

RPS

BowTieXP

The next generation bow-tie methodology tool

Risk Management Methodology and Software

Features and Advantages

of the

BowTieXP Advanced Edition

to suit the

IADC HSE Case Guidelines

Product Overview

BowTieXP is a risk management and analysis software tool that supports the BowTie and BowTieXP methodology. With a complete suite of functions that support hazard analysis, reporting and communication of risks, identification of critical tasks, linking to managements systems and more, the BowTieXP solution provides a way of the future for semi-quantitative and qualitative analyses

BowTieXP comes in several editions and is available with training guides, computer-based training (CBT) systems and many other supporting materials.

One of the users from the largest offshore drilling company in the world noted when starting to use BowTieXP without prior training that "BowTieXP has value beyond what I ever imagined". We agree: BowTieXP does risk analysis like no other software tool in the world.

BowTieXP Advanced is specifically written for the needs of IADC members

BowTieXP Advanced is a special version of BowTieXP for the advanced risk analyst, incorporating many features that save much time and effort. BowTieXP Advanced permits an organisation's activities to be modelled from both the perspective of being HSE-critical (or risk-critical) AND from the perspective of being hazardous.

Specifically built for the IADC (International Association of Drilling Contractors) following the release of their October 2006 HSE Case Guidelines, the BowTieXP Advanced edition is under continual development with a growing list of advantages and features to benefit the evolving needs of IADC members.

These notes include features up to version 3.2. Subject to change without notice.

visit us at www.bowtiexp.com.au or call us on +61 8 9211 1111

12 advantages of using BowTieXP for implementing the IADC HSE Case Guidelines:

1. BowTieXP is a specialised tool for building HSE Cases which focuses on getting the job done quickly and efficiently.
2. With inbuilt flexibility, BowTieXP supports the official IADC HSE Case Guidelines terminology.
3. BowTieXP contains change management tools that allow users to track and check changes between versions of their HSE Cases. Included are change management reports that save time and help prevent unintended/unwanted changes.
4. BowTieXP contains a Search Engine that makes information in the HSE Case accessible to those unaccustomed to working with HSE Cases. As one user noted, "it is like Google has been attached to the HSE case - a search engine that intelligently finds and summarises elements of the HSE Case".
5. The functionality for making Summary Of Operational Boundaries (SOOB) matrices not only uses the information available in the risk analysis (thereby saving time), but it also keeps the risk analysis and the SOOB matrix consistent - an otherwise very time-consuming and error-prone activity.
6. SOOB matrix navigation functionalities make it very easy to find the right information in large SOOB matrices. Common reading mistakes (e.g. people reading in the wrong row/column) are avoided by presenting the information with a clear and filtered approach.
7. BowTieXP contains many visualisation options that make a risk analysis more insightful and useful for operational personnel. This includes SOOB display options that show data in the SOOB matrix in a way that reveals the relationships between risks/hazards and operations.
8. BowTieXP generates a comprehensive and fully IADC HSE Case Guidelines-compliant Hazard Register report.
9. BowTieXP analyses information in the risk analysis and the operations to generate overviews of HSE-critical competencies.
10. BowTieXP is the first tool that can use information from the SOOB matrices to filter and prioritise information in the risk analysis.
11. BowTieXP unlocks the (safety) management system from the perspective of Operation Integrity Management & Risk Management, making it much clearer to those searching for information as to WHY complying with the (safety) management system is so important.
12. BowTieXP can link to all relevant documents on the intranet that are part of or relevant to the (safety) management system, as well as any other relevant document. BowTieXP can take all those linked documents offline so they can be burned onto a CD/DVD to be provided in digital format to a regulator.

