# BowTieXP Complete

BowTieXP Complete contains all Standard features and many more, specifically made for the BowTieXP power user. Do you work with bowties almost every day and want to fully and efficiently customize your files? Than BowTieXP Complete is for you! Find out all about the extra features in this brochure.
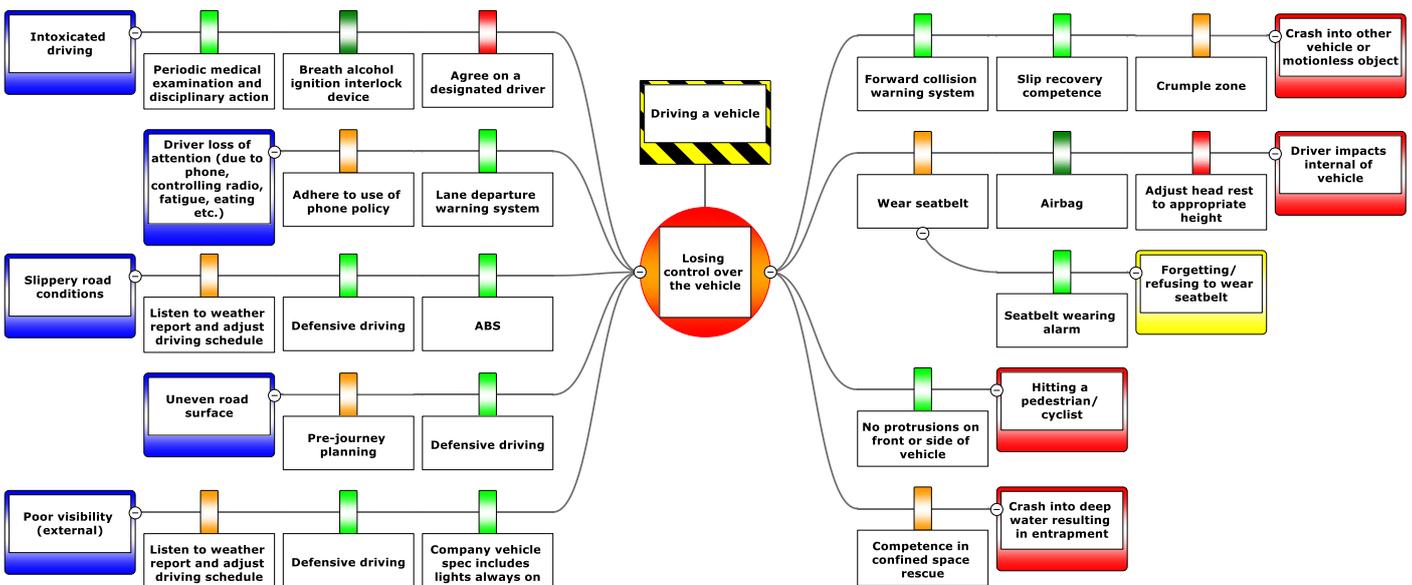
Complete features

👁 1 Visualization & Communication

Use one of these three features to ensure easy risk communication by making the risk visual and understandable at the right abstraction level.

1. Advanced Filter

Filtering a bowtie on multiple criteria is possible with the advanced filter. So whether you would like to find out how many barriers belong to a certain job title, or to visualize only those critical improvement actions that belong to hardware barriers, it can be done using BowTieXP Complete.

2. Diagram display profiles

Diagram display profiles can now be saved and used to quickly change the information that is visualized on the bowtie diagram.

3. Barrier grouping

This feature allows you to group barriers per threat or consequence line, based on their common values. Do you quickly want to see whether at least two different persons are accountable for barriers on a threat line? Or do you want to focus on the distribution of your barrier types?

