

STR Vision CPM

New features of the 2018 release

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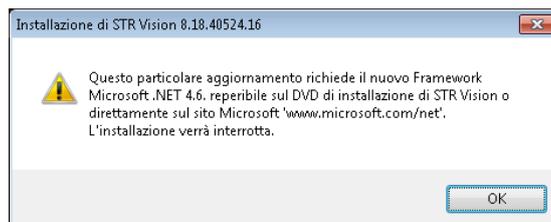
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ATTENTION - The installation requirements are changing:

- **Windows XP and Windows Server 2003 are no longer supported**
- **Update to Microsoft .NET Framework 4.6**

Support for Windows XP ended on April 8, 2014, Microsoft no longer provides security updates or technical support for this operating system. It is very important that customers migrate to a newer operating system.
Support for Windows Server 2003 ended on July 14, 2015.

Moreover, from this version on, the prerequisite for the correct operation of STR Vision CPM is .NET Framework 4.6. The component should already be pre-installed on Windows workstations that regularly run automatic operating system updates. The installation of STR Vision CPM verifies that .NET Framework 4.6 has already been installed, but if it is not detected, the following message is displayed:



Please refer to the specific manual attached for instructions.

Remote support with Bomgar

Bomgar is the new official Teamsystem tool for providing remote support.

Click on the Remote Support button to access the login screen with all the instructions:



GDPR

On May 25, 2018, the new European Regulation on the protection of personal data (GDPR) came into force.

Agyo Privacy is the Teamsystem cloud software for managing all legal requirements imposed by the new European regulation on Privacy 2016/679.

To take advantage of the compliance related changes it is possible to use your universal TeamSystem ID to access the various management platforms, in compliance with the GDPR security requirements.

Access to the management software using your TeamSystem ID increases the access control security level, making it compliant with the regulations of the GDPR. The management and maintenance of the password associated with this account are fully delegated to the new Agyo Privacy infrastructure.

The TeamSystem ID is an account that must be created online, by accessing the dedicated TeamSystem site:

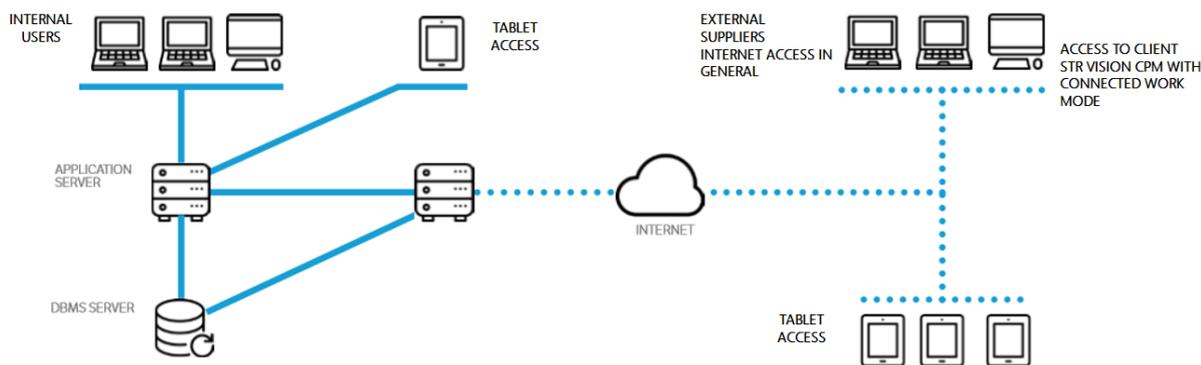
<https://myprofile.TeamSystem.com/Account/Register>

For details, please refer to the specific manual, attached to the installation instructions.

DATA ACCESS AND SECURITY

The STR Vision CPM features that ensure that the software is fully compliant with the law are as follows:

- ☑Centralization, Control, Accessibility, Security, Interoperability
- ☑Centralized application with Full Management Server functionality
- ☑Business productivity vs. Personal productivity
- ☑Procurement related information NOT spread across the company network through files of various formats
- ☑Analysis, fully centralized data controls (Multi procurement analysis)
- ☑Security: Management of users, roles, and rights over any application data
- ☑Scalability: scalable and gradual adoption over time based on a *Horizontal* approach
- ☑Centralized DBMS (Database)
- ☑Backup, retention
- ☑Management of the numerous work teams based on a robust management of roles and rights that makes it possible to manage user rights and distinct roles up to the individual lines of an estimate or works accounting



 TeamSystem®

Through the SIX (open format whose specifications are published on the www.standardsix.org website, which also includes an LGPLV3 license) and VIS (open format XML) formats and the exposure of interoperable software services, STR Vision CPM fully complies with this requirement.

STR Vision CPM is able to guarantee the authenticity, the security of the data entered and the origin of the same from competent subjects with a centralized database, user and role management, access permissions for users and roles, "Data signing (time and user)" for the creation and modification of entries and compliance with the GDPR.

In addition, with reference to the Works Ledger, from this version it is possible to manage permissions by grouping value assigned to the Daily Journal.

Works Ledger - Permissions by grouping value

From this version it is possible to manage permissions by grouping value assigned to the Daily Journal of the Works Ledger. Here are some specific modes of use:

Read mode

Create a system Role grouping with 2 companies (I1, I2) taken from the companies list associated with the Daily Journal and configuring it as an access control grouping:

Day	Weather condition	Rain/Snow (mm)	Wind (m/s)	Minimum tempera...	Maximum tempera...	Row type	Prg.
15/10/2018	Sunny	0,0	0,0	0,0	0,0	Activity	10
16/10/2018	Sunny	0,0	0,0	0,0	0,0	Activity	20
		0,0	0,0	0,0	0,0	Activity	30
		0,0	0,0	0,0	0,0	Activity	40

Create user access Roles with values 01 and 02 and associate Role 01 to user U1 and Role 02 to user U2.
 Create a daily journal registration with code 10 and associate it to Role 01.
 Create a daily journal registration with code 20 and associate it to Role 02.
 Set the rights by value as follows:

Role	Role description	Permission
I1	Mr. Smith	Read and write
I	Everyone	Read only

Role	Role description	Permission
I2	Mr. Smith	Read and write
I	Everyone	Read only

The result is that:

User U₁ will see the 2 journal registrations, but will be able to modify only line 10;

User U₂ will see the 2 journal registrations, but will be able to modify only line 20;

Exclusive viewing mode

If the rights by value are set as follows:

Role	Role description	Permission
I1	Mr. Smith	Read and write
Everyone	Everyone	Access denied
SM	Site manager	Read only

Role	Role description	Permission
I2	Str Spa	Read and write
Everyone	Everyone	Access denied
SM	Site manager	Read only

and if a WM user is created belonging to the Works Management role, the result will be that:

U₁ user will only see registration 10;

U₂ user will only see registration 20;

User WM will see both registrations 10 and 20, but in read-only mode.

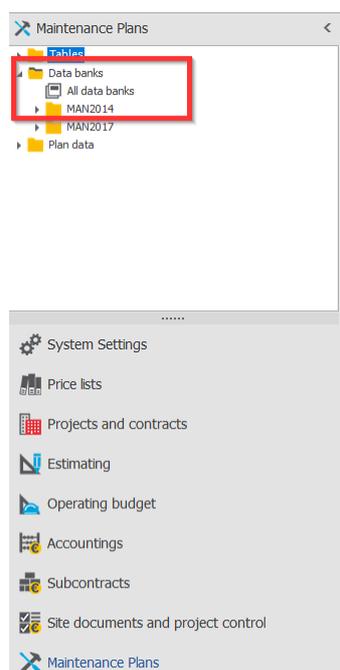
WORK ORDERS

Work Orders (WO) constitute the executive orders for ordinary and extraordinary maintenance to be carried out on a census item and assigned to suppliers and teams of operators.

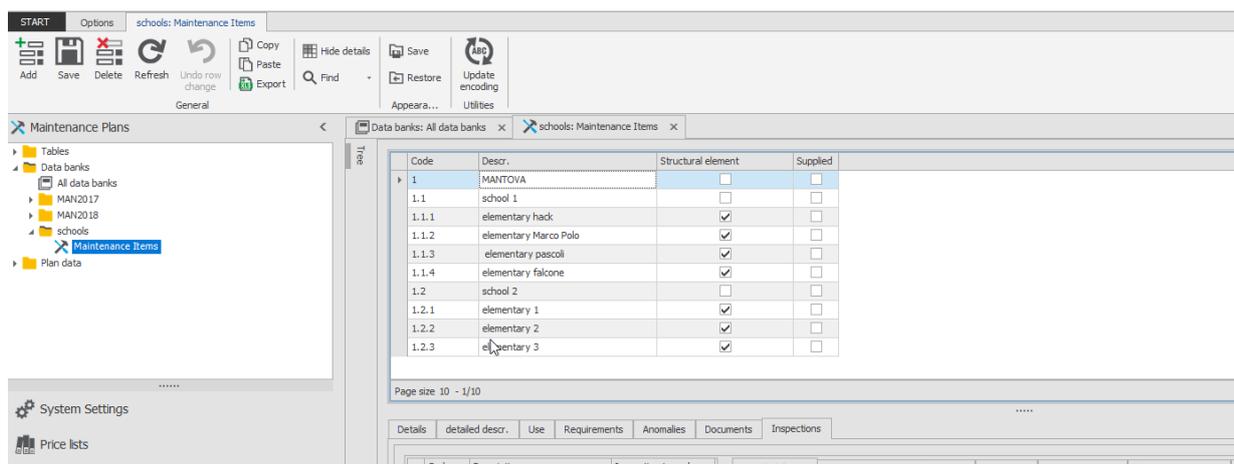
This module enables the insertion, printing and monitoring thereof.

Census creation

In the management of the Maintenance Plan > Databases, create one or more censuses that can be organized by type of assets/network for which you wish to build a more or less detailed inventory.



To create a new census, double click the all databases node and click the Add button from the toolbar. Enter the maintenance items using structured encoding to create hierarchies:



The database is structured into work parts, further subdivided into units and maintenance items. Each technological unit is characterized by specific requirements and performance. Each element is characterized by anomalies, controls and interventions.

The folders that make up the database are:

Detail data

Contains the following information:

- **Code and description of the item.**
- **Structural element:** indicates if the element is structural in nature. It will therefore be possible to filter the list to only display structural elements (according to the Ministerial Decree of 14 January 2008 and the relative Explanatory Memorandum of 2 February 2009, no. 617).
- **Higher level:** code and description of the associated parent element; this field is automatically valued for a code with structure; it can be freely modified in all other cases. For further information on the code structure, please refer to the paragraph titled How to configure the code structure - Tree Properties feature.
- **Full description:** shows the description of all the items in the hierarchy (higher levels).

Detailed Description

Contains the detailed description of the item.

Method of use

Contains instructions for the correct use of the item.

Requirements and performance

Contains the requirements for the correct functioning of the unit or item. The table fields are:

- **Requirement type code:** reference to the Requirement class table.
- **Short description of the requirement.**

The detail panels on the right display the Detailed Description, the Performance, the Minimum level of performance and the Reference Regulations.

Anomalies

Contains any anomalies associated with the item. In each row of the table a Detailed description can be associated in the panel on the side.

Documentation

Contains the detailed documentation relating to the item, technical data sheets, etc.

In the grid it is possible to specify:

- **The Description of the document and the Storage location.**
- **Manual:** can be filled with one of the available values: User manual, User and maintenance manual, Maintenance manual.

In the detail panels on the right, for each row of the grid, it is possible to specify

- **Detailed Description.**
- **Graphical representation:** In this tab, it is possible to associate an image to an element. To associate an image to the item, go to the Image tab pane, right click and select Load.
Once the image has been inserted it is possible to perform operations such as cut, copy, etc. using the context menu enabled with the right mouse button.
- **Web links:** click the button to specify a reference link for the element.

Controls and interventions

Contains the controls and interventions associated with the item. The following are shown in the grid:

- **Code and description of the control or intervention.**
- **Period:** to be selected from the available values in the dropdown menu.
- **Frequency:** indicate the frequency of the control/intervention according to what is stated in the Period field. In case of periodicity of type A failure or When necessary, the default value of 0.00 is left.
- **Performed by the user:** to be selected if the control or intervention can be performed by the final user. If the activity must be carried out by a specialist, do not select the option.
- **Amount:** To calculate the amount using the appropriate calculation, go to the Resources Calculation details panel to the right.

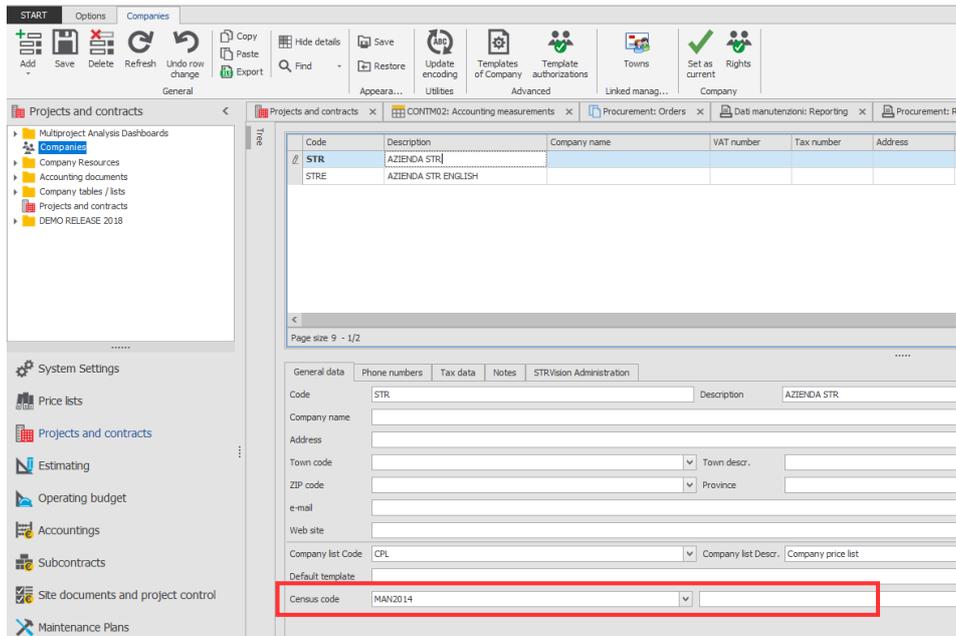
The detail panels are:

- **Detailed description.**
- **Requirements and performance:** view of requirements/performance related to the item itself or to the technological unit to which it belongs.
- **Anomalies:** view of the anomalies specified for the element.
- **Specialized personnel:** shows the list of categories of specialized personnel needed to perform the control or the intervention.
- **Resources calculation:** enter the code, description, unit of measure, the price and quantity of resources required to carry out the control or intervention. To use the items available in the project reference lists or price lists, open the help pane and drag the items using the drag and drop function in the resources calculation grid. Specify the amounts and save. The calculated total will be shown in the Item Amount field.

