



# Manual

# Risk Processor

## Risk register

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Manual version	Belongs to software version
<b>manual risk processor en v_5_12_1.docx</b>	This guide is part of Risk Processor version 5.12.

Do you have comments about this manual, or did you find errors? If so please let us know on [info@assetresolutions.nl](mailto:info@assetresolutions.nl)

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# 1 Introduction

Congratulations with the purchase of Risk Processor. The aim of the system is to support the efficient management of risks. In this document the functionality of Risk Processor is described. The structure of this manual is as follows:

1. A general introduction is described in this chapter
2. Installation of the software and backup is mentioned in chapter 2
3. In chapter 3 the structure of the program is described. Think of functions such as buttons and the function per button, worksheets and links to where they are explained in this manual. Also the dashboard is addressed
4. Configuration of the application is described in chapter 4 (e.g. to set the language, frequency band and effect matrix)
5. Working with risks is explained in chapter 5 (enter risks, edit risks and delete risks)
6. Reporting on the risk register is discussed in chapter 6
7. Securing data is explained in chapter 7
8. In chapter 8 the advanced management of the risk register is described (manually updating data lists and the risk register)
9. Troubleshooting is dealt with in chapter 9
10. Frequently asked questions can be found in chapter 10.

Risk Processor can be integrated with the Corporate version. Via [www.assetresolutions.nl/en](http://www.assetresolutions.nl/en) Risk Processor and Risk Processor Corporate can be ordered.

Always make sure you have a backup of the software. Other starting points are mentioned in the license agreement.

## 2 Installation of the software and start the application

### 2.1 Install software

The software can be installed and used in every directory, where you have sufficient authorizations. In case there is a company computer network, it could be efficient to install the software on this network.

The software contains of a number of an Excel file with the extension xlsx.

The installation consists of a number of easy steps:

1. create a directory in which the tool needs to be installed
2. copy the file with extension .xlsx in this directory.

The application can be started via the Windows browser and double click on the xlsx file, see paragraph 2.2.

### 2.2 Start the application

The application can be started via standard Windows functionality. If for example the Windows Explorer is applied, then double click on the application. In the Explorer the application can (dependent on the version) be recognized by this icon (figure 2.1):



Figure 2.1 Icon application

In order to make use of the application basic Microsoft Windows and Excel knowledge is required. When the application is started, acceptance of the license is required. The application does not start when the license is rejected.

After accepting the license agreement, this agreement can be seen via the sheet 'license'.

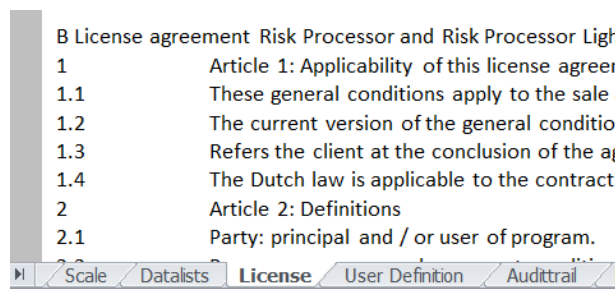


Figure 2.2 Sheet license

## 3 Structure of the application

In this chapter the structure of the program explained. After a brief introduction on the risk register, the screens and worksheets are discussed. Referral is made to the relevant chapters and paragraphs in this manual. Colour conventions are also explained and the protection of the worksheets is described. Finally the worksheet Dashboard is explained.

In this document in a number of cases is referred to cells. If for example R2C9 is mentioned, we mean Row 2 Column 9 on the relative worksheet (if another language version of Excel is applied different codes could be used, e.g. R2K9).

### 3.1 Introduction risk register

Each company faces risks. Risks can affect different business values, such as financial, quality, environment and safety. Companies define mitigation measures for the risks. These risks can be recorded in a risk register. Risk Processor is a risk register.

The application is able to capture for each risk the likelihood and impact of the risk. For each risk the impact on various business values can be determined as well as the total monetary impact. The risks can be shown on a risk matrix. If necessary, the risk register can will be integrated into an enterprise-wide solution (requires full version of Risk Processor and Risk Processor Corporate. See our website <http://www.assetresolutions.nl/en/products>).

To get an overview of the quantified risks, the following activities need to be performed:

1. Define the frequency of the risk matrix
2. Create an effect matrix
3. Define the risks
4. Show the risks.

The information is stored in different worksheets in the application. The worksheets of the application are presented in the next paragraph.

### 3.2 Screens and worksheets

The application consists of several worksheets. The worksheets are listed below including a brief explanation and a reference with more details:

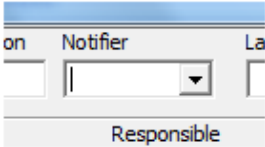
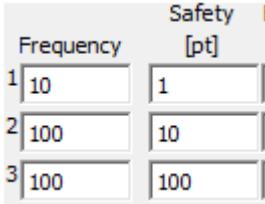
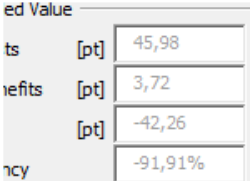
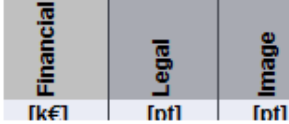
Worksheet	Explanation	Reference to more details
Dashboard	<p>In this worksheet the risk matrix is shown including the risks and the risk level per risk. Through this worksheet, the risks can be entered, changed and deleted.</p> <p>The frequency of the risk matrix is also set on this worksheet.</p> <p>A backup of the entire risk register can also be made on this worksheet (full version of Risk Processor only).</p>	<p>Paragraph 3.5 and chapters 4, 5 and 6.</p> <p>Paragraph 4.1</p> <p>Chapter 7</p>

<b>Worksheet</b>	<b>Explanation</b>	<b>Reference to more details</b>
Risk register	<p>On this worksheet the data of the added risks is stored.</p> <p>If desired, on this sheet data can be filtered, removed or changed so that the risks are not shown or shown differently in the corporate risk register.</p> <p>After an import of data from one department, the previous contents (if any) will be removed by the application.</p>	Paragraph 8.2
Effect matrix	Here the effect matrix is defined and maintained. This effect matrix is used on the worksheet 'Dashboard'.	Paragraph 4.3
Scale	Within the risk register can be worked with several areas. Here the weighting factor of risk can be entered per area.	Paragraph 4.8
Datalists	Here the selection lists are stored. These lists are used on the risk screen.	Paragraph 8.1
User Definition	For a number of fields in the program labels can be shown which deviate from the chosen language. On this sheet these labels can be changed.	Paragraph 4.7
Audittrail	On this worksheet, changes are stored through the screen, as described in chapter 6.	Paragraph 8.3
Opstartscher (startup screen)	Displays the version of the application as well as the customer to whom the license is provided.	N.A.
Licentievoorwaarden (license agreement)	This sheet shows the applicable license agreement.	Paragraph 2.2

Do not change the sequence of worksheets and do not change the names of the worksheets as well. Then the application could not work correctly.

### 3.3 Colour conventions

The colour conventions of the different fields match the default Windows convention:

Kind of field	Example	Explanation									
White  Empty field without text		In such a field data can be added. After adding the field it looks like as can be seen in the next line.									
White  Text has colour black	 <p>or</p> <table border="1" data-bbox="555 1019 869 1209"> <thead> <tr> <th>Environmen</th> <th>Financial</th> <th>Legal</th> </tr> <tr> <th>[pt]</th> <th>[k€]</th> <th>[pt]</th> </tr> </thead> <tbody> <tr> <td>25000</td> <td>25000</td> <td>25000</td> </tr> </tbody> </table>	Environmen	Financial	Legal	[pt]	[k€]	[pt]	25000	25000	25000	Contents can be changed or be deleted. Field was initially white (as above).
Environmen	Financial	Legal									
[pt]	[k€]	[pt]									
25000	25000	25000									
White  Text has grey colour		Field cannot be changed. In some cases the contents is automatically calculated on basis of input from other fields.									
Grey with black text		Contents of these fields cannot be changed.									

### 3.4 Protection of worksheets

The data on the worksheets is by default protected. There is no password protection, so the user makes changes at own risk. If a change is required, this can be done via Excel functionality. For Excel Office 7 in figure 3.1 it can be done via the worksheet 'Review' with the button 'Unprotect sheet'.



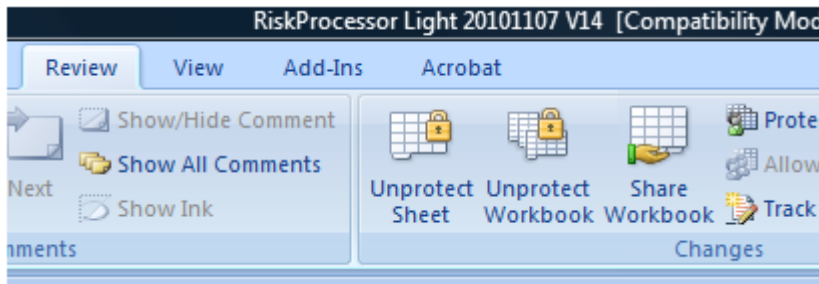


Figure 3.1 Possibility to unlock the protection

On the worksheet 'Dashboard' for example the contents of figure 3.2 can be seen. For a number of Business Values it cannot be read what the value is (#####).

Expected value per business value (in unit)					
2.774.864,32	33.033.581,00	24.168,00	#####	#####	1.234,80

Figure 3.2 Worksheet Dashboard; value in some cells is #####

When the protection is disabled, the column which contains ##### can be made wider with Excel functionality. After certain functions are applied or the application is saved, closed and restarted, the protection will be enabled again.

### 3.5 Worksheet Dashboard

On the worksheet 'Dashboard' the following information can be seen (figure 3.3).

