



riskHive Online ERM System User Manual V6 r106

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riskHive Enterprise Risk Manager

The riskHive ERM is a fully featured, online Enterprise Risk Management and Risk Register Handling solution. As a web-based tool it is constantly being updated with the latest and best functionality to support evolving needs of high-end risk managers and senior executives in large, complex businesses.

The central risk repository is used for collating and storing risk registers with essential risk reports and quickly and effectively centralises and maintains your risk registers whilst not changing the way you work by allowing the export of registers back to your native format.

The core system is designed to manage risk treatment information; produce management reports and information dashboards; manage asset and insurance information; and produce bowtie diagrams and graphics for better risk articulation. The riskHive ERM is aligned to both the ISO 31000 and COSO frameworks¹ and is highly configurable by the User-administrator. The system can be configured to be multilingual and to display your own risk terminology. Multiple currencies can be managed for assessment and reporting and are User-switchable.

You can run cost and schedule analysis; manage information security risks in line with ISO 27001; and manage control assurance information.

This guide covers functionality available in the system for Users, Risk Managers and Administrators. One of the many advantages of this system is its configurable nature. This means that each Company can request different configurable features or even have features removed. Due to this, this manual may not display the same functionality as you experience in the tool. Contact your administrator for a list of their configuration changes.

We hope you find Enterprise Risk Manager useful and easy to operate. We are eager to hear your feedback - either positive or critical - and ideas. Our contact information is provided above.

We hope you have an enjoyable and productive experience!

¹ Appendix 1 – ERM functionality link to ISO 31000 & the COSO frameworks
Classification: Internal

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1 Getting Started

The installation of Enterprise Risk Manager varies dependent on whether riskHive or your organisation is to host the system. If your company hosts the webserver and ERM data, then there may be additional requirements to access the system.

1.1 System Requirements

All that is required to use the application is a standard modern Internet browser. The application supports all platforms (not just Microsoft-centric systems) on multiple devices that can run a browser such as PC, Mac, Smart phone, Tablet, eBook, etc.

All browsers are supported but those we certify to work correctly are MS Edge, Firefox, Chrome, Safari, iOS Safari and Opera browsers.

1.2 Application Hosting

The application itself must be delivered to the users using a physical server. This can be an actual 'server' or a PC or even a laptop configured with some server components.

Recommended minimum system in Bold.

Operating System:

Windows Server 2012 r2, 2016 or **Windows 10**

Microsoft .Net 4.2.5

IIS7.5 or above

Database:

SQLExpress or SQLServer (2012 / 2016 / **2019**)

Internet browser:

MS Edge, Chrome, Firefox, Safari, Opera,

The software includes "factory set" terminology that relates to ISO 31000, it also has pre-set dropdown lists for risk reporting, however, all pre-settings can be User adjusted to meet your requirements.

You are advised to check your organisation's procedures and policies to ensure that the terminology is appropriate.

2 Glossary

The following are common terms used when carrying out Risk Management. Not all terms are used in the riskHive ERM but all of them should help the User gain a better understanding of how to identify, collect, manage, analyse, and report risk. Terms used in riskHive ERM are in bold.

Assumption	An assumption is a presumption or supposition with a degree of uncertainty. In the system Assumptions are input items with a high degree of pre-supposed dependent factors that have a degree of uncertainty.
Broad Brush Risk Assessment (BBRA)	A Broad-Brush Risk Assessment (BBRA) is a facilitated risk assessment that endeavours to identify all the significant hazards that may impact upon the organisation, including Health and Safety and Environmental aspects, but not necessarily every instance of the hazard manifesting itself as a risk.
Cause	Directly precipitates an event. Necessity. A cause must be necessary, i.e., without it, the event would not have happened. Sufficiency. A cause must be sufficient, i.e., sufficient to precipitate the event alone. Conditions. A cause usually has conditions, i.e., other elements which are necessary for the adverse event/change of state but not in and of themselves sufficient to cause it.
Causal Chain	Often used legalistically it describes a series of events/events and conditions which are directly linked to each other, i.e., one caused the other. Causal chains are usually necessary to prove fault.
CCS	The <i>Corporate Cost Score</i> shows corporate scores by cost only. Corporate scores are global scores and are defined in the Global Heatmap.
Consequence	Outcome of an event affecting objectives.
Control	Measure to modify <i>risk</i> .
CWS	The Corporate Worst Score, i.e., the worst score of each of the configured impacts (cost, time etc.). <u>NOTE</u> : Corporate scores are defined in the Global Heatmap whereas Project scores are defined by the administration of each project Heatmap.
Effect	The set of direct and indirect causal implications from the realisation of the risk.
Event	Occurrence or change of a set of circumstances (an event can lead to a range of <i>consequences</i>).
Exposure	Extent to which an organisation is subject to an <i>event</i> .
External Context	External environment in which the organisation seeks to achieve its objectives.
Financial Impact	The direct and immediate financial effect that a business will feel because of the realisation of a risk.
Frequency	Measure of the <i>likelihood</i> of an <i>event</i> expressed as several events or outcomes per defined unit of time.
Hazard	A source of potential harm to a person, or a situation that has the potential to cause damage or loss to the business, its plant and infrastructure or its people.
Impact	The direct and immediate outcome of the risk being realised.
Indicators	Used in the context of 'key risk indicator'. The state of an object or relationship which suggest that something is at risk.
Influence	The state/condition of an object or relationship which may influence another object or relationship.

Input Items	The system manages more than just <i>Risks</i> . For example, it can handle such items as <i>Trends</i> , <i>Assumptions</i> , and <i>Issues</i> . These things can have different metadata assigned to them and have different workflows. We refer to these inputs as <i>Input Items</i> .
Internal Context	Internal environment in which the organisation seeks to achieve its objectives.
Mitigation	A strategy or series of activities which are designed to reduce the impact felt by the realisation of a <i>risk</i> .
Monitoring	Continual checking, supervising, critically observing or determining the status in order to identify change from the performance level required or expected.
Opportunity	One of riskHive's' ERM <i>Input Items</i> . A possible action that that can be taken that could have a positive effect on objectives.
Outcome	The direct event and set of conditions which result from the realisation of a risk event/change of state.
Parameters	Defined within this document as a set of tolerable values, e.g., lowest tolerable value, and highest tolerable value.
PCS	Project Cost Score. The Project scorings for cost only.
Probability	Chance of something happening (AKA: Likelihood or Frequency). Measure of the change of occurrence expressed as a number between 0 and 1, where 0 is impossibility and 1 is absolute certainty.
PWS	Project Worst Score. The worst risk score of each of the configured impacts (cost, time etc.).
Residual risk	Risk remaining after risk treatments (AKA retained risk). Residual risks can contain unidentified <i>risk</i> .
Resilience	Capacity to resist being affected by an <i>event</i> .
Review	Activity undertaken to determine the suitability, adequacy, and effectiveness of the subject matter to achieve established objectives (this can be applied to the <i>Risk Management Framework</i> , <i>Risk Management Process</i> , or a <i>risk</i>).
Risk	There are several definitions for 'Risk'. We use the ISO3100 definition – A negative effect on the uncertainty of objectives. (Some organisations refer to risks as 'Threats').
Risk acceptance	Informed decision to take a particular <i>risk</i> .
Risk aggregation	Process to combine individual <i>risks</i> to obtain a more complete understanding of <i>risk</i> .
Risk analysis	Systematic process to understand the nature of and to determine the level of risk.
Risk appetite	Amount and type of <i>risk</i> an organisation is prepared to pursue to take.
Risk assessment	Overall process of risk identification, risk analysis and risk evaluation.
Risk attitude	Organisation's approach to access and eventually pursue, take, or refuse <i>risk</i> .
Risk aversion	Attitude to turn away from <i>risk</i> .
Risk avoidance	Decision not to be involved in, or to withdraw from, an activity based on the level of <i>risk</i> .
Risk context	The goals, objectives, strategies, scope and parameters of the activity, or part of the organisation to which the risk management process affects.
Risk criteria	Criteria against which risk is evaluated in association with organisation's internal policies, goals and objectives and the interests of stakeholders.

Risk evaluation	Process of comparing the level of risk against the criteria.
Risk financing	Form of risk treatments involving contingent arrangements for the provision of funds to meet the financial consequences should they occur.
Risk identification	Process of finding and describing sources of risk.
Risk management	Coordinated activities to direct and control an organisation regarding risk.
Risk management framework	Set of components that provide the foundations and organisational arrangements for designing, reviewing, and continually improving risk management processes throughout the organisation.
Risk matrix	Tool for ranking and displaying risks by defining ranges for consequences and likelihood .
Risk owner	Position holder who is delegated the responsibility for ensuring that the mitigation treatment and associated actions to minimise the impact of the risk to the business are effectively actioned.
Risk register	A register of assessed business risk which is maintained and reviewed for purposes of reference, assurance, and continual improvement.
Risk retention	Acceptance of the benefit of gain, or burden of loss, from a particular risk .
Risk sharing	Form of risk treatments involving the agreed distribution of risk with other parties.
Risk tolerance	Organisation's readiness to bear the risk after risk treatments in order to achieve its objectives.
Risk treatment	Process of selection and implementation measures (Controls) to eliminate or modify the existing risk to zero or a lower risk level.
Threat	Effect of uncertainty on objectives (Alternative to the use of word 'Risk' for some organisations).
Treatment	The application of some form of action or behaviour towards a risk or its indicators or impacts. Risks can be treated by either reducing the probability that they will occur or by reducing their impact.
Trigger	A trigger is an event or the presence of a set of pre-conditions which gives rise to the cause of a risk.
Uncertainty	State, even partial, of deficiency of information related to or understanding or knowledge of an event , its consequence , or likelihood .
Vulnerability	Intrinsic properties of something that create susceptibility to a source of risk that can lead to a consequence .

General Functions for Users

3 General Functions for Users

As Enterprise Risk Manager is a web-based system the only software required to access the system is a web browser such as Microsoft Edge, Chrome, Firefox, or Safari. To access the system simply open your chosen web browser and enter the provided web address to access the system.

In this latest addition of the Help Manual, we have included:

Item	Section	Description	Page
1	5.3.7.1.1- 5.3.7.1.3	Different methods to converting quantitative 3-point estimates to qualitative scores.	57-58
2	5.8.1.2	Strategic Risk Report – Updated to provide explanation of the solid and dotted lines	84

4 Getting started

4.1 Logging in via ERM

When first connecting to the system, you will be presented with a login dialog box. You will need to enter the **Username** and **password** that have been assigned to you, then press **Login**. This will take you to the system main screen.

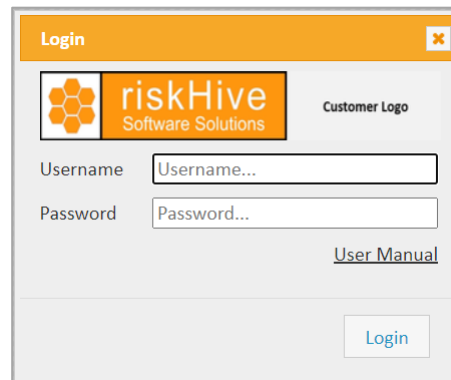
A screenshot of the ERM Login Dialogue window. The window has a title bar with the word "Login" and a close button. Inside, there is a "riskHive Software Solutions" logo on the left and a "Customer Logo" placeholder on the right. Below the logo, there are two input fields: "Username" and "Password", both with placeholder text "Username..." and "Password..." respectively. To the right of the password field is a link labeled "User Manual". At the bottom right, there is a "Login" button.

Figure 1 - ERM **Login** Dialogue

4.2 Logging in using SSO

If you are using Single Sign On (SSO), you will either be directed to the ERM system via your company website / intranet, in which case your log in screen may look something more like the log in screen below.

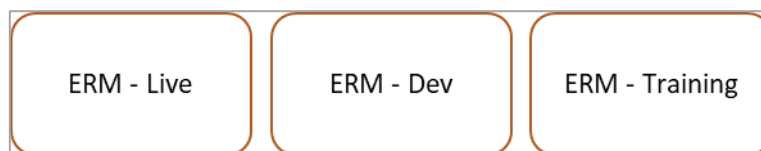
A screenshot of a Customer Specific SSO Login Dialogue window. It consists of three rounded rectangular buttons arranged horizontally. The first button is labeled "ERM - Live", the second is labeled "ERM - Dev", and the third is labeled "ERM - Training".

Figure 2 – Customer Specific SSO Login Dialogue

Alternatively, you may see the ERM screen, but with the option to sign in using SSO. If this is the case, just select the **Login using SSO Gateway**.

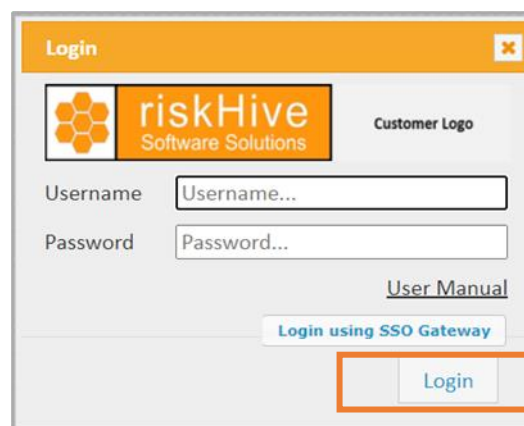
A screenshot of the ERM Login Dialogue window with an SSO option. It is identical to Figure 1, but includes an additional button labeled "Login using SSO Gateway" located below the "User Manual" link. The "Login" button at the bottom right is highlighted with a red rectangular box.

Figure 3 - ERM Login Dialogue - SSO

4.3 General features of the main screen

Once logged into the system you will be taken directly to the main screen. The main screen is split into three key areas:

Enterprise Project Structure (EPS)

The **EPS** (sometimes referred to as the **tree** or **node structure**) is a list of all the project risk registers. When you select a risk register, the risks within this register will appear in the **Summary Information** section and information relating to the project will appear in the **Project Information** section.

The path of the node is displayed. When the path is too long, rest the mouse cursor over the node to view the full path details.

Summary Information

The central part of the screen shows the main risk information related to the selected risk register.



Figure 4 - The ERM User Interface

4.4 Page Tabs

On the bottom left of the screen the system will indicate the number of risks being displayed and provide options on how many the User would like to see per page.

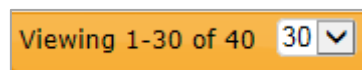


Figure 5 – Risk number

On the bottom right of the screen are the **page navigation buttons** to move through the screens.



Figure 6 – Page navigation buttons

If **All** risks are selected for display on the bottom left, the page navigator on the right will become inactive and default to showing '1' page. The scroll bar on the right-hand side of the screen can be used to move through the risks.

By selecting the column headings, the data beneath will be re-ordered by prioritising based on the Users selection.

4.5 Sorting data within the columns

Users may order the lists of risks in ascending or descending value based on their column selection. For instance, if a User wants to view risks by **Class**, by **Location** or by **Owner** etc. then they simply need only

click on the **column headers**. Multiple sorts can be conducted by selecting the first column, holding down the Shift key and selecting the next column (small arrows will appear to show the direction of the sorting).

Code	M...	Info	Watch	Class.	Group	Node	Risk Location	Esc. Level	Risk	Assumptio	Owner	Cat.	Alloca...
C0009				Strategic		Corporate	North America - Chicago	Level1- Corporate	There is a risk that current company infrastructure is not sufficient for Product X development.		Queen Elizabeth II	Change	£8,955
C0002				Operational		Corporate	North America - Chicago	Level1- Corporate	There is a risk that USA customer is well established and has a mature ordering system which is not aligned to our UK ordering system.		Helen Mirren	Change	£8,955
C0007				Operational		Corporate	Asia - China	Level1- Corporate	There is a risk that Several core suppliers could struggle to produce key products and meet delivery dates.		Helen Mirren	Infrastructure	£8,955

Figure 7 - Selection by column headings

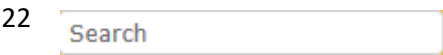
4.6 Using searches and filters

At the top right side of the main screen are the search and filter options.

NOTE: Searches will be conducted on the risks displayed on the screen, therefore it is important to select all nodes/risks that are to be searched first and display these on the main screen before running the search functions.



Figure 8 – The Search facility



Allows for a free text search of the risks displayed on screen which is instant and will show entries matching the search criteria as they are entered.

Multiple criteria can be entered at one time to reduce the number of results returned e.g., ‘resource hr’ could be entered to find all risks containing the words ‘resource’ and ‘HR’. The search will include any such text held in ‘hidden’ fields that could be assigned to the grid.



Clear All Filters removes any search filters you may have added.



The **Advanced Search** filter allows filtering of on-screen risks by classification, group, status, owner, project, category, and the custom fields.



The **Manage Filters and Settings Sets** button enables the saving and reusing of your favourite search options. Type your search requirements into the Search section and select the button. Select Create.

Type the name in Set Name, make your selection and select Create. This search is now saved.

4.7 Selecting individual or multiple risks using the keyboard

To select an individual risk, click once with the left mouse button on the risk row on the main screen.

To select a range of risks that are in consecutive order, select the first risk, hold down the **Shift** key then select the last risk.

To select risks randomly, select the first risk, hold down the **Control** key then select the next risk. Keep the control key held down until all risks are selected.

4.8 On-screen Symbols

As you begin creating and editing risks, you will notice symbols appear. Here are the common symbols (providing these columns are displayed on screen):

<i>Info column</i>		<i>Emoticons</i>		<i>Monitor</i>	
	Quarantined risk (the risk is not yet approved)		Great		This risk is being monitored
	Active risk (The risk is approved)		Good		
	Attested risk (The risk has been challenged)		OK		
	Retired (the risk is no longer a threat)		Bad		
	This risk belongs to a Group Parent		Terrible		
	This risk can display a Bowtie graph				
	This risk has Actions				
	Risk is restricted				

4.9 Useful functionality within panels

Before we learn about individual buttons and panels, there is common functionality within most panels to enable searching and editing of either an individual risk or several risks.

4.10 Search functions within panels

On the top right of most panels is a search option:

To search for a function, type the name i.e., type **'qualitative'** and the **Qualitative** options will appear.

Not only will the system try to find an exact match to what is in the filter, but also other words associated with what you are looking for i.e., type **'Actions'** and the **Treatment** panel will appear.

4.11 Apply changes to multiple risks

If you have previously selected several risks you can decide to apply the same changes to all the risks or, edit the risks individually.

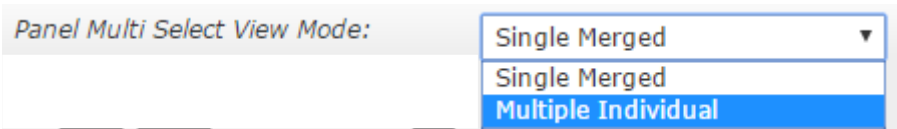


Figure 9 – The *Single or Multiple Changes* Options

By selected **Single Merged**, any changes you make will be applied to all the risks you have selected. So, for example, if you change the **Next Review** date, it will apply your changes to all the risks.

Equally, you can decide to edit the risks individually. By selecting **Multiple Individual**, if you wanted to edit the qualitative data, you would select **Assessment**, then **Qualitative** and a panel will appear showing all the qualitative assessments of the risks:

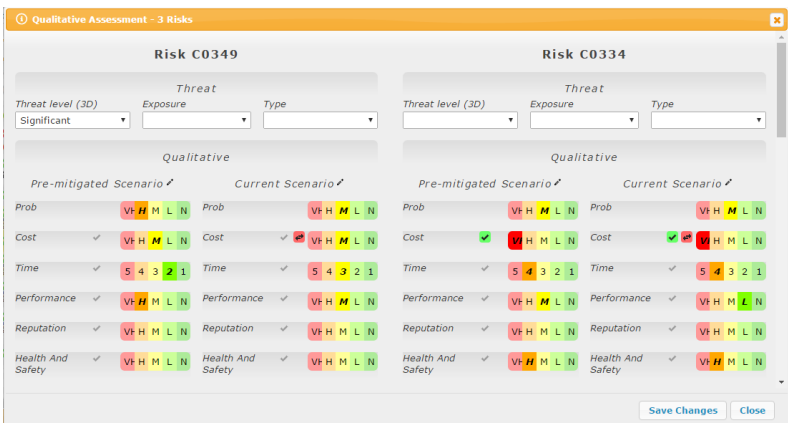


Figure 10 – Multiple risks edited within the *Qualitative* panel

You can then make your changes, select **Save Changes** and all the risks will be updated.

4.12 Dynamic Search for roles

Dynamic searching is available on drop downs for all roles and responsibilities. Entering individual characters or a character string into the selection box down selects to the users that contain those characters or string. This is particularly helpful if you have a long list of names in any one drop down.

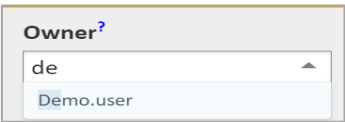


Figure 11 – Dynamic Search

4.13 Tool Tips

Sometimes the **Tool Tips** can be extensive. Using **Tool Tips** are a convenient way of reducing information in work instructions by having these available in the system. By clicking on the hint icon, a new dialogue panel will appear with the full tool tip text.

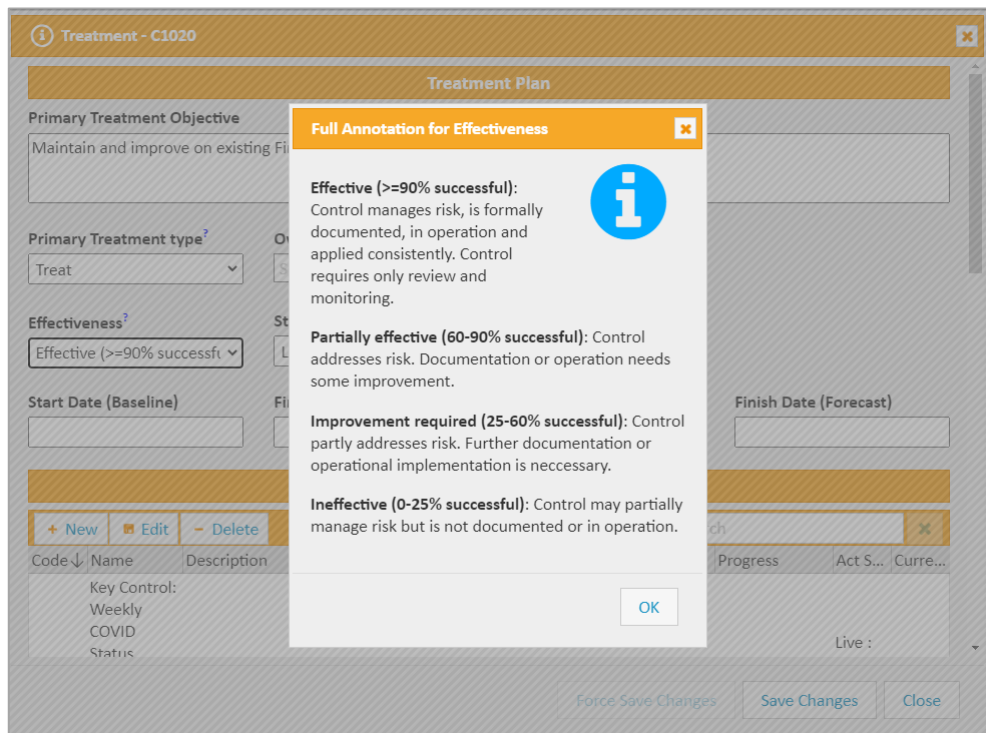


Figure 12 – Tool Tips Dialogue Panel

4.14 Data Validation Checks

Sensitivity checking takes place when using the quantitative and/or hybrid assessment panel. A prompt will show as a red box around the field that you are being asked to complete. The sensitivity checks apply to the Shape and the Value fields as demonstrated by the screen shot below.

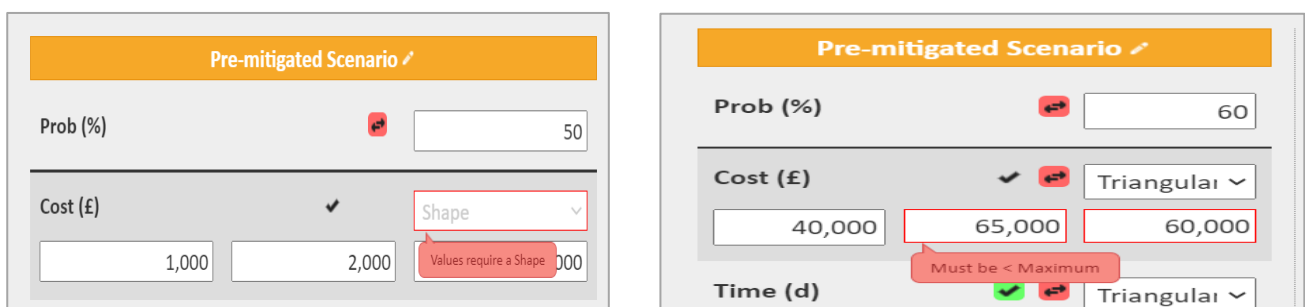


Figure 13 – Data Validation Checks

5 Risk Management

5.1 Screen Buttons

At the top left of the screen are the primary buttons which help Risk Managers manage risks, project data and reports.

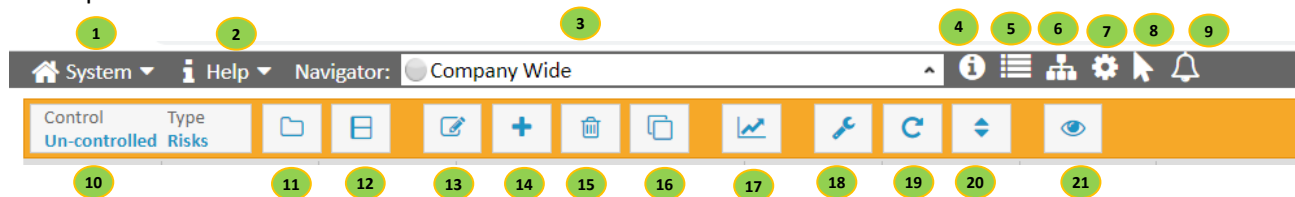
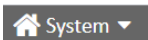
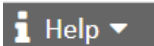









Figure 14 – Key main buttons and functions

The functions bar contains most of the buttons and selections you will require to select functions or navigate around the system.

- | | | |
|---|---|---|
| 1 |  | This option helps you log out and access other areas of the system. Depending on permission this may include administrative aspects, but generally it includes the Dashboards page. |
| 2 |  | Help provides Information and support through access to both PDF and web-based User Guides as well as a searchable knowledgebase of ERM and the ability to report problems and provide recommendations to improve the software to the Support Team. |
| 3 |  | Enterprise Project Structure (EPS) or Nodes list enables users to find where risks are stored. |
| 4 |  | View Node Overview provides a summary of the key features of the project. |
| 5 |  | Edit Node Data button. View and edit the project information. Includes project rating, budget, state, and ownership. This is taken from the project node and its subsidiary nodes. |
| 6 |  | Change Navigator View. The EPS is the normal Master view. The user can see the project through alternate views/structures which can be set up. This will usually include Levels of Escalation and might also include the alternate structures of Cost Breakdown Structure (CBS) and/or Work Breakdown Structure (WBS). |
| 7 |  | The Change Grid Settings button enables you to filter the risks on screen. This option is also included within the Grid Controls panel (see below). |
| 8 |  | The Row Selection Mode button allows for selection rows or pages of risks. |
| 9 |  | The User Messages button opens the local message inbox for the logged-on user. Messages within the inbox are those created by the Monitoring and/or Validation system. |

The **Control / Type** button opens a pop-up (below) for the type where you can select the following options:

ControlTypeViewAllRisksany / all available

Controlled Risks (Control)

All

Scenario

Current

Display (Type)

Risks

User Views (View)

any / all available

Set & UpdateCancel

Control: This gives you the ability to view risk where they are controlled by its actions. There are 3 states of action control. Controlled, Un-Controlled and All. The selection determines which of the risks are shown in the grid. The default is **ALL**, but this can be configured across the application.

Controlled Risks (Control)

All

All

Un-controlled

Controlled

Scenario: This shows and switches the selected or default scenario in which the risks are displayed. Using the Scenario selection, risks may switch between the configured scenarios, for example, pre-mitigated, current and target.

Scenario

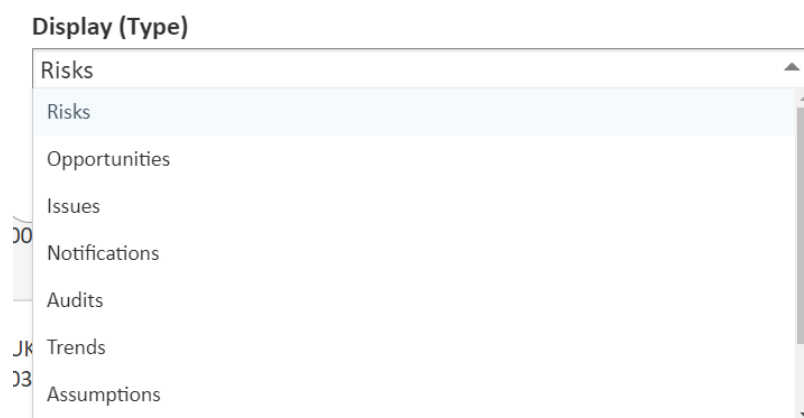
Current

Pre-mitigated

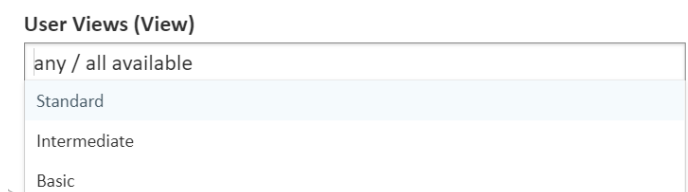
Current

Target

Display (Type): This shows and switches the current main grid view. Using the View/Display selection pop-up (below), risks may switch between the configured views. Depending on configuration, these are generally Risks, Opportunities, Trends, Assumptions and Actions but can include Notifications, Issues, Benefits and Audit.



View: A new main grid control has been introduced to manage the additional complexity of User View Permissions (above). Should a user have multiple permissions (for example both Standard and Basic) the user may choose to work in either configuration. This option will not show if you only have been allocated a single View Interface.



11



The **Node Only** button displays only the risks in the selected EPS the structure. Select to see subsidiary nodes.

12



The **Show Split Panel** button switches the application into risk line items and edit panels.

13



Once a risk(s) is selected, users can use the **Edit** feature to make changes to the risk's details.

14



The **New** button helps create risks.

15




Delete a risk. A deleted risk will be removed from the screen and placed in the archive where users will not be able to see them. A Retired risk has been through the risk management cycle but could still be impacting the live system (such as the aggregate probabilistic means for its assigned node). A Retired risk will remain on screen.











16



The **Duplicate** button enables the user to copy risks to other levels within the EPS.

- 17  **Reporting Parent** button provides access to the main reporting systems. These are presented as foldouts (sub-menus) to the parent. There are 5 sub-menus. These are: Dashboards, Excel Reports, Excel Registers, Report Scheduler, My risks, and My Actions.



- 17.1  Offers several **dashboard** style reports.
- 17.2  Configurable Excel **Reports**.
- 17.3  Configurable Excel **Export and Import Registers**
- 17.4  **Schedule** an Excel Report or Excel Output register to occur on a regular basis
- 17.5  **My Risks** enables you to see the risks which you have been identified as the risk owner or managing the risk.
- 17.6  **My Actions** shows the status of all the actions allocated to you.
- 18  The Tools button provides the options to run a statistical risk analysis (Monte Carlo simulation), create Bowties and Groups.
- 19  When drop down menus, users or information has been changed by the Administrator, the **Refresh Grid** will help show the changes on screen.
- 20  The **Reverse Sort** button reverts the main grid sorting to the initial configuration.
- 21  The **Risk Summary/Review** displays the details of a risk so that the risk can be reviewed, edited, and printed.

5.1.1 System

The System feature provides access other areas of the system, such as access to Administration or Datasets. However, this will depend on the user permissions setting.

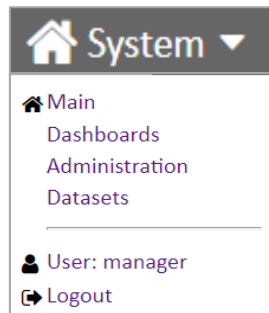


Figure 15 – The **System** menu

Select “Dashboards” to give you instant access to the Project Summary Dashboard. Select “Logout” to log yourself out of the system.

5.1.1.1 Change Password (User)

To change your password, go into the **Systems** option, click on your user name and the following panel will appear:

A screenshot of a 'Your User Settings' dialog box. The dialog has an orange title bar with the text 'Your User Settings' and a close button. The main area is light gray and contains several form fields: 'Username' with the value 'manager', 'Real Name' with the value 'manager', 'Password?' with a question mark icon and a link 'Show password characters...', 'Primary Email Address', 'Email Address 2', 'Phone Number 1', and 'Phone Number 2'. At the bottom right, there are two buttons: 'Update' and 'Close'.

Figure 16 - The **Change Password** button and panel

Type in your new password and click on the **Update** button.
By clicking on the '?', guidance notes for password creation will appear.

Passwords must obey the following rules:

- At least 8 characters long and no longer than 128 characters.
- No more than 2 consecutive characters the same.
- Meet at least 3 complexity criteria (at least 1 uppercase, 1 lowercase, 1 digit, or 1 special character.

5.1.2 Help

This feature provides several help options.

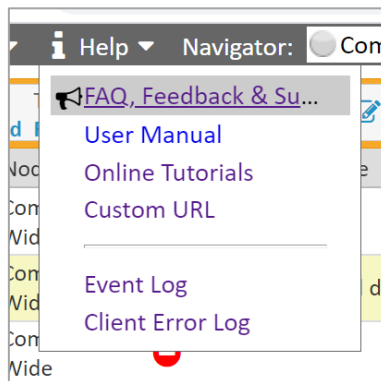
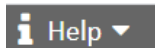


Figure 17 – The **Help** button

5.1.2.1 FAQ, Feedback & Support button.

This can be used to contact riskHive support, give feedback on the system and browse the knowledge base of frequently asked questions.

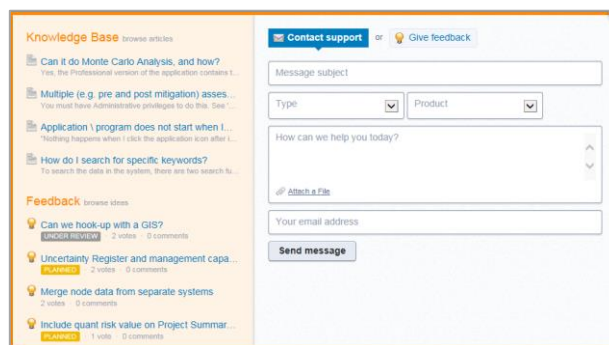


Figure 18 –The **FAQ, Feedback & Support** panel

To begin searching the current knowledge based, type your search word(s) in the **Message subject**. The search is intuitive and will direct Users to existing online material (orange lightbulb) or documents (piece of paper). The results will be displayed on the left-hand side of the panel.

Feedback ideas are captured in the bottom Left-Hand Side of the panel. All users can vote and/or add comments on these ideas. This information is captured and reviewed by riskHive to help determine future delivery possibilities.

By selecting **Contact Support** users can ask for direct help to a problem. By selecting **Give feedback**, users can offer advice on how to improve the system.

NOTE: If you wish to find out more about the riskHive company, our consultancy and tools please select the riskHive symbol at the top right of the main screen.

5.1.2.2 Online Tutorials

This provides you with templated riskHive videos on functionality such as creating risks, copying risks etc.

5.1.2.3 Custom URL

Where a customer has developed their own training videos or reference material, this can be linked to that customers URL. This link will only appear if this functionality has been used by that customer.

5.1.2.4 Event Log

The Error log is log of what happens on the server where ERM is running. It will report such things as database errors hidden from the outside world. You should run the event log after any error and include this within any communications to support@riskhive.com.

5.1.2.5 Client Error Log

The Client event log reports problems on the “Client” (the Browser, edge, chrome) and might report problems with the User interface (input, display problems.). You may be asked to run one of these if you are experiencing error regarding the ‘client’.

5.1.3 Enterprise Project Structure (EPS) / Node Structure

The **EPS** (sometimes referred to as the **tree** or **node structure**) is a list of all the risk registers. When you select a risk register, the risks within this register will appear.

The path of the node is displayed. When the path is too long, rest the mouse cursor over the node to view the full path details.

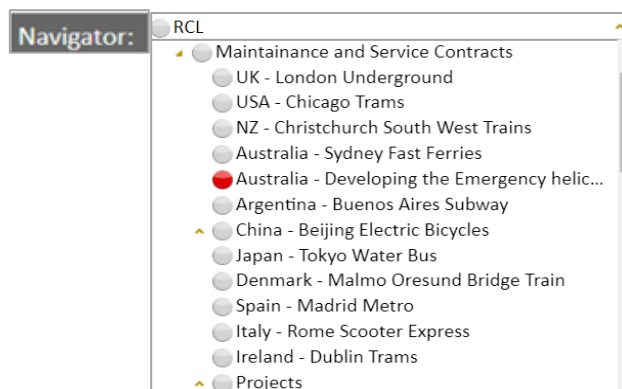


Figure 19 - The **EPS** or **Node Structure** menu

5.1.4 View Node Overview

This button will provide you with a summary of the main project features.

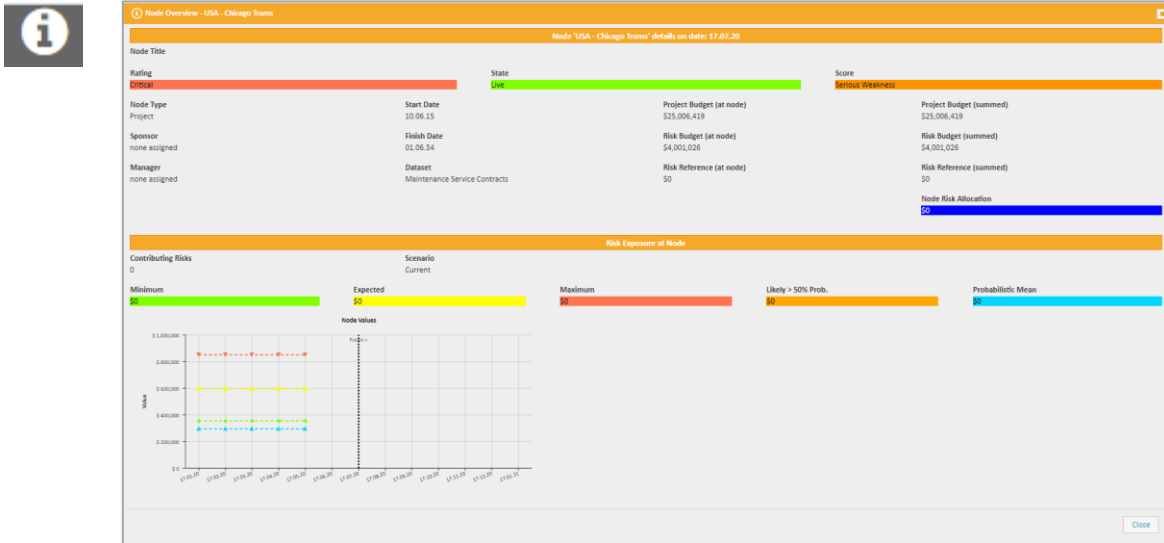


Figure 20 – The **View Node Overview** button and panel

5.1.5 Edit Node Data

The Edit Node Data is permissions based, therefore you may or may not have this option.

It is vitally important to understand the journey the project will face and the projects general health, which in turn will help readers understand the risks better. The **Edit Node Data** panel helps us define the projects context.

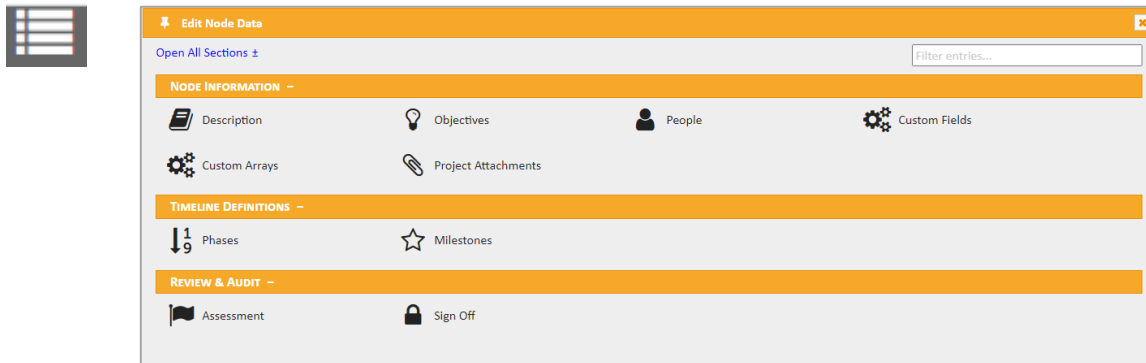


Figure 21 - The **Edit Node Data** button and panel

Node Information



Description

Provides the basic description of the project with start and finish dates.



Objectives

Lists the objectives for individual projects.



People

Shows those responsible and stakeholders for the project.



Custom Fields

Shows custom lists and fields for the project.



Custom Arrays/Benefits

Shows custom arrays and fields for the project.



Project Attachments

Shows attached documents and hyperlinks for the project.

Timeline Definitions



Phases

Shows the various phases of the project.



Milestones

Shows the various milestones of the project.

Review & Audit



Assessment

Gives a general assessment of the project's health along with supporting documentation.



Sign Off

Providing you have **elevate** permissions, you can sign off a project's risks showing the date and comments of the last formal assessment and approval.

5.1.5.1 Description

General information on the project is captured such as the start and finish date of the project, the budget and risk contingency, the phase and geographical region of the project.

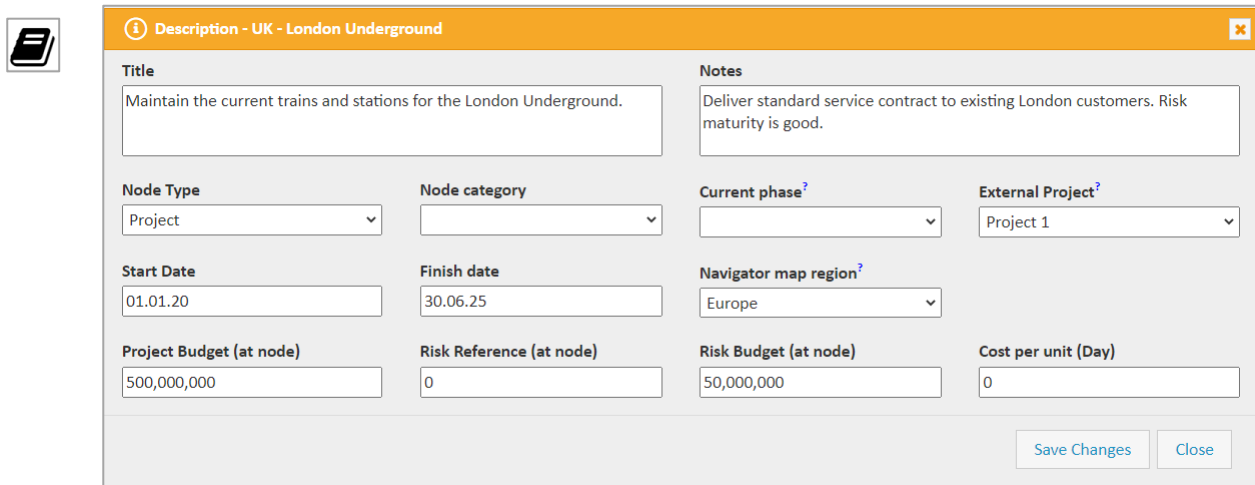


Figure 22 - The **Description** button and panel

The **Title** is the full title of the project.

The **Notes** section enables you to describe the project and its context.

Node Type enables you to indicate if it is a programme or a project.

The **Node Category** indicates the type of project.

The **Current Phase** indicates which phase the project is currently in i.e., manufacturing phase.

The **External Project** indicates which project is assigned to the node. This is relevant if you are using the Linked Task functionality.

The project formal start and end dates are indicated in the **Start Date** and **Finish Date**.

The main residency or headquarters of the project can be identified in the **Navigator map region** list.

The **Project Budget* (at node)** is the Project Budget for the node level.

The **Risk Reference* (at node)** is where there is a need to have a different value against your project, that is different to the Project Budget.

The **Risk Budget* (at node)** is the budget allocated to risks.

The Cost per unit (Day) is the pre-determined value you wish to allocate to time. (This is important if you are using the **Schedule Analysis** functionality).

*Refer to additional notes in section [5.12.6 in the How do I? Section](#)

5.1.5.2 Objectives

It is vital that the objectives of the project are fully documented so that further analysis can identify if the risks impact the objectives and therefore the potential success of the project.

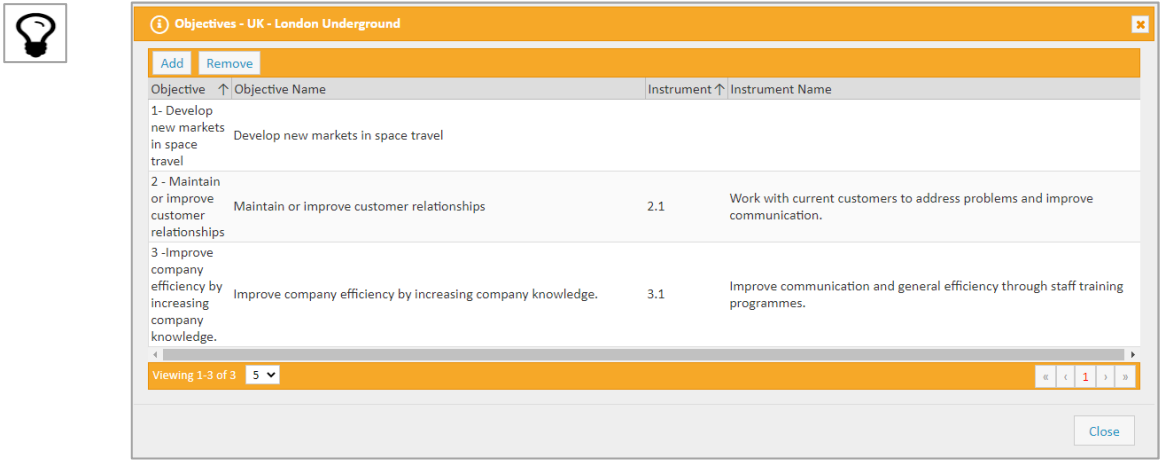


Figure 23 - The **Objectives** button and panel

Each objective is numbered and subsidiary objectives (i.e., **Instrument Name**) is also numbered.

To add an objective to the project select **Add**:

Select Objective to Add

Objective?

Instrument

Add Cancel

Figure 24 - Selecting **Objectives**

Select an objective number and an instrument (sub-objective) number. The objectives text will appear on the right, then select **Add**.

5.1.5.3 People

The major influential people related to the project are identified in the people section. These people contribute to the general health and progress of the project and therefore are stakeholders in the risk's progression as well. Keeping stakeholders informed of major and sudden risks is important as they will provide support and additional contextual awareness when required. These fields are configurable; therefore, your screen may look different to the one below.

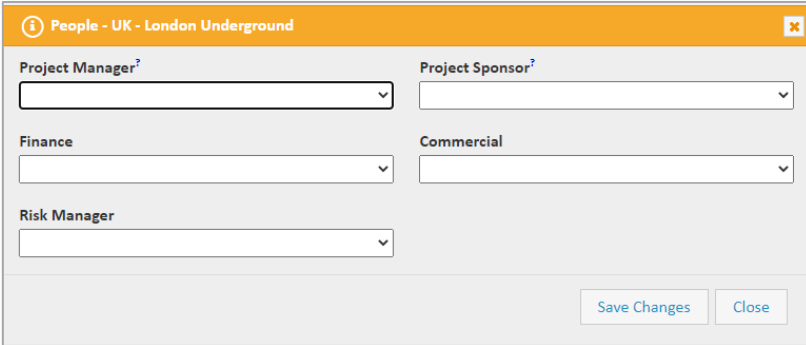



Figure 25 - The **People** button and panel

The most common types of people are:

The **Project Manager** is the person with ultimate responsibility for the project delivery.

The **Project Sponsor** identified the need of the project and the projects definition. Usually someone in senior management who resolves issues that are beyond the control of the project manager.

The **Finance** representative of the project reports on the projects budget, spending and financial forecasts.

The person responsible for sales, marketing, contracting, negotiations, finance, and contract law is the projects **Commercial** contact.

The **Risk Manager** ensures the risk management process is appropriate and followed.

Please enter as many stakeholders as possible and select **Save Changes**.

5.1.5.4 Custom Fields

If you are required to complete additional information regarding the project, then you will have a **Custom Fields** option in the Node Information panel. The drop downs will have been configured by your system administrator in line with your risk management policy requirements.

An example is shown below:

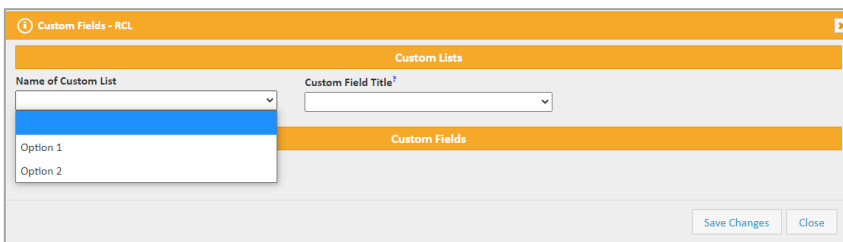



Figure 26 - The **Custom Fields** button and panel

5.1.5.5 Project Attachments

Important documents and hyperlinks relating to the project can be attached i.e., Project Overview, Risk Management Strategy, Project Schedule.

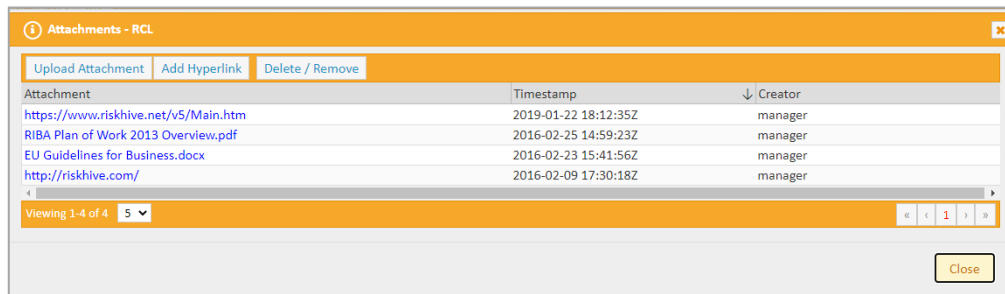


Figure 27 - The **Attachments** button and panel

To attach a document (Microsoft Word, Excel, PowerPoint, Project as well as pdf and notepad text files) select **Upload Attachment**. To include a hyperlink select **Add Hyperlink**.

5.1.5.6 Phases

By listing the many phases of a project, the Risk Manager can identify which risks could impact particular phases of a project.

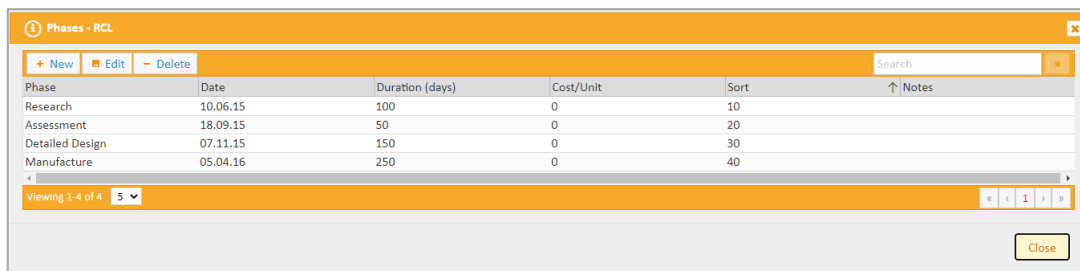


Figure 28 - The **Phases** button and panel

To add a **Phase**, select **New** and the following panel will appear:

Create Phase

Phase Type?

Order

Duration (days)

End Date

Notes

Save Close

Figure 29 – Adding a **Phases** to the project

The **Phase Types** has already been created and is listed.

In the **Duration** section, identify how many days has been allocated for this particular phase.

The **Order** section relates to the sort column. The first phase will be 10, the second phase will be 20 and so on. This is to ensure the list of phases are in the correct order.

The **End Date** identifies the ending of the phase.

The **Notes** section can be useful to add a fuller description or context.

5.1.5.7 Milestones

It is very important to identify the major events in the lifespan of a project. A list of milestones not only gives the reader a greater context of the project but also allows users to identify which risks may impact which milestones.



Figure 30 - The **Milestones** button and panel

Select the **New** button and the following panel will appear:

Figure 31 - The **Create Milestones** button and panel

Type the name of the milestone into the **Name** section, select the date when the milestone will take place in the **Date** section and select **Save**.

5.1.5.8 Assessment

It is always useful to understand the general health of the project which may give greater understanding of the project risks.



Figure 32 - The **Assessment** button and panel

The **Score** describes the general health of the project and options include **On Target**, **Minor Weakness**, **Serious Weakness** or **Critical Weakness**.

The **Rating** section identifies if the project is considered critical to the business path or not.