For more details please refer to the STR Vision CPM online help.

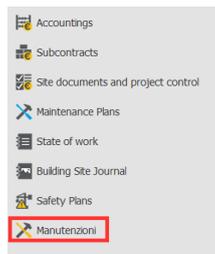
Census association

Associate with the company the census to which the work orders that will be created are linked. Open the Projects and orders management > Companies. Associate the census selecting it from the menu and save.

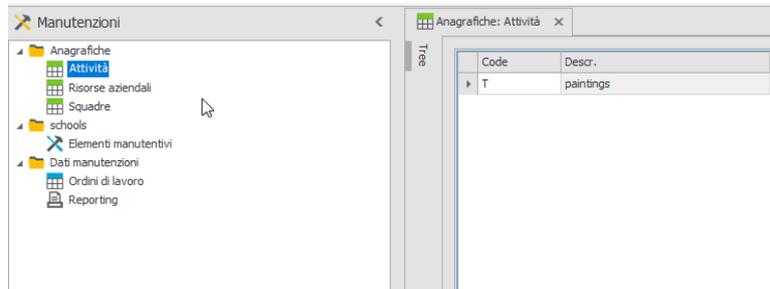


Data records

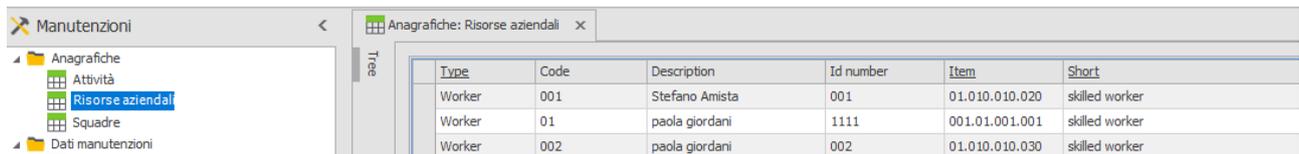
Open the Maintenance management and open the Data records node



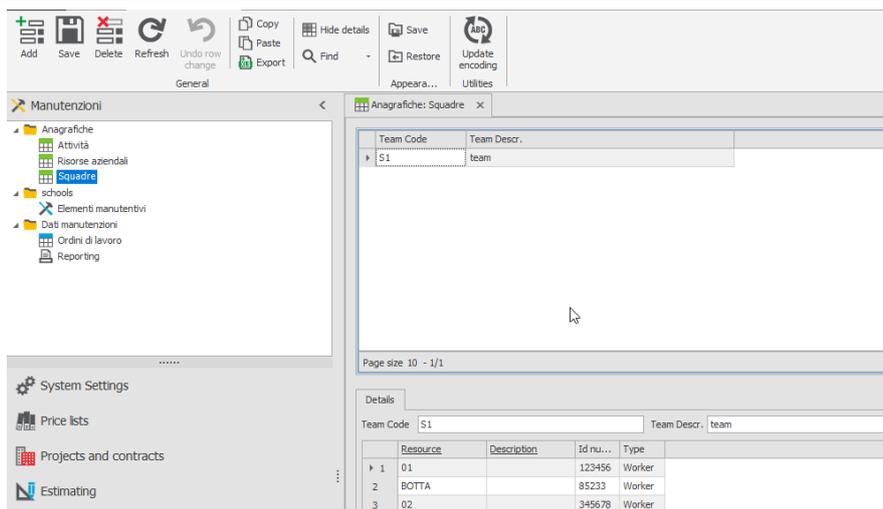
Enter the Activities data:



Enter the Corporate resources data, associating an item for each resource:



Enter the Teams data, specifying the details of the resources that comprise it.



The central node shows the data records associated with the company.

Work orders

To insert a new work order open the node in the Maintenance data folder.

Click Add and enter the code and description. In the Code field, enter a series of states to assign to the orders, e.g. Open, Closed, Suspended, etc.

General data	Notes	Detail data
Code	ODL01/2018	Descr. job order 01 2018
Status code	10	Status descr. open
Team code	S1	Team descr. team
Jobs Order date	14/09/2018	Closing date 19/09/2018

Specify the team which will carry out the activity and the date of the Work Order.

Enter any notes in the appropriate panel and fill out the Detail data panel.

Specify a description for the individual activity, select one of the generic activities from the relative data records and an item on which the activity will be performed.

General data	Notes	Detail data															
		<table border="1"> <thead> <tr> <th>Description</th> <th>Activity code</th> <th>Activity descr.</th> <th>Element code</th> <th>Element descr.</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>T</td> <td>paintings</td> <td>1.1.2</td> <td>elementary Marc...</td> </tr> <tr> <td>2</td> <td>IM</td> <td>mep chek-up</td> <td>1.1.2</td> <td>elementary Marc...</td> </tr> </tbody> </table>	Description	Activity code	Activity descr.	Element code	Element descr.	1	T	paintings	1.1.2	elementary Marc...	2	IM	mep chek-up	1.1.2	elementary Marc...
Description	Activity code	Activity descr.	Element code	Element descr.													
1	T	paintings	1.1.2	elementary Marc...													
2	IM	mep chek-up	1.1.2	elementary Marc...													

Printing

To print work orders open the Print node and create a new Work order printing report.

General	Options	Signatures	Print
Start date	14/09/2018	Final date	19/09/2018
Des. Intestazione dx 1	New Imbianchini		
Des. Intestazione dx 2	Via dei mille 123		
Des. Intestazione dx 3	Pegognaga- MANTOVA		
Squadra	S1	team	

Specify the date range to use in the printing, enter the work order header data and specify an eventual filter by Team.

PULIZIA CONDIZIONATORI

Periodo dal 04/07/2018 al 11/07/2018

Descrizione	Elemento manutentivo		Descrizione attività
	Codice	Descrizione	
Pulizia condizionatori	1.1.1	Secondaria Pascoli	PULIZIA
Lavaggio	1.1.1	Secondaria Pascoli	PULIZIA
Sostituzione	1.1.1	Secondaria Pascoli	RIPRISTINO

GENERAL

Indication of the number of users per license

The START information panel now reports the number of active users for the license installed:

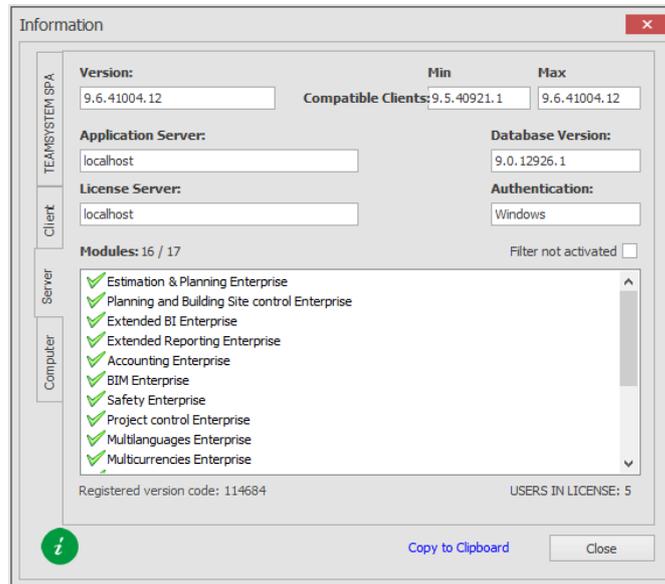
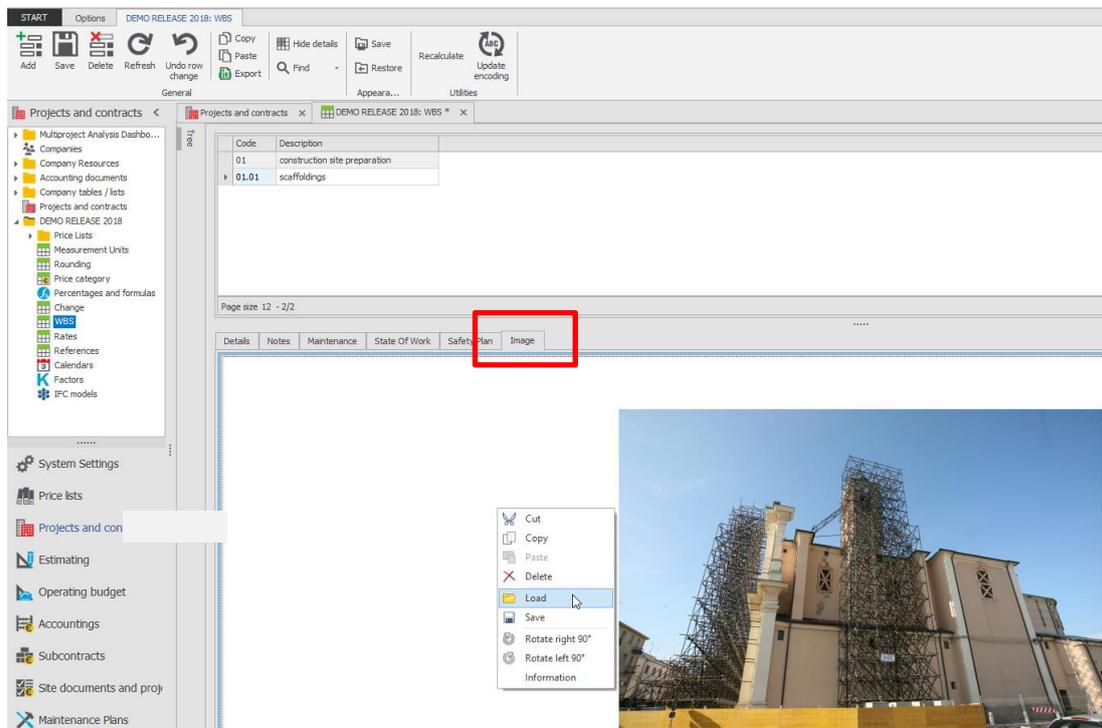


Image management for WBS

For each WBS it is possible to add an image in a designated panel:



Images can be included in the estimate print using a dedicated option.

The screenshot shows the 'Options' tab in the software. The 'Print WBS image' checkbox is checked and highlighted with a red box. Other visible options include 'Bill of quantities', 'Measurement types', 'Price class', 'Discount/Raise', 'Amounts carried forward', 'Print measures', 'Available amounts', 'Single column', 'Progressive', 'Images', 'Direct supply', 'Order amounts by code', 'Measure unit', 'Arrange by progressive number', 'Notes', 'Not structured summary', 'Labor', 'Ref. code', 'Index', and 'Markups and discounts'.

The image associated with each WBS is shown at the beginning of the section of registrations for that value, therefore the printing must be grouped by WBS:

The screenshot shows the 'WBS code' search filter. The 'Show' button is highlighted. The 'Available values' list includes 'Amount (Bid)', 'SOA cat. code', 'SOA cat. descr.', and 'Direct supply'. The 'And' button is also visible.


30/10/2018

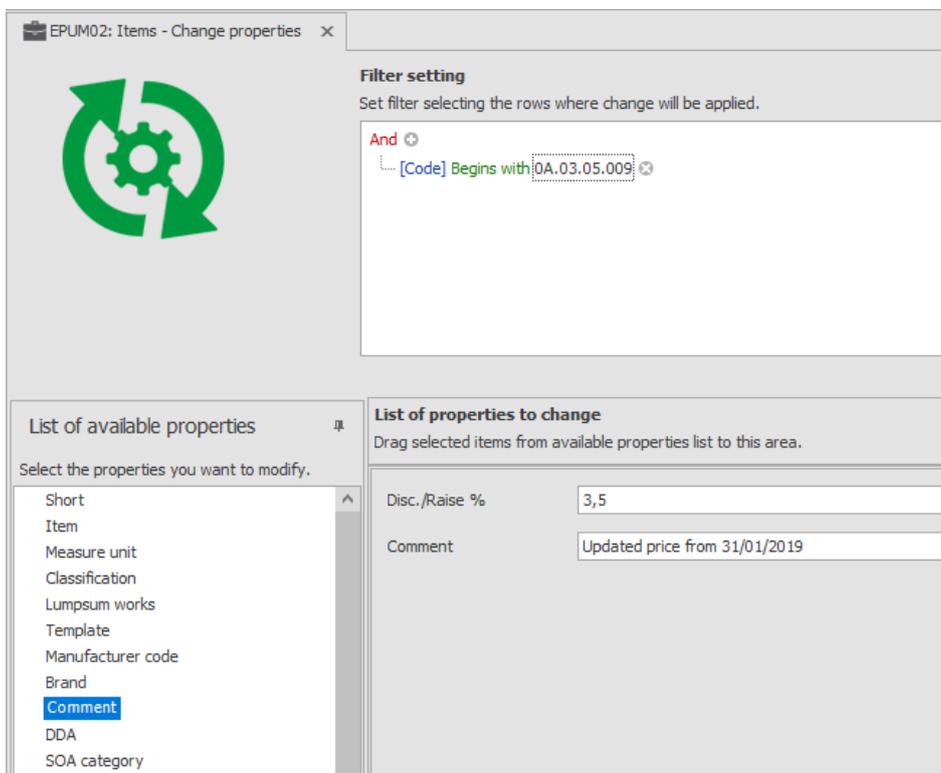
ESTIMATE

ITEM N.	DESCRIPTION OF WORKS AND SUPPLIES	QUANTITY	PRICE	AMOUNT
	scaffoldings 			
1 Z.02.02.05	Scaffolding			
	10	10,000		
	Total mq	10,000	16,38	163,80
	Total scaffoldings Euro			163,80
	Jobs amount Euro			163,80

PRICE LIST

Modify prices - Option to insert comments on target prices

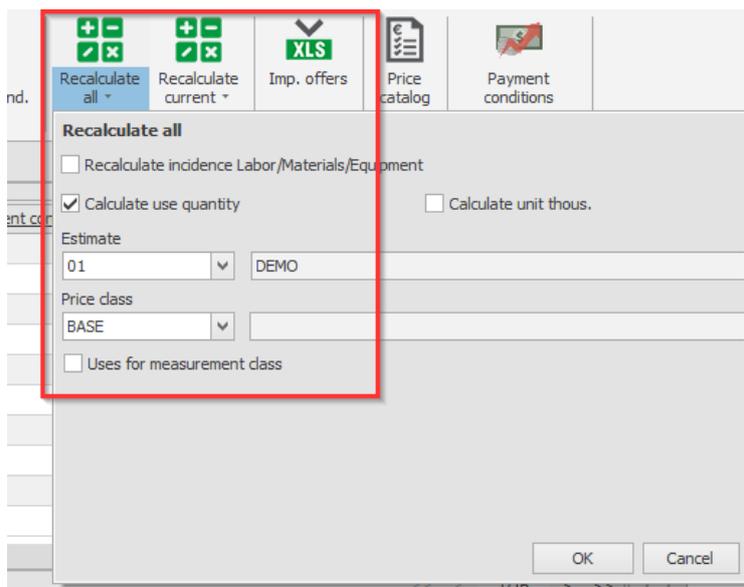
Among the available properties, it is now possible to enter a comment that will be assigned to all prices affected by a change.