This feature introduces an extra variable on your barrier: barrier families. Barrier families can be used as independent barrier names, while the 'normal' barriers can be used as more specific (not independent) barrier elements. This improves communication of bowties to different stakeholders.
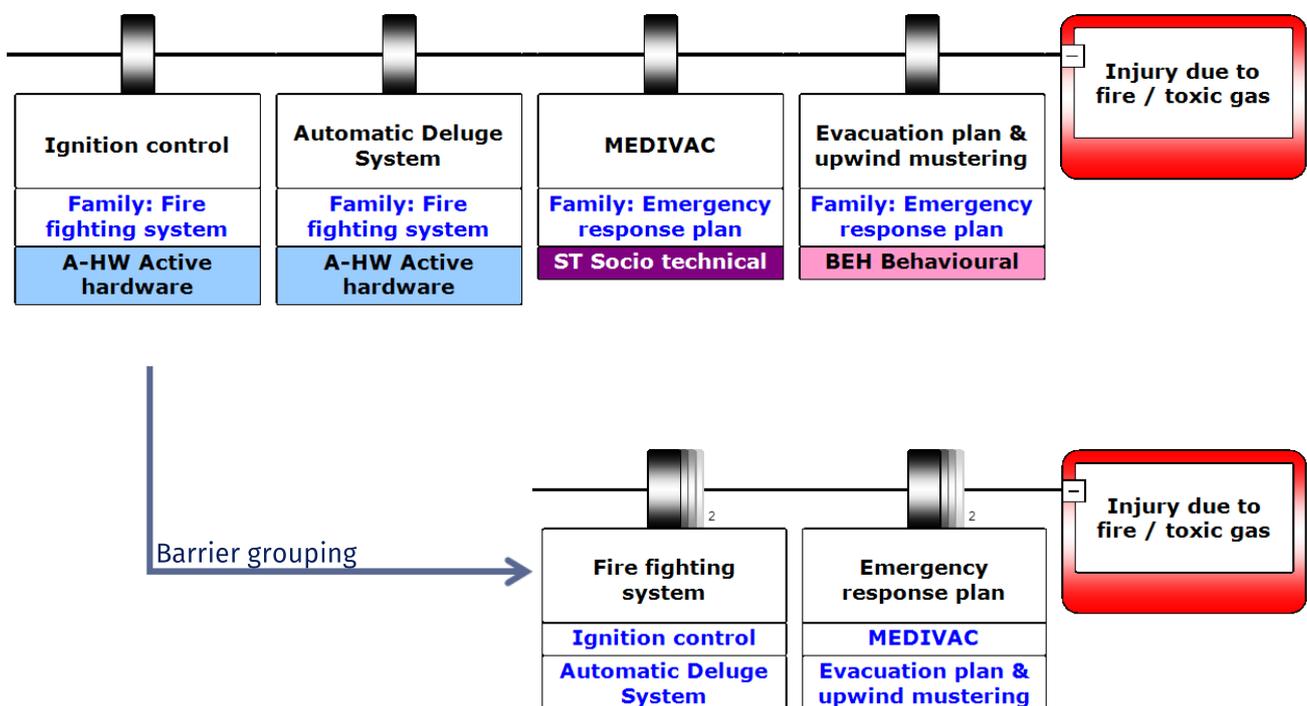
2 Scrapbook