The dashboard includes a risk matrix with the following structure:

Seriousness	Frequency					
	Very low [c] 0,003	Low [c-1] 0,003	Limited [c-2] 0,03	Regular [c-3] 0,3	Often [c-4] 3	Very often [c-5] 30
Extreme	7. Lokale verontreiniging (7) 8. Afvalwater verontreiniging (8)		9. Omgeving door aanpakken naam (9) 10. Dienstverlening: weggeding (10) 11. Permanent te hoge concentratie nutstoffen (11)	12. Reputatie noemer (12) 13. Continuïteit van de systeem (13) 14. Niet halen LT doelen KRW (14) 15. Niet behouden Milieuzoektocht (15) 16. Continuïteit organisatie (16)		
Serious	17. Grootchalige uitslag (17) 18. System (18)	19. Verplichte schade GDI door kadaverend object (19) 20. Falsen regionale kade (20)	21. Verplichte schade GDI (21) 22. Informatiebeveiliging (22) 23. Informatiebeveiliging (23) 24. Informatiebeveiliging (24)	25. Doorgeslede laag (25) 26. Niet behouden (26) 27. Schade aan Natuur (27) 28. Schade aan Natuur (28) 29. Schade aan Natuur (29) 30. Schade aan Natuur (30) 31. Schade aan Natuur (31) 32. Schade aan Natuur (32)	33. Arbeidsongeval (33)	
Considerable						
Moderate						
Small						
Negligible						
Meaning	Negligible	Low	Medium	High	Very high	Unacceptable
Number of risks	0	1	5	10	6	0
Number of risks	Total: 22	Within selection: 22	Not assessed: 0	Section: Totaal	Total risk: Monetary Equivalent per year: 24.056,00 [€]	

Summary statistics and business values table:

Expected value per business value (in unit)					
15.836,30	8.100,00	119,70	-	-	-
Annual monetary equivalent per business value					
15.836,30	8.100,00	119,70	-	-	-

Figure 3.3 Contents worksheet Dashboard

This worksheet contains a risk matrix with a number of settings which can be changed. Also a number of grey buttons are present and selections can be made. The settings which can be changed are described in chapter 4.

In the first column the levels of the severity of a risk are shown. In row 1 the levels of the risk matrix are stated.

The meaning of the colours of the risk levels are shown in the cells R10C2 until R10C7 (figure 3.4). The values can be changed (e.g. neglectable, low, medium). The risk levels in the risk matrix increase from bottom left (neglectable) to the top right level (unacceptable).

Below in same figure (in row 11) the number of risks per level is shown. This is calculated automatically. The calculation is dependent on selections on the worksheet 'Risk Register' (see also paragraph 6.2).

Meaning	Neglectible	Low	Medium	High	Very high	Unacceptable
Number of risks	2	3	6	5	4	3

Figure 3.4 Meaning per risk level and number of risks per risk level

Below the row as shown in figure 3.4 the contents of figure 3.5 is present.

	Total	Within selection	Not assessed
Number of risks	24	24	1

Figure 3.5 Total number of risks, number of risks not evaluated and not assessed risks

The total number is the number of risks which are entered into the application.

The number of risks within the selection is the number of risks which is taken into account on the worksheet 'Risk Register'. So the risks outside of the selection are not printed in the matrix.

The number of risks which are not evaluated, is the number of risks for which the risk level is not yet determined by the user. For these risks the category (between unacceptable and negligible) is not determined, so the position of the risk in the matrix cannot be printed on the screen. This means that a likelihood and/or an effect is lacking (see chapter 5).

The names of the business values and the maximum values are derived from cells as described in paragraph 4.2. If the value in a cell of a business value is changed according to this paragraph, then the levels of the cells in the column below are automatically calculated by dividing these by 10. In figure 3.6 it can be seen that if the maximum value for the business value Financial 25.000 k€, the maximum value for Extreme is 2.500 €, the maximum value for Serious is 250 k€ etcetera. These are the minimum values. The signs before it are >=, so greater than or equal.

In cells R3C9 until R3C18 the highest values per business value are mentioned. If for a business value, different then Financial (e.g. Safety), a dimension is filled out (e.g. points or 'pt'), then this value is taken into account in the monetary equivalent. So if the highest value is 25,000 points safety and also 25,000 k€ (figure 3.6), then a safety point is worth one kilo of euros. If that figure is changed in the effect matrix (paragraph 4.2), the monetary equivalent changes as well. This monetary equivalent is the expected financial value of the risks related to a business value. The highest effect for the business value safety here is a monetary value of 25.000 k€ per annum.

	I	J	K	L	M	N
	Financial	Quality	Safety	Legal	Environme	Image
	[k]	[pt]	[pt]	[pt]	[pt]	[pt]
>=	25000	25000	25000	25000	25000	25000
>=	2500	2500	2500	2500	2500	2500
>=	250	250	250	250	250	250
>=	25	25	25	25	25	25
>=	2,5	2,5	2,5	2,5	2,5	2,5
<	2,5	2,5	2,5	2,5	2,5	2,5

Figure 3.6 Example dimensions business values; Effect per severity per business value is divided by 10

Below cell R10C9 the expected value per business value per year is shown (figure 3.7). This is calculated automatically and is dependent on the selection on the worksheet 'Risk Register'.

Expected value per business value (in unit)					
2.774.864,32	33.033.581,00	24.168,00	32.166,30	1.770,00	1.234,80
Annual monetary equivalent per business value [pt]					
2.774.864,32	33.033.581,00	24.168,00	32.166,30	1.770,00	1.234,80

Figure 3.7 Expected value per business value and monetary equivalent per business value per year

Below the 'Expected value per business value' the total monetary equivalent across per business value per year is shown in the cells R14C9 (belongs to business value R1C9) until R14C18 (belongs to business value R1C18). This is done per business value in the dimension which is selected in the cells R2C9 (belongs to business value R1C9) until R2C18 (belongs to business value R1C18).

For the monetary equivalent the risks are always calculated in the most left dimension (R2C9). It is therefore advised to make the left dimension financial. This should be done on the worksheet 'Effectmatrix'. The sum of the monetary value is shown in the cell on row 13 column 9 (figure 3.8). This is the total monetary value of the risks associated with the active business values as defined on the worksheet 'Effectmatrix'.

Total risk Monetary Equivalent per year
<b>35.867.784,42 euro</b>

Figure 3.8 Sum of the monetary value

The four grey buttons on the 'Dashboard' worksheet contain the following text:

1. 1..10
2. Z->A
3. ID
4. Add risk data
5. Redraw graph
6. Recalculate risks
7. Audit trail.

Buttons 1 till 6 are discussed in chapters 5 and 6. The audit trail is discussed in chapter 8.

In row 14 column 1 the 'Number of risks' is shown (figure 3.9). This function is described in section 6.3.



Figure 3.9 Selection of risks

## 4 Configuration of the application

Before risks can be entered into the application, a number of preparatory steps need to be performed:

- Define the frequency of the effect matrix (paragraph 4.1)
- Fill the effect (paragraph 4.2)
- Select the required language (paragraph 4.3)

For Risk Processor, the following additional setting scan be made:

- Create user specific labels, so that the labels in the application differ from the selected language (paragraph 4.4)
- Select the desired labels (paragraph 4.5)
- Fill out a comment field if a new risk is saved or changes are made to an existing risk (paragraph 4.6)
- Automatically switch on the backup (paragraph 4.7)
- Define scaling of an area (or part of assets) (paragraph 4.8).

Is Risk Processor used within an organization where for example departments manage their own Risk Processor and results are combined in Risk Processor Corporate (central version), it is necessary to align the risk matrix between departments and the central version. See the manual of Risk Processor Corporate, which can be downloaded through <http://www.assetresolutions.nl/en/downloads>.

### 4.1 Add frequencies

The frequency band must be entered in order to plot risks in the risk matrix. This frequency band is entered on the worksheet 'Dashboard'. The dashboard is locked by default. First unlock the worksheet as described in paragraph 3.4.

The frequency can be changed by changing the value in the cell of row 2, column 7 (figure 4.1). When the value is changed, the cell will get a red colour. This is an indication that a change is made, which is not yet processed in the risk matrix. This can be done with the button 'Reassess risks' on the worksheet 'Dashboard'.



Figure 4.1 In white cell frequency can be changed

The contents of the cell must be a numeric value. The value to be entered is the upper limit. The dimension is the number of times a year. Ensure that upper value matches the frequencies of the risks in the risk register. That is because all the risks which have a frequency above the upper value in the white cell, will be taken together in the same frequency band. This also applies to risks in the lowest category.

The application uses a logarithmic scale for the frequencies, wherein the lower and upper limit of a band are a factor of 10 from each other. When the value in the cell is changed, the levels of the cells left to it on row 2 will automatically be changed by dividing these per cell by 10. The value in cell R2C2 does not change, since this is the 'less than' (<) value, while the value of the cell R2C3 is greater than or equal to that value.

Unlocking the worksheet and make edits such as adding or removing columns can lead to unexpected results.

## 4.2 Define effect matrix

The effect matrix is defined on the worksheet 'Effectmatrix'.

