SAFEXPERT WHITEPAPER

Safexpert

The most important innovations in Safexpert 9.0

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What's new in Safexpert 9.0

Don't worry! Although this Safexpert version includes many new features that will make your working life much easier, you will find the switch easy for two reasons:

- we have put special effort into the development of a modern and intuitive user interface and
- Core functions such as risk assessment and the CE Guide have received a facelift, but can still be used as usual.

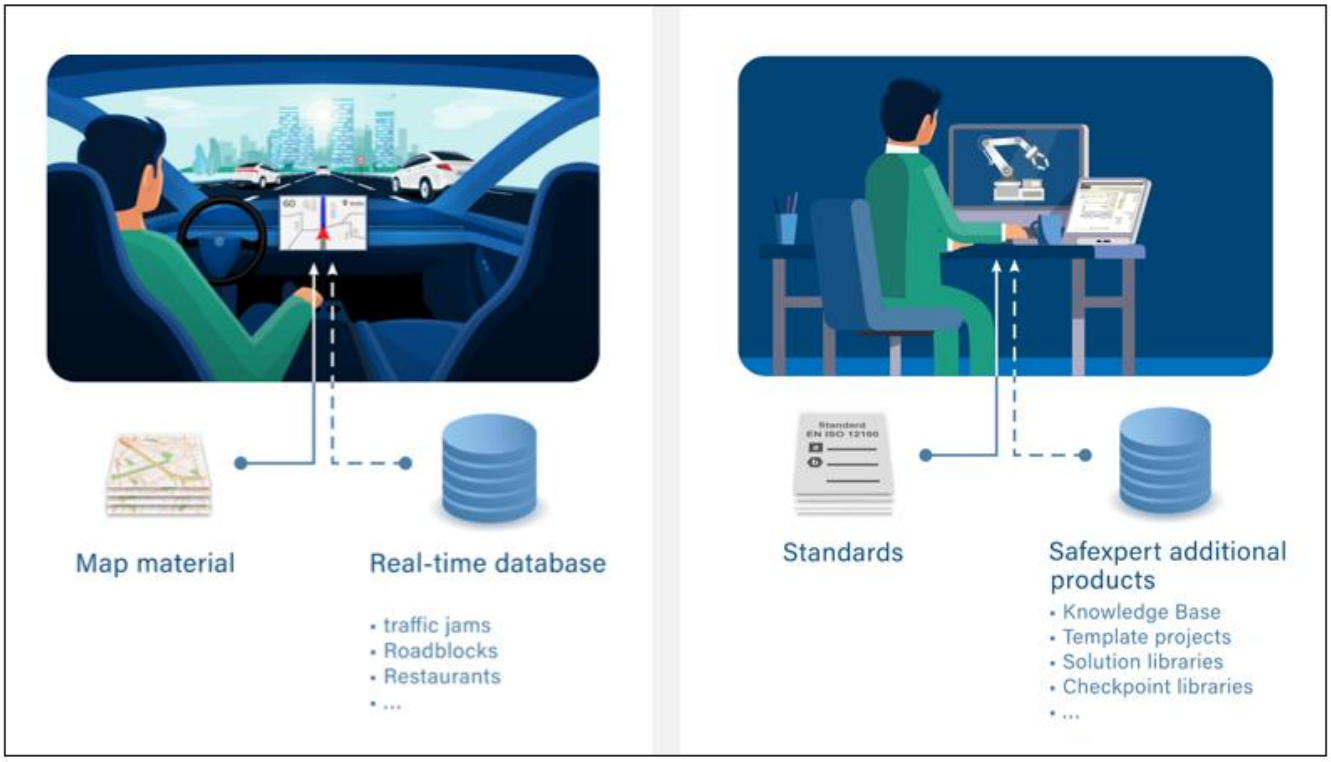
1 Digital standards management

With Safexpert 9.0, we are setting a new milestone in the field of digital standardisation. As before, we are not satisfied with providing standards documents in PDF format!

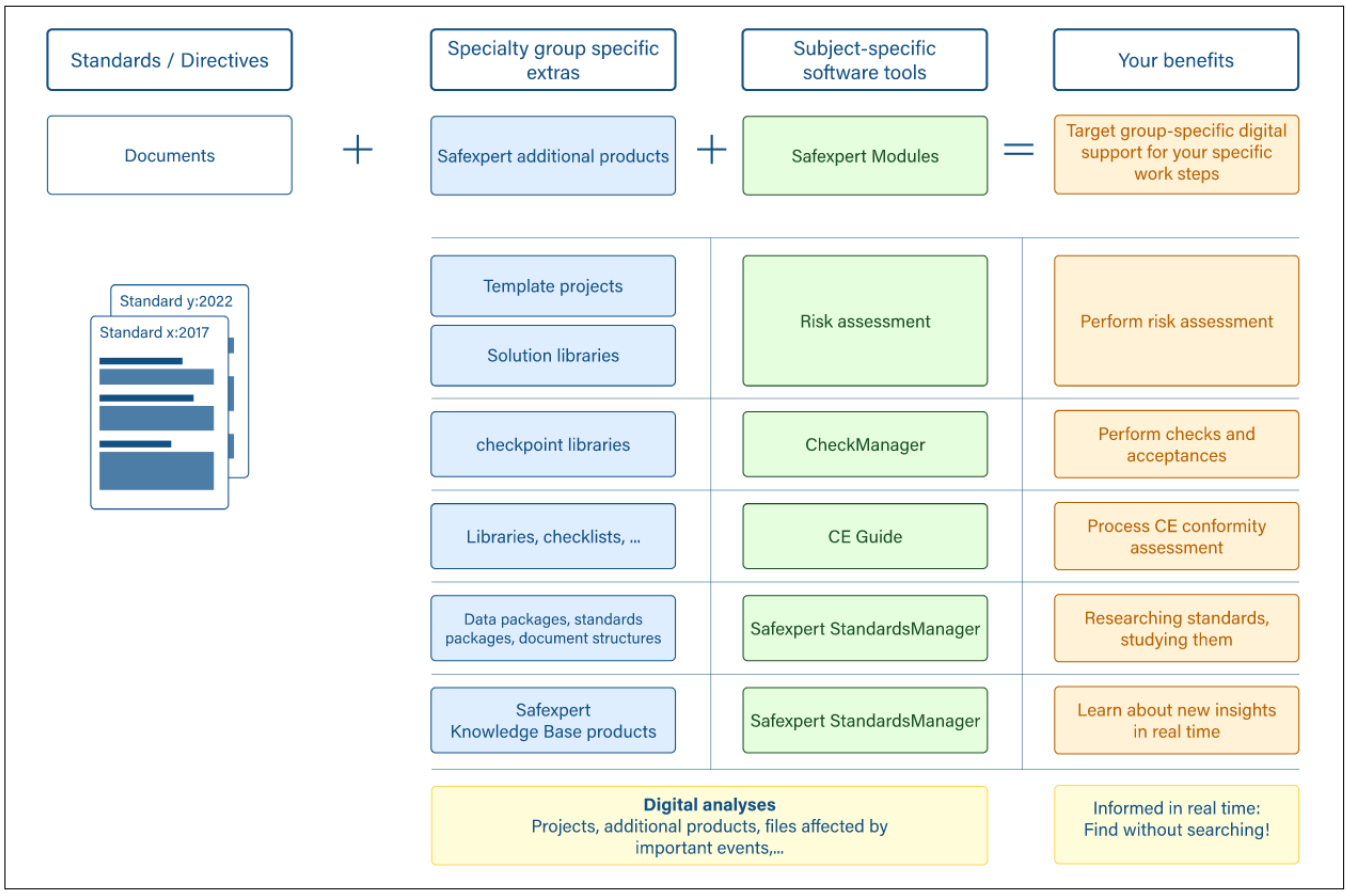
1.1 Project management with Safexpert

Standards are just like road maps. The days when you struggled through a foreign city with road maps are long gone. Navigation devices steer you reliably and safely to your destination. And they process more than maps. In the same way, standards are only the basis for you as a designer, planner or tester on your way to a safe and legally compliant product.

Knowledge of standards alone is often not enough. The state of the art develops more rapidly than the state of the standard. For this reason, we have placed a focus on the topic of "digital standardisation" in Safexpert 9.0 and developed functions to digitally build up requirements and knowledge in standards in such a way that it is available in machine-readable form and is suitable for informing the people concerned about important events in real time, similar to a navigation system:



Only the combination of digitally prepared standards content in Safexpert additional products (see 8) and subject-specific software modules form the optimum combination to provide you with suitable digital support for specific work steps:



Digital analyses (see 4) check daily whether important events have occurred that indicate that your projects are affected by important events. In your personal dashboard, you learn in real time about such important events that are of interest to you personally.

Above all, the new functions for managing solutions in a solution library (see 10) offer completely new functions with which you can standardize your risk assessments and keep your solutions not only at the state of the art, but at the state of the art!

1.2 Standards management with Safexpert

Safexpert is primarily intended for designers, planners, CE officers and other persons who perform risk assessments of machines, plants or electrical equipment or are otherwise involved in CE processes.

These target groups were also the focus of the new development of Safexpert StandardsManager.

But even people who have nothing to do with CE marking will be excited by our new concepts and solutions for digital standards management in the 21st century.

Therefore, it is possible to license only the Safexpert StandardsManager module and the matching Safexpert additional products.

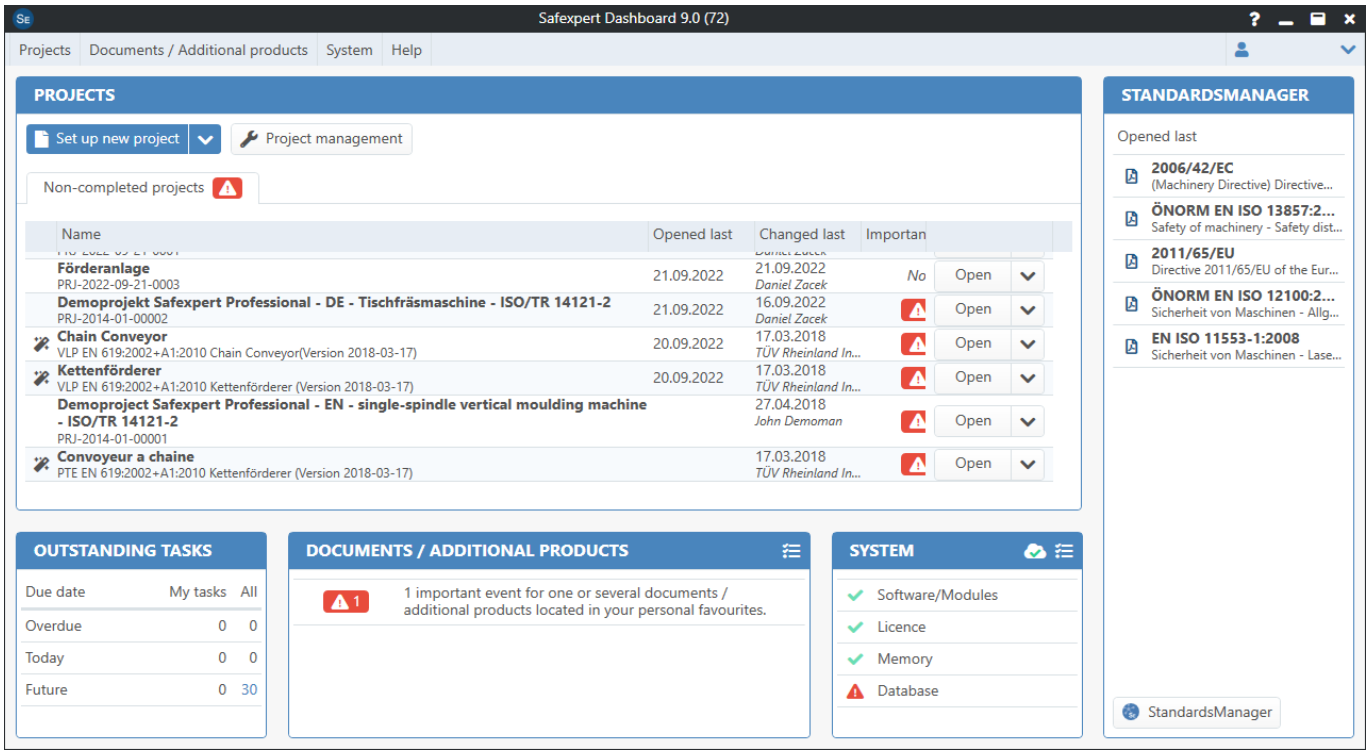
Inform your colleagues in your standards office as well as in compliance or quality management about our new concepts for a contemporary and modern standards management:

www.ibf-solutions.com/digital-standardisation

2 Your personal dashboard

After starting and logging in, your personal dashboard always opens now. Here you will find the Safexpert main menu and a lot of important information:

2.1 Complete dashboard

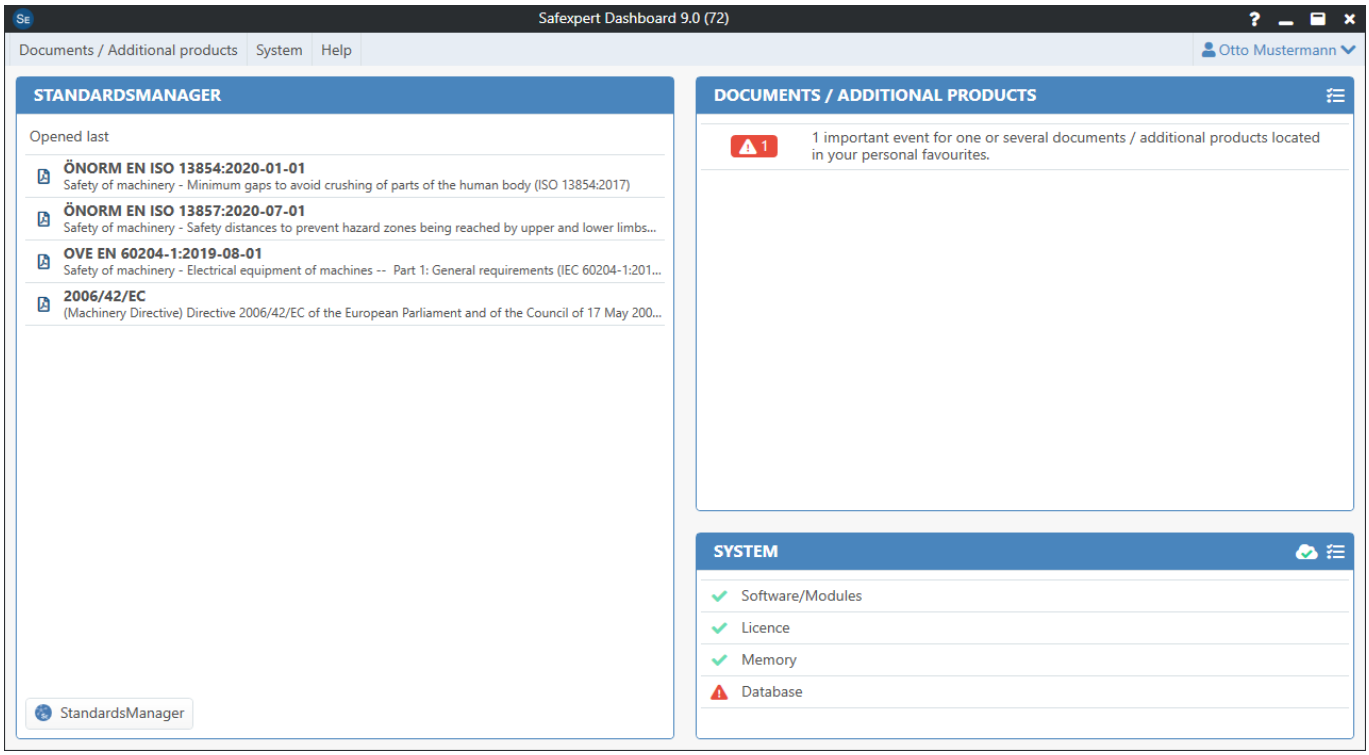


Contents of the new dashboard:

- The main menu has been rearranged.
- In the upper right corner, you can see under which username you are logged in. Safexpert continues to use your login for history logging. In addition, special personalized digital analyses are performed (see 4).
- The orange header tells you if Safexpert cannot perform automatic checks, for example, because there is no Internet connection to the Safexpert Live Server or your company favourites are out of date. This way, you will not be lulled into a false sense of security.
- In the "PROJECTS" widget you can now find out which projects are affected by important events without having to open them first.
- The "DOCUMENTS / ADDITIONAL PRODUCTS" widget will tell you when documents or Safexpert additional products that you have marked as "Personal favourites" have changed.
- In the "NORMMANAGER" widget, open the last opened documents or the StandardsManager module.