List of unit prices items with display of estimate amount

In the management of Price List items, fields are now available for the Usage Qty and Usage Amount, which indicate the quantities handled in the estimate.

To calculate the usage, click the recalculate everything button from the Analysis section of the toolbar:



Select the Calculate usage quantity option, choose the estimate and the price class, or select the Usage option from the registration class. The execution of the calculation will populate the Usage Qty and Usage Amount fields.

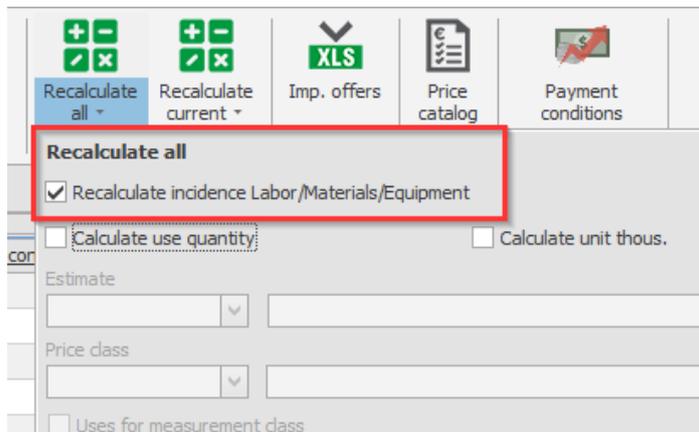
Addition of materials and equipment on items by percentage

In the price list items grid, the following fields have been added:

- Material %
- Material Price
- Equipment %
- Equipment Price

The same fields are also available in the Detail data and Prices panels.

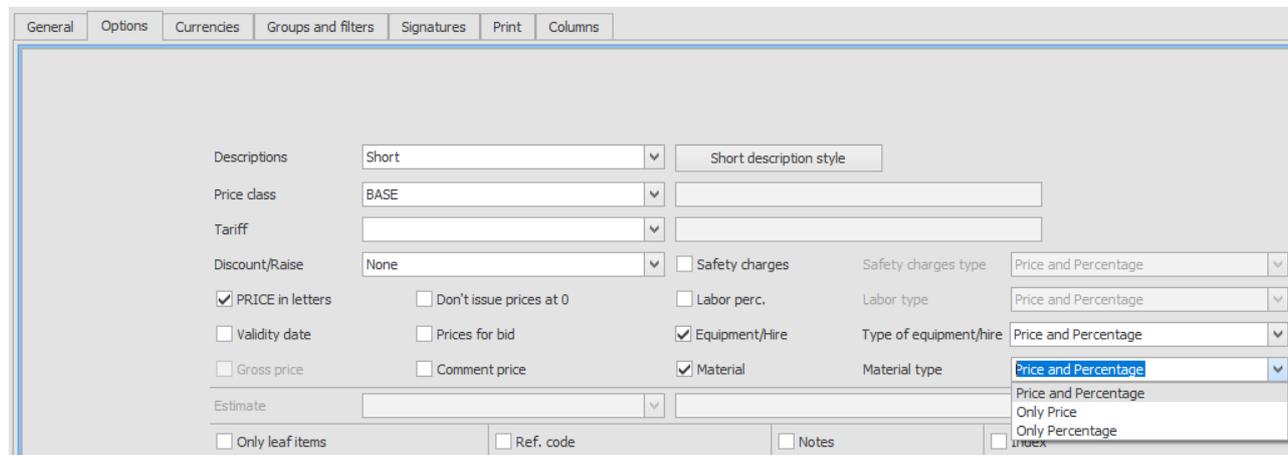
To carry out the calculation based on the type (material, equipment) click the Recalculate everything button in the Analysis section and select the Recalculate incidence Lab/Mat/Equip.



The **Material Price** is calculated taking into account only those components whose type is **Material**.
The **Equipment Price** is calculated taking into account only those components whose type is **Equipment**.

The Price list / Unit price list printings provide two new options to display data:

1. Equipment/Freight option – choose whether to display only the price, only the percentage or both in the same column
2. Material option – choose whether to display only the price, only the percentage or both in the same column



In the Handbook of Procedures dashboard, the following fields are available:

- Material %
- Material Price
- Material amount > calculated as the Material Price x Quantity
- Equipment %
- Equipment Price
- Equipment amount > calculated as the Equipment Price x Quantity

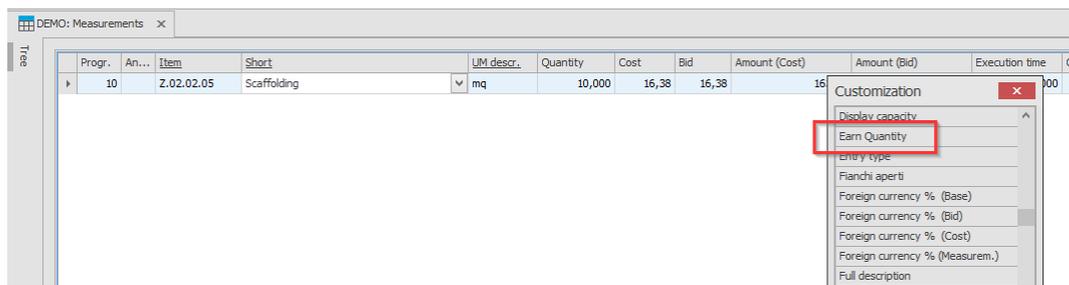
The Material % and price fields and the Equipment % and price fields are also managed when importing files in XPWE format.

Estimation

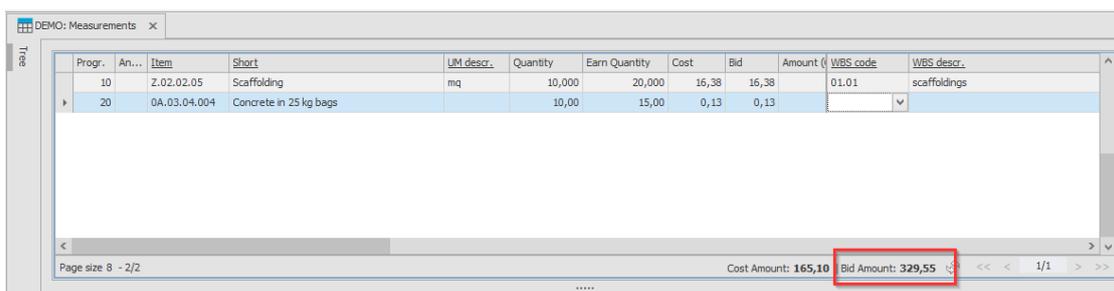
Offer quote - new Revenue amount field

The new Revenue amount field was introduced to allow the insertion of a double amount in the offer quote.

To use the field, go to the estimate registrations grid, right click > Select columns > and drag the revenue amount field.



The summary in the estimate management was adjusted, modifying the calculation of the offer total to take into account the Revenue amount field.



The revenue amount field can also be used in the estimate dashboards.

SUPPLIER OFFERS

Improvements in the offers comparison dashboard

A number of new options have been added:

Reference class: the choice of the reference class has been added, with respect to which the offers will be evaluated.

Best offer field: a new field has been added for each item, which contains the description of the offer that is most cost-effective or the lowest of the 6 (excluding the reference class).

Best price field: a new field has been added for each item, which contains the price relative to the previous point (best offer).

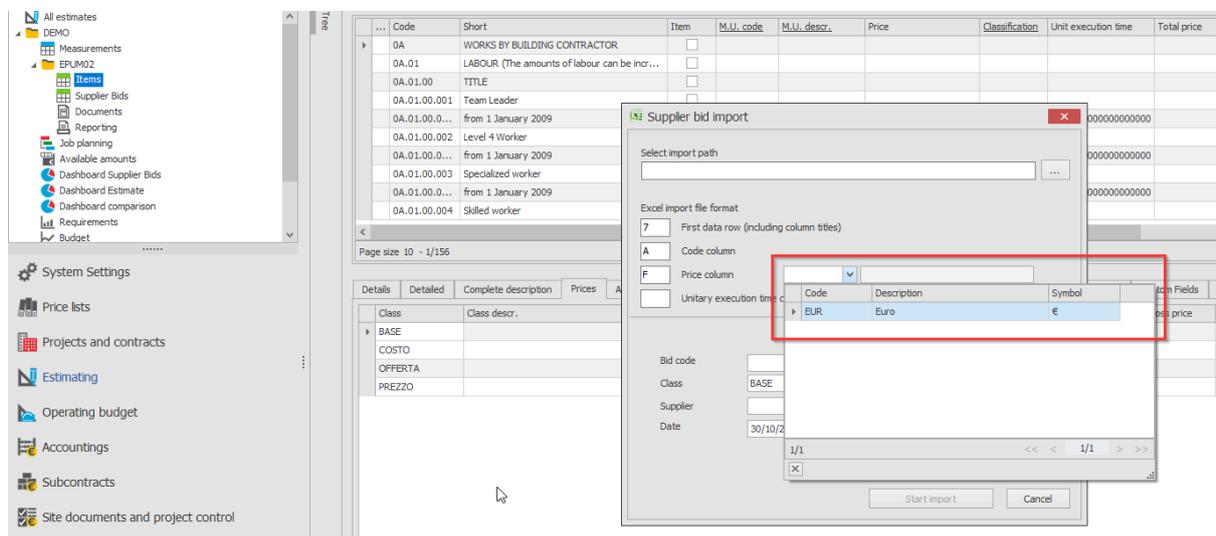
Difference fields: Diff. Offer1 ... Diff. OfferN (where Offer1... OfferN are the offer codes) in which the differences are calculated with respect to the reference using the formula:

$$Diff. OfferN = Gross Amount (Reference) - Gross Amount (OfferN)$$

Therefore up to 6 difference fields will be produced.

Currency selection in the importing of offers

In the offer import screen the option was added to execute the import based on a specific currency.



ACCOUNTING

New variables

A number of new variables have been added to be used in accounting documents:

- site inspector
- Amount of discount on works: amount relating to the discount from which the lists discount is excluded
- Net amount for works (excluding lists): net amount of the works excluding the lists net amount
- Net lists amount: net total relating to the dayworks items
- Amount for works subject to bidding discount: bidding price excluding safety costs (from accounting header data)
- Amount for works net of bidding discount: award amount excluding safety costs (from accounting header data)

Payment certificate variables

- Amount subject to discount (amount excluding charges)
- Amount excluding costs (works)
- Amount excluding costs (lists)

Contractual discount

- Discount amount (works)
- Discount amount (lists)

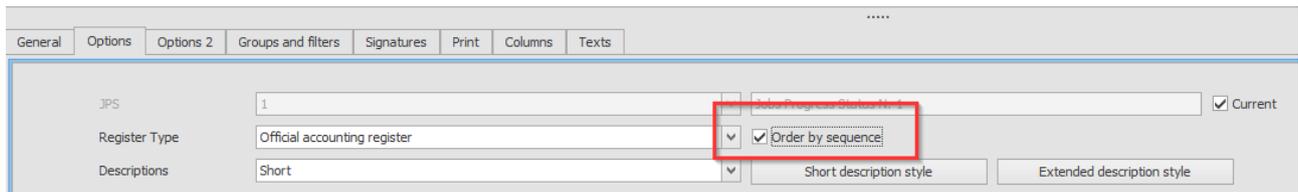
Costs

- Amount of costs (works)
- Amount of costs (lists)

Handbook of Procedures and Accounting Ledger in sequential order

The Order sequentially option on Handbook of Procedures / Accounting Ledger printing reports forces the ordering of the data in sequential order, regardless of any groupings that may have been defined in Groupings and filters.