Data on the worksheet 'Effectmatrix' is protected by the standard Excel functionality, see paragraph 3.4. On the worksheet 'Effectmatrix' the contents of the white cells can be changed (figure 4.2):

Change matrix	Financial	Quality	Safety	Legal	Image	Environment
Unit	[k]	[pt]	[#]	[pt]	[#]	[pt]
Top value	25000	25000	25000	25000	25000	25000
Extreme	Extreme	Extreme	Extreme	Extreme	Extreme	Extreme
Serious	Serious	Serious	Serious	Serious	Serious	Serious
Considerable	Considerable	Considerable	Considerable	Considerable	Considerable	Considerable
Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Small	Small	Small	Small	Small	Small	Small
Neglectible	Neglectible	Neglectible	Neglectible	Neglectible	Neglectible	Neglectible

Figure 4.2 White cells can be changed on worksheet Effectmatrix

On this worksheet per effect of the risk matrix (column 1) per business value (column 2 until 11) the following can be changed:

- name of the business value (cells R1C2 until R1C11). If the name of a business value is left out, then the value is not displayed on the dashboard and no monetary value for the relative business value is calculated on the worksheet 'Dashboard'. The data however remains available on the worksheet 'Risk Register'.
- the unit per business value (row 2 below the business values). For the business values without a unit it is advised to use a point scale.
- in row 3 the quantitative value per business value can be entered. This should be the highest value of the effects per business value. On the worksheet 'Dashboard' this is automatically divided by 10 per lower level, see figure 3.6. Thus the highest value is compulsory, because it is used in the monetary value calculation. If no value is entered, then a default value is applied
- examples of effects per business value (mentioned below the units per business values). Here it can be specified what the impact categories mean. This may be qualitative descriptions (rows 4 until 9) which appear when risks are entered (see chapter 5). When a value is changed in a white cell, it is then also automatically applied when a new risk is entered according to chapter 5 (shows value of risk per business value and the sort function, see chapter 4). Also the name is used when the risks are plotted in the risk matrix on the worksheet 'Dashboard'. Note that risks which were already entered are not modified if a change is made in the effect matrix.

When a change is made in the effect matrix, the button 'Change matrix' (top left) should be pressed. Then the change is copied to other sheets in the application. When the name of a business value is too long, it can happen that it is not completely shown in other screens (e.g. in the risk screen).

If changes are made in the effect matrix in the ratios of row 3 and the qualitative descriptions and the risk level of a risk changes (e.g. from 'Medium' to 'High'), then the risk level should be changed for the existing risks:

- manually via the 'Add risks' screen on the dashboard (see figure 5.4 in paragraph 5.1)
- or via the worksheet 'Risk Register' (see chapter 8).

The same is applicable if Business Values are mixed.

In chapter 5 is shown in which value lists the effects are applied.

If it is needed that the expected values for risks are monetarily calculated, then the first business value (column 2 row 1) needs to be the financial business value.

### 4.3 Set language

The application has a multilingual display of labels and choices of selection menus. The selection of the language displayed in the program can be made through the left menu, below on the Dashboard worksheet (see figure 4.3; English in this example).

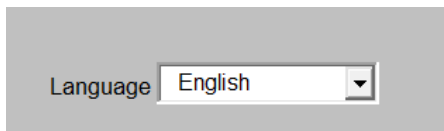


Figure 4.3 Selection of language

When the selection right of 'Language' is set on English (figure 4.3), all texts will be in English.

Note that the selection of the 'Language' only affects the various texts used in the program itself. It does not affect the data in the application. In some cases the application uses standard Windows text as described in this manual. With the selection in figure 4.3 the standard Windows text remains unchanged.

### 4.4 User specific labels

The program can make use of a number of user specific labels. This means that some labels which are used by the application can get a specific name which are chosen by the user. These can be changed on the worksheet 'User Definition' (figure 4.4).

Location	Default	Custom
RiskData	ID	ID
RiskData	Name	Person
RiskData	Status	Status
RiskData	First notification	First notification
RiskData	Notifier	Notifier
RiskData	Last change	Last change
RiskData	Change in	Change in

Figure 4.4 Example of user specific labels

The column 'Location' shows on which worksheet or screen the label is used.

The labels in the column 'Custom' with a white background are adjustable. If in this example the language 'English' (sheet Dashboard) would be chosen in combination with a 'custom' label on the

dashboard as well (see paragraph 4.5), then instead of 'Name' the text 'Person' will be shown in the application.

#### 4.5 Change Label set

When the user specific labels are defined according to paragraph 4.4, the selection of the label set can be made on the sheet 'Dashboard'.

When user specific labels are required, then selection 'Custom' must be made (figure 4.5).



Figure 4.5 Selection of language and user specific labels

When the label set is changed, the language should be changed once as well. Otherwise the tool will keep the previous setting.

The selection of the 'Language' and the label set only affects the various texts used in the program itself. It does not affect the data in the application. In some cases the application uses standard Windows text as described in this manual. With the selections of figure 4.5 the standard Windows text remains unchanged.

When Risk Processor is integrated with Risk Processor Corporate and custom labels are selected, then these are copied to the worksheet 'Dashboard' of Risk Processor Corporate. If in Corporate on the sheet 'Dashboard' default labels are required, then this selection must be made in Risk Processor.

#### 4.6 Comment field

Where new risks are added or existing risks are changed according to paragraphs 4.1 and 4.2, in a comment field the reason for the change can be added. This comment field is displayed in the audit trail screen (field 'comments'). If the field is not checked (figure 4.6), then the comments field can not be filled out in the risk screen.



Figure 4.6 Comments cannot be used



Figure 4.7 Comments can be filled out

When the function is enabled (figure 4.7), then the comment field is shown if a new risk is added or an existing risk is changed. A pop up window appears (figure 4.8) in which the comments can be added.

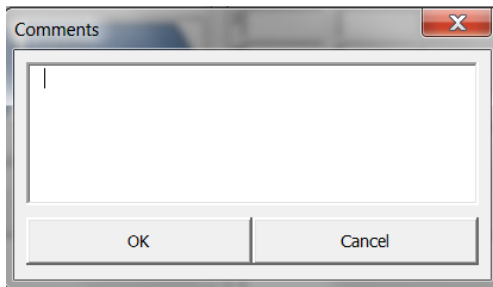


Figure 4.8 Window in which reason for new risk or change of existing risk can be entered

When the comments are entered, it can be stored by pressing OK in figure 4.8. If the comments do not need to be stored, then Cancel should be selected. Then the program will return to the risk screen which is shown in paragraph 4.1.

## 4.7 Autosave

It is possible to automatically create backups. Disabling (figure 4.9) and enabling the function (figure 4.10) is shown below.

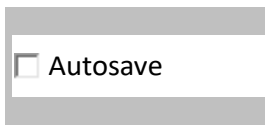


Figure 4.9 Autosave function disabled

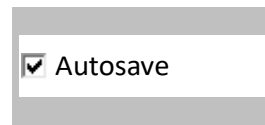


Figure 4.10 Autosave function enabled

## 4.8 Scaling

Within the risk register can be worked with several areas. Here the weighting factor of risks can be entered for each area (for example, because in one area more assets exist than in the other areas). The scaling can for example be applied to make a distinction between areas, but also a breakdown into different asset classes is possible.

The idea behind it is the following. When a small region is evaluated with the same matrix as the whole, than many risks will be invisible in the matrix. With the scale factor, weight can be given to the risk for the region, while the sum deals with all regions on the overall matrix. The only way to achieve this is that the impact is the same in every region and let only the frequencies differ by region. The definition is done on the 'Scale' sheet.

Tab	Tab Value	Area	Name	Tab ID	Share
Tab1	0	Total	Total	Sum	100%
Tab2	1	Region1	Area1	A1	40%
Tab3	2	Region2	Area2	A2	30%
Tab4	3	Region3	Area3	A3	10%
Tab5	4	Region4	Area4	A4	20%
Tab6	5	Region5			
Tab7	6	Region6			
Tab8	7	Region7			
Tab9	8	Region8			
Tab10	9	Region9			

Figure 4.10 Content sheet 'Scale'



De values below 'Gebiedsnaam' (column D = area name), Tab titel (column E = tab ID) and Schaalfactor (column F = share factor) need to be entered. Note that the values for the various fields match together, the application does not monitor, for example, whether the total is equal to 100% (cell F2).

The maximum number of fields is 25. Note: when Risk Processor Corporate is used, the field names in the individual field names in the several Risk Processors must be the same. The first area may in this case, for example, Risk Processor for province 1 not be municipality A and Risk Processor for province 2 cannot be called municipality B.

Are the scales defined, a selection can be made as described in chapter 6 on the sheet 'Dashboard'.

## 5 Process risks

In this chapter is described how risks can be:

- entered
- changed
- deleted.

Also is described how changes in risks can be shown by means of the 'audit trail' functionality.

### 5.1 Enter risks

In order to enter new risks, first switch to the worksheet 'Dashboard'. Press on the button 'Add risk data' to be able to enter data (figure 5.1).