Advanced Features

| Feature | What it does for you |
|--------------------------------|---|
| Case File Compare | Allows you to compare to case files to see what is different between them. Also allows you to run a report (Microsoft Word-compatible) to support your change management processes. A special SOOB compare report helps to change-manage SOOB matrices. |
| Import Entities | Allows you to import specific data (activities etc) from one BowTieXP case file into another BowTieXP case file. |
| SOOB Matrix | The Summary Of Operational Boundaries (SOOB) matrix allows you to model concurrent/simultaneous operations as well as identify controls and operational risk factors and their importance for various operations. This supports the new IADC HSE Case Guidelines. |
| Backlinks | Helps you to see immediately where information in a case file (for instance, an activity) is linked from. |
| Relationship Model | Visualises the relations between Hazards and Operations and other risk relationships. Also works on data in the SOOB matrices. |
| Custom Terminology | Allows standard BowTieXP terminology to be customized, for instance to support the IADC HSE Case Guideline terminology (template already included). |
| Hazardous Activities | Standard BowTieXP methodology focuses on HSE-critical or risk-critical activities. BowTieXP Advanced allows activities & operations to be modelled as either 'HSE-critical', 'hazardous' or both 'HSE-critical and hazardous'. |
| Mass find & replace | BowTieXP Advanced not only allows case file to be searched, but also to mass-replace labels or text anywhere in a case file. |
| New Reports | The new competencies report uses a completed BowTieXP HSE Case to identify which competencies are HSE-critical for a given operation. |

Example of a SOOB Relationship Model

BowTieXP
The next generation BowTie methodology tool



Figure 11: A Soob relationship model



| Feature | New in Ver 3.0 | Standard | Navigator | Advanced | The functions of this feature |
|------------------------|----------------|----------|-----------|----------|--|
| DATA MANAGEMENT | | | | | |
| Case File Compare | * | | | ✓ | Allows you to compare two case files to see what is different between them. Also allows you to run a report (Microsoft Word-compatible) to support your change management processes. A special SOOB compare report helps to change-manage SOOB matrices. |
| Import Entities | | ✓ | | ✓ | Allows you to import entities from other BowTieXP Case Files. Links to activities and/or documents can be imported as well. |
| Mark for move | * | ✓ | | ✓ | Allows you to reorganize your BowTieXP Case File (controls, activities, etc.) without losing the internal links. |
| Text Find | | ✓ | ✓ | ✓ | Provides the ability to search the case file for the given text fragment. |
| Find & Replace | | | | ✓ | BowTieXP Advanced allows you to replace text throughout the case file. |
| Mass Find & Replace | | | | ✓ | BowTieXP Advanced allows you to mass-replace texts throughout the case file. The effect of this operation is not directly visible and is therefore restricted to BowTieXP Advanced users. |

| BOWTIE VISTA | | S | N | A | |
|-------------------------------|---|---|---|---|---|
| BowTie Vista Search Engine | * | ✓ | ✓ | ✓ | Provides you with a search engine that has a similar look and feel as Google and will search through the entire BowTie Case File. |
| BowTie Vista wildcard search | * | ✓ | ✓ | ✓ | Provides you with the ability to use wildcards in your search |
| BowTie Vista type restriction | | | | ✓ | Provides the ability to restrict your search to a certain type of object |

| MODELING | | S | N | A | |
|-----------------------------------|--|---|---|---|--|
| Control colours | | ✓ | ✓ | ✓ | Allows you to use colour coding to show the effectiveness, type, BRF or SOOB category of an element. |
| Show Extra Information | | ✓ | ✓ | ✓ | Allows you to show the linked activities or BRF category in a separate box on the barrier / recovery measure |
| Show Risk Assessments | | ✓ | ✓ | ✓ | Allows you to show the risk assessments on the consequences within the BowTieXP model. |
| Relationship Model | | | ✓ | ✓ | Visualises the relations between Hazards and Operations and other risk relationships. Also works on data in the SOOB matrices. |
| New Case Wizard | | ✓ | | ✓ | Assists with the initial steps of creating a BowTieXP model. |
| Action notes added to any element | | ✓ | ✓ | ✓ | Adds "Post-It" style notes to any item |
| Selective Visibility | | ✓ | ✓ | ✓ | Allows you to show/hide selected elements, making it possible to filter a model for a specific audience. |