2.2 Dashboard, if you have only licensed the StandardsManager module

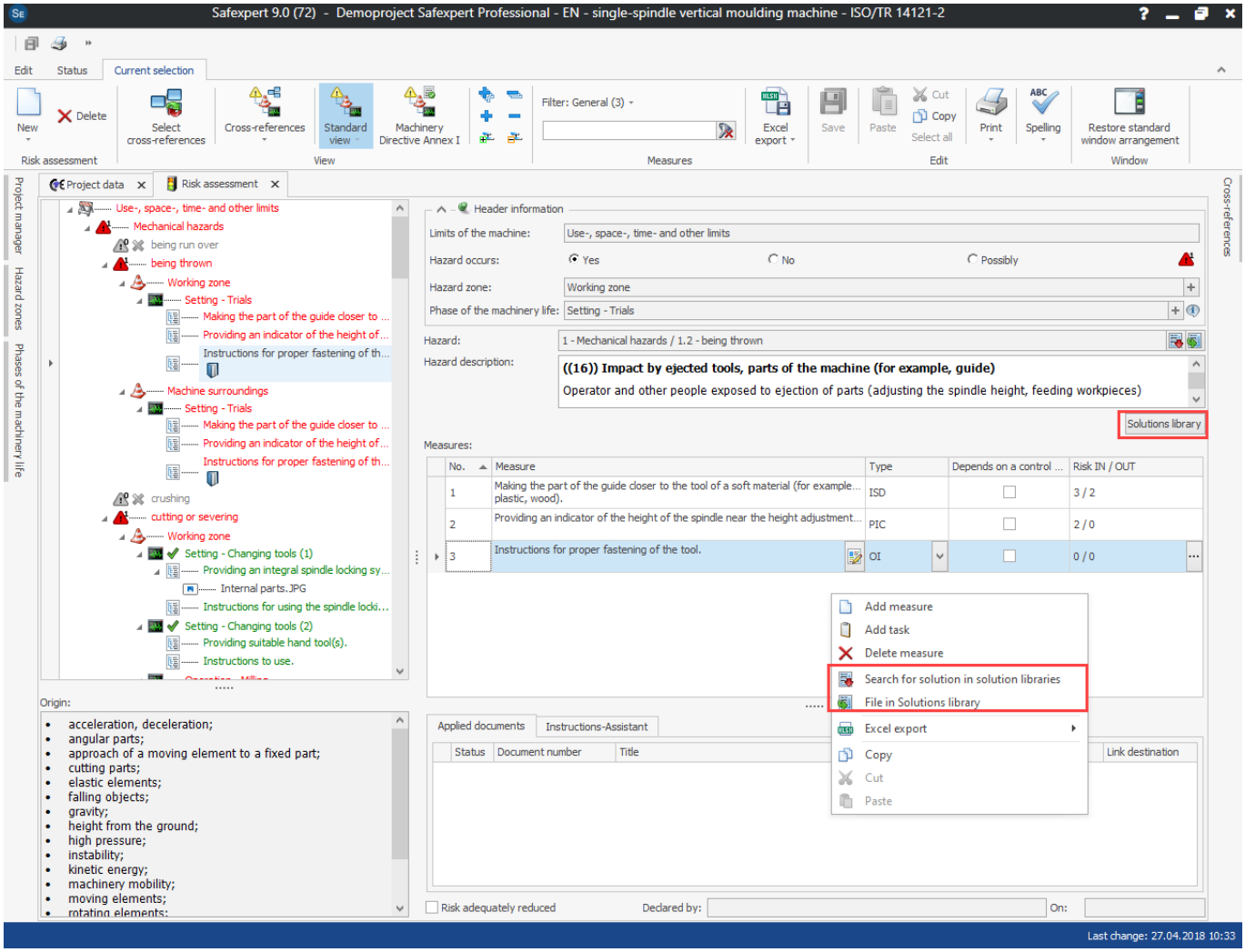
If you have only licensed the StandardsManager module including the Knowledge Base and the Safexpert PDF viewer, the "PROJECTS" and "OPEN TASKS" widgets will not be displayed in your personal dashboard:



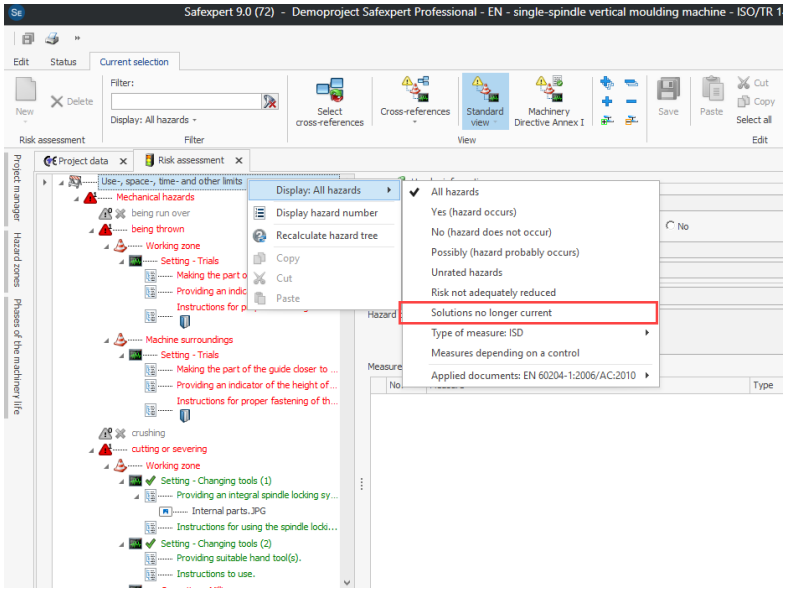
3 Risk assessment

The risk assessment has remained almost unchanged compared to Safexpert 8.6.

The most important new feature is the possibility to import complete solutions including the detailed data from a solution library (see 10):



With the new filter "Solutions no longer current" you can easily and quickly find all solutions in your project that have been withdrawn on by the solution library publisher.

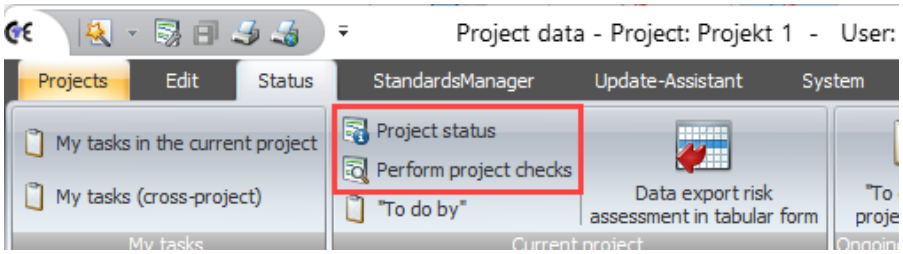


If a successor solution is available in the updated solution library, simply swap it out with a few mouse clicks.

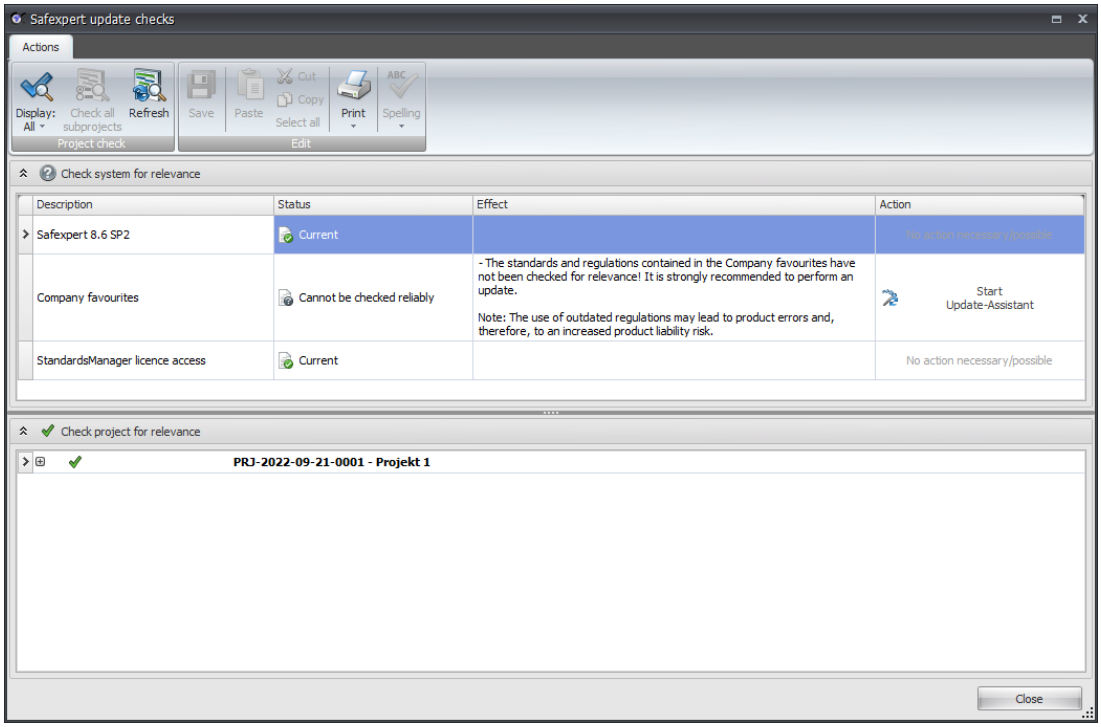
Important note: In accordance with this concept, it is now possible to withdraw solutions even though the standard has not (yet) changed. In this way, solutions can be adapted on a daily basis, e.g. even if it becomes apparent in the course of commissioning that a solution is causing difficulties or is no longer state of the art!

4 Digital analyses

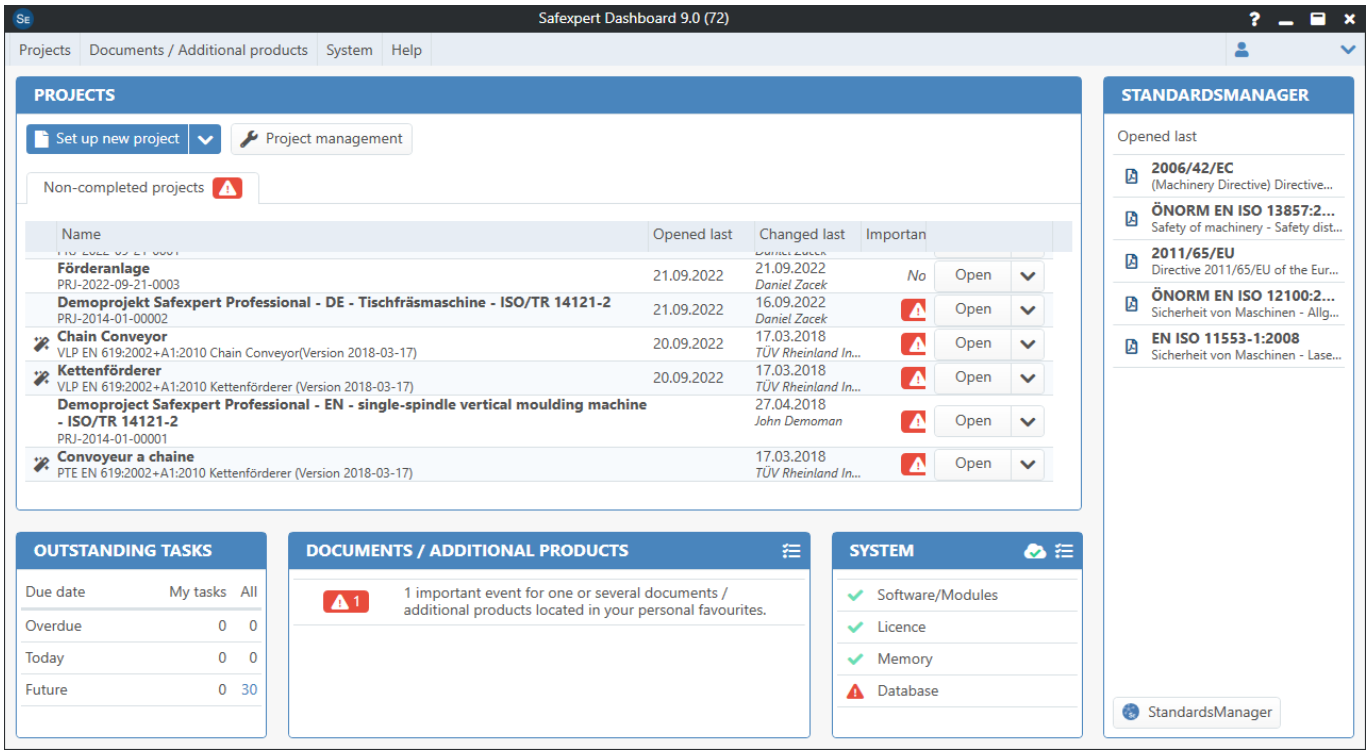
The "Project status" and "Project check" functions were previously located in the "Status" main menu:



When opening a project, the Safexpert Update Checks window was displayed automatically:



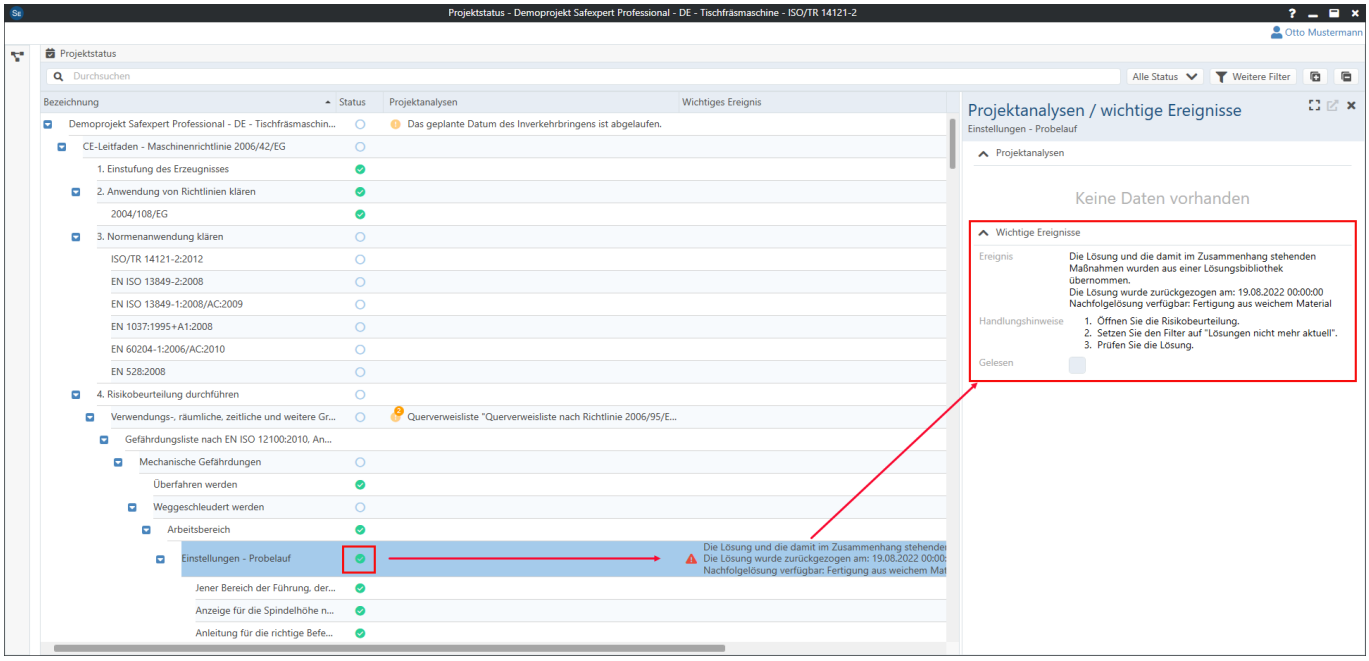
This window has been eliminated in Safexpert 9.0. The analysis results are now communicated in the new dashboard:



In contrast to Safexpert 8.6, the "PROJECTS" widget now shows which projects are affected by "important events" without having to open them.

In the widget "DOCUMENTS / ADDITIONAL PRODUCTS" you can see if there are important events for standards, guidelines or additional products that you have defined as personal favorites.

Clicking on the respective icon opens the details of the important events:



Even if you as a designer have already set "risk adequately reduced", you will receive information about important events. Safexpert thus analyzes in the background and without your intervention whether your project decisions are affected by important events. Manually, this daily analysis would be completely impossible. For your IT, it is an effort of a few seconds.

Successively improve analysis results

It is challenging to define as generally valid rules as possible in advance and to develop suitable algorithms that inform you only about really important events and filter out unimportant ones.

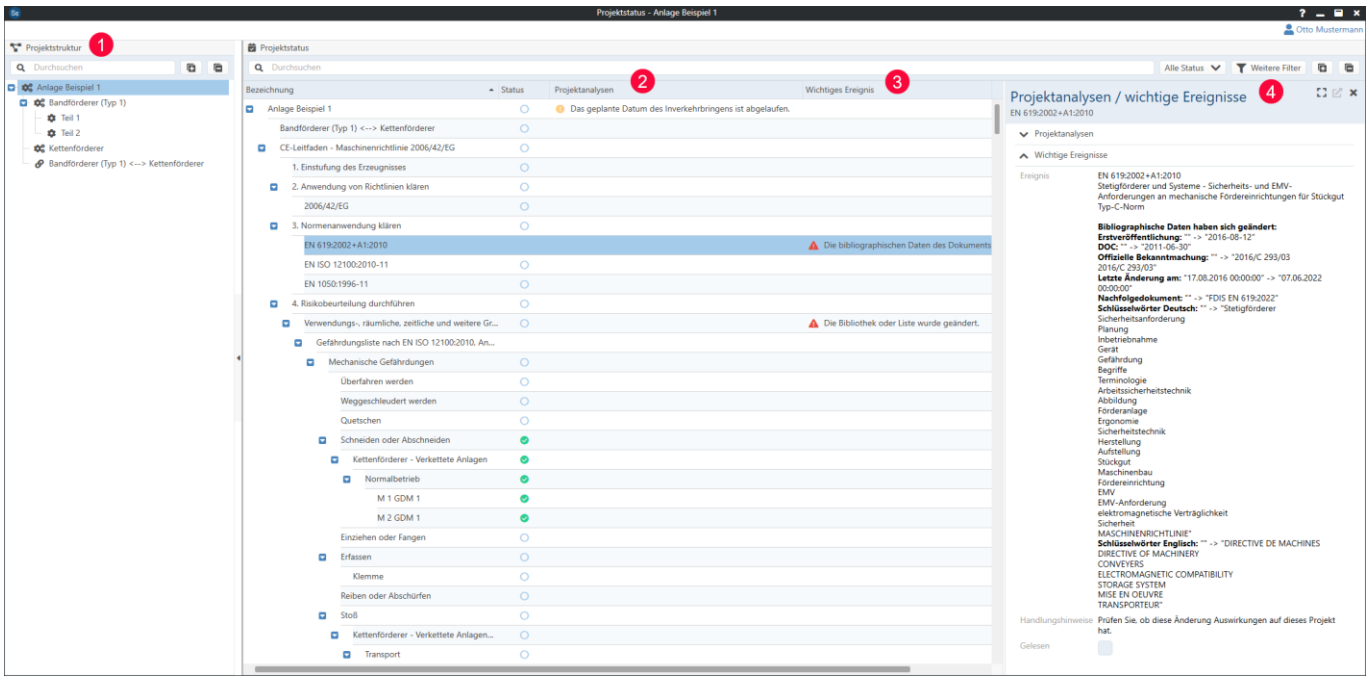
Therefore, we offer to extend or improve digital analyses on your behalf. And of course, we will also implement further valuable digital analyses ourselves in new Safexpert versions. Your feedback is particularly valuable to us in this process!

Important information on data protection

All digital analysis is done by the algorithms in your Safexpert installation in your company! No project data is transferred to IBF!

5 Project status

The Project Status window has been redesigned:



The analyses are now performed for the entire project structure (1). By clicking on the respective element, only the results for the project analyses (2) and the important events (3) are displayed.

Double-click on the respective analysis result to display the details of the event (4).