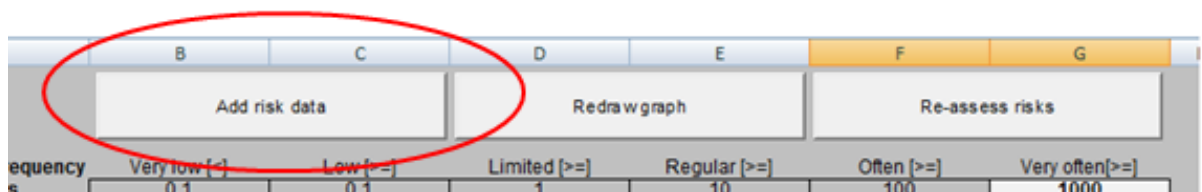
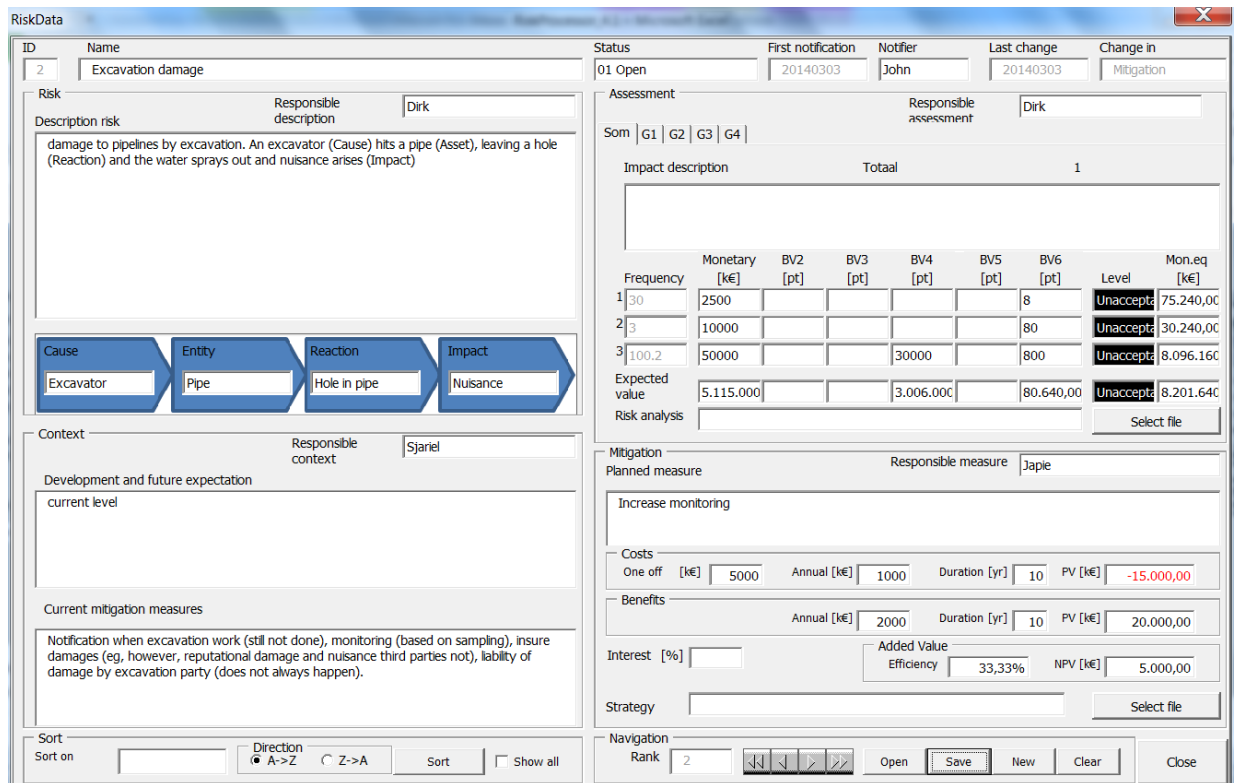


Figure 5.1 Press button to add risk data and change it

The screen below appears (figure 5.2).



**RiskData**

ID	Name	Status	First notification	Notifier	Last change	Change in
2	Excavation damage	01 Open	20140303	John	20140303	Mitigation

**Risk**

Risk:  Responsible description:

Description risk: damage to pipelines by excavation. An excavator (Cause) hits a pipe (Asset), leaving a hole (Reaction) and the water sprays out and nuisance arises (Impact)

**Cause** → **Entity** → **Reaction** → **Impact**

→  →  →

Context:  Responsible context:

Development and future expectation: current level

Current mitigation measures: Notification when excavation work (still not done), monitoring (based on sampling), insure damages (eg. however, reputational damage and nuisance third parties not), liability of damage by excavation party (does not always happen).

**Assessment**

Som | G1 | G2 | G3 | G4 | Responsible assessment:

Impact description: Totaal 1

Frequency	Monetary [k€]	BV2 [pt]	BV3 [pt]	BV4 [pt]	BV5 [pt]	BV6 [pt]	Level	Mon.eq [k€]
1   30	2500					8	Unaccepta	75.240,00
2   3	10000					80	Unaccepta	30.240,00
3   100.2	50000		30000			800	Unaccepta	8.096.160
Expected value	5.115.000		3.006.000			80.640,00	Unaccepta	8.201.640

Risk analysis:

**Mitigation**

Planned measure:  Responsible measure:

Costs: One off [k€]  Annual [k€]  Duration [yr]  PV [k€]

Benefits: Annual [k€]  Duration [yr]  PV [k€]

Interest [%]  Added Value: Efficiency  NPV [k€]

Strategy:

Navigation: Rank



Figure 5.2 Screen for adding, changing and deleting risks

This screen shows the user input and the calculated values of risks which are entered. The fields match the columns on the worksheet 'Risk Register'. A part of the fields contain value lists. The content on

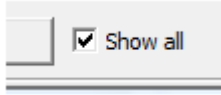
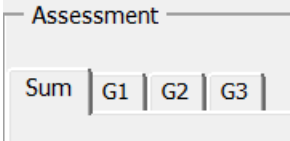

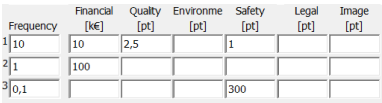
these lists are not unique for a specific risk and can be used for other risks as well, for example Responsible, Status and Cause. In value lists previously stored items are shown, so that consistency in the spelling is maintained and it is therefore possible to filter on the items. For new items the application asks whether they should be saved if the risk is stored. The lists can also be defined on the worksheet 'Datalists'.



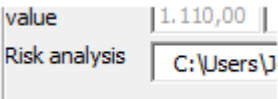
The data which can be selected and displayed on the screen depends on the selection on the worksheet 'Risk Register'.


The fields of figure 5.2 are described below:





Part	Field name	Description
Header	RiskData @ 117%	Name of tab and zoom level (in this case 117%).
		Zoom (up arrow) or
		Zoom (down arrow). If this button is pressed several time, the screen may not fit more on your monitor.
	ID	Unique number of the risk.
	Name	Here a name of the risk can be added.
	Status	The status of the risk can be selected. With the field 'Status' it can also be selected if a risk is no longer valid. See also paragraph 5.3.
	First notification	Date when the risk is first entered into the system. This date is automatically determined.
	Notifier	The name of the person who mentioned the risk first. Selection from a value list.  If a person is missing which is only applicable for this risk, it can be entered here. The content is automatically copied to the worksheet 'Data lists'. The same goes for the other value lists of this screen.  The application is case sensitive. So e.g. the names Mickey and mickey are both stored.
	Last change	Date when the last change in the risk took place.
Risk	Change in	The part in this screen in which the last change took place. If the language is changed, the content of this field will be changed after a change of data in this screen.
	Responsible description	Person responsible for describing the risk.
	Description risk	A broad description of the risk can be added.

Part	Field name	Description
		When data needs to be added in this field on the following line, use the keys <CTRL><Enter>. This goes for all remark fields.
	Cause	A value list in which the cause can be selected.
	Entity	Select where the risk can appear.
	Reaction	Selection what the effects of the risks are in case the risk appears.
	Impact	Selection of the most important element which the risk has effect.
Context	Responsible context	Person responsible for describing the context.
	Development and future expectation	A description how the risk looks like in the future.
	Current mitigation measures	Which mitigating measures already exist to reduce the risk within acceptable limits.
Sort	Sort on	<p>Selection field in which the order of the risks can be selected via the navigation function. The navigation function is described later in this table.</p> <p>Some sort possibilities start with EV (= economic value). The descriptions behind 'EV' are the business values as described in paragraph 4.2.</p> <p>Note: the sort function takes the sort function of worksheet 'Risk Register' into account. So less risks can be shown than there are present in the risk register.</p> <p>The lines are moved within the selected fields. This means that the ranks are in order, but not connected. The same applied if 'show all' is selected.</p>
	Direction A → Z	Ordering of the risks from A to Z or from low to high. When a field is selected with an empty value, then this value is shown last with an ordering from A → Z
	Direction Z → A	Ordering the risks from Z to A or from high to low.
	Sort	With this button the sort function is activated, after the selections 'Sort on' and 'A → Z' or 'Z → A' are made.
	Show all	In case not all risks are in the selection, because on the worksheet 'Risk Register' a selection is

Part	Field name	Description
		<p>made, then this selection can be made undone. In that case a mark should be placed here (left from Show all).</p> <p>On the worksheet 'Risk Register' the relative selection of that worksheet is not made undone.</p>
Assessment	Responsible assessment	Person responsible for the evaluation of the risk.
	Sheet 'Sum' and sheets others right next to it      	<p>In case of than one area is specified, the tabs receive the name of the specified field as described in paragraph 4.8.</p> <p>If only one area is specified, then automatically opens that sheet, where both impact and frequency must be completed.</p> <p>Note that the calculated sum is dependent on the choice of the area that was selected on the Dashboard tab (see paragraph 6.4). For example, if region 1 is selected on the dashboard, then the sum demonstrates the value of region 1. This is to ensure that the image of the risk will be placed correctly in the matrix (which uses the values of the total). Left it can be seen that on the dashboard 'Area1' is selected which has a scale factor of 40% (sheet 'Scale').</p>
	Impact description	Result of the assessment can be captured here.
	Frequency and impact  	<p>Under 'Frequency' the number of times per year can be entered when the risk occurs (e.g. in the figure left there is on average once per year a financial impact of € 100k and 0.1 times per year a safety impact of 300 points).</p> <p>Of more than one area is defined, the frequency needs to be entered per area. The impact is added on the tab 'Sum'. On that tab the application calculates the total risk exposure. For the idea behind this, see paragraph 4.8.</p> <p>The impacts can be entered as numbers or via a list, from which a selection can be made. This list is set up according to paragraph 4.2.</p> <p>The shown business values (in the figure Financial, Quality ... Image) are obtained from the worksheet 'Effectmatrix'. Only the business values which have a name on the worksheet 'Effectmatrix' are shown.</p>

Part	Field name	Description
		<p>The value of the dimension in the left-hand column is used to calculate the monetary equivalent of the risk and must therefore represent the financial business value. Leaving out the first column could result in strange results.</p> <p>The application also accepts non-numeric fields, but the application does not calculate with these types of fields. Figures which contain a dot are not recognized as a number. It must therefore be a comma for the decimal point and one point for thousands.</p> <p>See figures 5.3 and 5.4 below this table for an example of filling the effects. There are three lines with impacts because not every event results in the same effect. Therefore a separate impact frequency can be specified.</p>
	Level 	<p>For every combination of likelihood and effect a risk level is determined. Per impact line (line 1, 2, 3 and the total in line 4) the risk level is calculated automatically. The highest level is shown which is applicable for the business value.</p> <p>This is done on basis of the frequencies and effects as determined in chapter 4.</p> <p>The colours of the risks match with the colours from the risk matrix.</p>
	Monetary Equivalent 	<p>The monetary equivalent is calculated automatically on basis of the highest values in the matrix.</p>
	Risk analysis 	<p>Here a link can be shown of a document in which more details of the risk assessment are recorded. Selection takes place via the button 'Select file' or via manual input with the keyboard.</p> <p>Note that only the name is linked. The file itself is not saved in the application.</p>
Planned measures	Responsible measure	Person responsible for determining and scheduling the risk mitigating measures.
	Planned measure	Description of the planned mitigation measures.