| NAVIGATION | | S | N | A | |
|-------------------------|---|---|---|---|--|
| Backlinks | * | ✓ | ✓ | ✓ | Allows you to navigate back to where elements are linked from (e.g. : show all controls where effectiveness = High) |
| Go To Definition | * | ✓ | ✓ | ✓ | Each element in the BowTieXP model now contains a 'Go To Definition' link in the context menu, which will jump to the node in the Treeview where the element has been defined. |
| Back and forward button | * | ✓ | ✓ | ✓ | After navigating through the Treeview, the 'Back' and 'Forward' buttons will be available to assist navigation. |

| USER INTERFACE | | S | N | A | |
|------------------------------|---|---|---|---|--|
| Personal layout | | ✓ | ✓ | ✓ | The layout of BowTieXP can be completely configured to your specific needs. You can create and save personal layout templates by positioning and resizing windows. |
| Dual Layout Set | * | ✓ | ✓ | ✓ | Allows you to switch between two layout sets during presentations. |
| Changing fonts | | ✓ | ✓ | ✓ | Throughout the BowTieXP model, all fonts can be changed in order to improve the communicational value of the model and to emphasise certain elements. |
| Control colour legend | * | ✓ | ✓ | ✓ | BowTieXP now contains a window displaying a legend of the control colours that are currently being displayed. |
| Maximize / Minimize Treeview | * | ✓ | ✓ | ✓ | A new toolbar button allows you to quickly maximize and minimize the Treeview Window which improves the usability of the Treeview. |

| CONFIGURING | | S | N | A | |
|----------------------------------|--|---|---|---|--|
| Edit Property Descriptions | | | | ✓ | Allows you to customize labels throughout the software and reports, making BowTieXP compliant to organisational standards or to the IADC HSE Case Guideline terminology (template already included). Changed property descriptions are visible in the Standard & Navigator Editions. |
| Configure Risk Assessment Matrix | | ✓ | | ✓ | Allows you to configure up to six risk assessment matrices (categories, columns, rows and colours). |
| Configure lookup tables | | ✓ | | ✓ | Allows you to configure a large number of categories, colours and codes which are used throughout BowTieXP. |

| REPORTING | | S | N | A | |
|--------------------------|---|---|---|---|--|
| BowTieXP Reports | * | ✓ | ✓ | ✓ | A new mechanism has been added which makes it easier to browse through the available reports. Reports are generated in RTF format which can directly be edited within MS Word. |
| Competencies report | * | ✓ | ✓ | ✓ | The new competencies report uses a completed BowTieXP HSE Case to identify which competencies are HSE-critical for a given operation. |
| Export Listview to Excel | * | ✓ | ✓ | ✓ | Allows you to quickly export a specific listview directly into Excel. |

| SOOB | | S | N | A | |
|-------------------------------|--|---|---|---|--|
| SOOB Matrix | | | ✓ | ✓ | The Summary Of Operational Boundaries matrix allows you to model concurrent/simultaneous operations as well as identify controls and operational risk factors and their importance for various operations. Supports the new IADC HSE Case Guidelines. |
| SOOB Operation Filter | | | ✓ | ✓ | Allows the user to filter the SOOB Matrix by selecting the required operation, making the SOOB Matrix easier to use and reducing the chance of user error. |
| SOOB Instant Search | | | ✓ | ✓ | Easy & powerful search functionality embedded in the SOOB matrix makes finding information a simple and straightforward task. |
| SOOB Visualisation | | | ✓ | ✓ | Powerful mind maps show from the perspective of the operation that is planned to run, and which other operations can and cannot run simultaneously; relevant information is linked to the visualisation. |
| SOOB Filtered Export to Excel | | | ✓ | ✓ | Export to Excel allows you to export your SOOB Matrix with exactly the information that is currently showing on screen, providing you an easy way to filter the information in the SOOB Matrix for different users/stakeholders |
| SOOB flexibility | | | ✓ | ✓ | BowTieXP allows you to create SOOB Matrices with three perspectives in one matrix: operations, the relation between risk management (controls/barriers) and operations and operational risk factors. Use the perspective that is most logical and useful to you. |
| Expand/collapse by keyword | | | ✓ | ✓ | Allows the user to only have the lines matching the keyword to be expanded for easy navigation / searching. |