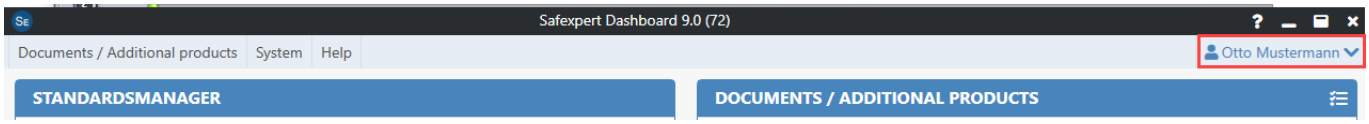
The "Additional filters" function offers the possibility to filter the results accordingly.

The analyses of important events are carried out in three stages:

1. In the first step, Safexpert analyzes whether there are any new events, e.g.:
   - Have standard changed?
   - Are there any new findings on standards or sections of standards?
   - Have additional products (checkpoint libraries, solution libraries, ...) been updated?
2. In the second step, Safexpert checks where in Safexpert this could have an impact, e.g.:
   - Are Safexpert functions affected?
   - Are documents or additional products affected?
   - Are projects affected and if so, at what points?
3. The third step is the relevance analysis:
   - Are the events important to you personally?
   - At which points in the project do the events have an impact?

Personalized digital analytics

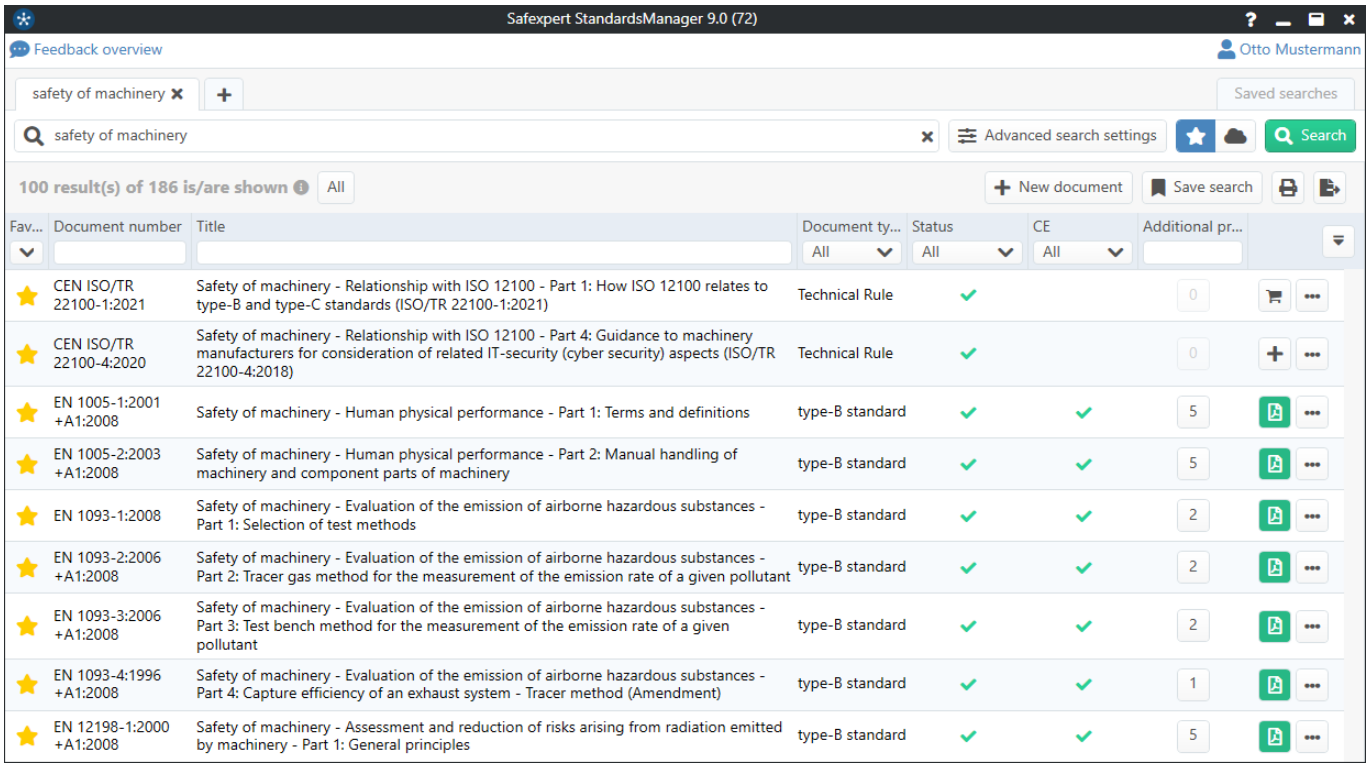
For personalized digital analytics, Safexpert uses your personal login:



Structural data as a basis

Safexpert requires the corresponding reference data for the digital analyses in specially developed Safexpert additional products (see 8).

6 The new StandardsManager



The StandardsManager has been completely redeveloped and is still available as an independent module. This opens the way to use the Safexpert StandardsManager autonomously in all possible industries (see 1.2).

These functions are still available to you:

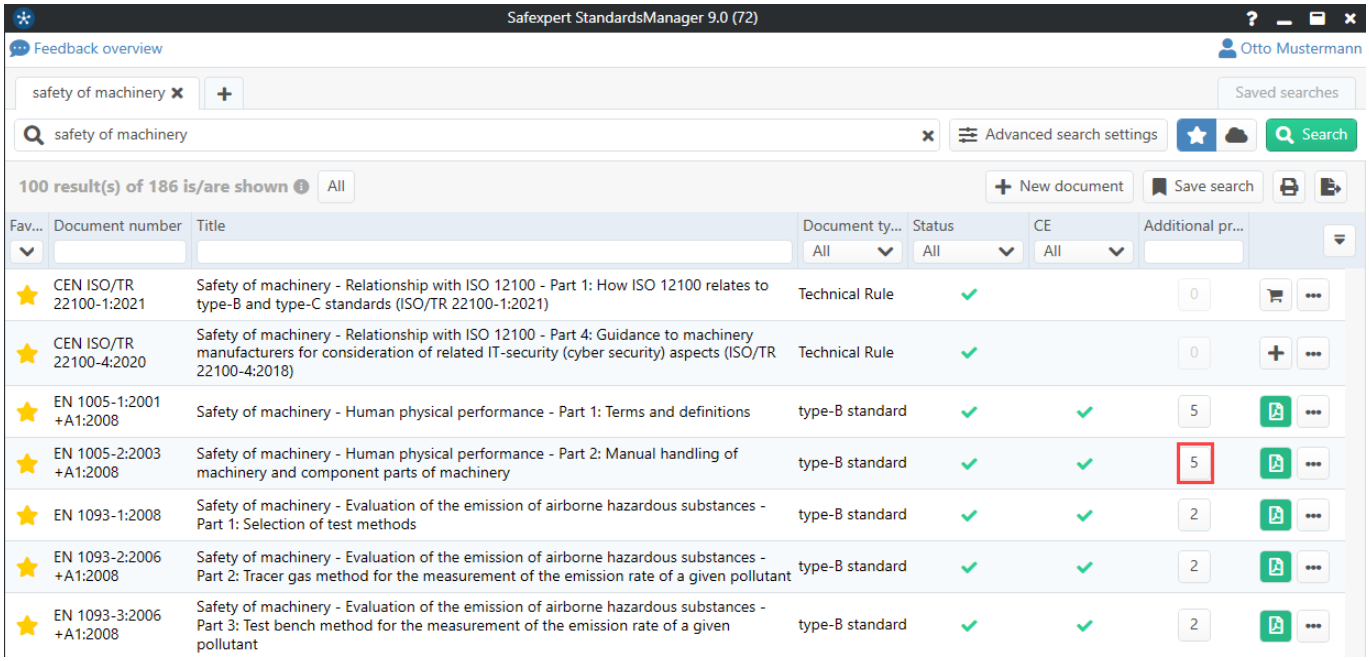
- Manage company favorites and your personal favorites
- Manage your own documents
- Search in your company favorites or on the Safexpert Live Server
- Filter in search results

New functions

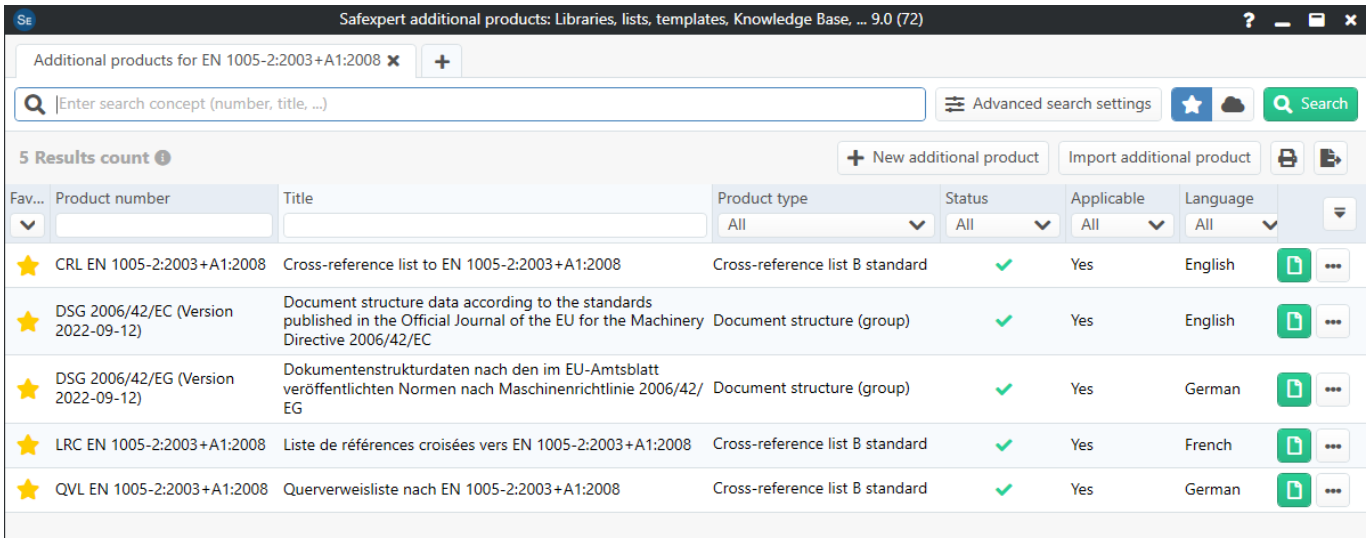
- Safexpert Knowledge including the new PDF viewer to display top current knowledge in real time (see 7)
- Quickly find additional products for standards (6.1)
- Compare document structures (6.2)
- Send unbureaucratic feedback on standards or sections of standards (6.3)

6.1 Quickly find additional products for standards

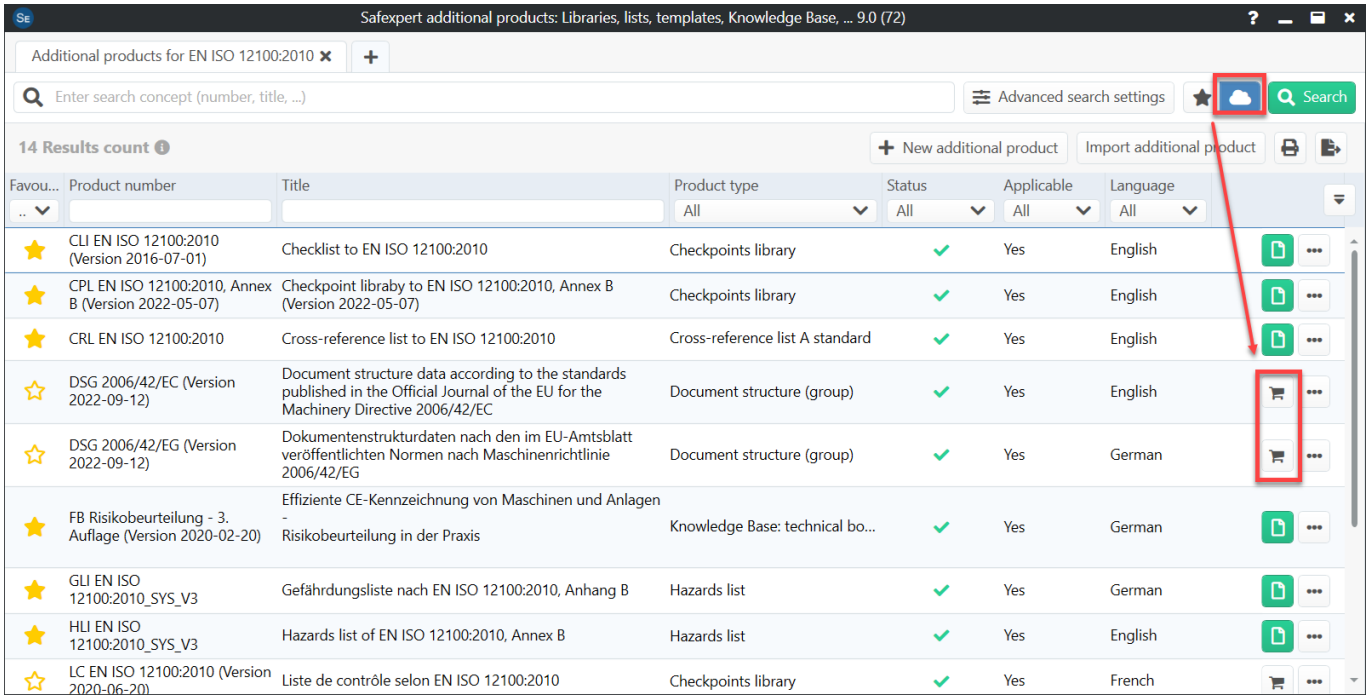
In the new column "Additional products" you can see how many Safexpert additional products (see 8) have been purchased for the individual documents and are therefore available in your company favorites:



By clicking on the number displayed, you can immediately see which "additional products" have already been licensed in your company:



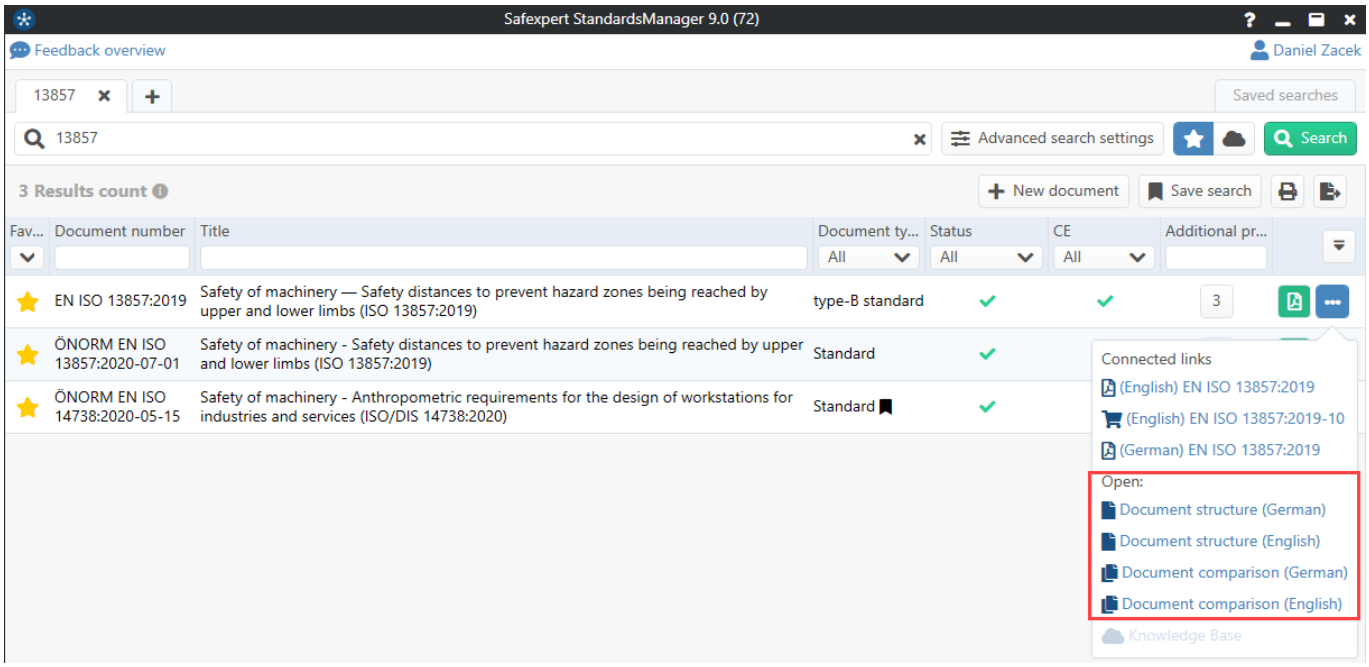
To search for additional products available for this standard that you have not yet purchased, simply click on "Search on Safexpert Live Server":



By clicking on the shopping cart, you will get more information about the additional product in the IBF Shop and the possibility to order directly.

