also right click on an existing Barrier and choose *Convert to...* > Effective Barrier or Missing Barrier.
- If you double-click at a Failed Barrier, the Causation Path will be created – working backwards from the Barrier. Barrier – Active Failure – Precondition – Latent Failure.
- After that you can keep on double clicking on the different items. Double clicking on an Active Failure will create another Precondition; double clicking on the Precondition will create an extra Latent Failure, etc.

To add a BRF code to a Latent Failure:

- Once you have added a Latent Failure to your diagram, you can select a BRF code.
- In the bottom left corner of any Latent Failure item, there is a small drop-down window.
- Click on the arrow to select from the list of BRF codes provided.

Layout options

- To resize shapes select the option '*Allow free sizing of shapes*' in Tools > Options > Diagram. Then little green handles will appear on the items to make them smaller or bigger.
- When you drag and move an item, the 'children' of that item will move as well. This makes the customization of the layout easier. When you want to move just one item press the 'alt' button on your keyboard while moving the item.
- To change the color of a line, click on it and change the color in the Properties window.
- To redraw the layout of the diagram automatically, right click on any item and click on the option 'Layout Immediate Children' or 'Layout all Children'. You can also click on the *Layout* button in the toolbar.
- To change the way the diagram is drawn you can change Layout options in Tools > Options > Diagram. Under the layout section you see different options:
 - *Use right-angle links*: select this option when you want the lines from Event to Hazard and Object to appear right angled. When deselecting this option the lines will appear straight.
 - *Automatically flip barriers*: when selecting this option the barriers on the lines between Event and Object will be flipped (turned upside down). This way the Causation Paths will go down instead of up to make the layout more efficient.
 - *Tripod Causation Path Link Styles*: choose how you want the lines from the Barriers to the Active Failures to appear. You have the choice between Straight, Curved and Right-Angle.

- *Tripod Diagram Alignment*: choose how you want your diagram to be aligned. Top (default): the Event appears on top (next to the Hazard), Centre Children: the Event appears in the middle of the Hazard and Object, Centre Sub Trees: the main trio appears as default, the sub trees appear as 'Centre Children' and Bottom: the Event appears at the bottom of the diagram (next to the Object).

Presentation options

- When you have built a big tree and you want to present it to an audience, you do not want to show the complete tree all at once. Therefore we made it possible to 'hide' certain parts of your tree to be able to build it step by step. In the toolbar you find two 'hide' buttons; 'Hide Causation Paths' and 'Hide Balloons'. When you click on the buttons again, the items appear again, you can also click on the button 'Show all'.
- To select a particular part of your diagram, drag a square with your mouse over the items you want to select. The selected area will then be highlighted. This is also a way to increase or decrease letter sizes of the text of the items at the same time or copy the selection to clipboard. When you hit the 'Copy to Clipboard' button only the selection will be copied and you can export for example to PowerPoint.
- You can collapse and expand you Tripod tree by clicking on the little yellow minuses in the upper left and right corner of the items. The right minus will collapse all the items at the right side of that item, the left minus collapses the children of the item. Then the minuses turn into plusses and you can expand your selection again.
- When right-clicking on an item you can choose to hide the child or parent elements. This way you can hide or show different parts of your diagram to be able to present it step by step.

Right-click options

- When right clicking on any of the items, you get a number of options (see Figure 13-5 Right mouse click menu (Tripod))

General

- When right clicking on an item the first options are to add the next items that can be added.
- The next general option is to add a Recommendation and a Narrative. When adding a Recommendation a new window opens where you can fill in all the information about that recommendation, like who is responsible, the priority, the due date, etc. A blue balloon with the recommendation code will then appear on the item. In the narrative balloon you can place comments or extra information.
- Then there is a Delete option, to delete the item.

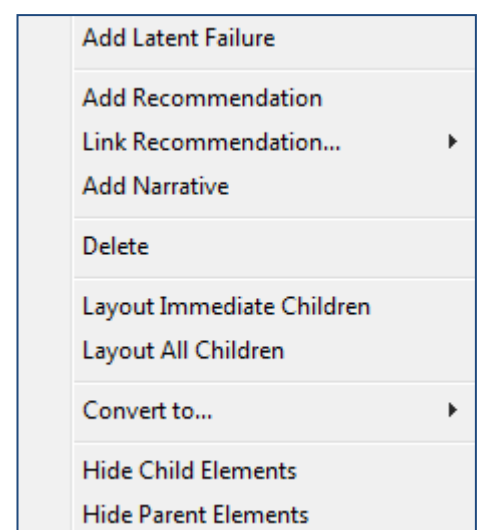


Figure 13-5 Right mouse click menu (Tripod)

- The next options are for the layout of the children (items evolving from the selected item) of the item:
- Layout Immediate Children
- Layout All Children
- Then there is an option to convert the item to another item. With this option you can change the item into another item of the Tripod Diagram.
- The last option is to hide child or parent elements of that particular item.

Then there are a few options that count for only particular items:

Event/Hazard/Object

- The option to Append Event and Append Event and Convert to... With this option you can append an extra Event in the trio. With the option convert to, you append an Event and you can also convert to item to a combined node (for example Event/Hazard combination).

Barriers

- The first Barrier option is to move the Barriers left or right as opposed to other Barriers.
- The next option is to flip the Barrier. With this option you can turn the Barrier upside down to optimize the layout of the diagram. The Causation path will also be drawn downwards to make the layout more efficient.
- The last option for the Barrier is to insert another Barrier to the right or left from that item. You can choose to add a Missing Barrier, a Failed Barrier or an Effective Barrier.