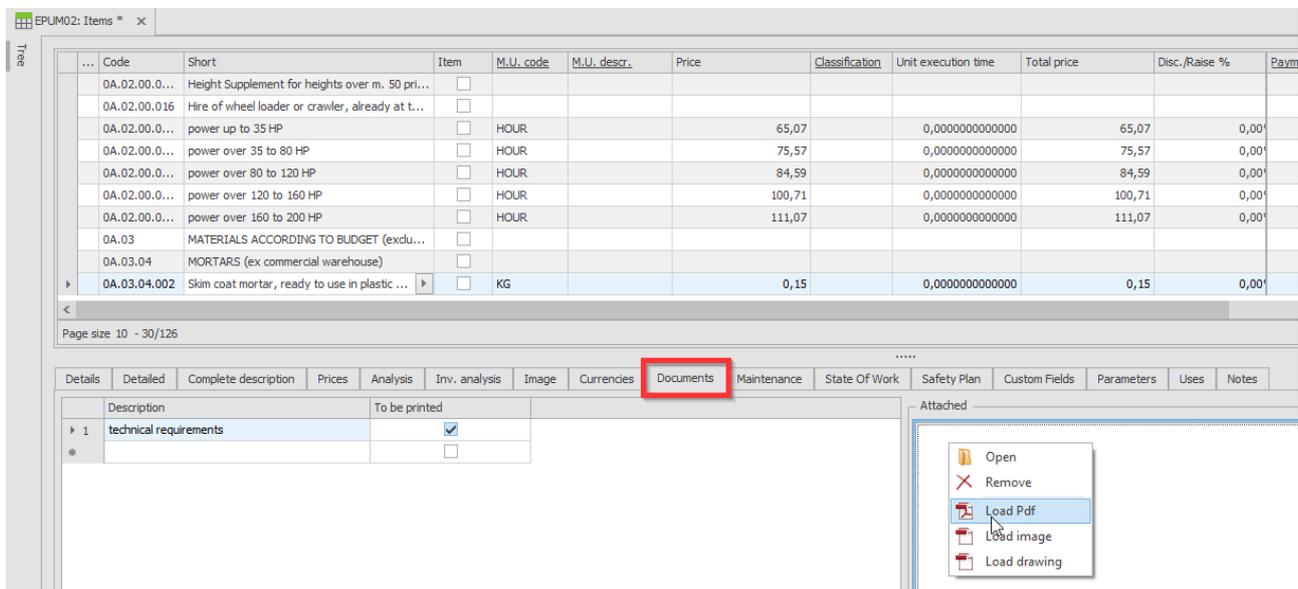
In the case of printings subdivided by type, the first sorting criterion will remain the Registration type (percentage completion, in full, etc.).



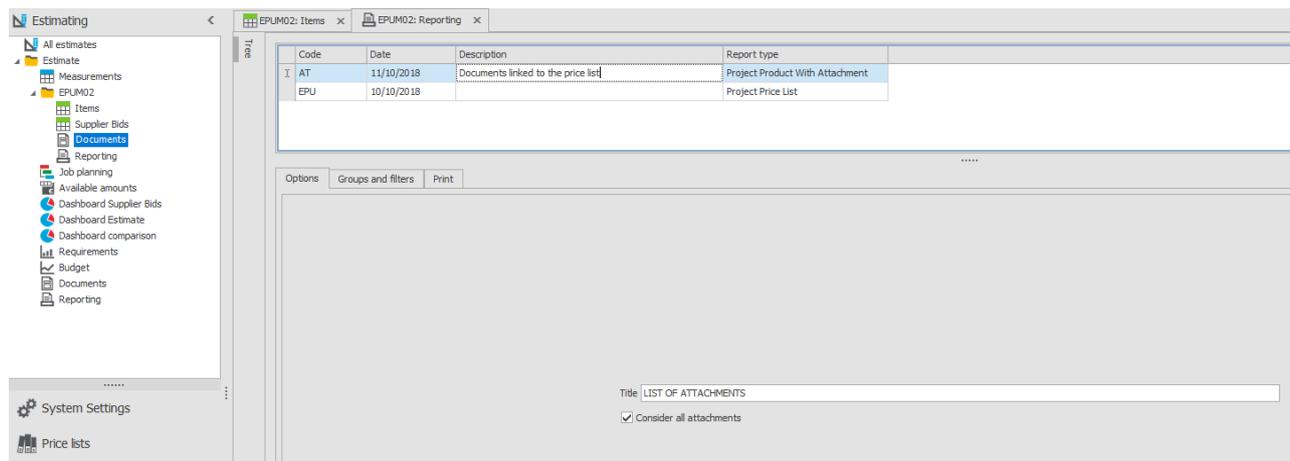
PRINTINGS

New print reports: Price list items and price list documents

In the List of unit prices items and price lists management, a new panel is available which makes it possible to associate documents in various formats that can be optionally printed.



The printing of the price list with attachments is available as part of the price list printing reports. Only attachments in PDF format will be printed, for which the **To print** option was selected. To print all PDF attachments, select the **Consider all attachments** option.



New detailed description style options

1. A new **Define detailed style** option is available that makes it possible to specify a style for the detailed description specific to the printing report.
2. **Detailed description style** button: this button is similar to the Short description style and allows you to customize the print style.

Export estimate print in Excel format

The printing of the estimate can be exported in Excel format, without the need for a print preview.

Click the Excel Export button from the estimate prints management toolbar.

The Excel printing will follow the settings of the report on which it is based, for example, it will provide for the option to represent separate Measures, Descriptions (short, detailed, both), Total net amounts (which take into account safety discounts and charges).

The printing can be grouped on a maximum of 3 groupings and at the end of the report, a summary will be displayed in relation to the 3 grouping levels (structured or not structured according to the relative printing option).

N.	CODE	DESCRIPTION OF WORKS AND SUPPLIES	Measur e unit	QUANTITY	PRICE	AMOUNT
	Undefined	Undefined				
1	0A.04.04.006.0 0A	Armed concrete C25/30				
		TRAVE - 001	QM	0,21		
		TRAVE - 001	QM	0,21		
		TRAVE - 001	QM	0,21		
		TRAVE - 001	QM	0,21		
		TRAVE - 001	QM	0,21		
		TRAVE - 001	QM	0,21		
		TRAVE - 001	QM	0,21		
		TRAVE - 001	QM	0,21		
		Totale	QM	1,68	€ 167,00	€ 280,56
2	0A.04.04.006.0 0A	Armed concrete C25/30				
		SOLAIO 002	QM	31,96		
		SOLAIO 002	QM	8,32		
		Totale	QM	40,28	€ 167,00	€ 6.726,76
		Total Undefined				€ 7.007,32
	20	First floor				
		Totale	P	5,00	€ 195,70	€ 978,50
32	0L.03.00.006.0 0B	for stairs	M	8,73	€ 88,00	€ 768,24
		Totale Ground floor				€ 42.677,97
	10	Ground floor				42.677,97
	20	First floor				54.751,07
	Undefined	Undefined				7.007,32
		JOBS AMOUNT				€ 104.436,36
		Safety charges				€ -
		Amount of works subject to discount bidding				€ 104.436,36
		From which, subtracting contract discount of 0,00% on				€ -
		TOTAL AFTER DISCOUNT/RAISE				€ 104.436,36
		AVAILABLE AMOUNTS				€ -
		TOTAL AVAILABLE AMOUNTS				€ -
		TOTAL AMOUNT OF WORK				€ 104.436,36

Accounting ledger printing: option to exclude bodies of work without progress

In the Accounting ledger printing the Exclude works without progress option is available, which excludes bodies of work whose progress is 0.

Copy/paste of printing reports between different projects

Is now possible to copy/paste print reports including between different projects.

Breakdown Analysis printing

In the **Advanced Reporting** module a new type of printing has been developed referred to as **Excel Breakdown Analysis**.

This printing option makes it possible to reconstruct the steps for calculating the Selling price (Offer management), starting from the breakdown of the Cost of each Estimate Registration and highlighting the amounts of Indirect Costs and Mark-ups or General Expenses and Business Profits attributed to the Direct item.

The printing produces an Excel spreadsheet.

Data display mode

The key economic data is represented both in its total value expressed in the reference currency of the Project, as well as in the individual currency amounts, displayed in the original currency value or converted to the reference currency.

Representation of the Cost

The direct cost of a single line in the estimate is broken down into its relative requirements, grouped and totaled based on the relative Types.

For each requirement, in addition to the codings and descriptions, the values of unitary incidence, quantities, unit costs (also in currency amounts) and amounts are available.

For each estimate line the indirect costs attributed to the same and any General expenses and Business profits, if calculated using the relative percentages, are also available.

Mark-ups

The cost mark-ups can be issued based on Synthetic or Detailed modes. In the first case, for each Kn used in the Offer management the Base taxable values are totaled to which the Kn and the relative mark-ups are applied.

In the second case, each of the synthetic values is further broken down with the taxable amount and the mark-up deriving from each line defined for the Kn in the Mark-up coefficients management.

Both in the synthetic and in the detailed mode, in addition to the economic values, the percentages, the coefficients values, the codings and the descriptions are also available.

XLST template

The printing is achieved through the Microsoft Smart Document mechanism that makes it possible to define a document template to be used across multiple printing reports.

STR has developed an example template importable online from the Estimate Documents management.

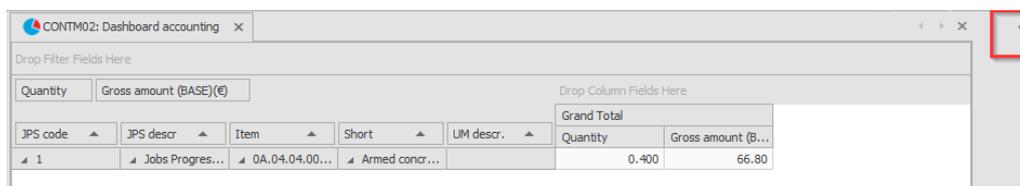
Exclusions

The printing option is not usable if Ks are defined per each type, as the representation of the mark-ups would be too complex and not very understandable.

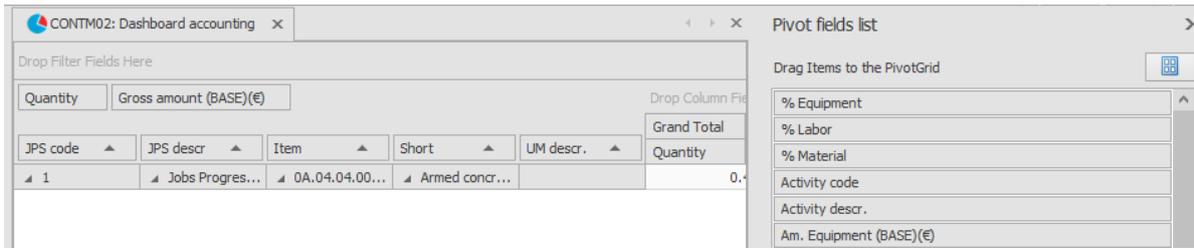
DASHBOARDS

Dashboard fields in the help pane

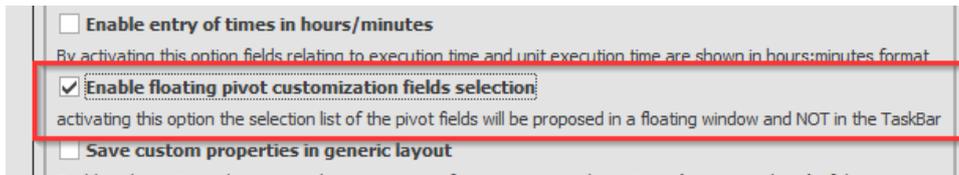
From this version, after a data request is made in a dashboard, the field list continues to be available in the help pane instead of staying in the foreground on the dashboard. Open the help pane by clicking on the arrows at the top right:



The field list is displayed:



The previous behavior can still be enabled with an option available from START> options > Interface Panel



Requirements dashboard - New field for estimate quantity

In the Requirements dashboard (and budget), in addition to the quantity at cost and revenue a new field has been added which represents the estimate quantity of the item analyzed.

The field is Est. quantity and is valued with the quantity of the item that is handled in the estimate:

For example, if analysis A consists of

1. Line1 with quantity = 2
2. Line2 with quantity = 3
3. Line3 with quantity = 4

and A is handled in the estimate with quantity = 100, the result in the current requirements dashboard sees

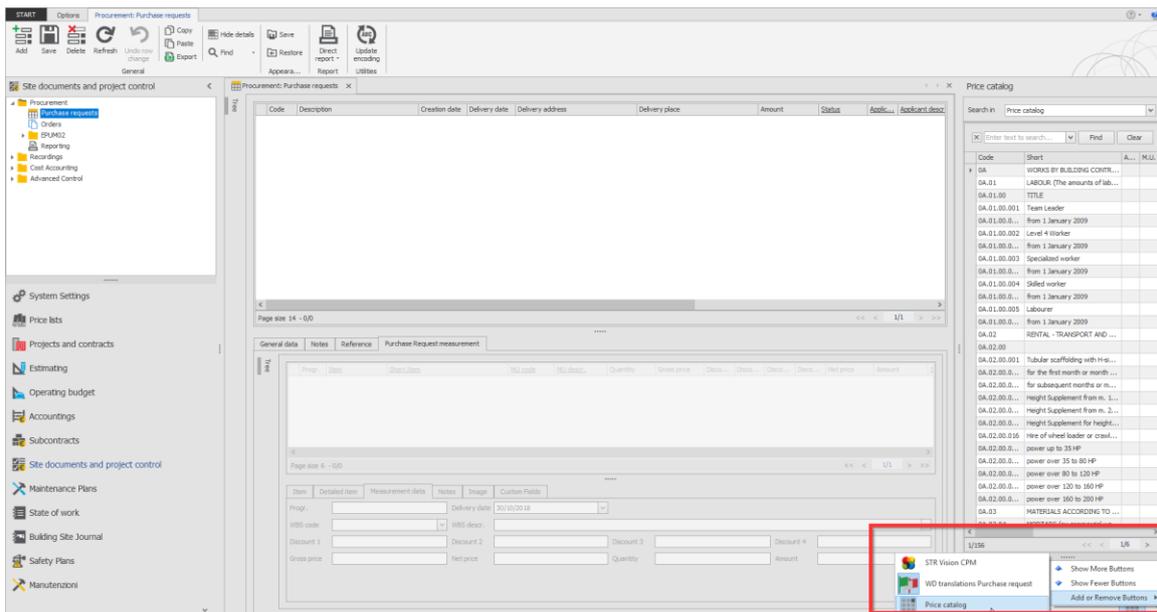
1. Line1 with quantity = 200
2. Line2 with quantity = 300
3. Line3 with quantity = 400

The new Est. quantity column will display the value 100 for all rows that concern item A (for a given registration).