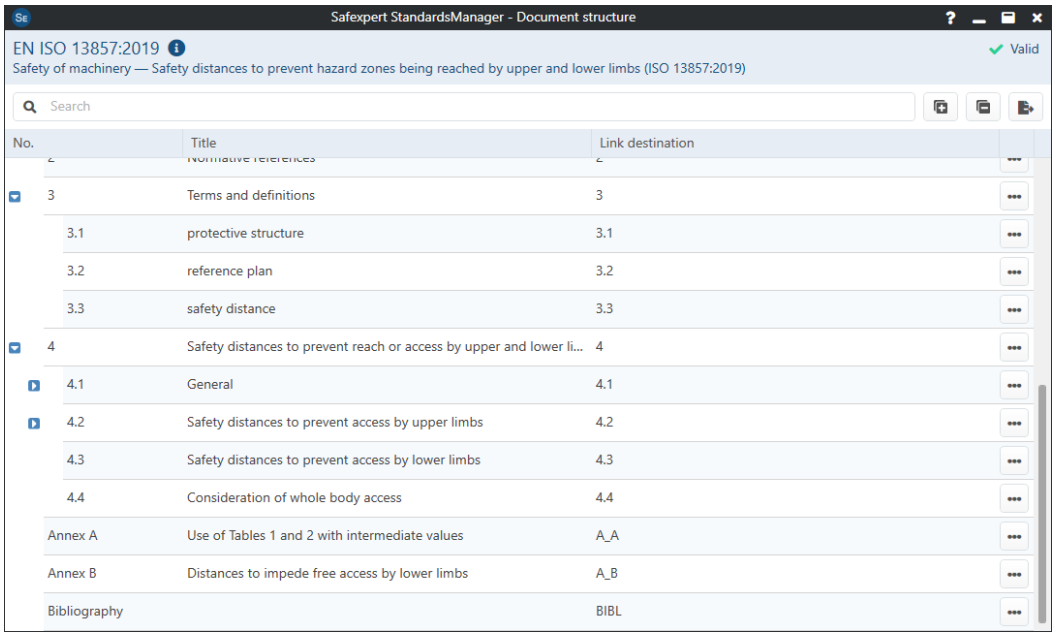
6.2 Document structure / document comparison

If Safexpert additional products of the type "Document structure" (see 6.2.1) are available and have been licensed, then you will find the respective functions in the context menu:



6.2.1 Open document structure

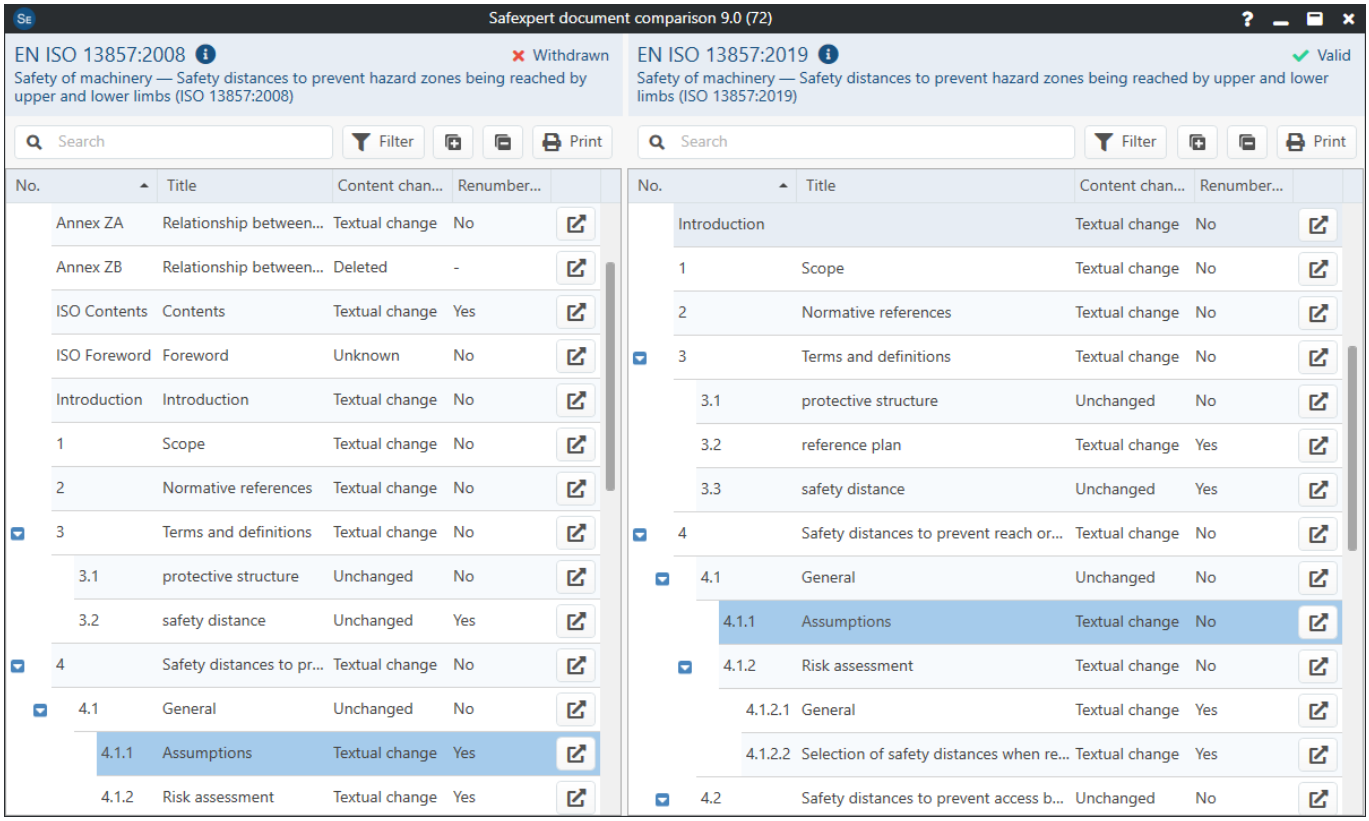
The "Document structure" function displays the selected document divided into its individual sections:



The preparation of data in this form is a prerequisite for a certain edition of a standard so that the references to the predecessor document can be created when a subsequent standard is published. The data of the additional products of the type "document structure incl. references to the predecessor" are required for the document comparison (see 6.2.2) and for the Update assistant function in the Risk assessment module. This function was already included in Safexpert 8.6 and explained in the whitepaper on the Change Assistant (see https://www.ibf-solutions.com/fileadmin/Dateidownloads/whitepaper-safexpert-change-assistant.pdf).

6.2.2 Document comparison

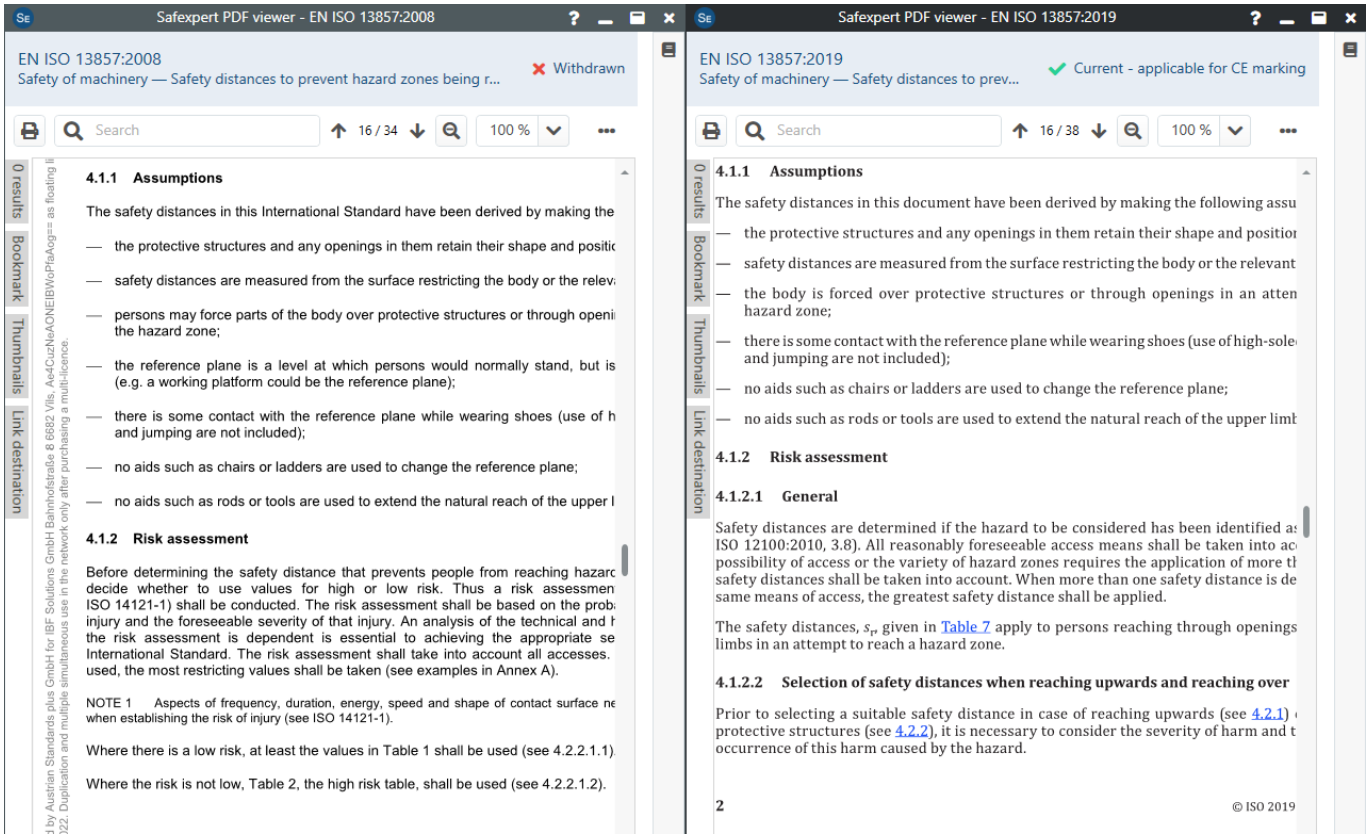
When standards change, you probably want to know what exactly has changed. This new function supports you in doing so in conjunction with the respective Safexpert additional products of the type "Document structure (incl. references to the predecessor document)".



Convenient filter functions provide answers to common questions:

- Which sections have been deleted (or not included) in the new standard?
- Where is a section of the predecessor document located in the successor document?
  And vice versa: Where was a section in the successor document located in the predecessor document?
- Has any section changed in content?
- Has a section been renumbered?
- Which sections are new in the follow-up document?

Clicking on one of the two "Open" icons opens both documents at the appropriate place so that you can see as quickly as possible exactly what has changed in terms of content:



Required licenses

In order for you to take advantage of these valuable features, you will need:

- the StandardsManager module,
- the MRL-EU data package so that you can search for the standards in the StandardsManager,
- the corresponding Safexpert additional product of the "document structure" type (including the links to the sections of the predecessor or successor document)
- the full text documents in PDF format.

If you cannot find suitable additional products for the standard you require in the IBF Shop, please send us an e-mail. We will clarify for you without obligation whether a SECOM expert is interested in developing the required products for you. If the products could be interesting for other customers, the development costs could be reduced. Please refer to our Early Adopter Program (www.ibf-solutions.com/safexpert-zusatzprodukte#c19115).

Product group to the harmonized standards according to the Machinery Directive

Safexpert additional products of type Document structure (group) [1]	**Item no.**	**License fee** [per user per month]*
Document structure data according to the standards published in the EU Official Journal in accordance with the Machinery Directive 2006/42/EC	4016-SE.EN.ML	5,00

**Will be billed annually*

[1] Previously named "Standards reference data“

Content and our service for these two products:

- We have divided all harmonized standards published in the Official Journal of the EU in accordance with the Machinery Directive into their individual sections in meticulous detail in German and English and stored them in the additional products. In total, there are currently around 2,000 standards with almost 200,000 (!) sections.
- Since 2016, we have also divided around 400 successor documents in German and English into their individual sections. In addition, we have recorded which section of a successor document replaces which section of the predecessor document.
- Our experts continue to do this work for these additional products when standards change according to the Machinery Directive in the EU Official Journal.
- And the best for the end: For all subsequent standards contained in these additional products, our SECOM experts have also been comparing the old with the new standards in terms of content since December 1, 2020. Depending on whether the headings or the content of a section changes compared to the predecessor section, the data record receives the attribute "Text change" or "Unchanged".

One additional product - triple benefit!

Safexpert 9.0 uses the data from these additional products not only for document comparison but also for

- in the Risk Assessment module in the Change Assistant function and
- in the StandardsManager module and in the Safexpert PDF viewer for selecting the standards section for which you want to provide feedback (see 6.3).

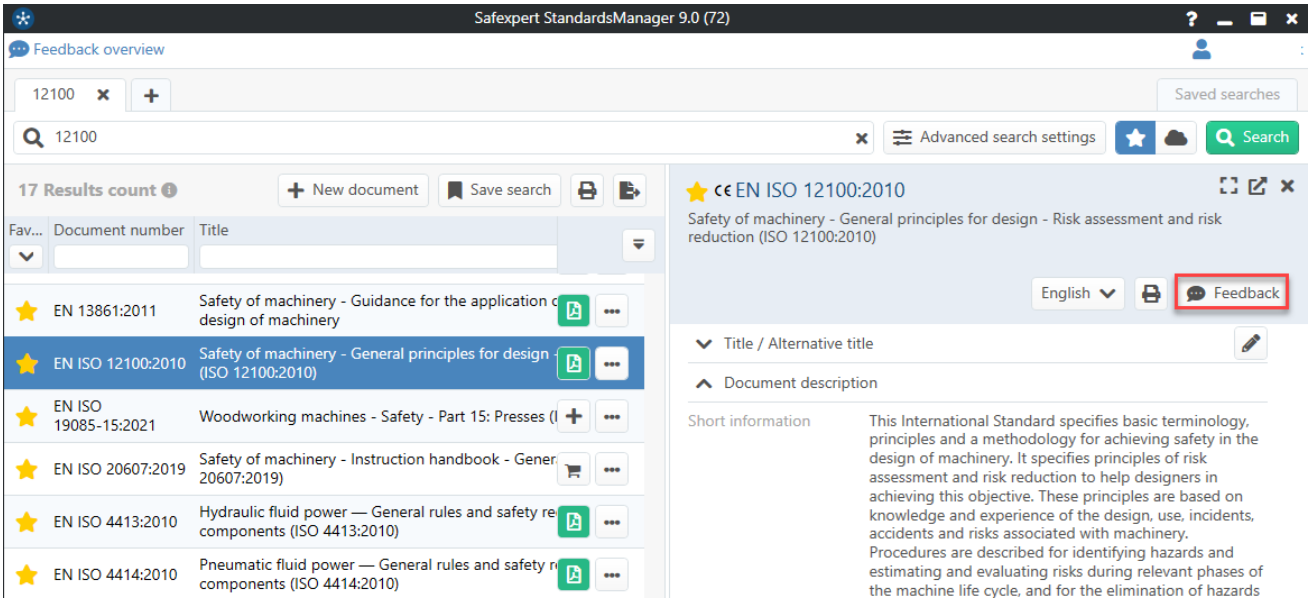
6.3 Provide feedback on standards

Safexpert has had the "Give feedback" function for some time. This allows you, as a standards user, to provide feedback on individual standards sections very easily and unbureaucratically, for example if you notice an error or if you are of the opinion that a requirement no longer meets the state of the art.

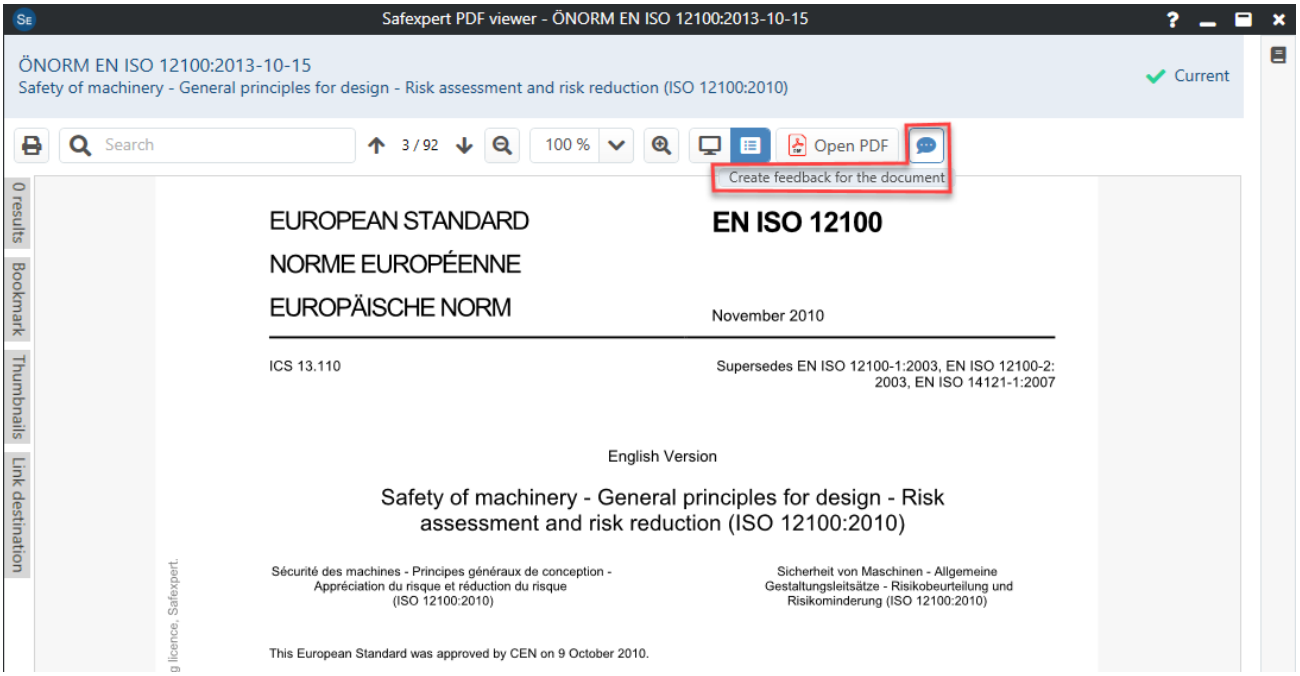
However, your feedback will not be published immediately in the Safexpert Knowledge Base, but will be edited and, if necessary, coordinated with the responsible standards committee.