The **State** identifies if the project is *Live* or Not Live (archived). If you select *Not live*, the circle next to the node will turn red once you log out and then log back into the system:



The overall **Maturity Level** of the project will help readers understand why a project may have a high level of risks.

Underneath is an **Audit** section which enables you to identify which core documentation the project has.

Once your changes have been made, select **Save Changes**.

5.1.5.9 Sign Off

This tab is provided to only those users who have rights to assess and approve the overall risks of the project (i.e., CEO, Director). The administrator will ensure this person is given the appropriate access (i.e., elevated).

When the **Sign Off** button is selected, the following panel appears:

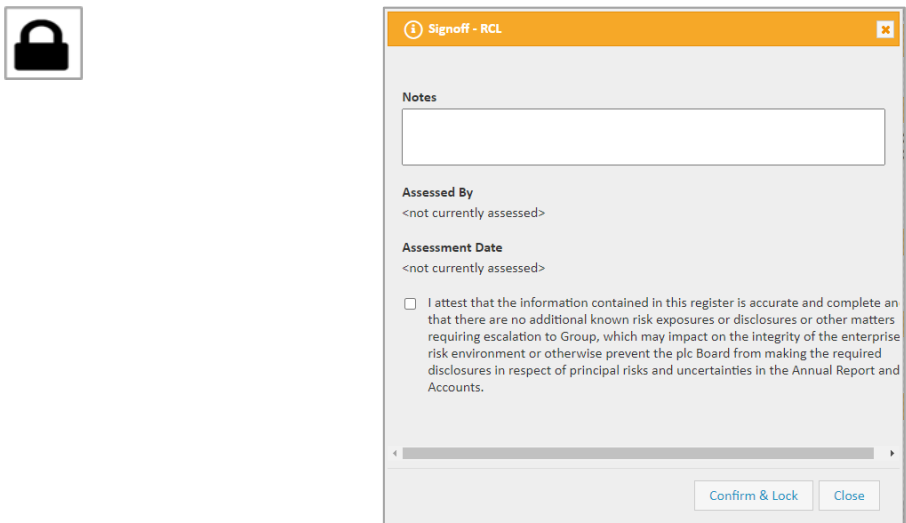


Figure 33 - The **Sign off** panel

The **Notes** section gives the person signing off the risks the opportunity to explain some of the context or why they believe the risks are appropriate to the project.

Select the tick box relating to the attestation statement.

Select **Confirm & Lock**. A confirmation panel will appear:

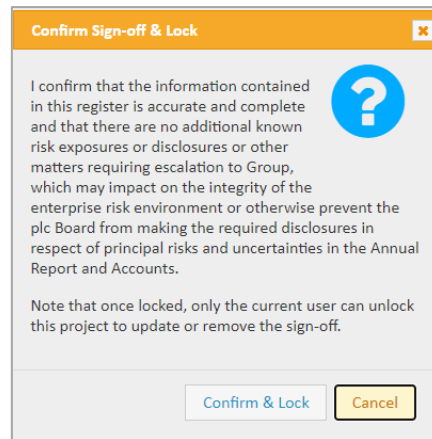
A confirmation dialog box titled "Confirm Sign-off & Lock" with a close button (X) in the top right corner. The dialog contains a blue circular icon with a white question mark. The text inside reads: "I confirm that the information contained in this register is accurate and complete and that there are no additional known risk exposures or disclosures or other matters requiring escalation to Group, which may impact on the integrity of the enterprise risk environment or otherwise prevent the plc Board from making the required disclosures in respect of principal risks and uncertainties in the Annual Report and Accounts." Below this, a note states: "Note that once locked, only the current user can unlock this project to update or remove the sign-off." At the bottom, there are two buttons: "Confirm & Lock" and "Cancel".

Figure 34 - A **Confirmation** panel

Select Confirm & Lock.

When you or others view this panel, they will see your name and the date when it was assessed.

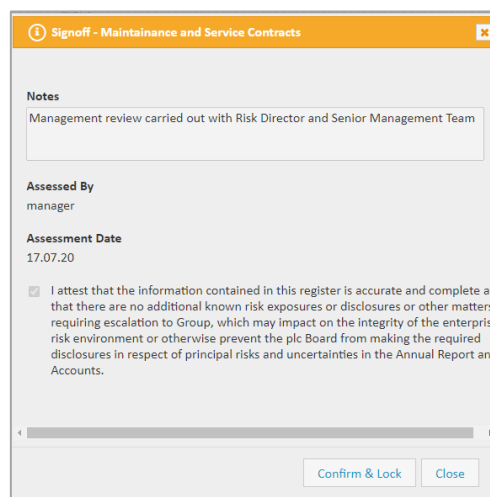
A panel titled "Signoff - Maintenance and Service Contracts" with an information icon (i) and a close button (X) in the top left corner. The panel contains a "Notes" section with the text "Management review carried out with Risk Director and Senior Management Team". Below this is the "Assessed By" field with the value "manager". The "Assessment Date" is "17.07.20". There is a checkbox that is checked, followed by the same confirmation text as in Figure 34. At the bottom, there are two buttons: "Confirm & Lock" and "Close".


Figure 35 - A completed Sign-Off panel

This will now be a historical statement of the date when the projects risks were assessed and confirmed. Only the person who originally locked the risks can unlock them. Equally, only an Administrator can reset all signoffs (through the **Sign-Off Reset (All)** option).

5.1.5.10 Rates/Exchanges

Depending on your access, you may have access to Rates/Exchanges.

The **Rates/Exchanges** indicates how the various impact assessments will be measured. For example, **Cost** is measured through a country's currency, Time is measured through a variety of time durations. **Cost** and **Time** are the key measurements for each project.



Rates - Maintenance and Service Contracts

cost?

GBP (£)

time?

Days

performance

reputation

Health and Safety

Legal

Save Changes


Close

Figure 36 – The **Rates/Exchanges** button and panel

5.1.6 Change Navigator View

The Navigator View is permissions based, therefore you may or may not have this option.

Select the **Change Navigator View** button:



Change Navigator View

Views

Master

Change

Close

Figure 37 - The **Change Navigator View** button and panel

Select the node structure you wish to see and then select **Change**.

The Node structure has changed to the different levels of hierarchy and depending on the node you select.

Navigator:

Level1-Corporate

Level1-Corporate

Level2-Strategic

Level3-Programme

Figure 38 – The **Escalation Levels** within the node structure

If you select the Escalation option, risks could have been automatically escalated through their Heatmap score or a user could have selected a particular escalation level for a risk. If you select the 2 other view options, the user would have needed to select these views for each risk. To return to the normal node, select **Master**.

5.1.7 Grid Controls

This panel enables the user to organise the way they view and select risks on screen.

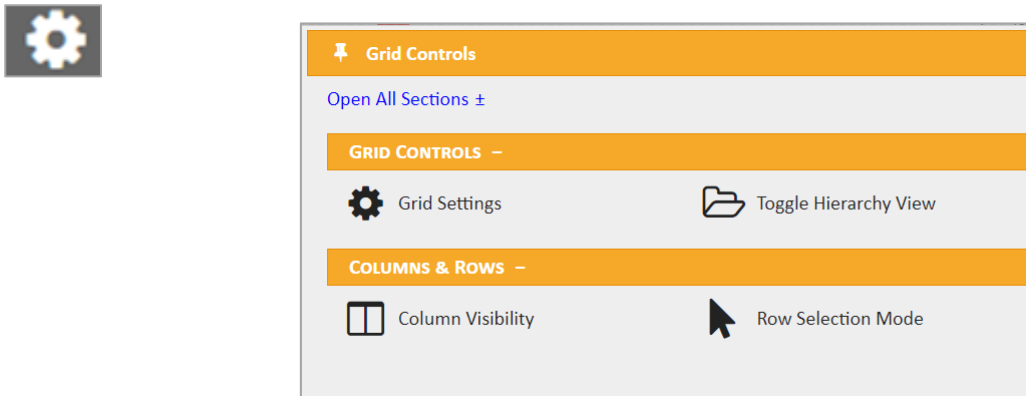


Figure 39 – The **Grid Controls** button and panel

Grid Controls



Grid Settings

Filtering the risks on screen.



Toggle Hierarchy View

Displaying either the risks within the current node or including risks within subsidiary nodes.

Columns & Rows



Column Visibility

Temporarily displaying more columns.



Row Selection Mode

Selecting rows or pages of risks.

5.1.7.1 Change Grid Settings

The **Grid Settings** are another way for users to view risks through creating their own filters.

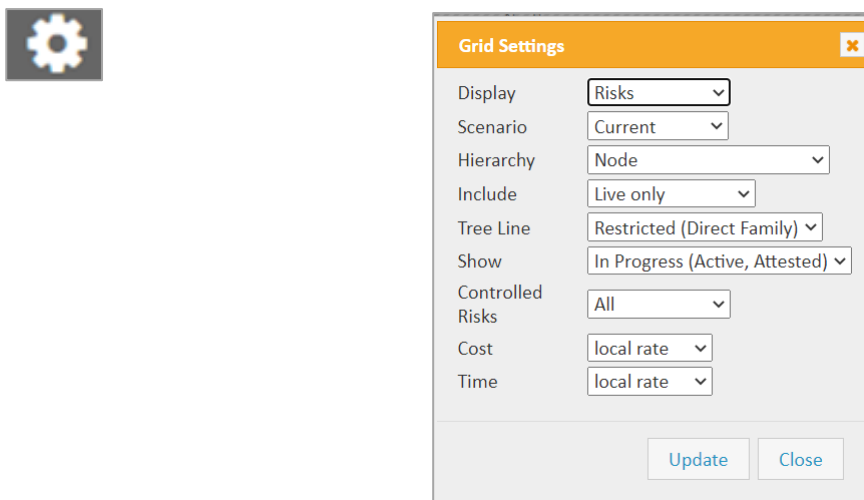


Figure 40 – **Grid Settings** button and panel

Grid Settings allow users to view input items by type. The options available will be dependent on the options selected by your administrator.

Display

Risks	The default view displaying only risks.
Opportunities	Displays only Opportunities.
Issues	Displays only Issues.
Notifications	An additional grid to display 'additional' record types if required. (E.g. records where a user is unsure of the actual record type).
Audits	This is a new grid type and is currently under further development.
Trends	Trends could indicate emerging risks which are not formally listed as risks but are showing signs of developing into risks. Equally trends can indicate something which could positively impact risks and their mitigation. This displays emerging trends so that very early risk/opportunity information can be monitored as soon as it begins to develop.
Assumptions	Displays only Assumptions.
Mobile	Gives you a cut-down view optimised for smaller screens such as tablets and smartphones.
Actions	Display all the actions within the current node. You can also view the risks they relate to.
Benefits	Displays the benefits within the current node.

Scenario

Scenarios represent **pre-mitigated**, **current** and **target** risk assessments.

Hierarchy

View risks allocated to the selected project node or the project node and the nodes descendants.

Include

View risks from projects which are either live or not.

Tree Line

The **Tree Line** relates to the node structure.

Restricted (Direct Family) – Displays risks whose owners are allocated to the selected node and nodes above.

All Users – Shows risks owned by all users.

Node and Children – Shows the risks of users who have access to the node and subsidiary nodes.

Show

Views risks in a variety of states.

Controlled Risks

Displays risks that are controlled or not by their Actions. There are 3 filter types:

All – Display all risks irrespective of their control state.

Un-controlled – Displays only those risks that are not controlled by their actions.

Controlled – Display risk that are controlled.

Restricted Risks

This option is only available to users that have "**Restricted**" permission. "**Restricted**" implies a user may view and edit risks marked as restricted. There are 3 filter types:

Standard – Displays standard (not restricted) risks.

Restricted – Display risks that have been tagged "**Restricted**"

All – Display all risks irrespective of their restriction level.

Cost

Enables you to set the cost view to a specific currency which is essential for geographically dispersed organisations.

Time

Enables you to set the view by time. For instance, certain projects may view time by days and others by weeks or another unit of measure.

5.1.7.2 Toggle Hierarch View

Toggle between viewing risks within the selected project node or descendant nodes.

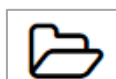


Figure 41 – The **Toggle Hierarch View** button

If you select a node, the risks within just that node will appear on screen. If you select **Toggle Hierarchy View**, the risks within any subsidiary nodes will also appear on screen.

5.1.7.3 Column Visibility

The **Column Visibility** panel allows you to select additional temporary columns which will be added to the main screen but will disappear when you log out of the system.

The options available will be dependent on the options selected by your administrator.

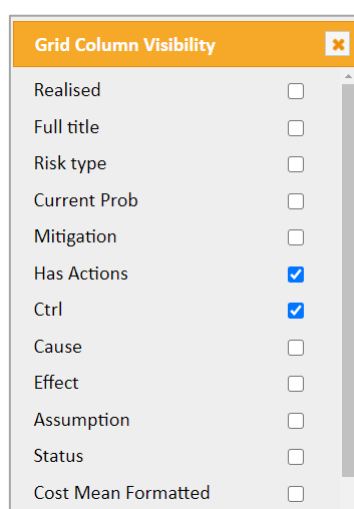


Figure 42 – The **Column Visibility** button and panel

Select the columns you wish to see, select **Update**. The columns will appear on the main screen.

5.1.7.4 Row Selection Mode

To select an individual row, click with the left mouse button on a row. However, you can use the **Row Selection** option to select a variety of rows and pages.

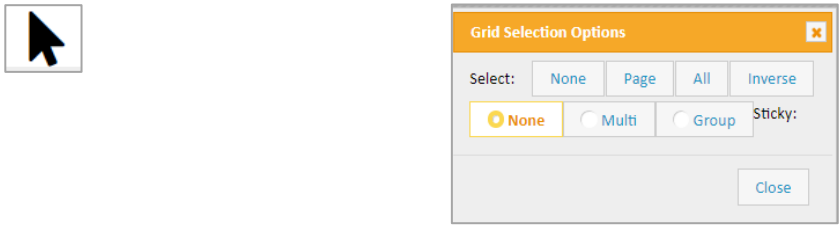


Figure 43 – The **Row Selection Mode** button and options

Select

- None** No rows are selected.
- Page** Only the rows on the current page are selected.
- All** All rows on subsequent pages are selected.
- Inverse** If you have already selected rows, you can use inverse to select all other rows e.g., if you want to select all rows on the main screen except 2 rows, select the 2 rows you do not want and then inverse, and all other rows will be selected.

Sticky

- None** No rows are selected.
- Multi** Randomly select rows.
- Group** Select consecutive rows. Select the first row and the last row and all rows in between will become selected as well.

Remember to turn this feature off when you no longer need it.

5.1.7.5 Your Messages

To complement Monitors and Validators (see Administration: Manage Tasks), when a Monitor or Validator generates an email, the application also stores the email directed at ERM users as local messages. This provides a basic inbox that alerts users to system messages. When a user logs in and they have un-read messages, they will see an alert (bottom right). Clicking the alert (you have N new messages) or selecting this (“Your Messages”) icon invokes the local inbox.

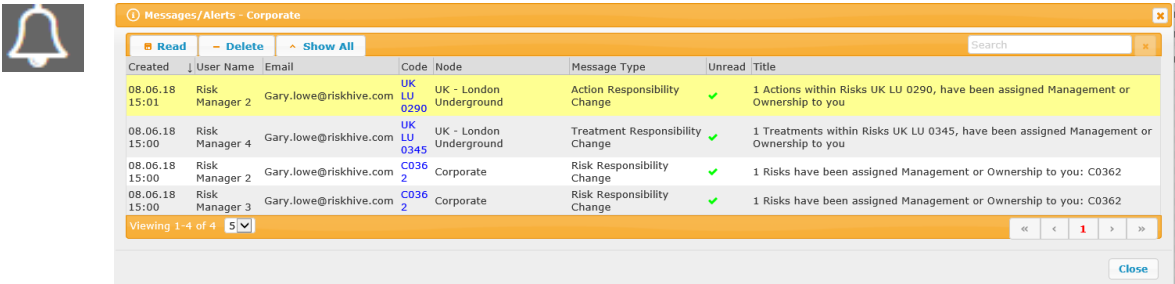


Figure 44 – The **Your Messages** local inbox

Within the local inbox, a use may “read” the full message (which marks the message as read), permanently “delete” messages or “show all” previously read messages.

5.1.8 Node & Desc

ERM will display the risks relating to the node you have selected within the EPS (node structure). If you wish to see risks within child nodes, select the Node & Desc button.



Figure 45 – The **Node & Desc** button

5.2 Split Panel Mode

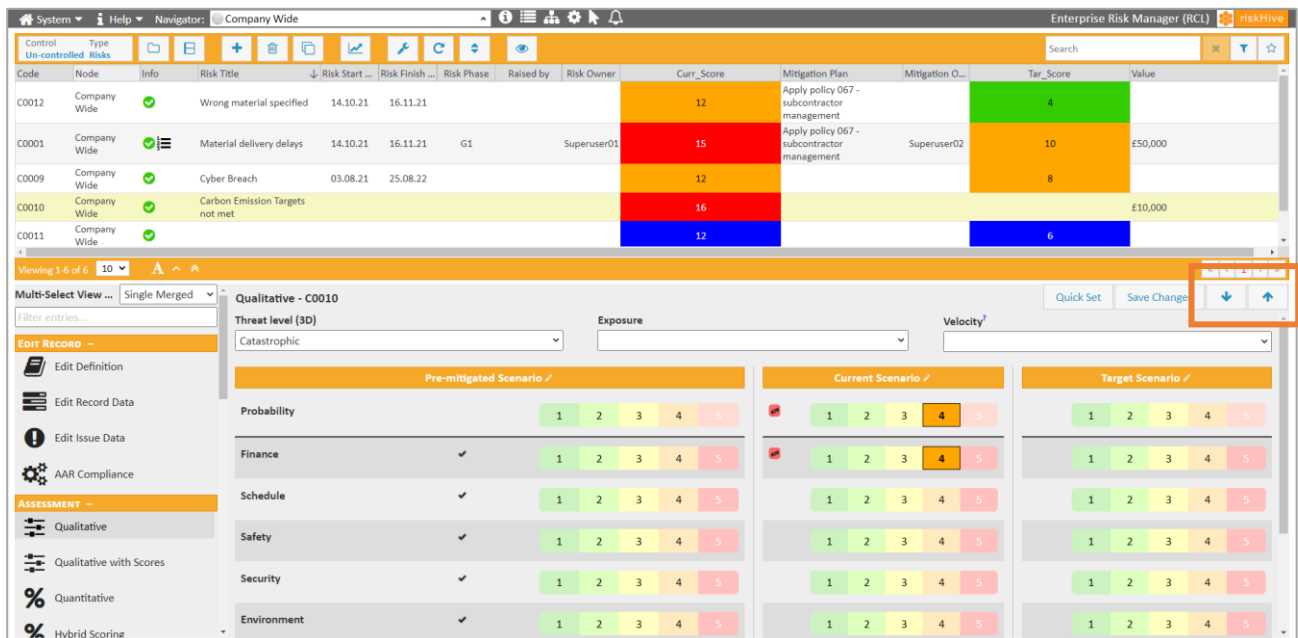
For Risk/Opportunity editing, the application can now split into a line items and editor. This allows for simpler reviewing and editing of risk information. Based on the standard Panel editors, split screen also allows risk merge and side by side editing.



Figure 46 – The **Split Panel** button

Toggleing the “Split Panel” button creates the following layout. Selecting a risk or risks populates the bottom right editor. The standard set of risk editors are selectable from the bottom left.

To change the side of the Grid Editor Split, use the “Up/Down” arrows next to “Save Changes”.



Code	Node	Info	Risk Title	Risk Start ...	Risk Finish ...	Risk Phase	Raised by	Risk Owner	Curr_Score	Mitigation Plan	Mitigation O...	Tar_Score	Value
C0012	Company Wide	✓	Wrong material specified	14.10.21	16.11.21				12	Apply policy 067 - subcontractor management		4	
C0001	Company Wide	✓	Material delivery delays	14.10.21	16.11.21	G1		Superuser03	15	Apply policy 067 - subcontractor management	Superuser02	10	£50,000
C0009	Company Wide	✓	Cyber Breach	03.08.21	25.08.22				12			8	
C0010	Company Wide	✓	Carbon Emission Targets not met						16				£10,000
C0011	Company Wide	✓							12			6	

Figure 47 - The Split Panel User **Interface**

5.3 The Edit Panel

The **Edit** button opens a variety of panels which help you manage the risks and actions. The options available will be dependent on the options selected by your administrator.

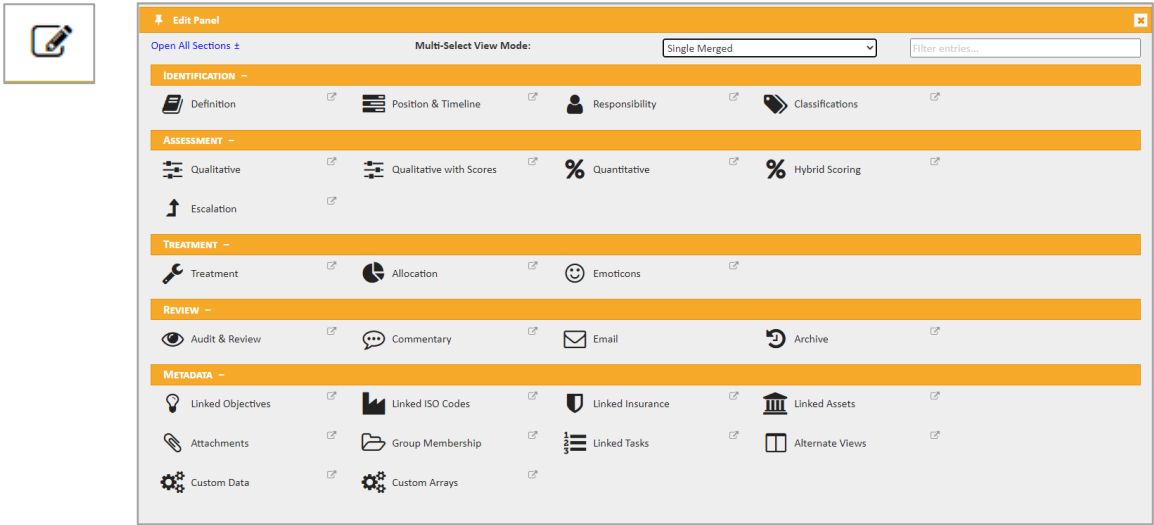


Figure 48 – The **Edit** button and panel

Identification		Definition	Initial description of risk.
		Position & Timeline	Relating the risk to the project's node, phase, and scope as well as timelines.
		Responsibility	Identifying who will take varying responsibility for the risk.
		Classifications	A mix of tags to describe the risk within the context of the project or organisation.
Assessment		Qualitative	Shows the basic qualitative assessment of a risk.
		Qualitative with Scores	Shows the qualitative assessment of a risk alongside other assessment impacts (i.e., Probability x Impact (2D), Threat (3D) and Project Rating (4D)).
		Quantitative	Shows the quantitative assessment.
		Hybrid Scoring	Allows a mixture of qualitative and quantitative scoring for different impact types.
		Escalation	A way of raising awareness of a risk to the risk hierarchy.

Treatment



Treatment

Providing an overview of the mitigation plan and the detailed actions.



Allocation

Shows how much money needs to be allocated to this risk and the cost of the actions.



Emoticons

Shows a subjective feeling towards the risk.

Review



Audit & review

Review details.



Commentary

Adding additional comments.



Email

Providing the system has the correct email address, you can send a message regarding a risk to a colleague(s).



Archive

Shows previous versions of the risk. Previous versions can be reinstated.

Metadata



Linked Objectives

Identifying which objectives could be impacted by the risk.



Linked ISO Standard Codes

Identifying which **ISO Codes** may be impacted if the risk occurs.



Linked Insurance

Reviewing if insurance can cover part or all of the risk impacts.



Linked Assets

Identifying the physical or intellectual assets that could be impacted by the risk.



Attachments

Attaching documents or hyperlinks for contextual or additional information.



Group Membership

Creating a Group to identify links or relationships between risks.



Linked Tasks

Shows which scheduled project tasks could be impacted by the risk.



Alternate Views

Viewing risks in alternate ways.



Custom Data / Custom Arrays

These are custom fields which are used when additional information is required to be recorded.



AAR Panel

To enable compliance to the Single Source Pricing Regulations.

5.3.1 Definition

The **Definition** panel enables a risk to be fully described, not only through a standard statement e.g., ‘Due to ... there is a risk (or opportunity) ... which will impact ...’ but also its background.



Definition - UK LU 0289

Summary

Descriptor

There is a risk

Name

that Changes to security state

Cause

because of increases in security state

Effect

which will result in increased restrictions on workforce movements/access

Preview

There is a risk that Changes to security state because of increases in security state which will result in increased restrictions on workforce movements/access.

Full Description, Background and Assumptions

Assumption that there will be changes to the security state, based on previous experience that this changes relatively often.

Save Changes Close

Figure 49 – The **Definition** button and panel

As you fill in the **Name**, **Cause** and **Effect** sections, the **Preview** section will begin building a risk statement.

You can view the risk using a **Bowtie** and make further changes.

Note: The order of the fields is configurable, and so may be different per customer deployment.

5.3.2 The Position & Timeline panel

The **Project Node** section enables you to check if the risk will be stored in the correct place. The **Proximity**, **Start Date** and **End Date** information is very useful for analysis and used in reports.



Position & Timeline - UK LU 0289

Project Node

RCL > Maintenance and Service Contracts > UK - London Underground

Proximity?

< 90 days

Legacy Code

DK798

Phase Type?

Manufacture

Scope

Influence?

Start Date

19.06.19

End Date

31.12.19

Proximity

Has Expired 6 Months ago

Date Raised

08.01.16

Created

08.01.16

Updated

07.05.20

Save Changes Close

Figure 50 – The **Position & Timeline** button and panel

If existing risks from a previous risk register have been migrated into the ERM system, their original risk id will be stored in the **Legacy Code** and ERM will generate a new risk id. This enables easier searching if the user can remember the old risk id.

Identify which parts of the project **Phase** or **Scope** may be impacted and the level of **Influence** you have over the impacting risk.

Proximity is an approximate estimate to when the risk could occur.

The **Start Date** is a more precise measure of when the risk could occur.

The **End Date** identifies when the threat of the risk is over.

Where possible, fill in both the **Proximity** and the **Start** and **End Dates**.

Complete the necessary information and select **Save Changes**.

5.3.3 Responsibility

The Responsibility panel helps identify who was augmented in the initial creation and mitigation of the risk.

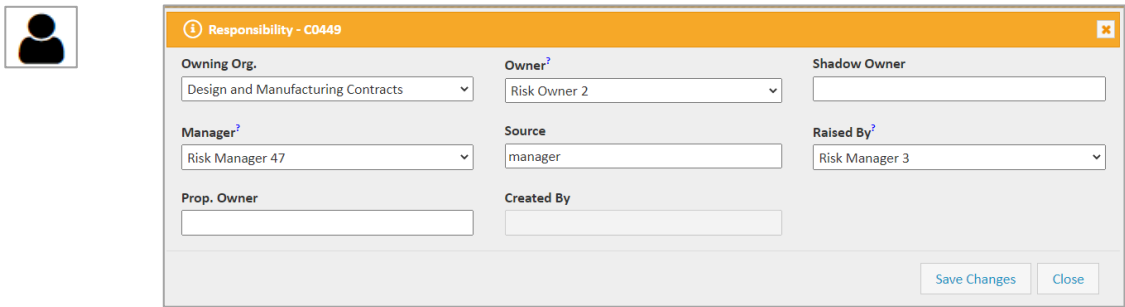


Figure 51 – The **Responsibility** button and panel

The **Owning Org** identifies if another organisation should own this risk, but an arrangement has been agreed whereby your organisation will mitigate the risk.

The **Owner** is the person responsible for the mitigation and reporting of the risk. Where owners may not be permanently present, a **Shadow Owner** can be appointed, and they have the same responsibilities as the **Owner**.

The **Manager** is the person who will regularly review if the risk management process is understood and implemented and support the **Owner** and **Shadow Owner** where possible.

The **Source** is the person who first identified the potential risk. This person can often provide contextual information and trigger points causing the risk.

The **Raised By** is the person who is raising the risk at the meeting or within the ERM system.


The **Prop Owner** is the **Proposed Owner**. When a risk is first created, it has a proposed owner. A process of reviewing and approving the risk should take place, after which the official **Owner** is identified as well as a mitigation plan and budget allowance.

The shaded grey field **Created by** automatically captures who created the risk in the system (I.e., the person logged on inserting the risk). This may be different to the tag “Raised by” as that is a manual selection. The “created by” field may be reported on or added to the grid view as any other standard risk field.

Complete as much as possible and select **Save Changes**.

5.3.4 *Classifications*

This panel indicates which parts of the organisation the risk could impact. The fields you will see will depend on the set up of your system, and what segmentation requirements your organisation has determined.



Classifications - C0449

Classification

Brexit

Location

Category?

Organisation

Sub-Category

Organisation Group

Organisation Sub-Group

Cascaded Workstream

Cascaded Workstream

Figure 52 – The **Classifications** button and panel

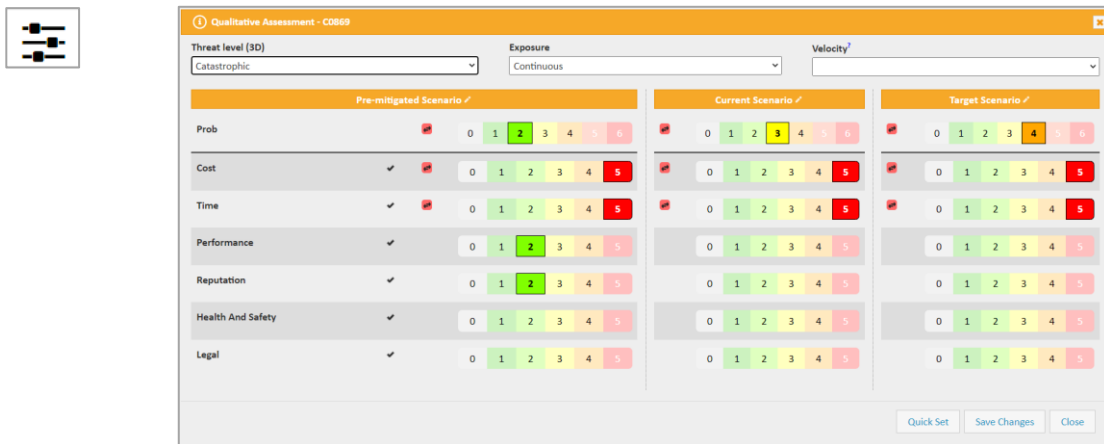
A risk can be identified by which **Classification** (Strategic, Operational, Financial or Compliance), **Location** (especially useful when a project may expand beyond several countries), **Category** (Key logistics of running the business i.e., commercial, governance, environmental or safety), **Organisational Group** (Divisions within the business) or **Workstream** it may impact.

If you see additional fields, these will have been created by your administrator and will be unique to your configuration.

5.3.5 Qualitative

Usually, these scoring ranks align to an *objective* scoring system laid out in corporate governance or a centralised risk management plan. There is, however, nothing wrong with scoring projects *subjectively*. Subjective scoring by domain specialists allows for the application of expert knowledge.

The **Qualitative** field provides all qualitative scoring against **Probability, Cost, Time, Performance, Reputation, Health and Safety** and **Legal**. These are default impacts and can be changed by the Administrator who can remove as many of these fields as they wish to reduce the burden of data entry in smaller projects, however this could reduce the richness of reporting. Administrators are advised to keep as a minimum Probability, Cost, Time, and Performance, although Probability and Cost are the most important.



The screenshot shows a 'Qualitative Assessment - CD669' window. At the top, there are dropdowns for 'Threat level (3D)' (set to 'Catastrophic'), 'Exposure' (set to 'Continuous'), and 'Velocity'. Below these are three panels: 'Pre-mitigated Scenario', 'Current Scenario', and 'Target Scenario'. Each panel contains a table with rows for 'Prob', 'Cost', 'Time', 'Performance', 'Reputation', 'Health And Safety', and 'Legal'. Each row has a checkbox and a score from 0 to 6. In the 'Current Scenario', the 'Reputation' row has a green tick next to the score 2. At the bottom right, there are buttons for 'Quick Set', 'Save Changes', and 'Close'.

Figure 53 – The **Qualitative** button and panel

Normally, a risks impact is calculated by multiplying Probability x Impact (2D). This creates a 2-dimensional view of the risk assessment. Other aspects that could impact a risks assessment is the impact the threat could have on the project and the project status (if a project is critical or not).

At the top left of the panel, you will see a drop-down list of Threat Levels: **Noticeable, Significant** and **Catastrophic**. The **Threat Level** represents the risks level of impact on the project. The **Threat Level** adds another multiplication i.e., Probability x Impact x Threat Level, this is known as 3D.

The project status also impacts the risk status by multiplying Probability x Impact (2D) x Threat (3D) x Project Rating (4D). These impacts are shown on another option called **Qualitative with Scores**.

The level of **Exposure** means how frequently the risk could occur and the user can choose from **Very Rare** to **Continuous**. This enables us to understand how often this risk could occur and decisions may be different in mitigating a risk which happens very infrequently to a risk that occurs continuously.

The **Velocity** field is an additional parameter which conveys the rate at which a risk can impact an organisation.

As the risk may have many impacts, all at various levels, there may be an occasion where the impact you are most concerned about but not the highest value needs to be identified. To identify the **Lead Driver**, select the tick next to the impact (in the example above there is a green tick next to Reputation, this means **Reputation** is the **Lead Driver**).

5.3.5.1 Quick Set

The **Quick Set** option is configurable and may be switched off in your system. (For example, if you are using the Hybrid assessment option).

The **Quick Set** option enables you to copy your assessment scores to either other impacts or scenarios in that risk.

Figure 54 – The **Quick Set** panel

Scenario	Select the scenario you wish to copy to other places.
Impact	Select the impact you wish to copy to other places.
Copy To	Dependent upon your selection in Scenario and Impact will depend on what options you can choose. Specified Impact in other Scenarios will copy the impact you have chosen in the Impact section to the same impacts in the other scenarios. Other Impacts in Specified Scenario copies the impact to all Impacts within the same scenario. All Impacts in All Scenarios copies the impact to all impacts within the Pre-mitigated, Current and Target scenarios.
Overwrite Existing Values	Select this option if you wish to overwrite any values in the destination fields.
Copy Empty Values	Select this option if you wish to copy empty values into the destination fields, so empty values will overwrite current values in the destination scenarios and impacts.

5.3.5.2 Rating Rationale

To the right of each scenario heading is a pen symbol:



Figure 55 – The **Pen symbol** next to the scenario headings

Select the pen symbol to open a free text box:


Pre-mitigated Scenario 
Rating Rationale













Figure 56 – The **Rating Rationale** box

As the feint text implies, a rationale or justification of the assessment needs to be captured to explain the thinking and assumptions of the person conducting the assessment.

Customers can request 2 scenarios (e.g., Current and Target) or up to 3 scenarios (e.g., Pre-mitigated, Current and Target).

5.3.5.3 Quantitative Conversion

You can convert a **Qualitative** assessment to a **Quantitative** assessment. If you have qualitative **Cost** data but wish to generate an actual quantitative **Cost** figure, you can run a **Quantitative Conversion**.

Prob		0	1	2	3	4	5	6
Cost	 	0	1	2	3	4	5	6
Time	 	0	1	2	3	4	5	6
Performance	 	0	1	2	3	4	5	6
Reputation	 	0	1	2	3	4	5	6
Health And Safety	 	0	1	2	3	4	5	6
Legal	 	0	1	2	3	4	5	6

The Conversion icon

Figure 57 – The **Quantitative Conversion** option

Select the **Conversion** button and the following panel will appear:


Convert Cost to Quantitative 	
Qualitative Level	High
Equivalent Quantitative Mean	£70,277,029
Current Quantitative Mean	£48,333
Project Deterministic	£11,396,275,027
<div>Convert Cancel</div>	

Figure 58 – The **Quantitative Conversion** panel

The **Qualitative Level** is the current Cost assessment.

The administrator will have set up a figure(s) representing each assessment level. If you select **Cost** as **Very High**, in the system background will be identified a number to represent **Very High** which is used to calculate a suggested quantitative figure.

The **Current Quantitative Mean** is the mean of any figures entered into the quantitative assessment panel. If there are no current figures in the **Quantitative** assessment, this will be blank.

The **Project Deterministic** figure represents the projects budget.

Select the **Convert** option. The new figures are entered into the **Costs Quantitative** assessment:

Project Budget (at node)	Project Budget (summed)	Risk Reference (at node)	Risk Reference (summed)	Risk Budget (at node)	Risk Budget (summed)	Node deterministic
£155,000,000	£11,396,275,027	£0	£0	£15,000,000	£203,845,602	

Pre-mitigated Scenario			Current Scenario			Target Scenario		
Prob (%)		60	Prob (%)		30	Prob (%)		Probability
Cost (£)		Triangular	Cost (£)		Triangular	Cost (£)		Shape
28,490,687	68,377,650	113,962,750	28,490,687	159,547,850	284,906,875	Minimum	Likely	Maximum

Figure 59 – A successful **Quantitative Conversion**

5.3.6 Qualitative with Scores

By selecting **Qualitative with Scores**, you will see not only the normal Qualitative panel but also the impact of selecting a Threat Level (3D) and Exposure (4D) on the risks scores. The basic score (i.e., 2D) is a multiplication of the Probability x Cost assessment. In the example below $2D = 4 \times 4 = 16$.

However, you may like to consider the impact of the Threat level (3D) which has 3 levels: **Noticeable**, **Significant** and **Catastrophic**. Each of these has a different impact. **Noticeable** multiplies the 2D score by 1, **Significant** multiplies the 2D score by 2 and **Catastrophic** multiplies the 2D score by 3. In the example below the **Threat Level** was considered **Catastrophic** which produces $16 \times 3 = 48$.

The Exposure (4D) also has a similar impact but no matter what exposure selection you make the system will only multiple the 3D score by 2, therefore $4D = 96$.

Qualitative Assessment with Scores - C														
Threat														
Threat level (3D)			Exposure			Type								
Catastrophic			Rare											
Qualitative														
Pre-mitigated Scenario			Current Scenario			Target Scenario								
Prob	0	1	2	3	4	5	6	0	1	2	3	4	5	6
2D: 4	3D: 12	4D: 24	2D: 4	3D: 12	4D: 24	2D: 2	3D: 6	4D: 12	2D: 2	3D: 6	4D: 12	2D: 2	3D: 6	4D: 12
Cost	0	1	2	3	4	5	6	0	1	2	3	4	5	6
2D: 16	3D: 48	4D: 96	2D: 12	3D: 36	4D: 72	2D: 6	3D: 18	4D: 36	2D: 6	3D: 18	4D: 36	2D: 6	3D: 18	4D: 36
Time	0	1	2	3	4	5	6	0	1	2	3	4	5	6
2D: 16	3D: 48	4D: 96	2D: 12	3D: 36	4D: 72	2D: 6	3D: 18	4D: 36	2D: 6	3D: 18	4D: 36	2D: 6	3D: 18	4D: 36
Performance	0	1	2	3	4	5	6	0	1	2	3	4	5	6
2D: 12	3D: 36	4D: 72	2D: 8	3D: 24	4D: 48	2D: 4	3D: 12	4D: 24	2D: 4	3D: 12	4D: 24	2D: 4	3D: 12	4D: 24
Reputation	0	1	2	3	4	5	6	0	1	2	3	4	5	6
2D: 12	3D: 36	4D: 72	2D: 8	3D: 24	4D: 48	2D: 4	3D: 12	4D: 24	2D: 4	3D: 12	4D: 24	2D: 4	3D: 12	4D: 24

Figure 60 – The **Qualitative with Scores** panel

5.3.7 Quantitative

Where possible try to include actual figures especially for later analysis and reports. The **Quantitative** panel includes the same assessment impacts as the **Qualitative** panel: **Probability, Cost, Time, Performance, Reputation, Health and Safety** and **Legal**.

Quantitative - C0002

Project Budget (at node)	Project Budget (summed)	Risk Reference (at node)	Risk Reference (summed)	Risk Budget (at node)	Risk Budget (summed)	Node deterministic
£200,000,000	£16,094,669,309	£0	£1,050,000	£10,000,000	£266,215,353	Project Budg ▼

Pre-mitigated Scenario	Current Scenario	Target Scenario
Prob (%) 45 Cost (£) Triangul 130,000 154,000 170,000 Time (d) Triangul 10.0 15.0 20.0 Performance Triangul 4 9 15 Reputation Shape Minimum Likely Maximum Health And Safety Shape Minimum Likely Maximum Legal Shape Minimum Likely Maximum	Prob (%) 50 Cost (£) Triangul 55,000 75,000 100,000 Time (d) Triangul 4.0 8.0 10.0 Performance Triangul 2 3 4 Reputation Shape Minimum Likely Maximum Health And Safety Shape Minimum Likely Maximum Legal Shape Minimum Likely Maximum	Prob (%) 35 Cost (£) Triangul 20,000 29,000 37,000 Time (d) Triangul 1.0 3.0 5.0 Performance Triangul 1 2 3 Reputation Shape Minimum Likely Maximum Health And Safety Shape Minimum Likely Maximum Legal Shape Minimum Likely Maximum

Quick Set Force Save Changes Save Changes Close

Figure 61 – The **Quantitative** Panel

In the third column of each scenario is a drop-down list. This list identifies what type of estimate you are entering.

Cost (£) Triangul ▼
 55,000 75,000 100,000

Figure 62 – The **Distribution type**

Constant means you are entering a single figure. Beta measures the risk against the index/market. Uniform means you are providing a minimum and maximum figure to show a range. Triangular is the most common and enables a 3-point estimate i.e., Worse, Most Likely and Best estimates.

When a word ends with 'whole', you must enter whole numbers 1, 2 and 3 and not 1.4, 2.3, 3.9.

Select the type first, then add figures directly into the various sections and select **Save Changes**.

Note: If there is an absence of any numeric values for fields other than **Cost**, this is because for this portfolio the business has not agreed on the rates and units of measure for areas other than cost and time. However, quantitative assessments provide the fundamental underpinning for Monte Carlo simulations.

The **Project Budget** and **Risk Budget** show the summed budgets from the current and subsequent nodes.

Value at Node displays the Project Budget of only the current node.

Contingency at Node displays the Risk Budget of only the current node.

5.3.7.1 Qualitative Conversion

If you have **Quantitative Cost** Impacts and wish to convert these to **Qualitative** scoring you follow a very similar process to **Quantitative Conversion**.

In the following example, we are converting the target **Quantitative** figures to **Qualitative** figures of the Target scenario, but this is the same process for any scenario:

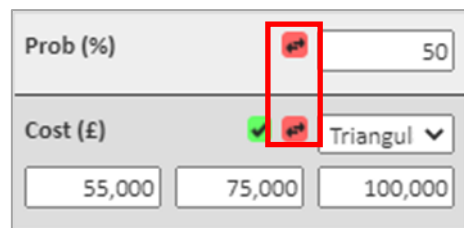
The image shows a software interface for data entry. It has two main sections. The top section is labeled 'Prob (%)' and contains a text input field with the number '50'. The bottom section is labeled 'Cost (£)' and contains three text input fields with the values '55,000', '75,000', and '100,000'. To the right of the 'Cost (£)' label is a green checkmark icon and a red button labeled 'est'. A red rectangular box is drawn around the 'est' button. To the right of the 'est' button is a dropdown menu currently showing 'Triangul' with a downward arrow.

Figure 63 – The **Quantitative Cost** impact within the **Target** scenario

Dependent upon the customers' requirements, the system can be set up by *riskHive Support* to convert the quantitative 3-point estimate into a qualitative score using 3 different methods.

5.3.7.1.1 Current Mean Conversion

Select the **Conversion** button and the following panel will appear:

Figure 64 – The **Qualitative Conversion** panel

The **Current Mean** is established by $((£55,000 + £75,000 + £100,000) / 3) = £76,666.67$.

The **Equivalent Qualitative** uses the pre-established qualitative levels in the system background to assess which qualitative level the current mean relates to. In this case the levels are:

Negligible	$\leq £5,000$
Low	$> £5,000 - \leq £50,000$
Medium	$> £50,000 - \leq £500,000$
High	$> £500,000 - \leq £2,000,000$
Very High	$> £2,000,000$

Therefore, the **Current Mean** (76,666) fits into the Level **Medium** (£50,000-£500,000).

Note: The means are for display purposes, they provide a summary of the values. Depending on the “Best Fit conversion” being used in the system (see below), The actual level selected may depend on a range of values or the mean.

The **Current Qualitative** shows the current qualitative value if there is one. If there is no current **Qualitative** assessment, this will say **<Not Set>**.

Project Deterministic shows the project budget.

Select the **Convert to Equivalent** option. **Negligible** will now be placed in the qualitative current cost section.

5.3.7.1.2 Current PERT Mean Conversion

Upon customer request, **riskHive Support** can apply a PERT Mean conversion instead:

The **Current PERT Mean** is established by $((£55,000 + (£75,000 * 4) + £100,000) / 6) = £75,833.33$.

In this case, $£75,833.33 = \text{Medium}$.

5.3.7.1.3 Best Fit Conversions

Upon customer request, **riskHive Support** can apply a Best Fit (Mean) conversion which establishes the most suitable qualitative level according to the mean outcome.

Or a Best Fit (Range) which considers the impact range (Min £55,000-Max £100,000) which in this example covers the *Medium* qualitative level.

Note: The best fit Range conversion is the default setting.

5.3.8 Hybrid Scoring

In some cases, your organisation may use a mixture of qualitative and quantitative scoring for different impact types.

For example, quantification may be required for cost and time, but only a qualitative assessment is needed for other impacts, such as Performance, Reputation and Health and Safety as those impact types are not quantifiable.

To support these cases a Hybrid Scoring panel is provided to enforce the scoring methodology across the organisation.

The combination of qualitative and quantitative assessment methods is configurable in System Administration and can be set at each node level and inherited / overridden at child nodes.

Scenario	Prob (%)	Cost (£)	Time (d)	Performance	Reputation	Health And Safety	Legal
Pre-mitigated Scenario	50	28,490,687 - 68,377,650 - 113,962,750	3 - 5 - 9	2	4	3	3
Current Scenario	30	28,490,687 - 159,547,850 - 284,906,875	1 - 2 - 4	2	4	3	3
Target Scenario	20	28,490,687 - 159,547,850 - 284,906,875	1 - 2 - 4	2	4	3	3

Figure 65 – The **Hybrid Scoring** panel

When you enter the probability and quantitative values, the system will calculate the qualitative equivalent against the reference tables when the Save Changes button is clicked.

This means the ability to report using heatmaps and RAG statuses is maintained and the qualitative scores are automated when quantitative scoring is in use.

The calculation is based on the parameters configured in administration of the node metadata.

There is also the option to calculate the qualification equivalence at Project or Programme level by selecting the 'summed' version of the denominator.

By clicking on **Settings** at the bottom of the panel, this will display the current selected conversion factor. You can change the qualification assessment by clicking on either:

Project Budget at Node	This calculates the RAG status based on the budget at the node level that you are working in.
Project Budget Summed	This calculates the RAG status based on the budget levels, summed. I.e., will include all project budgets below and including the node you are working in.
Risk Reference at Node	This calculates the RAG status based on the alternative Risk Reference figure to the project budget.
Risk Reference Summed	This is the alternative figure, summed. I.e., will include all risk references below and including the node you are working in.

Project Budget and risk reference numbers are entered in the Node Edit panel.

See section **5.1.5 Edit Node Data** for instructions on how to do this.

5.3.9 Escalation

We can view risks by selecting a node from the EPS. However, there is another way of viewing risks - through a function called **Escalation**. Escalation does not move, edit, or delete the risk. Escalation purely allows us to view risks in a different hierarchical way by giving the risk a hierarchy tag.



Escalation - M&S Contracts 0317

Escalation Level by Heatmap
Level2-Strategic

Escalation Level Override?

- Level1-Corporate
- Level2-Strategic
- Level3-Programme

Save Changes Close

Figure 66 – The **Escalation** button and panel

When a risk is assessed, the Likelihood and Financial Impact is used to provide the risk with a generic number score. This number is then plotted on a Heatmap report which generates an overall score for the risk. When a risk attains certain scores, it will automatically be raised to the next escalation level. For example, if a risk acquires a score of 15, it may automatically be escalated to the next level, moving from Escalation 3 to Escalation 2.

The **Escalation** levels are set up by the administrator.

You can override the automatic **Escalation** by using the **Escalation Level Override** section. You select the Escalation Level and select **Save Changes**.

5.3.10 Treatment

Once the risk has been described and assessed, we now need to understand how we will intervene and mitigate the risk. Emphasis is placed on understanding how a risk is being mitigated and the success of that mitigation.



Treatment - UK LU 0289

Treatment Plan

Primary Treatment Objective

Understand cause of increased security, impacts on project and how to limit the impact on the project

Summary

Date Raised: [] Owner: Risk Manager 4 Primary Treatment type: Treat

Status: Live Effectiveness: Improvement required (25-61) Implemented: 75% Review Date: []

Start Date (Baseline): 23.09.15 Finish Date (Baseline): 30.09.21 Start Date (Forecast): 22.09.20 Finish Date (Forecast): 29.09.20

Figure 67 – The **Treatment** button and panel

The **Primary Treatment Objective** describes the overall approach to mitigating the risk. This should be a broad statement showing the key actions.

The **Summary** is a free text field.

The **Primary Treatment Type** list helps identify if the risk will be tolerated, treated, terminated, transferred, or considered residual.

The **Owner** of the risk is identified as the person with overall responsibility for the mitigation and responsible for reporting progress.

The **Effectiveness** captures the degree to which the plan is effective.

The **Implemented** captures the degree to which the plan has been implemented.

The **Status** of the plan is stated as **Not Approved**, **Approved**, **Live** or **Completed**.

This panel is critical when it comes to visual **Bowtie** analysis and a key determinant when **calibrating** risk information across the project.

The **Start Date (Baseline)** indicates the date when the overall Treatment is planned to start.

The **Finish Date (Baseline)** indicates the date when the overall Treatment is planned to finish.

The date when the overall Treatment started is shown in the **Start Date (Forecast)**.
The date when the overall Treatment finished is shown in the **Finish Date (Forecast)**.

At the bottom of the panel shows the **Controls**, **Fallback** and **Response** actions.

To create a **Control**, **Fallback** or **Response**, select **New** and the following panel will appear:

The screenshot shows a 'Create Action' dialog box with the following fields and sections:

- Action Section:**
 - Title: Text input field.
 - Description: Text input field.
 - Action Type: Dropdown menu.
 - Associated Definition: Text input field.
 - Action Treatment Type: Dropdown menu.
 - Owner: Dropdown menu.
 - Executor: Dropdown menu.
 - Status: Dropdown menu.
 - Implemented: Dropdown menu.
 - Effectiveness: Dropdown menu.
 - Help Required: Checkbox.
 - Is Complete: Checkbox.
 - Is Working: Checkbox.
 - Date Raised: Text input field.
 - Review Date: Text input field.
 - Start Date (Baseline): Text input field.
 - Finish Date (Baseline): Text input field.
 - Start Date (Forecast): Text input field.
 - Finish Date (Forecast): Text input field.
 - Commentary / Outcome: Text input field.
- Assessment Section:**
 - Action Effect: Dropdown menu.
 - Current Spend: Text input field.
 - Actual Spend: Text input field.
 - Notes on Action Effect: Text input field.
- Quantitative Assessment Section:**
 - Cost (£): Text input field.
 - Minimum: Text input field.
 - Likely: Text input field.
 - Maximum: Text input field.
 - Shape: Dropdown menu.
- Buttons:** 'Save Changes' and 'Close' buttons at the bottom right.

Figure 68 - The **Treatment Actions** fields

The **Title** is a short phrase to describe the action.

The **Description** provide more details about the action.

The **Action Type** identifies if the action is a **Control** (addressing a **Cause**) or a **Fallback** (addressing an **Effect**).

The **Associated Definition** shows which Cause or Effect the action is addressing.

The **Action Treatment Type** shows if the approach is to Tolerate, Treat, Terminate, Transfer, or consider the risk as Residual.

The **Owner** is responsible for fulfilling the action and reporting to the **Risk Owner** on the action's status, completion, and effectiveness.

The **Executor** is the person conducting the action (although normally this is the **Action Owner**).

The **Status** of the action shows if it is unapproved, approved, live, or completed.

The **Implemented** shows how much of the action has been implemented so far.

The **Effectiveness** is how effective is this action, is it reducing the **Probability** or **Impact** as expected?

Ticking the box **Helped Required** indicates that the Action Owner/Executor required additional assistance.

The checkboxes **Is Complete** and **Is Working** have configurable settings nominally controlled by the Implemented and Effectiveness settings, respectively. Usually an action is deemed "is complete" when it reaches 100% implemented, though in some cases this could be 75%. An action deemed "is working" when its effectiveness is generally "Effective >90%". These values are configurable according to the data set configuration. They may for example also include a specific status value (Approved or Live say).

One additional configuration setting is the ability to override the selections for Implemented and Effectiveness. This may be achieved by tagging an action "Is Complete" and/or "Is Working" by checking the boxes irrespective of the corresponding drop list values. Note that this functionality is usually configured off but may be enabled by software support.

Identify when the risk was raised by selecting **Date Raised**.

The **Review Date** when the action's completion and effectiveness will be next reviewed.

The **Start Date (Baseline)** indicates the date when the action is planned to start.