The scrapbook allows bowtie items to be collected for quickly building or expanding a bowtie. From single barriers to complete threat lines and even hazards with all associated information. Pieces of a bowtie can be dragged and dropped to quickly create a new diagram. The information is gathered from a variety of places, such as Excel or manual input. From there it can be saved into a file, separate from the case file, in order to build bowtie registers. The scrapbook will save you hours of work when building and maintaining your bowties.
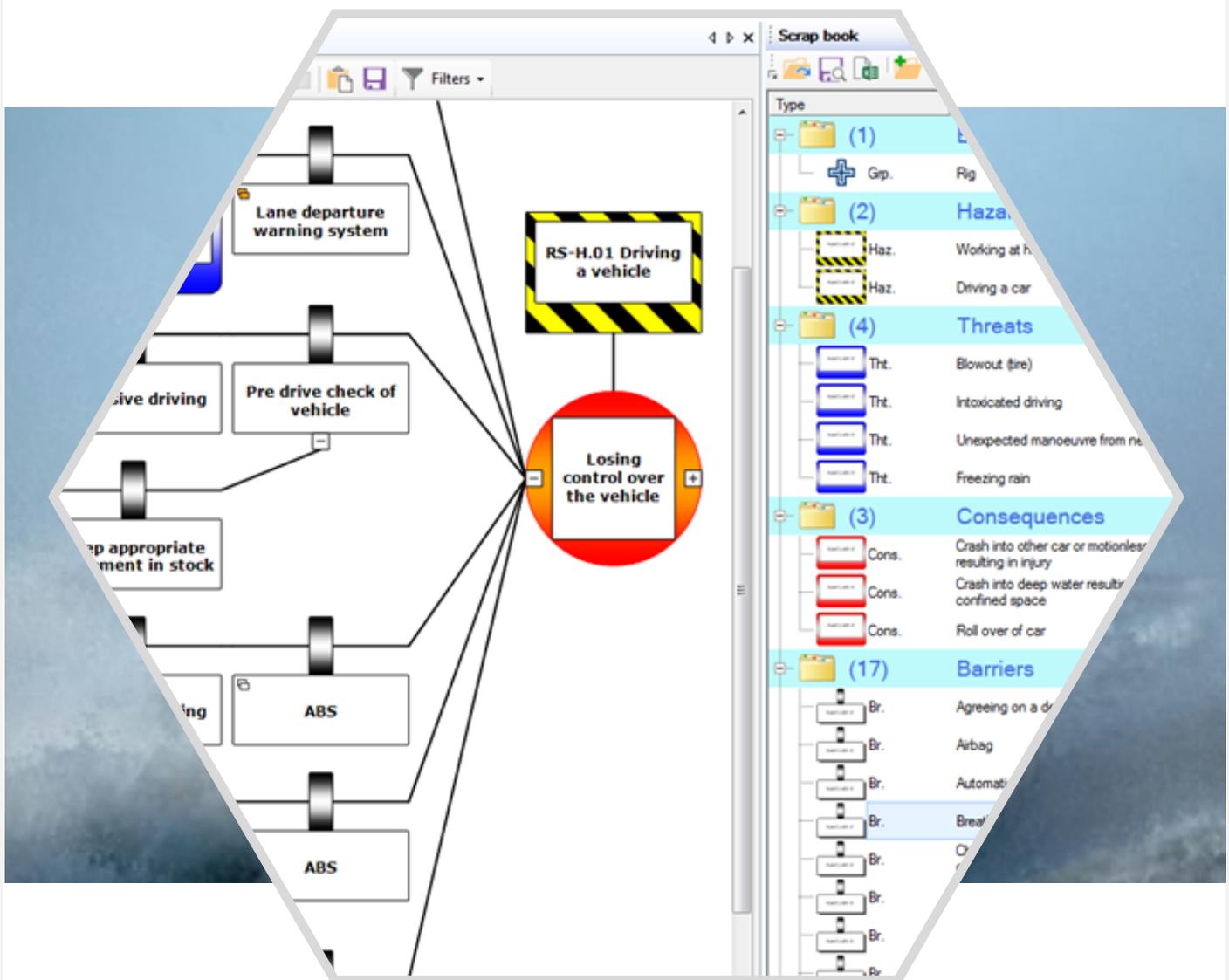
Complete features

3 LOPA

Layers of Protection Analysis (LOPA) is a semi-quantitative risk analysis methodology. Hereby the frequency of a negative event is calculated according to the risk reduction delivered by the independent protection layers (barriers). The LOPA feature automatically calculates the frequency of a consequence, given the initial frequency of all the threats and the Probability of Failure on Demand (PFD) of the barriers. This allows you to easily compare the target consequence frequency with the reality of daily operations.

- **Visualize your LOPA calculations**

  Traditional LOPA calculations are often performed in spreadsheets. The LOPA feature makes the LOPA study visual and therefore easier to understand and communicate.