Part	Field name	Description
	Costs: One off	One off investment needed for the selected mitigation measure. Dimensions can be changed as described in section 4.2 (goes also for fields below).
	Costs: Annual	Annual costs needed for the chosen mitigation measure.
	Costs: During	Throughput time needed to implement the mitigation measure.
	Costs: PV	Present value of the costs (one off and annual) required implementing the chosen mitigation measure.
	Benefits: Annual	Total financial risk reduction per year for the chosen mitigation measure.
	Benefits: During	Period for which the chosen mitigation measure is applicable.
	Benefits: PV	Present value of the added values during the period for which the mitigation measure works.
	Benefits: Interest	Interest rate which will need to be taken into account for the investments and added values.  Figures with a dot are not recognized as a figure. This has to be a comma for the decimal sign and a dot for the thousands.
	Benefits: Efficiency	Efficiency of the chosen mitigation measure. The efficiency is the present value divided by the present costs.
	Benefits: NPV	Total Net Present Value of the chosen mitigation measure. A net present value greater than 0 is a positive investment.
	Strategy 	Here a link can be shown of a document in which more details of the risk assessment are recorded. Selection takes place via the button 'Select file' or via manual input with the keyboard.  Note that only the name is linked. The file itself is not saved in the application.
Navigation	Rank	Here the numerical value is shown in which the risk is in the range. This range can change per risk if the order (described earlier) is changed.  For the navigation the same is applicable as for the ordering. It is dependent on a possible

Part	Field name	Description
		selection on the worksheet 'Risk Register'.
		Navigate to the first risk in the list. This is dependent of the chosen order. This goes also for the next three buttons described hereafter.
		Go one risk back in the order.
		Go one risk forward in the order.
		Go to the last risk in the list.
	Open	Open of a risk. When this button is pressed, a screen appears in which the number of the risk can be inserted. The ID (unique number of the risk) is shown, as well as the description of the risk.
	Save	Store the changes. Note: when 'Save' is clicked, the user must press the save button of the application as well when the entire application is closed. Otherwise the change is not saved. See paragraph 7.1.
	New	Add a new risk. When this function is selected, the question appears whether data of the current opened risk need to be used. In case of an answer 'Yes', a copy is created which can be changed. When 'No' is selected an empty screen appears, in which the data needs to be added manually.
	Clear	Delete this risk and remove it from the risk register.
	Close	Leave this screen.

Example 1 add likelihoods and effects for a risk (figure 5.3) and the calculation of the monetary equivalent:

Frequency	Financial [k€]	Environme [pt]	Safety [k€]	Legal [pt]	Image [pt]	Quality [pt]	Level	Mon.eq [k€]
1   10	10						High	100,00
2   0,01	10000						Medium	100,00
3   0,1	100						Medium	10,00
Expected value	210,00						High	210,00
Risk analysis								

Figure 5.3 Calculation financial value of the risk



In figure 5.3 is shown that for this risk on average:

- 10x per year a financial damage of 10,000 Euro appears. This means that the risk level is 'High' (shown below level) and that monetary equivalent is 100k Euro (shown below Mon. Eq)
- 0,01x per year a financial damage of 10,000,000 Euro appears. This means that the risk level is 'Medium' and that the monetary equivalent is 100k Euro. Despite the monetary equivalent is equal to the previous line, the risk level here is lower. This is caused by the chosen limits of the risk matrix as described in paragraph 4.2
- 0,1 x per year a financial damage exists of 100,000 Euro. This means that the risk level is 'Medium' and the monetary equivalent is 10k Euro.
- In the row 'Expected value' it is shown that the average annual costs for this risk are 210,000 Euro. This results in the risk level 'High'. The total monetary equivalent in this example is also 210,000 Euro, because the risk here goes only for the business value Financial. If there is also influence on other business values, then the sum of the values is calculated below Mon. Eq.

Example 2 to add likelihood and effects for a risk (figure 5.4):

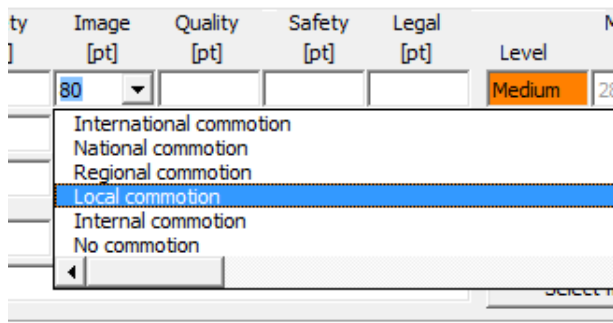


Figure 5.4 Determine value of the risk via value list

In figure 5.4 it can be seen that via a value list the effect of a risk per business value can be chosen as well. The value list is linked with the contents of paragraph 4.2. The application links the choice from the value list automatically to the severity (first column of worksheet 'Risk Register'). The highest existing severity appears automatically below the column 'Level' (see figure 5.4 above). The numerical values of the business values are shown on the dashboard. So the impact matrix is only a tool to help you fill out the effects. The figure that is used in the calculation after the fill out help is applied, is the geometric mean value (rounded to one significant figure), or about a factor of 3 times the limit. For a limit of 25 (of 25 k€) this is 75, so 8 is used.

## 5.2 Change risks

Changing risks is identical to adding new risks. Press the button 'Add risk data' on the worksheet 'Dashboard' (see figure 5.1).

First seek the risk which needs to be changed. This can be done to select a selection field by using the sort function (figure 5.5), add the required sort direction (A → Z or Z → A) and then pressing the 'Sort' button.

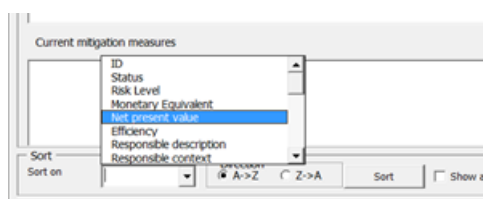


Figure 5.5 Sort function

When the risk is the first in the line of the row, then it will immediately be shown after the 'Sort' button is pressed. If it is not shown immediately, then use the navigation function with the arrows (figure 5.6).



Figure 5.6 Navigation function

If the risk is found, then the required changes can be made according to paragraph 5.1. When the change is made, then the button 'Save' must be pressed.

It is also possible to make manual changes as described in paragraph 8.2. However this is not advised since the program can then not make certain checks.

### 5.3 Delete risks

If a risk is no longer current, then a number of options exist:

- Clear the risk via the risk screen
- Change the status of the risk
- Manually delete the risk according to paragraph 8.2. This is not advised since the program can not perform certain checks.

Deleting a risk via the risk screen should be done as follows. On the worksheet 'Dashboard' press on 'Add risk data' as is shown in figure 5.1. Seek the risk that which must be cleared in accordance with paragraph 5.2. If the risk is found, then press the 'Clear' button. The program shows the warning of figure 5.7.

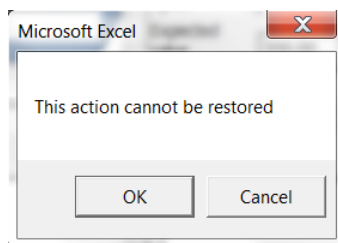


Figure 5.7 Warning which is shown when the Clear-button is pressed

If the OK button of figure 5.7 is pressed, then the risk is deleted on the worksheet 'Risk Register'. Press 'Cancel' in figure 5.7 if the risk should not be deleted.

In Risk Processor a deleted risk is stored in the audit trail. Only on the worksheet 'Audit Trail' the risk can then be viewed.

Changing the status can be done as follows.

First search the risk as described in the previous paragraph. Select the status field (figure 5.8).

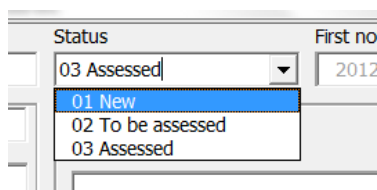


Figure 5.8 Status field

In that field the status '04 Deleted' can be added for example. Then press the button 'Save'. If the value is not yet available in the list, then the message of figure 5.9 appears.

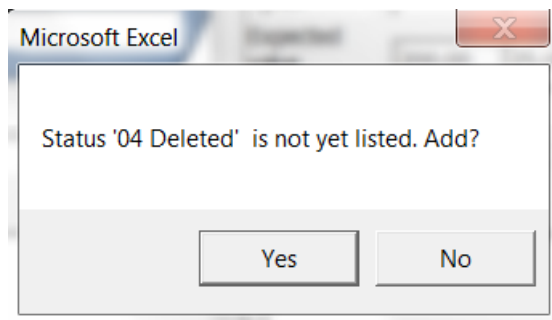


Figure 5.9 Message which appears if the value is not yet in the list

If 'Yes' is selected in figure 5.9, then the new status is added to the default values on the worksheet 'Datalists'. If 'No' is selected, then the status will be added to the risk, but not on the worksheet 'Datalists' with the default values. For another risk the status '04 Deleted' from this example will then not be available in the list of figure 5.9. If 'Yes' was chosen, this will be the case.

## 5.4 Audit trail

The 'audit trail' button (figure 5.10) on the dashboard opens the audit trail window.