RECORDS AND CONTROL

PURCHASE REQUESTS - List of unit prices in the help pane

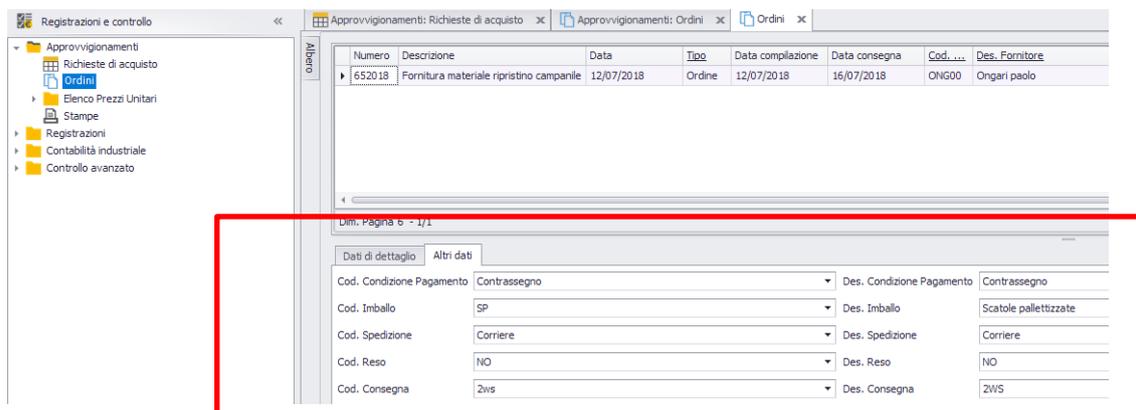
Working in the management of Purchase requests, it is possible to enable the price list in the help area on the right:



Click on the arrow at the bottom right and click the Add or Remove buttons, select the Price List and then click the icon that appears in the help pane.

ORDERS - Addition of data relating to payments and delivery

In the Orders header the new Other Data panel has been added, in which it is possible to specify information related to payments and delivery:



Each of the fields is contained in a table which can then be populated with a set of default values:

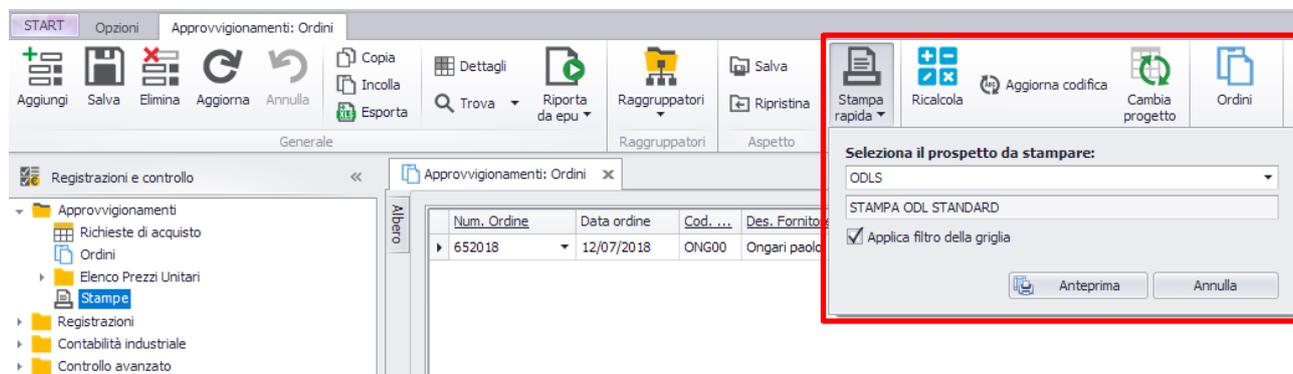
- Payment terms
- Packaging
- Shipping
- Return
- Delivery

The order printing will use the information described above and possible exemptions for Packaging, Shipping and Return.

Orders Quick print button added

The Quick Print button is now available in the work orders toolbar.

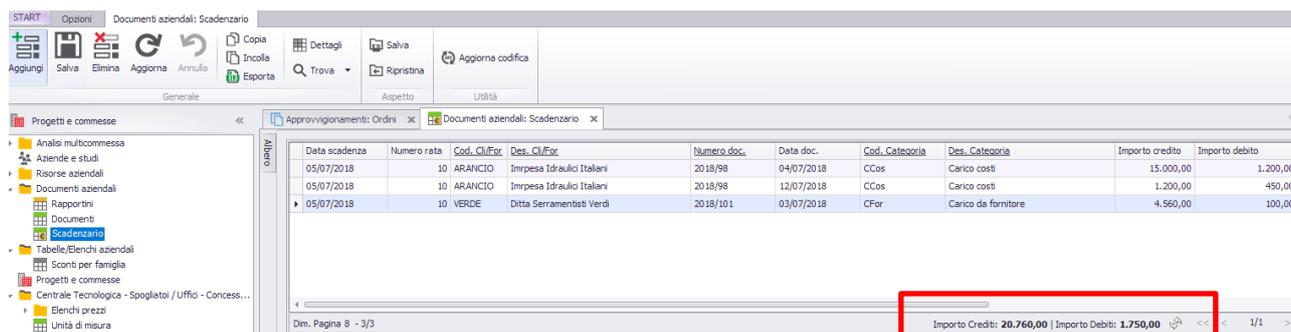
It allows you to print quickly using one of the saved print reports available in print management.



SCHEDULE

Total costs and revenues in the working document

The Schedule management was enhanced to include the amounts of Receivables and Payables directly under the grid with the list of deadlines.



MULTI-WORK ORDERS

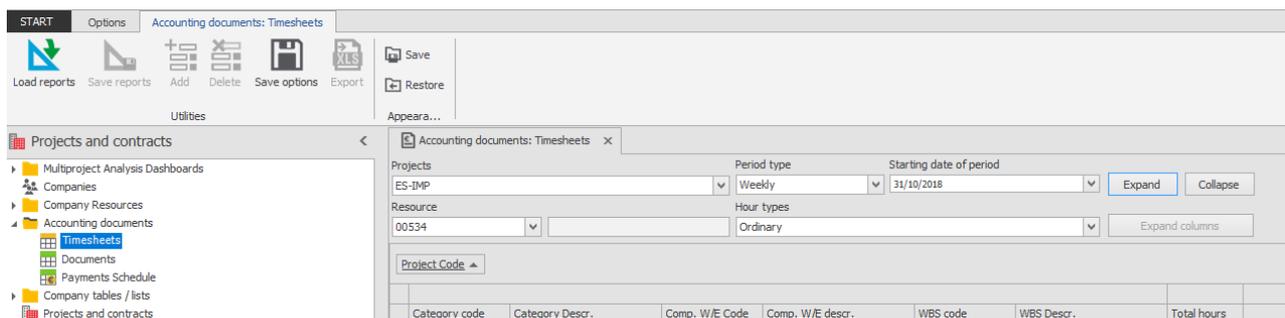
Multi-work order reports

A new management is available, which can be enabled in the Projects and work orders node > Business documents > Reports, which supports the insertion of reports in multi-work order mode.

The main features of the new management are:

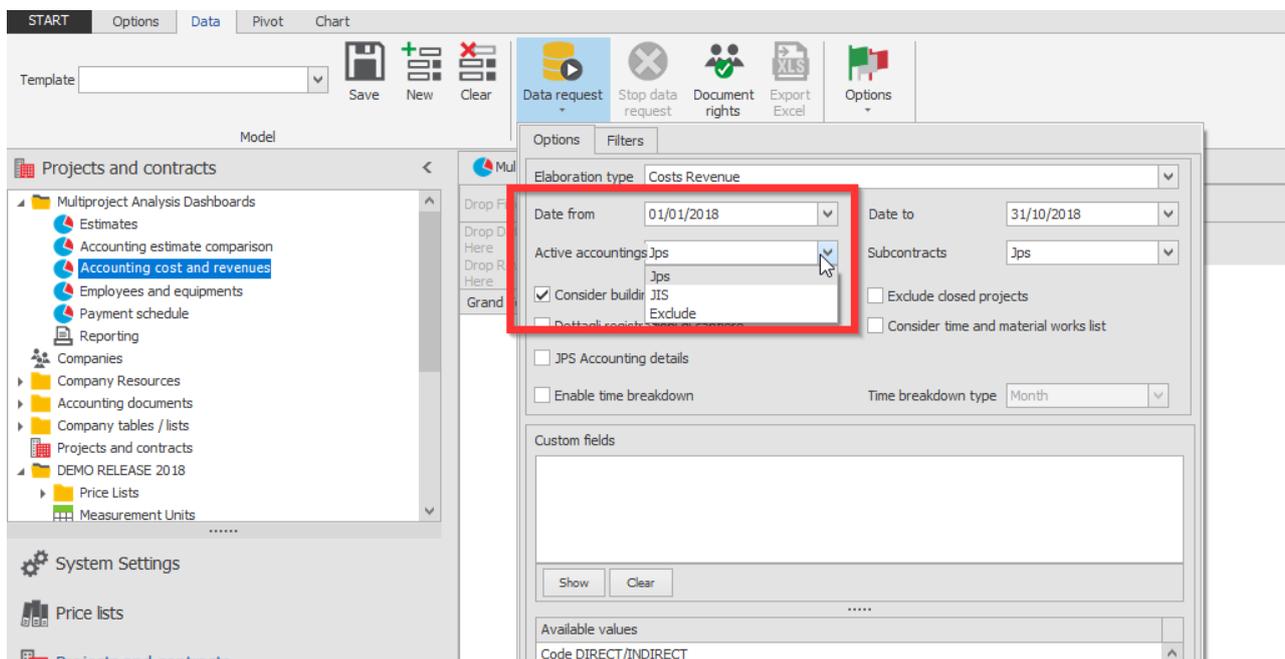
- Filter by selection of work orders on which to enter data
- Indication of the start of period date (week) to be taken into account
- Indication of the hour types to be taken into account
- Possible configuration of the resource (employee or equipment) at a general level
- Inserting of data on work orders with daily data organized by column

The management provides the ability to save the filter settings and the ability to export the data displayed to Excel:



Multi-work order dashboards – new features

1. In the Multi-work order Dashboards (Final estimate and Final costs and revenues comparison) the possibility of excluding assets accounting or liabilities accounting from the comparison was introduced:



2. On the Final Costs and Revenues, Estimates/Final balances comparison, Estimates, Reports dashboards, the groupings defined on the WBS can be added, if they have been entered by company or system.
3. Cost from Registration option added in the Advanced panel. This option means that for each estimate processed (and specifically for each registration processed) the registration class is taken into consideration (Registration Class field) for the population of the cost instead of the cost class defined in the header of each estimate.

Estimates Multi-work order dashboard - Cost from Registration option

From this version, the Cost from Registration option is available in the Advanced panel.

This option means that for each estimate processed (and specifically for each registration processed) the registration class will be taken into consideration (Registration Class field) for the population of the cost instead of the cost class defined in the header of each estimate.

The following fields are therefore displayed:

- Registration Class Code
- Registration Class Description

PI.CO.

Variiances analysis dashboard: possibility to obtain a bubble chart on a selected grouping

An option for selecting a grouping (for movements) that will form the basis for the production of a bubble chart as an alternative to the WBS was introduced.

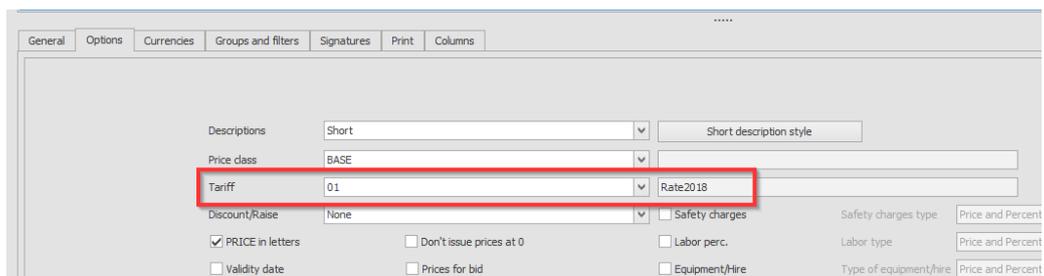
The representations that can be obtained, i.e. CPI – PERIOD and CPI – SPI are also currently obtainable on the WBS.

PLANT ENGINEERS

Price list / list of unit prices printing: printing of rates instead of prices

The ability to print rates instead of prices was introduced, both for price lists as well as for lists of unit prices.

Select the option in the price list printing report:



The option automatically enables the 16 rate columns (Ordinary, Extraordinary, etc) of which only Ordinary and Extraordinary will be active. To include the other columns open the Columns panel and select the ones you want to issue.



Please note >> for price list printing, the option is active only if what you are printing is identified as a company price list.

PRICE CATALOG

CODE	DESCRIPTION	Measure unit	PRICE	ORDINARY	NON-STANDARD
0A	WORKS BY BUILDING CONTRACTOR				
0A.01	LABOUR (The amounts of labour can be increased from 13 to 15% for taxes, overhead, and a further 10% for corporate profits - article 14 Law No 741 10.12.81)				
0A.01.00	TITLE				
0A.01.00.001	Team Leader				
0A.01.00.001.00A	from 1 January 2009		43,54	20,00	30,00
	(Euro /54)				
0A.01.00.002	Level 4 Worker				
0A.01.00.002.00A	from 1 January 2009		41,78	30,00	50,00
	(Euro /78)				

Implementation of Orders printing

A new type of printing was introduced, that can be enabled from the supply management: Supply > Printing > Add > Orders.