The **Finish Date (Baseline)** indicates the date when the action is planned to finish.

The date when the action started is shown in the **Start Date (Forecast)**.

The date when the action finished is shown in the **Finish Date (Forecast)**.

Any comment can be entered in the **Commentary/Outcome** section i.e., problems completing the action, help required.

The **Action Effect** describes the aim of this action. Generally, actions aim to reduce the Probability and/or Impact.

The **Current Spend** indicates the money being spent currently.

The **Actual Spend** indicates the amount of money so far spent on this action.

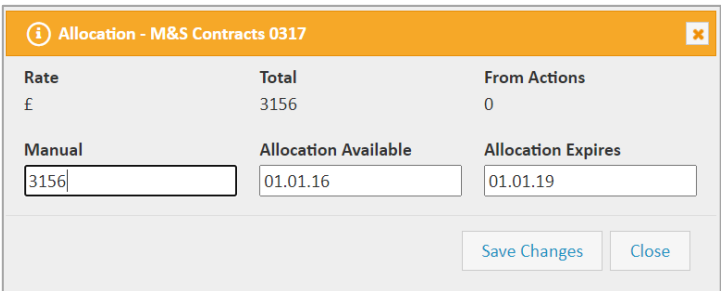

The **Notes on Action Effect** indicate how effective this action is so far.

The **Quantitative Assessment** is the assessment format of the estimate cost of the action.

Finally, the **Cost** is the estimated cost of the action by identifying the minimum cost, most likely cost, and potential maximum cost of the action.

5.3.11 Allocation

The allocation is an essential field as it shows the level of **contingency funding** required/allocated to cover the risk. When the User performs Monte Carlo simulations at a later stage the simulation outputs allow for the User to then automatically re-adjust the **Allocation** field based on the simulation outputs.



The figure shows a software panel titled "Allocation - M&S Contracts 0317". It contains a table with three columns: "Rate", "Total", and "From Actions". The "Rate" column shows "£" and a text input field containing "3156". The "Total" column shows "3156". The "From Actions" column shows "0". Below the table, there are three more columns: "Manual", "Allocation Available", and "Allocation Expires". The "Manual" column has a text input field with "3156". The "Allocation Available" column has a text input field with "01.01.16". The "Allocation Expires" column has a text input field with "01.01.19". At the bottom right of the panel are two buttons: "Save Changes" and "Close".

Rate	Total	From Actions
£	3156	0

Manual	Allocation Available	Allocation Expires
3156	01.01.16	01.01.19

Figure 69 – The **Allocation** button and panel

The currency of the project is shown by the **£** sign underneath **Rate**. The **Total** money allocated and spent is listed and the cost of **The Actions** is also shown. The current cost of the actions will automatically be summed by the system and entered into the **From Actions** field when the **Treatment** panel is completed. The contingency funding is entered into the **Manual** field along with when this funding will be available.

5.3.12 Emoticons

Most of the information we enter into the system will be based on facts or the information we hold has a certain quality or level which makes us feel secure making decisions. However, sometimes we rely on our own experience, skills, and gut feel. We can tag a risk with an **Emoticon** which means we feel a certain way about a risk. This is subjective but can bridge the gap between what is known and our own sense of the risk e.g., a risk may appear to being successfully mitigated but as a seasoned professional you may feel the risk still needs close monitoring, or you feel uneasy about the risk and therefore tag the **Emoticon** of the risk as **Bad**.

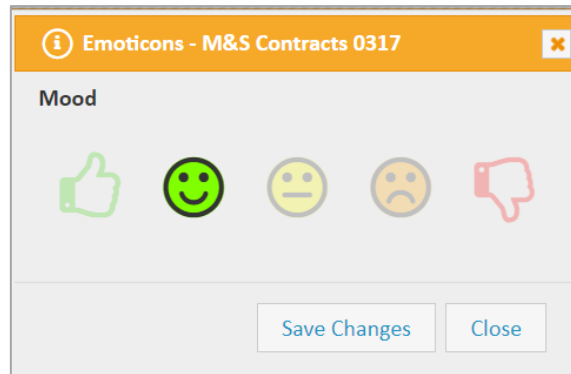


Figure 70 – The **Emoticons** button and panel

Select the mood you feel towards the risk and then **Save Changes**. This symbol will be displayed in the **Mood** column on the main screen.

5.3.13 Audit and Review Record

Reviewing the progress of a risk is fundamental and used in many meetings and reports. The **Audit and Review Record** panel allows Managers to understand how the risks are changing and the review process.

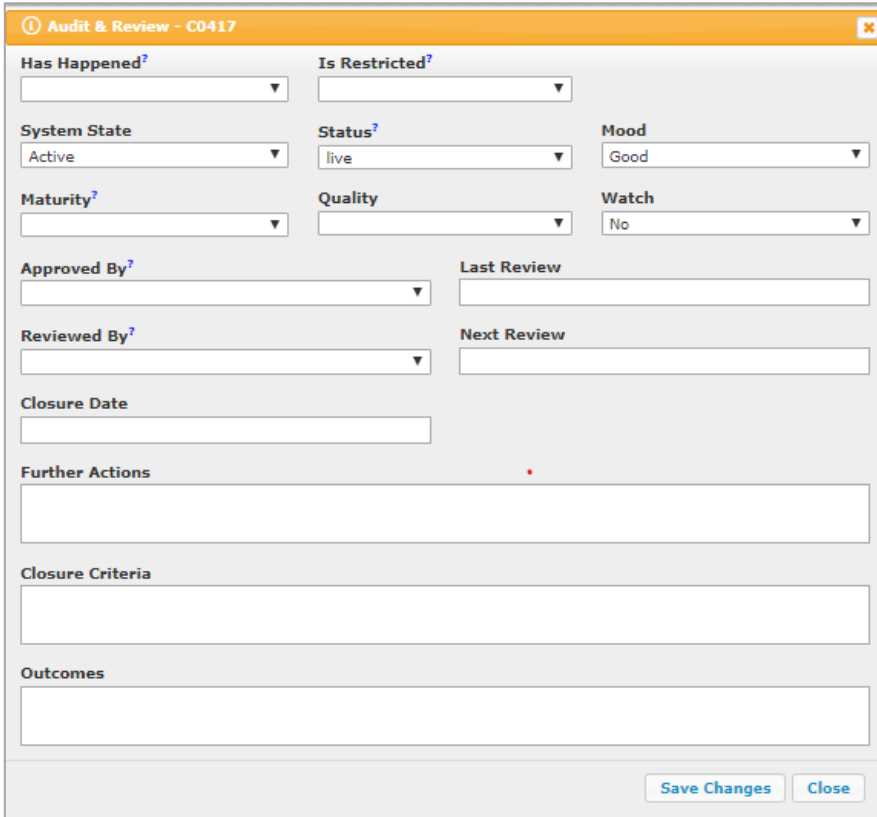



Figure 71 – The **Audit and Review Record** button and panel

The **Has Happened** is used, to indicate that the risk has occurred.

The **System State** indicates whether the risk is **Quarantined** (not approved), **Active** (approved), **Retired** (no longer a threat) or **Attested** (the risk has been challenged).

The **Status** gives more detailed status levels such as **New** (the risk is new), **Live** (the risk is live and being mitigated), **Watch** (monitor the risk), **Approved** (risk approved), **Retire** or **Archive** (risk no longer a threat), **Risk Occurred** (risk developed into an issue). Your administrator will edit the Status list to fit with your company needs.

We can tag a risk with an **Emoticon** which means we feel a certain way about a risk e.g., a risk may appear to be successfully mitigated but as a seasoned professional you feel the risk still needs close monitoring. In this case, you feel uneasy about the risk and therefore can tag the risk with a **Bad emoticon**.

Maturity could represent familiar risks, risks where there is a history and therefore the information, we hold is mature. Equally, in new fields, technologies or industries risks have immature information as there are lots of unknowns and as information is gathered the risk matures.

The quality of the information you hold on the risk. There may be gaps in information or the information is inconsistent. Good **Quality** information is reliable, poor **Quality** information is vulnerable.

Like an **Emoticon**, use **Watch** when you wish to monitor a risks progression.

Approved By indicates the person who confirmed this was a true risk and would go through an assessment process?

Last Review shows the date when the risk was last reviewed.

Reviewed By shows the person who conducted the last review.

Next Review indicates the date of the next review.

Closure Date shows the date when the risk was closed.

Any **Further Actions** that should be taken after the closure of this risk i.e., transfer information to another department, collect knowledge management records.

Closure Criteria shows the basis or criteria that meant this risk could be closed.

Outcomes shows any further events/results after the risk is closed.

5.3.14 Commentary

The **Commentary** panel is useful for adding general comments. Comments could relate to the changing context of a risk, the mitigation success, key information that develops during the life of the risk or the schedule which may be impacted by the risk. Comments can relate to anything but should provide the reader with additional useful knowledge.

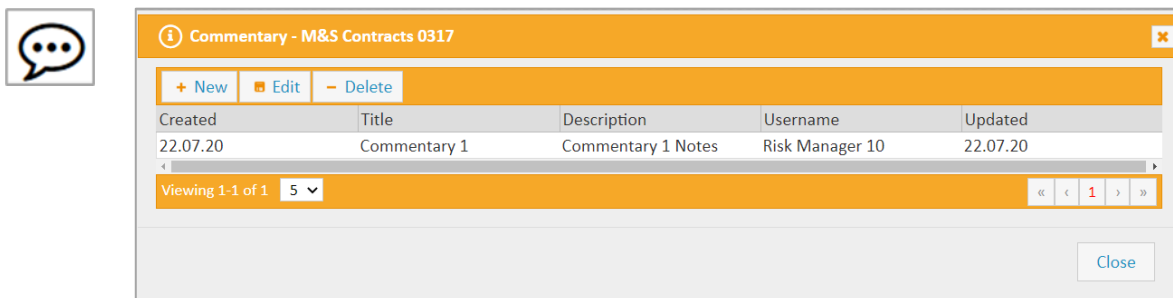


Figure 72 – The **Commentary** button and panel

To create a new comment, select **New** and a panel will appear:

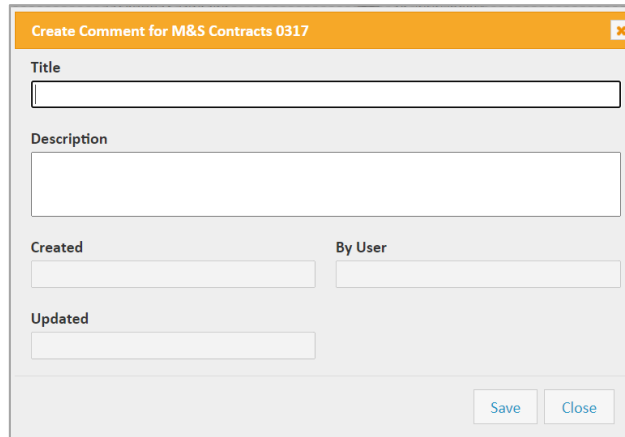
A screenshot of a software panel titled "Create Comment for M&S Contracts 0317". The panel has a light gray background and an orange header bar. It contains several input fields: a "Title" field, a large "Description" text area, a "Created" date field, a "By User" text field, and an "Updated" date field. At the bottom right, there are two buttons labeled "Save" and "Close".

Figure 73 – The **Comment** panel

Give the comment a **Title**. Write the comment in the **Description** section (which will be shown on the **Comments** page) and select **Save**.

5.3.15 Email

A risk can be selected and then emailed to a colleague or a number of colleagues (using the CTRL key to select multiple names) providing the colleagues email details have previously been entered into the system by the administrator.

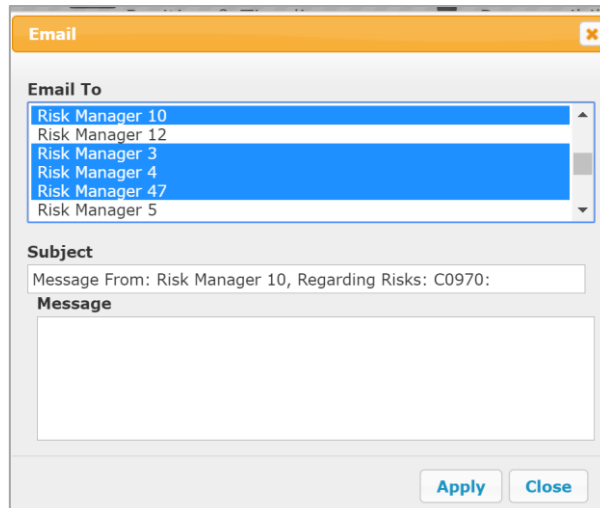
A screenshot of a software panel titled "Email". The panel has a light gray background and an orange header bar. It contains a list box labeled "Email To" with several names: "Risk Manager 10", "Risk Manager 12", "Risk Manager 3", "Risk Manager 4", "Risk Manager 47", and "Risk Manager 5". Below the list box is a "Subject" field with the text "Message From: Risk Manager 10, Regarding Risks: C0970:". Below the subject field is a "Message" text area. At the bottom right, there are two buttons labeled "Apply" and "Close".

Figure 74 – The **Email** button and panel

Identify who you wish to send the risk to, give the email a **Subject** and **Message** and then select **Save & Send**. The email recipient will receive an email containing your message, not a copy of the risk.

When in edit mode, the system will automatically capture the risk code, however the subject field can be edited as appropriate.

5.3.16 Archive

The **Archive** panel maintains a record of all risk changes. All records can be opened and all the information about the risk at that point in time is saved in the format of the **New Risk** dialogue. Any of the captured records can be restored by returning the risk back to a specific point in time by selecting **Restore**.

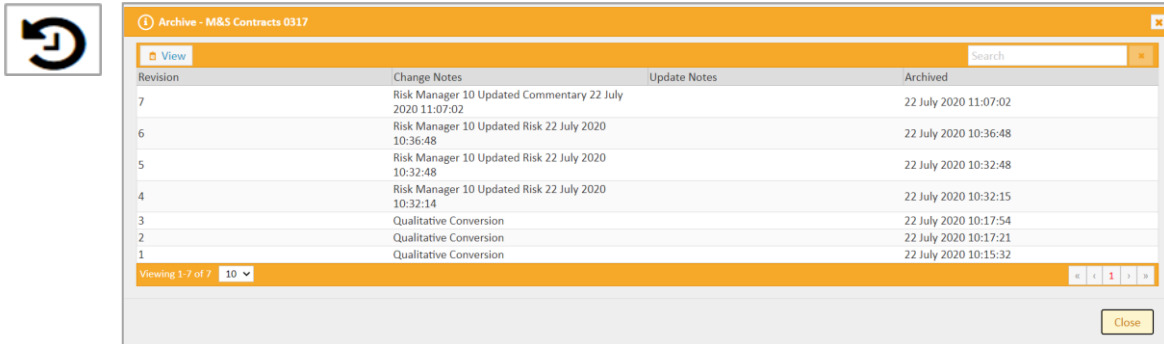


Figure 75 - The **Archive** button and panel

5.3.17 Linked Objectives

The Risk Manager will need to enter the objectives into the system before they can be selected but once inputted the user can identify which objectives the risk may impact. This is important when measuring risk against corporate strategy as well as the strategic objectives of the various divisions.

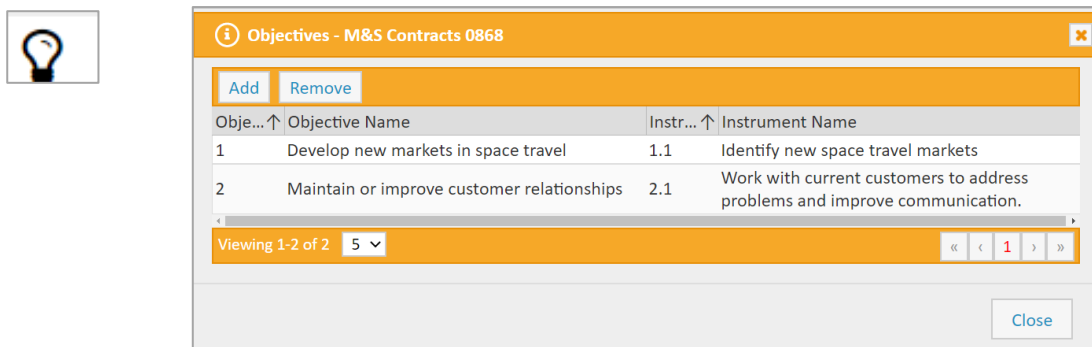


Figure 76 – The **Linked Objectives** button and panel

Select **Add** and select an **Objective** from the list. Each **Objective** may have a sub-objective (**Instrument**) list underneath. After each selection, select **Add**.

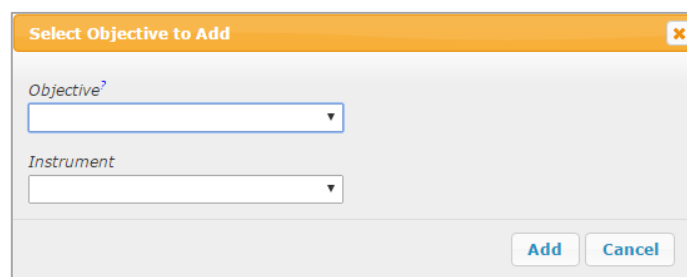


Figure 77 – The **Objectives and Instrument** panel

5.3.18 Linked ISO Codes

As with the **Objectives**, the **ISO Standard Codes** will need to be added to the system first, but once added you can identify which codes the risk relates to.

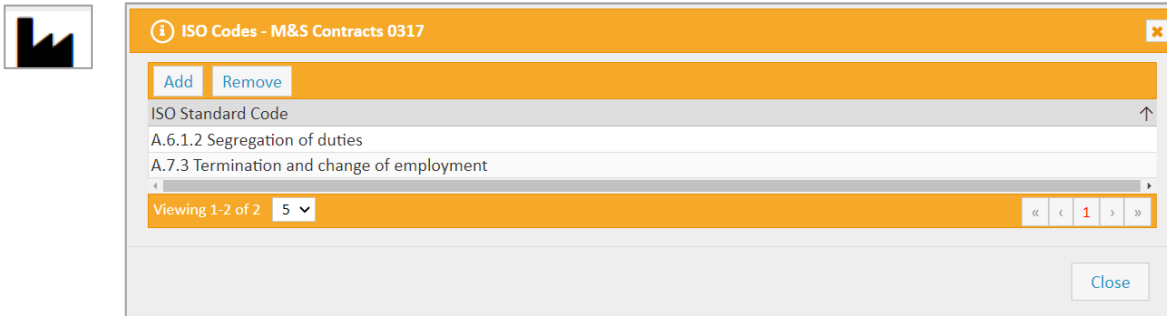


Figure 78 – The **ISO Standard Codes** button and panel

Select **Add** and the following panel will appear:

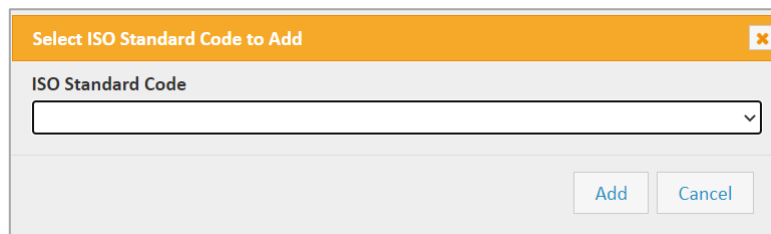


Figure 79 – The **ISO Standard Codes** list panel

Select a code from the list, then select **Add**. Repeat until all the codes relating to the risk are selected.

5.3.19 Linked Insurance

It is useful to understand if all or part of the risk is covered by insurance which could reduce the number of actions taken and the allocation made.



Insurance - M&S Contracts 0868

This is
Insured: Fully covered

Policy Ref.[?]
CY9287D

Commentary & Information
Notes to be entered here

Policy Details
Provider: ABC Ltd, Broker: A. Smith
, Type: Cyber Insurance Policy

Save Changes Close

Figure 80 – The **Insurance** button and panel

This provides a list with varying levels of insurance cover. The **Policy Ref** provides the reference details. **Commentary & Information** allows you to describe the elements of the risk which are covered by insurance. At present, insurance details are to be provided to riskHive Ltd who will ensure the details are entered into the system.

5.3.20 Linked Assets

Enables you to assign assets against risks and is very useful when determining which assets will be affected by certain risks or even when certain assets may affect contractual obligations, e.g., debt covenants with banks.



Assets - M&S Contracts 0317

Add Remove

Asset	Sub-Asset
Building damage	1.1 Damage to local buildings internally

Close

Figure 81 – The **Assets** button and panel

The Assets panel enables you to select from a variety of assets and sub-assets:

Select Asset to Add

Asset?[?]
Building damage

Sub Asset
1.1 Damage to local buildings internally
1.2 Damage to local buildings externally
1.3 Damage to national buildings internally
1.4 Damage to national buildings externally

Damage to external and internal aspects of buildings.

Add Cancel

Linked Insurance

Figure 82 – The **Assets** and **Sub Assets** panel

5.3.21 Attachments

The **Attachments** tab allows you to upload documents as well as attach hyperlinks relating to the risk. This is incredibly powerful where teams are relying on certain business artefacts, e.g., risk management plan, financial models, schedules etc.

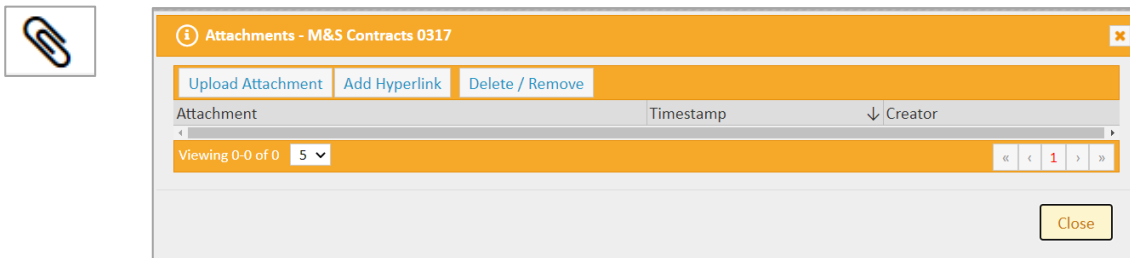


Figure 83 - The **Attachments** button and panel

To attach a document (Microsoft Word, Excel, PowerPoint, Project as well as PDF and notepad text files) select **Upload Attachment**. To include a hyperlink select **Add Hyperlink**.

5.3.22 Group Membership

The **Group Membership** option can analyse data across many risk registers to identify potential links or relationships which may need to be monitored. To manage potential relationships, risks can belong to groups. The risks will not be moved out of their current **EPS node**, they simply belong to a group which can be recalled whenever necessary.

The **Group** column on the main page will indicate which risks relate to which **Groups** (by showing the **Group Ids**):

Control	Type	Un-controlled	Risks	Code	M...	Has A...	Info	Ctrl	Watch	Class.	Cat.	Group	Node	Risk Locati...	Esc. Level	Risk	Owner
M&S Contracts 0868	Yes	Yes	Yes	Yes	Operational	Operational		Yes					Maintainanc e and service Contracts	Europe - London	Level2- Strategic	There is a risk that Operational risks are not managed properly	Admin User 2
M&S Contracts 0317	No	No	Yes	No	Strategic	Technical		No					Maintainanc e and service Contracts	Europe - London	Level2- Strategic	There is a risk that Commissioning of Facility may be withheld	Risk Manager 26
M&S Contracts 0332	Yes	Yes	Yes	No	Financial	End User and Customer Agreements		No					Maintainanc e and service Contracts		Level2- Strategic	There is a risk that Maintenance contracts may not be financially viable.	Risk Owner 9
M&S Contracts 0443	Yes	Yes	Yes	No	Brexit	Support to Operations		No				C0538	Maintainanc e and service Contracts	Europe - London	Level3- Programme	There is a risk that Suppliers move their headquarters out of the UK	Risk Manager two
M&S Contracts 0942	Yes	Yes	Yes	No				No					Maintainanc e and service Contracts			There is a risk that electrocution	
M&S Contracts 0320	No	No	Yes	No	Financial	Governance		No				C0538	Maintainanc e and service Contracts	Europe - London		There is a risk that programmes may face additional tax costs	Risk Manager 10

Figure 84 – The **Group** column

In the above example, several risks belong to Group CO538. To view this group, select one of the risks, select **Edit** and then **Group Membership**.

The following panel will appear showing the **Group Code** as C0538:

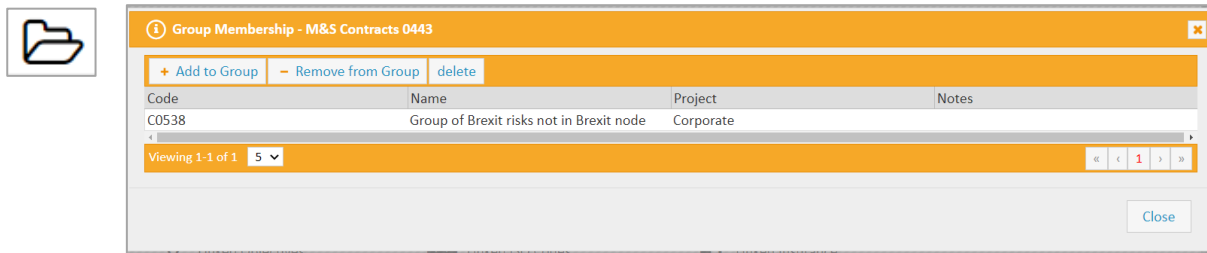


Figure 85 – The **Group Membership** button and panel

5.3.23 Linked Tasks

It is very helpful understanding if a risk impacts an action on a schedule. The schedule activities must first be loaded into the system but after this it is a simple case of selecting which activity the risk could impact.

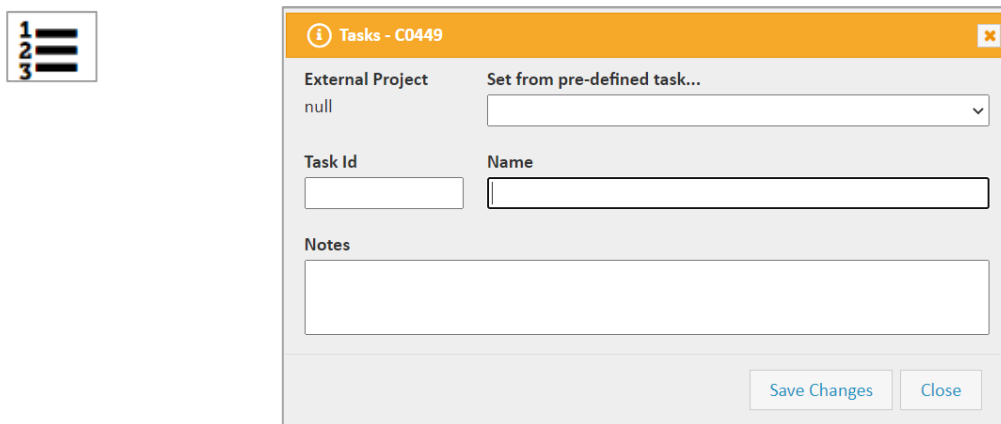


Figure 86 – The **Task** button and panel

The specific MS Project is added from **Admin Datasets** and then **Projects**. This functionality is vital when assigning risks to a WBS structure (**Alternate Structure**) so that teams can see where schedule risks are.

Select from the list underneath **Set from pre-defined task** and the **Task Id** and **Name** will automatically populate. Additional comments can be added to the **Notes** section describing how the risk could impact the task.

Select **Save Changes**.

5.3.24 Alternate Views

The **Administrator** can set up different ways of looking at a project. The default approach is by showing the risk registers that exist within each project. However, there are alternative views such as a Work Breakdown Structure or a Cost Breakdown Structure. The Alternative Views will be decided by your organisation.

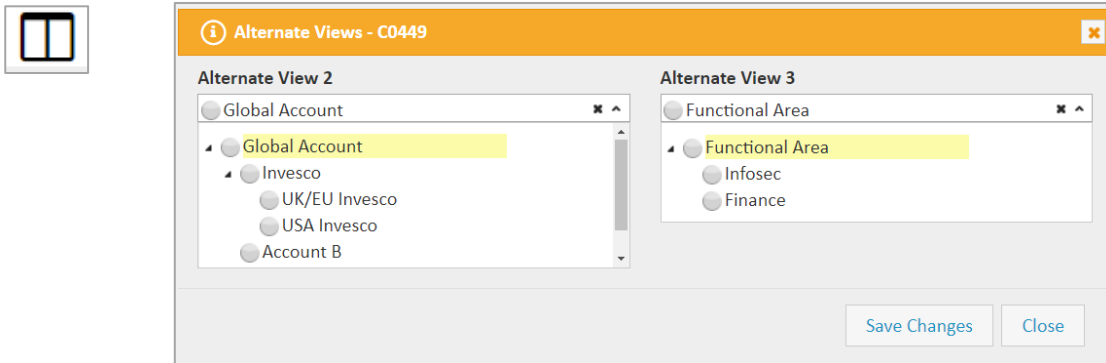


Figure 87 – The **Alternate Views** button and panel

Alternate Views enables risks to be viewed in different contexts. When these are assigned to a risk it provides a powerful alternate view of risks and provides an insightful means of correlating risks against costs and tasks.

5.3.25 Custom Data

The Administrator can add additional lists in which to describe the risk. If you are required to add in additional data, these fields will be available to you and will be specific to your organisational requirements.

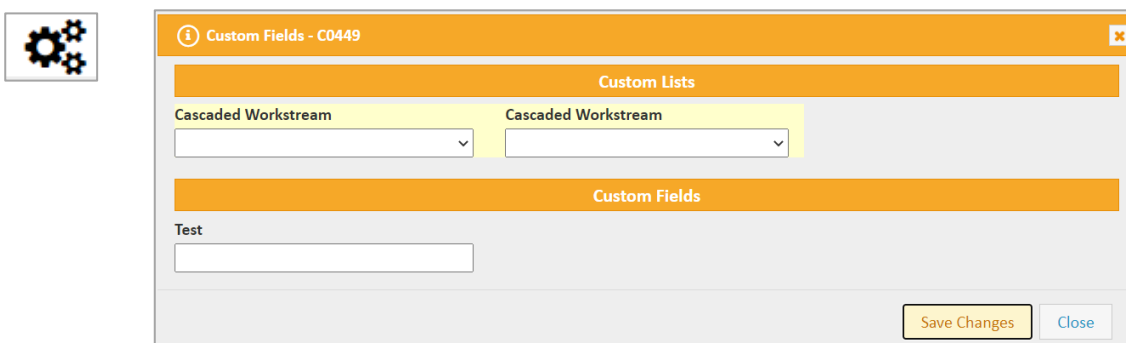


Figure 88 – The **Custom Data** button and panel

Lists could include workstreams or different departments. The ability for the administrator to add your own lists will help to understand the impact the risk could have on the wider business, areas, or disciplines.

Complete as much as possible and select **Save Changes**.

5.3.26 AAR Panel (Single Source Pricing Compliance Regulations)

If you need to comply with AAR Compliance requirements you are able to select if the risk is **appropriate**, **attributable** and/or **reasonable**. Users can also provide a justification for each of these elements.

The Administrator can add additional options lists. If you are required to add in additional data, these fields will be available to you and will be specific to your organisational requirements.

This functionality is switched off by default but can be enabled by your system administrator.



The screenshot shows a web application window titled "Question Set fields - UK LU 0326". It contains several sections: "Summary" with a text input field; "Sentence" with a text input field containing the sentence "There is a risk that Terrorist threats and actions may impact smooth running of track because The country is on a higher alert of terrorist threats to public transport which will result in Trains delayed."; "Full Description, Background and Assumptions" with a text input field containing "There has been increasing warnings of terrorist threats by Government officials."; "Compliance" with three radio buttons labeled "Appropriate", "Attributable", and "Reasonable"; and "Justification" with three text input fields. At the bottom right, there are "Save Changes" and "Close" buttons.

Figure 89 – The AAR panel (Single Source Pricing Regulation Compliance)

The results (against each risk) might appear on the grid as follows.

Control	Type					
Un-controlled	Risks					
Code	App	Att	Rea	Plan impleme...	Group	
C0349	Y	Y	Y	50%		
C0440	N	Y	N			
C0878						
C0876	Y	Y	N			

Figure 90 – The AAR results

Note: One current limitation of Question Array sets (SSPR) is that they may only be reported. Updates cannot be imported (IO register).

5.4 New

The **Create New** panel uses a combination of **Definition, Qualitative, Quantitative, Hybrid, Treatment, Responsibility, Proximity** and **Classifications** at the top of the panel. The order in which they appear, will have been set up during configuration in accordance with your risk management policy.

When creating a new risk, the user has the potential to provide a lot of key information and the risk will be created in quarantined form (it is not yet approved). Users should not feel they must enter data into all fields but rather (i) only enter data where they have precise information, and (ii) only enter the amount of data necessary to perform the requisite analysis. However, sufficient quality and quantity of data enables better and broader analysis and reporting. All the functionality and support the system offers is rarely used but Risk Managers and other risk-based executives are able to increase the value they add and the risk intelligence of the organisation by using ERM to ask the difficult and uncomfortable questions which arise from good risk analysis.

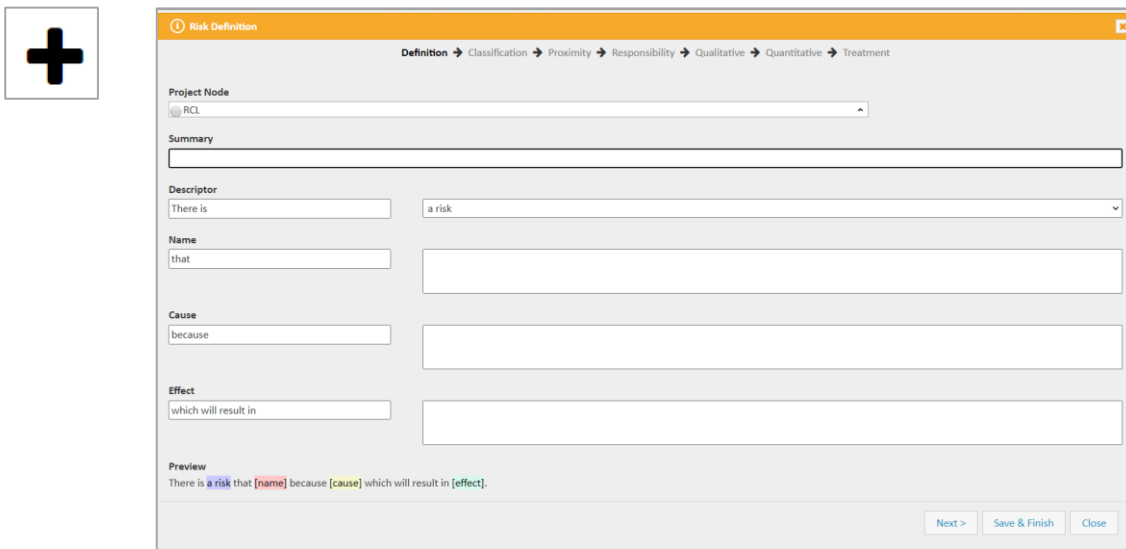


Figure 91 – The **Create New Risk** button and **Definition** section

The **Project Node** option lists the EPS to ensure the risk is stored in the most suitable place.

The **Summary** text box enables you to provide a concise statement describing the risk.

The **Descriptor** ensures the event is appropriately described as a risk, opportunity, issue, notification, assumption, trend, action, or benefits. What you will see, will depend on the configuration of your system.

The **Name** is the full name of the risk.

The **Cause** is the reason why the risk is occurring.

The **Effect** is the consequence or result if the risk occurred.

The **Preview** shows the **Name, Cause** and **Effect** within a statement which helps focus the mind as to the description of the risk.

Select **Next** to move to the **next panel**.

To complete the process, refer to the panels as described in the 'Edit Panels' section of this document.

5.5 Delete

A **deleted** risk will be removed from the screen and placed in the archive where users will not be able to see them. You can select 1 risk or several risks for deletion.

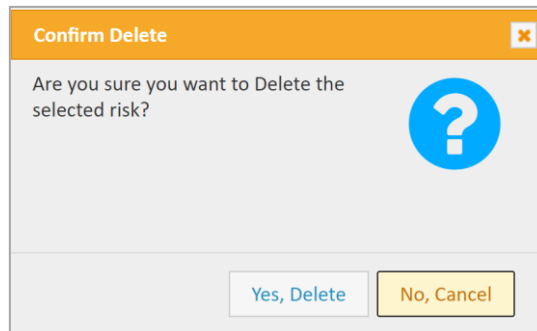


Figure 92 – The **Delete** button and panel

Once the button Delete is selected, the system checks and asks if you still want to proceed with the deletion. Select **Yes, Delete**.

5.6 Duplicate

A risk(s) can be copied to the current or any other node.

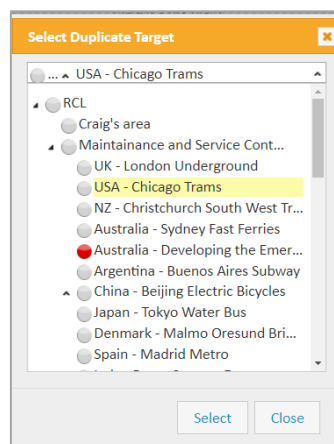


Figure 93 – The **Copy Risk** button and panel

Select the **Copy Risk** button, select the risk register where the risk should be located, then choose **Select**. Another panel will open checking you wish to continue and copy this risk:

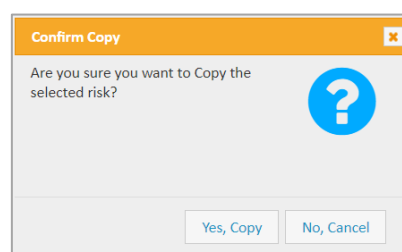


Figure 94 – The **Confirmation** panel for copying risks

Select **Yes, Copy** and the risk will be generated and displayed in the main screen.

Note: If there are many risks to copy, ask your administrator to help as the administrator can move multiple risks from one node to another.

5.7 Issues

You can create an **issue** directly in the system, by selecting **issues** in the descriptor options.

When you select 'Issue' the Issue Edit icon will appear in the edit panel.

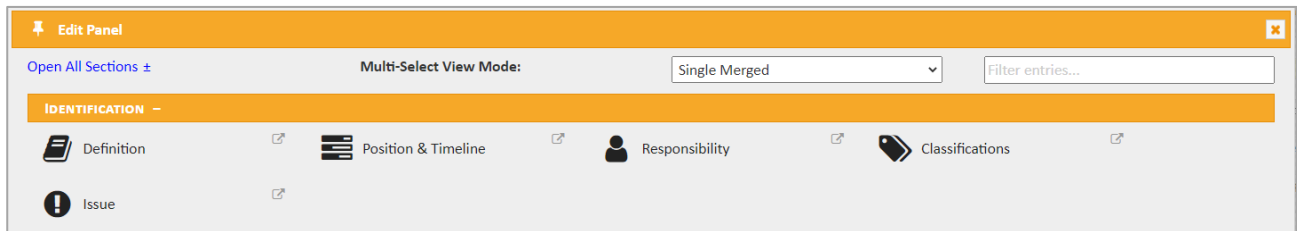


Figure 95 – The **Issue** edit button

By selecting the Issues icon, this will allow you to capture specific information regarding Issues.

When you change a risk or opportunity to a risk, the system captures the date this occurred. This is displayed in the **Became issue on** field.

The fields to capture **Status**, **Priority**, **Scope Change** and **Escalation** are provided as standard, however there are 4 additional custom drop lists available.

The content and name of these lists are customisable with help from riskHive Technical Support.

The screenshot shows the 'Issue - L' panel. It has a title bar with an information icon and a close button. The panel contains several fields: 'System State' (a dropdown menu with 'Active' selected), 'Became issue on' (a date field with '28.11.19'), 'Issue Status' (a dropdown menu), 'Issue Priority' (a dropdown menu), 'Issue Scope Changed' (a dropdown menu), 'Issue ext1' (a dropdown menu), 'Issue ext2' (a dropdown menu), 'Issue ext3' (a dropdown menu), 'Issue ext4' (a dropdown menu), 'Issue Escalation' (a dropdown menu), and 'Escalation Comment' (a text area). At the bottom right, there are two buttons: 'Save Changes' and 'Close'.

Figure 96 – The **Issue** panel

5.8 Reporting

5.8.1 Dashboards

The **Dashboard** option provides a variety of reports and graphs to view how your risks are performing or impacting a project. They are the fundamental reason why we take so much care and attention in inputting risk data. When configuring and generating standard or customised risk reports the need and utility of all the system's complexity becomes apparent. Without entering all the data, the User would not have the same level of visibility and insight into project complexity. Project reports enable the User to display risk data and risk analyses in a variety of ways which help executive managers bridge the gap from risk to action. More importantly, good risk reporting uncovers dependencies and implications which are only visible through deep analysis and by correlating disparate and seemingly unrelated data sets.

There are 2 entry points into the Dashboards system

- 1: Main page Dashboards Panel
- 2: Independent Dashboards page.

Both offer access to the same set of dashboards as described individually below. The main page panel reports immediately on the node/risks/actions you are viewing. The independent dashboard page provides a browse and report view of the system. The Dashboards page may be bookmarked and used as the main entry point into the system for those users who are interested in the state of the system rather than managing content.

The Dashboards page is accessed from the main navigator.

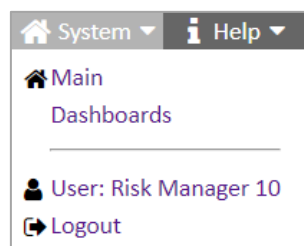


Figure 97 – Main navigator drop down list

On entry to the page a dashboard is loaded by default. The default dashboard can be changed (per deployment) as well as its default configuration (e.g., Node & descendants, just active risks etc.).

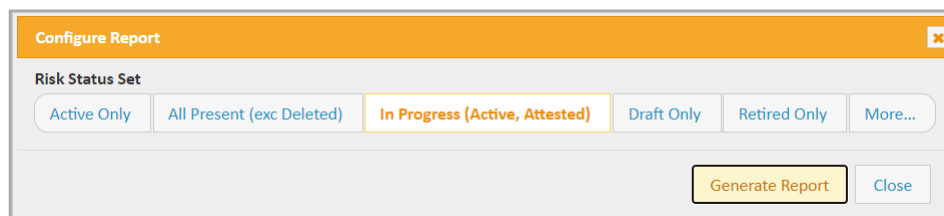


Figure 98 – Dashboard configuration panel

There are 2 main controls once in the dashboards page.

Top left, to “Configure” location and risk selection

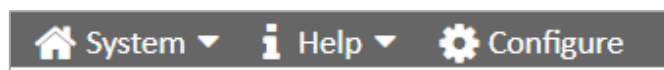


Figure 99 – Configure Dashboard

And top right, to **select, configure** and **print** a dashboard.

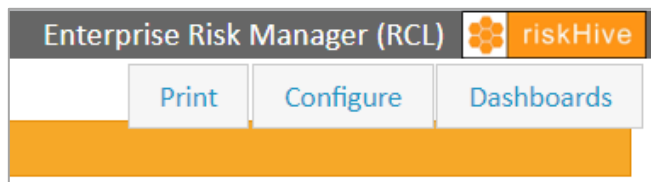


Figure 100 – Configure Dashboard – Print link

The main “Configure” invokes the following navigation tool. Here you can change nodes/projects as well as select and filter on specific risks.

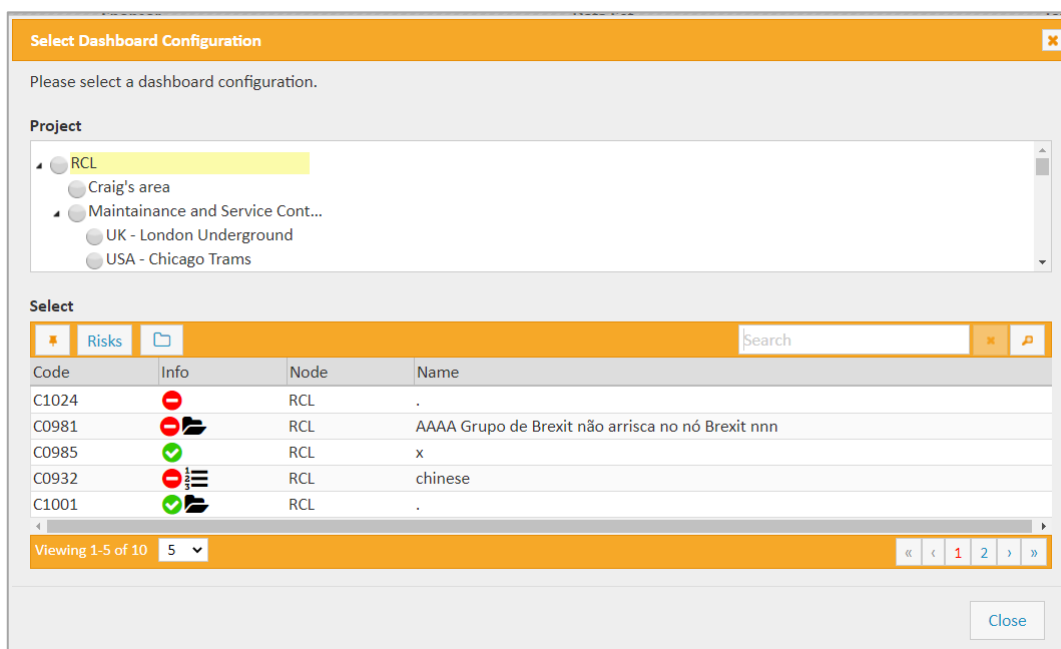


Figure 101 – Configure Dashboard - Print

To change dashboards, select “Dashboards” from the top right. This invokes the standard dashboard list as available from the main page. The “Configure” option here allows re-configuration of the selected dashboard e.g., Node & Descendant, Quarantined risks.

The dashboards page and panel have as default the following set of reports.

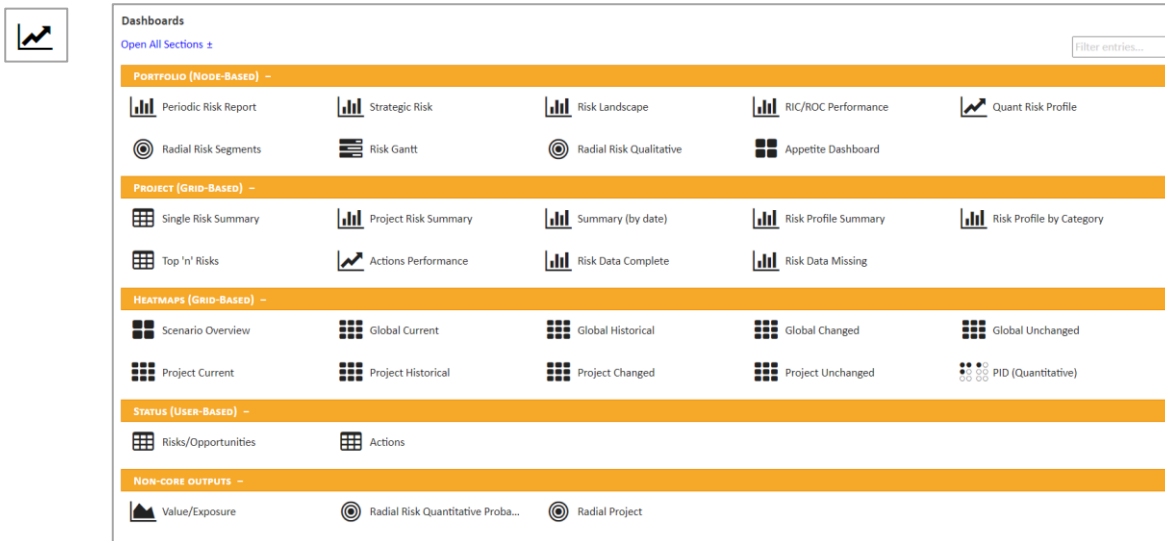


Figure 102 – The **Dashboard** button and panel

When you select any of the dashboards a configuration screen will appear. Common for all dashboards are the options around **User Risks From**, **Risk Status Set** and **Restricted Risks**.

The default is to report on the Grid filter. If you select any other option an additional suite of selections within the **Risk Status Set** appears.

Default reporting configuration screen

Additional options when selecting outside of the Grid Filter

Figure 103 – The **Configuration** panel

Each dashboard will include additional configuration options depending on the report selected. For example, the Monthly Risk Report will require data around reporting periods, and Heat Map Dashboards will require configuration regarding scenarios.

Where there are more options than can be displayed on the screen, there will be a **More** button, which when selected will display all the options available.

5.8.1.1 Periodic Risk Report

This dashboard provides a current and historical overview of a selected project and descendants. It lists counts of risks created, closed and quarantined within each of the reporting periods as well as giving a breakdown of the heatmap scoring such as Critical, Major risks.

Configure the report to use risks at the current node and/or descendants. The reporting periods can be days, weeks, months or quarters. **Number of periods** defines how many reporting periods, whereas **Number of periods in detail tables** specifies how many risk and actions lists are produced in the report, generally this is the latest set (default=1).

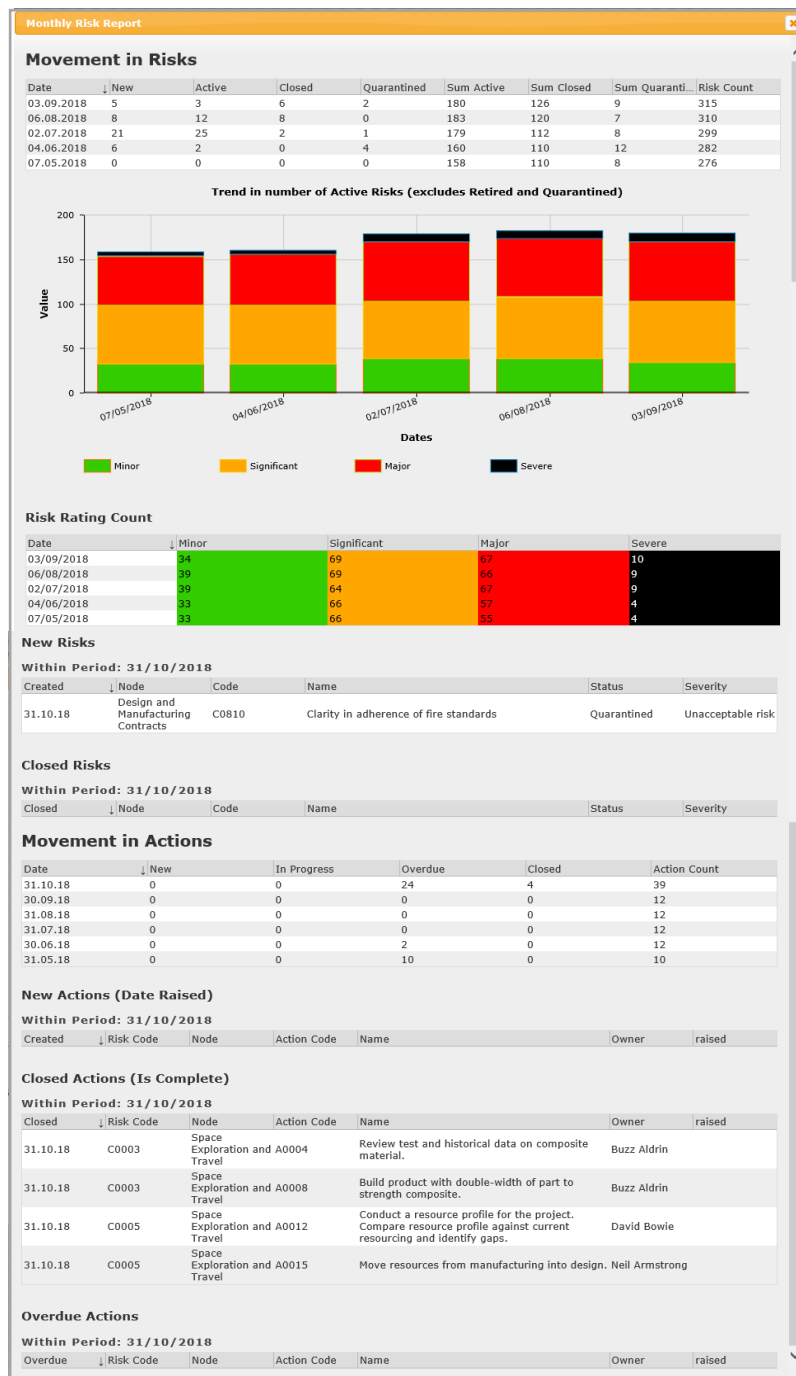


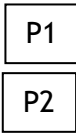
Figure 104 – The **Periodic Risk Report** button and dashboard

As the report provides a high volume of information in the tables, below is a detailed explanation of the data tables and graphics.

Movement in Risks Columns

The Movement in risks columns provides the count of risks created (new) and the count of risks assigned the status of either Quarantined, Active or Closed during a given period.

The counts of these columns are independent of each other.



Date	New	Active	Closed	Quarantined
03.09.2018	5	3	6	2
06.08.2018	8	12	8	0
02.07.2018	21	25	2	1
04.06.2018	6	2	0	4
07.05.2018	0	0	0	0

Figure 105 – Time duration with the **Movement in Risks Report**

Date: The count of the risks is dependent on the period ranges and calculated as follows:

Period 1: 06.08.2018 - 03.09.2018 - the system is counting risks from midnight on the 06.08.2018 up to the time you ran the report on the 03.09.2018.