The features that allow you to write and send your feedback to us have been expanded and improved in Safexpert 9.0:

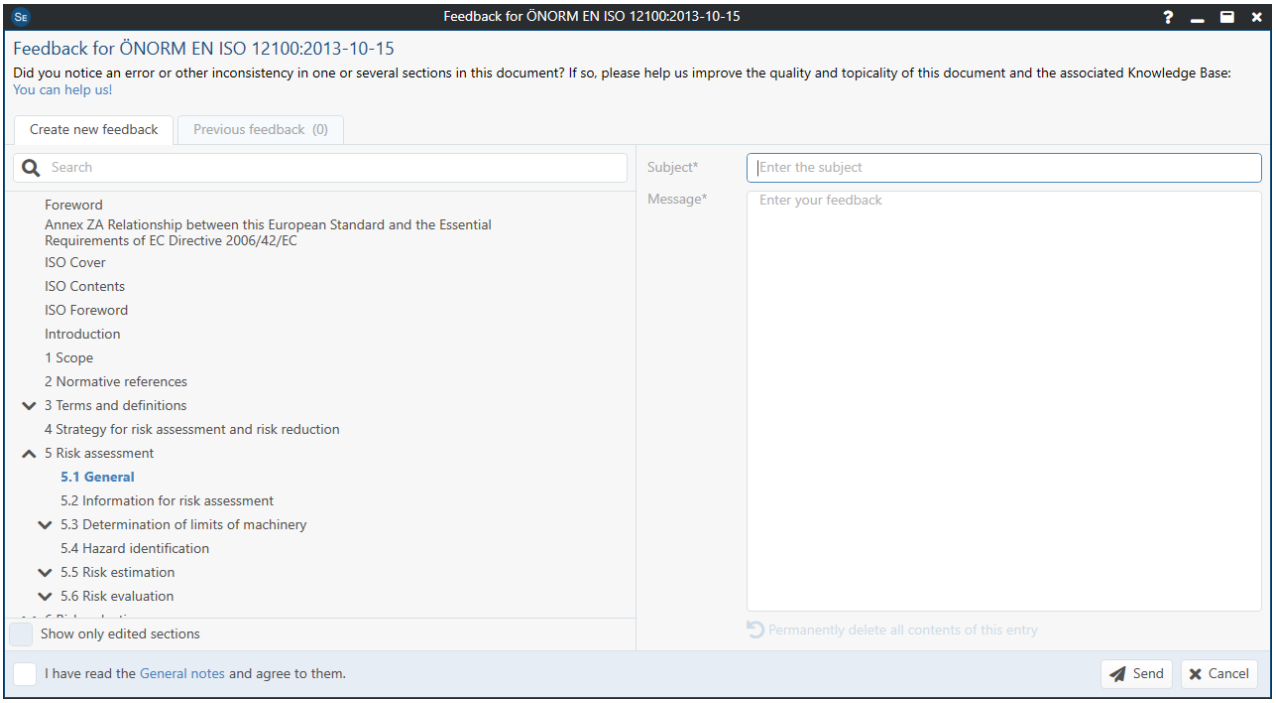
- The function can be called in two places. In the StandardsManager in the detail area of a standard:



and in the Safexpert PDF viewer:

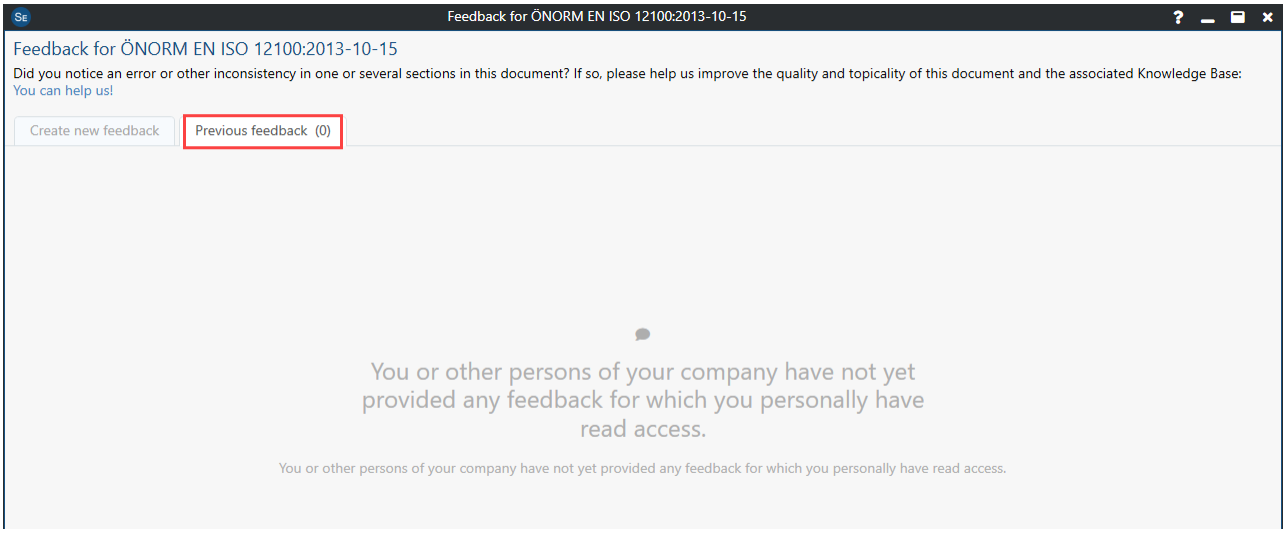


- The mask for recording feedback has been revised:

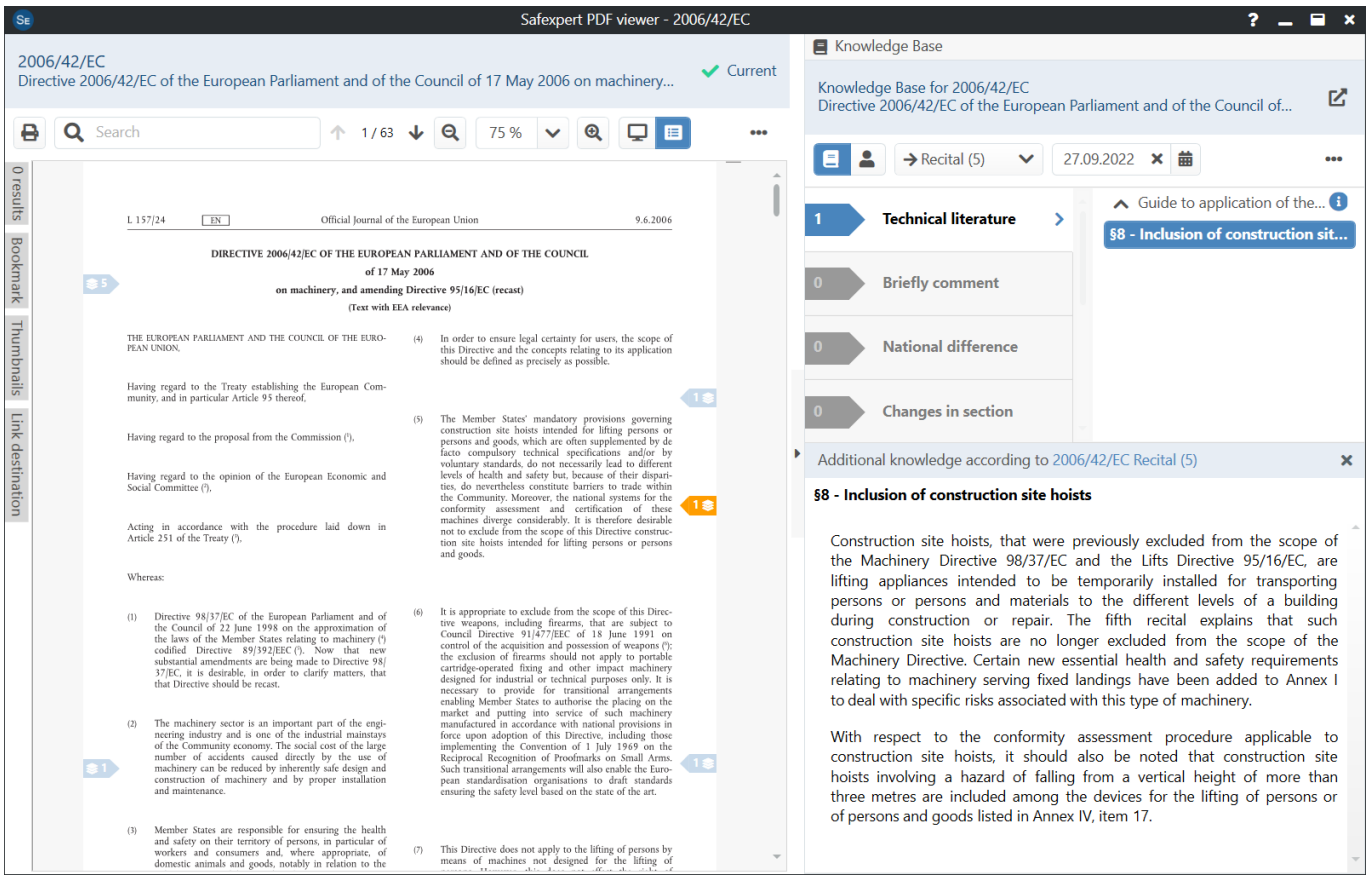


You can now also see the sections of a standard, provided that an additional product of the type "Document structure" (see 6.2.1) is available.

- You can now also see if you have already sent feedback to us on this standard:



7 Safexpert Knowledge Base incl. Safexpert PDF Viewer



With the Safexpert Knowledge Base we offer you a worldwide unique system to display daily updated additional knowledge exactly where it is needed, directly on the screens of the responsible persons.

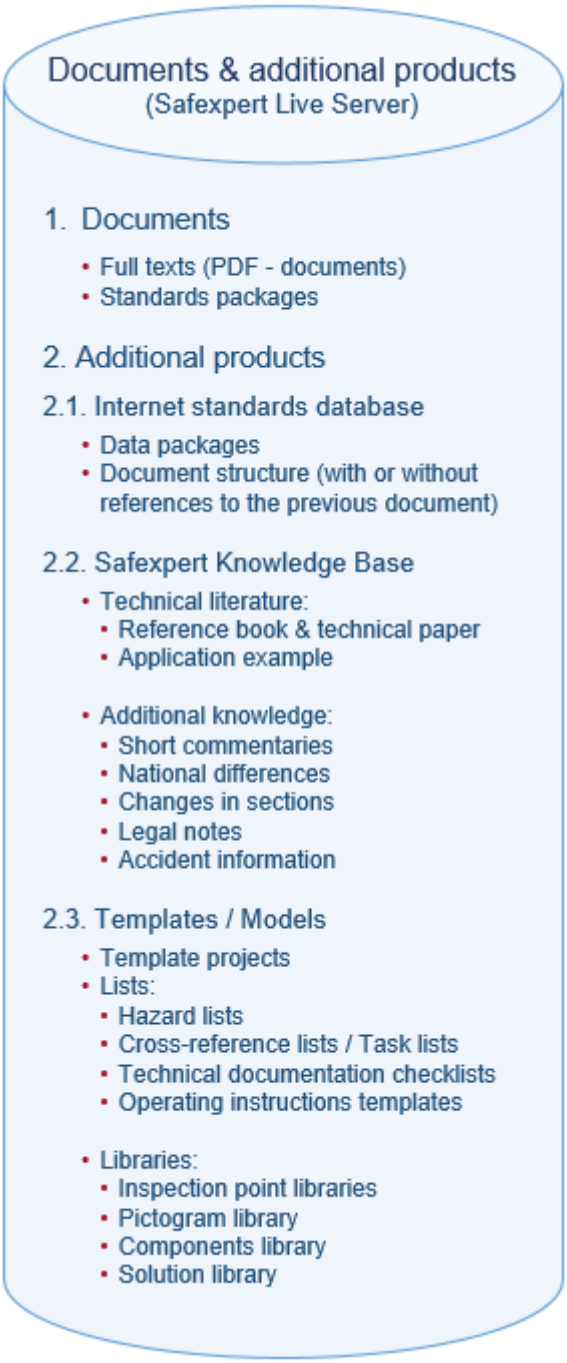
While the document is loading in the also newly developed PDF viewer, Safexpert checks in real time whether entries are available in the Safexpert Knowledge Base on the Safexpert Live Server in the Knowledge Base products you have licensed. The number of entries found is displayed directly for each section in the base document.

Clicking on the flag displays the additional knowledge directly. There may be links to websites that provide you with even more information on the topic.

To free you from ballast that is of no interest to you, only data from Knowledge Base products you have marked as "personal favorites" are displayed.

8 Safexpert additional products

8.1 Product portfolio



As before, Safexpert contains standards or other documents in full text in PDF format, as well as data packages on the harmonized standards of various EU directives.

In addition to the standards, we offer Safexpert additional products, which are divided into groups for a better overview.

Safexpert Knowledge Base

Safexpert 9.0 comes up with a worldwide unique novelty: for every standard - and even for every single standard section (!) top up-to-date additional knowledge can now be provided in so-called knowledge base products.

Until now, users of standards have purchased a technical book, for example, to obtain background and empirical knowledge about standards. With Safexpert 9.0, our customers now purchase access to updated data on the Safexpert Live Server.

This has three key advantages:

- The content can be updated daily at a central location.
- New information is available to users in real time.
- The data are available in machine-readable form and can therefore be used for digital analyses (see 4). This means that data subjects can be informed about "important events" even though they did not search for them. We call this:

Find without searching!
(Need to know)

Template / Models

In this product group there are important innovations in connection with checklists or checkpoint Libraries (see section 11.8) and a sensational novelty: the Safexpert solution library (see section 10).

Detailed information on Safexpert additional products can be found on our homepage:

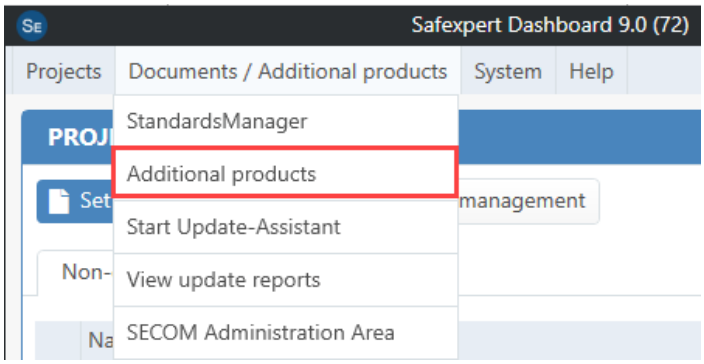
- www.ibf-solutions.com/safexpert-zusatzprodukte

If you are a SECOM expert and would like to develop additional products yourself, you can also obtain the document free of charge:

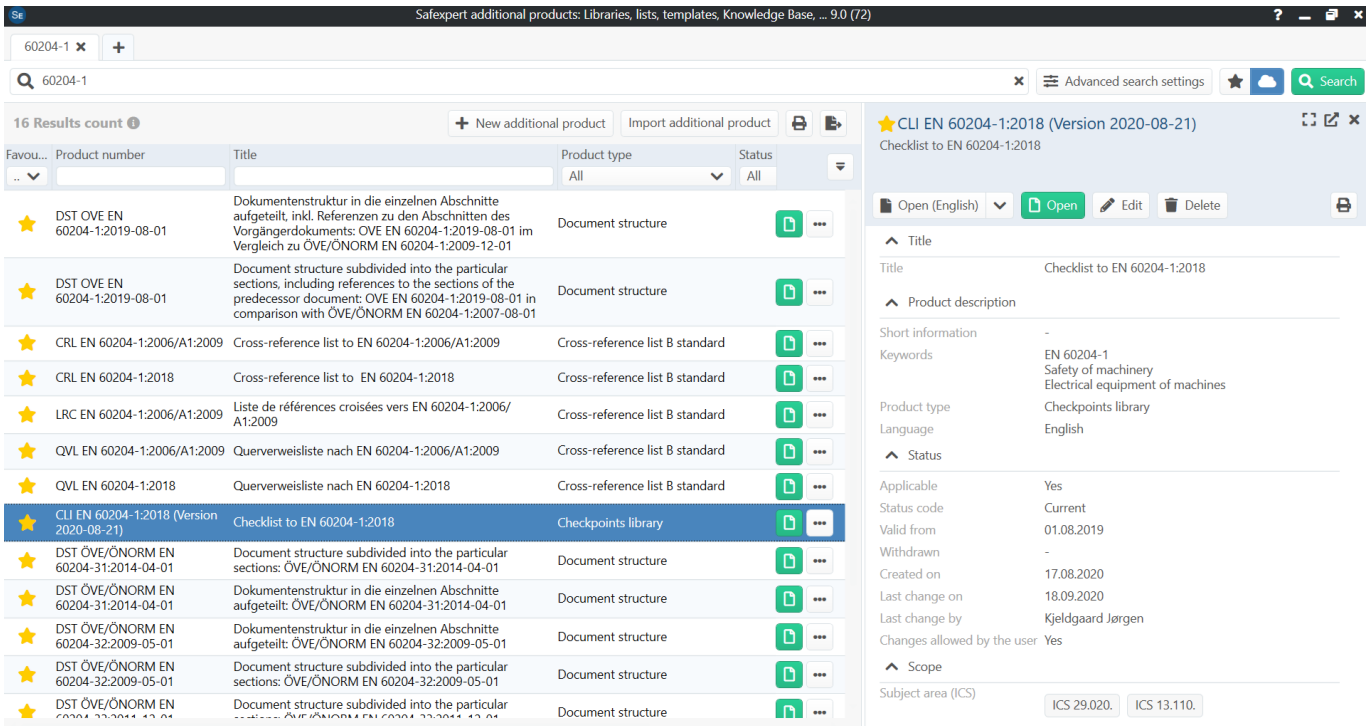
- Guide to the production of Safexpert additional products

8.2 Search additional products

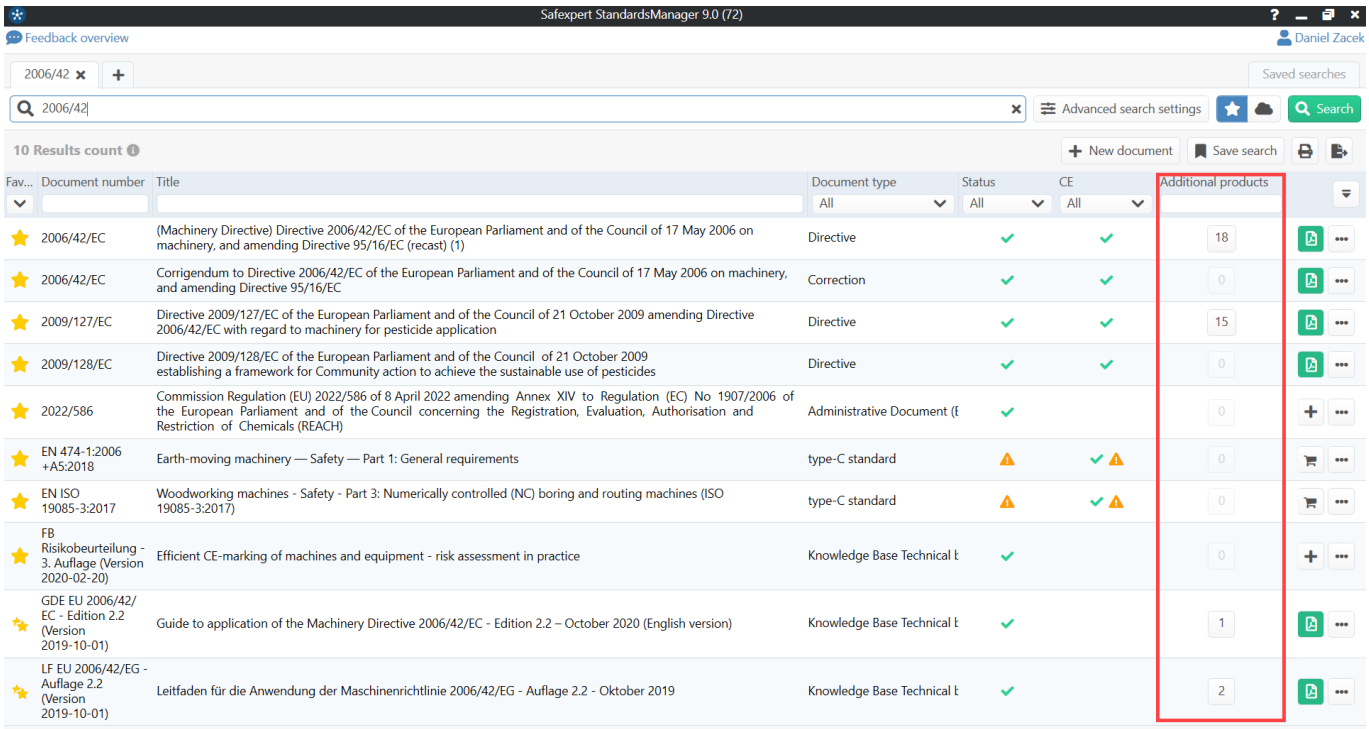
This new feature is located in the Safexpert Dashboard in the main menu:



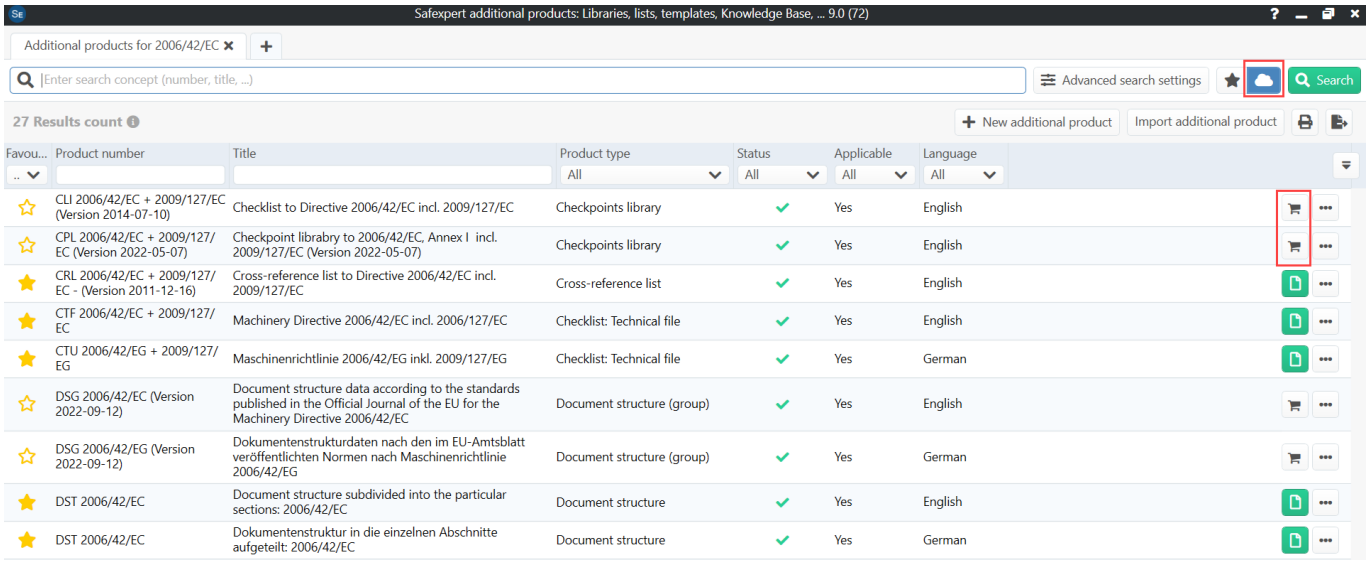
The functionality is very similar to the search and management of standards in Safexpert StandardsManager:



To find suitable additional products for a standard, the column "Additional products" has been implemented in the StandardsManager:



The number indicates how many additional products have already been licensed for your company for a standard or other document.

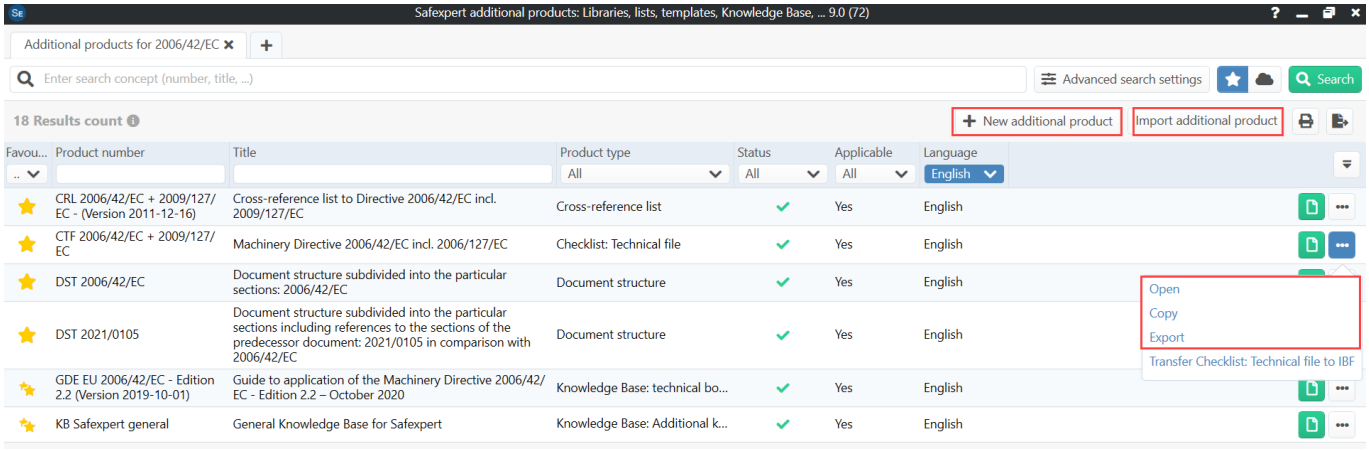


If you extend the search to the Safexpert Live Server, you will see all other available additional products for a document. A click on the shopping cart leads you to the IBF Shop (see section 9).

Additional products can now also be defined as "personal favourites". This makes it easier to find the additional products that are marked as important for you. This also controls whether an additional product should be displayed in the Safexpert Knowledge Base. This relieves you of information that is unnecessary for you.

8.3 Manage additional products

The additional products are also managed in this window:



Here you can create, import export and open for editing additional products.

8.4 License models

You use the Safexpert modules as before in a floating license (simultaneous parallel use in the purchased number).

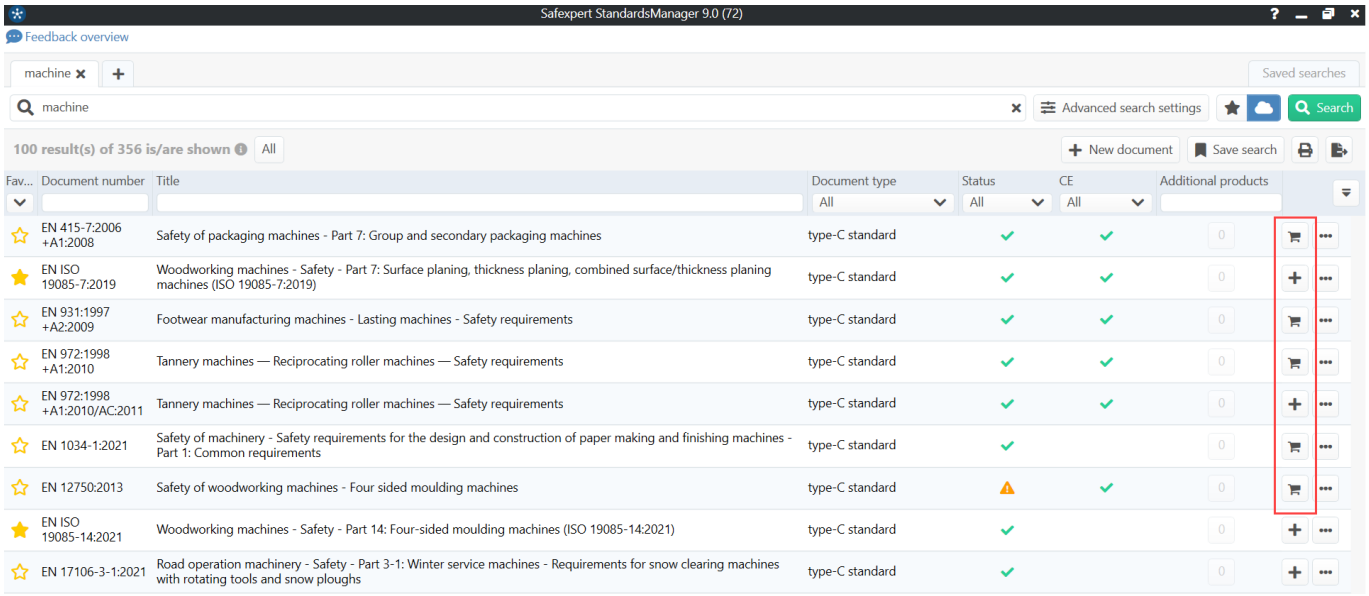
We offer Safexpert additional products as a personalized license for the following reasons:

- People in different roles need different software tools and therefore different additional products.
- It would not be practical if you had to pay for products that you do not need.
- In order for the digital analyses in Safexpert to take place simultaneously in the background, all Safexpert users need simultaneous access to "their" Safexpert additional products.
- The copyrights for many additional products are not held by IBF. The publishers themselves decide on the license models offered.
- The cost of developing and updating additional products can be enormous. For business reasons, providing them at affordable prices is basically only possible if the costs can be spread over many shoulders.

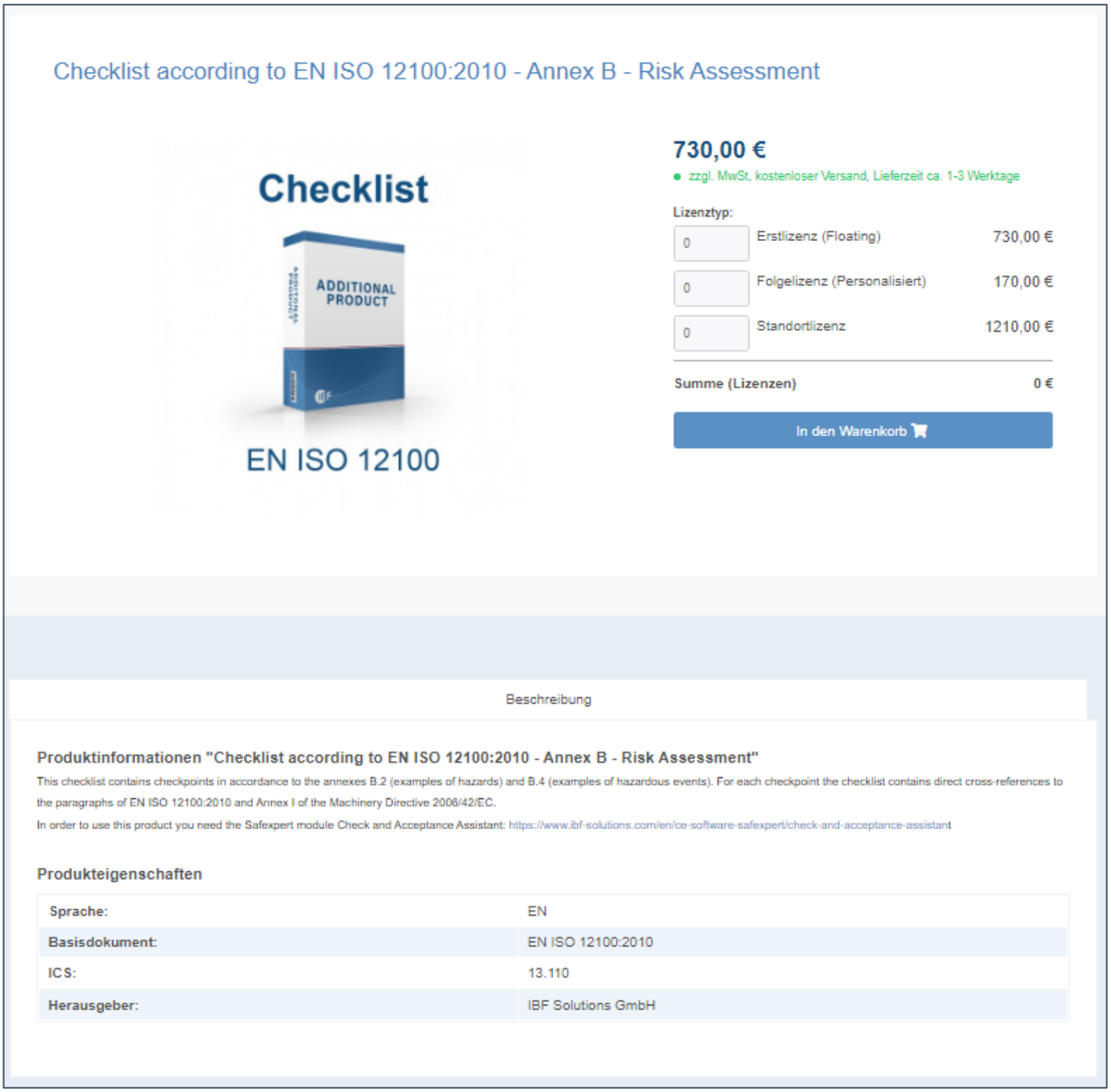
Nevertheless, it is possible to put together individual license packages for your department or company. Please feel free to contact us if you have any requirements in this regard. We will be happy to provide you with a non-binding offer.

9 Connection to the IBF Shop

Both in StandardsManager and when searching for additional products, the icon with the shopping cart is displayed if a license has not yet been purchased for the product in your company:



Click on the "shopping cart" icon to open the IBF Shop:



10 Safexpert solution library

Besides the Safexpert Knowledge Base, this is probably the most important new feature in Safexpert 9.0 if you use Safexpert to perform and document risk assessments!

The new function replaces the previous "measures library" and will massively simplify your safety-related product management!

The measure libraries developed on your system are automatically converted into solution libraries during setup. These can then be manually extended to the Safexpert 9.0 state.

What is special about the solution libraries?

Designers and planners are primarily looking for solutions, not standards. In product development, a lot of time could be saved if one could fall back on solutions that are already available.

But there is a catch: standards and the state of the art are constantly evolving. A solution that met the safety requirements yesterday may no longer be suitable today. This is also expressed in the harmonized EN ISO 12100 standard:

> **EIN ISO 12100:2010, Section 4, Note 2:**
>
> "A machine design that is acceptable at a particular point in time may no longer be justifiable if technological developments permit the design of an equivalent machine with less risk. "

Safexpert has previously already checked whether the standards applied when developing the measures are still current when adopting solutions from the measures library. If standards changed, the designers then had to check themselves what exactly had changed in the standard and check and, if necessary, adapt the selected measures.

The "Change Assistantchan" implemented in Safexpert version 8.6 supports this work (see https://www.ibf-solutions.com/fileadmin/Dateidownloads/whitepaper-safexpert-change-assistant.pdf).

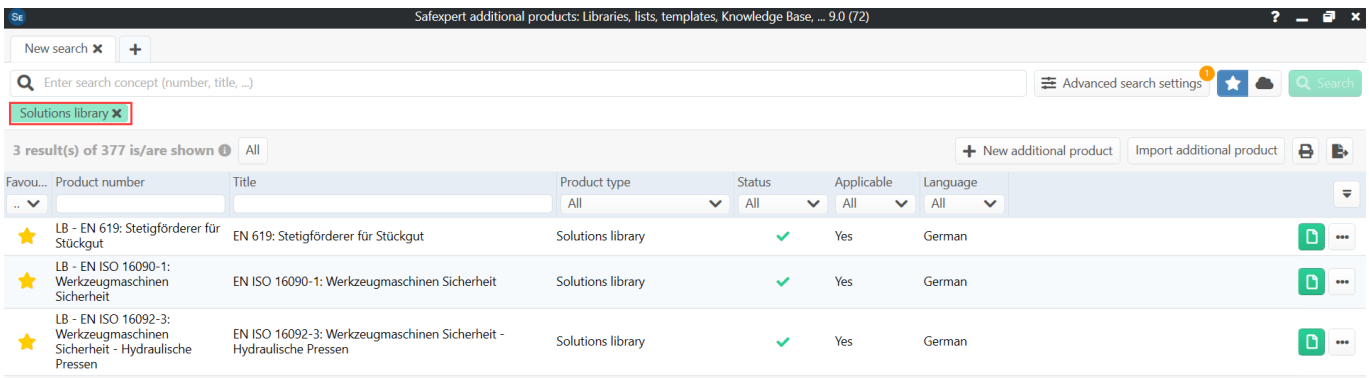
But Safexpert 9.0 can do even more:

- complete solutions developed on the basis of standards are now centrally managed in solution libraries worldwide,
- the publishers of solution libraries can update them centrally in one place worldwide,
- Designers can find predefined solutions in solution libraries,
- in the projects, digital analyses (see 10.2) whether the solutions applied are still up to date,
- affected persons learn about such events that are important to them via their personal dashboard,
- by means of the new filter "Solutions no longer up to date" you can very quickly find all withdrawn solutions in your projects,
- if successor solutions have been defined by the publisher for withdrawn solutions, exchange them in your projects with a few mouse clicks.

With this novel concept and the implementation in Safexpert, you save yourself the tedious clarification of what has changed in standards and in which projects at which points this has an impact. Safexpert delivers these analyses and the new solutions free to your desk every day (see 10.2).