- **Consider multiple scenarios**

  Make your LOPA calculations more realistic by taking into account all bowtie scenarios when calculating the frequency of the top event.

- **Calculate future frequencies**

  Frequencies and/or probabilities could change over time. The LOPA feature allows you to calculate both current and future frequencies.

- **Create insightful reports**

  Analyze and share your LOPA calculations by creating useful reports. Some reports will be based on a single scenario (traditional) LOPA calculation, while others will take all bowtie scenarios into account.
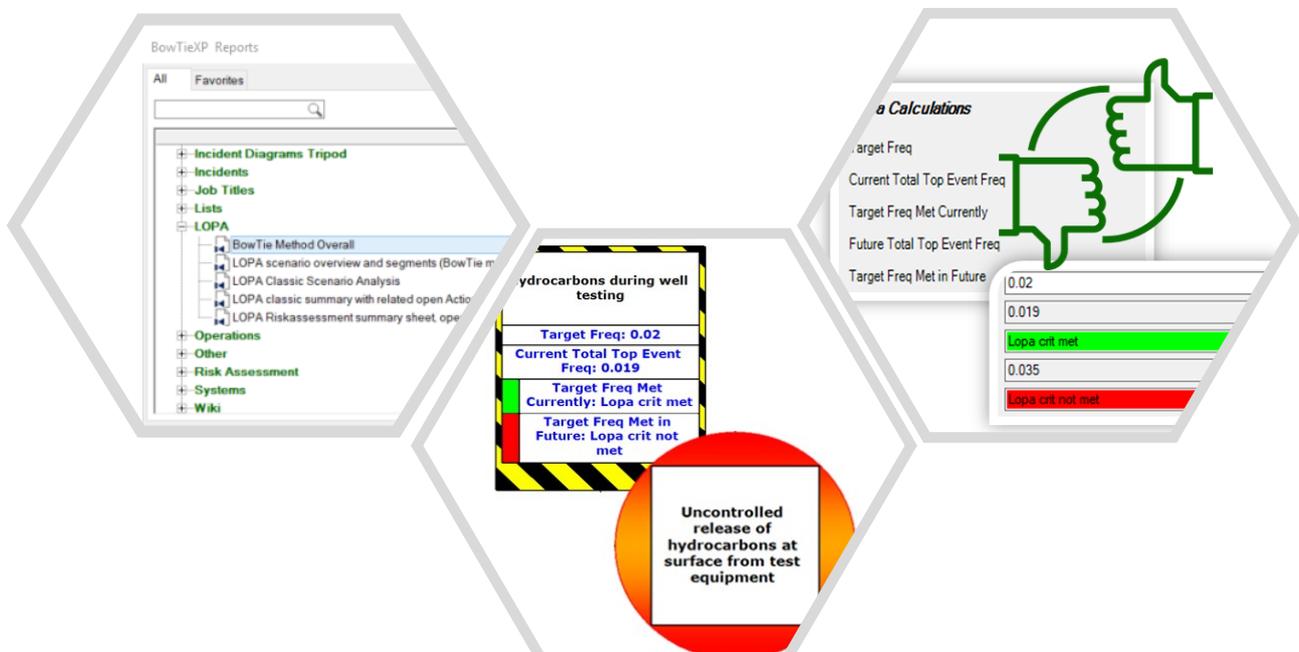
4 Audits