Period 2: 02.07.2018 – 06.08.2018 - the system is counting risks from midnight on the 02.07.2018 up to midnight of the 06.08.2018.

New risks: These are the risks that have been **created** in the system, irrespective of the start/end date of the risk.

Active, Closed and Quarantined risks: This is the count of risks that have the status of Quarantined, Active and Closed at the time of running the report for that period.

Risk Sum Columns

The second series of columns is the sum of all risks (dependent on the reporting configuration), and as with the movement counts, these too are independent of each other.

Date	Sum Active	Sum Closed	Sum Quaranti...	Risk Count
03.09.2018	180	126	9	315
06.08.2018	183	120	7	310
02.07.2018	179	112	8	299
04.06.2018	160	110	12	282
07.05.2018	158	110	8	276

Figure 106 – Summed risks within the **Movement in Risks Report**

Sum Active, Closed and Quarantined: This is the number of risks that had the status of Quarantined, Active and Closed during the reporting periods.

Risk Count: This is the sum only of the Sum Quarantined, Sum Active and Sum Closed.

Note: If, on your report the sum does not equal the sum of all three status's, this would happen if you are using the status option of 'Attested' and the report does not currently show 'Attested' risks.

Trend Graph

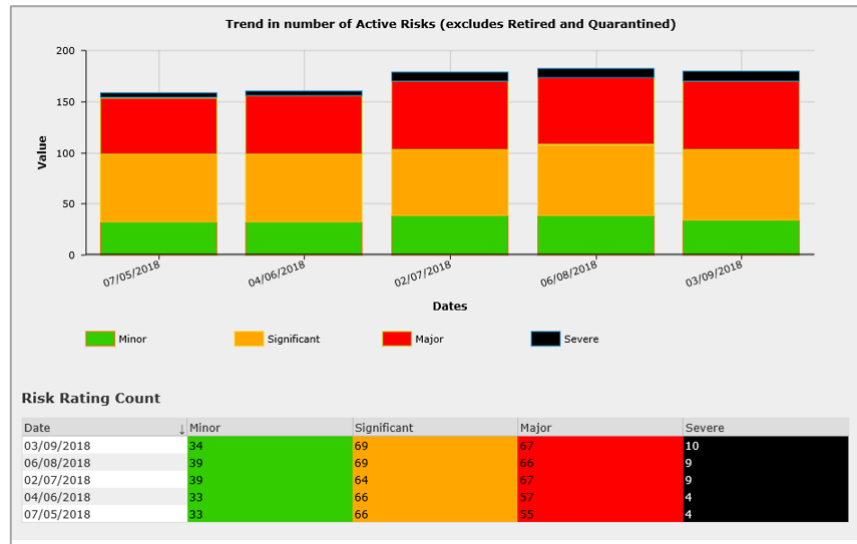


Figure 107 – The **Trend Graph Report**

The **Trend Graph** provides a bar graph of counts of risks over each of the periods (dependent on the configuration of the report. I.e. if you selected only Draft Risks only Draft risks would appear in the graph).

The corresponding **Risk Rating Count** summarises this information in a table.

Movement in Actions

Movement in Actions provides the count of actions **new** (date raised) **In-progress**, **Overdue** and **Closed** during the reporting period. It also provides a summation of such actions.

Action Count: This is the total of actions in the system during that period.

Movement in Actions					
Date	New	In Progress	Overdue	Closed	Action Count
31.10.18	0	0	24	4	39
30.09.18	0	0	0	0	12
31.08.18	0	0	0	0	12
31.07.18	0	0	0	0	12
30.06.18	0	0	2	0	12
31.05.18	0	0	10	0	10

Figure 108 – Actions with the **Trend Graph Report**

5.8.1.2 Strategic Risk Dashboard

This dashboard provides a 2-dimensional, high-level view of risks and their pre, current and target qualitative assessment scores.

If there are more than two scenarios, you will see two types of lines between the scenarios. The first line is always solid and the second is always dotted. This is for visualization purposes only and has no relation to the status of actions etc.

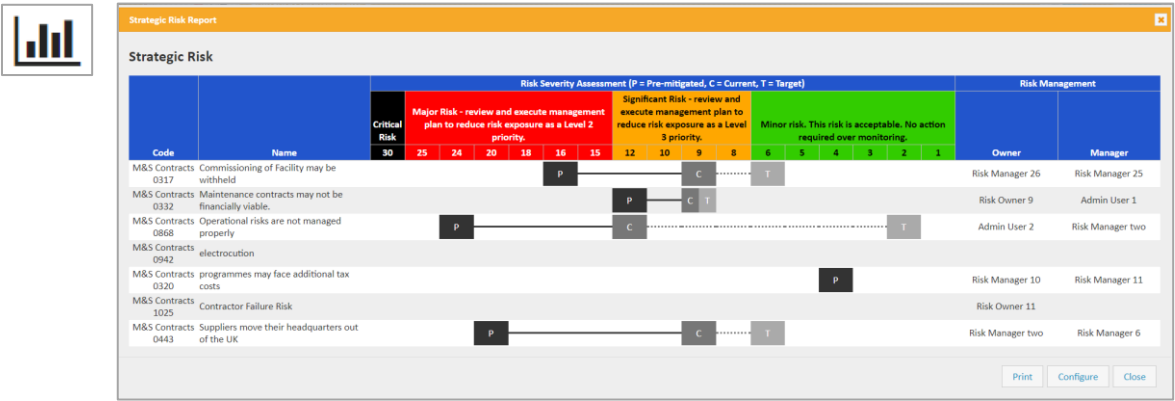


Figure 109 – The Strategic Risk Report button and dashboard

5.8.1.3 Risk Landscape

This dashboard downloads each projects data such as status, score, budget, risk budget, minimum, most likely and maximum assessment impacts. The report is split into 3 graphs: **Risk Values as a percentage of Project Values**, **Risk Values on top of Project Values** and **Risk Percentage per project as a percentage of Total Risk**.

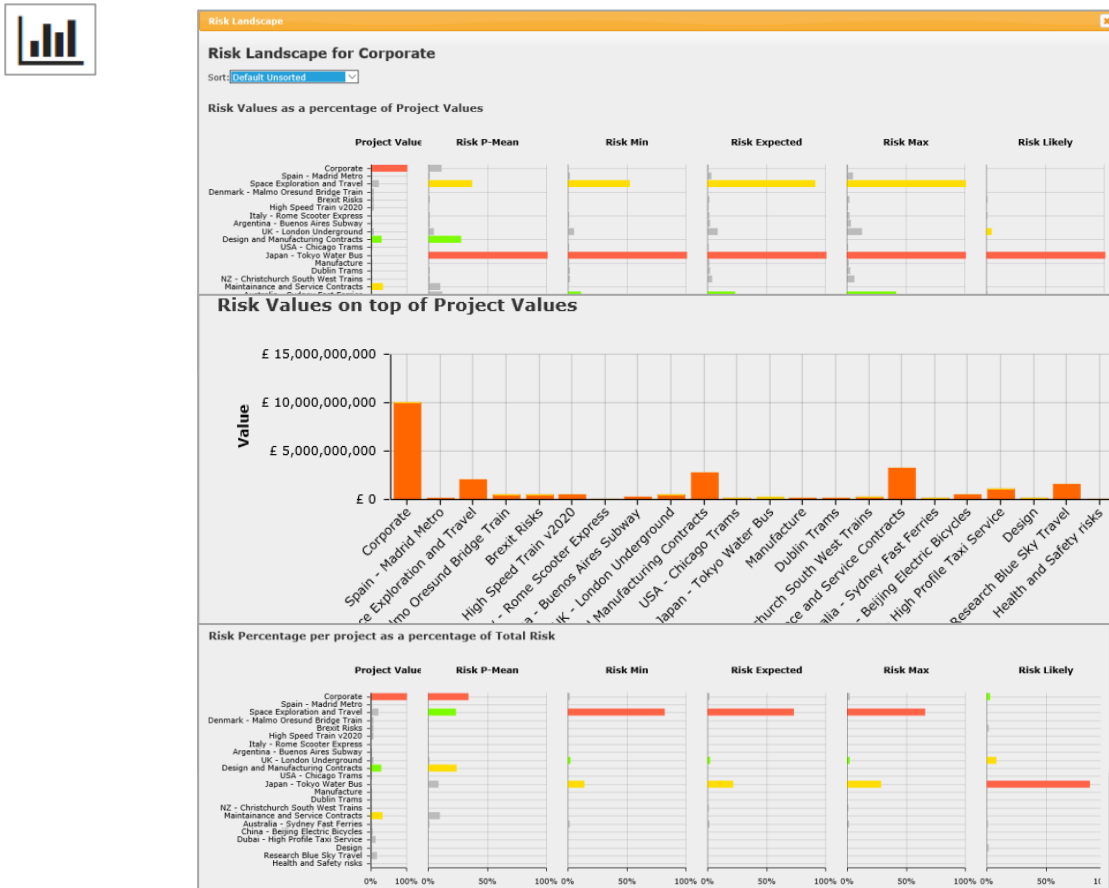


Figure 110 – The **Risk Landscape Report** button and dashboard

The **Risk Values as a percentage of Project Values** section shows how much risk each project node is carrying.

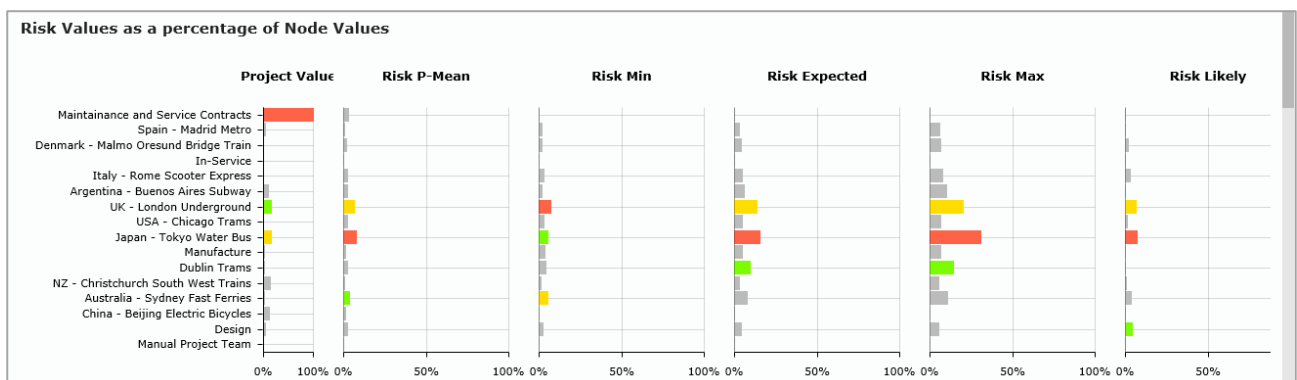


Figure 111 – The **Risk Values as a percentage of Node Values** section

In the above example, the top node is **Maintenance and Service Contracts**. The red bar next to the node represents all the node budgets underneath summed together making a total budget of 100%. By resting

the mouse on **UK – London Underground** it shows the figure 14.73 which means that **UK - London Underground** has a project budget of 14.75% of the total summed budget across all projects.

The **Risk Min** column shows the amount of risk per project. **The UK – London Underground project** has a project budget of £320,000,000. If all the quantitative current cost minimum values of every risk within this project are summed for every risk the total minimum risk impact is £22,510,000 which is 7.05% of the projects total budget.

The **Risk Values on top of Node Values** section shows you how much cost impact each node is carrying.

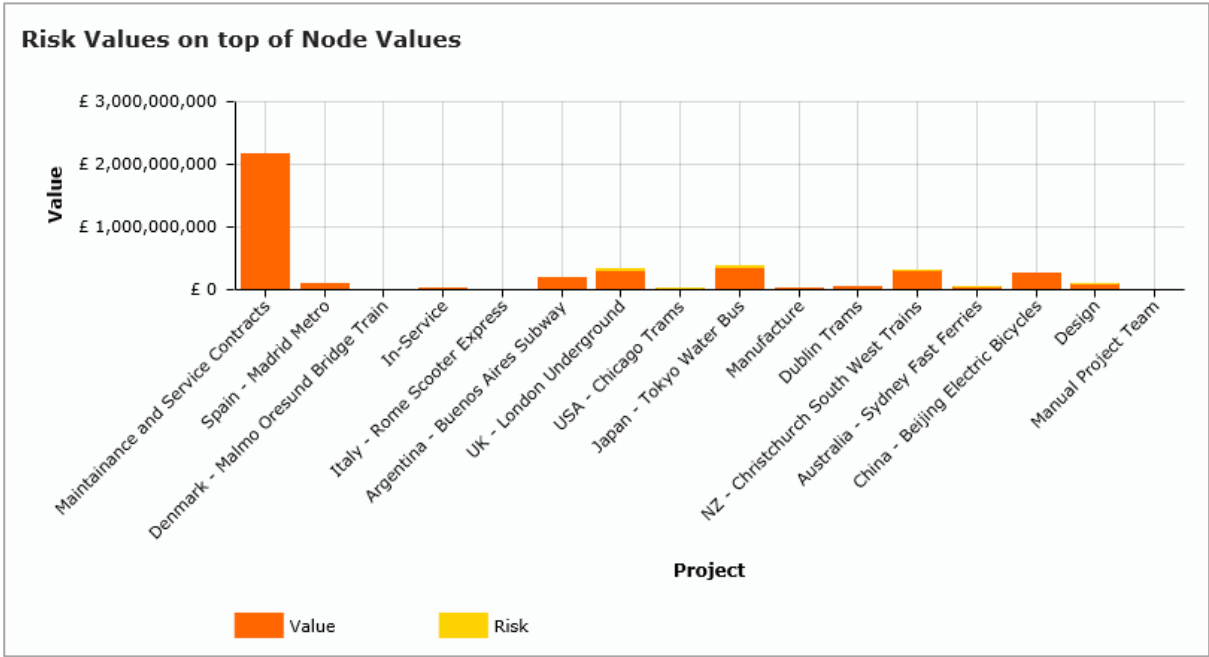


Figure 112 – The **Risk Values on top of Node Values** section

Each orange column displays the project budget of each node. On top of each column in yellow is indicating the Cost mean (minimum, most likely and maximum cost impacts summed together and then divided by 3) for each risk within that node. If a node does not contain risks, it is not shown on the graph.

The **Risk Percentage per project as a percentage of Total Risk** section shows the total value of risk of all nodes and the percentage of risk each node is carrying. All the quantitative minimum cost impacts across all projects are summed together. Then the amount of summed minimum cost impact within each node is shown as a percentage of all the projects minimum cost impacts.

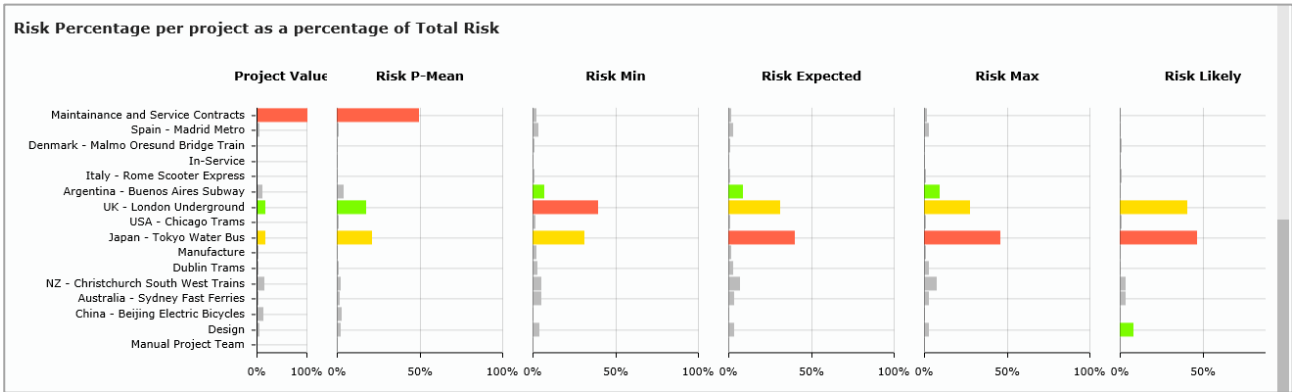


Figure 113 – The **Risk Percentage per project as a percentage of Total Risk** section

The **Sort** option enables you to sort the graph by different columns: Project Value, Risk P-Mean Value, Risk Min Value, Risk Expected Value, Risk Max Value, Risk Likely Value, Risk P-Mean Percentage, Risk Min Percentage, Risk Expected Percentage, Risk Max Percentage, Risk Likely Percentage.

Field	Where located
Project Value	Edit Node Data / Description / Project Budget
Current Probability	Edit / Quantitative / Current Scenario / Prob (%)
Minimum, Most Likely and Maximum cost values	Edit / Quantitative / Current Scenario / Cost (£) for Minimum, Most Likely and Maximum

5.8.1.4 RIC/ROC Performance

The **RIC/ROC Provision** indicates the amount of budget required to cover high level risks (RIC), risks which do not need funding at this time (ROC).

The report includes the options around the Project Value that you can select.

The **Project Value** list:

Probabilistic Mean	Sums all the Probabilistic Mean values of the risks on screen.
Expected	Sums all the Expected values of the risks on screen.
Maximum	Sums all the Maximum values of the risks on screen.
Minimum	Sums all the Minimum values of the risks on screen.
Likely (> 50%)	Sums all the values of the risks with a Probability of 50% or over on screen.
Risk Allocation	Sums up the risk allocations of all risks on screen.
Action Allocation	Sums up the Current Spend of all actions related to the risks on screen.
Total Allocation	Sums the Risk Allocation and Action Allocation of risks on screen.

No matter what you selected from the **Project Value** list, the top section provides the Pre-mitigated, Current and Target pie charts showing the number of risks which have been identified as **RIC**, **ROC**, **LPHI**, **Void** or **Unassigned**. **RIC** represents Risk Inside Cost. These are risks that have a high Probability and Impact and therefore must have funding put aside. **ROC** represents risks with a lower Probability and Impact and are not deemed to need funding at this moment in time. **LPHI** represents risk with a Low Probability but High Impact. Although funding will not be available in the same way as RIC risks, these risks still need regular monitoring. **Void** means that these risks have been assessed but the impacts have been deemed non-existent. **Unassigned** means these risks have not been assessed yet.

The bottom graph shows each provisional type against the **Probabilistic Mean** (selected from the **Project Value** list).

Again, the risks are categorised into RIC, ROC, LPHI, Void and Unassigned but **Provision Cost** axis shows Pre-mitigated, Current and Target lines representing the aggregated values of the risks.

The **Provision Cost** lines are showing the provision for each category.

For the following example, **Probabilistic Mean** was selected.

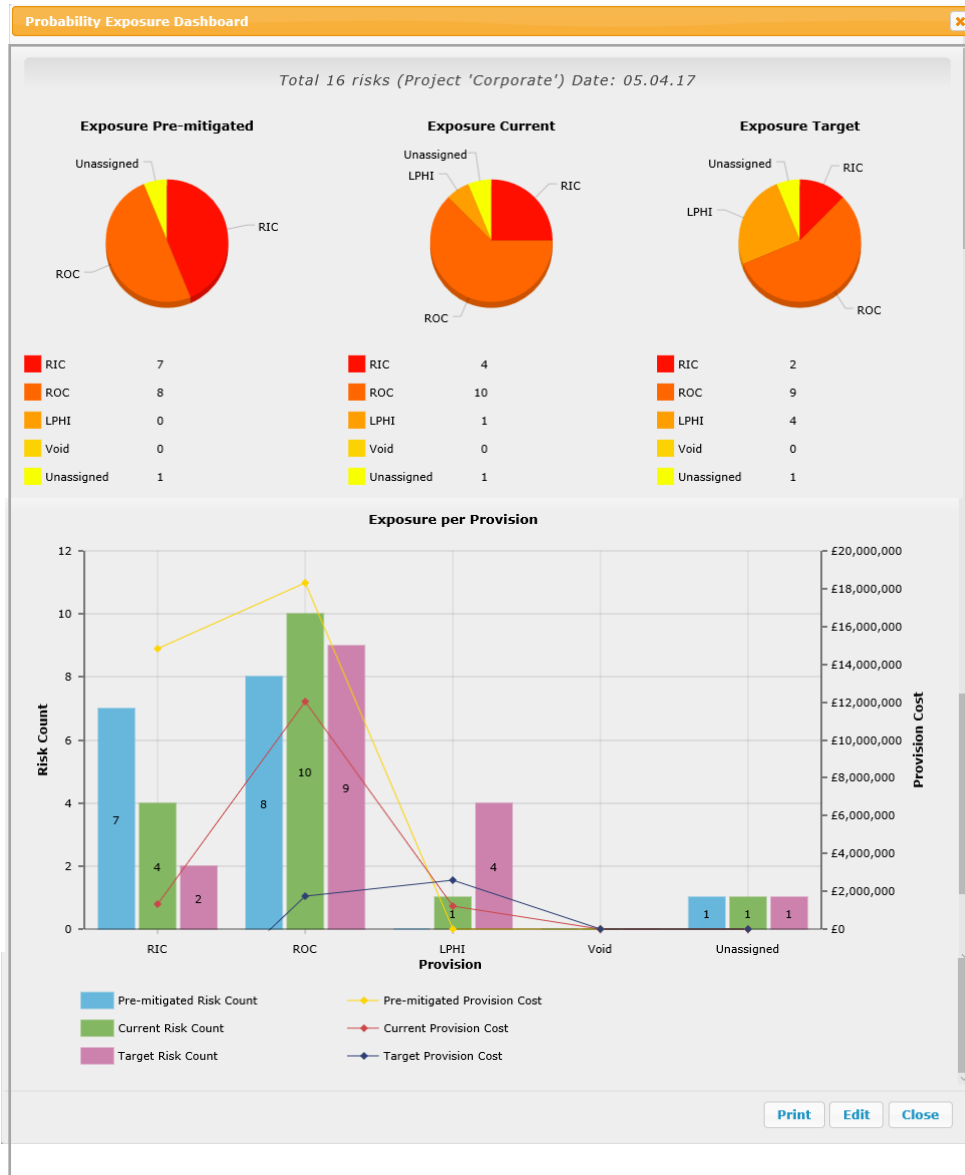


Figure 114 – The **RIC/ROC Provision** graph

Fields required for this report

Qualitative Current Probability impact

Qualitative Current Cost impact (Minimum, Most Likely and Maximum)

Risk Allocation

Action Cost

Where to locate the fields

Edit / Qualitative / Current Scenario

Edit / Qualitative / Current Scenario

Edit / Allocation / Manual

Edit / Treatment / Edit / Current Spend

5.8.1.5 Exposure Profile

This dashboard shows the financial impact of risks or budget allocations over a period of time (past or future).

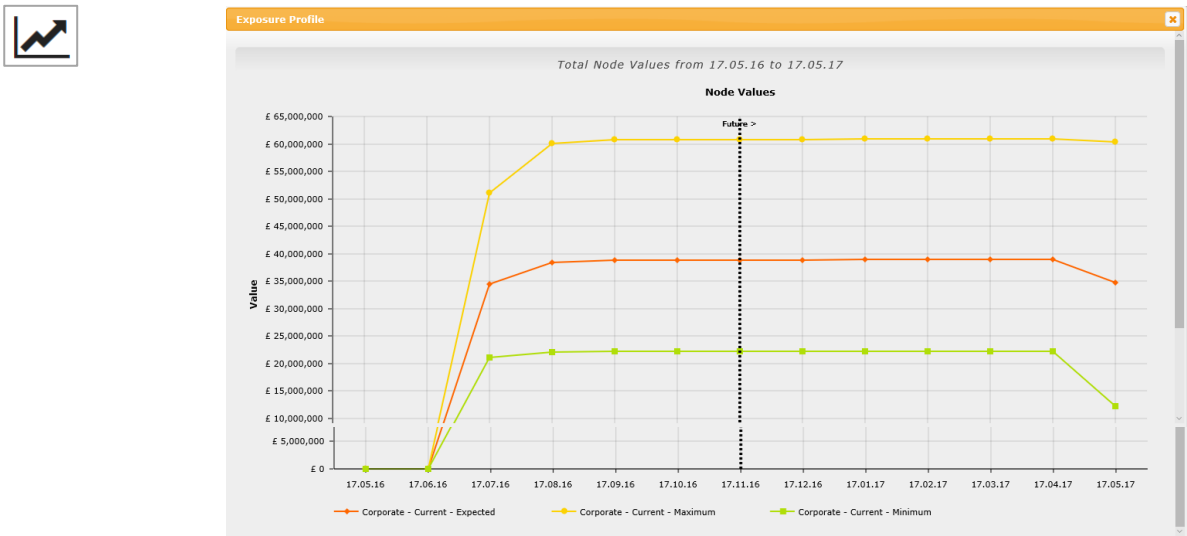


Figure 115 – The **Exposure Profile** button and report

Before the chart can be created, the system asks a few initial questions:

The 'Configure Report - Exposure Profile' dialog box contains the following sections and options:

- Use Risks From:** Current Project Node (selected), Current Node & Descendants, Node & Next level, Next level only, Node & Next 2 levels, More...
- Risk Status Set:** Active Only, All Present (exc Deleted), In Progress (Active, Attested) (selected), Draft Only, Retired Only, More...
- Restricted Risks:** Standard (selected), Restricted, All
- Select Periods:** Daily, Weekly, Monthly (selected), Quarterly
- Multi-Select Project Values:** Probabilistic Mean, Expected (selected), Maximum, Minimum (selected), Likely (>50%), Risk Allocation, Action Allocation, Total Allocation
- Select Report Start Date:** 22.01.20
- Select Report Finish Date:** 22.01.21
- Multi-Select Scenarios:** Pre-mitigated, Current (selected), Target

Buttons at the bottom: Generate Report, Close

Figure 116 – The **Exposure Profile** button and report

The **Use Risks From** section enables you to identify which risks will be used in the report. The **Grid Filter** option relates to the risks currently showing on the main screen. Other options include the risks within the current or subsidiary nodes.

The **Risk Status Set** relates to the status of risks you want to report on.

The **Restricted Risks** is only visible if you have 'restricted' access and will report on restricted risks if selected.

The **Select Graph Periods** relates to how you would like the graph to display change over a period of time i.e., weekly, monthly, quarterly.

The **Multi Select Project Values** list will be used to generate the graph. You can select many options (by holding down the **Shift** key on your keyboard) e.g., showing the minimum, most likely or maximum cost levels over a period of time.

The **Select Report Start Date** and **Select Report Finish Date** both indicate the time period you would like to see in the report.

The **Multi-Selected Scenario** section is asking if you wish the report to show the pre-mitigated, current or target state of the risks.

Fields required for this report

Where to locate the fields

Risk Start Date	Edit / Position & Timeline / Start Date
Risk Finish Date	Edit / Position & Timeline / End Date
Quantitative Pre-Mitigated Probability	Edit / Quantitative / Pre-Mitigated / Prob (%)
Quantitative Current Probability	Edit / Quantitative / Current / Prob (%)
Quantitative Post-Mitigated Probability	Edit / Quantitative / Target / Prob (%)
Quantitative Pre-Mitigated Cost assessment impacts	Edit / Quantitative / Pre-Mitigated / Cost (£) / Minimum, Most Likely and Maximum
Quantitative Current Cost assessment impacts	Edit / Quantitative / Current / Cost (£) / Minimum, Most Likely and Maximum
Quantitative Post-Mitigated Cost assessment impacts	Edit / Quantitative / Target / Cost (£) / Minimum, Most Likely and Maximum
Risk Allocation Start Date	Edit / Allocation / Allocation Available
Risk Allocation Finish Date	Edit / Allocation / Allocation Expires
Risk Allocation	Edit / Allocation / Manual
Action Allocation	Edit / Treatment / Select an Action / Edit / Current Spend

5.8.1.6 Radial Risk Proximity

Each Radial graph reviews risks from 2 different views. Firstly, it reviews risks in this graph against risks with the closest proximity, and then by the item you choose on the **Segment** list.

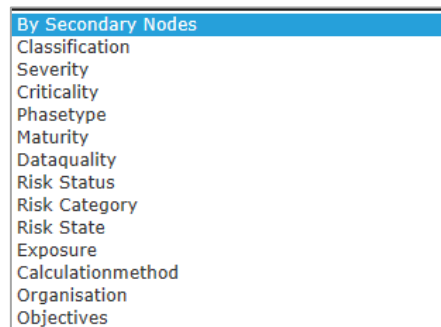


Figure 117 – The **Segment** List

The options you can choose from are:

By Secondary Nodes	The key nodes within the portfolio (secondary level nodes underneath the very top node).
Classification	The bullseye segments are the different classifications of the risks.
Severity	The bullseye segments are the different levels of impact on the project.
Criticality	Obsolete option. Please do not use.
Phase type	The bullseye segments show risks in different phases.
Maturity	The bullseye segments show the various maturity levels of the risks.
Data Quality	The bullseye segments show the quality of information the risks are based upon.
Risk Status	The risks status.
Risk Category	The category a risk may impact.
Risk State	The status of each risk.
Exposure	How often will the company be exposed to a risk?
Calculation method	How the qualitative assessment be used.
Organisation	The organisation with overall responsibility for the risk.
Objectives	Objectives which could be impacted by a risk. This will be updated later to show the objective names relating to each segment.

For example, if you choose **Classification** the following graph will appear:



Figure 118 – The **Radial by Proximity** with **Classification** segments

This graph is showing the risks with the various levels of proximity within the red, amber, and green circles and the various classifications as segments **Operational**, **Strategic**, **Brexit** and **No Classification**.

The **Radial by Proximity** graph will always show the various levels of proximity as the red, orange, and green circles and your selection from the **Segment List** as segments within the bullseye.

5.8.1.7 Risk Radar Gantt

This dashboard shows the timeline of active risks and their actions, along with the allocation start and expiry dates.

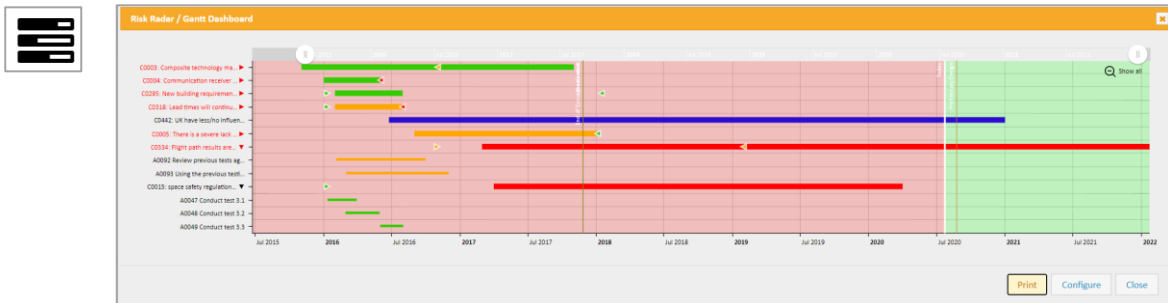


Figure 119 – The **Risk Gantt Chart** button and report

The panel has red and green background colours. Any risks within the red shaded area are historical (i.e., prior to today's date). Any risks and actions within the green shaded area are future items.

The left-hand column shows the risks as the left margin and their relative actions indented.

Risks in black text do not have any actions. Risks in red text have actions.

Actions which are black indicate the action start date is before the risk start date. Actions in red mean the start date of the action is on/after the start date of the risk.

In the middle of the screen are the risks and actions durations represented by bars.

The colour of the risk bars indicates the qualitative cost impact shown on the Heatmap for each risk (e.g., if a risk has a Heatmap score of 16, it will display as a red bar). A grey risk bar means the qualitative assessment has not been conducted yet.

Actions are also colour coded and the various colours are based on the **Implemented** and **Effectiveness** of the actions.

Green bar	If an action is 100% complete and considered fully Effective .
Amber bar	The action is considered still in progress unless it is 100% complete (even if the Effectiveness is 100%).
Red Bar	If an action is 100% implemented but not fully effective. At either end of a bar there should be a triangle which represents the allocation Start and Expiry dates which are also colour coded.
Green Start symbol	No actions start before the allocation Start Date .
Amber Start symbol	Either there are no actions, or 1 or more actions start before the allocation Start Date .
Red Start symbol	The Allocation Start Date (Allocation Available) does not commence until after an action finishes.
Green Finish symbol	The risk and actions finish before the Expiry Date .

Amber *Finish* symbol

Allocation expires before the risks ***Finish Date***.

Red *Finish* symbol

Allocation expires before the actions ***Finish Date***.

The start and finish times of each risk and action is displayed. The vertical black line represents today.

At the top of the graph is a slider bar, which enables you to zoom in and out. This allows your data to be displayed in years or months as appropriate.

You can edit the data direct from this dashboard. For example, by clicking on the coloured bar allows you to edit the start and end date of the risk. By clicking on the arrows, this enables you to edit the start or end of the risk allocation.

Fields required for this report**Where to locate the fields****Risk Name**

Edit / Definition / Name

Action Description

Edit / Treatment / Action Description

Quantitative Proximity of each risk

Edit / Position & Timeline / Start Date

Risk End Date

Edit / Position & Timeline / End Date

Duration of each action

Edit / Treatment / Select an Action / Edit / Start Date (Baseline) and Finish Date (Baseline)

Allocation

Edit / Allocation / Manual

Allocation availability

Edit / Allocation / Allocation Available and Allocation Expires

Action Start Date

Edit / Treatment / Edit / Start Date (Baseline or Forecast)

Action End Date

Edit / Treatment / Edit / Finish Date (Baseline or Forecast)

5.8.1.8 Radial Risk Qualitative Probability

The **Radial by Qualitative Probability** is very similar to the Radial Risk by proximity dashboard. This time the bullseye circles are split by the qualitative probability of the risks and then the segments you choose from the **Segments List**. Here is an example:

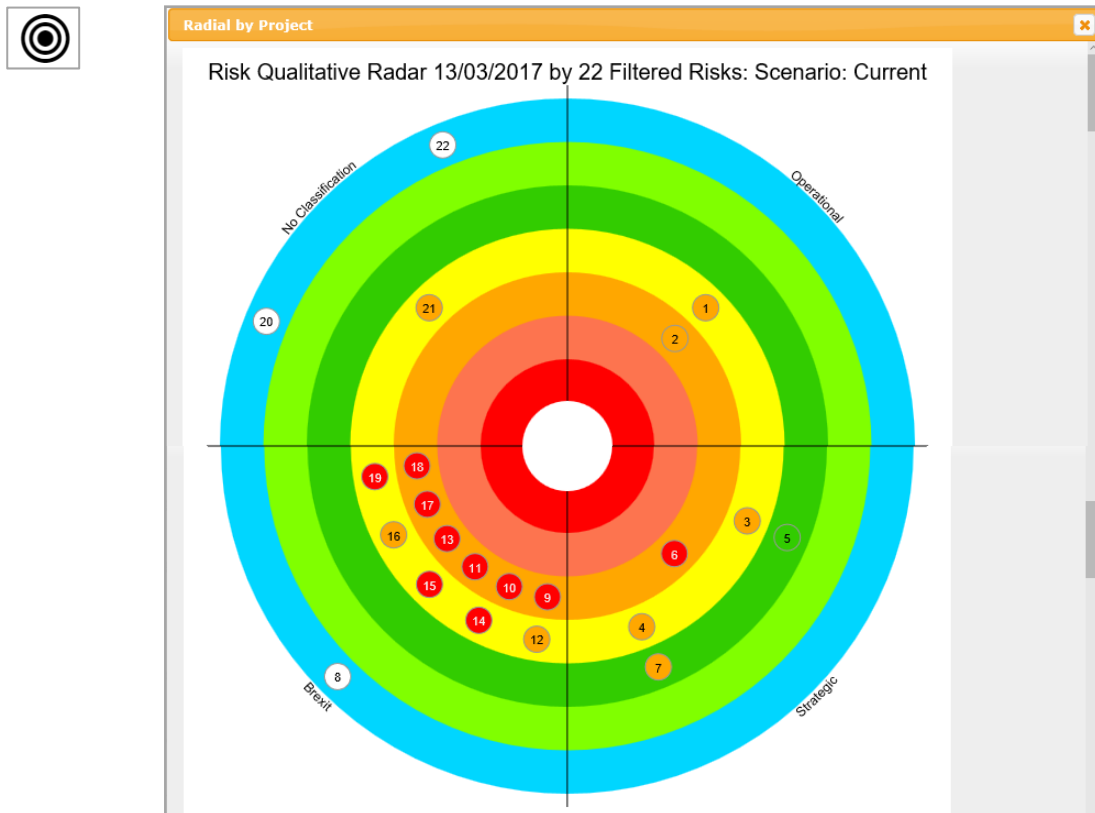


Figure 120 – The **Radial by Qualitative Probability** with **Classification** segments

In the above graph, the inner circles represent each risk qualitative probability:

- Zone 1: 6 Certainty (C)
- Zone 2: 5 Very High (Very High - Over 70%)
- Zone 3: 4 High (High - Between 56%-69%)
- Zone 4: 3 Medium (Medium - Between 31%-55%)
- Zone 5: 2 Low (Low - Between 11%-30%)
- Zone 6: 1 Negligible (Negligible - Below 10%)
- Zone 7: 0 Zero (is zero, will not happen)

The segments represent the classifications.

5.8.1.9 Project Appetite Dashboard

This is a dashboard entry point into the individual “Project Current” heatmaps. It shows a summary of risks scored for each impact type. The heat map gives a count of risks at each score. Selecting/Clicking one of the Mini-Heat maps invokes the standard selected Impact heat map.

This would be used if you have different risk appetites for different risk impacts.



Figure 121 – Project Dashboard Summary risk scoring

5.8.1.10 Single Risk Summary

This dashboard shows you the details of a risk which you have selected on the main screen.

Risk Dashboard

Definition

Code

UK LU 0336

Project

UK - London Underground

Allocation

£4,868,339

Risk

Severe weather damage sustained by tracks over 4 months

Causes - why could it happen?

- Electric boxes and tracks damaged due to lightning, frost and extremely low temperatures

Summary

Owner

Risk Owner 9

Proximity

-9

Category

Safety

Classification

Operational

Comments

manager Updated Risk 23 April 2020 14:36:42

Effects - what could happen?

- Trains may need to be adapted for future severe weather
- Ballast issues

Scenarios & Impacts

Pre-mitigated Scenario

Probability Level

Very High

Probability

75%

Pre-mitigated Impact Levels

Id	Impact	Level	Min	Exp	Max
0	cost	Medium	1500000	6500000	8000000
1	time	Very High	90	100	150
2	performance	Medium	12000	15000	20000
3	reputation	Medium			
4	Health and Safety	Medium			

Target Scenario

Probability Level

Medium

Probability

50%

Target Impact Levels

Id	Impact	Level	Min	Exp	Max
0	cost	High	1000000	2000000	5000000
1	time	High	10	30	60
2	performance	Low			
3	reputation	Low			
4	Health and Safety	Low			

Current Scenario

Probability Level

High

Probability

65%

Current Impact Levels

Id	Impact	Level	Min	Exp	Max
0	cost	Medium	1500000	5000000	6000000
1	time	High	20	45	70
2	performance	Medium			
3	reputation	Low			
4	Health and Safety	Low			
5	Legal	Low			

Treatment & Actions

Primary Treatment Objective

Develop new processes or technology to safe guard equipment.

Type

Control

Owner

Risk Manager 6

Actions

Code	Name	Description	Owner	Instance	Finish Da...	Progress	Act Status	Current ...
A0768	Redesign trains	Redesign trains		Response	17.01.20	0	Not-Approved	0
A0338	Have a supply of ballast		Risk Owner 9	Fallback	04.02.20	0	Not-Approved	0
A0096	Agree way forward with Customer	Work with customer to understand the findings and how the current maintenance contract can cope. If not, how the contract can be updated to address extra costs.	Risk Manager 5	Control	10.02.20	75	Live : Overdue	0
A0095	Gather information on replacement parts	Identify critical or single point parts that may be damaged. Understand the suppliers, lead times, costs and potential delays to current trains if there parts were not procured.	Risk Manager 6	Control		50	Live : Partially effective	0

Viewing 1-5 of 5

«

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1

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Edit Risk

Bowtie

Print

Configure

Close

Figure 122 – The **Selected Risk** panel

The **Selected Risk** dashboards provides an editable overview of the risk's general description, quantitative assessment, mitigation plan and actions. This is the same as the **Risk Dashboard**.

Classification: Internal

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Fields required for this report**Risk Summary****Project****Risk Owner****Category****Classification****Allocation****Quantitative Proximity****Comments****Risk Title****Cause****Effect****Quantitative Pre-mitigated Probability****Quantitative Pre-mitigated Cost assessment****Quantitative Current Probability****Quantitative Current Cost assessment****Quantitative Target Probability****Quantitative Target Cost assessment****Mitigation****Type****Owner****Action Name****Action Description****Action Owner****Instance****Where to locate the fields**

Edit / Definition / Summary

Edit / Position & Timeline / Project Node

Edit / Position & Timeline / Owner

Edit / Position & Timeline / Classifications /
CategoryEdit / Position & Timeline / Classifications /
Classification

Edit / Allocation / Manual

Edit / Position & Timeline / Start Date

Edit / Commentary

Edit / Definition / Name

Edit / Definition / Cause

Edit / Definition / Effect

Edit / Quantitative / Pre-mitigated / Prob (%)

Edit / Quantitative / Pre-mitigated / Cost (£)

Edit / Quantitative / Current / Prob (%)

Edit / Quantitative / Current / Cost (£) / Minimum,
Most Likely and Maximum

Edit / Quantitative / Target / Prob (%)

Edit / Quantitative / Pre-mitigated / Cost (£) /
Minimum, Most Likely and Maximum

Edit / Treatment / Primary Treatment Objective

Edit / Treatment / Primary Treatment Type

Edit / Treatment / Owner

Edit / Treatment / Edit / Title

Edit / Treatment / Edit / Description

Edit / Treatment / Edit / Owner

Edit / Treatment / Edit / Action Type

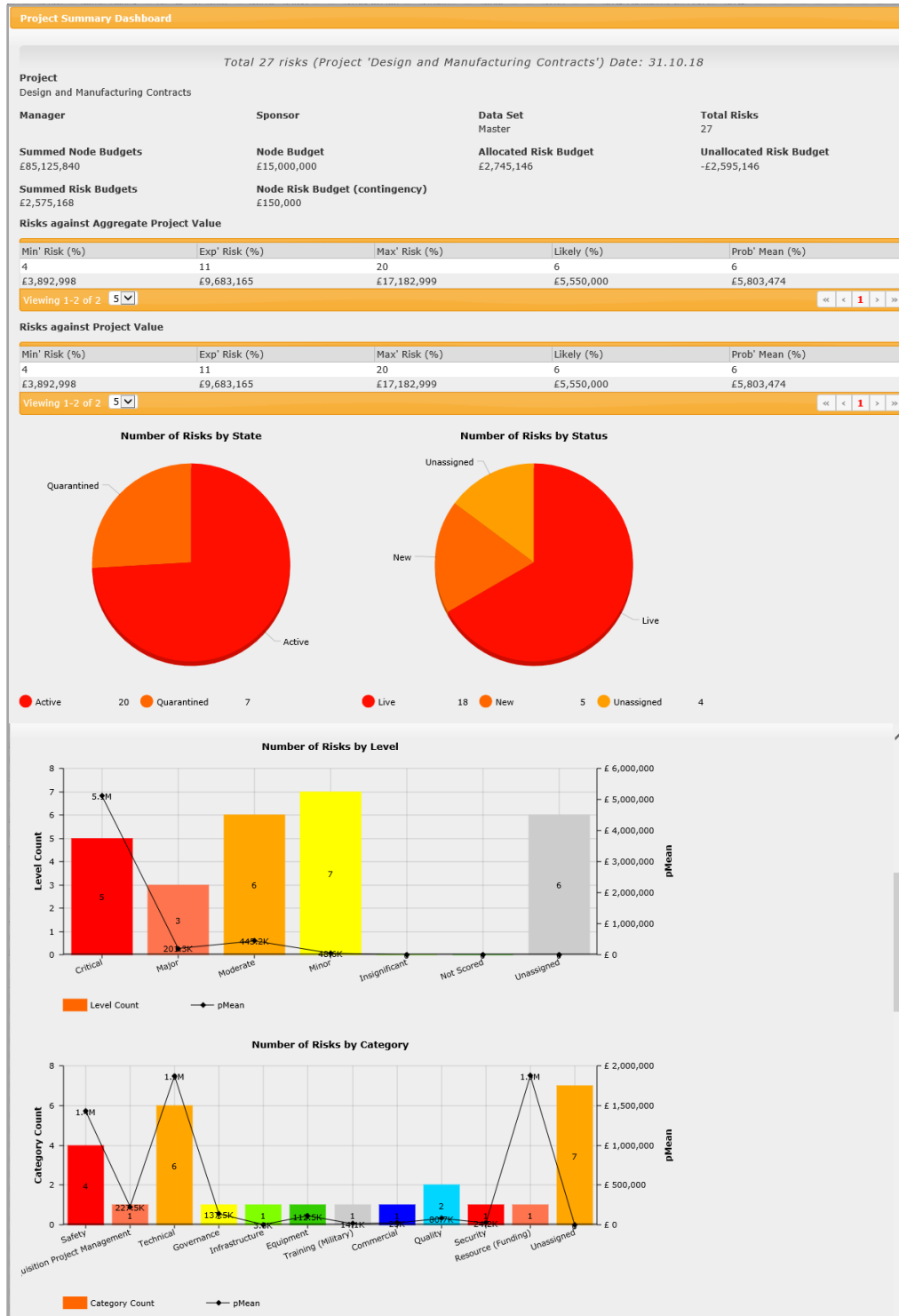
Finish Date	Edit / Treatment / Edit / Finish Date (Baseline) or Finish Date (Forecast)
Progress	Edit / Treatment / Edit / Implemented
Action Status	Edit / Treatment / Edit / Effectiveness
Current Spend	Edit / Treatment / Edit / Current Spend (£)

5.8.1.11 Project Risk Summary

As the name suggests, this dashboard provides an overview of the risks against the project value of the node and subsidiary nodes. It gives several graphics showing the risk impacts and categories plus list of the top financial (by probabilistic mean) and risks with closest quantitative proximity. Finally, it breaks down this risk into each categorisation and list the top N according to probabilistic mean.

The report works with the current risks but can be asked to provide output at a given date.

Figure 123 – The **Project Risk Summary** configuration panel



Top Financially Rated Risks (by Probabilistic Mean)							
Code	Project	Title	Mitigation	Prox.	Cost Score	Prob Mean	Alloc.
C0005	Space Exploration and Travel	There is a risk that There is a severe lack of specialist resource in space scientists.	Understand and address where technical and market knowledge is weak, how to improve that knowledge and conduct the necessary communication	-943	350	£1,875,000	£300,000
C0334	High Speed Train v2020	There is a risk that Flight path results are unreliable	Identify if previous testing was sufficient, identify what has changed and if new testing is required.	-852	175	£1,416,666	£53,146
C0003	Space Exploration and Travel	There is a risk that Composite technology may not have required strength	Identify and address strength weaknesses in new composite product.	-913	280	£1,400,000	£150,000
C0004	High Speed Train v2020	There is a risk that Communication receiver (which shares data with other space equipment) does not work.	Understand how product has changed and how new product can be adapted or source alternative product	-790	280	£416,666	£100,000
C0310	Design and Manufacturing Contracts	There is a risk that Tenderers decline bidding	Understand the gaps in the current tender and rewrite it.	-281	35	£227,500	£100,000
Viewing 1-5 of 5 5 < 1 >							
Risks with Closest Proximity							
Code	Project	Title	Mitigation	Prox.	Cost Score	Prob Mean	Alloc.
C0310	Design and Manufacturing Contracts	There is a risk that Tenderers decline bidding	Understand the gaps in the current tender and rewrite it.	-281	35	£227,500	£100,000
C0297	High Speed Train v2020	There is a risk that Discovery of asbestos	Asbestos registers provided to the contractor for Hangar 8. Contractor to undertake Type 3 survey during design period. This intrusive survey cant be done prior to contract as building needs to be unoccupied.	-491	10	£7,583	£5,000
C0291	Design and Manufacturing Contracts	There is a risk that Strengthening of structure required to support new external flues	Identify the extra weight of the flues and the stress limits of the hangar.	-568	4	£758	£500,000
C0304	Design and Manufacturing Contracts	There is a risk that Operational exercises	Operations are often not revealed for security reasons. Liaison to be maintained with Base to ensure that adequate notice is obtained if possible.	-568	150	£14,083	£250,000
C0414	Design and Manufacturing Contracts	There is a risk that Strengthening of structure required to support new external flues	Identify the extra weight of the flues and the stress limits of the hangar.	-568	4	£758	£500,000
Viewing 1-5 of 5 5 < 1 >							
Risk Categories							
Safety							
Code	Project	Title	Mitigation	Prox.	Cost Score	Prob Mean	Alloc.
C0334	High Speed Train v2020	There is a risk that Flight path results are unreliable	Identify if previous testing was sufficient, identify what has changed and if new testing is required.	-852	175	£1,416,666	£53,146
C0297	High Speed Train v2020	There is a risk that Discovery of asbestos	Asbestos registers provided to the contractor for Hangar 8. Contractor to undertake Type 3 survey during design period. This intrusive survey cant be done prior to contract as building needs to be unoccupied.	-491	10	£7,583	£5,000
C0303	Design and Manufacturing Contracts	There is a risk that Clarity in adherence of fire standards	DE Tech 10, references relevant documentation. UFC details all the relevant sections of the NFPA, ETL 02-15 references the relevant american standards. All fire engineering sub-contractors to be LPC approved. If crown fire standards are more stringent, then these are to be utilised.	-700	10	£5,016	£7,000
Acquisition Project Management							
Code	Project	Title	Mitigation	Prox.	Cost Score	Prob Mean	Alloc.
C0310	Design and Manufacturing Contracts	There is a risk that Tenderers decline bidding	Understand the gaps in the current tender and rewrite it.	-281	35	£227,500	£100,000
Technical							
Code	Project	Title	Mitigation	Prox.	Cost Score	Prob Mean	Alloc.
C0003	Space Exploration and Travel	There is a risk that Composite technology may not have required strength	Identify and address strength weaknesses in new composite product.	-913	280	£1,400,000	£150,000
C0004	High Speed Train v2020	There is a risk that Communication receiver (which shares data with other space equipment) does not work.	Understand how product has changed and how new product can be adapted or source alternative product	-790	280	£416,666	£100,000
C0323	High Speed Train v2020	There is a risk that Customer technology is built	Keep abreast of personal technology use by customers and review how technical improvements can be made during the life of the manufacture	-668	35	£38,666	£15,000
C0298	Design and Manufacturing Contracts	There is a risk that Strengthening of structure required to support overhead gantry.	Review the current weight limits, test the stress points and identify what options there are to strengthening the gantry.	-700	70	£17,333	£275,000
C0299	Design and Manufacturing Contracts	There is a risk that Strengthening of structure required to support overhead gantry.	Identify the extra weight of the gantry.	-700	70	£17,333	£275,000

Figure 124 – The **Project Summary** button and report

The top section provides information about the project such as who the manager is, how many risks the project holds, the project value, the risk contingency budget and how much of the risk budget has been allocated so far.

The Risks against Aggregate Project Value section is showing:

Min' Risk (%)	This is the current minimum 3-point estimate of every risk within the project and subsidiary projects summed together.
Exp' Risk (%)	This is the current most likely 3-point estimate of every risk within the project and subsidiary projects summed together.
Max' Risk (%)	This is the current maximum 3-point estimate of every risk within the project and subsidiary projects summed together.
Likely (%)	This is the PMean of every risk within the project which has a probability of 50 or higher.
Prob' Mean (%)	This is the minimum, most likely and maximum 3-point estimates summed together and divided by 3 for each risk and then the result of each risk summed together for the project and any subsidiary projects.

The **Risks against Project Value** section shows the following:

Min' Risk (%)	This is the current minimum 3-point estimate of every risk within the project summed together.
Exp' Risk (%)	This is the current most likely 3-point estimate of every risk within the project summed together.
Max' Risk (%)	This is the current maximum 3-point estimate of every risk within the project summed together.
Likely (%)	This is the PMean of every risk within the project which has a probability of 50 or higher.
Prob' Mean (%)	This is the minimum, most likely and maximum 3-point estimates summed together and divided by 3 for each risk and then the result of each risk summed together.

The **Number of Risks by State** graph is showing in percentages the number of risks by **System State**.

System states are generally Quarantined , Active  and Closed  (retired).

The **Number of Risks by Status** graph is showing in percentages the number of risks by **Risk Status**. The values are generally client specific and may be subsets of the system state Active.

The **Number of Risks by Level** graph is displaying risks against the qualitative assessment level e.g., 7 risks have been qualitatively assessed as having a **High** cost impact. This graph also shows a black line which is the summative probability mean of the risks within the high-cost impact assessment column.

The **Number of Risks by Category** graph is displaying the number of **Categories** and the black line represents the summed probability mean of the risks within each category.

The **Top Financially Rated Risks (by Probabilistic Mean)** section is showing the risks with the highest **Current Probability Mean**. The **Current Probability Mean** column is sorted.

The ***Risks with Closest Proximity*** graph is displaying the risks with the closest quantitative proximity to today. This means the system reviews the current date against ***Start Date*** of the risk. The ***Proximity*** column is sorted.