Diagram shortcut keys

Ctrl + F	Fit Diagram
Ctrl + L	Layout Diagram
Ctrl + A	Select all
Ctrl + B	Layout all Children
Ctrl + Z	Undo
Ctrl + Y	Redo
Ctrl + Shift + P	Pan
Ctrl + Alt + N	Hide or Show Balloons

13.3 Analysis Diagram windows

13.3.1 Item Properties (Figure 13-6 Properties window):

- You can also edit the name, description, location of event, date and time, and other information in the Item Properties Window on the right side.
- To the right bottom side of your diagram there is a smaller window where you can edit information directly.
- Any changes made here will be reflected instantly in your diagram.

Properties (Event)	
A. Details	
Name	Event
Description	
Location of Event	
Date / Time	
Time Before Incident	
Asset Value	
Persisted over period	
B. Classification	
Category	
Colour	
C. Misc	
Reportable	<input checked="" type="checkbox"/>

Figure 13-6 Properties window

13.3.2 Overview (Figure 13-7 Overview window):

- Choose between the *Overview*, *Recommendations* and *Attachment* windows using the tabs at the bottom of the windows.
- The *Overview* window shows you a bird's eye view of the entire Tripod Method Diagram/Root Cause Diagram. This is a good way to navigate a complex Diagram and zero in on portions you wish to edit or move.
- To select a portion of the Diagram, use your mouse to drag the green box over the area you wish to focus on. The Diagram will snap to the selected section.
- Use the *Fit* button on the toolbar to show the whole Diagram again.

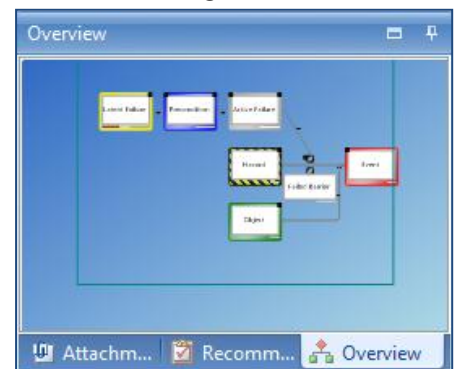


Figure 13-7 Overview window

13.3.3 Attachments (Figure 13-8 Attachments window):

Adding Notes:










- Click the plus  button to create a new note
- Provide the note with a title and add your note text in the field marked 'Notes', or copy and paste your note text from another document into this field. (NB Please note that it can be very useful to add interview notes in this way.) The text you enter into this field can be shown in the report or left out by clicking the Show in Report checkbox. You can then move back to a list of the notes, images and attachments you have added by clicking the small arrow  button.

Figure 13-8 Attachments window

Adding images and other attachments:


- Adding images and other attachments by locating the relevant file on your computer: You can add images and other attachments (for example Word documents) by clicking on the small open folder icon . You can then select an image or other attachment. You can rename it in the 'Title' field, and elect whether or not the attachment should be shown in the report by clicking the Show in Report? checkbox. You can then move back to a list of the notes, images and attachments you have added by clicking the small arrow  button.
- Adding images and other attachments using drag and drop: You can add images and other attachments by physically dragging the relevant file from its location on your computer into the 'Attachments' field using your mouse. You can then move back to a list of the notes, images and attachments you have added by clicking the small arrow  button.
- Using the 'Link'  button: If you have added an attachment previously to one individual's details, and you wish to add the same attachment to another individual's details, you can do this by using the 'Link'  button. Use the small arrow  button next to the icon to see the attachments you have already added elsewhere shown as a drop-down menu.
- Saving the attachments to disk: Use the small Save  icon to save your attachments to a location of your choosing.

NB Please note that only plain text can be viewed in the report. This means that only text that has been copied and pasted into the 'Notes' field can be viewed in the report. Pictures can also be viewed in the report. However, it is not possible to view attached documents (for example, Word documents) in the report. You must save these files separately.



Recommendations & Executive Summary



14.4 Recommendations

In this section of the software, the recommendations made by you or your team are displayed. The recommendations that are added in the Diagram section are automatically added in this section. But you can also add new recommendations here by using the *Add*  button. You can also add a new recommendation by clicking the little plus button at the bottom left of the table. When clicking these buttons a new window opens (see

Recommendations Executive Summary

List of Recommendations

Enter your Recommendations in the table below. You can group, sort and filter by any column. Only displayed Recommendations will show in the Preview/Print.

 Add  Remove

Drag a column header here to group by that column

Ref. Code	Recommendation	Due Date	Person Responsible	Priority	Complete	Edit
Click the Add button to create a new Recommendation.						

Next

Figure 14-1 Recommendations section (1) where you can fill in all the information about your recommendation: the person responsible, priority, due date and whether it is completed or not. All the recommendations will appear in a table. You can arrange this table by name, person responsible, date, and priority. You can add or remove recommendations on this screen by clicking on the appropriate buttons.