Audits allows you to proactively verify the performance of your safety barriers. It enables you to raise findings and generate actions to continuously improve your risk management approach and close the Plan-Do-Check-Act cycle.
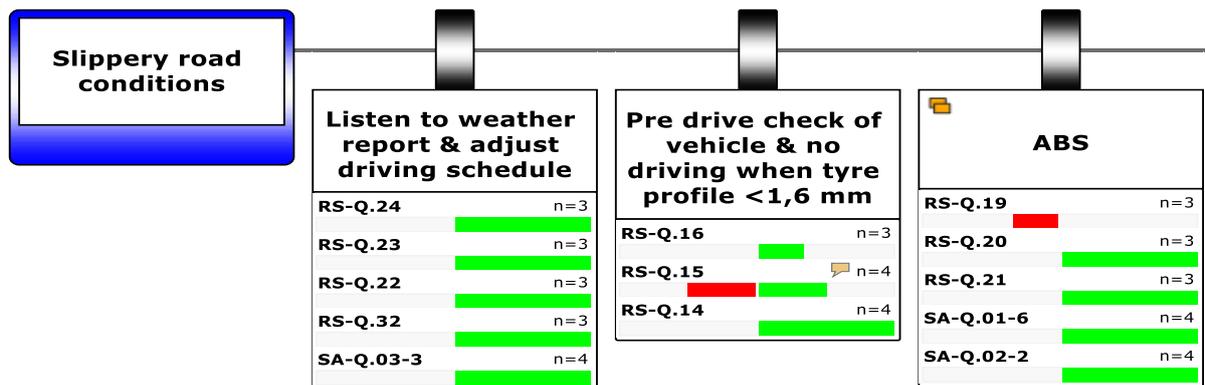
Use the Audits functionality to:

- **Generate barrier based questions**
  Check all components that make a barrier fully functional by creating barrier-specific questions. Define and rate ordinal answers to score your barrier performance.

- **Create focused surveys**
  Compile questions into a survey that fits your target audience and easily send this to the designated department or individuals, via Excel. Audits easily imports the results.

- **Check your compliance**
  Translate regulations into clear objectives linked to specific barriers, using compliance frameworks. Show audit results on your barriers to check if your compliance level is acceptable.

- **Expose strengths and weaknesses**
  Visualize the results on your bowtie and make risk based decisions. Analyze barrier strengths and weaknesses and summarize results by aggregating answers per barrier or survey.

- **Share valuable audit information**
  Check barrier performances over time or per location with the Audits filter. Communicate risks and capture all data in high-quality reports that Audits offers.

Complete features

5 Powerful user features

To support you as user, BowTieXP Complete offers additional features and options that are tailored towards your needs. These features are designed to help you work more efficient and effectively and can be a valuable resource for those who are looking to get the most out of their software.