Fields required for this report	Where to locate the fields
Project Manager	Edit Node Data / People / Risk Manager
Project Sponsor	Edit Node Data / People / Project Sponsor
Dataset used for this project	Only administrators will have this option: Edit Node Data / Formats & Settings / Dataset
Project Value for every project	Edit Node Data / Description / Node budget
Risk Contingency for every project	Edit Node Data / Description / Node Risk Budget (Contingency)
Quantitative Current Probability	Edit / Quantitative / Current / Prob (%)
Quantitative Current Cost assessment impacts for each risk	Edit / Quantitative / Current / Cost (£) / Minimum, Most Likely and Maximum
Risk Status	Edit / Review Record / Status
Qualitative Current Probability	Edit / Qualitative / Current / Prob
Qualitative Current Cost assessment impact for each risk	Edit / Qualitative / Current / Cost
Category that could be impacted by a risk	Edit / Classifications / Category
Risk Title	Edit / Definition / Name
Mitigation	Edit / Treatment / Primary Treatment
Quantitative Proximity	Edit / Position & Timeline / Start Date
Allocation	Edit / Allocation / Manual

5.8.1.12 Top 'n' Risks

This dashboard is designed to show the most cost impacting or proximity impacting risks across a single node, or the portfolio and you dictate whether you want the top 5, 10 or whatever number.

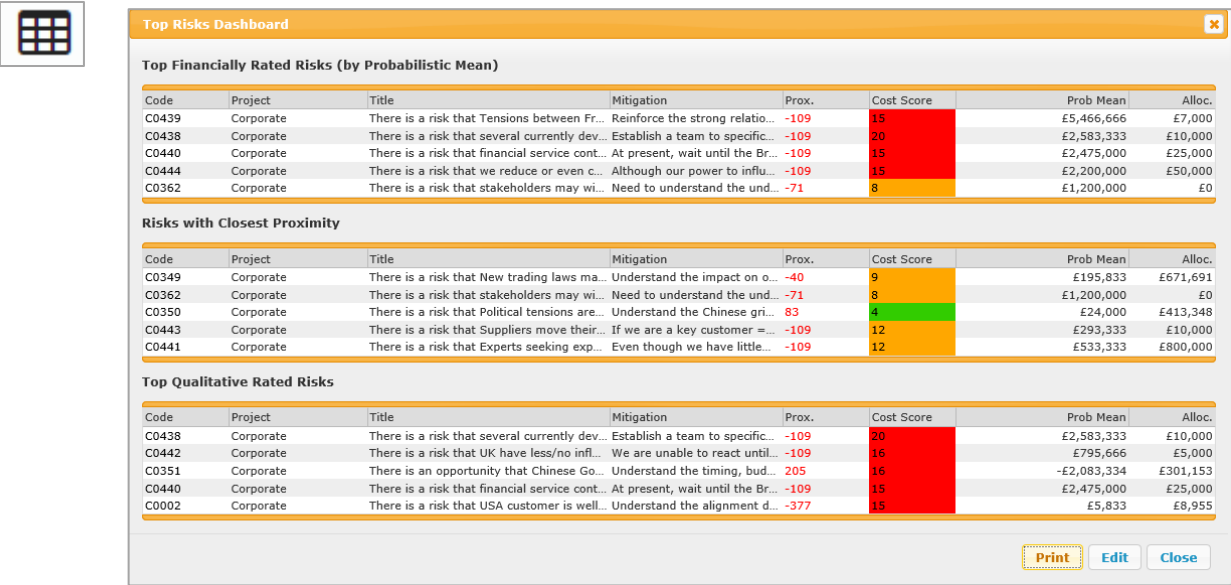


Figure 125 – The Top 'n' Items report

When running this report, you are able to select either a specific impact or all impacts.

N.B the list of impacts shown in the figure below may be different as these are configurable.

Configure Report - Top Risks

Use Risks From
Grid Filter Current Project Node Current Node & Descendants

Restricted Risks
Standard Restricted All

Top N (risks)
5

Scenario?
Pre-mitigated Current Target

Impact?
Finance Schedule Safety Security Environment Finance

Generate Report Close

Figure 126 – Selection of Impacts

The selection of **All Impacts** will provide you with the **Worst Score**.

Top Risks Dashboard

Total 5 risks (Project 'Company Wide') Date: 26 August 2021 17:45:22

Top Financially Rated Risks (by Probabilistic Mean)

Code	Project	Title	Mitigation	Prox.	Prob Mean	Alloc.	Assessm...	Likelihood	Impact	Worst Sc...
C0010	Company Wide	There is a threat that Carbon Emission Targets are not met			£5,000	£0	Finance	4	4	16

Risks with Closest Proximity

Code	Project	Title	Mitigation	Prox.	Prob Mean	Alloc.	Assessm...	Likelihood	Impact	Worst Sc...
C0009	Company Wide	There is a threat that our IT infrastructure is compromised		-23	£0	£0	Safety	3	4	12
C0001	Company Wide	There is a threat that Delays of key materials	Apply policy 067 - subcontractor management	49	£0	£0	Finance	4	3	12

Top Qualitative Rated Risks

Code	Project	Title	Mitigation	Prox.	Assessment	Likelihood	Impact	Worst Sc...
C0010	Company Wide	There is a threat that Carbon Emission Targets are not met			Finance	4	4	16
C0001	Company Wide	There is a threat that Delays of key materials	Apply policy 067 - subcontractor management	49	Finance	4		12
C0009	Company Wide	There is a threat that our IT infrastructure is compromised		-23	Safety	3	4	12

Print

Configure

Close

Figure 127 – The **Top 'n' Items** report – Worst Score

The dashboard shows 3 sections.

Top Financially Rated Risks (by Probabilistic Mean): This section shows the risks with the highest Current Probability Mean.

Risks with Closest Proximity: This section shows the risks with the closest quantitative proximity to today. This means the system reviews the current date against **Start Date** of the risk.

Top Qualitative Rated Risks: This section shows the risks with the highest Current Qualitative Cost impact.

The **Cost Score** column relates to the Heatmap score generated by the risk.

The **Probability Mean** column shows the PMean of each risk. A PMean is the quantitative current cost scores (minimum, most likely and maximum values summed together) multiplied by its probability.

The **Allocation** column shows how much money has been manually requested for each risk.

Fields required for this report

Where to locate the fields

Quantitative Current Probability

Edit / Quantitative / Current / Prob (%)

Quantitative Current Cost assessment impacts for each risk

Edit / Quantitative / Current / Cost (£) / Minimum, Most Likely and Maximum

Qualitative Current Probability

Edit / Qualitative / Current / Prob

Qualitative Current Cost assessment impact for each risk	Edit / Qualitative / Current / Cost
Risk Title	Edit / Definition / Name
Mitigation	Edit / Treatment / Primary Treatment
Quantitative Proximity	Edit / Position & Timeline / Start Date
Allocation	Edit / Allocation / Manual

5.8.1.13 Action Performance

This dashboard shows the effectiveness and spend of Actions against the Risks Cost impact.

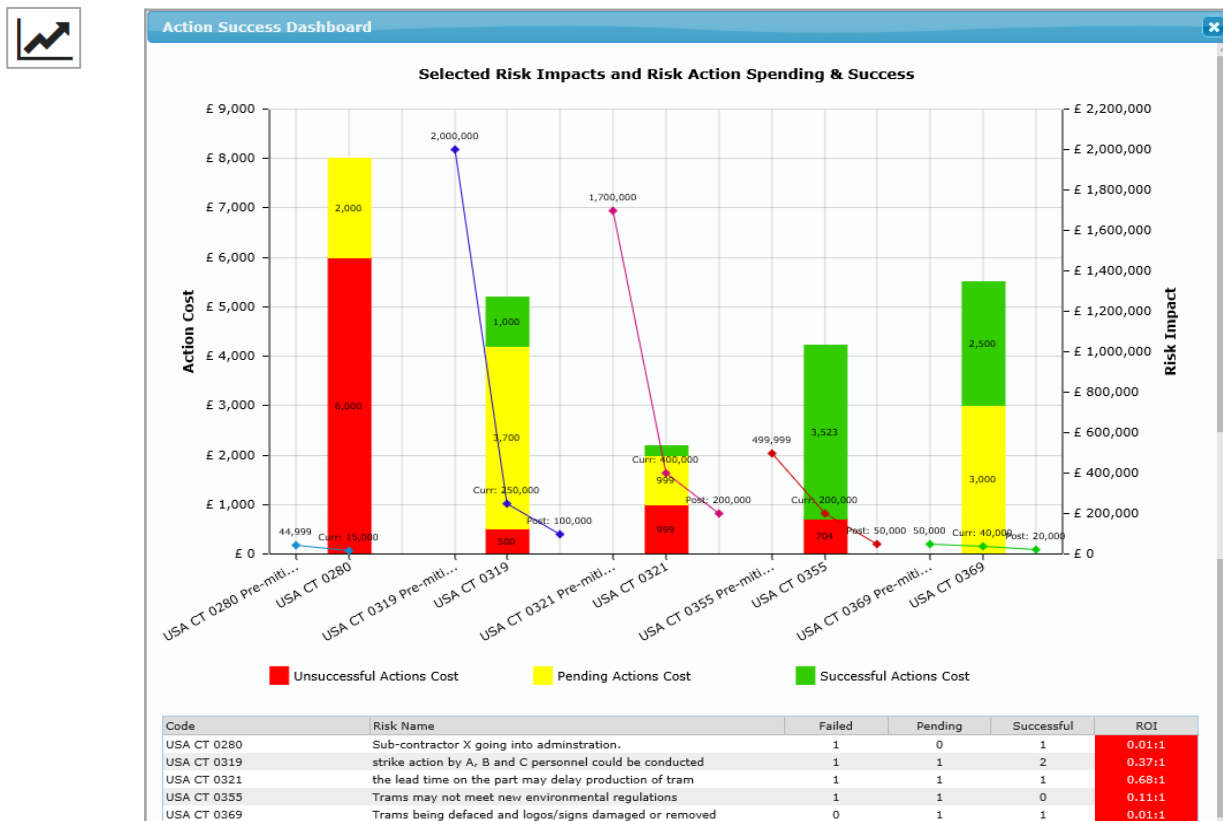


Figure 128 – The **Action Success** button and report

Each column represents a risk and the successful, pending, or unsuccessful actions within that risk.

Failed actions are actions that have not been considered effective or successful and are displayed as red.

Pending actions are actions which have not yet been 100% implemented or completed and displayed as yellow.

Successful actions are actions that are considered successful and displayed as green.

In the example above, risk USA CT 0319 has a successful action (in green) costing £1000, 2 pending actions (in yellow) costing a combined £3,700 and a failed action (in red) costing £500. A total of £5,200 has been spent on actions.

Along with this column is a line which represents the pre-mitigated, current and target quantitative current cost impacts.

ROI means the Rate of Investment and the tool considers if the amount of money spent on actions has been financially worth it against the risks impact cost.

Underneath the graph will be listed the risks involved in generating the graph.

Fields required for this report**Where to locate the fields****Risk Name**

Edit / Definition / Name

Action Implemented

Edit / Treatment / Select an Action / Edit / Implemented

Action Success

Edit / Treatment / Select an Action / Edit / Effectiveness

Action Cost

Edit / Treatment / Select an Action / Edit / Current Spend

Action Status

Edit / Treatment / Select an Action / Edit / Status

Quantitative Pre-Mitigated Cost assessment impacts

Edit / Quantitative / Pre-Mitigated / Cost (£) / Minimum, Most Likely and Maximum

Quantitative Current Cost assessment impacts

Edit / Quantitative / Current / Cost (£) / Minimum, Most Likely and Maximum

Quantitative Post-Mitigated Cost assessment impacts

Edit / Quantitative / Target / Cost (£) / Minimum, Most Likely and Maximum

5.8.1.14 Risk Data Complete

The **Risk Data Complete** report shows fields which are completed within the range of risks on your main screen.

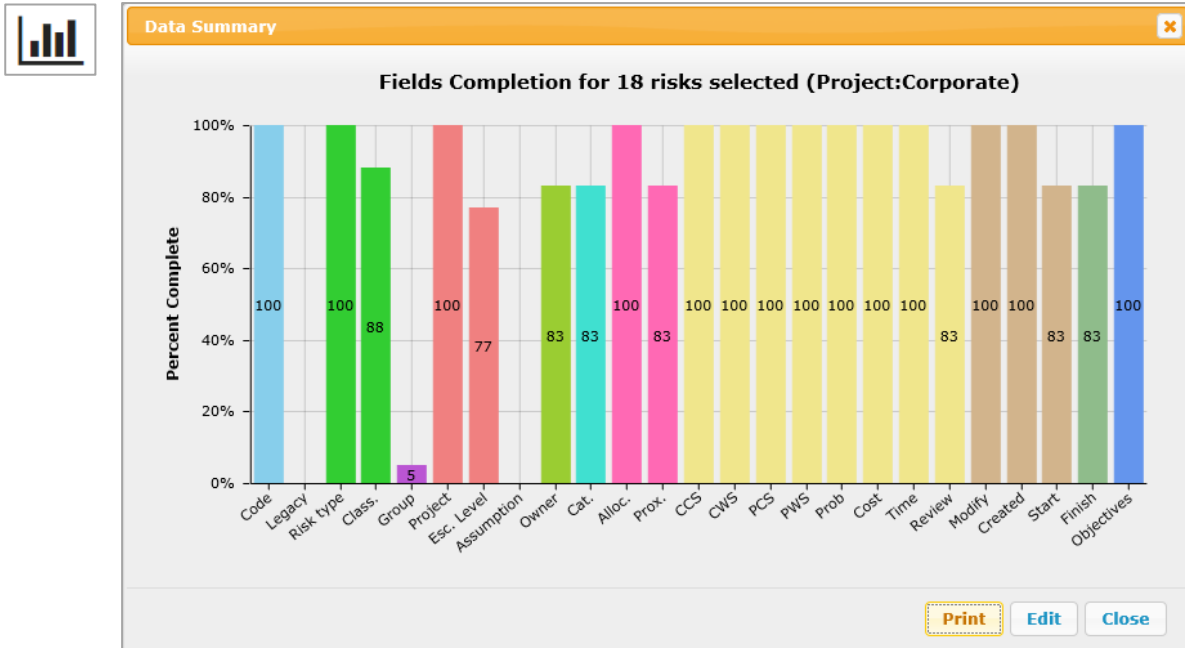


Figure 129 – The **Risk Data Complete** report

For example, the above dashboard is showing that from 18 risks on screen the **Legacy** and **Assumption** fields have not been completed for any of the risks, whereas **Class** has been completed for 88% of the risks.

Note: The administrator can change the fields so that you can review specific fields. For the above example, the fields below are required.

Fields required for this report

Where to locate the fields

Legacy

Edit / Position & Timeline / Legacy Code

Risk Type

Edit / Definition / Descriptor

Classification

Edit / Classifications / Classification

Group

Edit / Group Membership

Escalation Level

Edit / Escalation

Assumption

Change View: Grid Controls / Grid Settings / Display (change to Assumptions)

In Assumptions: Select Assumption / Edit / Definition / Linked Risk

Risk Owner

Edit / Responsibility / Owner

Category

Edit / Classifications / Category

Risk Allocation	Edit / Allocation / Manual
Proximity	Edit / Position & Timeline / Start Date
CCS (Corporate Cost Score)	Edit / Qualitative / Current / Prob Edit / Qualitative / Current / Cost
CWS (Corporate Worst Score)	Edit / Qualitative / Current / Prob Edit / Qualitative / Current / Other impacts
PCS (Project Cost Score)	Edit / Qualitative / Current / Prob Edit / Qualitative / Current / Cost
PWS (Produce Worst Score)	Edit / Qualitative / Current / Prob Edit / Qualitative / Current / Other impacts
Probability	Edit / Quantitative / Current / Probability
Cost	Edit / Quantitative / Current / Most Likely / Cost
Time	Edit / Quantitative / Current / Most Likely / Time
Review (Last Review Date)	Edit / Review Record / Last Review
Start	Edit / Position & Timeline / Start Date
Finish	Edit / Position & Timeline / End Date
Objectives	Edit / Linked Objectives

5.8.1.15 Risk Data Missing

The **Risk Data Missing** report displays which major risk data is missing.

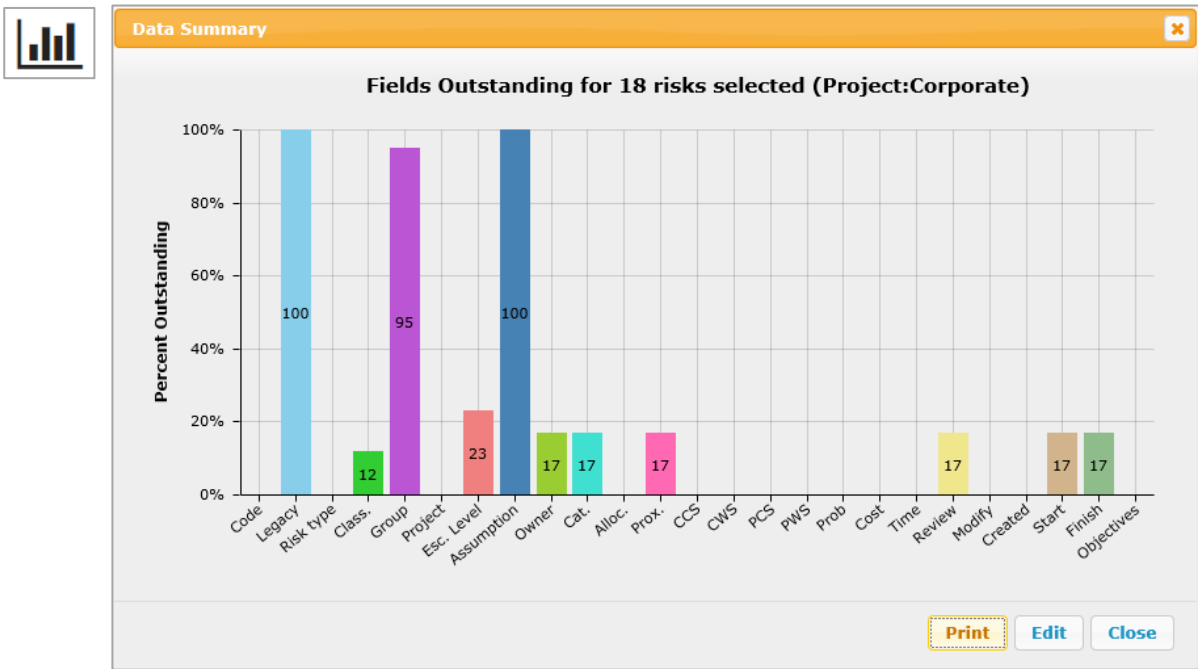


Figure 130 – The **Risk Data Missing** report

The above report is showing that from 18 risks on screen the **Legacy** and **Assumption** fields are not completed for any of the risks (100% incomplete), whereas 12% of risks have not completed their **Class** field.

Note: The administrator can change the fields so that you can review specific fields. Guidance on how the administrator can make these changes is shown in the Administrator section of the manual.

The fields are the same as the **Risk Data Missing** report.

5.8.1.16 Scenario Overview

Note: The scenario overview is one of several Heatmap reports. Each Heatmap provides a scoring overview for a set of risks. The Heatmap configuration and colours are built by administrators along with risk and impact appetite descriptions. This definition is appended as an index to the right-hand side of each Heatmap and varies according to client configuration. A sample configuration is provided below:

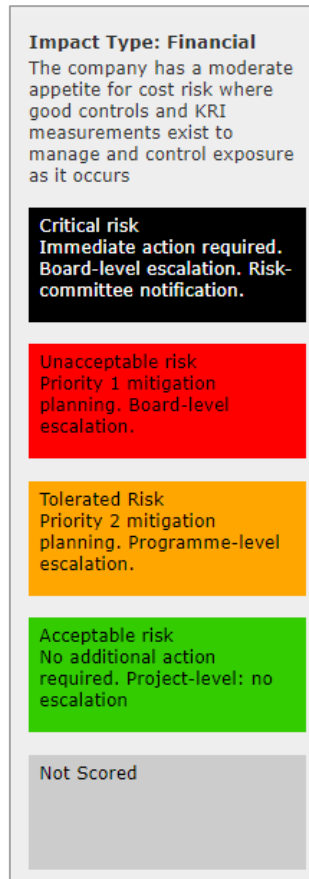


Figure 131 – Risk Appetite Index

To reduce clutter the appetite index has not been shown with the Heatmap reports described.

The **Scenario Overview** dashboard is a variant on the standard “Project Current” Heatmap. A Heatmap is produced showing how a Risk (or Risks) qualitative scoring differ over each of the configured scenarios.



Figure 132 – The *Scenario Overview* dashboard

The above dashboard is showing that the Risk 0431 has a “Pre-mitigated” score of 525 with and eventual “Target” of 1.

5.8.1.17 Global Current

The **Global Current** dashboard uses the Global heatmap (which may be different from project heatmaps) to display all the risks on screen. Typically, you would select the top node and then **Global Current**.

The Heatmap dashboard is based on the qualitative assessment for each risk.

Figure 133 – The **Global Current Dashboard - Configuration**

The **Restricted Risks** section ask if you wish the report to show either Standard, Restricted or all risks. (This is only used if you are using this functionality). If you are not using this functionality, then ignore this option and accept the default 'Standard'.

The **Scenario** section is asking if you wish the report to show the pre-mitigated, current or target state of the risks.

The **Select Risk Type** is asking if you wish to report on either risks or opportunities – this is only applicable if you have both Risks and Opportunities jointly displayed on your main grid.

The **Impact** section asks which assessment impact you wish the Heatmap to show. This will automatically show a list of all impacts within the qualitative assessment section of the risks.

The **Show Impact Boundaries (zero/not scored)** includes all risks which have either been scored 0 or not scored at all for probability and impact. This option can be switched on or off. A standard Heatmap will probably contain a 5x5 matrix. If this option is turned on, the Heatmap will show additional blue cells:

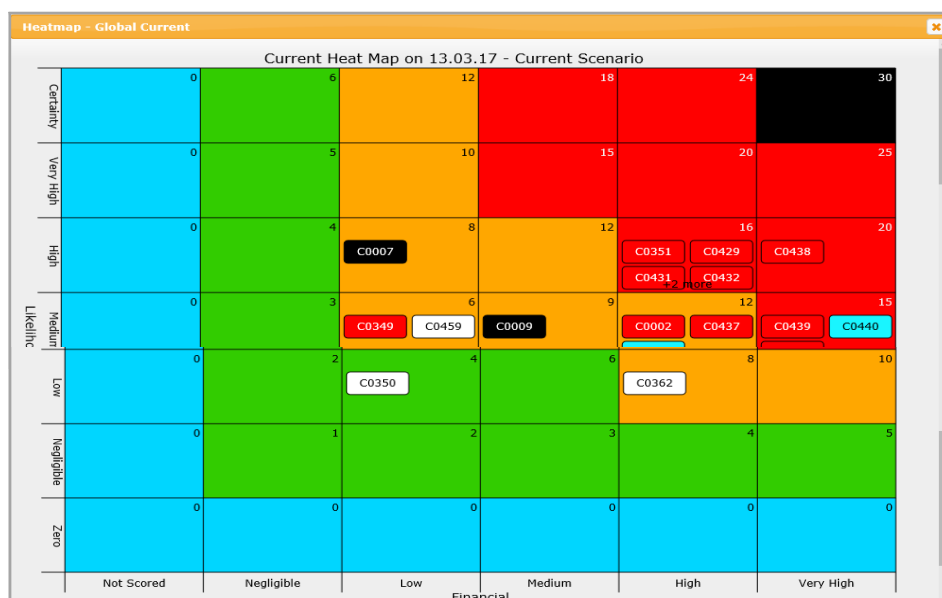


Figure 134 – The standard Heatmap with optional zero or not scored cells

The **Show Risk codes (or Counts)** section asks if you wish to display the risk codes or the risk count.

When you select **Generate Report** using risk Code a Heatmap will appear (the Heatmap below is not showing the 0 boundaries).

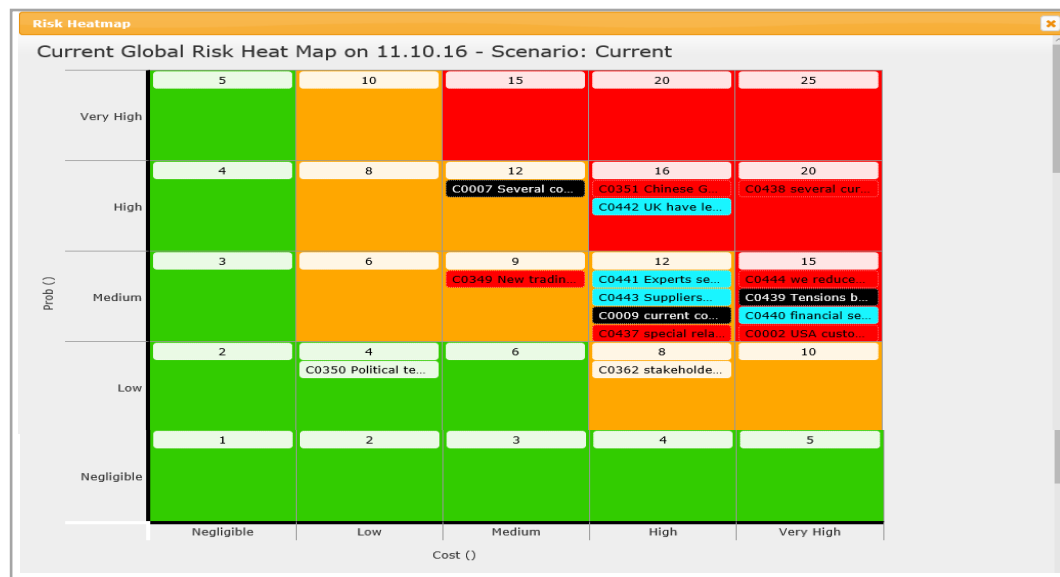


Figure 135 – The **Global Current** Heatmap

The above example is a 5 x 5 Heatmap and is separated into 25 numbered sections each indicating a level of probability and cost. The sections can be coloured as above in green, amber, and red to also indicate the various levels.

Each risk will display its risk id and name. Risks with a white background mean they have no additional threat level has been identified. Risks with a blue background mean they have a **noticeable** threat level.

Risks with a red background mean they have a **significant** threat level and finally a risk with a black background means it has a **catastrophic** threat level.

If you select a risk, the **Risk Dashboard** will appear showing the core details of that risk.

Scroll down to view all the risks used to generate the Heatmap.

Code	↑ Class.	Project	Name	Cat.	Worst Sc... ↓
USA CT 0274	Operational	USA - Chicago Trams	Contractor A goes bust	End User and Customer Agreements	3
USA CT 0280	Operational	USA - Chicago Trams	Sub-contractor X going into administration.	Commercial	12
USA CT 0319	Operational	USA - Chicago Trams	strike action by A, B and C personnel could be conducted	Resource (Funding)	9
USA CT 0321	Operational	USA - Chicago Trams	the lead time on the part may delay production of tram	Logistics	15
USA CT 0355	Compliance	USA - Chicago Trams	Trams may not meet new environmental regulations	Environmental	12
USA CT 0369	Operational	USA - Chicago Trams	Trams being defaced and logos/signs damaged or removed	Security	20
USA CT 0370	Compliance	USA - Chicago Trams	cleaning product 123 may become toxic in certain weathers as shown on limited tests	Safety	6

Figure 136 – Risks displayed underneath Heatmap

The qualitative likelihood and cost figures are multiplied to produce the overall Heatmap score for each risk
e.g., Likelihood 4 x Cost 5 = Score 20.

Fields required for this report	Where to locate the fields
Name	Edit / Definition / Name
Risk Impacts	Edit / Qualitative / Pre-Mitigated / Prob Edit / Qualitative / Pre-Mitigated / Cost, Time, any Impact Edit / Qualitative / Current / Prob Edit / Qualitative / Current / Cost, Time, any Impact Edit / Qualitative / Target / Prob Edit / Qualitative / Target / Cost, Time, any Impact
Threat level	Edit / Qualitative / Threat Level (3D)
Classification	Edit / Classifications / Classification
Category	Edit / Classifications / Category

5.8.1.18 Global Historical

This dashboard is the same as the **Global Current** Heatmap but allows you to dictate which historical date you wish to see the risks.

When selecting this dashboard, the following panel will offer several options, but this time will include **Select Report Start Date**.

Configure Report - Global Historical

Use Risks From

Grid Filter

Current Project Node

Current Node & Descendants

Risk Status Set

Active Only

All Present (exc Deleted)

In Progress (Active, Attested)

Draft Only

Retired Only

More...

Restricted Risks

Standard

Restricted

All

Select Report Start Date

23.06.20

Scenario

Pre-mitigated

Current

Target

Impact?

cost

time

performance

reputation

Health and Safety

More...

Show Impact Boundaries (zero/not scored)

Yes

No

Generate Report

Close

Figure 137 – The **Global Historical** Heatmap opening panel

Once the options are completed, select **Generate Report** to see the Heatmap:

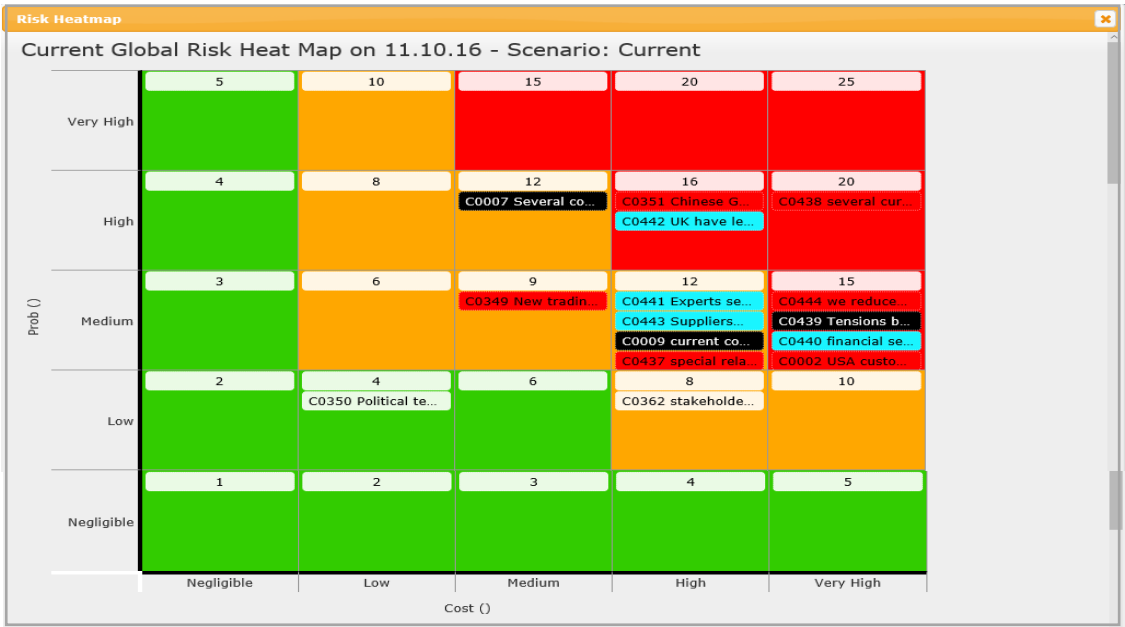


Figure 138 – The **Global Current** Heatmap on a specific historical date

The list of risks used in the generation of the report are displayed underneath the chart.

The same fields are required as the Global Heatmap.

5.8.1.19 Global Changed

This dashboard displays only the risks that have changed their score during a certain period.

Configure Report - Global Changed

Use Risks From

Grid Filter

Current Project Node

Current Node & Descendants

Risk Status Set

Active Only

All Present (exc Deleted)

In Progress (Active, Attested)

Draft Only

Retired Only

More...

Restricted Risks

Standard

Restricted

All

Select Report Start Date

23.06.20

Select Report Finish Date

23.07.20

Scenario

Pre-mitigated

Current

Target

Impact?

cost

time

performance

reputation

Health and Safety

More...

Show Impact Boundaries (zero/not scored)

Yes

No

Generate Report

Close

Figure 139 – The *Global Changed* Heatmap opening panel

The opening panel now displays a *Select Report Start Date* and *Select Report Finish Date* to determine the time frame you would like to analyse. Once the options are completed, select *Generate Report*:

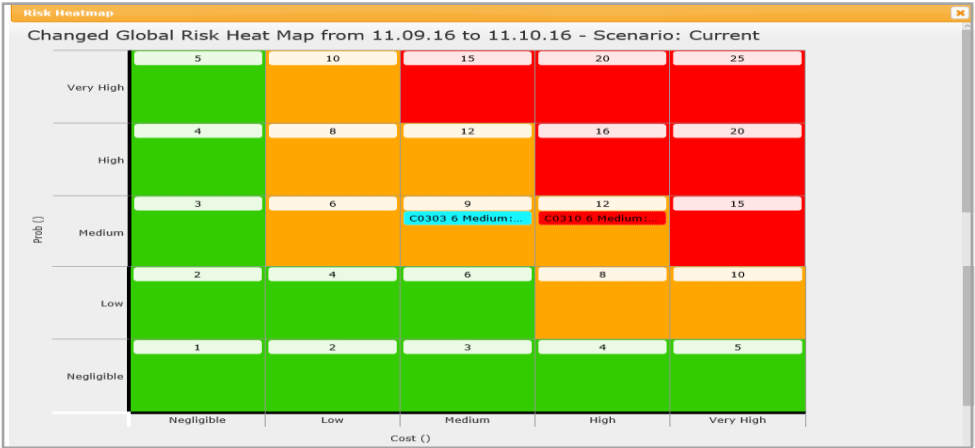


Figure 140 – Risks whose scores have changed during a particular time period

Using the global heatmap the report shows only the risks that have schanged their heatmap score during a particular time period of your choice.

As with the other heatmaps, the risks used to generate the report are displayed underneath. However, now displayed as columns is the Current **Score**, Current **Likelihood** and Current **Impact** score (eg Cost) as well as **Previous Score**, **Previous Likelihood** and **Previous Impact** score.

The same fields are required as the **Global Current** Heatmap.

5.8.1.20 Global Unchanged

This dashboard displays the risks that have not changed their score during a certain period. The same initial panel opens and asks for a time period and other details. The Heatmap report is identical to the **Global Current** and displays the risks used to build the report underneath.

The same fields are required as the **Global Current** Heatmap.

5.8.1.21 Project Current

This dashboard uses the project Heatmap to generate a local Heatmap for the node you are displaying on screen. In all other senses, it is the same as the **Global Current** Heatmap.

The same fields are required as the **Global Current** Heatmap.

5.8.1.22 Project Historical

This dashboard uses the project Heatmap to generate a local Heatmap for the node you are displaying on screen. In all other senses, it is the same as the **Global Historical** Heatmap.

The same fields are required as the **Global Current** Heatmap.

5.8.1.23 Project Changed

This dashboard uses the project Heatmap to generate a local Heatmap for the node you are displaying on screen. In all other senses, it is the same as the **Global Changed** Heatmap.

The same fields are required as the **Global Current** Heatmap.

5.8.1.24 Project Unchanged

This dashboard uses the project Heatmap to generate a local Heatmap for the node you are displaying on screen. In all other senses, it is the same as the **Global Unchanged** Heatmap.

The same fields are required as the **Global Current** Heatmap.

5.8.1.25 PID (Quantitative)

This dashboard displays quantitative values (options include Mean, Likely, Max) for Cost or Time impacts against their probability.

There are 2 selectable options for the output, either by Velocity or by Proximity.

Velocity conveys the rate at which a risk can impact an organisation.

Where Triangle indicates highest velocity, Square = next highest, Circle = other.

Icon sizing is according to the heat map score.

Each data point is coloured according to their qualitative values as converted from quantitative assessments. That is their Heat map High, Medium, Low, or corresponding values.

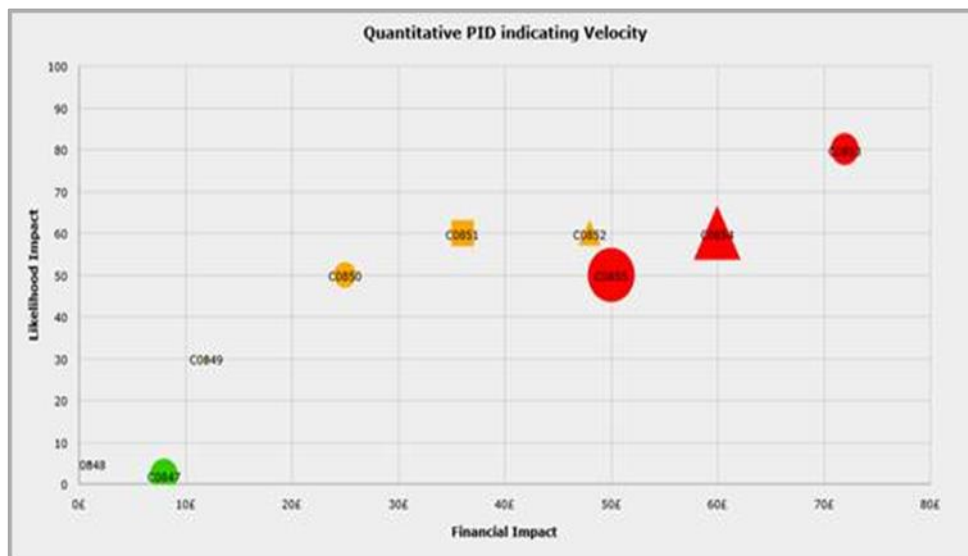


Figure 141 – The **PID (Quantitative)** report - Velocity

Proximity provides an indication of the closest risks in days. Where Triangular implies Imminent, Square < N days, Circle = other ("Imminent", "< N days" are configurable).

A downward triangle indicates the risk has expired. Icon sizing is also based on the proximity.

Each data point is coloured according to their qualitative values as converted from quantitative assessments. That is their Heat map High, Medium, Low, or equivalent values.

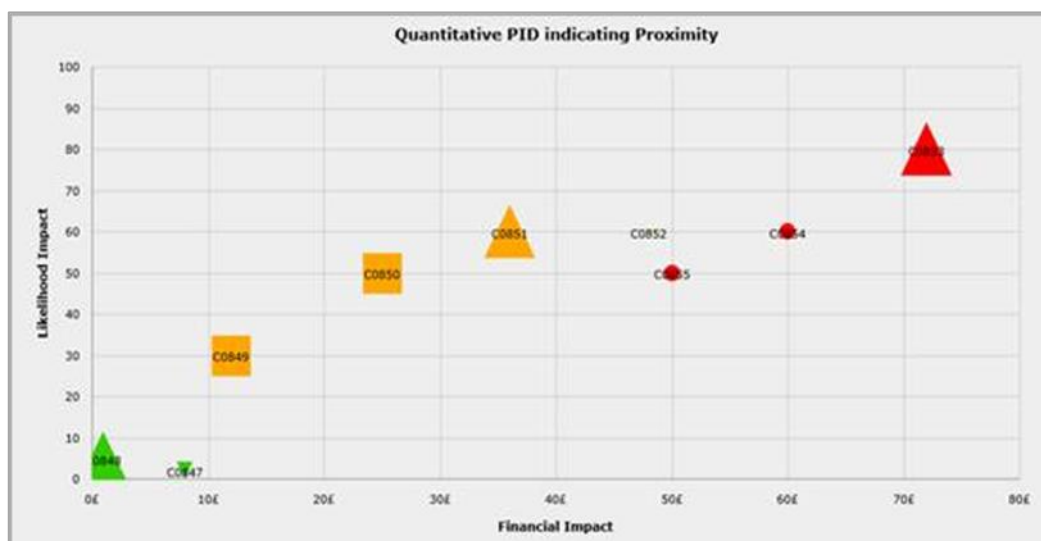


Figure 142 – The **PID (Quantitative)** report - Proximity

5.8.1.26 Risks/Opportunities

This dashboard displays the risks owned by yourself or another with the greatest proximity or financial impact.

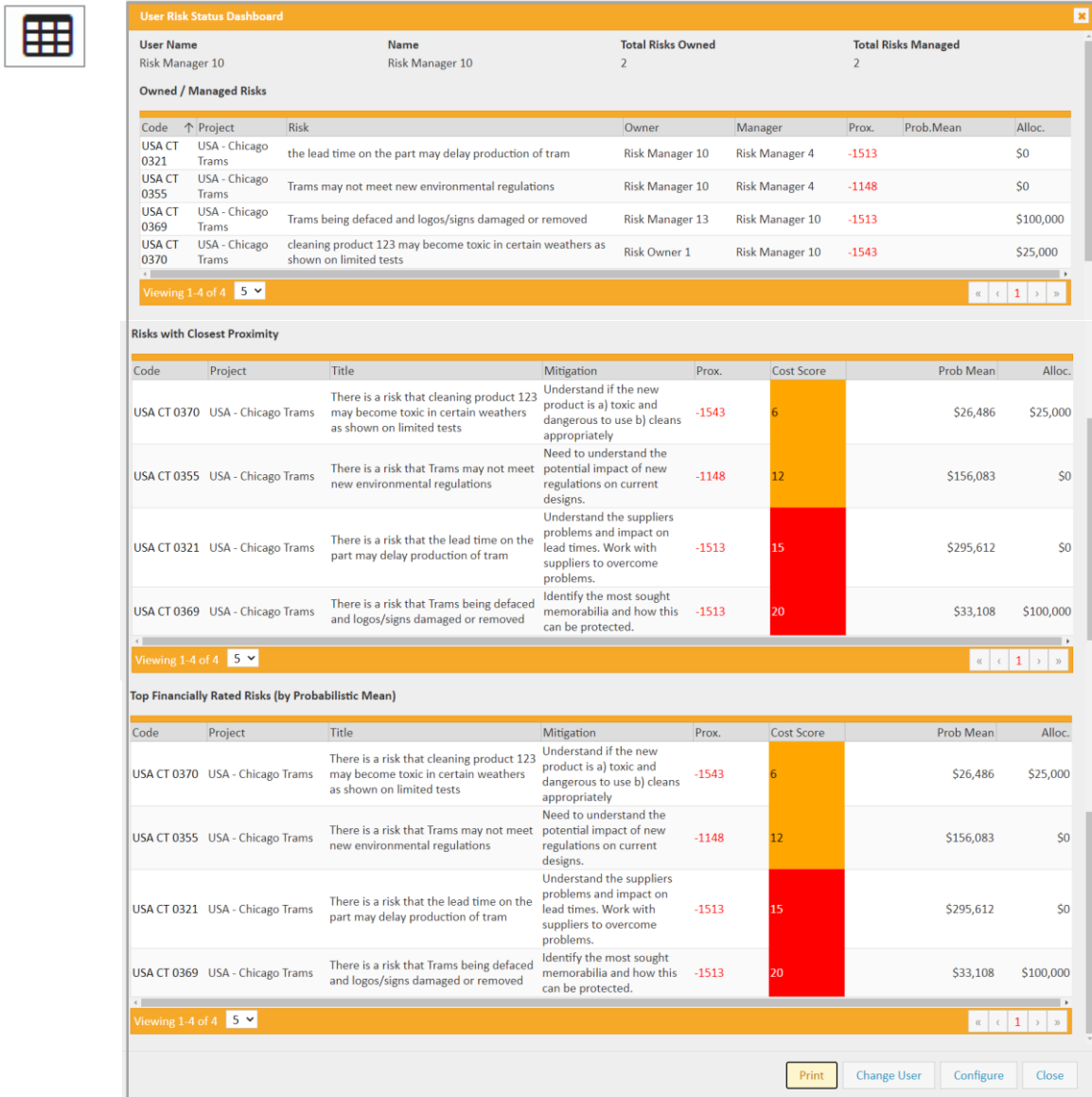


Figure 143 – The **Risks/Opportunities** button and report

In the above dashboard Helen Mirren manages 14 risks and is the risk owner for 8 risks and a list of the individual risks is shown directly underneath.

The section **Risks with Closest Proximity** uses the quantitative proximity of the Start and Finish date of each risk to indicate when the risks could materialise.

The section **Top Financially Rated Risks (by Probabilistic Mean)** organises Helen's risks into risks with the highest current probability mean.

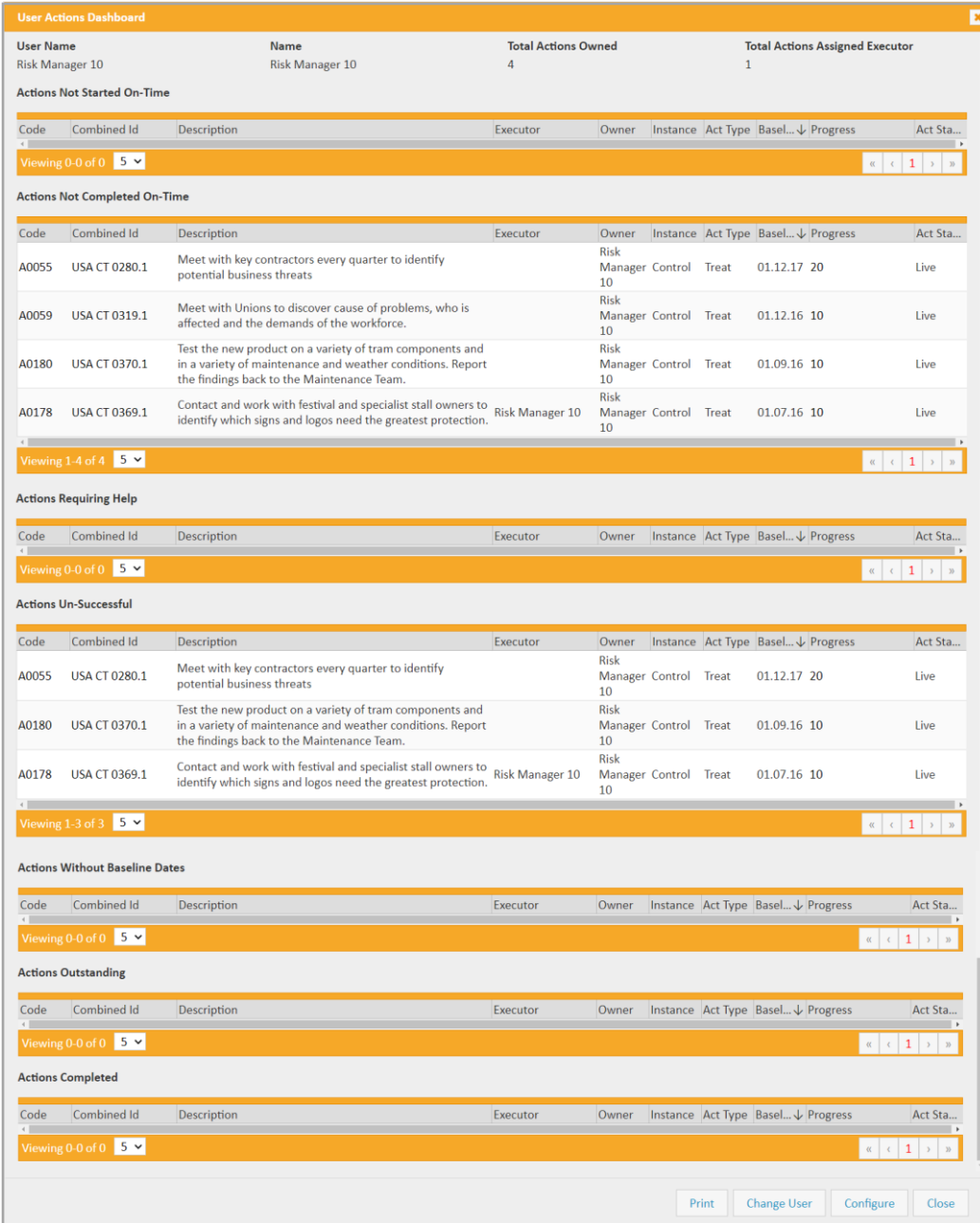
At the bottom you can view the risks of someone else by selecting **Change User**.

Note: You will only be able to view the risks from other risk owners within the node(s) you have access to. Although you may be select other people's names, you will not be able to see their risks.

Fields required for this report	Where to locate the fields
User Name	Administration / People / User ID
Name	Administration / People / Name
Risk Name	Edit / Definition / Name
Risk Owner	Edit / Responsibility / Owner
Risk Manager	Edit / Responsibility / Manager
Risk Impacts	Edit / Qualitative / Pre-Mitigated / Prob Edit / Qualitative / Pre-Mitigated / Cost, Time, any Impact Edit / Qualitative / Current / Prob Edit / Qualitative / Current / Cost, Time, any Impact Edit / Qualitative / Target / Prob Edit / Qualitative / Target / Cost, Time, any Impact
Proximity	Edit / Position & Timeline / Start Date
Allocation	Edit / Allocation / Manual

5.8.1.27 Actions

This dashboard shows the actions owned by yourself or another person.



User Actions Dashboard

User Name: Risk Manager 10 Name: Risk Manager 10 Total Actions Owned: 4 Total Actions Assigned Executor: 1

Actions Not Started On-Time

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0 5 1									

Actions Not Completed On-Time

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
A0055	USA CT 0280.1	Meet with key contractors every quarter to identify potential business threats		Risk Manager 10	Control	Treat	01.12.17	20	Live
A0059	USA CT 0319.1	Meet with Unions to discover cause of problems, who is affected and the demands of the workforce.		Risk Manager 10	Control	Treat	01.12.16	10	Live
A0180	USA CT 0370.1	Test the new product on a variety of tram components and in a variety of maintenance and weather conditions. Report the findings back to the Maintenance Team.		Risk Manager 10	Control	Treat	01.09.16	10	Live
A0178	USA CT 0369.1	Contact and work with festival and specialist stall owners to identify which signs and logos need the greatest protection.	Risk Manager 10	Risk Manager 10	Control	Treat	01.07.16	10	Live
Viewing 1-4 of 4 5 1									

Actions Requiring Help

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0 5 1									

Actions Un-Successful

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
A0055	USA CT 0280.1	Meet with key contractors every quarter to identify potential business threats		Risk Manager 10	Control	Treat	01.12.17	20	Live
A0180	USA CT 0370.1	Test the new product on a variety of tram components and in a variety of maintenance and weather conditions. Report the findings back to the Maintenance Team.		Risk Manager 10	Control	Treat	01.09.16	10	Live
A0178	USA CT 0369.1	Contact and work with festival and specialist stall owners to identify which signs and logos need the greatest protection.	Risk Manager 10	Risk Manager 10	Control	Treat	01.07.16	10	Live
Viewing 1-3 of 3 5 1									

Actions Without Baseline Dates

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0 5 1									

Actions Outstanding

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0 5 1									

Actions Completed

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0 5 1									

Print Change User Configure Close

Figure 144 – The **Actions** report

In the example above, Helen is the risk owner for 7 actions. A series of status is displayed underneath.

Select the **Combined Id** reference to edit an action. The panel will remain on screen but the risk containing that action will appear on the main screen behind. Close the panel to edit the risk on the main screen.

Note: You will only be able to view the actions from other action owners within the node(s) you have access to. Although you may be select other people's names, you will not be able to see their actions.

Fields required for this report**Where to locate the fields****User Name**

Administration / People / User ID

Name

Administration / People / Name

Action Description

Edit / Treatment / Select an action / Description

Action Owner

Edit / Treatment / Select an action / Owner

Action Executor

Edit / Treatment / Select an action / Executor

Instance

Edit / Treatment / Select an action / Action Type

Action Type

Edit / Treatment / Select an action / Action Treatment Type

Baseline

Edit / Treatment / Select an action / Finish Date (Baseline)

Progress

Edit / Treatment / Select an action / Implemented

Action Status

Edit / Treatment / Select an action / Status

5.8.1.28 Value/Exposure

This report shows the amount of risk each project is managing.