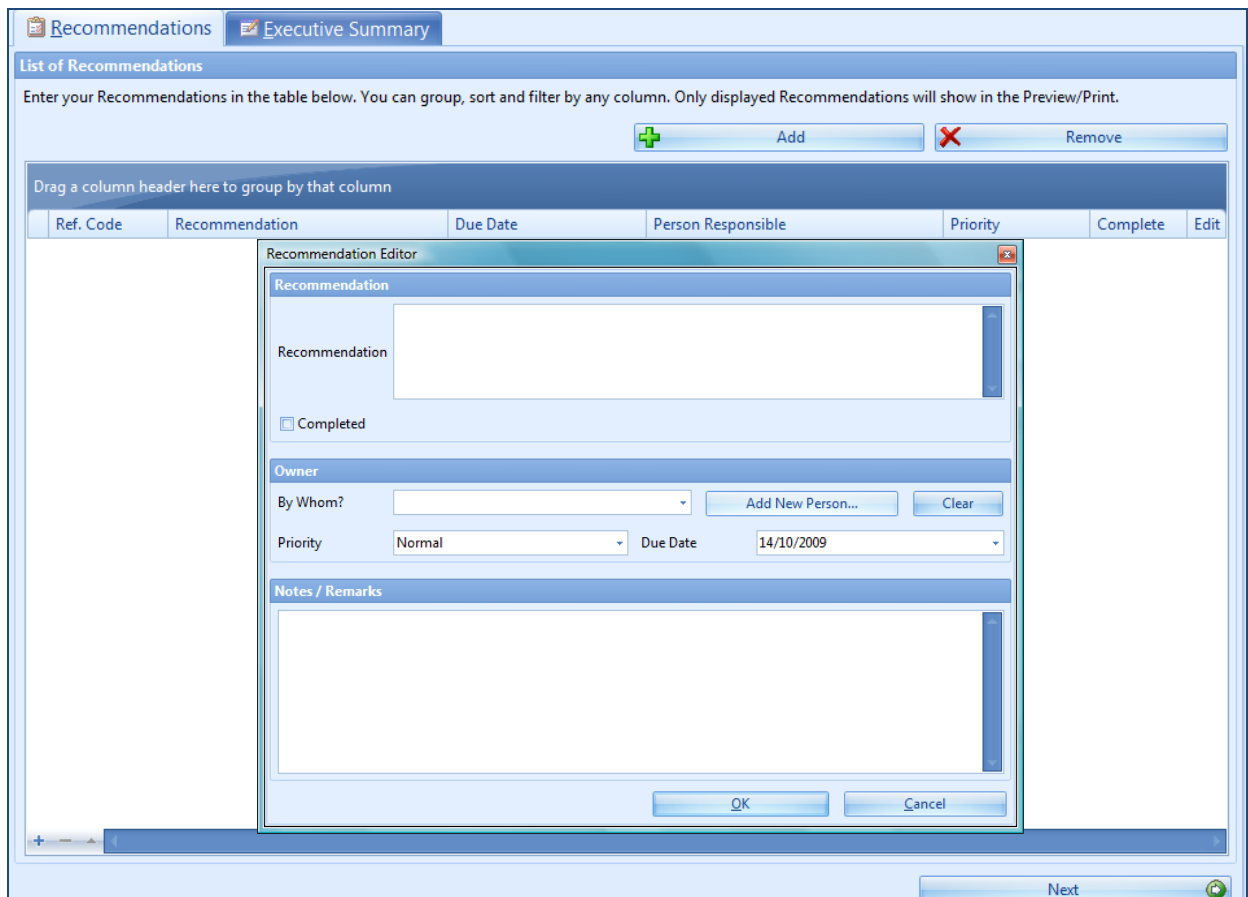


Figure 14-1 Recommendations section (1)

To group the Recommendations table (e.g. by person responsible):

- Grab the *Person Responsible* title bar.
- Drag it to the dark blue box at the top of the list.
- **Investigator 3** will automatically group your actions according to the people responsible for those actions.
- Click on the plus or minus nodes to expand or hide the details under each item in the list.
- You can Preview & Export or Print out these organized actions by using the print buttons on the toolbar.

Follow the same steps above to arrange by the other available categories.

To filter the Recommendations table:

- Arrange the items in the list the way you desire (i.e. by person responsible)
- In the title bar of each category there is a little pin icon.
- Click on the pin, and you can filter your results (see Figure 14-2 Recommendations section (2))

- Use the *Preview & Export* button in the toolbar to export your selection of the list or print it. This is useful for providing people with specified lists – to assign actions, to group by date, etc.

Recommendations Executive Summary

List of Recommendations

Enter your Recommendations in the table below. You can group, sort and filter by any column. Only displayed Recommendations will show in the Preview/Print.

+ Add - Remove

Drag a column header here to group by that column

Ref. Code	Recommendation	Person Responsi...	Due Date	Priority	Complete	Edit
1	Training of personnel in monitoring	Estella Groeneweg	(Custom)	Normal	<input type="checkbox"/>	
2	Redesign of tanks for making release of fuel and formation of vapour impossible	Estella Groeneweg	(Blanks)	Normal	<input type="checkbox"/>	
3	Improving or creating emergency system	Management	(Non blanks)	Normal	<input type="checkbox"/>	
4	Improving maintenance procedures	Management	Estella Groeneweg	Normal	<input type="checkbox"/>	
5	Better monitoring of tanks and pipes	Estella Groeneweg	Management	Normal	<input type="checkbox"/>	
6	Create workable procedures	Management	25/08/2009	High	<input type="checkbox"/>	
7	Creating detection system of gas levels	Estella Groeneweg	06/10/2009	Normal	<input type="checkbox"/>	
8	Increase awareness of safety with management	Estella Groeneweg	16/07/2009	Urgent	<input type="checkbox"/>	

Figure 14-2 Recommendations section (2)

13.4 Executive Summary

When clicking in the *Next* button or clicking on the tab you go to the next section: the Executive summary (see Figure 14-3 Executive Summary). The Executive summary section consists of two parts: Discussion of Findings and Conclusion. These are basically free text fields to write your findings and discussion. You can also copy-paste text from Word or other applications. Again, you can use the *Preview & Export* or *Print* buttons in the toolbar to export or print this section.

Recommendations

Executive Summary

Discussion of Findings

Discuss your findings in the box below.

Conclusion

Write your conclusions in the box below.

Previous

Figure 14-3 Executive Summary

15

Report

When you click on Report in the navigator, your investigation report will be created automatically based on all the information you provided in the program (see Figure 15-1 Report). On the left side of the screen, there is a Document Map you can use to navigate through your final report. You can click on the plus or minus nodes to expand or hide the subheadings. To adjust settings for the report, like font size or select certain options go to Tools > Options > Report or Word Report.