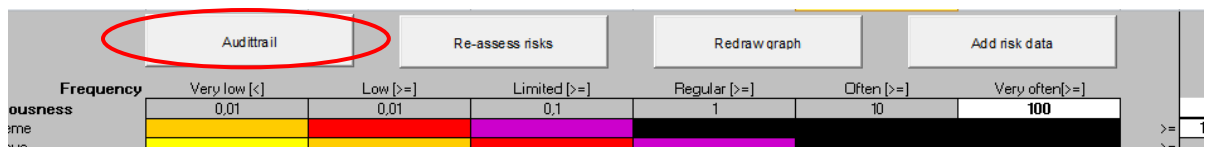


Figure 5.10 Open audit trail window

If the audit trail is empty and there are risks on the worksheet 'risk register', then after pressing the button 'Audit Trail' the program will ask to create a starting point. If the answer to the question create a starting point is 'Yes', the program automatically derives an audit trail from the risks. Of course this depends on whether the risk register includes any changes of the risks.

Also the message "No marker for edits in audit trail. Create markers?" can appear. This function checks whether the relevant field on the worksheet "audit trail" has the colour cyan (cell c2 in the worksheet audit trail). If that cell does not have the cyan colour, then the program asks to add the colour. When the answer is 'Yes' this is done, when 'No' is selected it is not added. If 'No' is selected, then the first change is not displayed in the audit trail screen of figure 5.12.

After pressing the audit trail button with a filled audit trail in which the first field has a cyan colour, the risk to be shown needs to be selected (figure 5.11).

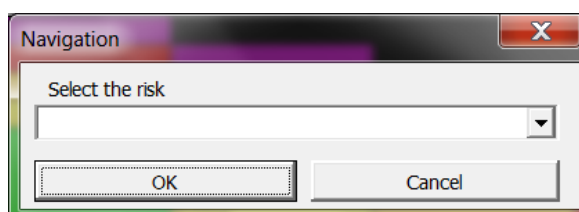


Figure 5.11 Window opening after pressing the Audit trail button

A selection can be made of the risk to be displayed. If no risk is selected, then a blank window opens in figure 5.12. The view of the audit trail is controlled by the settings on the dashboard.

If there have been changes in risk, then it will be shown in the 'audit trail' window of figure 5.12. The audit trail provides the latest state of the related risk. The information which is shown is derived from the worksheet 'Audittrail'.

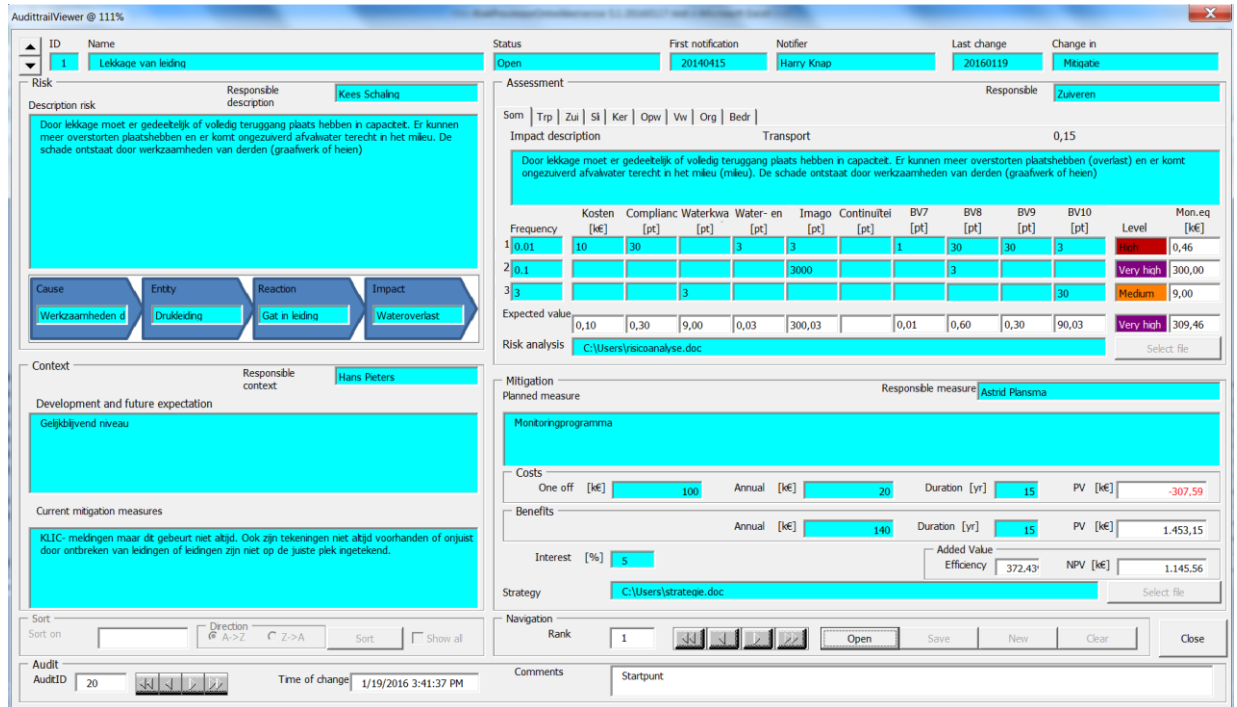








Figure 5.12 Audit trail window

The majority of the fields are identical to that as described in paragraph 5.1, in which data can not be filled out and several selections can not be made in the audit trail. In the bottom there are some additions. Description of those fields:

Part	Field name	Description
Audit		Name of tab and zoom level (in this case 117%).
		Zoom (up arrow) or Zoom (down arrow). If this button is pressed several time, the screen may not fit more on your monitor.
	ID	Unique number of the change that relates to the risk
		Navigate to the first change of the risk in the list. This is dependent of the chosen order. This goes also for the next three buttons described hereafter.

Part	Field name	Description
		Go one risk back in the order.
		Go one risk forward in the order.
		Go to the last changed risk in the list.
	Time of change	Time according to the system clock when the change of the selected risk associated to the AuditID occurred. The way the time is displayed depends on the setting made on your Windows PC.
	Comments	Comments made about the change of the selected risk associated to the AuditID are displayed here.

The changed fields compared to the previous version of the risk are visible through the different colour cyan (figure 5.13).

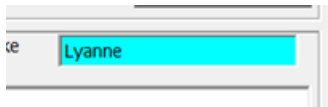


Figure 5.13 Fields in cyan colour are changed related to the previous version of the risk

When pressing the 'audit trail' button and no changes in the risks are present, then the following message appears (figure 5.14).

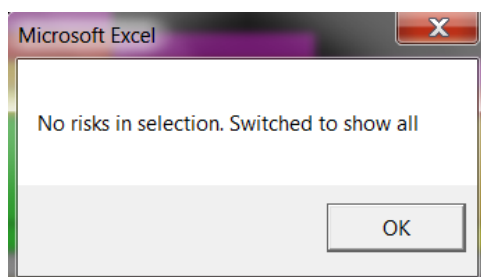


Figure 5.14 Window showing no changes in risks

In that case, the window of figure 5.12 opens. The risks can be viewed, but changes are not shown. Colour differences as shown in figure 5.13 are not shown as well.

Once a risk has been erased, it is no longer visible in the audit trail screen. It is only visible on the worksheet 'audittrail'.

## 6 Reporting risks

This chapter describes how risks can be reported. This includes showing information of risks, redrawing the graph and the revaluation of risks. This involves the risk matrix, numbers of risks, the monetary equivalent and filtering in the risk register.

### 6.1 Show information of risks

For the risks can be determined which information is shown on the dashboard. By default the convention is as follows: <rank>: <name of the risk> <ID in the risk register>, see figure 6.1.

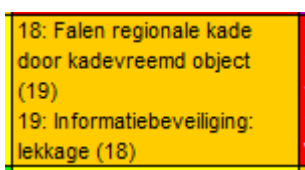


Figure 6.1 Showing information of risks

Explanation:

Part of the convention	Comments
Rank	Sequence of the risks based on the risk level, the impact and then the monetary equivalent (all from high to low). If there is more than one risk with the same risk level, then the risk with the highest impact is shown first. If the impacts are also the same, then the risk with the highest monetary equivalent is shown first.
Name of the risk	Description of the risk from the risk register.
ID	Unique number of the risk from the risk register.

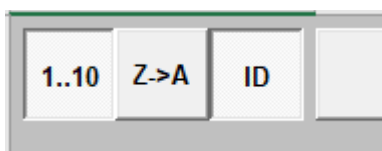


Figure 6.2 Buttons for changing display risks on dashboard and sequence

With the button 1..10 (figure 6.2) the display of the ranking on the dashboard can be switched on or off. This is enabled in figure 6.2. With picture 6.2 the risk is thus shown.

With the button ID the unique number on the dashboard can be switched on or off. This is also enabled here. After pressing the buttons, the 'Redraw graph' button (see next section) must be pressed before the function works. Figure 6.3 shows the display when the functions are switched off.

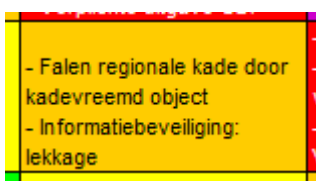


Figure 6.3 View risks on dashboard with rank and ID switched off

The Z-> A button gives the standard sorting with the numbers before it. The effect is only visible when the rank is switched on (button 1-10).

## 6.2 Redraw graph and manual filtering

With the button 'Redraw graph' the location of the risks in the graph is determined (figure 6.4).

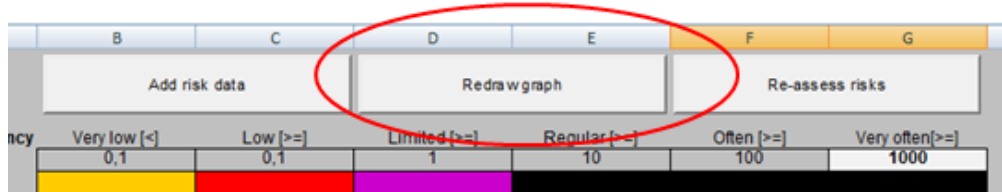


Figure 6.4 Redraw graph

The button is used when a filter is applied in the worksheet 'Risk Register', for example when only risks with an impact on safety are selected.