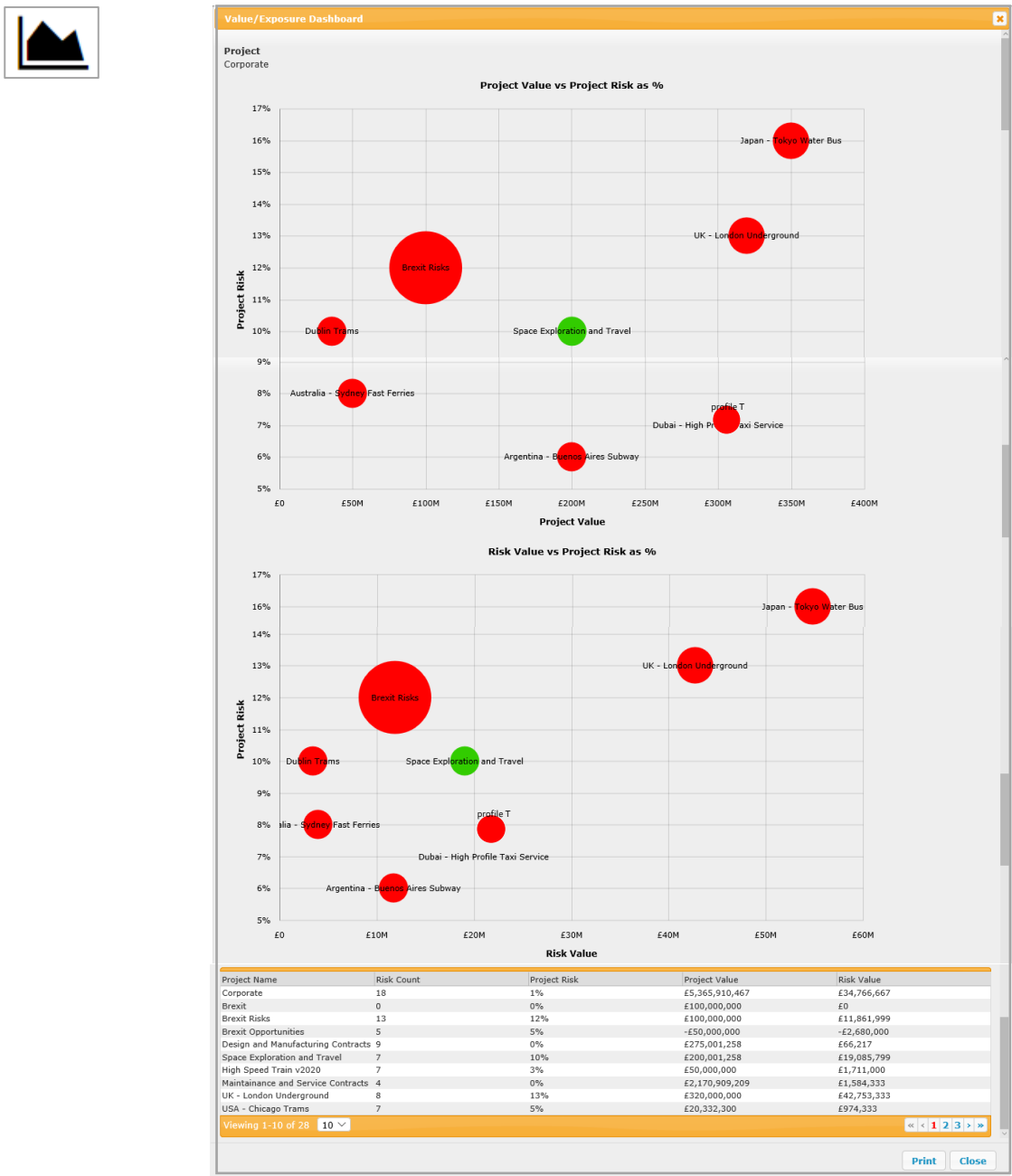


Figure 145 – The Value/Exposure button and report

The report contains 3 sections:

Project Value vs Project Risk as %	Shows the project budget, how many risks the project contains and the percentage of risk (using the Quantitative Current Cost Most Likely impact divided by the project budget).
Risk Value vs Project Risk as %	Shows the risk budget, how many risks the project has and the percentage of risk (using the Current Cost Most Likely impact divided by the project budget).
Risk Value	<p>Project Risk shows how much percentage of risk each project carries.</p> <p>Project Value is the Project Budget.</p> <p>Risk Value shows the summed current cost impacts of the risk within each project.</p>

If you rest your mouse cursor on any of the circles, a short summary will appear.

If a project has less than 5% risk, it will not show on the graph. If a project has more than 5% risk but very few risks, the graph will show the name of the project without a circle.

If a project is critical to the business, it will be displayed as a red circle. If a project is not critically, it will be displayed as a green circle. If the rating assessment has not been conducted on a project, the circle will be grey.

The size of the circle relates to the number of risks within a project. The projects with the highest number of risks (in comparison with the other projects on the graph) will attain large circles and the projects with relatively low number of risks will have the smaller circles.

Fields required for this report	Where to locate the fields
Project Value for each project	Edit Node Data / Description
Risk Budget for each project	Edit Node Data / Description
Project Rating (is the project critical or not to the business)	Edit Node Data / Assessment / Rating
Quantitative Current Cost Most Likely impact for each risk within the project	Edit, Quantitative

5.8.1.29 Radial by Quantitative Probability

The **Radial by Quantitative Probability** is very similar to the previous dashboards. The bullseye circles are split by the quantitative probability of the risks and then the segments you choose from the **Segments List**. Here is an example:

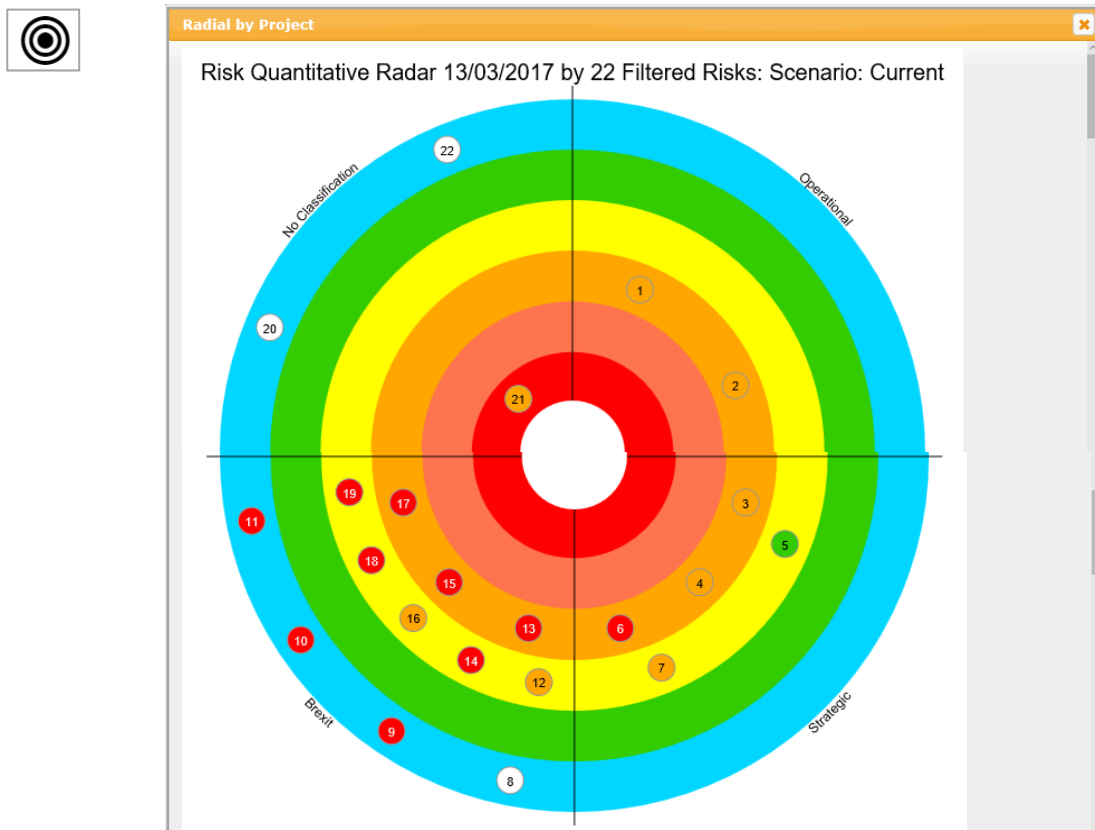


Figure 146 – The **Radial by Quantitative Probability** with **Classification** segments

In the above dashboard, the inner circles represent each risk's quantitative probability:

- Zone 1: >80% to 100%
- Zone 2: >60% to 80%
- Zone 3: >40% to 60%
- Zone 4: >20% to 40%
- Zone 5: >0% to 20%
- Zone 6: 0 / Not scored

The segments represent the classifications.

The object colours relate the Heatmap colour of the risks. White objects mean the risk has not been assigned the search information. Diamond shaped risks indicate more risks to view.

Fields required for this dashboard	Where to locate the fields
Probability	Edit / Quantitative / Quantitative Current Probability
A risks quantitative proximity	Edit / Position & Timeline / Start Date
A risks classification	Edit / Classifications / Classification
Risks severity	Edit / Qualitative / Treat Level
Risk criticality	Obsolete option. Please do not use.
Project Phases	Edit Node Data / Phases and Edit / Position & Timeline / Phase Type
Risks maturity	Edit / Review Record / Maturity
The quality of the information the risk is based on	Edit / Review Record / Quality
The category which could be impacted by a risk	Edit / Classifications / Category
Risks status	Edit / Review Record / Status
Risk state	Edit / Review Record / State
Risks exposure level	Edit / Qualitative / Exposure
Risk calculation method	Edit / Qualitative / Type
Owning Organisation	Edit / Responsibility / Owning Org
Objectives	Edit / Linked Objectives

5.8.1.30 Radial Project

This dashboard uses a bullseye chart to show the critical and non-critical projects within a node.

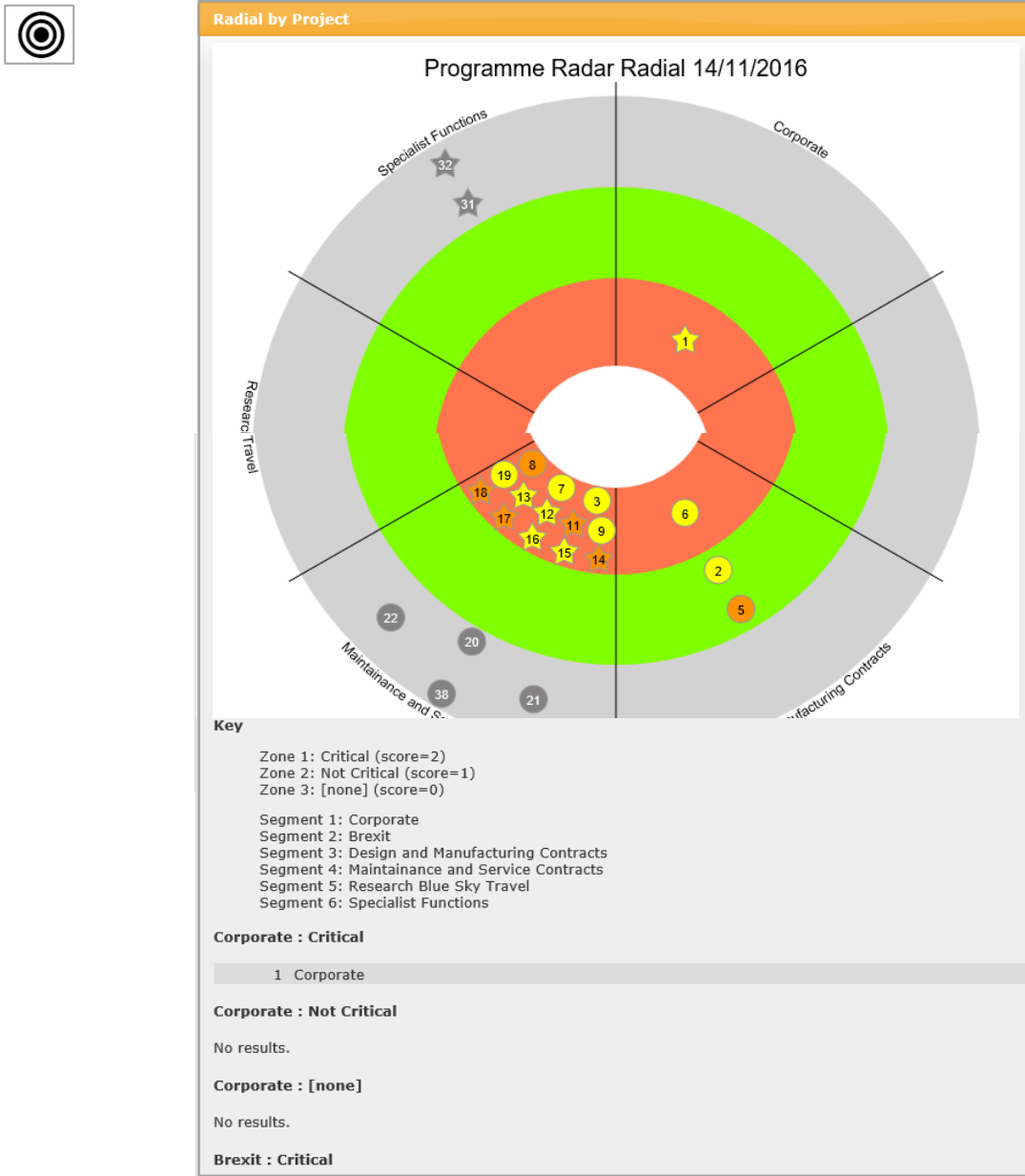


Figure 147 – The Radial by Project button and report

In the example above, Corporate is the parent node which has 5 child nodes (i.e., Brexit, Design and Manufacturing Contracts, Maintenance and Service Contracts, Research Blue Sky Travel and Specialist Functions). Each of the child nodes has a segment of the bullseye. Within each segment shows further child nodes. In the example above the Brexit segment shows number 63, 35 and 64. 63 represents a child node of Brexit that has been assessed as critical to the business. 35 represents a child node that is not considered critical to the business and 64 is a child node of Brexit which has not been assessed. The inner red circle relates to projects which are considered critical, the middle green circle represents projects which are not considered critical, and the outer grey circle means these projects have not yet been assessed.

Each child project is represented by a circle or a star. The circle represents projects, and the star represents programmes.

If a project is represented by a red object, the project has been assessed as having critical weaknesses. An orange object represents serious weaknesses, a yellow object represents minor weaknesses, and a green object means the project is considered on target.

Fields required for this dashboard	Where to locate the fields
Project Rating (is the project critical or not to the business)	Edit Node Data / Assessment / Rating
Project Score	Edit Node Data / Assessment / Score
Project Type	Edit Node Data / Assessment / Node Type

5.8.2 Reports

Risk data, which either spans the risk portfolio or belongs to an individual risk, can be downloaded to Excel or JSON. However, only users with download access can use this feature. The reports available will be different for each organisation, however if no specific reports have been defined, then the default reports will be available. Each of these downloads are configurable.

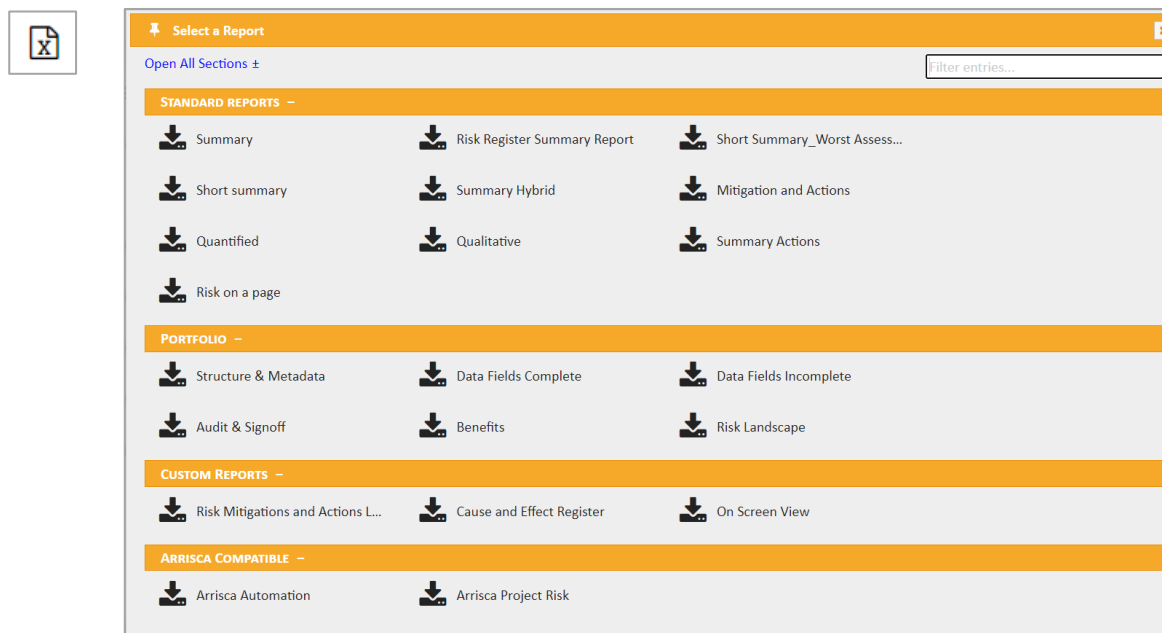


Figure 148 - The **Reports** button and panel

The reports listed below are the default reports.

Risk Reports	Summary	This report downloads risk data such as: class, category, probability, qualitative impact, insurance, mitigation, start and finish date.
	Risk Register Summary	Downloads risk data such as: cause, consequence, category, mitigation strategy and last review.
	Short Summary with worst assessment	Downloads risk data such as: probability cost impact, worst impact and risk scores.
	Short Summary	Downloads risk data such as: probability, cost impact and score.
	Short Summary Hybrid	Downloads risk data such as: category, start and finish dates, probability, minimum, most likely and maximum cost impacts, actions, action progress and last review.
	Mitigation and Actions	Downloads risk data such as: category, start and finish dates, mitigation and actions, completion, current progress and review dates.

	Quantified	Downloads risk data such as: classification, category, start and finish dates, probability, minimum, most likely and maximum quantified cost impacts, score, proximity, last review, allocation and probability mean.
	Qualitative	Downloads risk data such as: classification, category, start and finish dates, qualitative probability, all qualitative impacts and scores and last review.
	Summary Actions	Downloads risk data such as: cause, consequence, category, qualitative probability, impacts and scores, actions and forecast completion dates.
	Risk on a Page	Downloads individual risk information on a single excel sheet, with each risk on a separate tab. Although configurable, this form of output will require riskHive support to produce.
Portfolio	Structure & Metadata	Downloads project data such as: project titles, ratings and scores, datasets used, project and risk budgets, start and finish dates of projects.
	Data Fields Complete	Downloads the same data as Structure & Metadata but also includes a section showing the level of completion on key fields.
	Data Fields Incomplete	As above but this time showing the level of incompleteness of key fields.
	Audit & Signoff	Downloads which projects have been assessed and the assessment details.
	Benefits	Downloads the risks relating to any benefits of the project.
	Risk Landscape	Downloads project details such as aggregated and individual node budgets, minimum, expected and maximum cost figures, aggregated pmean for each node, risks as a percentage of the project budgets.
Arrisca Compatible	Arrisca Automation	riskHive also produces the software Arrisca which is used specifically for analysing quantitative risk data. This report will generate an excel spreadsheet containing the Cost quantitative values ready for importing into Arrisca for analysis.

Arrisca Project Risk

This report will generate an excel spreadsheet containing the Time quantitative values ready for importing into Arrisca for analysis.

Custom

Your administrator can create reports to meet your exact requirements and they will be saved in this section.

The **Reports** panel provides functionality for easily exporting Microsoft Excel Risk Registers into the ERM system.

Select any of the reports and a **configure report** panel will appear. This panel may be slightly different depending on the report selected:

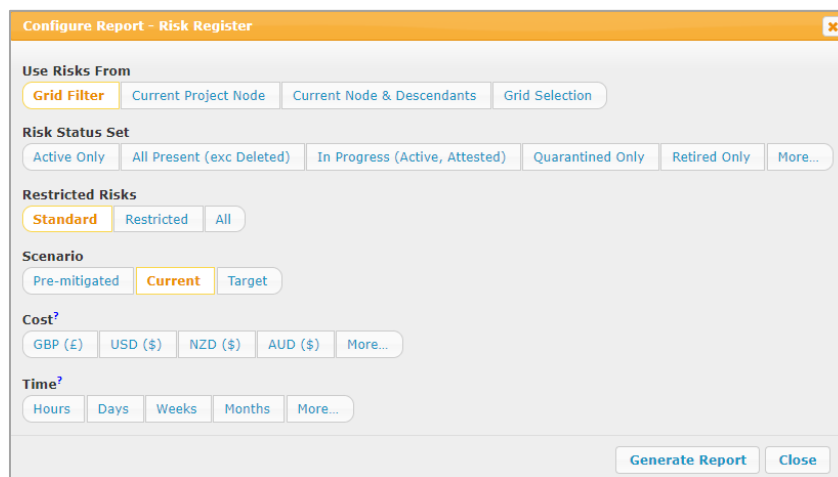


Figure 149 – The **Reports** panel

The **Use Risk From** section asks if you wish to download data from the **Grid Filter** (i.e. what is currently showing on your grid), **Current Project Node** (i.e. everything in the node you are in at the time of running the report), **Current Node and Descendants** (i.e. everything in the node you are in and below) or the **Grid selection** (i.e. if you have selected specific risks showing in your Grid).

You can select the risk status from the options in **Risk Status Set**. Note: This is the system status only and not the ERM states.

Restricted Risks will only be available to you if you have permissions to see restricted risks.

The **Scenario** section asks if you wish to see data from **Pre-mitigated**, **Current** or **Target** assessments.

You can choose to see currencies in the local rate of the project or a choice of other rates through the **Cost** option.

As with the **Cost**, you can choose to see the report displaying the timing of the project or in different timings of your choice through the **Time** option.

Once you have made your selections, select **Generate Report** and the data will be exported to Excel.

Depending on the report you selected, the spreadsheet will something like the below:

Report ID:

1082.001.000

Project Name:

UK - London Underground

Export Date:

26.09.19

Project Manager:

Project Sponsor:

Record Count:

10

Risk Register Summary Report

Class	Node	Risk Status	Risk Name	Category	Likelihood	Impact	Cumulative Score	Insurance	Risk Owner	Mitigation	Mitigation Owner	Start Date	Finish Date	Last Review	Legacy
Operational	UK - London Underground	Active	There is a risk that Severe weather damage sustained by tracks over 4 months because Electric boxes and tracks damaged due to lightning, frost and extremely low temperatures which will result in Trains may need to be adapted for future severe weather.	Safety		4	4	16	Risk Manager 50	Develop new processes or technology to safe guard equipment.	Risk Manager 6	13.07.16	01.04.17	01.01.16	336
Operational	UK - London Underground	Active	There is a risk that Terrorist threats and actions may impact smooth running of track because The country is on a higher alert of terrorist threats to public transport which will result in Trains delayed.	Security		3	4	12	Risk Manager 2	Ensure maintenance crews are updated and prepared for dealing with normal maintenance but also emergency equipment.	Risk Manager 5	01.08.15	01.11.16	11.03.16	

Figure 150 – Downloaded **Risk Register Summary Report**

All reports in the **Portfolio** section download immediately once selected and need no configuration to run.

5.8.2.1 Registers

The **Registers** panel provides functionality for easily exporting and importing Microsoft Excel Risk Registers into the ERM system. The panel contains the standard **Risk Register** which can be downloaded and used as a template. Organisations can create their own registers for their specific usage. If the field names remain the same, registers can be uploaded without difficulty.

Individual risk data or risk data spanning the portfolio can be downloaded into Excel, altered, and uploaded back into ERM. Only users with export and import access can use these features.



Figure 151 - The **Registers** buttons

To download a Register, click on the required register and a **configure report** panel will appear. This panel may be slightly different depending on the report selected:

Configure Report - Risk Register

Use Risks From

Grid Filter Current Project Node Current Node & Descendants Grid Selection

Risk Status Set

Active Only All Present (exc Deleted) In Progress (Active, Attested) Quarantined Only Retired Only More...

Restricted Risks

Standard Restricted All

Scenario

Pre-mitigated Current Target

Cost?

GBP (£) USD (\$) NZD (\$) AUD (\$) More...

Time?

Hours Days Weeks Months More...

Generate Report Close

Figure 152 – The **Register** panel

The report will download into excel and will usually appear as a download on the bottom left-hand side of your screen.

If you decide to amend the data within the download and wish to re-import the register, select the equivalent register in the **Standard Imports** section. An import screen will appear:

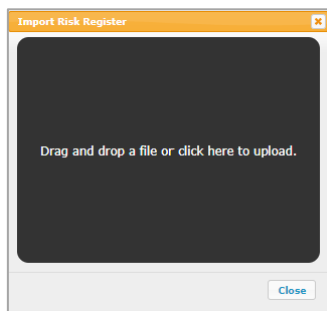


Figure 153 – The **Import** panel

Drag and drop your excel file on the black part of the screen to upload your data into the system.

5.8.2.2 System Node Data Export and Import

You can amend your Node Data information from the Register panel.

5.8.2.3 Schedule Output

This panel allows users with the correct permission to schedule reports on a regular basis. It enables you to email a particular person a copy of a report or register on a set time and date and repeat the email if necessary.

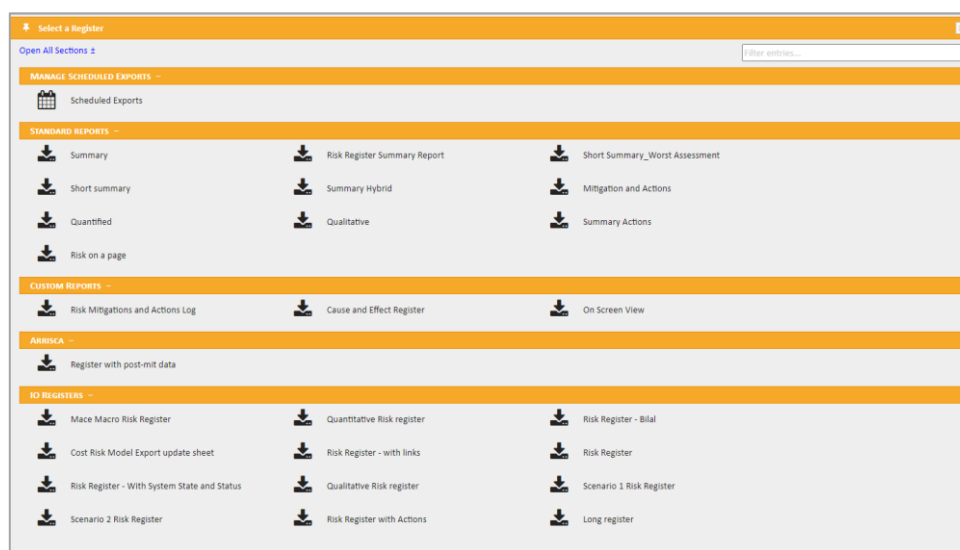


Figure 154 – The **Schedule Output** button and panel

Manage Schedule Exports

Scheduled Exports

Provides a list of current scheduled exports.

Standard Reports

Risk Reports which can be emailed to a specific person, at a specific time and date and repeated eg weekly, monthly.

Custom Reports

Custom Reports which can be emailed to a specific person, at a specific time and date and repeated eg weekly, monthly.

Standard Registers

Standard Registers which can be emailed to a specific person, at a specific time and date and repeated eg weekly, monthly.

If you select a report or register the following panel will appear, although depending on your configuration the last two fields could look different:

The screenshot shows a 'Schedule Report - Summary' dialog box. It has a title bar with a close button. The fields are arranged vertically: 'Repeat' (dropdown menu showing 'Weekly'), 'Start Time' (text input showing '23:30'), 'Start Date' (text input showing '06.03.18'), 'Email To' (dropdown menu), 'Use Current Advanced Search?' (dropdown menu showing 'Yes'), 'Prior Reporting Period' (dropdown menu showing 'Months'), 'Updated within Last (select period)' (text input showing '1'), 'Created within Last (select period)' (text input showing '1'), 'Use Risks From' (dropdown menu showing 'Current Project Node'), 'Scenario' (dropdown menu showing 'Pre-mitigated'), 'Financial*' (dropdown menu showing 'local rate'), and 'Schedule*' (dropdown menu showing 'local rate'). At the bottom right are two buttons: 'Schedule Report' and 'Close'.

Figure 155 – The **Schedule Report Summary** panel

Once the **Start Time**, **Start Date** and **Email To** have been set up, you can repeat emailing the report or register hours, days, weeks, month or years later.

The **Start Time** is asking the exact hour and minute you wish to email the report or register.

The **Start Date** is asking the exact date you wish to begin the report. It will repeat according to the selected **Repeat** period.

The **Email To** is asking who you wish the report or register to be sent to. You can schedule a report to be emailed to specific users and/or groups of people.

If you have previously used the **Advanced Search** to filter your risks on the main screen, the **Use Current Advanced Search?** option will save your **Advanced Search** filter options and use this again if you were to repeat emailing the report or register to someone at a later time/date.

To reduce the content of the output to only those risks that have been created and/or updated during a given time span, use the **Prior Reporting Period**. Here you can specify the report should contain only those risks that are new or have changed during the N Days/Weeks/Months prior to generation of the report.

Use Risks From tries to identify where the risks are current stored (either in the current node or node and descendants), risks that have been filtered or highlighted on the main screen.

You can select from pre-mitigated, current or target risk status using the **Scenario** option.


The **Financial** option is asking what currently you wish the report or register to display.

The **Schedule** option is asking what rate you wish the report or register to display.

By selecting **Schedule** report, you are setting up the time and date when the report will be emailed. This will also be recorded in the **Schedule Exports** list in the previous panel.

5.8.2.4 My Risks

My Risks enables you to see the risks which you have been identified as the risk owner or managing the risk.



User Risk Status Dashboard

User Name	Name	Total Risks Owned	Total Risks Managed
Risk Manager 10	Risk Manager 10	3	2

Owned / Managed Risks

Code	Project	Risk	Owner	Manager	Prox.	Prob. Mean	Alloc.
M&S Contracts 0320	Maintenance and Service Contracts	programmes may face additional tax costs	Risk Manager 10	Risk Manager 11	-1574		£26,089
USA CT 0321	USA - Chicago Trams	the lead time on the part may delay production of tram	Risk Manager 10	Risk Manager 4	-1513		\$0
USA CT 0355	USA - Chicago Trams	Trams may not meet new environmental regulations	Risk Manager 10	Risk Manager 4	-1148		\$0
USA CT 0369	USA - Chicago Trams	Trams being defaced and logos/signs damaged or removed	Risk Manager 13	Risk Manager 10	-1513		\$100,000
USA CT 0370	USA - Chicago Trams	cleaning product 123 may become toxic in certain weathers as shown on limited tests	Risk Owner 1	Risk Manager 10	-1543		\$25,000

Viewing 1-5 of 5

Risks with Closest Proximity

Code	Project	Title	Mitigation	Prox.	Cost Score	Prob Mean	Alloc.
USA CT 0370	USA - Chicago Trams	There is a risk that cleaning product 123 may become toxic in certain weathers as shown on limited tests	Understand if the new product is a) toxic and dangerous to use b) cleans appropriately	-1543	6	\$26,486	\$25,000
USA CT 0355	USA - Chicago Trams	There is a risk that Trams may not meet new environmental regulations	Need to understand the potential impact of new regulations on current designs.	-1148	12	\$156,083	\$0
USA CT 0321	USA - Chicago Trams	There is a risk that the lead time on the part may delay production of tram	Understand the suppliers problems and impact on lead times. Work with suppliers to overcome problems.	-1513	15	\$295,612	\$0
M&S Contracts 0320	Maintenance and Service Contracts	There is a risk that programmes may face additional tax costs	Understand the tax implications and deadlines. How can we adapt the project to limit the tax?	-1574		£0	£26,089
USA CT 0369	USA - Chicago Trams	There is a risk that Trams being defaced and logos/signs damaged or removed	Identify the most sought memorabilia and how this can be protected.	-1513	20	\$33,108	\$100,000

Viewing 1-5 of 5

Top Financially Rated Risks (by Probabilistic Mean)

Code	Project	Title	Mitigation	Prox.	Cost Score	Prob Mean	Alloc.
USA CT 0370	USA - Chicago Trams	There is a risk that cleaning product 123 may become toxic in certain weathers as shown on limited tests	Understand if the new product is a) toxic and dangerous to use b) cleans appropriately	-1543	6	\$26,486	\$25,000
USA CT 0355	USA - Chicago Trams	There is a risk that Trams may not meet new environmental regulations	Need to understand the potential impact of new regulations on current designs.	-1148	12	\$156,083	\$0
USA CT 0321	USA - Chicago Trams	There is a risk that the lead time on the part may delay production of tram	Understand the suppliers problems and impact on lead times. Work with suppliers to overcome problems.	-1513	15	\$295,612	\$0
USA CT 0369	USA - Chicago Trams	There is a risk that Trams being defaced and logos/signs damaged or removed	Identify the most sought memorabilia and how this can be protected.	-1513	20	\$33,108	\$100,000

Viewing 1-4 of 4

Print
Change User
Configure
Close

Figure 156 – The **My Risks** button and report

In the above report Risk Manager 10 manages 2 risks and is the risk owner for 3 risks and a list of the individual risks is shown directly underneath.

The section **Risks with Closest Proximity** uses the quantitative proximity of the Start and Finish date of each risk to indicate when the risks could materialise.

The section ***Top Financially Rated Risks (by Probabilistic Mean)*** organises Risk Manager 10's risks into risks with the highest current probability mean.


At the bottom you can view the risks of someone else by selecting ***Change User***.

You can edit a specific risk, by clicking on the **Code Reference**.

NOTE: You will only be able to view the risks from other risk owners within the node(s) you have access to.

5.8.2.5 My Actions

This report shows the actions owned by yourself or another person. As with the previous report, there is an option to state what level of confidentiality or security you wish to place on printed reports.



User Actions Dashboard

User Name
Risk Manager 10

Name
Risk Manager 10

Total Actions Owned
4

Total Actions Assigned Executor
1

Actions Not Started On-Time

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0									

Actions Not Completed On-Time

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
A0055	USA CT 0280.1	Meet with key contractors every quarter to identify potential business threats		Risk Manager 10	Control	Treat	01.12.17	20	Live
A0059	USA CT 0319.1	Meet with Unions to discover cause of problems, who is affected and the demands of the workforce.		Risk Manager 10	Control	Treat	01.12.16	10	Live
A0180	USA CT 0370.1	Test the new product on a variety of tram components and in a variety of maintenance and weather conditions. Report the findings back to the Maintenance Team.		Risk Manager 10	Control	Treat	01.09.16	10	Live
A0178	USA CT 0369.1	Contact and work with festival and specialist stall owners to identify which signs and logos need the greatest protection.	Risk Manager 10	Risk Manager 10	Control	Treat	01.07.16	10	Live

Viewing 1-4 of 4

Actions Requiring Help

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0									

Actions Un-Successful

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
A0055	USA CT 0280.1	Meet with key contractors every quarter to identify potential business threats		Risk Manager 10	Control	Treat	01.12.17	20	Live
A0180	USA CT 0370.1	Test the new product on a variety of tram components and in a variety of maintenance and weather conditions. Report the findings back to the Maintenance Team.		Risk Manager 10	Control	Treat	01.09.16	10	Live
A0178	USA CT 0369.1	Contact and work with festival and specialist stall owners to identify which signs and logos need the greatest protection.	Risk Manager 10	Risk Manager 10	Control	Treat	01.07.16	10	Live

Viewing 1-3 of 3

Actions Without Baseline Dates

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0									

Actions Outstanding

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0									

Actions Completed

Code	Combined Id	Description	Executor	Owner	Instance	Act Type	Basel...	Progress	Act Sta...
Viewing 0-0 of 0									

PrintChange UserConfigureClose

Figure 157 – The **My Actions** button and panel

In the example above, Helen is the risk owner for 7 risks. A series of status is displayed underneath.

Select the **Combined ID** reference to edit an action.

5.9 Tools

The **Tools** panel gives you tools to attach documents, view key words across risks and projects, view geographical locations of projects, create bowties and groups, Monte Carlo simulations on costs and schedule.

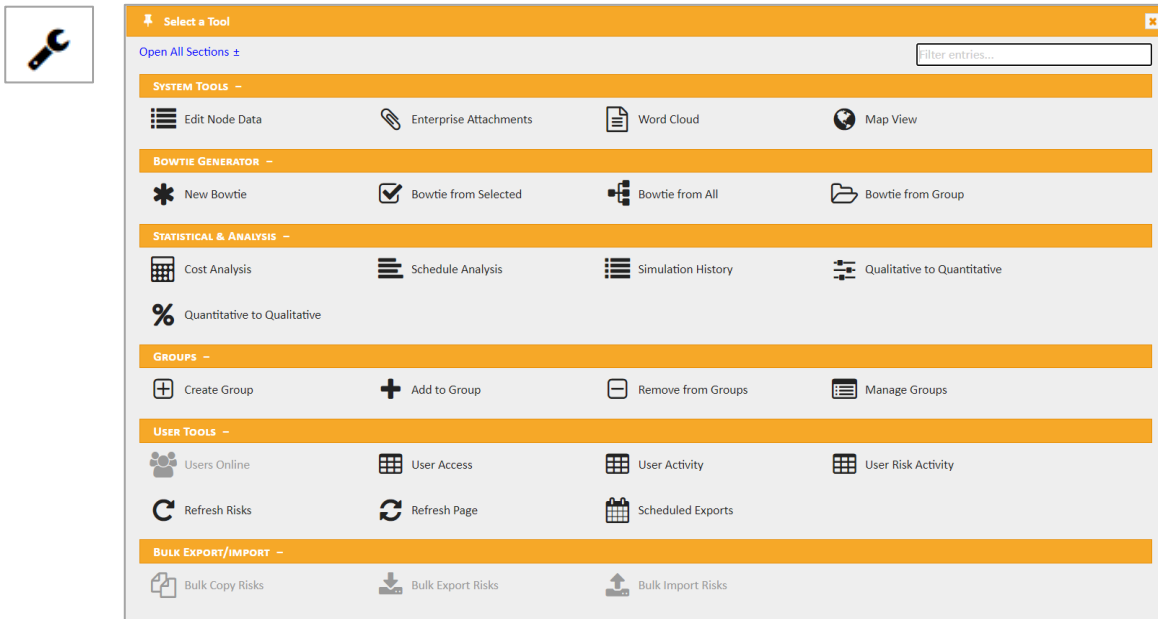


Figure 158 – The **Tool** button and panel

System Tools



Edit Node Data

Refer to 5.1.5 – this is permissions based.



Enterprise Attachments

Documents and hyperlinks can be added to the root projects.



Word Cloud

The Word Cloud searches through the risks to find common words or phrases and displays them in a simple diagram.



Map View

Shows the geographical location of projects.

Bowtie Generator



New Bowtie

Create a new risk using the bowtie.



Bowtie from Selected

Display the bowtie from the risk or risks selected.



Bowtie from All

Display the bowtie from all the risks on screen.



Bowtie from Group














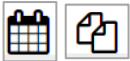
Display the bowtie of a Group.

Statistical & Analysis



Cost Analysis

Runs the Monte Carlo simulation using the risks displayed on screen.

Groups		Schedule Analysis	Runs the Monte Carlo schedule analysis.
		Qualitative to Quantitative	Convert qualitative Cost assessment to a quantitative assessment.
		Quantitative to Qualitative	Convert quantitative Cost assessment to a qualitative assessment.
		Create Group	Creates a group.
		Add to Group	Add the current risk(s) to a group.
		Remove from Groups	Remove the current risk(s) from a group.
		Manage Groups	Lists the current groups and enables you to view the risks within each group, remove risks from a group or delete a group.
User Tools		Users Online	Shows which users are currently using or have accessed the system within the last hour but their session has not yet timed out. This option is only available to an administrator.
		User Access	Shows how many times a user has logged into the system and the date of their last log in.
		User Activity	Shows the date and time when a user has logged in or out of the system within a given time frame.
		User Risk Activity	Shows the activities you conducted within a time frame.
		Refresh Risks	There are many occasions where extensive changes are made to a risk. To ensure all changes are showing on the screen, select Refresh Risks .
		Refresh Page	If work has been conducted in the Dataset or Administration pages i.e., custom fields have been added, lists altered, Heatmap colours changed then the main page may need refreshing to display those changes.
		Scheduled Exports, Bulk Exports/Imports	These are only available to an administrator.

5.9.1.1 Enterprise Attachments

Documents and hyperlinks can be added at the project level through the **Enterprise Documents** option.

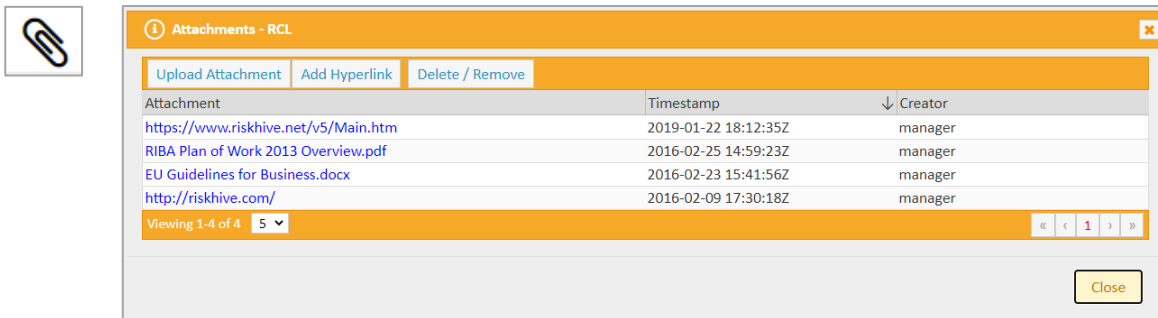


Figure 159 - The **Enterprise Documents** button and panel

As with **Attachments**, to add a document select **Upload Attachment**, to add a hyperlink select **Add Hyperlink** and you also can delete documents and hyperlinks.

5.9.1.2 Word Cloud

Word Cloud conducts an analysis on the text within the **Name**, **Cause** or **Effect** of the risks you have on screen and shows duplicated words or sentences.

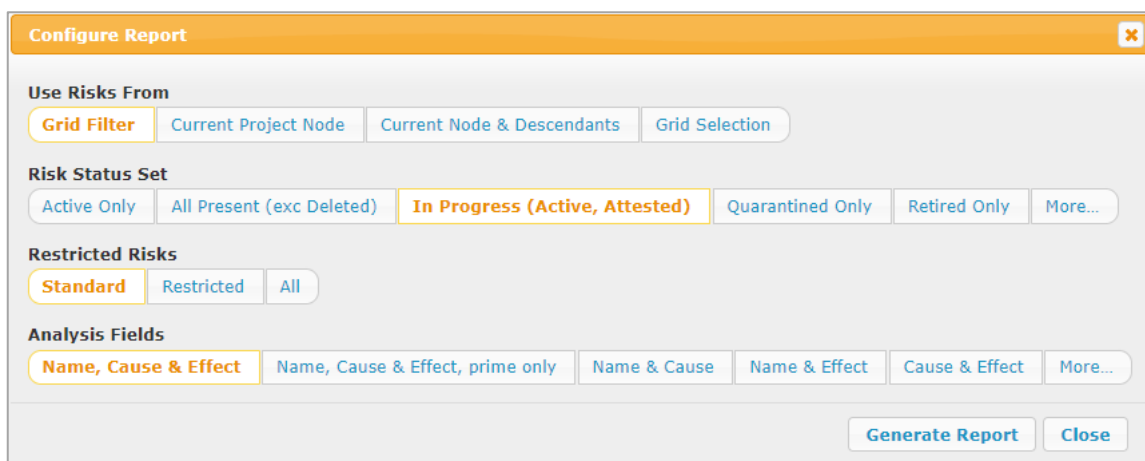


Figure 160 - The **Word Cloud** button and panel



As many words are shown, you may wish to deselect common words which do not contribute i.e., due, will. You can filter the risks further by typing in the **Search** box.

Classification: Internal

The **Word Cloud** acts as a visual interpretation of the key words across the risks. From the example above, it is clear that within a specific project the main concern and opportunity is around damage and delays.

The **Configure** option enables you to tailor the filtering even further.

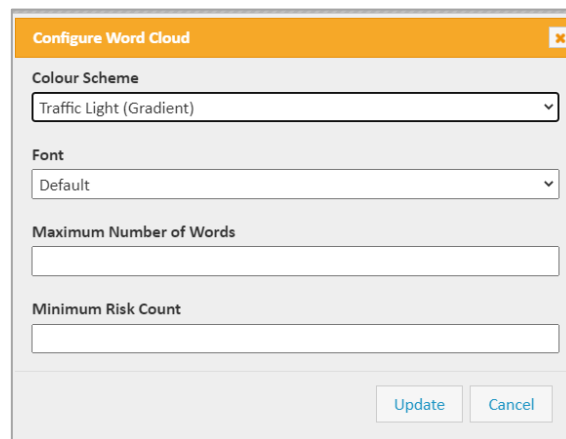


Figure 163 - The **Configure** panel

The **Colour Scheme** enables you to change the colours on the Word Cloud.

The **Font** section enables you to choose a different font.

The **Maximum Number of Words** enables you to cut down how many words you wish to display on the **Word Cloud**.

The **Minimum Risk Count** tells the system to display risks with up to a minimum number of repetitive words within a risk.

By changing the configuration of the example above, we can make the word cloud look something like the below:



Figure 164 - The **Word Cloud** panel reconfigured

5.9.1.3 Map View

The **Map View** provides a geographic view of where the various projects are located by clicking on the various black boxes showing the number of projects in each area.

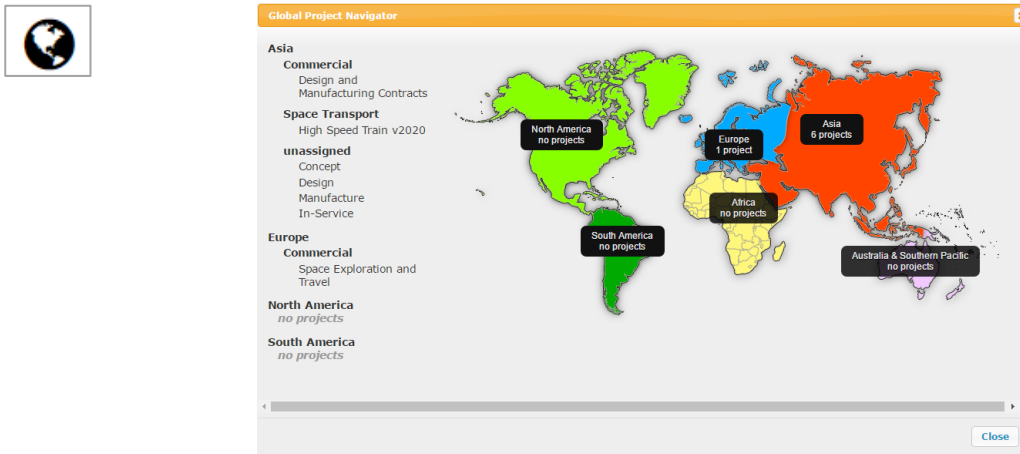


Figure 165 - The **Sign Off** panel

This graphic is for information only. When a location is entered into the **Administration** panel there is a **Region** option to select for each node. By selecting a **Region**, each project will be identified on the **Navigator** map.

5.9.1.4 New Bowtie

Bowtie diagrams are a simple and effective tool for visualising and communicating risk information to employees at all levels. Not only is a Bowtie a very simple way to create a risk but the diagram clearly displays the links between the **assumptions**, potential **causes**, the **controls**, **event** and **consequences** of the risk(s) and **fallback** options.

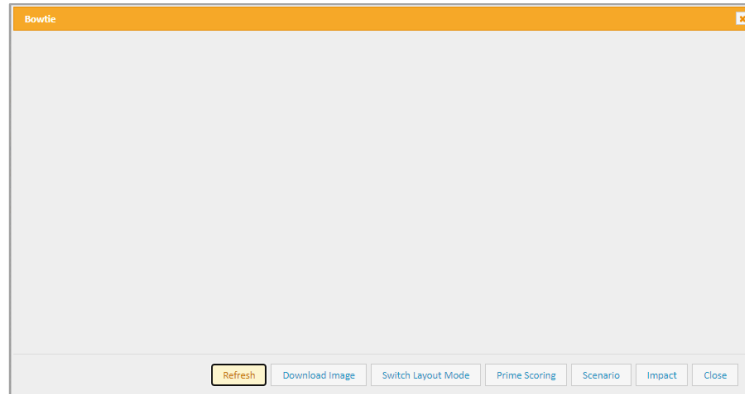


Figure 166 - The **New Bowtie** button panel

Right click anywhere on the screen, select **Create New Risk**.

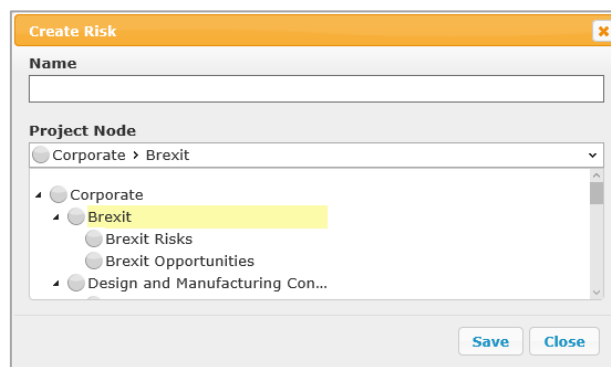


Figure 167 – **Creating a new risk**

Type the name of the risk in the **Name** section. Identify where you wish the risk to be stored in the **Project Node** section. Select **Save**.

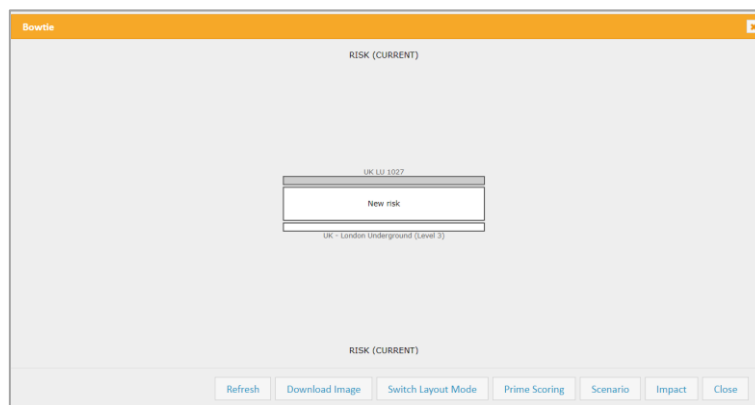


Figure 168 –A new risk in the **Bowtie**

The newly created risk will appear in the centre of the screen.

To add a cause, right click in the Risk box, then select **Add New Cause...**, give the cause a **Name** and a current qualitative **Probability** level and select **Add**. Do the same for the **Effects** and this time add a current qualitative **Impact**. You can add multiple **Causes** and **Effects**.

NOTE: Any assessment impact can be selected for the Prime Effect, however, only Cost can be selected for all other Effects.

Underneath the first **Cause of Risk** and **Risk Effect** you created will be displayed the word **prime** in grey. The Bowtie will list the first **Cause** or **Effect** as the primary concern.

If you are not satisfied with the order of the **Causes** or **Effects**, come out of the bowtie, with the risk selected, select the **Edit** button, and select **Definition**. In the **Cause** or **Effect** section, select the risk you wish to move. Select **Sort** and the following panel will appear:



Figure 169 – The **Sort** panel

Click and drag the **Cause** you wish to move to the correct position within the **Causes** list. Select **Sort**.

Back in the bowtie, to delete a **Cause** or **Effect**, right click in the cause box and select **Delete**.

Note: The changes you make to the risks probability and impacts may affect the colour of the risk box.

Controls, Responses and **Fallbacks** can be added using this method as well. Select the cause box, right click, and then select **Create New Control** and the following panel will appear:

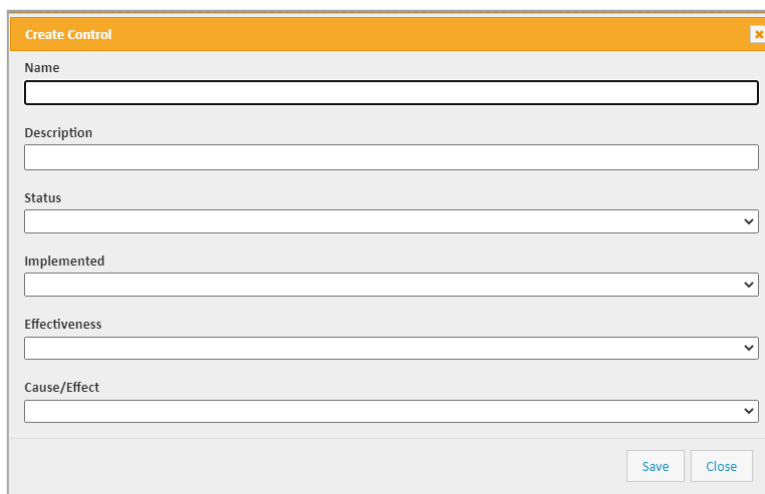


Figure 170 – The **Create Control** panel

Give the Control a title in the **Name** section and describe the Control in the **Description** section. Finally, identify if the Control is **Not-Approved**, **Approved**, **Live** or **Completed** in the **Status** section. Select **Save**.

If the action has already started, identify the level of implementation and effectiveness.

Note: If an action is above 75% implemented and 75% effective, the action will be coloured blue within the bowtie. This symbolises the action is controlled and needs no further monitoring. If an action is uncontrolled (that is, under 75% implemented and less than 75% effective) then the action will be red.



Figure 171 – Example of Uncontrolled (red) and Controlled (blue) actions

As you can see, each action will also have a bar underneath split into 3 sections representing the status for the risk, its level of implementation and effectiveness. Identify which Cause or Effect this action relates to.

There are arrows between the **Cause of Risk** and the **Risk Controls**. These are links and showing which actions are addressing which cause. If a **Risk Control** has not been linked to a cause (e.g., the final action in the column) there will be no arrow.

Note: The Risk box will change colour according to the current highest probability and cost impacts.

The grey object within the actions sections means an action has not yet been created but the system has put in a place holder instead.

To create a **Response** or **Fallback**, click on the **Effect**.