1. ## Custom terminology

   Each case file contains a large table with the names of all object types and their property present within BowTieXP. This allows you to make adjustments to terminology and gives you the opportunity to tailor-fit the software to your organization. For example, you could rename controls to barriers.
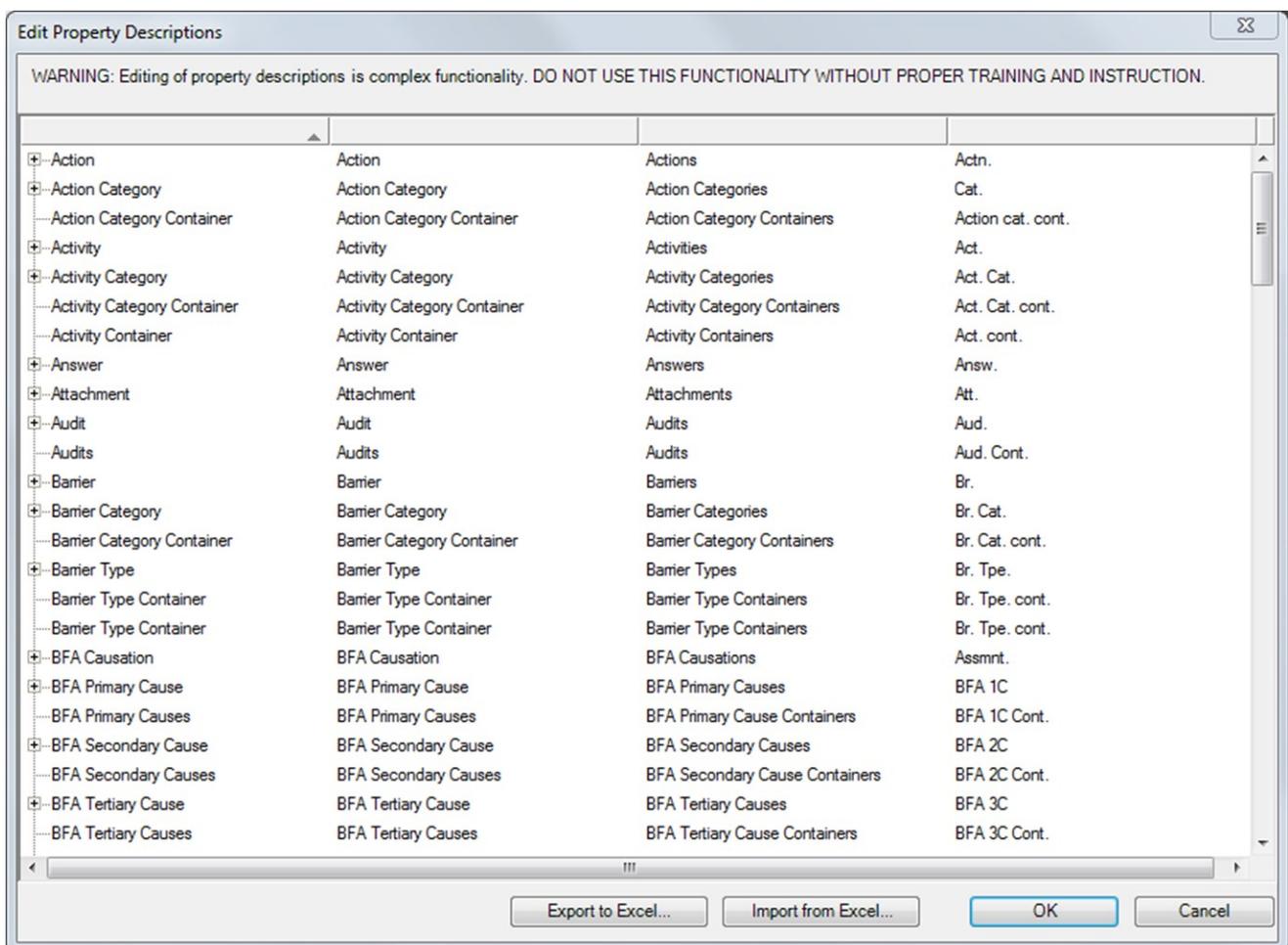
2. Extra reports

To accommodate the extra information you can import in Complete, and to gain some more complex insights into your data, the Complete edition has twelve extra reports. You can adjust these reports to your own liking. You can adjust it to your company branding and create targeted reports for different divisions. From detailed barriers in one report to extensive overviews for your board members, these reports got it all.

	A	B	C	D	E	F	G	H	I
2	**Hazard**	RS-H.01 Driving a vehicle							
3	**Top event**	Losing control over the vehicle							
4	Inherent	Residual							
5	**[D4]**	**B4**	People						
6	**[D2]**	**D2**	Assets						
7	**[A0]**	**A0**	Environment						
8	**[D1]**	**C1**	Reputation						
9									
10	**Intoxicated driving**								**HF Human Factors**
11	**Barriers & Escalation Factors**		**Crit.**	**Barrier type**	**Eff.**	**Br. Cat.**	**Family**	**Accountable**	**Activities**
12	Periodic medical examination for professional drivers		Medium Critical	BEH Behavioural	Good			Doctor	
13	Breath alcohol ignition interlock device		Highly Critical	A-HW Active hardware	Very Good			Engineer	• RS-A-M.02 General vehicle maintenance
14	Agreeing on a designated driver		Medium Critical	BEH Behavioural	Unknown			Driver	• RS-A-T.03 Practical vehicle safety training
15	Lane departure warning system		Medium Critical	A-HW Active hardware	Good			Engineer	• RS-A-Inv.01 Lane departure system present in car
16									
17	**Driver loss of attention (due to phone, controlling radio, fatigue, eating etc.)**								**HF Human Factors**
18	**Barriers & Escalation Factors**		**Crit.**	**Barrier type**	**Eff.**	**Br. Cat.**	**Family**	**Accountable**	**Activities**
19	Lane departure warning system		Highly Critical	A-HW Active hardware	Good			Engineer	• RS-A-Inv.01 Lane departure system present in car

3. Copy past between bowties

Similar to importing data from a case file, there is also another way of copying data. You can simply use copy and paste to import all kinds of entities between bowtie files.