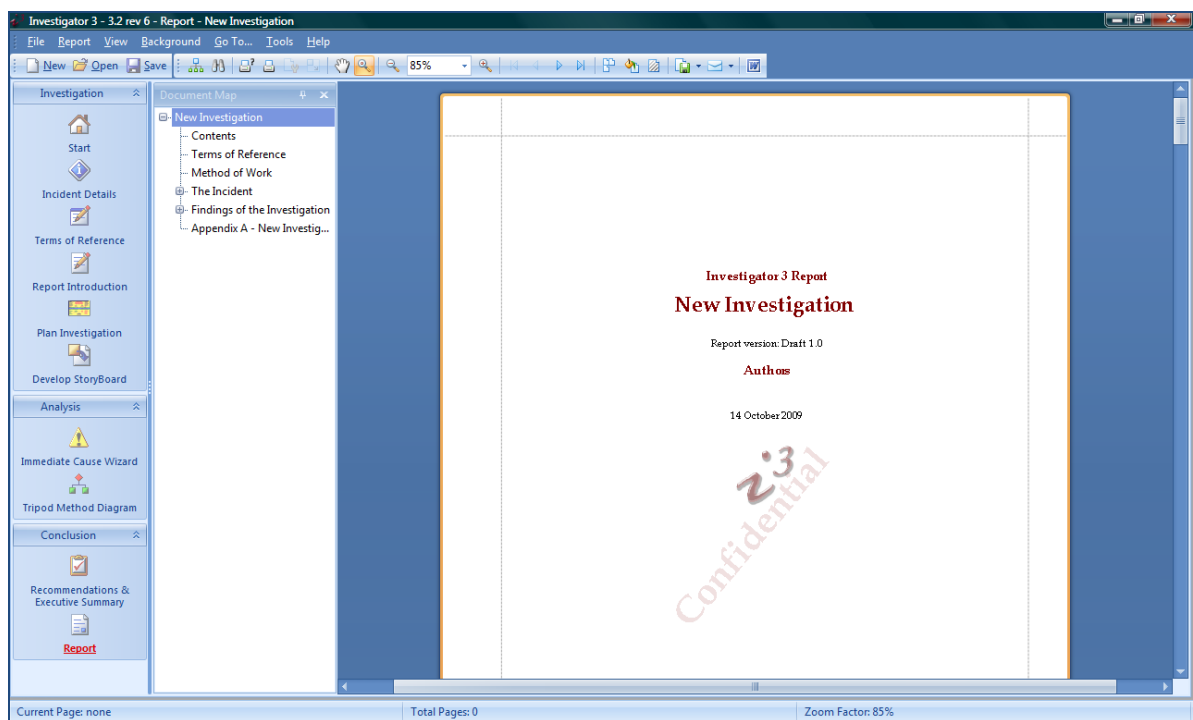


Figure 15-1 Report



Investigator 3 creates the following chapters in your report:

- Contents
- Terms of Reference
- Discussion of Findings
- Conclusion
- Recommendations
- Introduction
- Method of Work
 - Investigation Team

- The Incident
 - Description of the Incident
 - Consequences
 - Detailed description of the Incident
 - When it happened
 - Where it happened
- People Involved
 - Injured People
 - Other People
- Findings of the Investigation
 - Timeline of events
 - Immediate Causes of the incident
 - Underlying Causes of the incident
 - Root Causes of the incident
- Appendixes
 - Analysis Diagram (either Tripod or Root Cause)
 - Persons Interviewed
 - Injury Reports


15.1 Layout of the report

There are several adjustments you can make for the layout of the report:

- Background color: click on the *Color*  button in the toolbar to choose a background color for your report.
- Watermark: click on the *Watermark*  button in the toolbar to open the Watermark window. Here you can choose all the options for the watermark like text, color, size or if you would like a picture as a watermark. You can also change some Watermark settings in Tools > Options > Report.
- Company logo: go to Tools > Options > Report. Here you can right-click on the report logo to edit or change it to your company logo.



15.2 Exporting the Report

There are several ways to export you report:

- Use the Word  button in the toolbar to export directly to Word (see
-
-
-
-

-
-
-

Figure 15-2 Word Report). The software will then ask you to name your word report and if you want to open the file. In Word the report will be fully editable. The report is already put in a template where the contents are automatically updated when you make changes in the chapters. Just press F9 and click on the company logo to update the contents.

- You can also click on the Export  button in the toolbar to export your report to different applications. You can export the report as a PDF file, HTML file, RTF file, Excel file, etc.
- You can also send your report as an email with the email  button in the toolbar. Again you can choose from different formats.