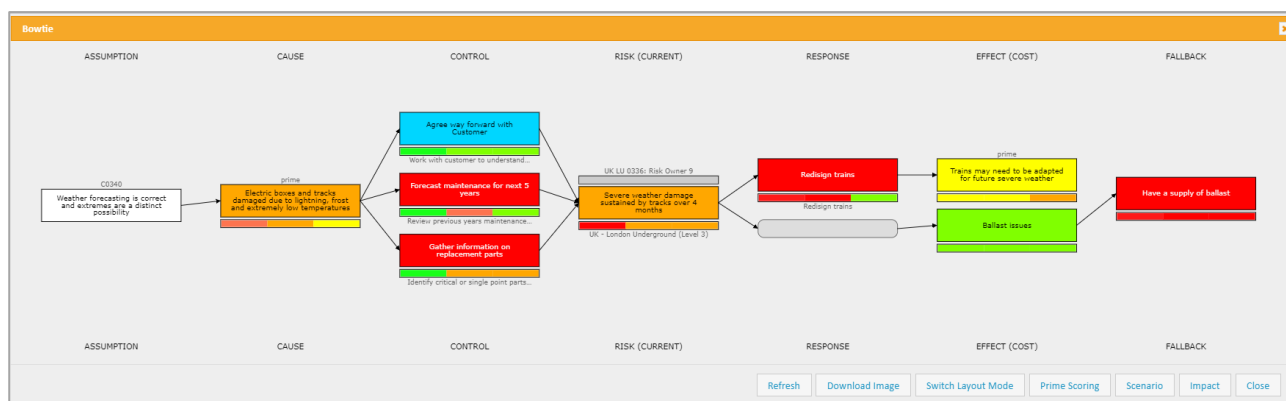


Figure 172 – Example of bowtie with responses and fallbacks

5.9.1.5 Bowtie from Selected

This is a very useful feature giving the Risk Manager the ability to view a **Bowtie** of a single risk of a selection of risks.

If you select a single risk and then select **Tools** and **Bowtie from Selected**, you will see the following:

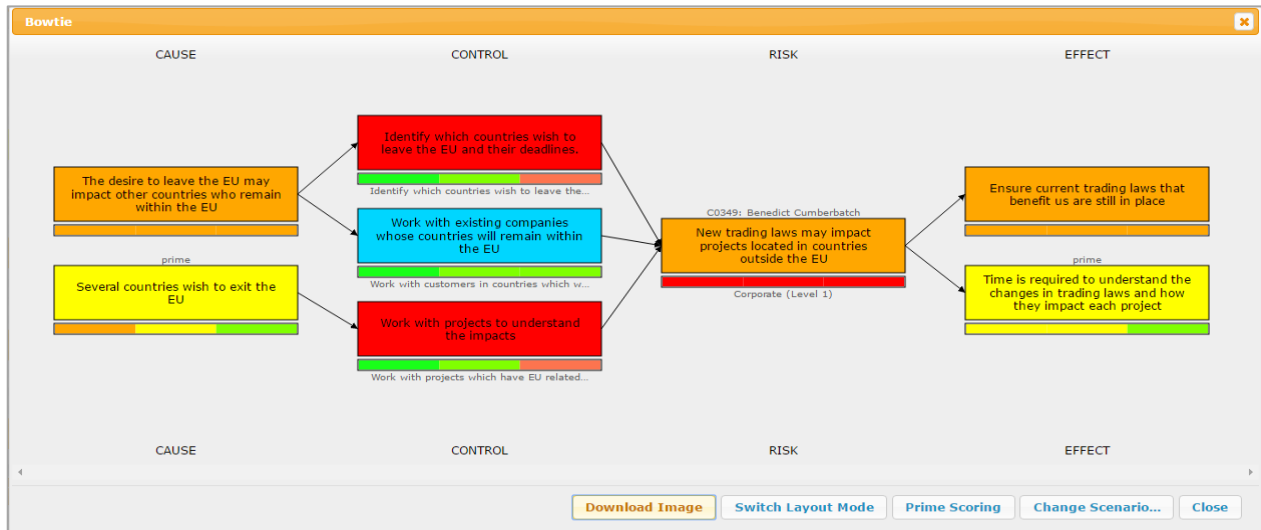


Figure 173 – A single risk displayed in the **Bowtie**

The system will automatically generate a **bowtie** diagram using the **cause**, **treatment**, **event**, **consequence**, and **fallback** information that has previously been entered into the system. Where information has not been added, there may be blank spaces, but you can use the bowtie to add the elements required.

If you select several risks, then select **Tools** and **Bowtie from Selected** you will see:

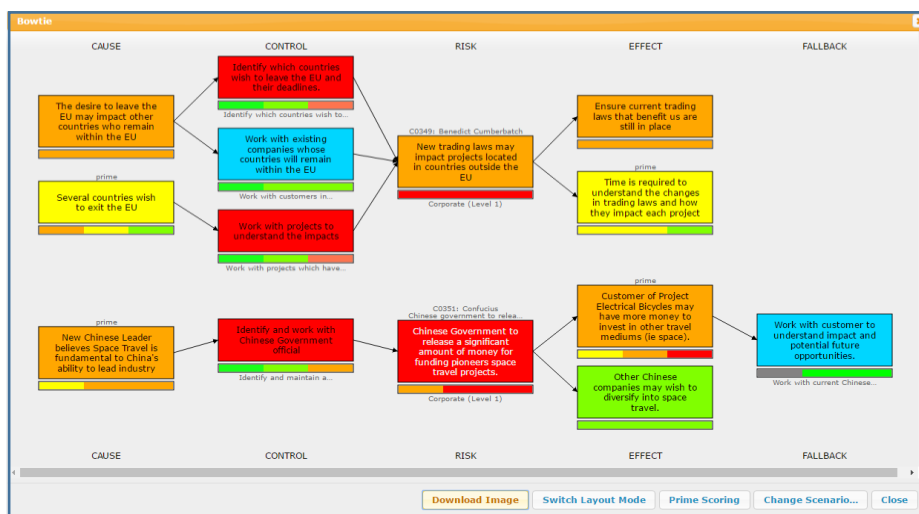


Figure 174 – Several risks displayed in the **Bowtie**

If an empty box appears in the **Risk Control** column this means a place holder for an action has been generated which you can complete later.

At the bottom of the panel are the following options:

- Download Image** Download the image to PDF.
- Switch Layout Mode** Makes a number of bow ties fit closer together.
- Prime Scoring** The colour of the risk is dictated by the qualitative **Probability x Prime Cost** impact. By changing this to **Worse Scoring**, the risk colour will be dictated by the **Probability x Worse Impact** score.
- Change Scenario** The bowtie will show the current scenario of the risk by default. You can choose another scenario.
- Close** Close the bowtie and return to the main screen.

5.9.1.6 Bowtie from All

If you filter and display on screen all the risks you wish to see in a bowtie you do not need to select them, you simply select **Bowtie from All** and a Bowtie will open showing all the risks.

5.9.1.7 Bowtie from Group

Similar to **Bowtie from Selected** above, if you select the **Group** header, **Tools** and **Bowtie from Group** you will see all the risks within the **Group** displayed within the Bowtie. The lead risk will show at the top of the Bowtie.

Note: The more risks you display, the bowtie will be more complicated (and difficult to read) on screen.

Displaying a group of risks within a bowtie is not just simple but extremely effective when trying to update several risks and reviewing the potential impacts of those changes on other risks within the group.

5.9.1.8 Cost Analysis

Monte Carlo simulation is a technique which can be used to quantify the impact of uncertainty on a project's cost and/or schedule. Ranges of possible outcomes are specified by the user as to how long each individual task might take, or how much each item costs. Running a Monte Carlo simulation generates hundreds or thousands of possible scenarios for each input, allowing decision makers to understand their best-case scenario, their worst-case scenario, and everything in between.

As implied, there are two aspects to the analysis held with the **Tools** and **Statistical & Analysis** section. Cost and Schedule Analysis.

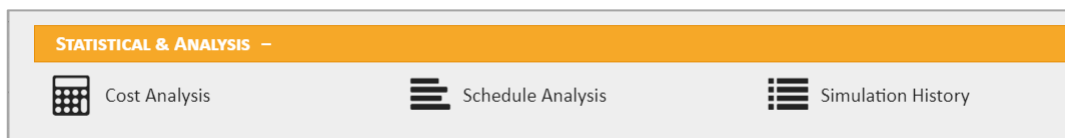


Figure 175 – Statistical Analysis options: Cost and Schedule Analysis

Risks held in the ERM application may be assigned a quantitative cost impact across each of the configured scenarios. ERM is then able to run a simulation which shows the distribution of the outcomes of those risks, across all the simulated scenarios. ERM also calculates various statistics from all simulated values, enabling the user to understand what their risk is at a given percentile. For example, if you wanted to find out how much risk contingency you would need to be 90% confident it was sufficient, you would look at the P90.

For cost analysis to provide some informative output, a node must have risks with cost impacts. Constant values are permitted but may not provide any more insight than “adding” values. Risks and nodes in a hierarchy are allowed, using node and descendant risks. The analysis will simulate at each node and aggregate results up through the hierarchy as the analysis progresses.

Preparation for analysis of risks at a given nodes simply select the node and select “Cost Analysis”.

All risks will be added to the analysis, regardless of having any quantitative cost.

The output following shows a single node with a fixed cost of £500,000,000 and multiple risks.

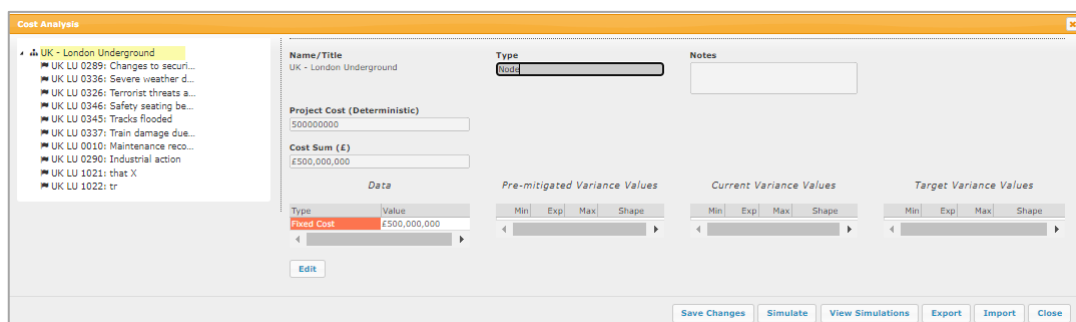


Figure 176 – Cost Analysis panel

Uncertainty may be added to the node by selecting **Edit**.

Figure 177 – **Cost Analysis quantitative assessment** panel

Node uncertainty may be entered here for each of the configured scenarios. Fixed cost of the node may also be adjusted. Certain inputs related to Schedule analysis are also available these (**Overrun Cost per unit**, **Schedule Lag Time**, **Planned Duration** and **Schedule Lag Value**) will be explained in the **Schedule Analysis** Section (5.1.16.9).

As well as being able to adjust node parameters, each of the risks may be selected and their cost impacts can be adjusted by selecting **Edit Quantitative data**.

Figure 178 – **Cost Analysis Edit Quantitative** panel

Once the appropriate Fixed costs, uncertainties and risk impacts have been configured an analysis can be run by selecting **Simulate**.

You can run the analysis at the mode level or at individual risk level. To run the simulation, select the level at which you wish to run the analysis and click on the **Simulate** button.

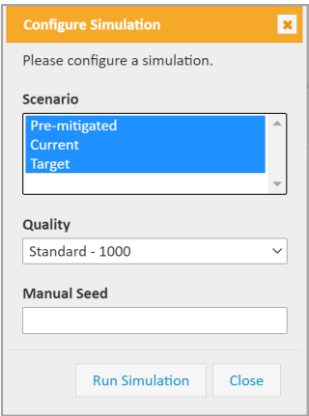


Figure 179 – **Simulate** panel

You can select any, or all the scenarios, by using the control key. Then chose how many iterations you want the analysis to be based upon. The selectable Monte-Carlo iterations/quality and their labels are configurable (by Support). The default values are as follows.

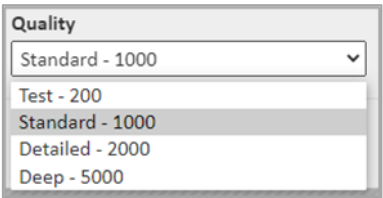


Figure 180 – **Iteration** options

You can specify the number generation start seed for a Cost or Schedule simulation. The seed is saved with a simulation.

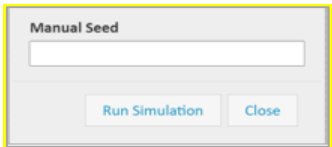


Figure 181 – **Manual Seed** options

Output from all scenarios will result in a combined summary of the **Fixed Cost Risk**.

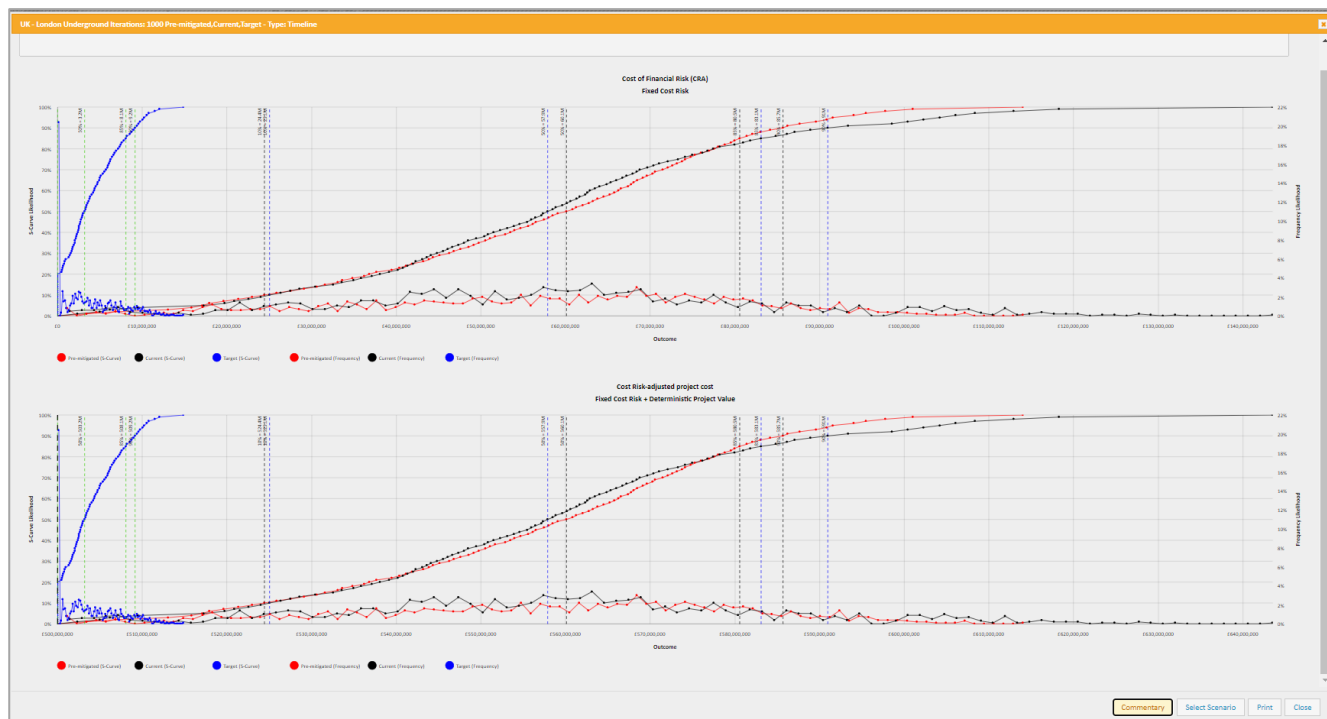


Figure 182 – Cost Analysis **Iterations** output

The top graph in this example is showing the Fixed Costs at the Deterministic.

The bottom graph is showing the Cost Risk- adjusted project cost Fixed Cost Risk + Deterministic Value.

You can switch of any of the results by clicking on the radio buttons which are situated below each graph.



Figure 183 – Cost Analysis **display options**

If you wish to add a Commentary for reporting purposes, then click on the Commentary button.

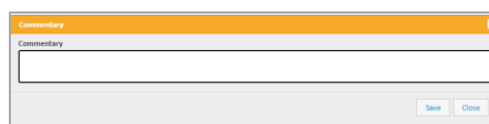


Figure 184 – **Cost Analysis Commentary** panel

Simulations are archived and any comments will also be retained.

By clicking on the **Select Scenario** button you can retrieve a detailed simulation output.

In the screen shot below, the Current Scenario was selected.

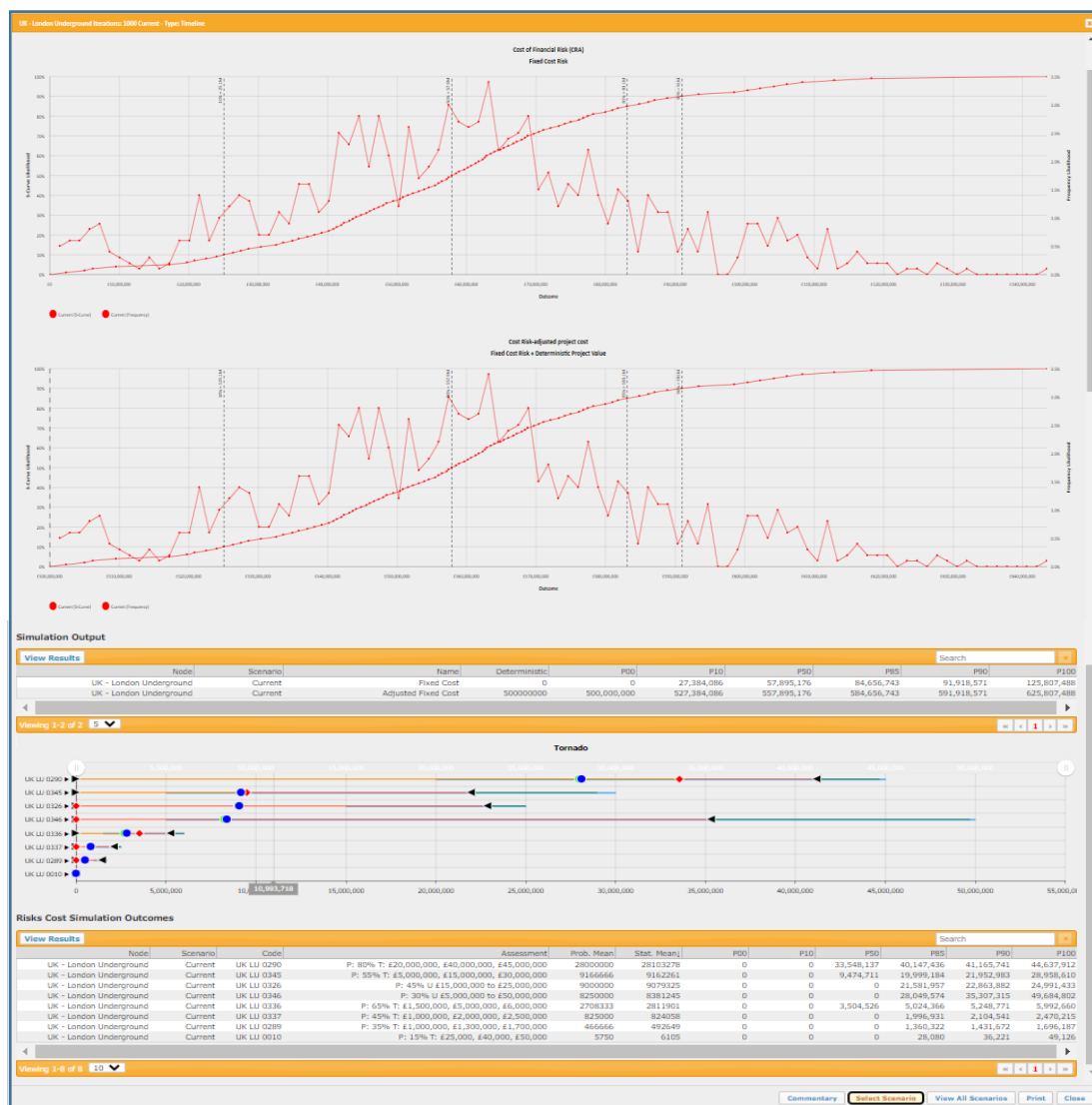


Figure 185 – Cost Analysis **Iterations output** - Example

The output consists of:

- **S-curves for the Fixed Cost Risk and node Deterministic.**
- **Percentile results table** for the selected node simulation output.
- **A Tornado graph** for the contributing risks.
- **Risks Cost Simulation Outcome Data Table** containing the data produced from the Monte Carlo simulation. This shows the 0%, 10%, 50%, 85%, 90% and 100% probability of costs occurring, and the percentage these figures are of the total project value. The statistical average is also produced.

If you wish to view the output as a histogram, select the **Toggle Histograms** button at the bottom of the page.

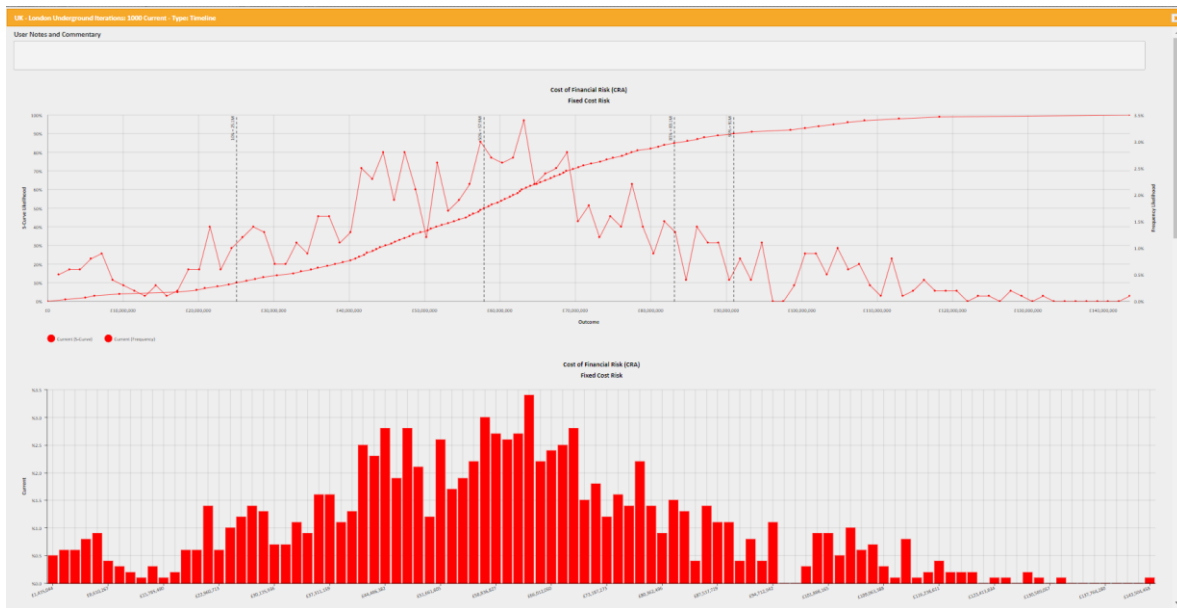


Figure 186 – Cost Analysis *Histogram output* - Example

Where applicable, each graphic and associated results may be viewed in more detail and printed (see **View Results** and **Print buttons**).

It is very useful being able to see previous simulations and have a comparison between previous and the current simulation.

Select a row then select **View Simulations** and the simulation will appear.

Unwanted simulations can be deleted.

Date	Project	Analysis Type	Scenario	Iterations	Comment
23/07/2020 15:03	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
02/06/2020 15:17	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
17/04/2020 16:07	UK - London Underground	Cost	Current	1000	
17/04/2020 15:54	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
15/04/2020 11:51	UK - London Underground	Cost	Current	100000	
15/04/2020 11:48	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
27/12/2019 14:01	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
27/12/2019 13:59	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
16/09/2019 16:32	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	

Figure 187 – Configure Simulations view

5.9.1.8.1 Multi-node/project simulation

As well as analysing risks and uncertainty at a single node, a simulation may be run against a hierarchy of nodes and impacting risks.

This is achieved by requesting **Node & Descendant** risks prior to opening the **Cost Analysis tool**. Select the risks you wish to analyse using the standard grid filters (e.g., risks belonging to a certain category), and these risks will be used for the simulation.

As an example, the following sample shows multiple nodes, where the risk category was filtered on “Commercial”. Here you can see that the simulation will now run on those highlighted risks.

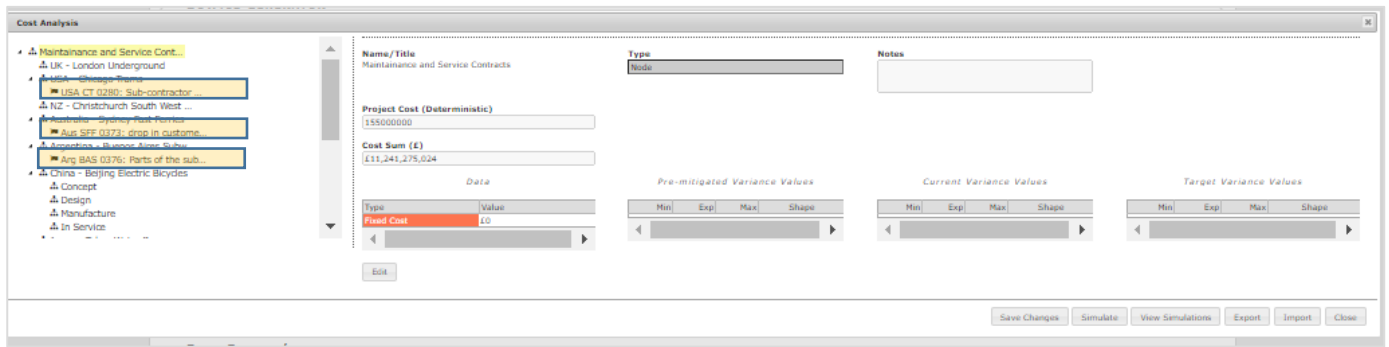


Figure 188 – Cost Analysis – *Multi node/project simulation* panel

5.9.1.9 Schedule Analysis

Schedule analysis can be used to understand time impacts on a given project. The scheduler will show the activities in the programme Work Breakdown Structure (WBS).

You can also connect risk information of project activities to the baseline schedule which will enable you to run a Schedule Risk Analysis (SRA). This will provide you with sensitivity information of individual project activities to assess the potential impact of uncertainty on the final project duration and cost.

5.9.1.9.1 Building the Schedule Analysis – Phases and Tasks

For the Schedule analysis to work, you must first build your schedule.

To do this, you must select the *Schedule Analysis* option from within the 'Tools'.

The following screen will appear. At this stage, the top-level Programme information will appear. The start date on the schedule screen will be the date given to the start of the programme as entered in the Node information.

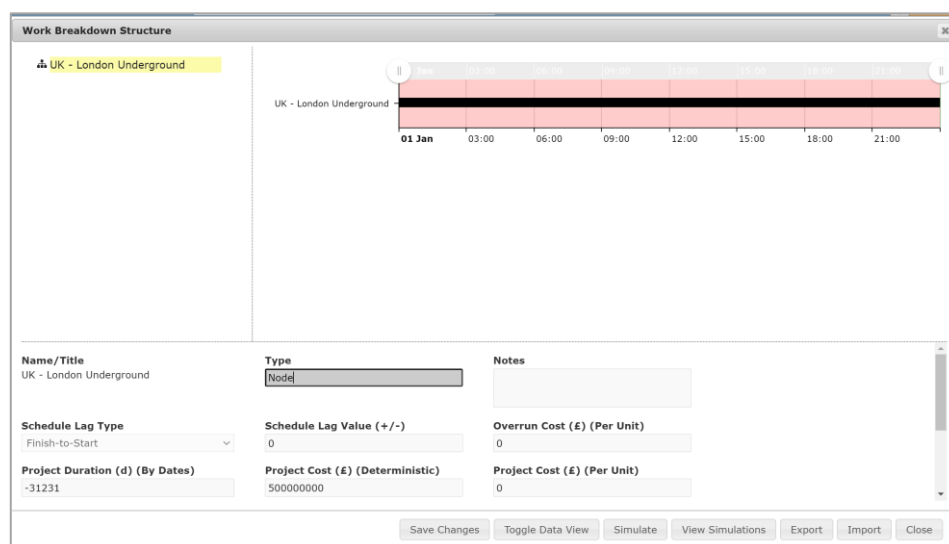


Figure 189 – *Schedule Analysis* panel – creating your schedule

To add in your Project Phases, right mouse click on the Programme and select Add Child.

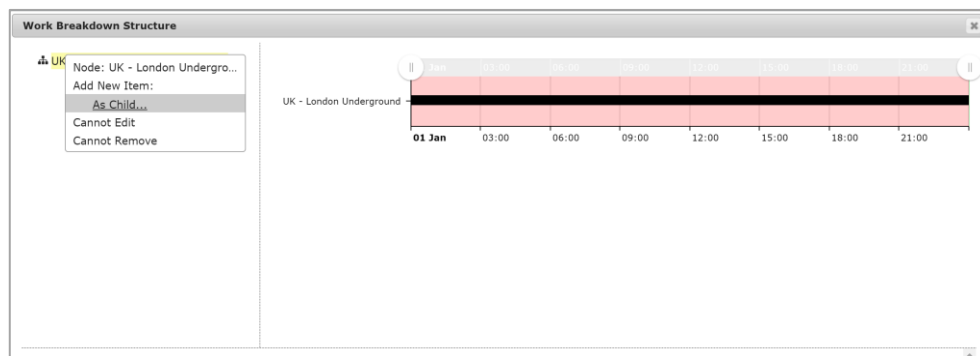


Figure 190 – *Schedule Analysis* panel – adding Phases (step 1)

The system will prompt you for a 'Phase Name'

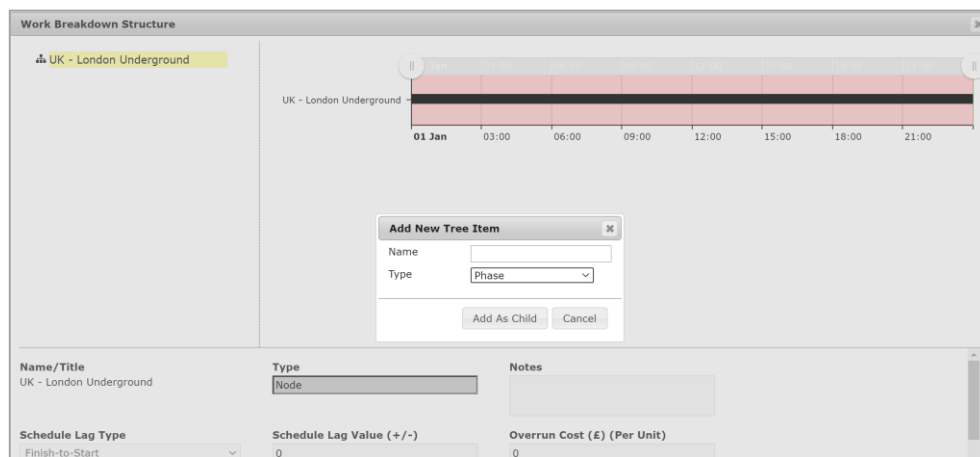


Figure 191 – *Schedule Analysis* panel – adding Phases (step 2)

Type in the Phase Name and select **Add as Child**. You can create as many 'Phases' as you wish, as per the example below:

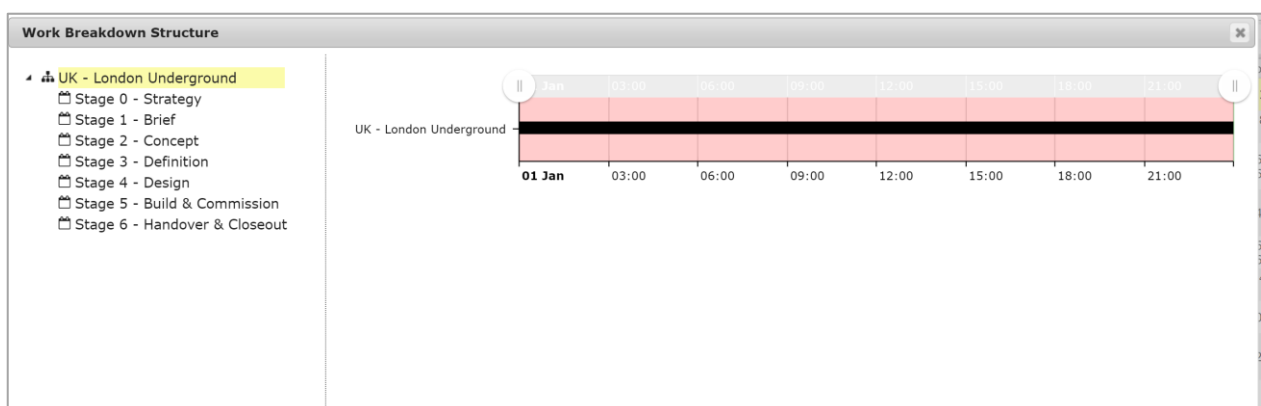


Figure 192 – *Schedule Analysis* panel – adding Phases - example

Once you have built your phases, you can add **Tasks** to your schedule. In the same way as adding a **Phase**, right mouse click on the **Phase** to which you wish to add your task and create your **Task**.

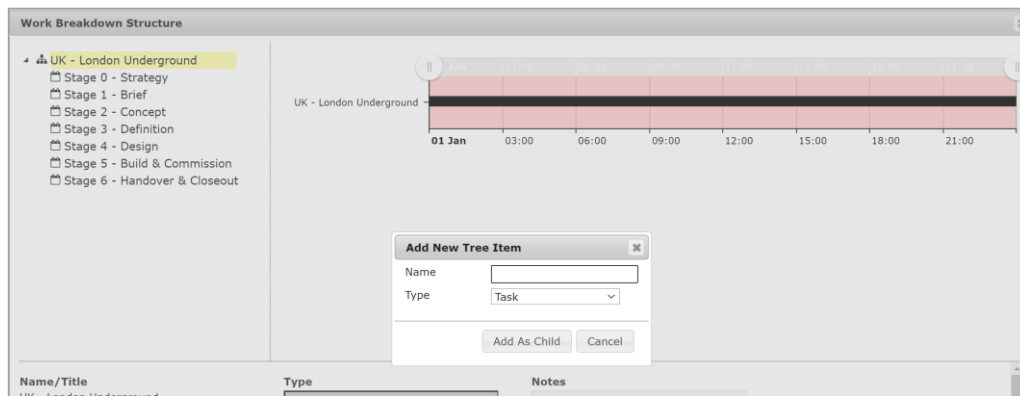


Figure 193 – **Schedule Analysis** panel – adding Tasks

In the example below, there are 2 Tasks created for Stage 2 of the Project and a Task and Sub-task created for Stage of the Project. You can add as many tasks as necessary and as many 'levels' of tasks. However, it is recommended that you remain as high level as possible – just enough to get value add information from the schedule analysis, but not so much that you end up trying to replicate schedule information that you probably hold in a specifically designed schedule tool.

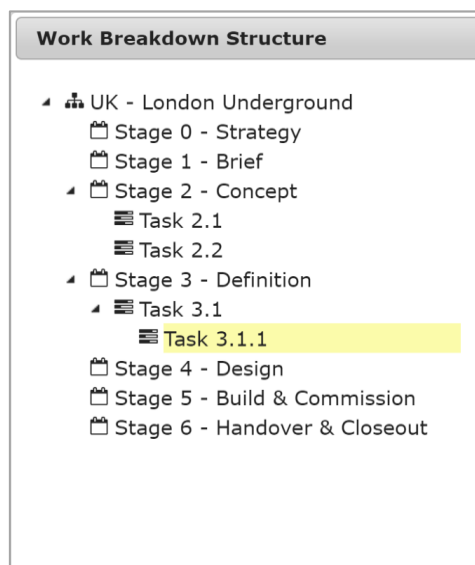


Figure 194 – **Schedule Analysis** panel – adding Tasks (example)

Once you have built your Project Schedule, select **Save Changes** and the Gantt chart to the right will automatically build.

The default 'build' will assign a 1-day concept lag to each **Phase**, until you assign appropriate lag timeframes to each line item.

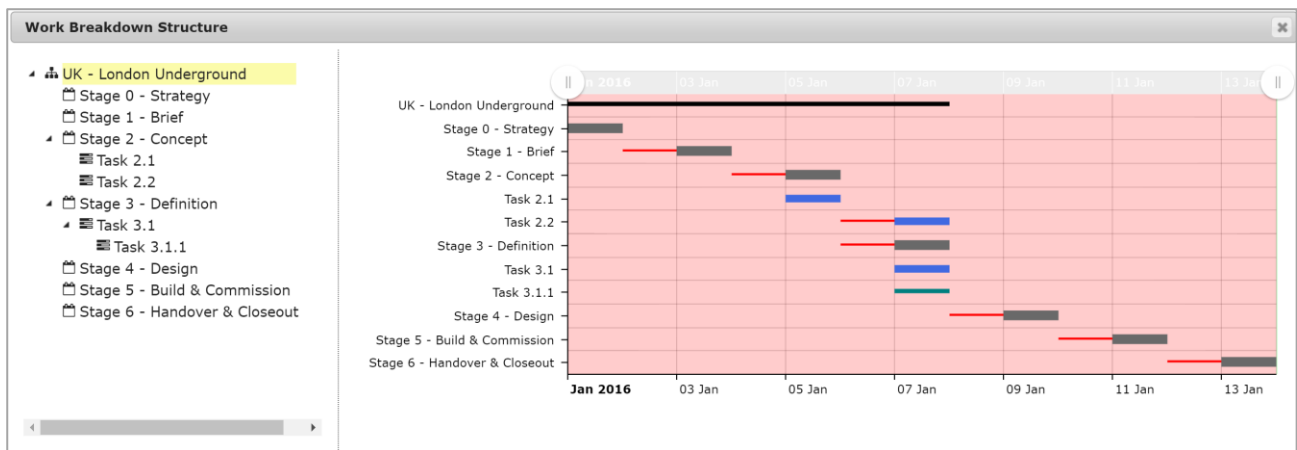


Figure 195 – **Schedule Analysis** panel – default Gantt prior to adding Phase Periods

The black bar is the time period for the overall project or programme.

The grey bars denote the individual phases of the project or programme.

The thin red lines denote the lag times for the phase or task.

The thick dark blue lines denote the associated tasks and their duration.

5.9.1.9.2 Building the Schedule Analysis – Assigning Schedule Lag Times

To assign **duration** and **uncertainty** to each Phase and/or task select the **Edit** button on the bottom left-hand side of the panel. This will bring up a new window – **Quantitative Assessment**.

The figure shows the 'Quantitative Assessment' window, which is used to input data for different scenarios. The window is divided into several sections: 'Details', 'Pre-mitigated Scenario', 'Current Scenario', and 'Target Scenario'. Each section contains input fields for 'Cost (£)' and 'Time (d)', with options for 'Minimum', 'Likely', and 'Maximum' values. The 'Details' section also includes 'Cost Fixed', 'Overrun Cost (Per Unit)', 'Schedule Lag Type' (set to 'Finish-to-Start'), and 'Schedule Lag Value (+/-)'. The 'Pre-mitigated Scenario' and 'Current Scenario' sections have 'Shape' dropdown menus for 'Cost (£)' and 'Time (d)'. The 'Target Scenario' section also has 'Shape' dropdown menus for 'Cost (£)' and 'Time (d)'. At the bottom of the window are buttons for 'Force Save Changes', 'Save Changes', and 'Close'.

Figure 196 – **Quantitative Assessment** panel

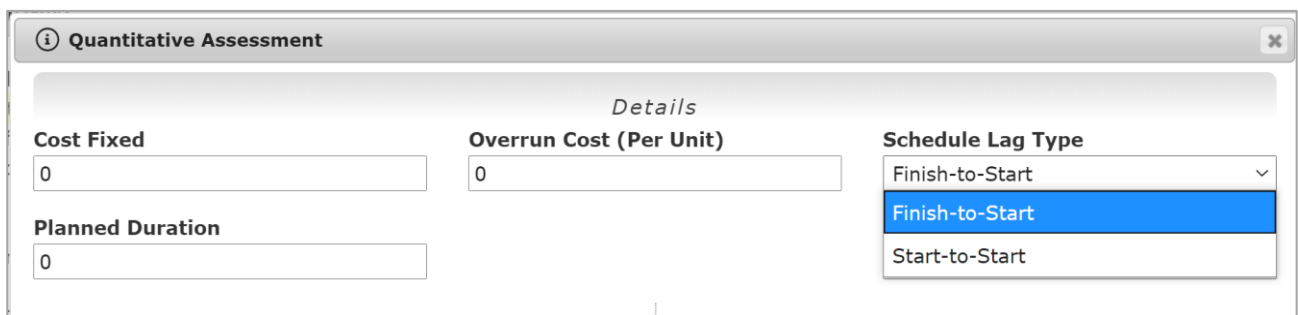
In this panel, you can assign fixed costs to a phase or task, overrun costs, the phase or task time period and quantitative cost and time uncertainty for the different scenarios.

It is important, if you wish to use the Schedule Risk Analysis (SRA) that you complete the uncertainty, as a minimum for **Time**. This is calculated on an absolute value.

Schedule Lag times can be assigned by Finish-to-Start or Start-to-Start.

Finish-to-Start is a logical relationship in which the next activity cannot **start** until the predecessor activity has **finished**.

Start-to-Start is a logical relationship in which the next activity cannot **start** until the predecessor activity has **started**.

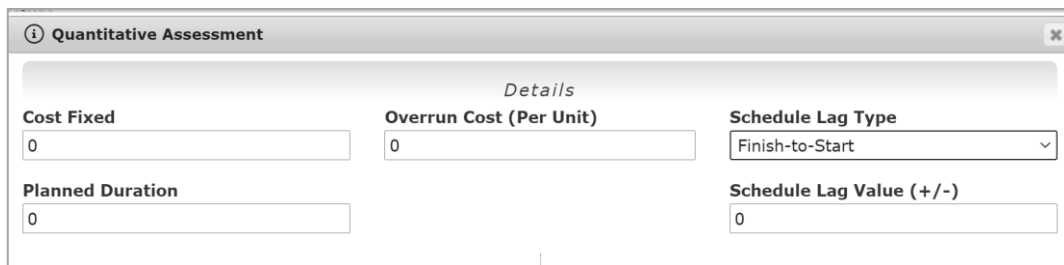


The screenshot shows a software window titled "Quantitative Assessment" with a close button in the top right. Below the title bar is a section labeled "Details". Inside this section, there are four input fields: "Cost Fixed" with a value of 0, "Overrun Cost (Per Unit)" with a value of 0, "Planned Duration" with a value of 0, and "Schedule Lag Type". The "Schedule Lag Type" is a dropdown menu with three options: "Finish-to-Start", "Finish-to-Start" (highlighted in blue), and "Start-to-Start".

Figure 197 – **Schedule Lag Type - Options**

The Schedule Lag Value allows you to allocate the time delay between 2 phases or tasks.

The lag times are represented in the Gantt chart by a thin red line.



The screenshot shows the same "Quantitative Assessment" window. In this view, the "Schedule Lag Type" dropdown is set to "Finish-to-Start". A new input field, "Schedule Lag Value (+/-)", has appeared with a value of 0. The other fields ("Cost Fixed", "Overrun Cost (Per Unit)", "Planned Duration") remain the same.

Figure 198 – **Schedule Lag Value**

The Planned Duration (days) should be completed so that each subsequent Phase/Task can be allocated to a time period. Each time you save the entries, the Gantt chart will rebuild to reflect those entries.

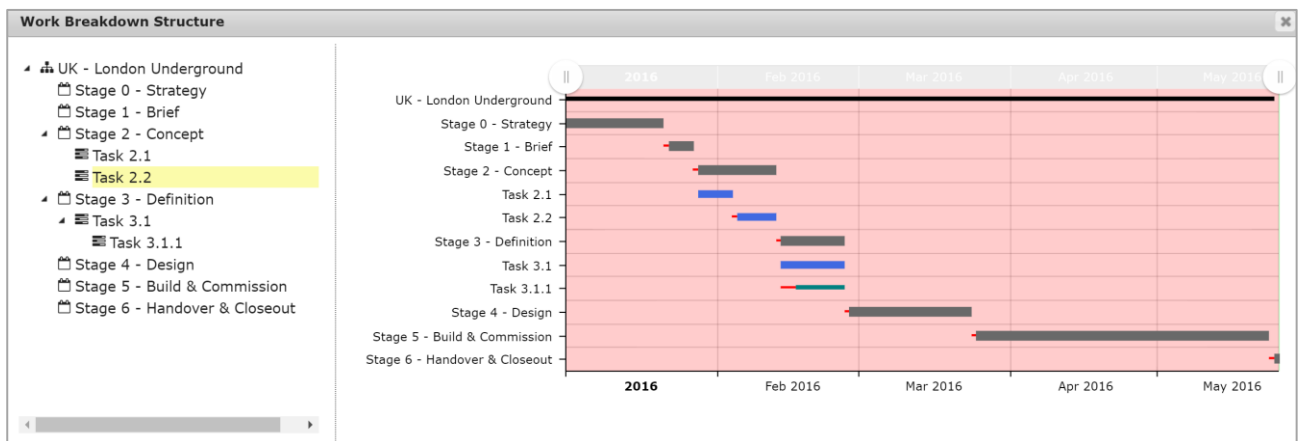


Figure 199 – *Schedule Analysis* panel

Hovering over any of bars in the Gantt chart, will bring up an information panel. In the example below you can see that Stage 2 – Concept lasts for 16 days, from the 28.01.2016 to 13.02.2016.

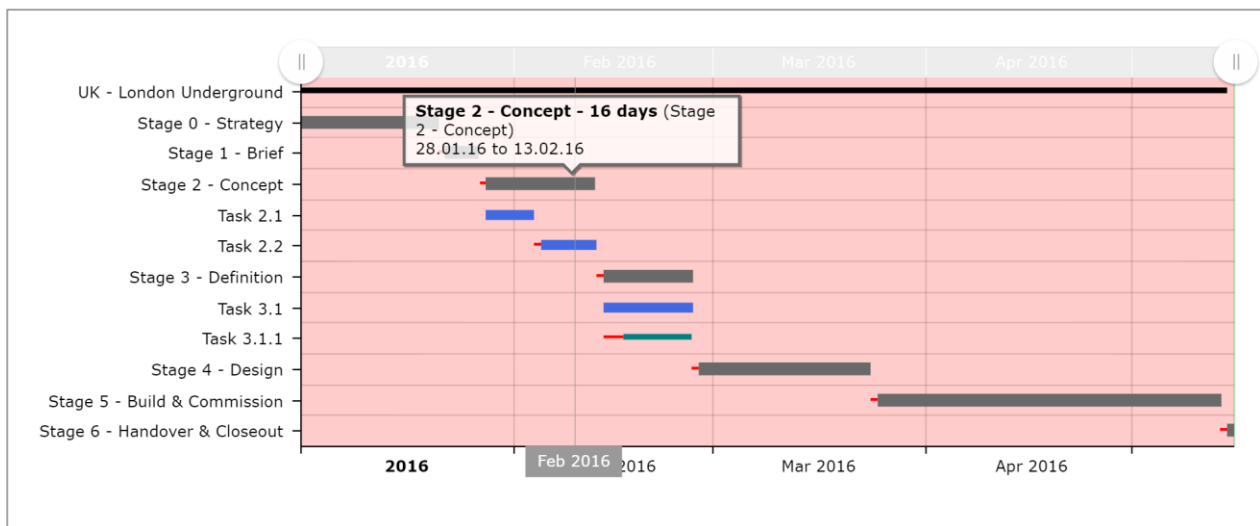


Figure 200 – *Schedule Analysis* panel – hover over information

5.9.1.9.3 Building the Schedule Analysis – Assigning Risks

If you wish to link your risk information into the Schedule Analysis, you add these into the schedule, in the same manner as adding Phases or Tasks, except that you select the Risk option when adding a new tree item.

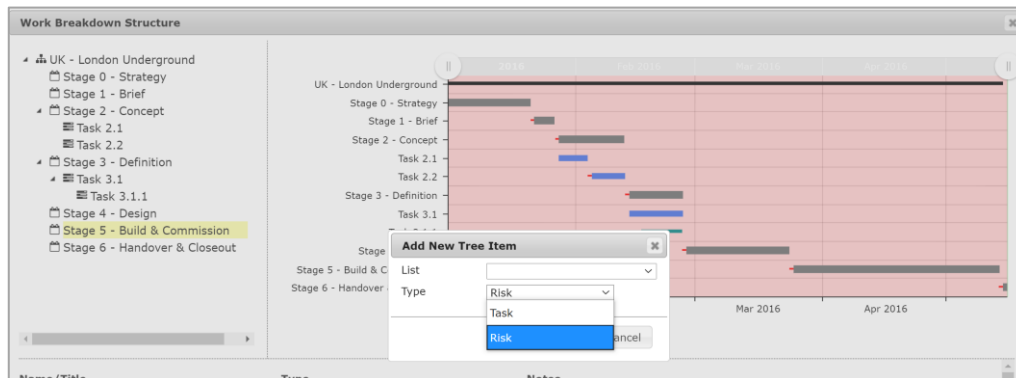


Figure 201 – *Schedule Analysis* panel – adding risks

When you select **Risk** the option to select any of the risks entered for that project are available.

The **Risks** are relative to the end of the associated **Phase** or **Task**, and as such these could have a positive or negative impact on the end date of that **Phase** or **Task**.

Note: A risk can only be selected once. Once that risk has been selected, the next time you add a risk, only the remaining risks will appear in the drop down.

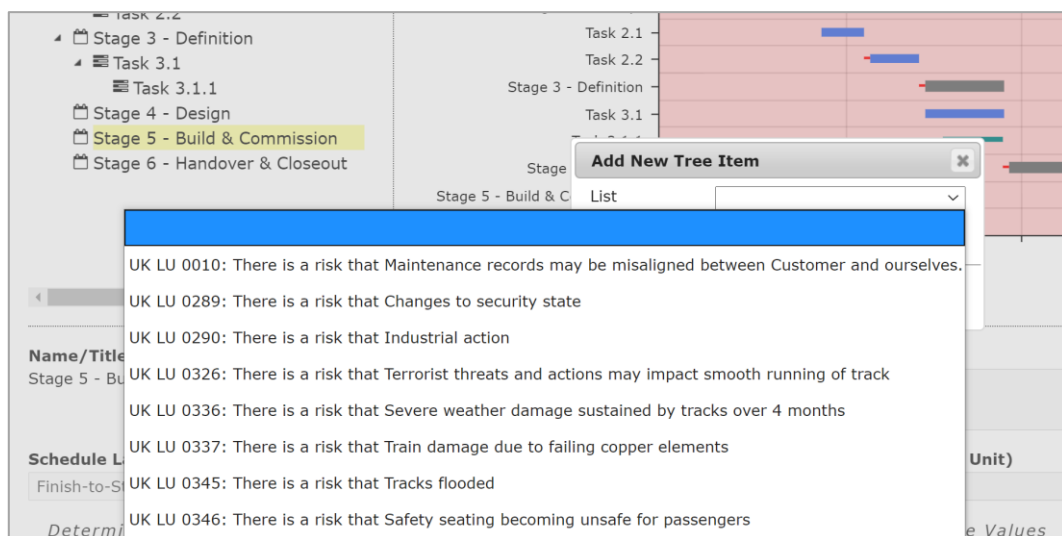


Figure 202 – *Schedule Analysis* panel – risk selection

You can run the SRA simulation at any time during the building of your schedule so you can see quickly and easily the potential overrun of your project from the Risk Adjusted Gantt chart.

5.9.1.9.4 Schedule Risk Analysis Simulations

To view the Simulation, click on the **Simulate** button at the bottom of the panel.

Just as with the Cost Analysis functionality, you can select any combination of scenario and the number of iterations.

This builds the following report:

The top three graphs show the Fixed Cost information (Cost, Time and combined Cost and Time)

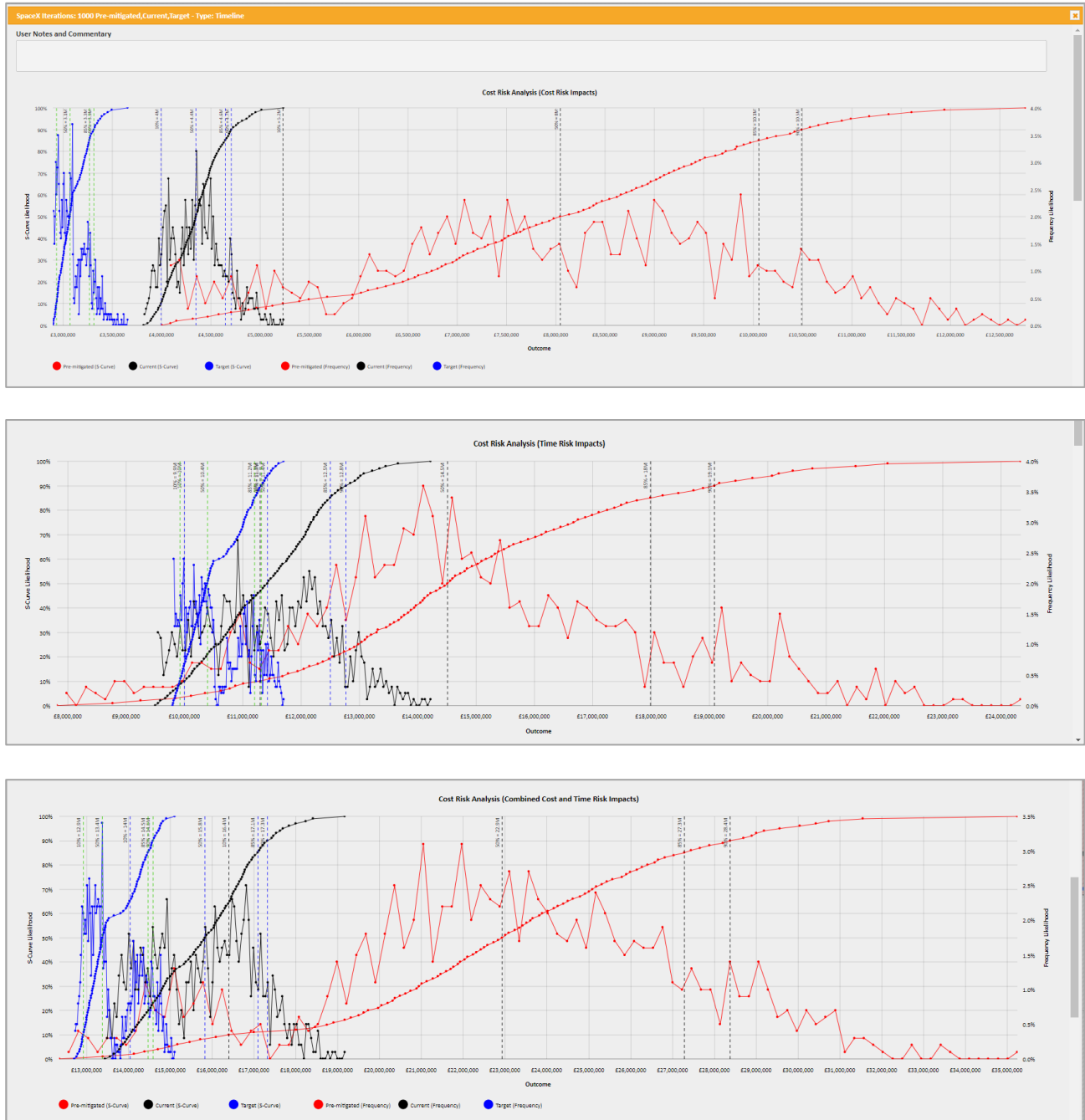


Figure 203 – **Simulation Outputs** – Fixed Cost Graphs

The bottom two graphs show the Schedule Risk Analysis (Time Risk Impacts) and the Joint Cost and Schedule Risk Analysis (Combined Cost vs Schedule Outcomes).