10.1 Manage solution libraries

Like all other additional products, you can find the solution libraries in the "Safexpert additional products ..." window:

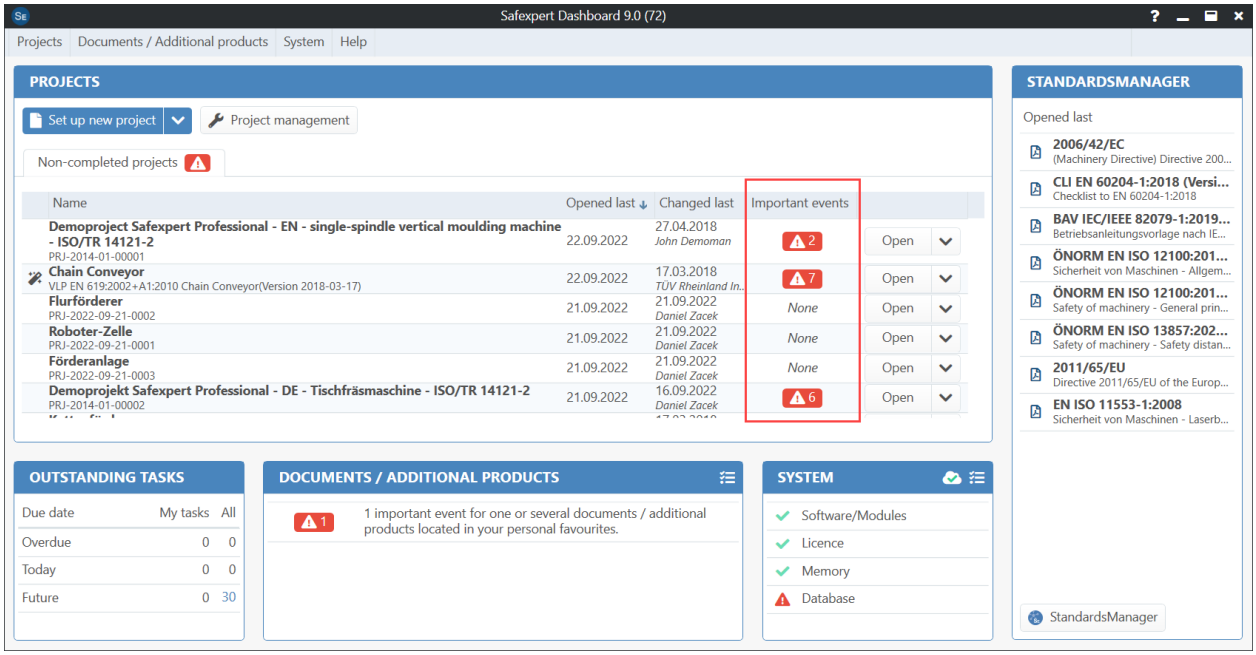


10.2 Digital analysis: Solutions still up to date?

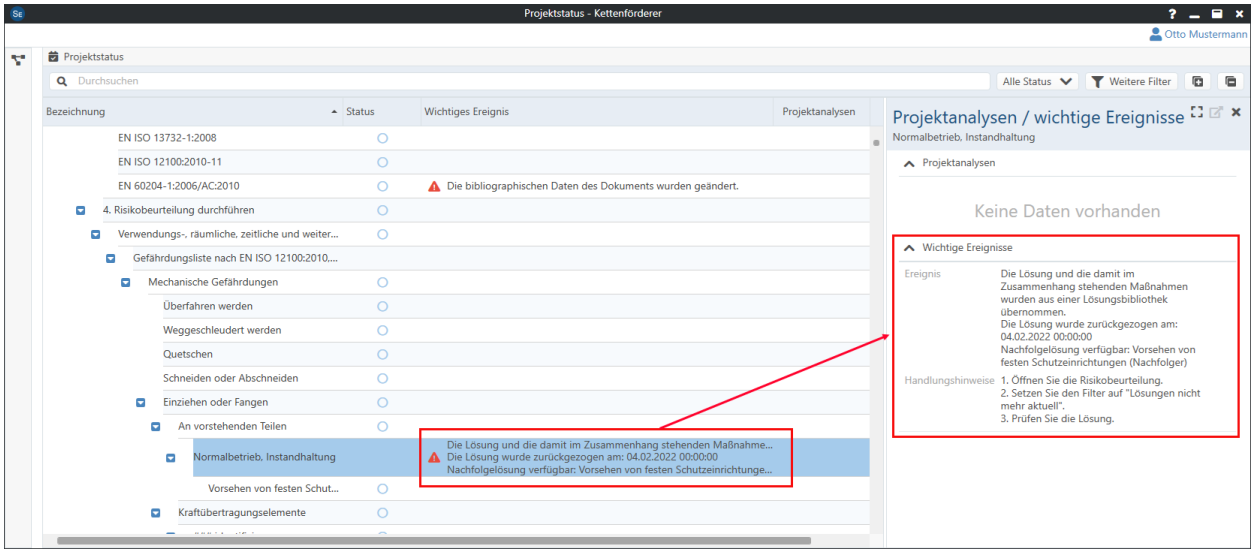
Safexpert now no longer "only" checks whether the applied standards are still up-to-date. Now Safexpert also supplies the successor solutions adapted to a standard. You simply replace your outdated solution with a few mouse clicks!

Practical example:

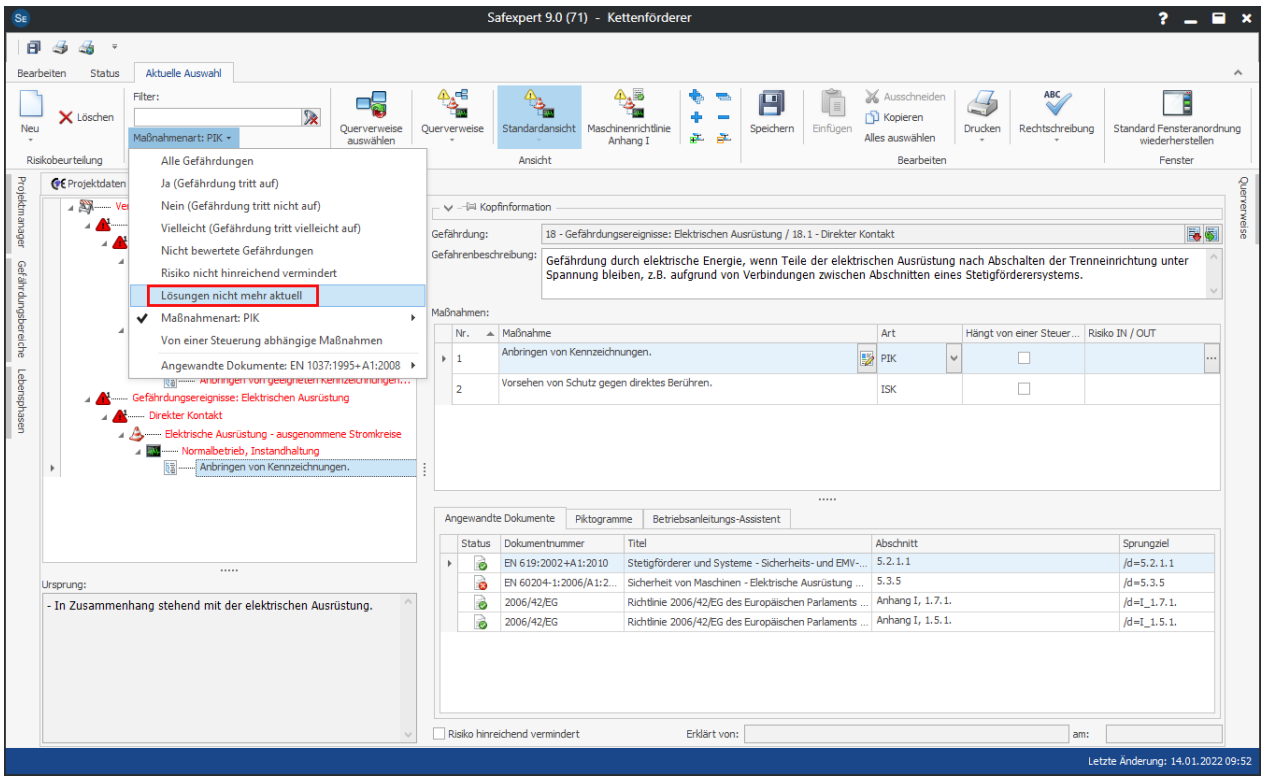
1. A prefabricated solution from a solution library was adopted in the "chain conveyor" project.
2. When standards or the state-of-the-art change, SECOM experts update the solutions managed on the Safexpert Live Server in the solution library.
3. You'll hear about it in the dashboard and update your solution libraries across your organization.
4. In the "PROJECTS" widget, you can find out which projects have "important events":



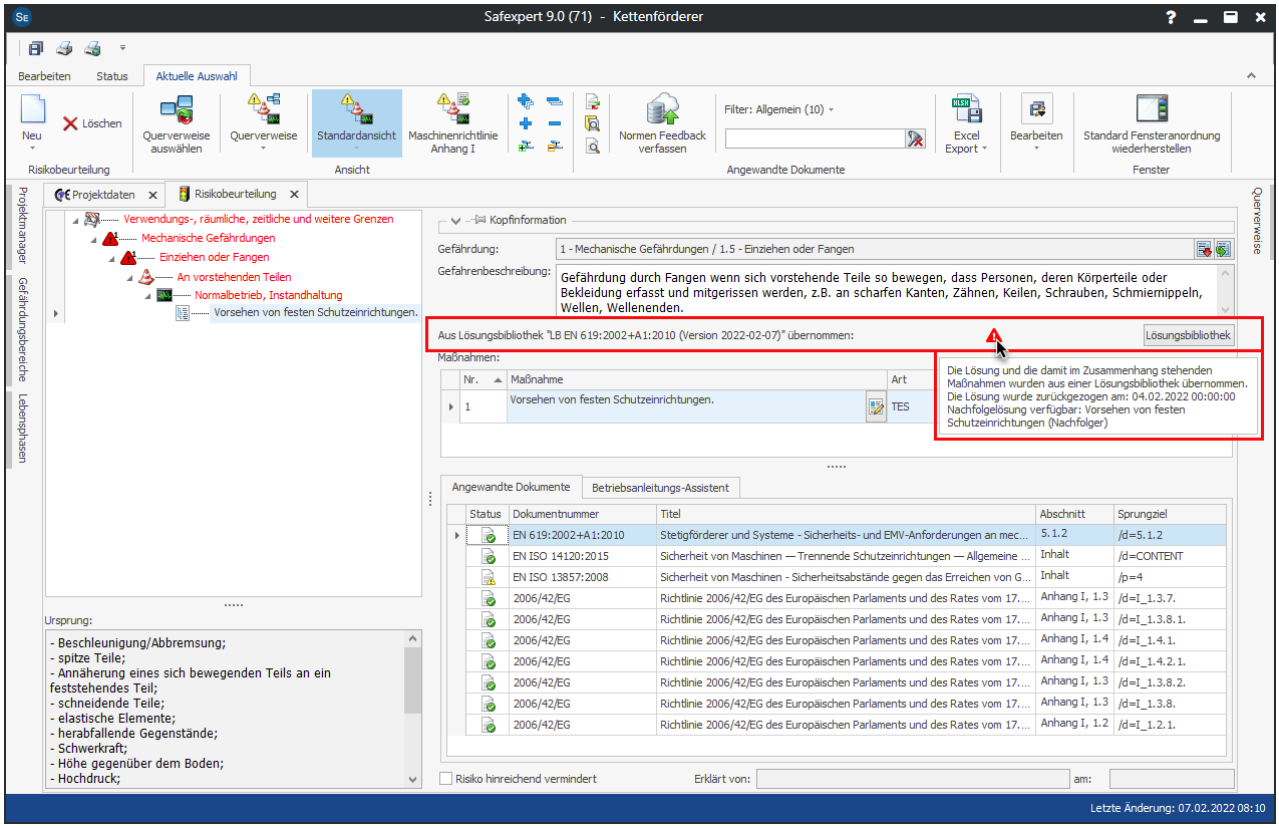
5. Clicking on the icon opens the "Project status" window. Here you can see which solutions are no longer current:



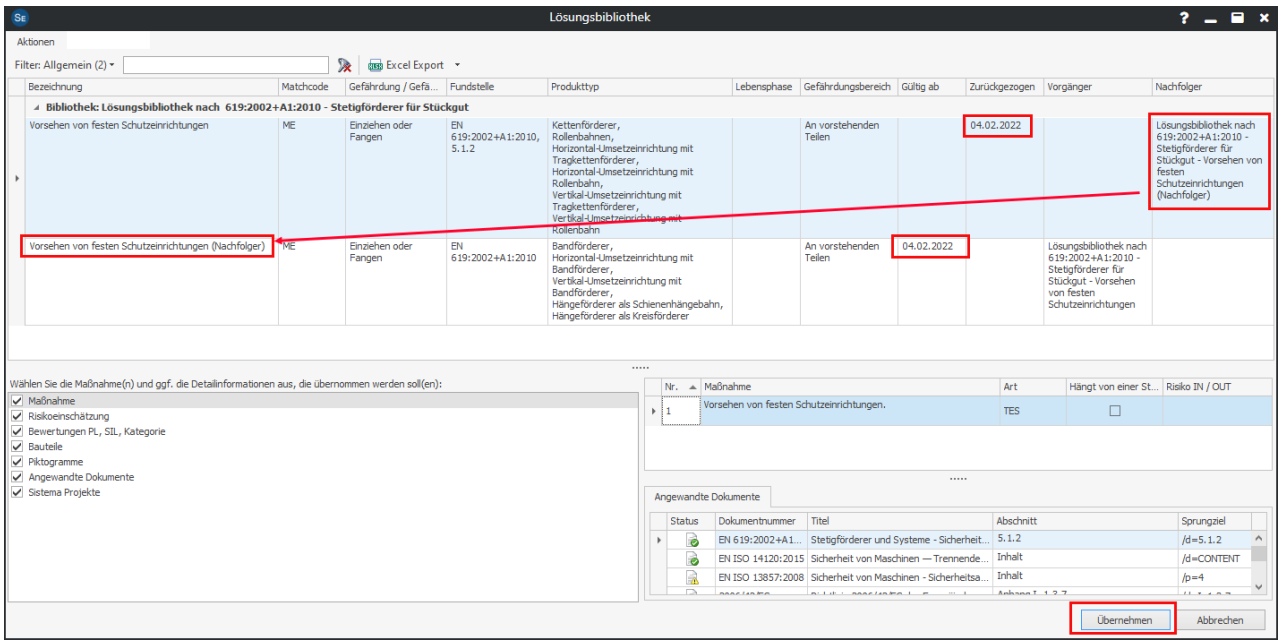
6. In the "Risk assessment" window, you can find the outdated solutions using the "Solutions no longer up to date" filter newly developed in Safexpert 9.0:



7. For each individual solution, you can see from which solution library the obsolete solution originates:



8. Clicking on "Solution library" opens the solution library. The cursor is positioned on the obsolete solution currently contained in the project. In addition, the available successor solutions are displayed:

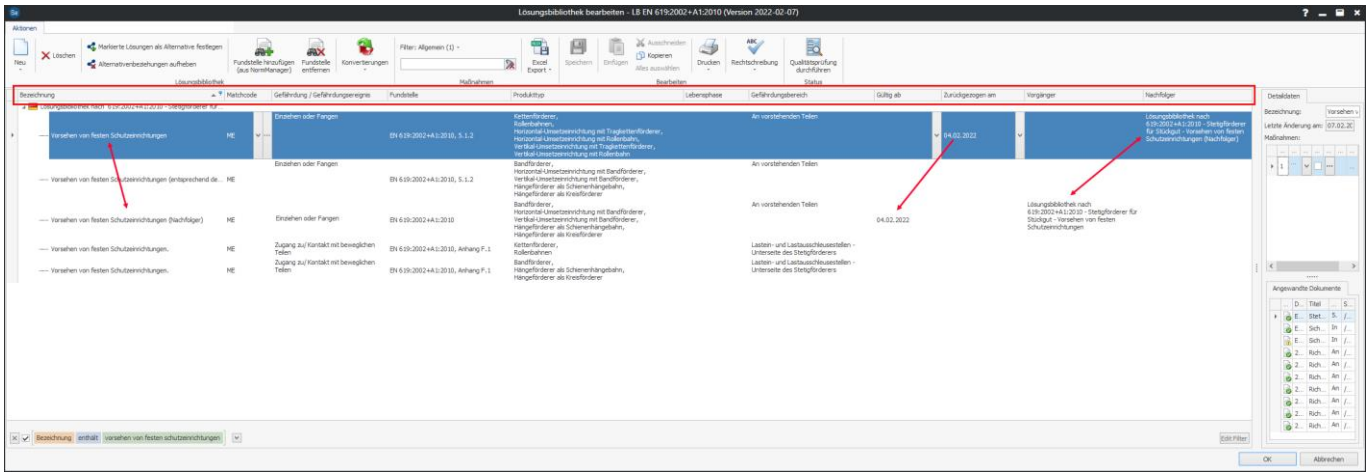


9. Now select the appropriate successor solution and click "Apply".

   This means that your solution is up to date in the project - including all detailed data on the solution, such as the applied documents.

10.3 Find suitable solutions

To help you find the right solution as quickly as possible from a large number of possible solutions, we have added further fields to the existing match code, in which the SECOM expert can enter the cases for which a solution is suitable.



The "Reference" field specifies the standard or standard section for which the solution is suitable. This means: SECOM experts can provide one or more standardized solutions in the solution library for each section of a standard.

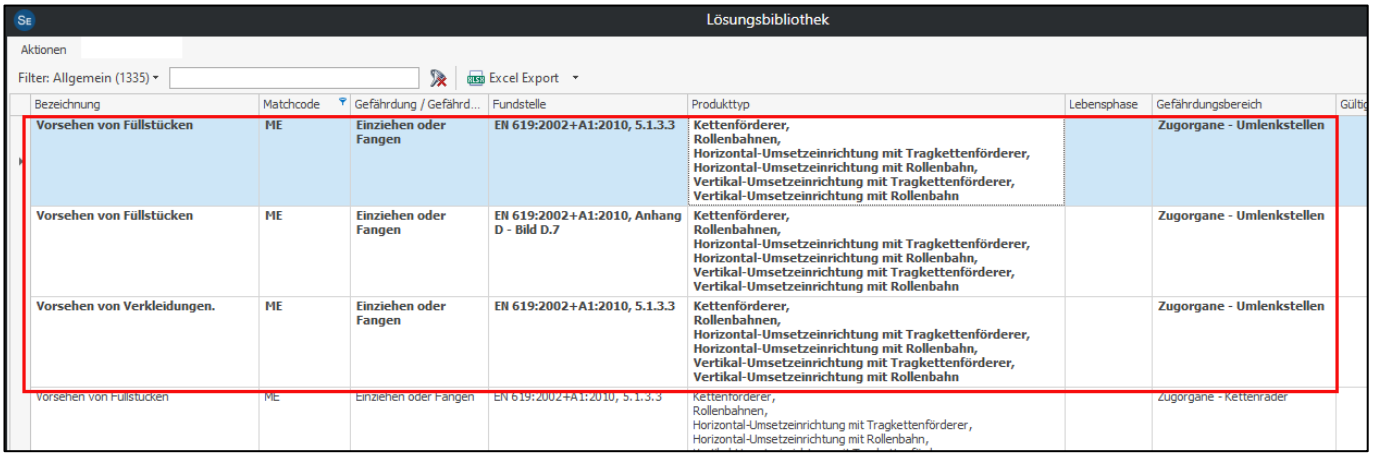
The fields "Product type", "Phase of the machinery life" and "Hazard area" are used to enter the case for which the solution is suitable.

The fields "Valid from", "Withdrawn", "Predecessor" and "Successor" are used for versioning solutions. Safexpert uses these status fields for the digital analyses (see 4). As a solution library manufacturer, you can use them to withdraw each solution on a daily basis if, for example, it no longer meets the state of the art.