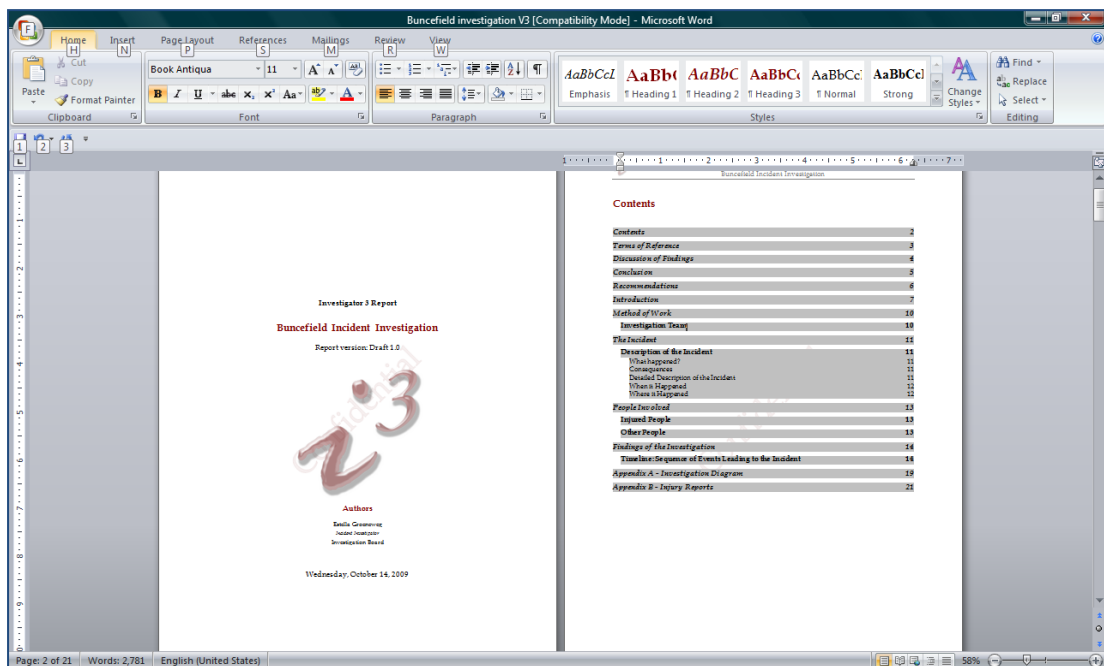
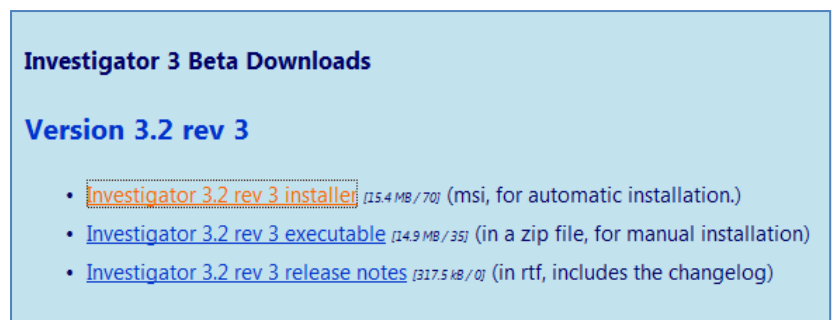