An example is given. Suppose the worksheet 'Risk Register' includes the following content (figure 6.5).

ID	Name	Status
1	Risk 1	Status 1
2	Risk 2	Status 1
3	Risk 3	Status 1
4	Risk 4	Status 3
5	Risk 5	Status 3
6	Risk 6	Status 2
7	Risk 7	Status 3
8	Risk 8	Status 1
9	Risk 9	Status 1
10	Risk 10	Status 1
11	Risk 11	Status 2

Figure 6.5 Example for a part of the contents of the worksheet 'Risk register'

It contains 11 risks in total. If it is for example required to only show risks with the status 'Status 1' in the risk matrix, then in the column 'Status' a filter should be placed (figure 6.6; functionality is dependent on Windows version).

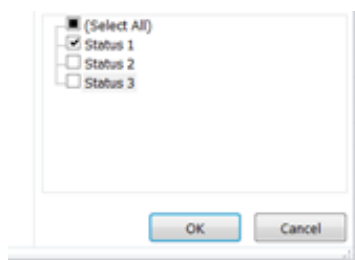


Figure 6.6 Selection risks with 'Status 1'

Is the filter set, then switch back to the worksheet 'Dashboard'. Click on the button 'Redraw graph'. On the worksheet 'Dashboard' the following is then presented:

- Total number of risks: 11
- Within selection: 6
- Not assessed: that depends on the number of risks for which no likelihood and / or effect is defined. The minimum number is now 0, the maximum number of 6.

In the risk matrix now only risks are shown which are selected with the filter.

It is also possible to filter on more than one column on the worksheet 'Risk Register'.

The result in the risk matrix is dependent on whether in the risk screen (through the button 'Enter Risk data'; see section 5.1) the option 'Show All' is checked. Is that button checked then all risks from the risk register are shown in the risk matrix, independently from the selection on the worksheet 'Risk Register'.

A selection on the worksheet 'Risk Register' also affects the monetary values per business value. Is a selection of application, then only the monetary values are calculated within the selection (both per business value as for the total). Again, when via the button 'Add Risk Data' the option 'Show All' is checked, all risks are taken into consideration, regardless of the selection on the worksheet 'Risk Register'.

Finally, a selection affects the number of risks for each level, as can be seen in figures 3.4 and 3.5.

### 6.3 Re-assess risks

When the data on the severity in the white cells are adjusted in the effect matrix or frequency on the dashboard, then the risks are shown in the wrong place in the risk matrix.

When the button 'Re-assess risks' is pressed (figure 6.7), the level of the risks is recalculated. That is needed if the evaluation criteria are changed (frequency and effect matrix).

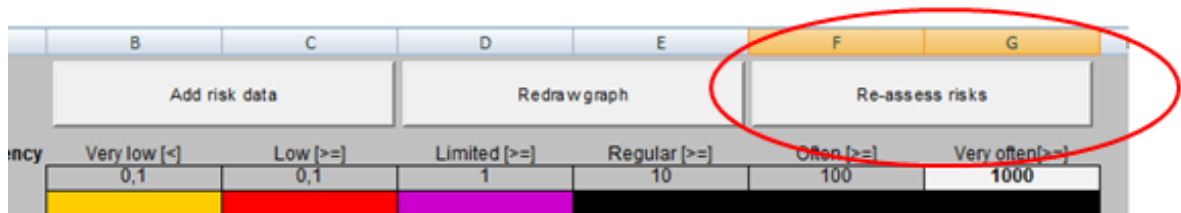


Figure 6.7 Re-assess risks

### 6.4 Select Scaling

When areas are defined in the 'Scaling' sheet (section 4.8), then on the sheet 'Dashboard' it can be chosen whether the total risk exposure needs to be shown or whether a specific area should be displayed. Therefor make a choice in the field below (figure 6.8).

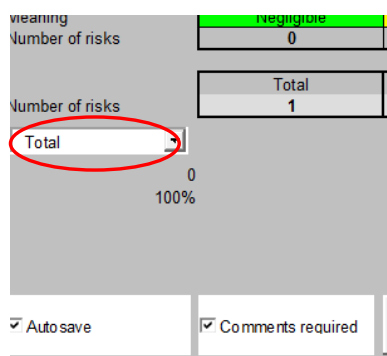
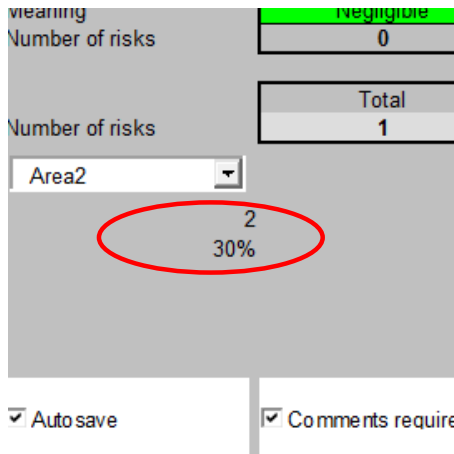


Figure 6.8 Select scaling: total



In figure 6.8 it can be seen that the total is selected. This means that the total risk for all areas is shown. Below is the area the number is displayed (0 means total) and below that is the weight factor of the total (100%). Scale factors influence the risk matrix. An effect with a scale factor of 100% which scores 'serious', will receive the value 'extreme' (see the effect matrix in paragraph 4.2) at a scale of 10%.

If a selection of an area is made, then the area number and the weight factor (figure 6.9) can be seen below that selection field. Also the position of a risk in the matrix can change, because the weight factor of the effect changes as well (the scaling works the impact of a risk. The frequency for each area is filled out in accordance with paragraph 5.1). The data of the risks associated with related areas is derived from the screen that is described in paragraph 5.1.



Meaning	negligible
Number of risks	0
Number of risks	Total
	1
Area2	
	2
	30%

Autosave       Comments require

Figure 6.9 Area number and weight factor of the area

## 7 Secure data

In this chapter securing data is discussed. This includes saving the application and the creation of a backup:

- Save data (paragraph 7.1)
- Create a copy (paragraph 7.2)
- Export data (paragraph 7.3)
- Copy data to Excel (paragraph 7.4)
- Create an automated backup (paragraph 7.5).

Make sure you always have a backup of the application. This is the responsibility of the customer / user, including the safe storage for e.g. fire and theft.

### 7.1 Export data

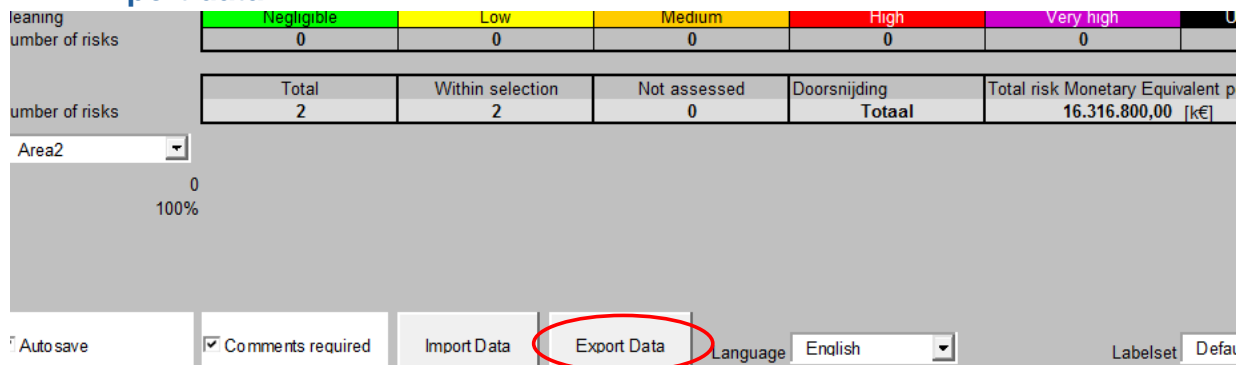


Figure 7.2 Export function for data

Make sure filters are switched 'off' in sheets before exporting data.

When the data is exported as described here, it is always possible to make an import of the data. In most cases this is possible to do this automatically.

When the export method is selected as described in this paragraph, data from the different worksheets will be copied in a single file: the risk register, the effect matrix, area definition, the data lists, the user specific fields, the audit trail and the risk register itself. These are all altered fields which the user has entered since the first use of the application.

### 7.2 Copy data to Excel

Another way to secure the data is to copy the data to Excel. An automated recovery action will then not be possible. If a crash has occurred, then the data needs to be copied manually to the appropriate worksheets with the correct rows and columns. This requires the protection of the worksheets switched off, see paragraph 3.4. When this approach is selected, the following worksheets should be copied:

- 'Risk Register'. This is essential because the risk data is stored in this tab
- 'Effect Matrix'. This may be necessary if the matrix is not available on another location
- 'Area definition'. See paragraph 4.8
- 'User Definition'. The application works without the data on this tab, but the userspecific fields are then no longer available (see paragraph 4.4)

- The data lists (tab 'Datalists'). This is useful but not strictly necessary. If a risk is saved and one or more elements from the data list are new, the application will ask whether the data for the data list should be added. See for example figure 5.9
- The audit trail (only for the full version; worksheet 'Audittrail'). This is not always strictly necessary, see paragraph 5.4. Risk Processor itself can create an audit trail, but this depends whether the risk register contains all the changes in order to create an audit trail.

It is recommended to copy the worksheets completely. Then it is always traceable from which columns to the data originates. This can be useful when upgrades of the application have taken place.

## 8 Advanced control of the risk register

In this chapter the manual update procedure is described. For all kind of changes it is applicable that the structure of a worksheet should not be changed for example by adding columns or delete the contents of the grey cells. The order of the worksheets or their names should not be changed either. If it happens, then the application could malfunction. Always keep an accurate backup as described in chapter 7.