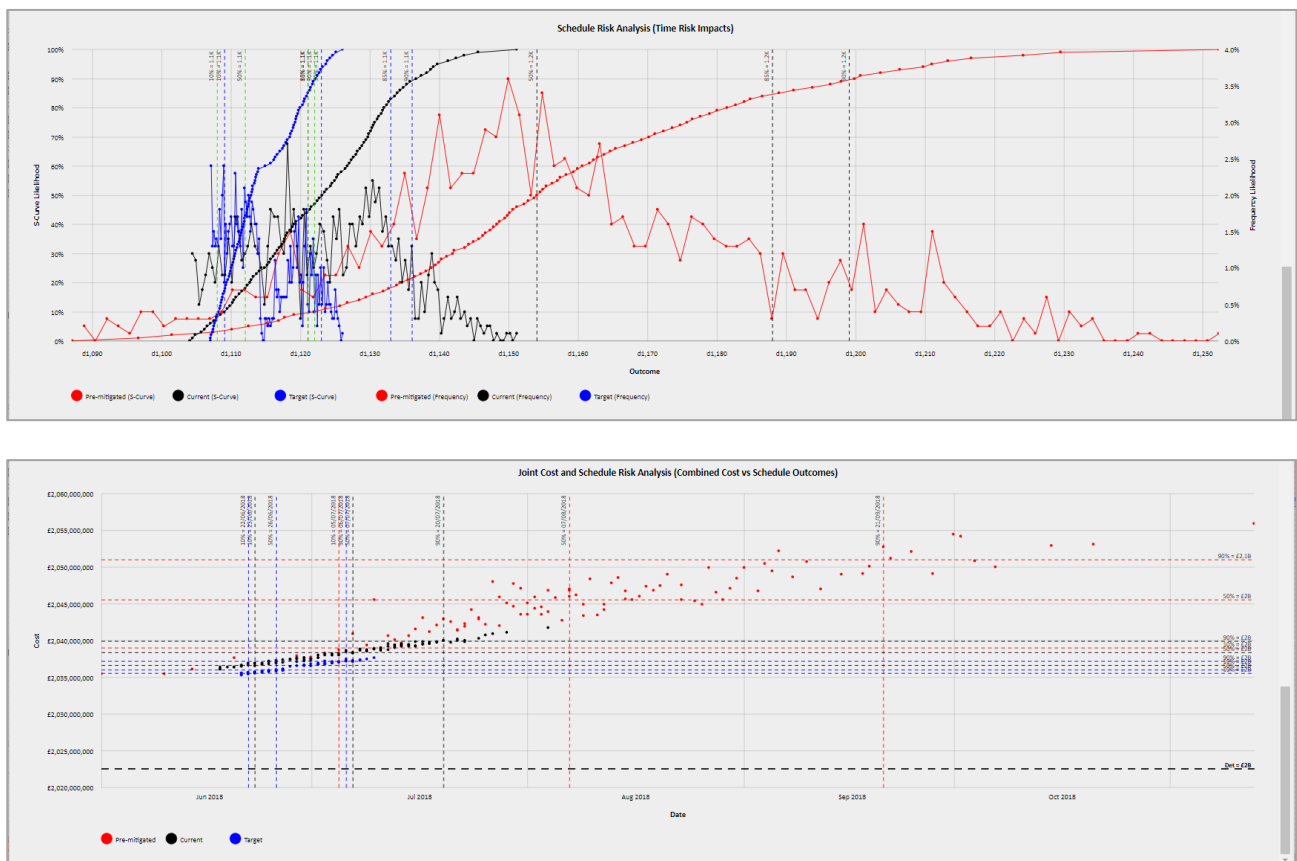


Figure 204 – *Simulation Outputs* – Schedule Risk Graphs

5.9.1.9.5 Phase Results & Schedule Gantt

Whilst you can select all three scenarios to build the CRA and SRA, to see the detailed scheduled Gantt, Cost and Time Tornadoes and Data tables, you need to select a specific **scenario** at the bottom of the display page. If you selected only one scenario at the start of the simulation the following additional information will automatically appear.

- Simulation Output (Data Table)
- Schedule Gantt
- Schedule Results (Data Table)
- Time Tornado
- Risks Schedule Simulation Outcomes (Data table)
- Cost Tornado
- Risk Cost Simulation Outcomes (Data table)

Simulation Output (Data Table)

Simulation Output										
Node	Scenario	Name	Deterministic	P00	P10	P50	P85	P90	P100	
UK - London Underground	Current	Schedule		22/05/2016	23/05/2016	25/05/2016	27/05/2016	27/05/2016	28/05/2016	
UK - London Underground	Current	Variable Cost		407	490	600	686	707	798	
UK - London Underground	Current	Fixed Cost		0	0	10,305,992	20,070,135	21,661,493	29,249,951	
UK - London Underground	Current	Adjusted Variable Cost	£500,000,000	500,000,407	500,000,490	500,000,600	500,000,686	500,000,707	500,000,798	
UK - London Underground	Current	Adjusted Fixed Cost	£500,000,000	500,000,000	500,000,000	510,305,992	520,070,135	521,661,493	529,249,951	

Viewing 1-5 of 5

Figure 205 – **SRA Report** – Simulation Output Data Table

The Simulation Output provides the data information for the selected scenario for each of the graphs at the P0, P10, P50, P85, P90 and P100.

The Schedule Gantt

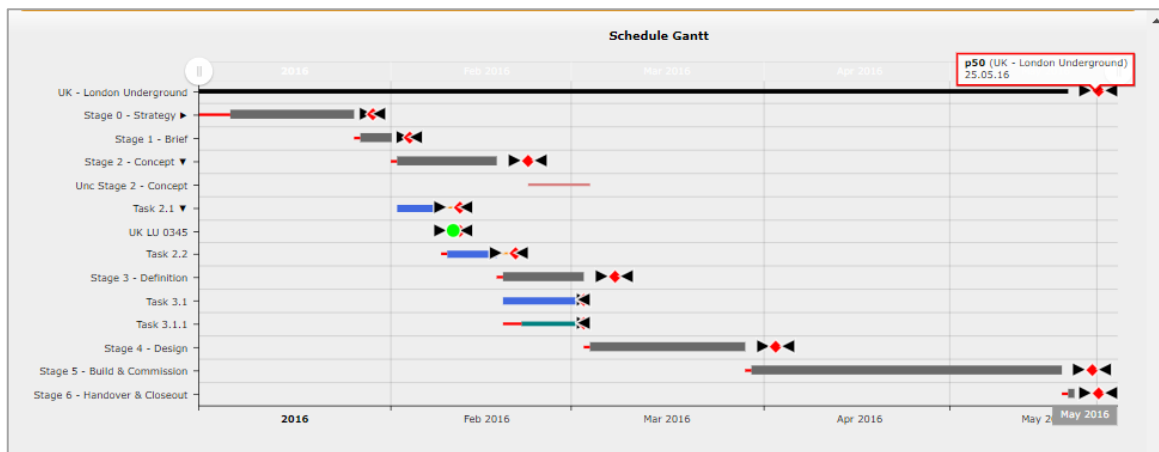


Figure 206 – **SRA Report** – Schedule Gantt Chart

The data is graphically displayed in the Schedule Gantt. In the example above, the red diamond represents the P50. For the whole project, the P50 is 25/05/16. (Refer to Figure 188 – SRA Report – Schedule Results (Data Table)).

As with the Gantt chart in the Schedule Panel, you can hover over the areas in the Gantt to obtain the schedule details for each item. It will also indicate the impact at P10, P50 and at P90 estimates.

The black arrows indicate the P10 and P90 estimates, whilst the Red arrow indicated the P50 estimate.

By clicking on the arrow in the Project Menu to the left, you can also display the risks. These are denoted by a green circle.

Schedule Results (Data Table)

Schedule	Start Date	Duration	Cost/Unit	Fixed Cost	P00	P10	P50	P85	P90	P100
UK - London Underground	01/01/2016	140.0d	0	500000000	22/05/2016	23/05/2016	25/05/2016	27/05/2016	27/05/2016	28/05/2016
Stage 0 - Strategy	06/01/2016	20.0d	200	0	28/01/2016	28/01/2016	29/01/2016	29/01/2016	30/01/2016	30/01/2016
Stage 1 - Brief	27/01/2016	5.0d	0	0	03/02/2016	03/02/2016	04/02/2016	04/02/2016	05/02/2016	05/02/2016
Stage 2 - Concept	02/02/2016	16.0d	0	0	20/02/2016	21/02/2016	23/02/2016	25/02/2016	25/02/2016	26/02/2016
Task 2.1	02/02/2016	7.0d	0	0	09/02/2016	09/02/2016	12/02/2016	13/02/2016	13/02/2016	14/02/2016
Task 2.2	10/02/2016	8.0d	0	0	18/02/2016	18/02/2016	21/02/2016	22/02/2016	22/02/2016	23/02/2016
Stage 3 - Definition	19/02/2016	13.0d	0	0	05/03/2016	06/03/2016	08/03/2016	10/03/2016	10/03/2016	11/03/2016
Task 3.1	19/02/2016	13.0d	0	0	03/03/2016	03/03/2016	03/03/2016	03/03/2016	03/03/2016	03/03/2016
Task 3.1.1	22/02/2016	10.0d	0	0	03/03/2016	03/03/2016	03/03/2016	03/03/2016	03/03/2016	03/03/2016
Stage 4 - Design	04/03/2016	25.0d	0	0	31/03/2016	01/04/2016	03/04/2016	05/04/2016	05/04/2016	06/04/2016

Figure 207 – SRA Report – Schedule Results (Data Table)

The table above the Schedule Gantt provides information regarding the Schedule, Start Date, Duration, Cost Unit and Fixed Cost and the schedule variations.

Time Tornado

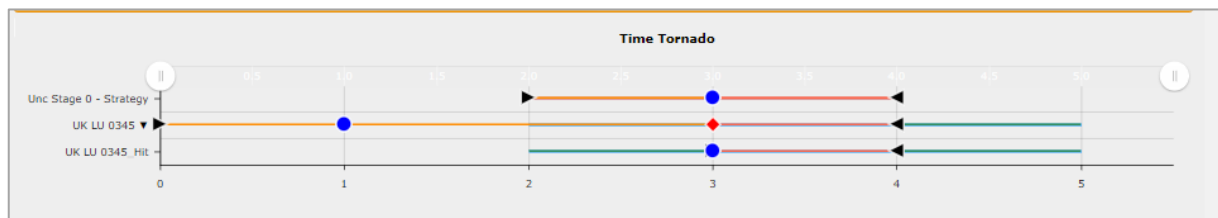


Figure 208 – Time Tornado Results

This displays the time (at the various P estimates) horizontally and ordered (within each phase)

If you wish to understand the data regarding risk schedule information, refer to the data table **Risk Schedule Simulation Outcomes (data table)**

Node	Scenario	Code	Assessment	Prob. Me...	Stat. M...	P00	P10	P50	P85	P90	P100
Stage 0 - Strategy	Current	Unc Stage 0 - Strategy	P: 100% T: 2.0d, 3.0d, 4.0d	3	3	2	2	3	3	3	3
Task 2.1	Current	UK LU 0345	P: 55% T: 2.0d, 3.0d, 5.0d	1	1	0	0	2	3	3	4

Figure 209 – SRA Report – Schedule Risk Data Table

Cost Tornado

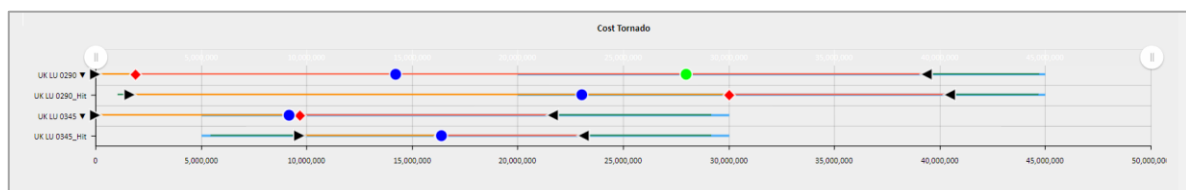


Figure 210 – SRA Report – Cost Tornado

The cost tornado displays the costs (at the various P estimates) horizontally and ordered (within each Phase) so that the highest impact appears at the top of the chart, the second largest appears second from the top and so on.

The range displayed are from P0 to P100. However, by expanding the risk information (by clicking on the arrow on the risk) you can also see the range excluding P0 and P100.

Risk Cost Simulation Outcomes (Data Table)

This table provides the data supporting the Cost Tornado.

Risks Cost Simulation Outcomes											
View Results										Search	
Node	Scenario	Code	Assessment	Prob. Mean	Stat. Mean↓	P00	P10	P50	P85	P90	P100
Stage 1 - Brief	Current	UK LU 0290	P: 80% T: £20,000,000, £40,000,000, £45,000,000	28000000	14227967	0	0	1,887,073	37,562,487	39,371,878	44,696,437
Task 2.1	Current	UK LU 0345	P: 55% T: £5,000,000, £15,000,000, £30,000,000	9166666	9176005	0	0	9,669,613	19,948,068	21,650,178	29,171,324
Viewing 1-2 of 2 5											
Commentary Select Scenario View All Scenarios Print Toggle Graphs Close											

Figure 211 – **SRA Report** – Risk Cost Simulation Outcomes (Data Table)

5.9.1.10 Simulation History

To view all previous simulations run, select the Simulation you wish to look at and press **View**. Simulations no longer required can be removed using the **Delete** button.

Configure Simulation					
View Delete					
Date	Project	Analysis Type	Scenario	Iterations	Comment
08/07/2020 11:10	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
08/07/2020 10:45	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
02/06/2020 15:17	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
17/04/2020 16:07	UK - London Underground	Cost	Current	1000	
17/04/2020 15:54	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
15/04/2020 11:51	UK - London Underground	Cost	Current	100000	
15/04/2020 11:46	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
27/12/2019 14:01	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
27/12/2019 13:59	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
16/09/2019 16:32	UK - London Underground	Cost	Pre-mitigated,Current,Target	1000	
Viewing 1-10 of 10 10					
Close					

Figure 212 – **SRA Report** – Risk Cost Simulation Outcomes (Data Table)

5.9.1.11 Qualitative to Quantitative

The **Qualitative to Quantitative** option enables you generate quantitative assessment figures from a qualitative assessment.



Figure 213 – The **Create Group** button

The **Scenario** is asking where the current qualitative figures reside. Once identified from the drop-down list, click on **Select & Convert**.

5.9.1.12 Quantitative to Qualitative

Equally, if you have quantitative figures which you wish to convert to a qualitative assessment you can use the **Quantitative to Qualitative** option:



Figure 214 – The **Create Group** button

5.9.1.13 Create Group

When risks have similarities or relationships you may decide to create a group. The risks remain independent and can be edited individually but they also can be retrieved in a group.

Select 2 or more risks (the first risk selected will become the dominant risk within the group). Select the **Create Group** button.



Figure 215 – The **Create Group** button

Whilst the group is being established, a timer will appear on the screen briefly.

5.9.1.14 Add to Group

Risks can be added to existing groups. Select the risk(s) you wish to add, select the **Add to Group** option.



Risk Group

☒ Add to Existing Group ☐ Add to New Group

Existing Group

▼

Add Close

Figure 216 – The **Add to a Group** button and panel

The **Existing Group** displays a list of existing groups. Select the group relevant for your risks and select **Add**.

If the group does not currently exist, select **Add to New Group**.

Risk Group

☐ Add to Existing Group ☒ Add to New Group

New Group Name

New Group Name

Notes

Enter notes here

Add Close

Figure 217 – The **Add to New Group** options

Add the group's name in the **New Group Name** section. Add a description in the **Notes** section (e.g., risks with financial considerations to objective A, risks belonging to a struggling supplier, risks that could impact environmental regulation 1.2). Help another user understand the relationships of the risks within the group.

Select **Add**.

5.9.1.15 Remove from Group

First, remove the risks within the group. Search for the parent risk. The parent risk and the risks within the group should appear on the screen. Select one of the risks within the group, select **Tools** and **Remove from Group**. Do this to all the risks within the group. Finally, you will be left with the original parent risk, but this no longer belongs to a group as it no longer is linked to any other risks.

Select a risk which belongs to a **Group**, select **Risk Actions** and then **Remove from Groups**.



Figure 218 – The **Remove from Groups** button

The risk is not deleted. The risk remains on the main screen but is no longer part of a **Group**.

5.9.1.16 Manage Groups

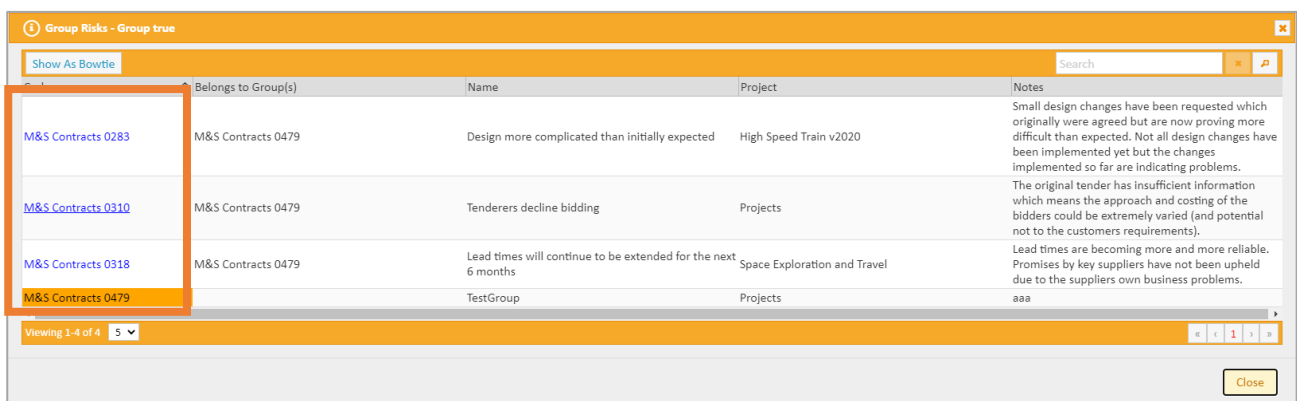
You can see all the Groups created by selecting **Managed Groups**:



Code	Name	Project	Notes
M&S Contracts 0287	Interpretation of Fire Regs, Contractor v Fire Officer.	Projects	There has been evidence to suggest that different Fire Officers implement the regulations in varying ways.
USA CT 0355	Trams may not meet new environmental regulations	USA - Chicago Trams	
C0417	Loss of Life Cluster	RCL	Group made up of distributed sub-risks
C0451	Weather Cluster	RCL	
M&S Contracts 0479	TestGroup	Projects	aaa
C0538	Group of Brexit risks not in Brexit node	Corporate	
C0540	Loss of Life	Corporate	Group made up of distributed sub-risks
C0544	Weather	Corporate	
M&S Contracts 0868	Operational risks are not managed properly	Maintainance and Service Contracts	
C0976	we experience complete or partial loss of Low Voltage (LV) electrical equipment	National Air Traffic Service	

Figure 219 – The **Manage Groups** panel showing the list of **Groups**

A list of the **Group Headers** will appear. To see the risks within a group, select the **Code**.



Belongs to Group(s)	Name	Project	Notes
M&S Contracts 0479	Design more complicated than initially expected	High Speed Train v2020	Small design changes have been requested which originally were agreed but are now proving more difficult than expected. Not all design changes have been implemented yet but the changes implemented so far are indicating problems.
M&S Contracts 0479	Tenderers decline bidding	Projects	The original tender has insufficient information which means the approach and costing of the bidders could be extremely varied (and potential not to the customers requirements).
M&S Contracts 0479	Lead times will continue to be extended for the next 6 months	Space Exploration and Travel	Lead times are becoming more and more reliable. Promises by key suppliers have not been upheld due to the suppliers own business problems.
M&S Contracts 0479	TestGroup	Projects	aaa

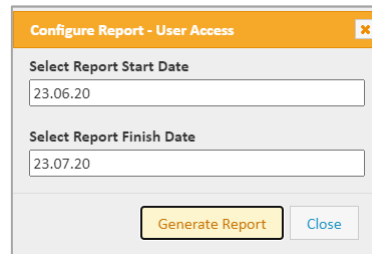
Figure 220 – A list of risks contained within a **Group**

A list of the risks will appear. To view a risk, select the **Code**. The risk will appear in the main screen behind this panel. To see the risk, close this panel first.

5.9.1.17 User Access

This panel shows when a user has logged into the system within a given time period. The **User Access panel** shows the dates and times when a user has logged in, logged out and when the system timed out.

Select the date ranges for which you wish to run the report:



The dialog box titled "Configure Report - User Access" contains two date selection fields. The first field, "Select Report Start Date", has the value "23.06.20". The second field, "Select Report Finish Date", has the value "23.07.20". At the bottom, there are two buttons: "Generate Report" and "Close".

Figure 221 – User Access panel

A dashboard will appear giving you the number of times a person has logged on and the date and time of the last time they logged in.

5.9.1.18 User Activity

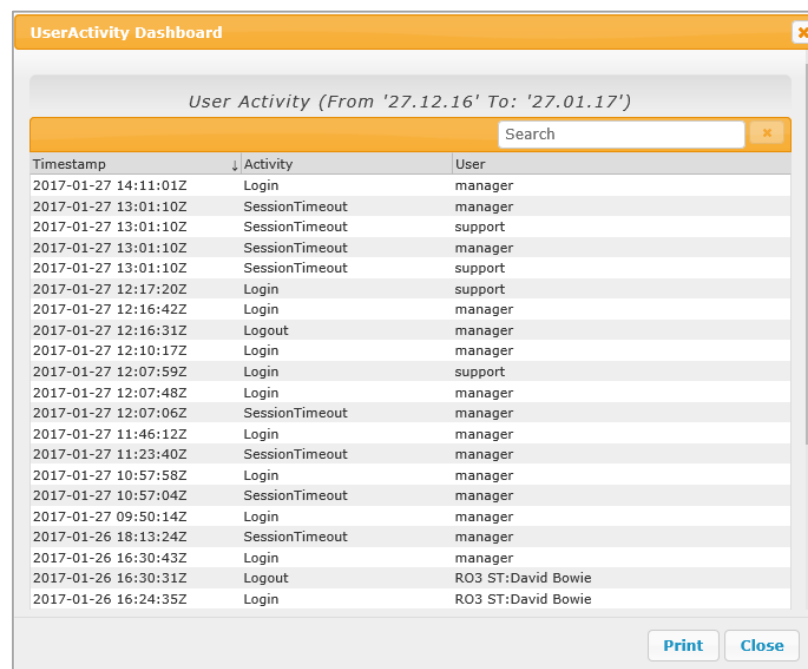
The **User Activity** gives you two options:

Users Only

Displays a list of user activity showing when users logged into the ERM system and when the system timed out.

Users and System Activity

Similar to **Users Only** but also shows when the application started up. You can use the search field to find a specific user or time stamp.



The "UserActivity Dashboard" window displays a table of user activity for the period from '27.12.16' to '27.01.17'. The table has three columns: Timestamp, Activity, and User. A search bar is located at the top right of the table area. The table contains 20 rows of data, showing various login, session timeout, and logout events for users named 'manager', 'support', and 'RO3 ST:David Bowie'.

Timestamp	Activity	User
2017-01-27 14:11:01Z	Login	manager
2017-01-27 13:01:10Z	SessionTimeout	manager
2017-01-27 13:01:10Z	SessionTimeout	support
2017-01-27 13:01:10Z	SessionTimeout	manager
2017-01-27 13:01:10Z	SessionTimeout	support
2017-01-27 12:17:20Z	Login	support
2017-01-27 12:16:42Z	Login	manager
2017-01-27 12:16:31Z	Logout	manager
2017-01-27 12:10:17Z	Login	manager
2017-01-27 12:07:59Z	Login	support
2017-01-27 12:07:48Z	Login	manager
2017-01-27 12:07:06Z	SessionTimeout	manager
2017-01-27 11:46:12Z	Login	manager
2017-01-27 11:23:40Z	SessionTimeout	manager
2017-01-27 10:57:58Z	Login	manager
2017-01-27 10:57:04Z	SessionTimeout	manager
2017-01-27 09:50:14Z	Login	manager
2017-01-26 18:13:24Z	SessionTimeout	manager
2017-01-26 16:30:43Z	Login	manager
2017-01-26 16:30:31Z	Logout	RO3 ST:David Bowie
2017-01-26 16:24:35Z	Login	RO3 ST:David Bowie

Figure 222 – The User Activity results

5.9.1.19 User Risk Activity

The User Risk Activity shows the total number of risks a person has changed, the number of risks created, updated, or deleted. **Note:** This will include any amendments, such as spelling changes.

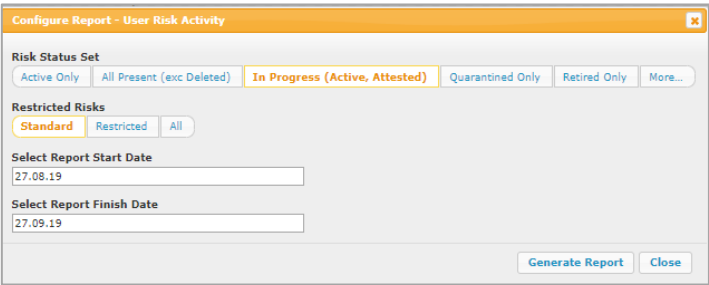
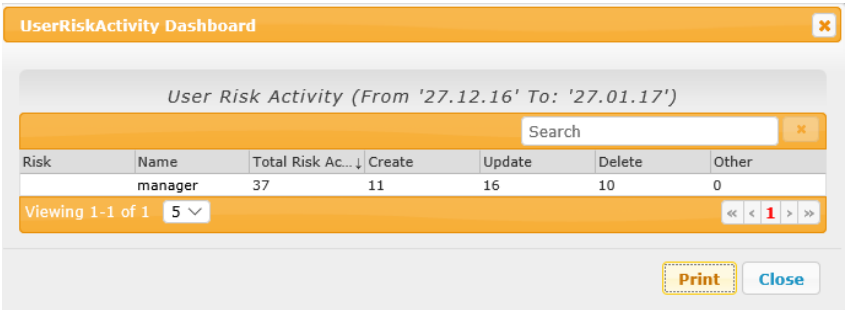


Figure 223 – The *User Risk Activity* panel

Firstly, indicate the timeline by selecting a **Start** and **Finish** date. The select **Generate Report**.



Risk	Name	Total Risk Ac...	Create	Update	Delete	Other
	manager	37	11	16	10	0

Figure 224 – The *User Risk Activity* results

5.9.1.20 Refresh Risks

There are many occasions where either the Administrators or Users may make major or extensive changes and it is possible these changes may not show on the main screen immediately.



Figure 225 – The *Refresh* button

Use the Refresh Risks option to ensure all risks are updated with any changes. Normal editing of a risk should not require this function.

5.9.1.21 Refresh Page

If changes have been made that impact the look of the main screen or drop-down menus, refresh the page to see the updates.



Figure 226 – The *Refresh* button

5.9.1.22 Scheduled Exports

If you have permissions to create **Scheduled Reports**, this provides a list of reports that have been scheduled. From this panel, reports may be re-scheduled (edited) or deleted from the schedule.

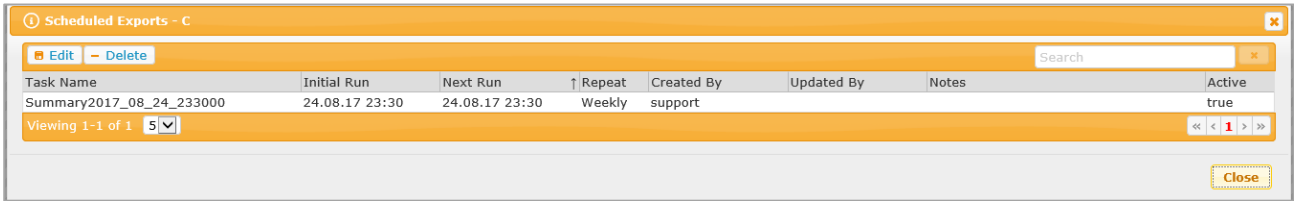


Figure 227 – **Scheduled Exports** edit panel

5.9.1.23 Bulk Copy Risks

If you have the permissions, you can use the Bulk Copy to clone a complete node, its children, and all risks to another node. This is useful when a folder of templated risks exists as a starting point for a new project.

5.9.1.24 Bulk Export Risks

If you have the permissions, you can use the Bulk Export to back up a complete node, its children, and all risks to a file. This is useful when it may be useful to take a snapshot of a node for potential reimport at some later time or transfer to a different ERM application (E.g., Dev to Live).

5.9.1.25 Bulk Import Risks

If you have the permissions, you can use the Bulk Import of a backup previously sent to a file. This may be needed if experimental changes to risks need to be reset (restored) or as a transfer from a different ERM application (E.g., Dev to Live).

5.10 Refresh

There are many occasions where either the Administrators or Users may make major or extensive changes and it is possible these changes may not show on the main screen immediately.



Figure 228 – The **Refresh** button

Use the Refresh Risks option to ensure all risks are updated with any changes. Normal editing of a risk should not require this function.

5.11 Risk Summary/Review

The **Risk Summary/Review** pane enables users to view a summary of a selected risk, review that risk, edit changes and sign-off. There is also the option to print a copy of the risk. Select a risk and then select the button.



Risk Reviews

Created	Title	Description	Username	Updated
24.08.21	Review Record on 24/08/2021	No changes for this risk	support	26.08.21
19.08.21	Review Record on 19/08/2021	Likelihood score increased as a number of near miss incidents have occurred since last review in July.	RM01	26.08.21

Definition

Code: C0001 Risk: Delays of key materials

Summary: Material delivery delays

Causes: lack of delivery drivers Effects: financial penalties to the contract

Responsibility, Classification & Timeline

Owner: SuperUser01 Manager: SuperUser02 Classification: no value Category: Financial

Location: no value Proximity: -18 Start Date: 14.10.21 End Date: 16.11.21

Hybrid Scoring

Impact	Pre-mitigated				Current				Target			
	Level	Min	Exp	Max	Level	Min	Exp	Max	Level	Min	Exp	Max
Probability	More than likely		50%		Less than likely		30%		Unlikely		15%	
Finance	Extreme		£50,000		Extreme		£50,000		Extreme		£50,000	
Schedule	Moderate		4.0d		Moderate		4.0d		Minor		4.0d	
Safety	Moderate				Moderate				Minor			
Security	Major				Moderate				Moderate			
Environment	Major				Moderate				Minor			
Operational	Minor				Minor				Minor			
Legal	Major				Moderate				Minor			
Reputation	Major				Moderate				Minor			

Treatment & Actions

Primary Treatment Objective: Apply policy 067 - subcontractor management

Primary Type: Reduce Owner: Superuser02 Primary Effectiveness: Effective (>=90% successful) Primary Status: In Progress

Actions

Code	Name	Description	Owner	Instance	Finish Date	Prog.	Act Status	Current Spend	Actual Spend
A0003	Action 1	Description of Action	Suprtuser13	Control	25			£0	£0

Budget

Project Budget (summed): £200,000 Risk Budget (summed): £0 Project Budget (at node): £200,000 Risk Budget (at node): £0

Allocation

Total: £50,000 From Actions: £0 Manual: £50,000 Allocation Available: no value Allocation Expires: 16.11.21

Linked Insurance

This is Insured: Fully covered Commentary & Information: Clause 7.3 covers this risk for transfer capability

Risk Commentary

Created	Title	Description	Username	Updated
19.08.21	This is a comment that I am adding on	description	RM01	19.08.21

< Previous Sign Off... Next > Edit... Print Close

Figure 229 – The **Review** pane

The size of the **Risk Summary/Review** window is adjustable. Select the left side of the review window and drag to the required width.

Each section is editable via buttons. This pane is semi-configurable by riskHive support. This enables sections to be added, re-ordered, or removed, hence the deployed pane may appear differently. The

standard sections are: **Review Record, Definition, Cause and Effect, Responsibility, Classifications, Timeline, Scenarios, Impacts, Treatment, Actions, Budget, Allocation, Insurance and Commentary**. In addition to the standard sections there are: **Custom Arrays** (if your organisation has made use of this functionality).



The **Risk Reviews** section is automatically populated if you have selected the 'Sign Off' button at the bottom of the risk review page and records who and when the risk was 'Signed-Off'. You can edit the risk reviews if necessary.



The **Definition** button enables you to update the Risk Title, Causes and Effects.



The **Edit Responsibility** button enables you to update the risk owner, risk manager and stakeholders connected with the risk.



The **Edit Classification** button enables you to update the Classification, Location, Category, and custom fields.



The **Edit Timeline** button enables you to update the Node, Proximity, Start and End Date as well as other time related fields.



The **Edit Qualitative Assessment** button enables you to update Pre-Mitigated, Current and Target Scenarios.



The **Edit Quantitative Assessment** button enables you to update Pre-Mitigated, Current and Target Scenarios.



The **Edit Treatment and Actions** button enables you to update the Primary Treatment and individual actions.



The **Edit Allocation** button enables you to update the budget for the risk, the date when the allocation will be available and expires.



The **Insurance** button enables you to update the insurance *status and add commentary*.



The **Commentary** button enables you to add commentary for your risk reviews and/or edit previous comments.



The **Edit Custom Arrays** button enables you to update any custom arrays configured for the application. This will only appear if your organisation has made use of this functionality.

Each section can be saved individually when making changes.


You can use the **Sign-off** option to record this risk has been reviewed. The Description section of the Sign-off panels enables you to add comments which will be later displayed at the top of the **Risk Summary/Review** pane.

The **Previous** and **Next** options will display the previous or next risk in the list on the main screen.

The **Edit** option will open the **Edit** pane where detailed changes to this risk can be made.

5.12 How do I?

5.12.1 Editing multiple risks

First, select all the risks you wish to review on the main screen (we recommend a maximum of 4). Select the **Edit** button .


At the top of the **Edit** panel is the **View Mode**:

Multi-Select View Mode: Single Merged


Single Merged will show a single box which, when edited, will apply the changes to all the selected risks.

Multiple Individual will show the individual elements for all risks. You can make changes to the individual risks and then save the changes.

5.12.2 Move a single risk

To move an individual risk, select the risk and then the **Edit** button . Select the **Position & Timeline** option. Changing the **Project Node** will move the risk to the selected register.

5.12.3 Move up to 4 risks

To move an individual risk, select the risk and then the **Edit** button .

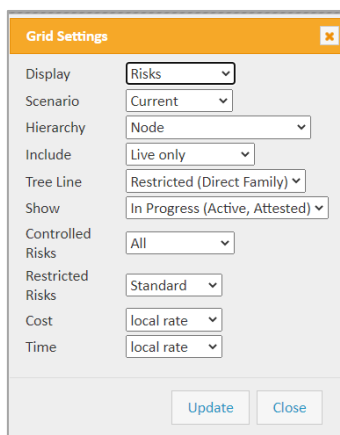
Ensure the option **Single Merged** is selected at the top of the panel.

Select the **Position & Timeline** option. Changing the **Project Node** will move the risks to the selected register.

5.12.4 View and Tag Restricted Risks

To view anything regarding restricted risks a user must have “Restricted” permission. Restricted permission may only be assigned by administrators.

Restricted risks are not displayed by default on the main grid. This is to avoid the possibility of sensitive risks showing on an unattended screen. A permitted user must request to see restricted risks from the “Grid Settings” control.




The image shows a 'Grid Settings' dialog box with the following settings:

Setting	Value
Display	Risks
Scenario	Current
Hierarchy	Node
Include	Live only
Tree Line	Restricted (Direct Family)
Show	In Progress (Active, Attested)
Controlled Risks	All
Restricted Risks	Standard
Cost	local rate
Time	local rate

Buttons: Update, Close

Figure 230 – Grid Settings – Restricted Risks Filter

Here the user selects Restricted Risks - “Restricted” or “All” the main grid will then allow such risks to be listed.

Restricted risks can be identified by the  icon within the info column.

















<div>AllPre-mitigatedRisks</div>							
Code	Risk Phase	Curre...	Name Values	O...	M...	Info	Watch
C0362		31	rrr			  	
C0442		55				  	
C0009	Research	50				  	
C0349		50				  	

Figure 231 – Main Grid showing restricted Risks

To tag a risk as restricted or un-tag, use the “Is restricted” field within the “Audit and Review” panel. Note this selection field only appears if a user has “Restricted” permission, otherwise it is hidden.

Audit & Review - C0432

Has Happened?

Is Restricted?

Yes

System State

Quarantined

Status?

new

Figure 232 – Audit and review Tagging risk as “Restricted”

5.12.5 Plug-In Translator

If you wish to have your screen translate your information from one language to another, follow the steps below:

Go to Google home page: <https://www.google.co.uk/>

To the right of the address bar, select the **Customize and Control Google Chrome** button: .

From the drop-down list, select **Settings**.

Select **Extensions** from the left-hand side.

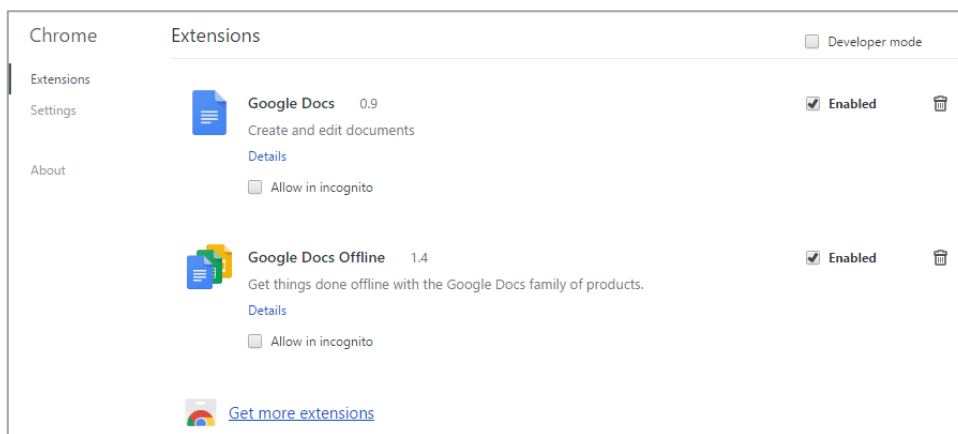


Figure 233 – The **Extensions** panel in Google

Select Get more extensions.

In the Search bar (top left of screen), type Translate. Translation options should appear.

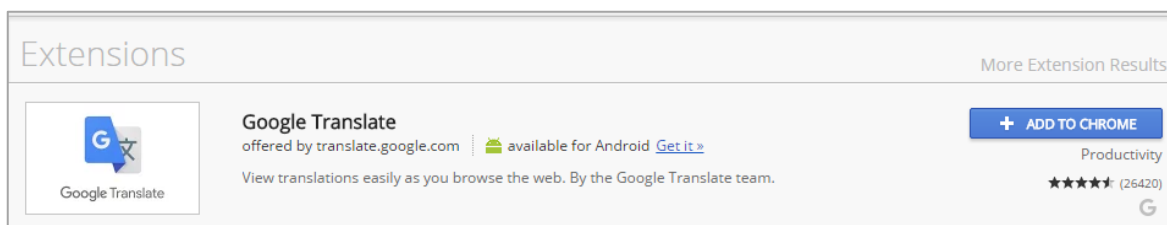


Figure 234 – The **Google Translate** option

Select **Add to Chrome**. The following panel will appear:

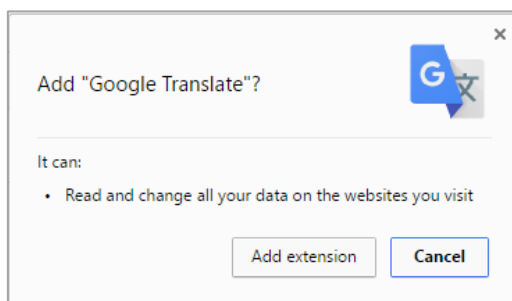


Figure 235 – The **Google Translate** option

Select **Add extension**. The following panel will appear:

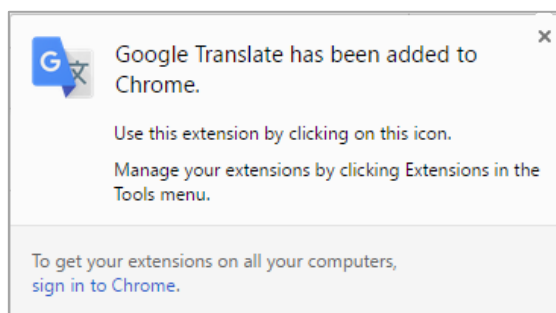



Figure 236 – The **Confirmation** notice

The translation plug-in has now been added to Chrome (although it can be added to any browser).

To the right of the address bar, you will see the **Google Translate** button: 

Select the button and the following panel will appear:

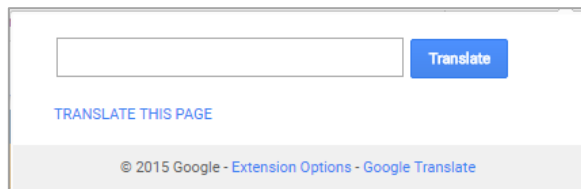


Figure 237 – The **Translation** panel

Select Translate this Page.

Directly underneath the button, another bar will appear:



Figure 238 – The **Translation** bar

Select the hyperlink **English** (or the down arrow next to it).

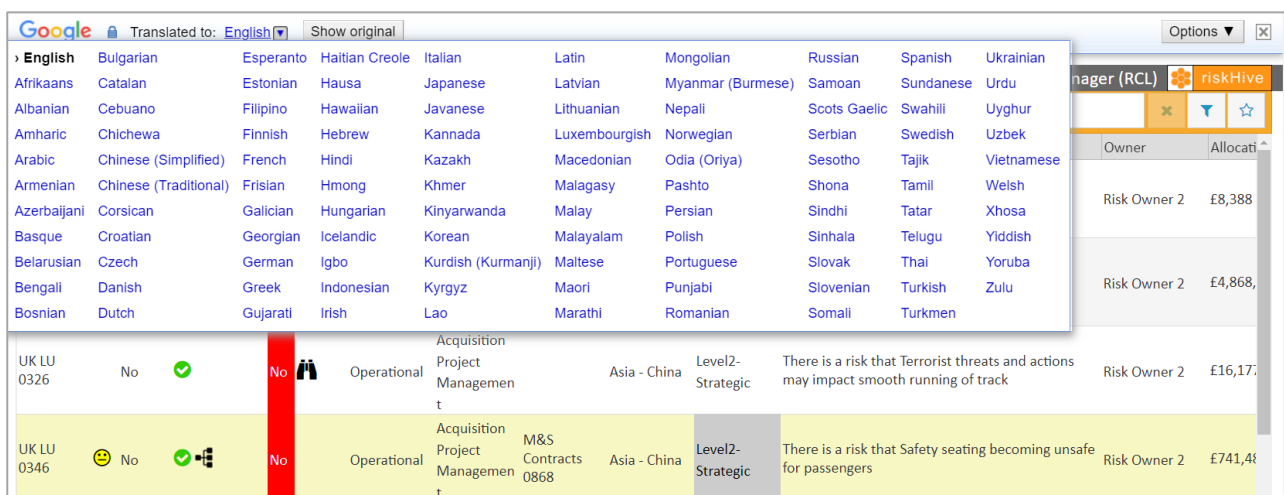


Figure 239 – All languages

Select the language you wish to view and **Translate**. All the on-screen text and text within panels and drop-down menus will now show in your new language.

5.12.6 Update my risk scores having changed the project Cost data

If you are using dynamic scoring and you change any of the budget fields (Project / Risk Reference / Risk Budget) having once created risks in that project, they system does not currently automatically 'update' the relative risks scores. The user must carry out a 'forced' update to all those records.

You can do the following either on a risk-by-risk basis, or by selecting all the risks in that register. To force the changes, complete the following steps:

1. Select the risk(s) and use the split screen functionality.
2. Select the Hybrid scoring panel to show on the split screen. Note: If you have selected more than one risk the values will appear as blanks.
3. Press 'Save changes' in the top right-hand side of the panel.

Figure 240 – The **Translation** bar

The following message will appear:

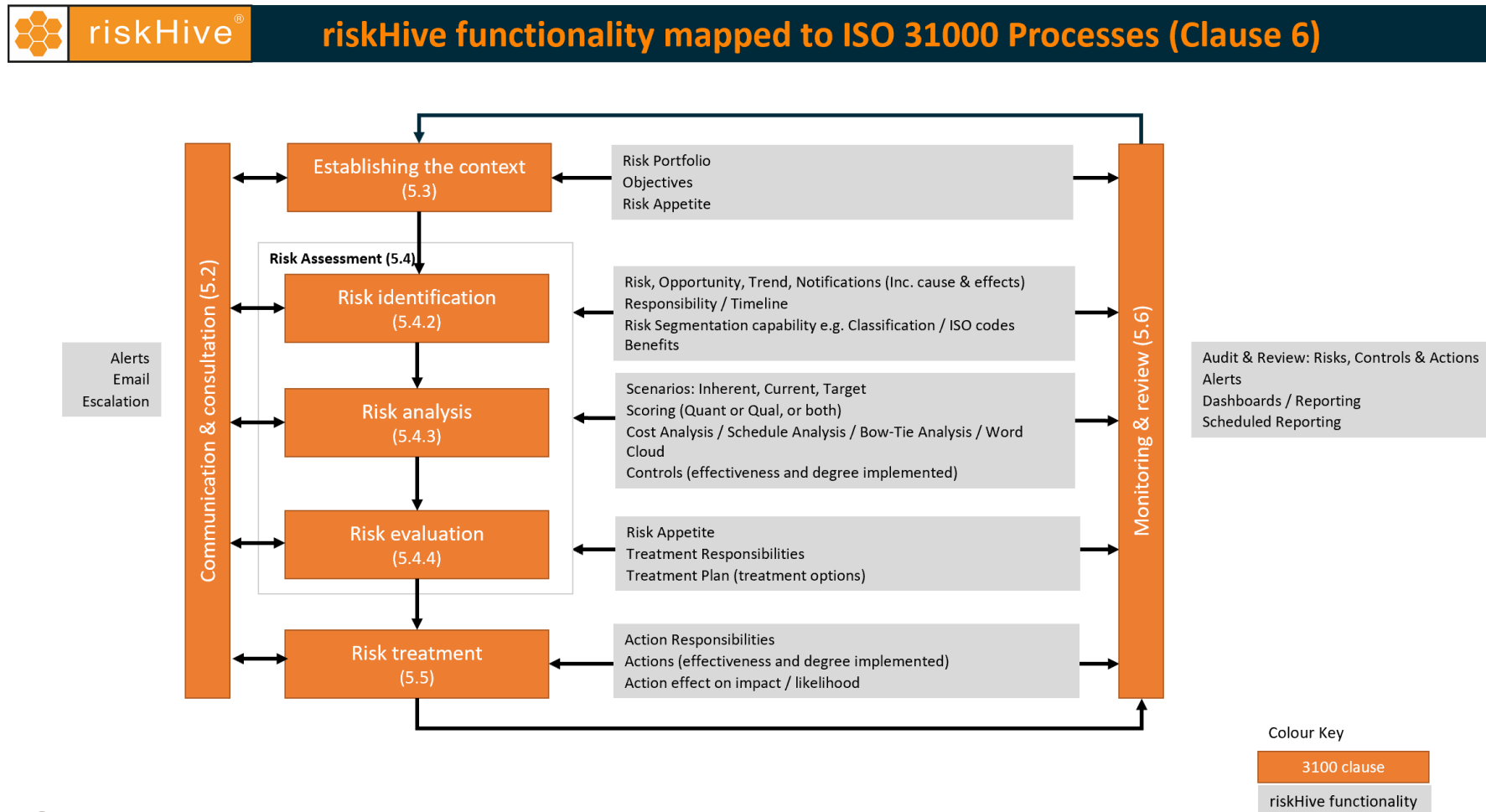
Figure 241 – The **Translation** bar

4. Select 'Yes, Save Changes'.

The system will now re-calculate the scores for all the risks you have selected.

6 Appendix 1

6.1 6.1 ERM and the ISO31000 framework



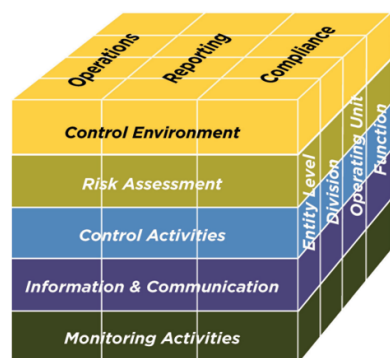
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6.2 6.2 ERM and the COSO framework

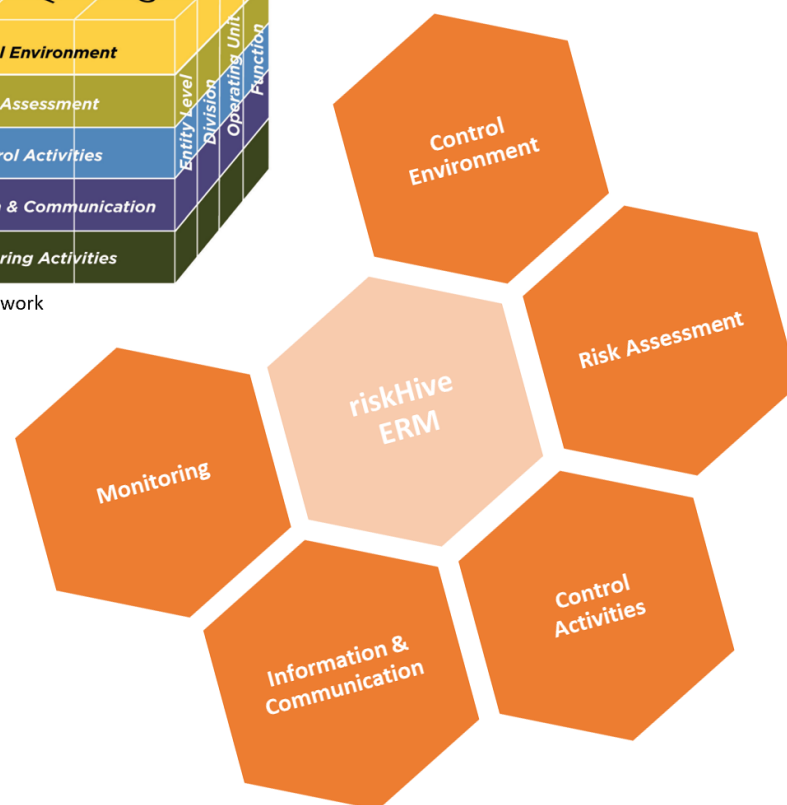


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riskHive functionality mapped to the COSO Framework



COSO Framework



Control Environment

Risk Portfolio
Risk Appetite
Risk, Treatment and Actions Ownership Responsibilities

Risk Assessment

Objectives
Risk, Opportunity, Trend, Notifications (Inc. cause & effects)
Responsibility / Timeline
Risk Segmentation capability e.g. Classification / ISO codes
Benefits
Scenarios: Inherent, Current, Target
Scoring (Quant or Qual, or both)
Cost Analysis / Schedule Analysis / Bow-Tie Analysis / Word Cloud

Control Activities

Controls (effectiveness and degree implemented)
Treatment Plan (treatment options)
Actions (effectiveness and degree implemented)
Action effect on impact / likelihood

Monitoring

Audit & Review: Risks, Controls & Actions
Alerts
Dashboards / Reporting
Scheduled Reporting

Information & Communication

Alerts
Email
Escalation