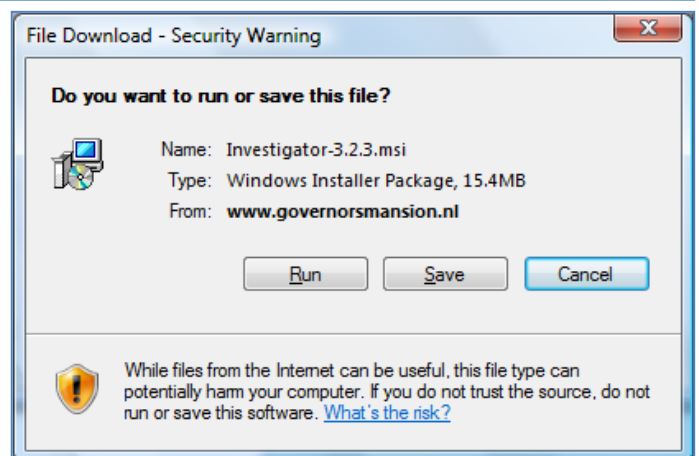
Figure 15-2 Word Report

How to install Investigator 3 – MSI

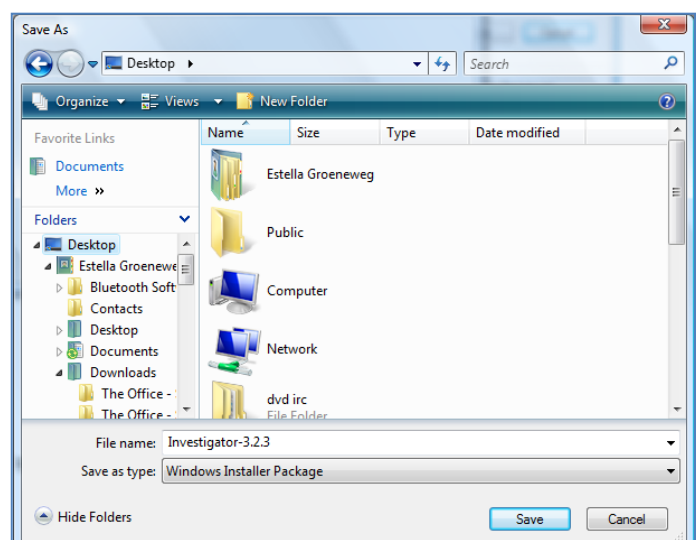
1. Click on the download link



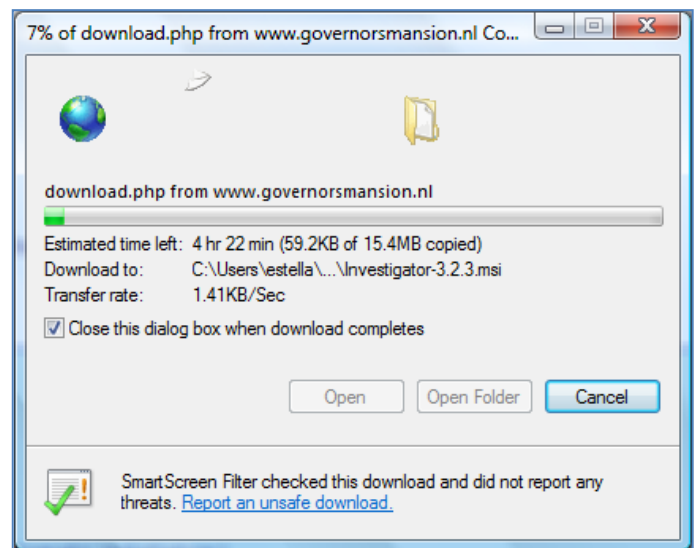
2. Click on Save



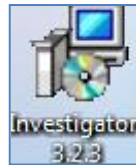
3. Save the installer



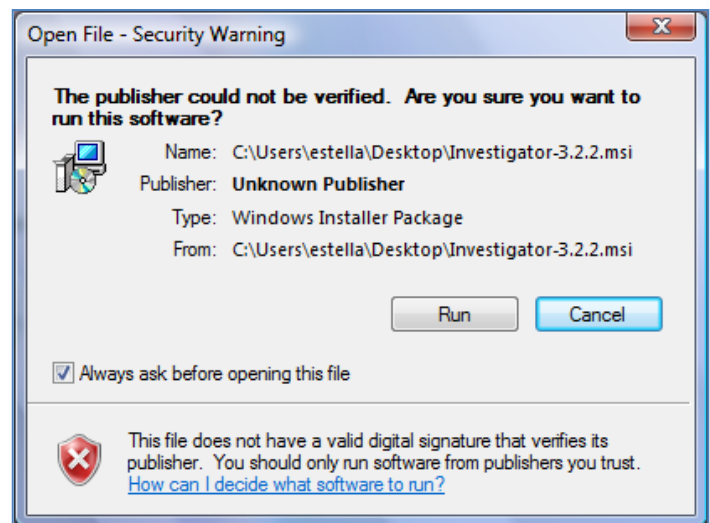
4. Download the installer



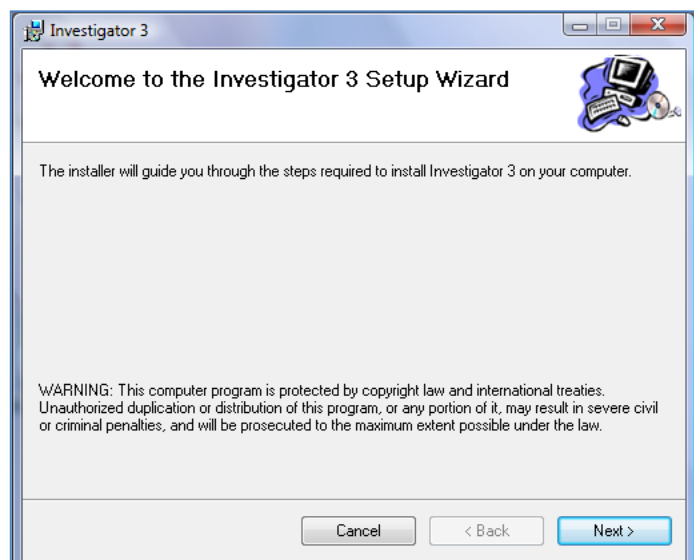
5. Open the file (double click icon)