Feature matrix BowTieXP editions

6 Feature matrix

BowTieXP feature	Standard	Complete	Feature
Display profiles	✓	✓	Easily switch between your own created diagram profiles. Only in Complete you can create your own display profiles.
Barrier grouping	-	✓	Visually group barriers by family, effectiveness, criticality, type etc. Only usable in Standard if visual barring grouping is saved in display profile (read only).
Advanced filter	-	✓	Show only shapes of the diagram that have a reference of any form to the elements you have selected. Customize the filter criteria on the advanced filter, which extends its functionality.
Maintenance data (S&P)	-	✓	Visualize the online/offline status of (active) hardware barriers by determining their current function through individual equipment tags (parts) and their systemic logic (systems).
Relationship models	-	✓	Draw many different diagrams based on the data you have entered into your case file, visualizing the relationships between the data.
Bowtie chaining	-	✓	You can chain bowties together, so the reach of the bowtie can be extended when the need arises. It allows you to visualize the relationship between bowties.
Scrapbook	-	✓	Collect bowtie elements for quickly building or expanding a bowtie diagram. Import any reference data.
Import external data	-	✓	Import external data, such as from Excel files.
Advanced import entities	✓	✓	More integral import from other BowTieXP case files.
Compare file function	-	✓	Assess the difference between two case files or single bowties. See the differences visually or generate a report of the comparison.
Mark for compare	-	✓	Compare specific bowtie elements.
Custom terminology	r	✓	Change terminology used in the software. Standard allows some customized terms, Complete allows all.

BowTieXP feature	Standard	Complete	Feature
Additional reports	-	✔	Generate a full collection of reports (Excel and/or Word). BowTieXP Standard has only a selected collection.
Case overview	✔	✔	Offers additional views to gain insight from different perspectives into the relations between the data in your case file.
Spreadsheets	-	✔	Allows you to create your own methods for quantified and visual risk assessment in BowTieXP.
Copy & paste between files	-	✔	Simply copy & paste to import all kinds of elements between bowtie files.
Find text	✔	✔	Find and substitute text throughout the case file.
Grouped barriers editing	-	✔	Make use of the grouping symbol on an element to edit multiple grouped elements simultaneously.
Multiple select edit	✔	✔	Select multiple bowtie elements and edit or copy & paste them at once.
Link maintenance data to barriers	-	✔	Via self-defined online criteria you can make decisions how many parts may be offline to keep the "parent-element" online.
Global-local bowties	✔	✔	A set of (local) bowties can be linked to a parent (often on global level) bowtie. This concept allows autonomous management of bowties and barriers performance from different organization units/locations.
LOPA	-	✔	Assessing probability and display of (semi-) quantifiable information on bowties.
Compliance	-	✔	Translate regulations into clear objectives linked to specific barriers, using compliance frameworks.
(Barrier Centric) Surveys	-	✔	Compile questions into a survey that fits your target audience and easily send this to the designated department or individuals, via Excel.

BowTieXP feature	Standard	Complete	Feature
Tree view filtering & tooltips	✓	✓	Temporarily hide elements in the tree view to keep overview.
Expose strengths & weaknesses	–	✓	Analyze barrier strengths and weaknesses and summarize results by aggregating answers per barrier or survey.
SOOB matrices	–	✓	Summary Of Operational Boundaries (SOOB), the matrix gives you 3 different overviews that generates an operational map of what you can and cannot do under certain conditions.
Export to Visio	✓	✓	Export basic bowtie diagrams to Viso. What information is exported is limited.

Please note: IncidentXP is not included in this document. | "r" in a column means that it can read a Complete (or Standard) setting.

Contact Wolters Kluwer Enablon for a trial license or an online demonstration.