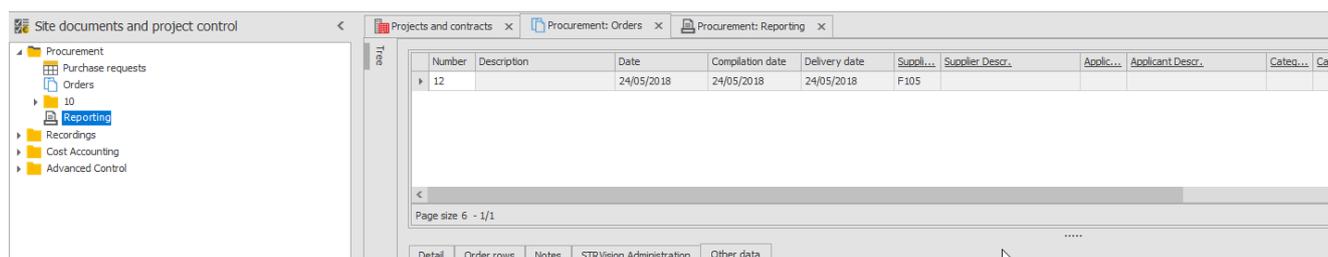
The printing consists of several sections:

Header section: with subject and recipient (supplier) of the order

Conditions section: lists the supplier payment and delivery conditions.

Order lines detail section: this section will consist of the item codes, with brands and families, quantities, prices and amounts and delivery date.

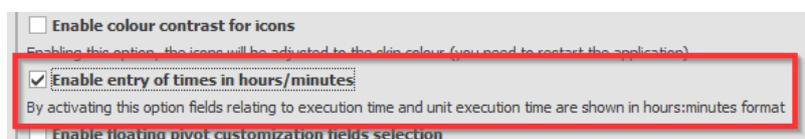
The printing is always grouped by Supplier and Order (with page breaks).



Estimate registrations: entering time in hours/minutes rather than decimal format

It will optionally be possible to enter data in the Time field in hours/minutes rather than in decimal format.

Enable the appropriate option from START > Options > Customize > Interface Panel.



Display mark-ups and discounts on estimate registrations and dashboards

The fields:

- Gross offer
- Discount1
- Discount2
- Discount3
- Discount4
- Markup1
- Offer

relating to the offer class, are now available in the registrations grid and in the estimate dashboards.

The same fields can now be edited by importing (update) from an Excel file.

In the estimate printing, a new Mark-ups and discounts option is now available, which is enabled only if the offer class was selected from the estimate header.

The screenshot shows the 'Options' tab of the STR Vision CPM software. The 'Options' section is expanded, showing various settings. The 'Markups and discounts' checkbox is checked and highlighted with a red box. Other visible options include 'Available amounts', 'Single column', 'Progressive', 'Images', 'Direct supply', 'Print WBS image', 'Measure unit', 'Arrange by progressive number', 'Notes', 'Not structured summary', 'Labor', 'Ref. code', and 'Index'.

If enabled, this option adds the columns for the fields listed above to the estimate printing.

The screenshot shows the 'Columns' tab of the STR Vision CPM software. The 'Main body' section is expanded, showing a list of columns with checkboxes. The columns listed are: ITEM - N., DESCRIPTION OF WORKS AND SUPPLIES, QUANTITY, PRICE, AMOUNT, MARKUP1, DISCOUNT1, DISCOUNT2, DISCOUNT3, and DISCOUNT4. All checkboxes are checked.

BIM

Import of models in IFC4 version

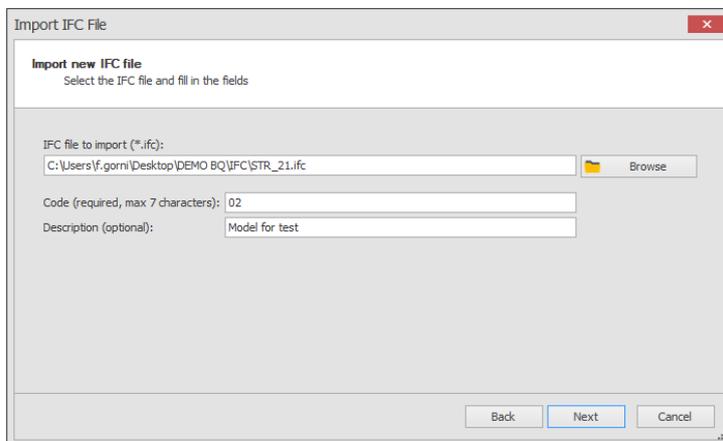
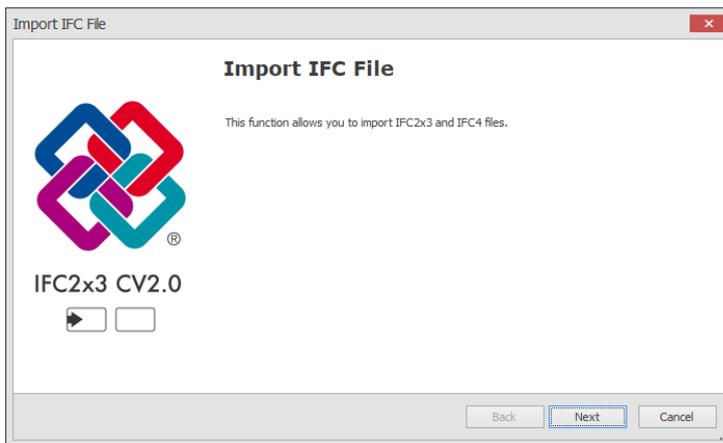
The new version of STR Vision CPM allows you to also import and manage IFC files in the IFC4 format.

New IFC models import wizard – also available from START

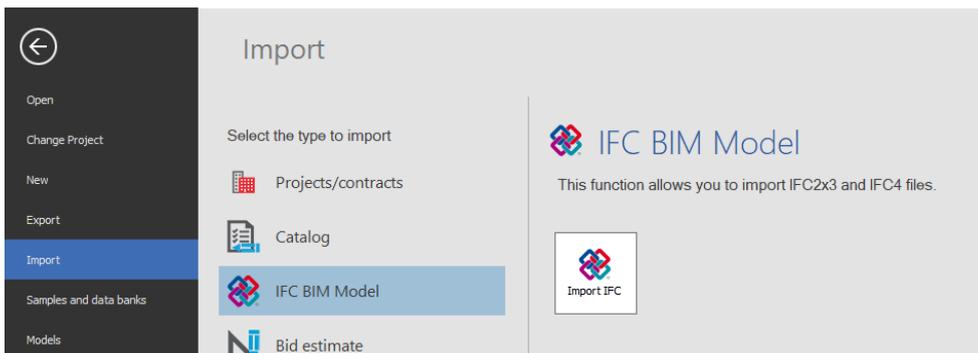
The importing of IFC files has been reorganized into a wizard. The import steps specify the versions of IFC files that can be imported, therefore requiring the selection of the file to be imported, the specification of a code (required field, please refer to the BIM Modules Manual for the characters that the code can support) and the description that the file will display in the grid (optional field).

The following steps allow

1. to inherit the user properties set up in other IFC models already managed within Vision CPM;
2. to inherit object display settings (hide or display objects by IFC Type)

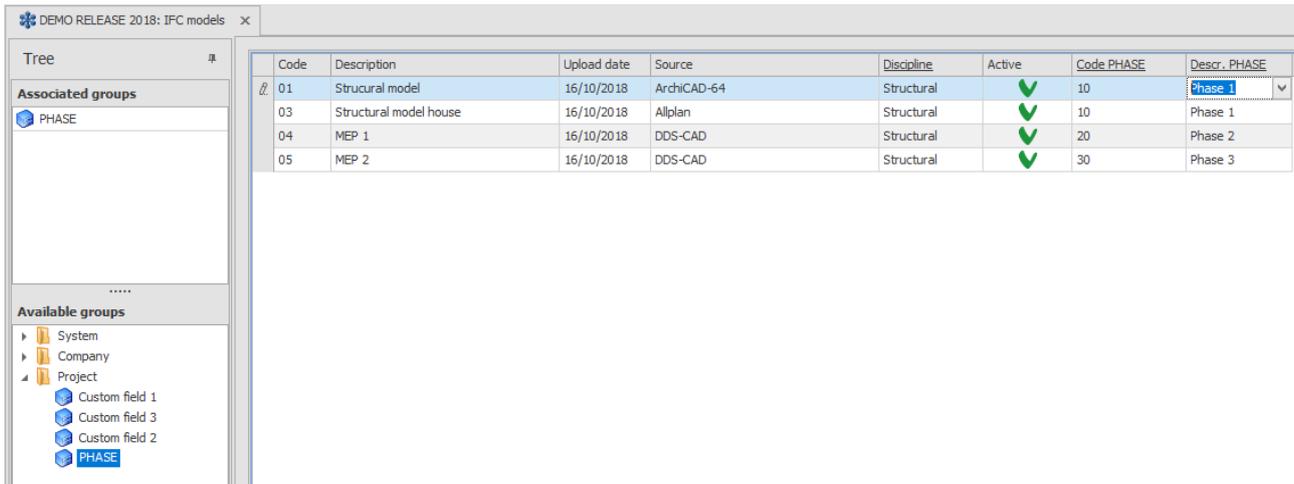


On the start page – therefore unconstrained with respect to the open working document – the IFC file import function is available



Free groupings available in the IFC Models working document

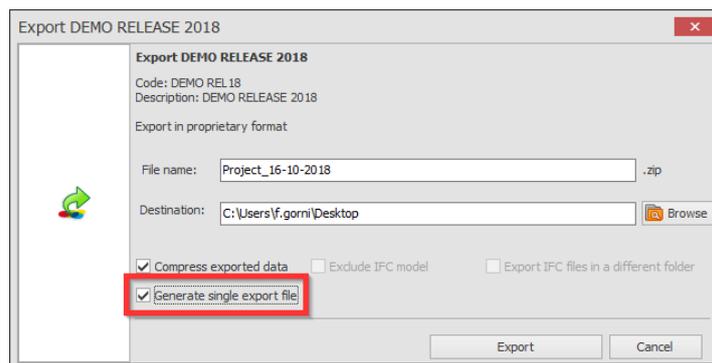
The IFC model management now makes it possible to add free groupings and use them to organize the models. A navigation tree is also available, which can also be organized based on the free groupings used for the models.



New vis export format including all IFC models

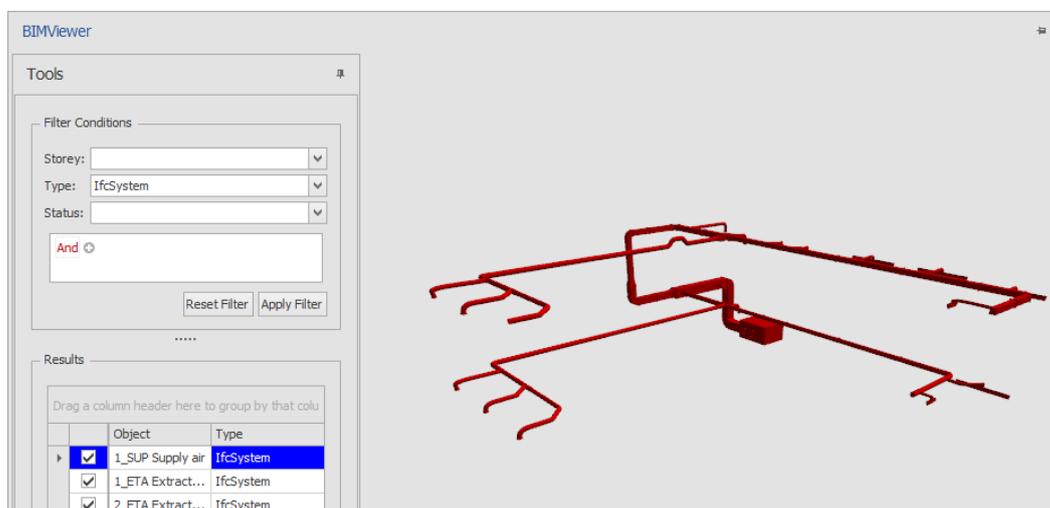
In the vis export window a new option is available that makes it possible to generate a compressed file that contains both the CPM project file, as well all IFC files associated with the work order.

This feature generates a compressed file; to import it correctly, please proceed by importing the file without decompressing it.



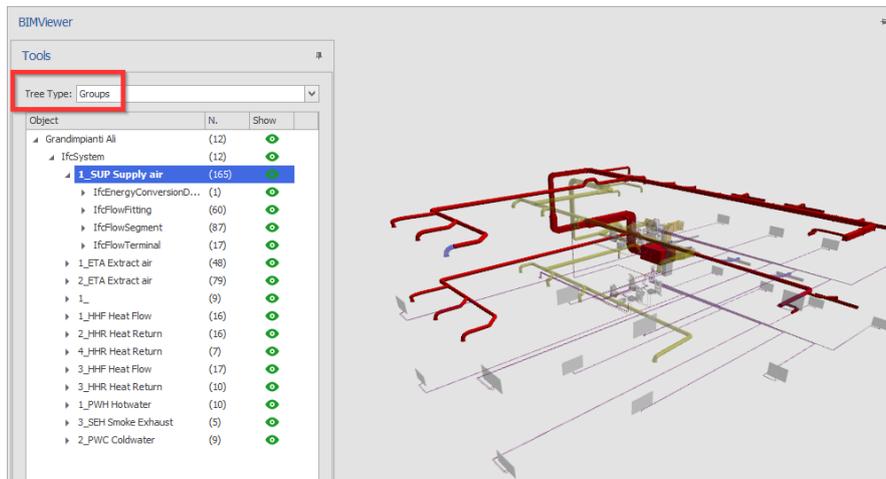
Managing Groups, Areas and IFC file Systems

If the IFC file includes Group, Area and/or System type items, these will be available in the object filters and the relative properties will be viewable.



New navigation tree of the IFC model in the case of Groups, Areas and Systems

If the IFC file includes Group, Area and/or System type items, a new navigation tree will be available in the tree tab drop-down menu. The tree will display the objects organized by group.