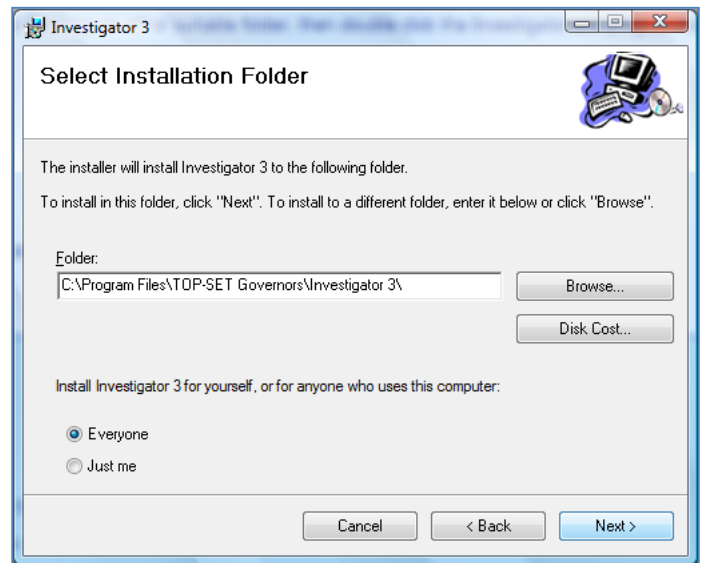
6. Run the software



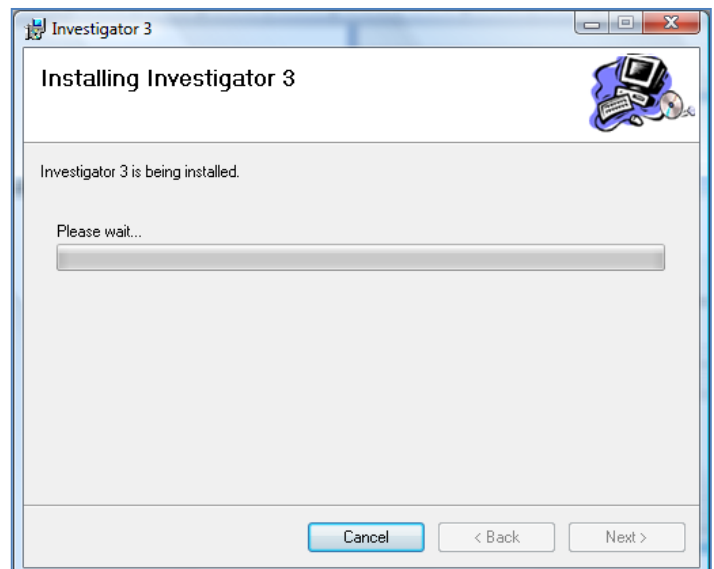
7. Start the Wizard



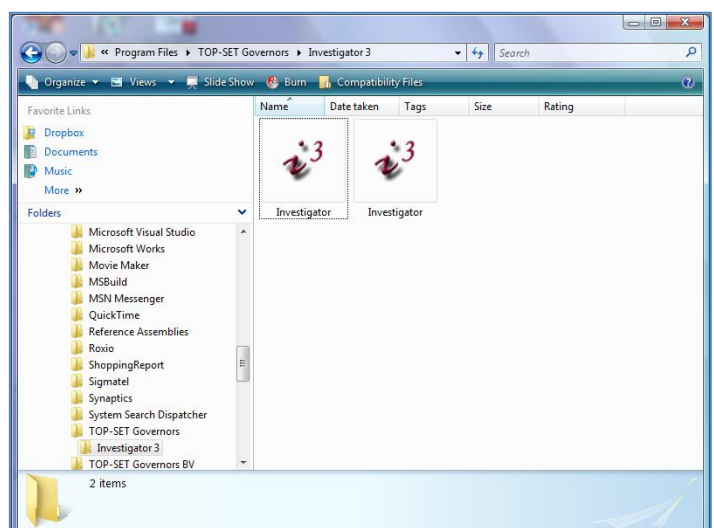
8. Select installation location



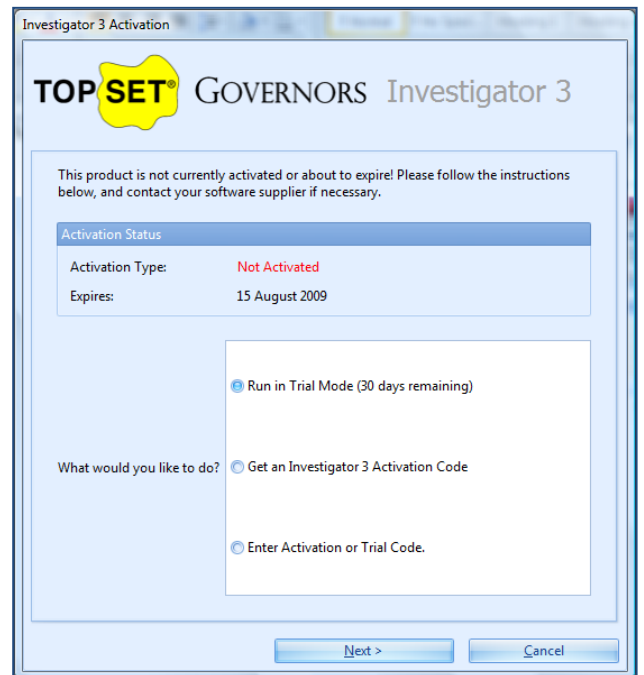
9. Install the software



10. Open the software from the saved location



11. Run the software and choose how you want to run the software



B

Attachment

How to install Investigator 3 – zip

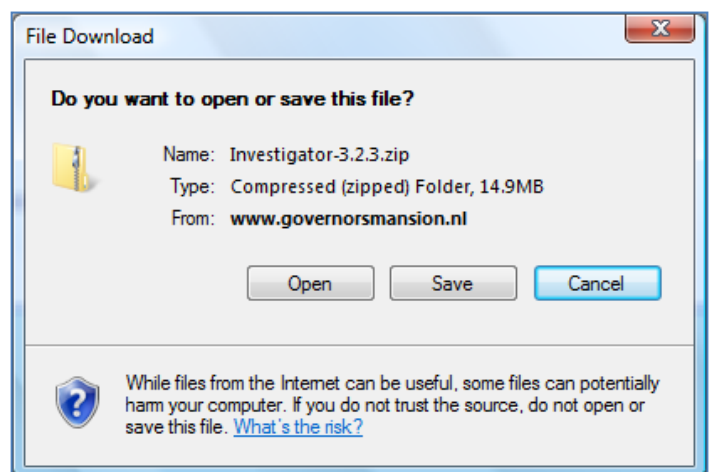
1. Click on the download link

Investigator 3 Beta Downloads

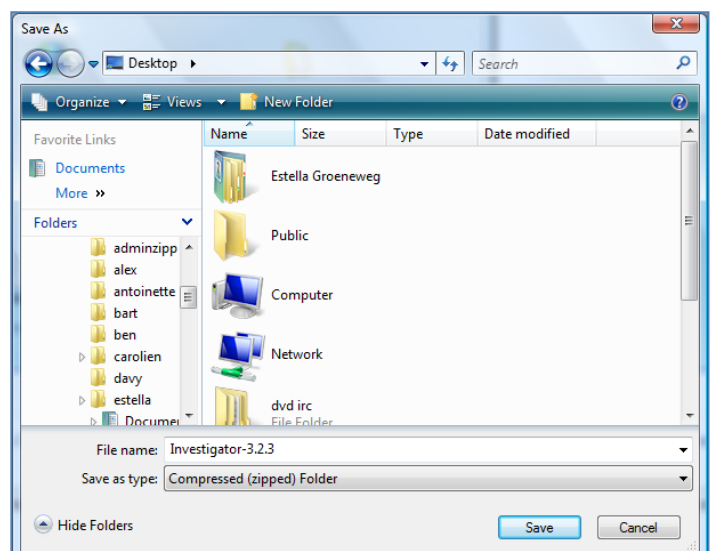
Version 3.2 rev 3

- [Investigator 3.2 rev 3 installer](#) [15.4 MB / 77] (msi, for automatic installation.)
- [Investigator 3.2 rev 3 executable](#) [14.9 MB / 35] (in a zip file, for manual installation)
- [Investigator 3.2 rev 3 release notes](#) [317.5 kB / 0] (in rtf, includes the changelog)