Of course, this does not release you as a designer from the decision whether the adopted solutions fit in the individual case. Therefore, you continue to declare "Risk sufficiently mitigated" manually. This way, you can be sure that Safexpert does not unknowingly make unwanted decisions for you in the background.

10.4 Interaction between template projects and solution libraries

Until now, suitable safety-related solutions or measures were entered in the template projects by means of "variants". In a solution library in Safexpert 9.0, it is now possible to define several solutions as alternatives to each other:



Bezeichnung	Matchcode	Gefährdung / Gefährd...	Fundstelle	Produkttyp	Lebensphase	Gefährdungsbereich	Gültig
Vorsehen von Füllstücken	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.3.3	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn, Vertikal-Umsetzeinrichtung mit Tragkettenförderer, Vertikal-Umsetzeinrichtung mit Rollenbahn		Zugorgane - Umlenkstellen	
Vorsehen von Füllstücken	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, Anhang D - Bild D.7	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn, Vertikal-Umsetzeinrichtung mit Tragkettenförderer, Vertikal-Umsetzeinrichtung mit Rollenbahn		Zugorgane - Umlenkstellen	
Vorsehen von Verkleidungen.	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.3.3	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn, Vertikal-Umsetzeinrichtung mit Tragkettenförderer, Vertikal-Umsetzeinrichtung mit Rollenbahn		Zugorgane - Umlenkstellen	
Vorsehen von Füllstücken	ME	Einziehen oder Fangen	EN 619:2002+A1:2010, 5.1.3.3	Kettenförderer, Rollenbahnen, Horizontal-Umsetzeinrichtung mit Tragkettenförderer, Horizontal-Umsetzeinrichtung mit Rollenbahn,		Zugorgane - Kettenräder	

This means:

- In your projects, Safexpert shows whether there are alternatives to a selected solution in the solution library. Thus, you can replace a selected solution with an alternative solution at any time.
- Solutions from a solution library can now be integrated into template projects. This means that the digital analyses for checking the up-to-dateness of solutions are also available in template projects.

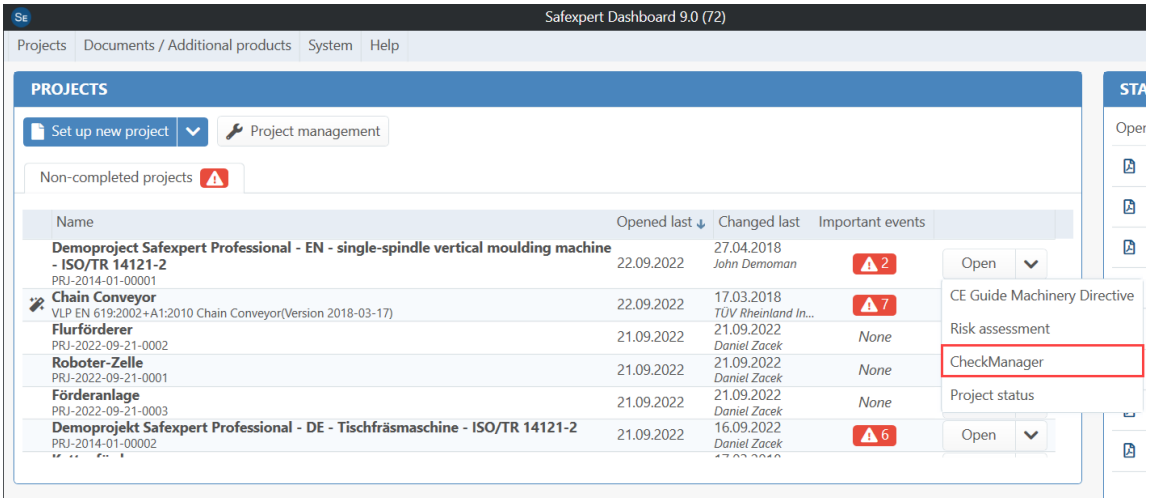
11 Check and Acceptance Assistant→ CheckManager

The previous "Check and Acceptance Assistant " module has been completely redeveloped. It is now available under the new product name "Safexpert CheckManager".

Numerous new functions support you in performing uniform checks or acceptances and in managing checkpoints.

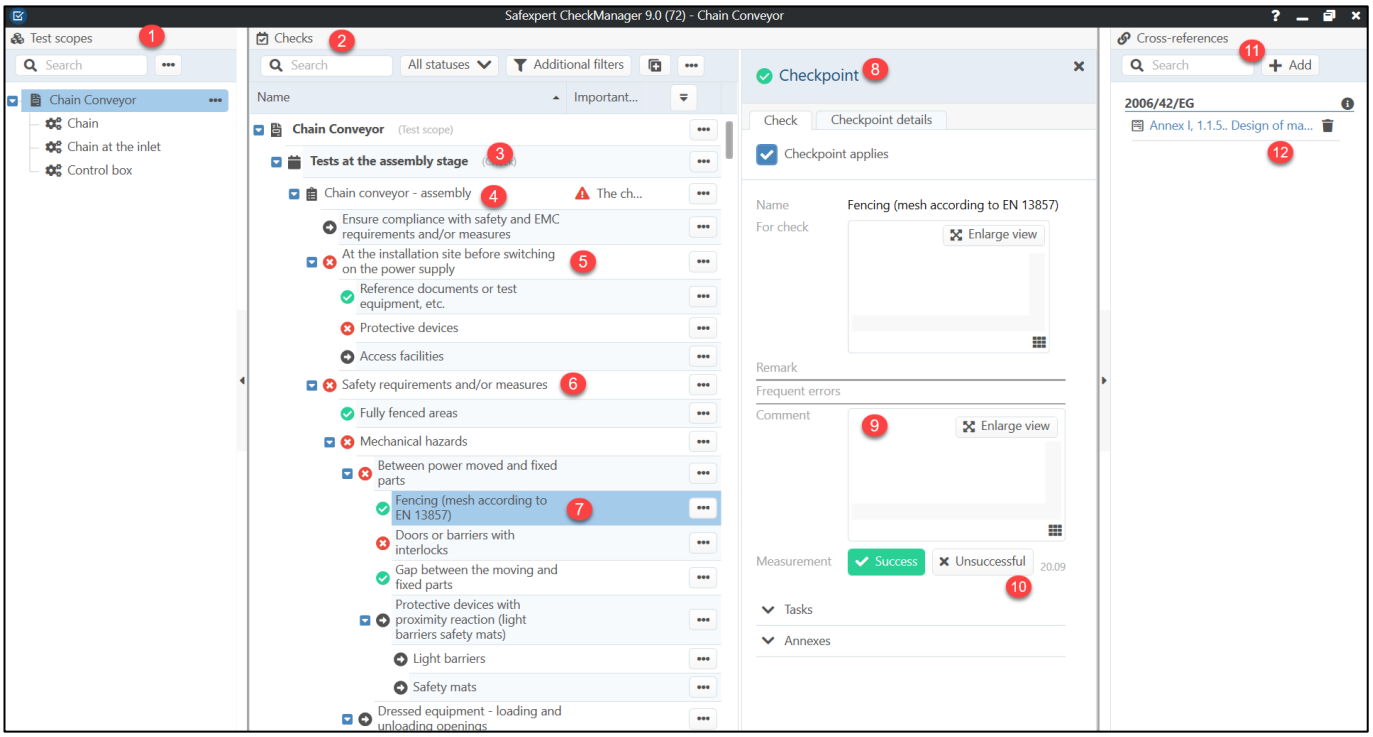
11.1 Open CheckManager

- You can now open the CheckManager directly from the Dashboard:



11.2 More overview in the testing process

The window for performing checks or acceptances has been completely revised:



You can now divide larger test objects into check areas (1). Clicking on the checkpoint area displays only the checkpoints that are to be checked for this area. This saves you unnecessary paths when inspecting from location.

In the "Checks" window section (2) you have the possibility to add one or more checks (3) to each individual check area.

As before, you can add one or more complete checklists (4) to an inspection. You can continue to structure the checklists (5) and (6). As before, the lowest level is formed by the concrete checkpoints (7).

On the right side in the "Checks" window (8), you document the test results as before in the form of test comments (9) and test methods (10).

The cross-references (11) are now displayed grouped to the respective document (12).

11.3 New distinction: Checklists and Checkpoint Libraries

11.3.1 Checklists

Previously, only an entire checklist could be transferred to the test project. The checklist could not be changed individually in the project. Individual checkpoints could therefore not be subsequently deleted and others could not be added.

From now on, it is possible to compile the checklists for a specific test order individually.

11.3.2 Checkpoint Libraries

Previously, it was necessary to create separate checklists for different check times and for different product types. Now, individual checkpoints are managed in a so-called checkpoint Library and distinguished from each other by means of the new parameters "check time" and "product".

This allows the large number of checklists previously required to be reduced to one checkpoint Library. For details see section 11.9.

11.4 Test methods flexibly expandable

The test methods (visual inspection, functional test, measurement and documentation test) can now be extended as required at the checkpoint level.

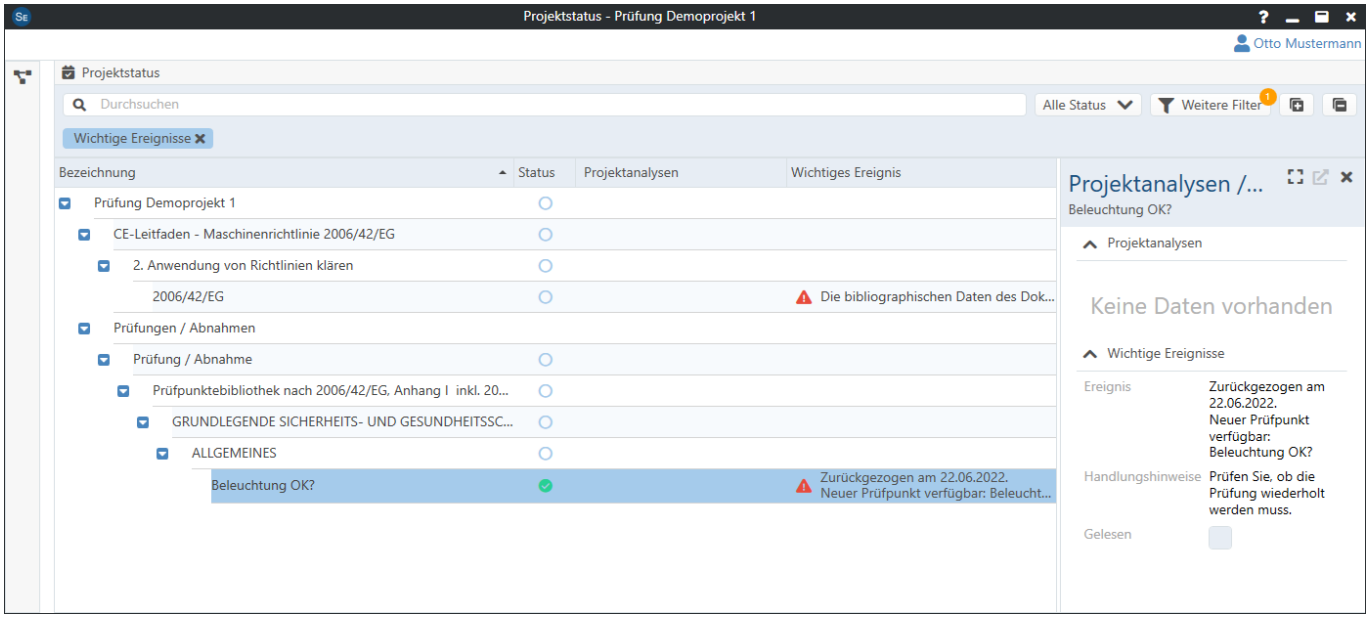
11.5 Cross references grouped

The cross-references to important sections of documents are now displayed grouped by document. This makes it even easier than before to find the appropriate standards bodies that can support you in the review process.

11.6 Digital analyses for testing processes

For general information on digital analyses, see section 4.

There are two areas in CheckManager where results of digital analyses are displayed:



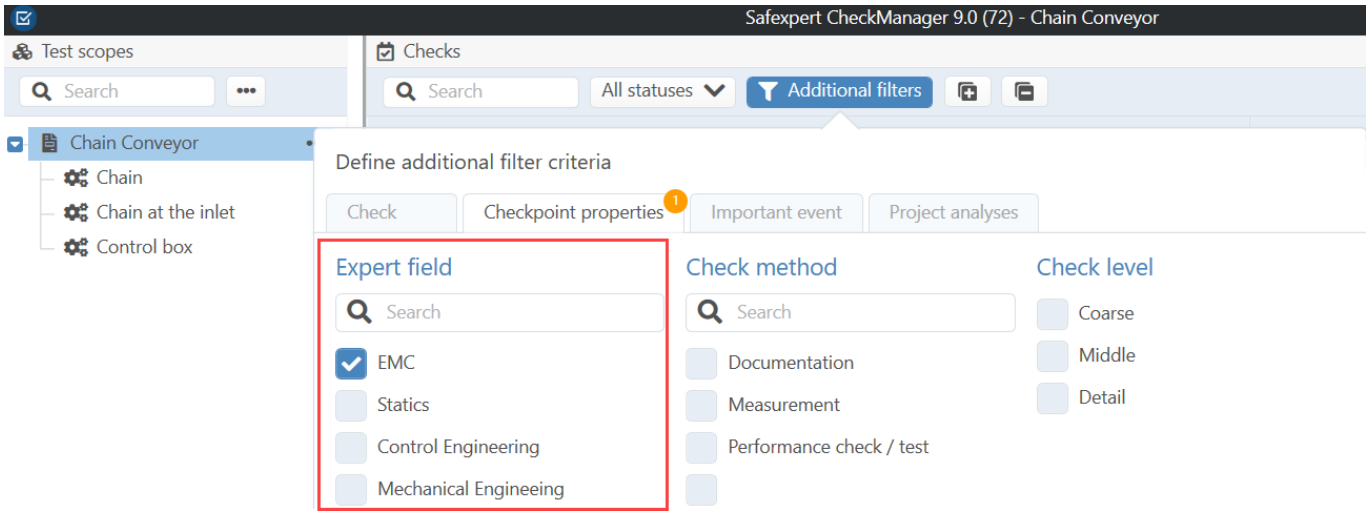
These digital analyses are available in CheckManager in Safexpert 9.0:

1. Are the checkpoints still up to date?

2. Are successor checkpoints available for withdrawn on checkpoint?

11.7 Subject-specific exams

Another useful feature is the new "Expert field" parameter. This allows you to define for each checkpoint which inspection competencies are required for the inspection. With the new "Expert field" filter, you only display the checkpoints that meet these criteria:



As before, it is possible to filter by the checkpoints that correspond to specific test methods or check levels.

11.8 Repeat exams eliminated

The "Repeat check" function (Safexpert 8.6 manual, section 12.4) has been eliminated, since a complete check can now simply be copied, as is usual in Windows.

11.9 Manage Checkpoint Libraries

Instead of "checklists", checkpoints are managed in "checkpoint libraries" as of Safexpert 9.0. For each individual checkpoint, it is now possible to define for which product type and for which check times a checkpoint is suitable.

11.9.1 Your advantage with checkpoint Libraries

Previously, for example, 44 checklists had to be developed for the harmonized standard EN 619 (continuous conveyors) (eleven for the conveyor types covered by the standard, each for four different check times). Now, only one checkpoint Library needs to be developed for the entire standard.

In the new "Product" and "Check time" fields, it is now possible to define for which product type dealt with in the standard or for which "Check time" a checkpoint is suitable. This reduces not only the checklists, but also the number of checkpoints enormously. This in turn makes it easier to update the checkpoint Library when standards change.

Each checkpoint now receives its own status. As a result, it is now possible to withdraw checkpoints worldwide centrally on the Safexpert Live Server and to define successors. In digital analyses, Safexpert can thus determine whether individual checkpoints have changed in ongoing test projects and for which persons this event is important. You can see the results of the digital analyses in CheckManager and also in the "Project status" window (see 5).

Checkpoint Libraries are Safexpert additional products that you can produce yourself as before, have developed by SECOM experts or purchase from the IBF Shop.

11.9.2 Why do checklists continue to exist?

The checklists already contained in your database will of course retain their previous names after updating to Safexpert 9.0. However, the product type is automatically changed to the name "Checkpoint Library".

Within the test projects, we continue to use the term "checklist". They are compiled from checkpoint libraries or self-created checkpoints for the respective checkpoint project.

This means for you:

- Your checklists in the already created test projects remain unchanged.
- Your checklists purchased from IBF or created by yourself remain unchanged. During setup, the product type is changed to Checkpoint Library.
- After setup, you can rename your existing checklists yourself so that the product designation matches the type designation again.
- You can develop a checkpoint Library from the checklists you have created yourself so far.

12 Technical innovations

To ensure that Safexpert continues to run in your future IT environments and is in line with the state of the art in development and application methods, we are also continuously developing Safexpert on a technological level.

In Safexpert 9.0, a lot has been done in this respect:

12.1 Conversion from Winforms to WPF

Thanks to Microsoft's further developments, WPF offers new technical possibilities to massively increase the performance of software systems, for example by the fact that certain tasks are now completed by the graphics card, which previously burdened the processor.

However, due to further developments by Microsoft, it is also becoming apparent that systems developed on the earlier Winforms technology will no longer run on future operating systems in the medium term. We have taken this development into account with Safexpert 9.0 and have already completely redeveloped numerous elements on WPF technology. This also sets the course for portability of the systems to other platforms.

In order to make the leap into the new generation of Safexpert as easy as possible for you as a user and to avoid unnecessarily dragging out the update cycles, we have developed Safexpert 9.0 as a hybrid application. This means that some modules and functions have already been completely converted to WPF, such as the newly developed Dashboard, StandardsManager, Knowledge Base, CheckManager (formerly Test and Acceptance Wizard).

Other modules, such as the CE Guide and the risk assessment, were integrated into the frame application in the previous Winforms technology. Thus, the usability in these areas has not changed significantly for you either. Unfortunately, the performance of Safexpert suffers a bit due to the hybrid application. When all modules are switched to WPF, full performance will be achieved under WPF.

12.2 Web services

Data is provided in Safexpert by means of additional products (see 8). From a technical point of view, access to the basic data of the licensed additional products takes place by means of web services.

This technology offers the possibility to make the data from Safexpert additional products also usable for software systems of other software manufacturers. This opens up completely new possibilities for manufacturers of software systems related to standards to integrate digital analyses in their software solutions as well. For example, a function could be developed for an ERP system to determine whether a product for which a quotation is being prepared still complies with the normative requirements at all at the desired time and place of delivery.