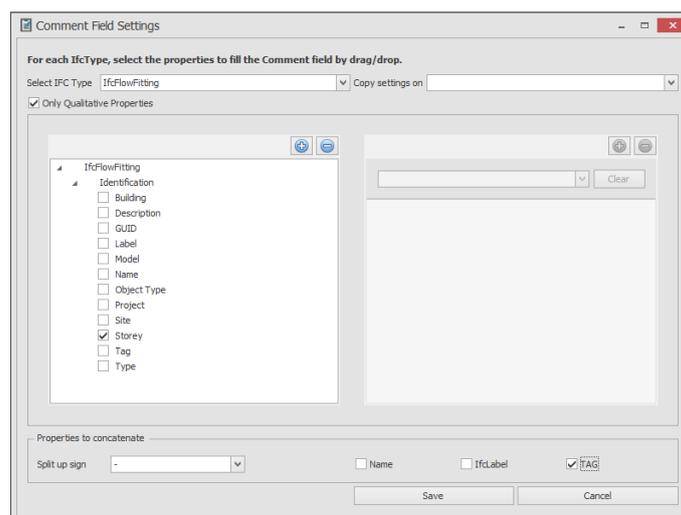
Option to populate the comment field using drag and drop functionality

In the IFC Models working document a feature is now available which makes it possible to set the options for filling out the comment field in drag and drop mode.

Based on the standard configuration using the drag and drop of a property the comment field (if empty) is populated with the name of the IFC object; this functionality, instead, allows the user to select other properties associated with the BIM objects to populate the comment field.



Once the window is open, select an IFC Type and the properties are loaded, which can be selected using a flag. The property can be concatenated, using the separators in the lower part of the window, with the Name, Label or TAG. These settings are inheritable on other types of models.



Free groupings available for Calculation Rules

In the working documents of the calculation rules the functionality to create free groupings is now available, which can be used to catalog the rules and manage the navigation trees.

Code	Description	Object Type	Price List Code	Item Code	Source	Code FLOW TYPE	Descr. FLOW TYPE
10	Copper pipes length 5 m 15x1 mm	IfFlowSegment	DDSCAD	MM.14.040.0010.c	DDS-CAD	01	Segment
20	Copper pipes length 5 m 35x1,5 mm	IfFlowSegment	DDSCAD	MM.14.040.0020.h	DDS-CAD	01	Segment
30	Copper fitting bend 90° 15x1 mm	IfFlowFitting	DDSCAD	MM.14.040.0020.c	DDS-CAD	02	Fitting
40	Copper fitting bend 90° 35x1,5 mm	IfFlowFitting	DDSCAD	MM.14.040.0020.h	DDS-CAD	02	Fitting
50	Folded spiral seam circular duct d=16...	IfFlowSegment	DDSCAD	MM.09.100.0010.f	DDS-CAD	01	Segment
60	Folded spiral seam circular duct d=20...	IfFlowSegment	DDSCAD	MM.09.100.0010.h	DDS-CAD	01	Segment
70	Folded spiral seam circular duct d=18...	IfFlowSegment	DDSCAD	MM.09.100.0010.g	DDS-CAD	01	Segment
80	Folded spiral seam circular duct d=30...	IfFlowSegment	DDSCAD	MM.09.100.0010.j	DDS-CAD	01	Segment
90	Folded spiral seam circular duct d=25...	IfFlowSegment	DDSCAD	MM.09.100.0010.i	DDS-CAD	01	Segment
100	Folded spiral seam circular duct d=12...	IfFlowSegment	DDSCAD	MM.09.100.0010.d	DDS-CAD	01	Segment
110	Folded spiral seamless circular bend 4...	IfFlowFitting	DDSCAD	MM.09.100.0010.f	DDS-CAD	02	Fitting
120	Folded spiral seamless circular bend 9...	IfFlowFitting	DDSCAD	MM.09.100.0010.f	DDS-CAD	02	Fitting
130	Wall WC wash down with on top cistern	IfFlowTerminal	DDSCAD	MM.11.030.0010.a	DDS-CAD	03	Terminal
140	Bidet wall mounted type I	IfFlowTerminal	DDSCAD	MM.11.030.0010.a	DDS-CAD	03	Terminal
150	Hand basin 450x355 mm	IfFlowTerminal	DDSCAD	MM.11.020.0010.a	DDS-CAD	03	Terminal
160	Bathroom radiator 878x455 mm top b...	IfFlowTerminal	DDSCAD	MM.10.030.0060.a	DDS-CAD	03	Terminal

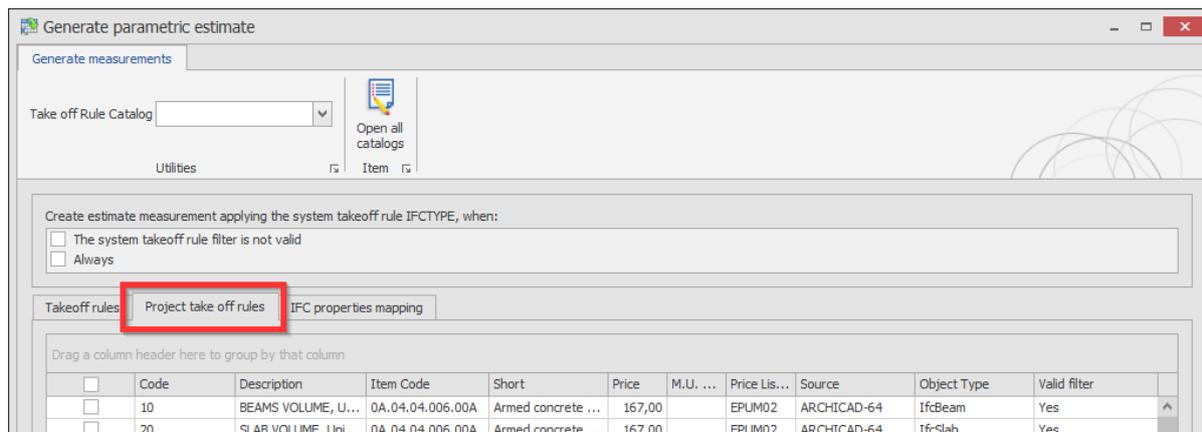
In the Parametric Estimate window the Calculation Rules can be displayed organized through the relative free groupings

From the column headers it is possible to view all the free groupings associated with the rules; the groupings therefore make it possible to organize or filter the rules.

Project Calculation Rules used in the Parametric Estimate

With the updated version of Vision CPM, the Project Calculation Rules are available to generate registrations via the Parametric Estimate.

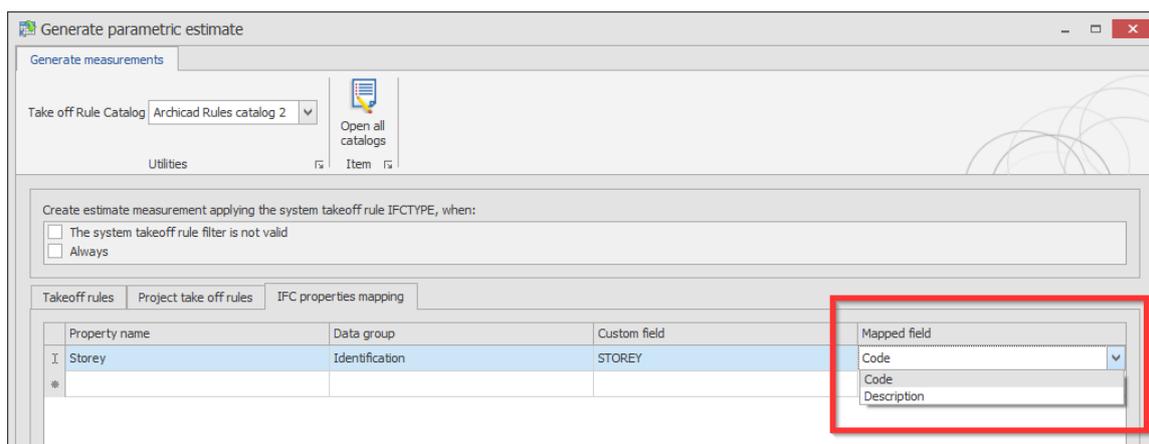
The Project Rules are managed in a similar way to the System ones, and therefore the generation of registrations will be influenced by the eventual mapping of IFC properties.



Mapping of IFC properties optionally available on the code or description of free groupings

For each IFC property which the user decide to map on the different free groupings, it will be possible to select the code field or the description field to map and organize the registrations that will be generated.

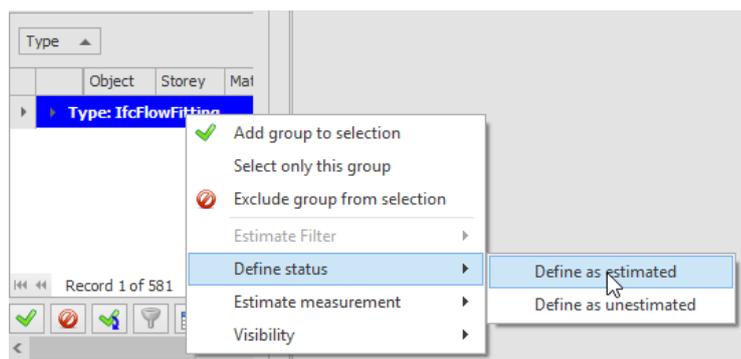
In the Populated Field column select the field that you want to populate with the values of the IFC properties.



Control instruments: Computed STR property

During the import of models on all BIM objects a property is added by default which allows users to define when an object is definitively computed. This property is independent of the computation using drag and drop and the calculation rules. The Computed property is a manually-configurable control tool. Once an object or a group of objects has been selected – or a filter applied – it is possible to change the status of the Computed property which by default is set to False.

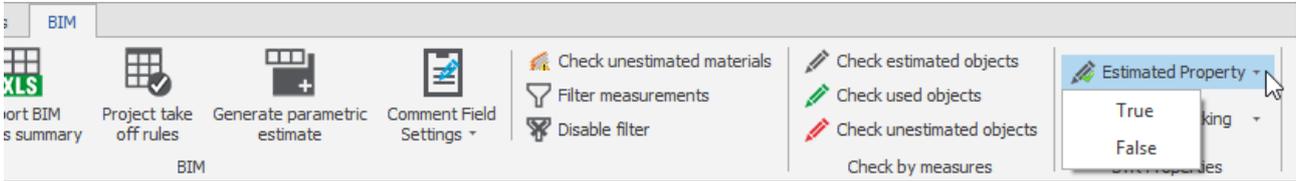
The property is independent from how many BIM object properties are used for the computation and facilitates a manual control in a BIM computing context.



New controls related to the Computed Property

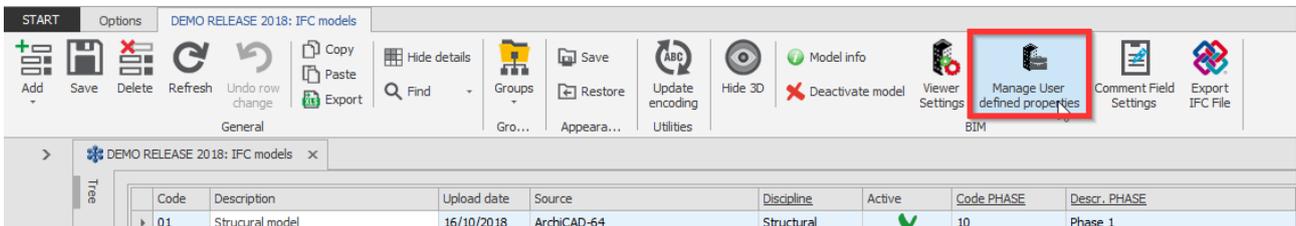
In the Estimate BIM toolbar controls on the Computed Property have been added:

- a) by selecting True, all objects that have the property value set to Computed will be shown in the viewer;
- b) by selecting False, all objects that have the property value set to Not Computed will be shown in the viewer;



Management of user creation properties

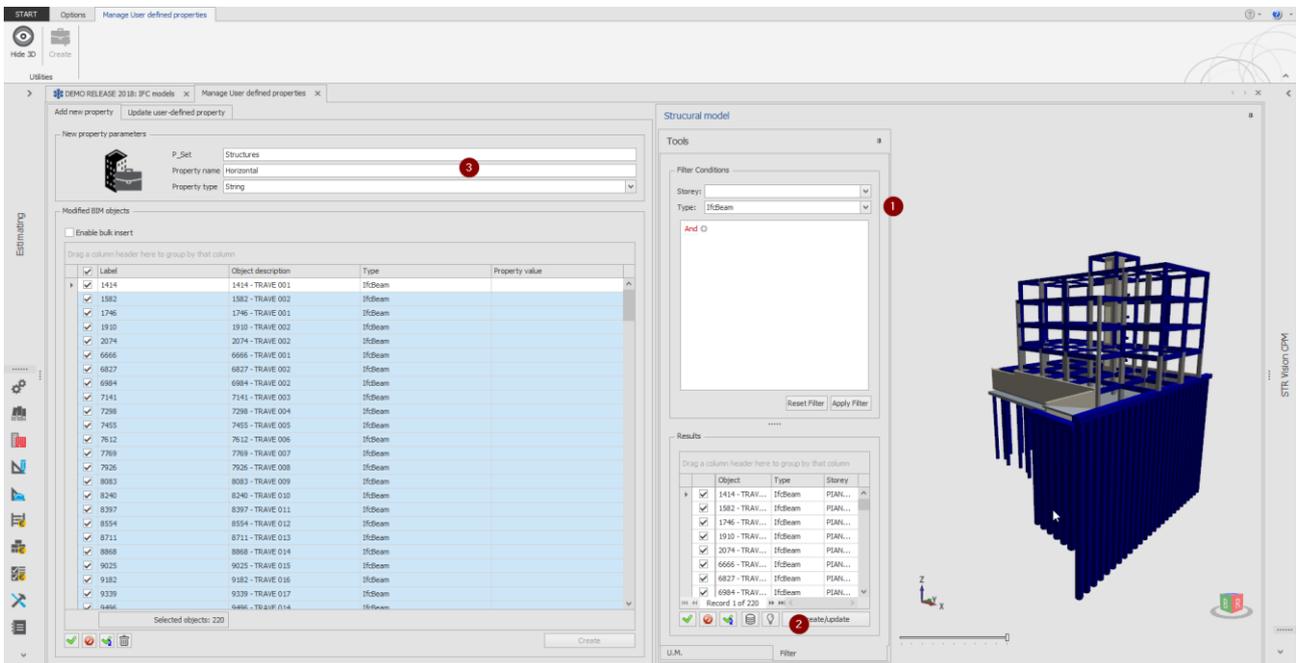
From the IFC models working document it is possible – by selecting a model – to open the interface for creating properties on the BIM objects and the relative updates.