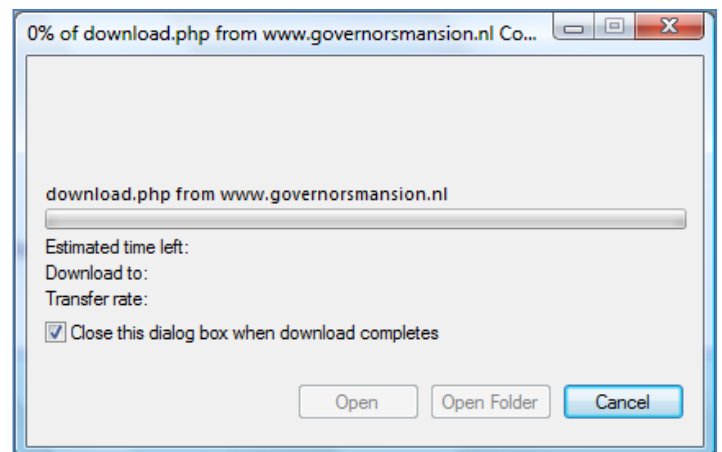
2. Click on Save



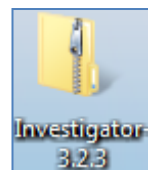
3. Save the file



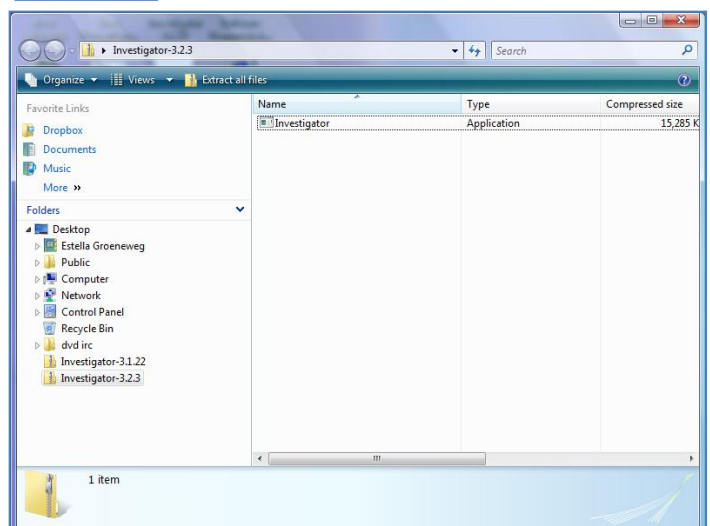
4. Download the file



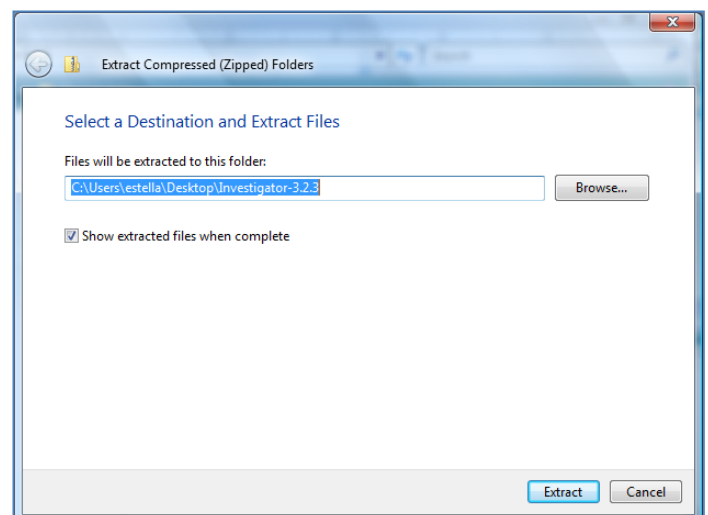
5. Open the zipfile (double click icon)



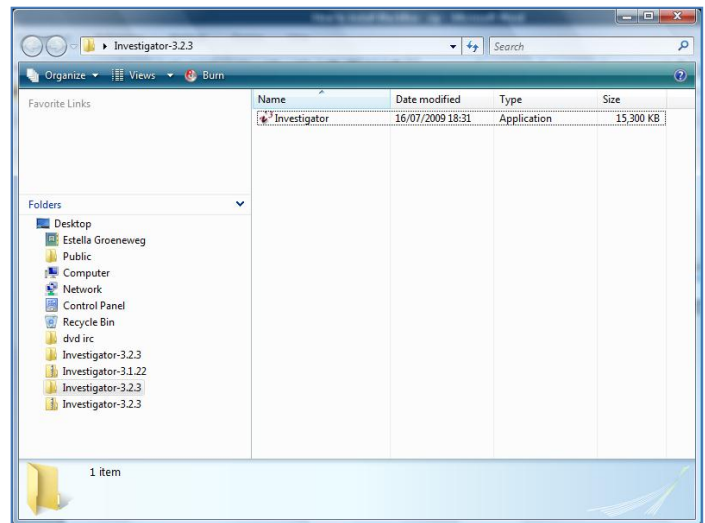
6. Extract the zipfile



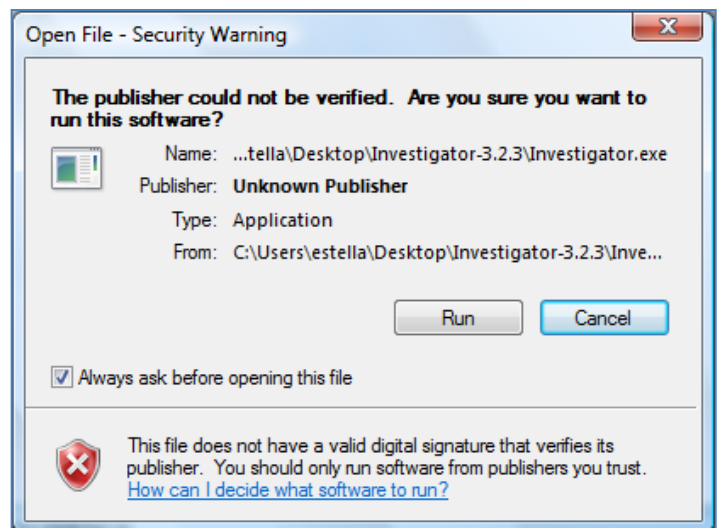
7. Select a destination for the file



10. Open the software from the saved location



11. Run the software



12. Choose how you want to run the software