Before a manual change is made, it must be ensured that the protection on a worksheet is removed as is stated in paragraph 3.4. After closing the application or a specific operation is performed in the application, the worksheet will be secured again.

If manual changes are made as described in this chapter then the audit trail functionality for the data will not work for changed or deleted data. Also deleting data manually can cause problems in the automated backup function (both not available in Risk Light Processor).

### 8.1 Data lists

The worksheet 'Datalists' contains the values of the default selection lists. The worksheet is protected by default because the selection lists are filled automatically via the risk screen.

The contents of the white cells of figure 8.1 contain input of the user and can be changed. The white fields show the limitations, namely 150 records per value list. When the content of other non-white cells is changed, the application might not work correctly. See also the license agreement.

Status	Employee	Cause	Entity	Reaction	Impact
01 Open	Bill	Deliberate damage	System	Loss functionality	Quality
02 Accepted	Frank	Accidents	People	Damage to entity	Environment
03 Estimated	Joyce	Force majeure	Asset	None	Other

Figure 8.1 Data lists. Data in white fields can be changed

Do not change the structure of a data list by adding for example columns or by deleting the contents of the grey cells (figure 8.1). Also the grey rows cannot be deleted since then the application will not work.

With the functionality to change the data fields automatically, the data in the white fields is in use by at least one risk (or was used).

If for example a status is not relevant, it can be deleted via the default Excel functionality.

If in figure 8.1 for example the entity 'People' is not relevant, the entire row cannot be deleted, because then also other data lists are impacted. In that case the relevant contents of the cell 'People' must be deleted and the cells below People (for example 'Asset') must be placed one row above. There should be no blanks between values above and below. So for example in the column 'Employee' Bill cannot be moved without removing the content below (Frank and Joyce) upwards.

It is also possible to change the contents of a cell by changing it to other data. If data is changed on this tab, then it is not automatically included in the risk register. Saving a risk with the old data list information then leads to the question whether the old data list record should be saved. So, if for example in figure 8.1 the name 'Frank' is changed to 'Frans', in a risk the name Frank still appears. If a change is made in that risk according to paragraph 5.1 and 5.2 and the name Frank is still attached to the risk and the risk is saved, then the application will ask whether the name 'Frank' must be added to the data list. Is the answer 'Yes', then the name 'Frank' will be added to figure 8.1 below the last mentioned name (so below 'Joyce').

It is possible to create a tree structure by working with prefixes. See for example the column 'Status': every status starts with a sequence number. More details in the prefix is possible (e.g. 2.1.3.4)

New values can best be added via the risk screen (paragraph 5.1 and 5.2) on the worksheet 'Dashboard'. New values are added at the bottom of the list. If in the list a specific sequence is needed, it must be sorted manually using the sort feature of Excel. This requires the worksheet to be unlocked. If a value in the list is lacking, it can also be inserted after the last record in the column. Under the grey cell 'Employee' directly under the last name ('Joyce') a new name can be inserted for example.

## 8.2 Risk register

The data of the worksheet 'Risk register' is automatically added via the functionality on the worksheet 'Dashboard'. It is advised to use the functionality on the 'Dashboard' to add and change the risk register.

It can be needed to make changes on the worksheet 'Risk Register' if the number of risks is larger than the amount that Excel allows. In practice this will not occur.

When a risk needs to be deleted, this can be done by deleting the row with default Excel functionality and then move all the contents below it one row up. If a row is cleared, this could lead to unexpected results in the back up. Therefore it is advised to do this via the functionality as described in paragraph 5.3.

Do not change the structure of the risk register by adding for example columns, deleting these or change the sequence of the columns. Also the row of figure 8.2 must not be deleted since then the application will not work.

ID	Name	Status	First notification	Notifier	Last change	Change in	Description risk

Figure 8.2 Row which must not be deleted

## 8.3 Audit trail

The data on the worksheet 'Audit trail' is applied in the audit trail screen. The data structure looks like as in figure 8.3.

AuditID	Time of change	ID	Name	Status	First notification	Notifier	Last change	Change in
1	27-4-2012 9:34	1	Risk1		20120427		20120427	Assessment
2	27-4-2012 9:35	2	Risk2		20120427		20120427	Assessment
3	27-4-2012 9:35	3	Risk3		20120427		20120427	Assessment
4	27-4-2012 9:37	Na	Risk3		20120427		20120427	Assessment
5	28-4-2012 9:39	4	Risk4		20120427		20120427	Name
6	29-4-2012 9:41	5	Risk5		20120427		20120427	Assessment
7	30-4-2012 9:41	1	Risk1		20120427		20120427	Assessment
8	1-5-2012 13:55	6	Risk6		20120427		20120427	Mitigation
9	2-5-2012 11:37	1	Risk3					
10	3-5-2012 18:01	3	Risk3		20120427		20120427	Context
11	4-5-2012 15:57	3	Risk3		20120427		20120427	Assessment

Figure 8.3 Data on the sheet audit trail

The grey line on top (starting with AuditID) is a system rule that never should be removed or changed. If that happens, the audit trail may not work correctly.

A cyan field means that the corresponding field is changed from the previous version. That data is presented with that colour on the screen, as described in paragraph 5.4.

A yellow field means that the relative record is deleted as described in paragraph 5.3. In figure 8.3 Risk1 (ID 1, audit ID number 7) is removed. This means that such a risk is not displayed on the risk screen (see chapter 5). If a row is removed here, it means that the information is definitely removed and will not be shown in the audit trail.

In some cases blue lines can be removed and repaired automatically. Risk Processor itself can create an audit trail, but this does depend whether the risk register contains all the changes made. See also paragraph 5.4.

If in the column 'ID' the next 'Na' is shown (or the equivalent in whatever language), it means that the row is an audit trail row for a new data list element (see paragraph 8.1).

## 9 Trouble shooting

Nr	Possible issue	Solution
1	Some virus scanners could limit certain functionalities of the application; note: as from RiskProcessor version 4.1 this is has not shown up anymore.	It can be required to disable certain functions of the virus scanner. AssetResolutions is not liable in case of damage if (parts of) the virus scanner are switched off.

Nr	Possible issue	Solution
2	A button on the dashboard sometimes gets bigger.	This is cause outside of our application. The solution is to shut down the application and restart the application again.
3	Text in the risk matrix is not clearly visible.	Show less risks in the risk matrix. This can be done to make selections on the sheet 'Risk Register' or 'C_Risk Register' (in Corporate version). Only selected data is shown in the risk matrix. See also paragraph 6.3.
4	When the application is saved, a compatibility message can appear.	This could be caused by the screen settings on your PC. As far as we know this has no impact on the tool. If it has impact, please let us know.
5	Error after launch, while the application previously worked as normal and no changes were made.	<p>Can be caused by faulty Microsoft update.</p> <p>The solution is stated here: <a href="http://excelmatters.com/2014/12/10/office-update-breaks-activex-controls/">http://excelmatters.com/2014/12/10/office-update-breaks-activex-controls/</a> . It deals with deleting EXD files in the Localdata section,</p> <p style="text-align: center;"><i>Close all Office applications.</i></p> <p style="text-align: center;"><i>Do a search in Windows Explorer – make sure to include hidden and system files and folders – for *.exd files (note: that's not *.exe !!) and delete any you find.</i></p> <p style="text-align: center;"><i>Make sure you get these:</i></p> <p style="text-align: center;"><i>C:\users\username\AppData\Local\Temp\Excel8.0MSForms.exd</i></p> <p style="text-align: center;"><i>C:\users\username\AppData\Local\Temp\VBEMSForms.exd</i></p> <p>Usually this can be done by the end user, however on business PCs this function can be disabled. Please contact your helpdesk if this occurs.</p>
6	A button becomes larger every time this is pressed.	This is a Microsoft bug that occurs in more Excel applications. Solution: change the language once on the dashboard. The size of the buttons will then be reset.
7	How can you add additional text in large text fields under existing text?	In an Excel input screen, this works via <CTRL><Enter>. This applies to the fields: Description risk, Development and future expectation, Current mitigation measures, Impact description, Planned measure

## 10 Frequently asked questions

### 10.1 How can I use a smaller matrix (e.g. 4 x 4)?

An option is to agree in your organization which cells are used. The boundaries (cell G3 of the dashboard) and the maximum values of the effect matrix need to be adopted.

For presentation purposes, the results can be copied to a separate Excel document for further presentation.

### 10.2 How can I get insight into the risk level before and after mitigation?

Options are:

1. Risk Processor (not in Risk Processor Light) - Audit Trail screen:
  - a. Enter the risk in the risk register.
  - b. Give the risk a status for defining the control measure (e.g. status 'new').
  - c. Save the risk.
  - d. Add to the risk just added the mitigation measure and change the risk level.
  - e. Change the status related to the defined mitigation level
  - f. In the audit trail screen the risk can then be viewed including the risk level before and after the mitigation measure was defined
2. in Risk Processor and Risk Processor Light in the risk matrix:
  - a. Enter the risk in the risk register. Ensure that the risk can be identified (e.g. in the name)
  - b. Give it a status before defining the control measure (e.g. status 'introduced').
  - c. Save the risk.
  - d. Copy the just entered risk
  - e. Fill out the risk management measure and change the risk level into the level after mitigation.
  - f. Change the status of the risk
  - g. In the risk matrix screen then the risk level before and after mitigating the risk can be shown. Note that the risk number for the risk with the risk level before and after mitigation is not equal
  - a. On the worksheet 'Risk Register' optionally a filter on the status can be set, so for example only the risks after mitigation are shown in the risk matrix

### 10.3 How can I make reports?

If desired, the data from a worksheet (e.g. the risk register or audit trail) can be copied to another Excel document. Because the format of the risk register does not change, the formatting of the Excel document can be determined yourself.

In the risk register itself the layout can not be adjusted. The program could not work, or the layout is changed by the program itself after processing.

### 10.4 Where can I find general hints and tips?

Please visit our website at <http://www.assetresolutions.nl/en/products/questions-and-answers>