| DIAGRAM | | S | N | A | |
|-------------------------------|--|---|---|---|--|
| Protected "read only" version | | | ✓ | | The BowTieXP Navigator Edition will allow data consumers to navigate through BowTieXP diagrams ("read only"). |
| Save as image | | ✓ | ✓ | ✓ | Allows diagrams to be saved in the following formats: GIF, PNG, BMP, JPG, TIF and EMF. |
| Copy to clipboard | | ✓ | ✓ | ✓ | Allows diagrams to be copied to clipboard for immediate use in programs like Microsoft Word. |
| Export to Visio | | ✓ | ✓ | ✓ | Allows export of diagrams to Microsoft Visio. |
| Printing of diagram | | ✓ | ✓ | ✓ | Allows the current diagram to be printed. Within BowTieXP it is possible to print a diagram over multiple pages. |
| Order diagram as poster | | ✓ | ✓ | ✓ | Allows a BowTieXP diagram to be ordered as a full colour A0 poster. |
| Headers and footers | | ✓ | ✓ | ✓ | Allow the user to add custom headers and footers to each hazard diagram. |
| Expand & collapse | | ✓ | ✓ | ✓ | Allows the user to hide parts of the diagram by expanding and collapsing specific branches. |
| Overview window | | ✓ | ✓ | ✓ | Allows the user to see in which part of the diagram he/she is working and quickly select a new region for viewing / editing. |

| OTHER | | S | N | A | |
|---|--|---|---|---|--|
| Hazardous Activities | | | ✓ | ✓ | Standard BowTieXP methodology focuses on HSE-critical or risk-critical activities. BowTieXP Advanced allows activities & operations to be modelled as either HSE-critical or hazardous or both HSE-critical and hazardous. |
| Spell checker | | ✓ | | ✓ | Allows spell checking throughout the entire case file in more than 200 languages. |
| Import of BlackBox incident investigation fact list | | ✓ | | ✓ | Allows importing of an incident investigation fact list generated by the Investigators' BlackBox software tool (Black BowTieXP Edition only). |
| Case overview | | ✓ | ✓ | ✓ | A quick overview of all consequences in the case file showing the location, hazard, top event and risk assessments of each. |
| Quality checks | | ✓ | ✓ | ✓ | Checks which can be performed on the current case file to find areas which require further attention to fulfil completeness requirements. |
| Document links | | ✓ | ✓ | ✓ | The ability to link documents directly to BowTieXP elements (either be on the local machine, a network or the internet). Document Links provides a powerful way to integrate BowTieXP with other systems in the org. |
| Offline document links | | ✓ | ✓ | ✓ | The linked documents can be copied / downloaded to a cache directory next to the case file to allow them to be viewed whilst not connected to the network (off line). |
| Case file information | | ✓ | ✓ | ✓ | The details of the author and the case file can be added to the file and shown upon opening. |
| Ability to send mail to the case file author | | ✓ | ✓ | ✓ | If the case file information has been entered, it is possible to send an email to the author at the press of a button. |
| Clipboard with ability to copy / paste entire trees or 1 item | | ✓ | | ✓ | Standard windows clipboard support for moving, copying or pasting data. |
| Drag and drop | | ✓ | | ✓ | Most links can be assigned using drag and drop between the different BowTieXP windows. |
| Ability to create doc links by dropping files or urls | | ✓ | | ✓ | Document links can be quickly created by dragging urls or files onto the diagram or document links window. |
| Undo system | | ✓ | ✓ | ✓ | BowTieXP offers an unlimited undo/redo system. |

Contact Details



PO Box 528, West Perth WA 6872

Level 1, 610 Murray Street, West Perth WA, Australia 6000

T +61 8 9211 1111 F +61 8 9211 1133 E bowtiexp@rpsgroup.com W www.bowtiexp.com.au

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