In the working document, apply a filter and click search. Then click the Create/update.

In the section on the left enter

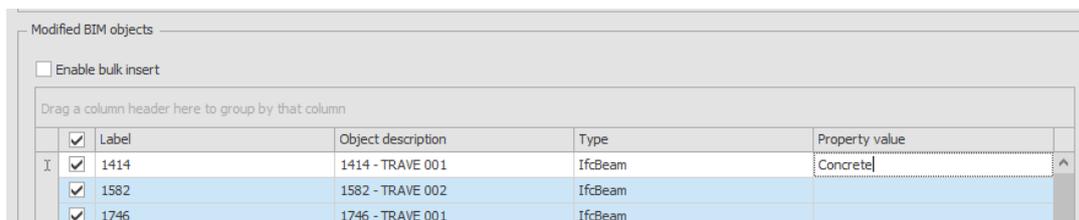
1. the name of the Pset (Pset = Property set = set of properties)
2. the name of the property
3. select the property type that you want to create



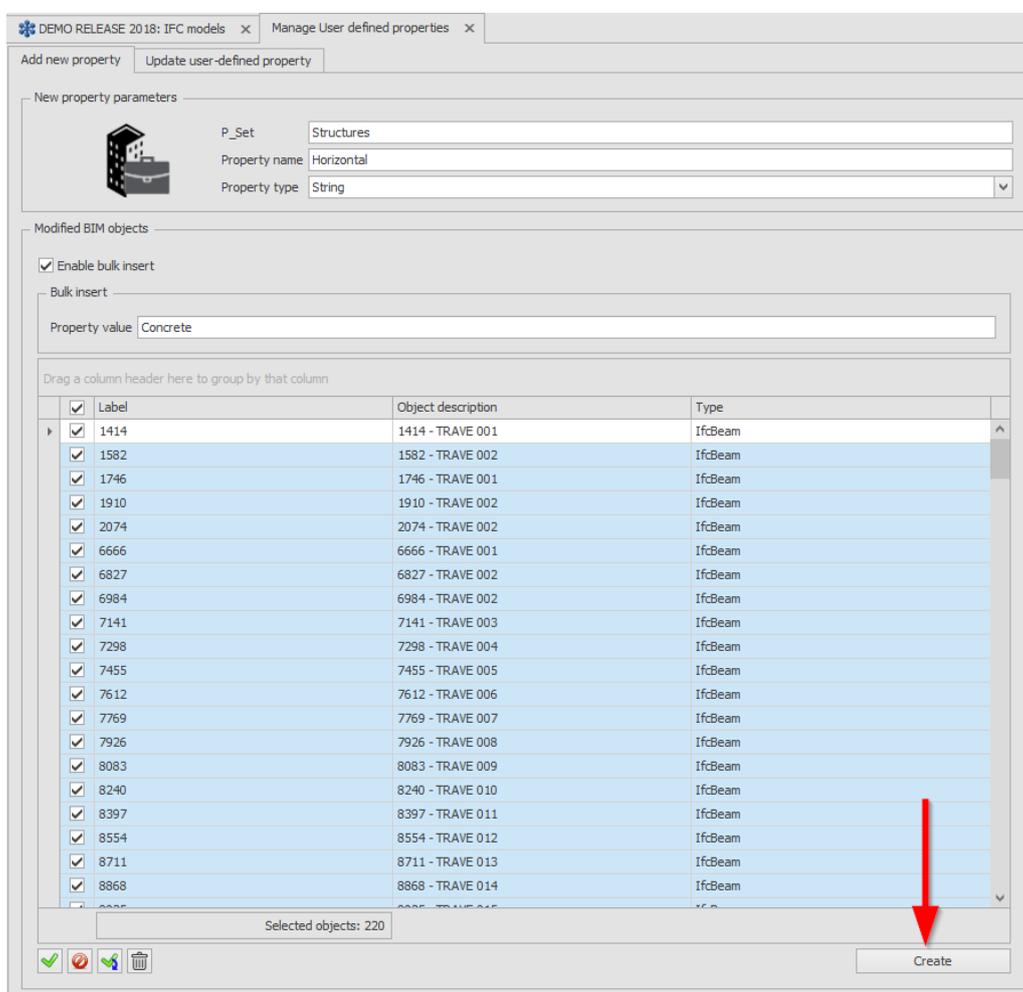
Based to the user's need select the Enable bulk-input flag and fill in the value that will be assigned to all the objects in the result set.



If the objects return different values of the property, the flag will not be selected and the values will be populated in the different rows representing the objects.



The Create button will only be available when the value has been set on all objects.



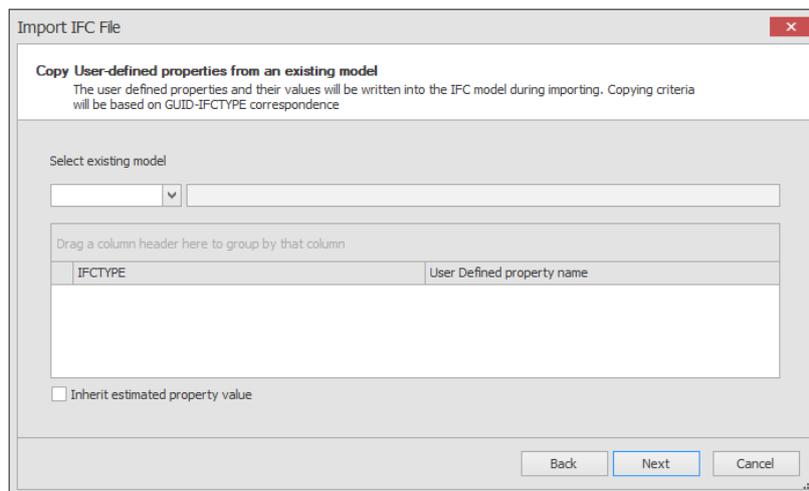
The user properties created can be used as filter criteria, in the calculation rules formulas and as mapping properties with the parametric estimate.

Inheriting user properties in the import procedure of IFC files

The new import procedure makes it possible to inherit the properties created by users and, in the case of variant models, copy (for the same IFC Type and GUID) the properties and their values between models.

In the window, select the model from which to copy the properties, and then select the IFC Types.

the Inherit computed property value flag allows you not to have to check any works that have already been fully computed and that have not undergone changes in the case of project variants.



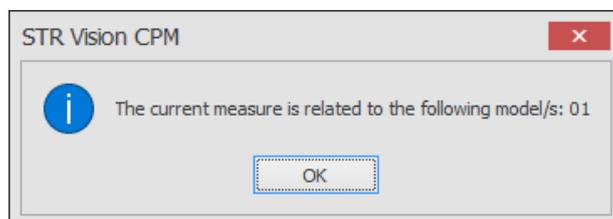
Verify models used functionality

In the case of registrations populated by drag and drop or generated using calculation rules in the context menu (right button), on each line the Verify models used function will be available.

This function will show a window with the IFC model code to which the joined BIM object belongs.

Item	Detailed item	BIM Objects	Measurement data	Lumpsum works	Notes	Image	Cost analysis	Parameters	CU
130	0A.04.05.11	using selected bricks from standard produc...							5.56
140	0A.04.05.01...	using selected bricks from standard produc...							2.62

Comment	Similar	Length	Width	Height	Total
MURO 002		6,798			6,798
Highlight 3D objects		10,796			10,796
Used models		6,661			6,661
MURO 002		5,947			5,947
MURO 002		4,021			4,021



New "QTO Type" field on the computation registrations, on the Handbook of Procedures registrations and on the Progress of internal work registrations

In the estimate, Handbook of Procedures and Progress of internal work grids, the new "QTO Type" field is now available. The field is automatically calculated by the system and displays the following values in the different cases for generating the row:

- QTO Type = TOI, if the row was created using one or more properties of a BIM model using drag and drop
- QTO Type = TR if the line was generated using a Calculation Rule applied to one or more BIM models
- QTO Type = "" (empty), if the row was created manually without any use of the BIM model properties

The new column enables the filtering of the rows of the estimate, of the Handbook of Procedures and of the Progress of internal work registrations on the available values, making it possible to distinguish the lines generated through different methodologies.

Progr.	An...	Item	Short	LM descr.	Quantity	Cost	Bid	Amount (Cost)	Amount (Bid)	Execution time	QTO Type	Recovered W...	Code Custom fe...	Descr. Cust
10	0A.04.04.00...	Armed concrete C25/30			1,68	167,00	167,00	280,56	280,56	0,0	TR	0,00		
20	0A.04.04.00...	Armed concrete C25/30			40,28	167,00	167,00	6.726,76	6.726,76	0,0	TR	0,00		
30	0A.04.04.00...	Armed concrete C25/30			1,68	167,00	167,00	280,56	280,56	0,0	TR	0,00		
40	0A.04.04.00...	Armed concrete C25/30			40,28	167,00	167,00	6.726,76	6.726,76	0,0	TR	0,00		
50	0A.04.04.00...	Armed concrete C25/30			124,05	167,00	167,00	20.716,35	20.716,35	0,0	TR	0,00		
60	0A.04.04.00...	Armed concrete C25/30			40,28	167,00	167,00	6.726,76	6.726,76	0,0	TR	0,00		
70	0A.04.04.00...	Armed concrete C25/30			124,05	167,00	167,00	20.716,35	20.716,35	0,0	TR	0,00		
80	0A.04.08.005	Plaster to civil for exteriors, to be carried o...			165,34	25,00	25,00	4.133,50	4.133,50	0,0	TR	0,00		
90	0A.04.08.005	Plaster to civil for exteriors, to be carried o...			83,62	25,00	25,00	2.090,50	2.090,50	0,0	TR	0,00		
100	0A.04.10.00...	EPS 20			66,34	75,00	75,00	4.975,50	4.975,50	0,0	TR	0,00		
110	0A.04.10.00...	EPS 20			34,23	75,00	75,00	2.567,25	2.567,25	0,0	TR	0,00		
120	0A.04.05.01...	using selected bricks from standard produc...			66,350	162,68	162,68	10.793,82	10.793,82	0,0	TR	0,00		
130	0A.04.05.01...	using selected bricks from standard produc...			34,223	162,68	162,68	5.567,40	5.567,40	0,0	TR	0,00		
140	0A.04.05.01...	using selected bricks from standard produc...			16,131	162,68	162,68	2.624,19	2.624,19	0,0	TR	0,00		

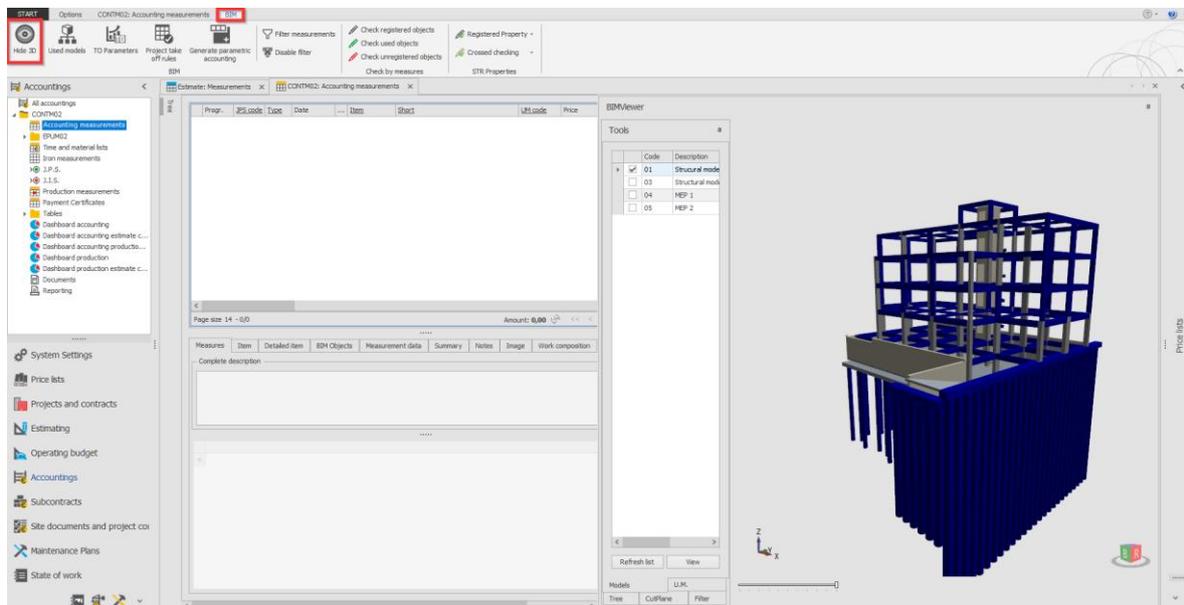
BIM Accounting (active if the license for the BIM modules is available)

The new version of Vision CPM offers the first functionality to support the management of the Handbook of Procedures and of the Progress of internal work registrations by reading the properties of the BIM models (Buildable Model or As-Built Model). The main features developed for the "BIM Accounting" functionality are presented below.

BIM Viewer

The BIM Viewer is now available both the working document (grid) of the Handbook of Procedures, as well as in the Progress of internal work registrations, based on the same methods used for managing the estimate in the working document when the QTO license is available.

The toolbar includes a section of buttons corresponding to BIM features, which include the "Hide 3D" / "Show 3D" button to activate or deactivate the BIM Viewer in the working document.



The models that can be enabled in the BIM Viewer are those loaded into the project in the "IFC Models" working document with the active checkbox. 

Handbook of Procedures registrations / Progress of internal work registrations via Take off

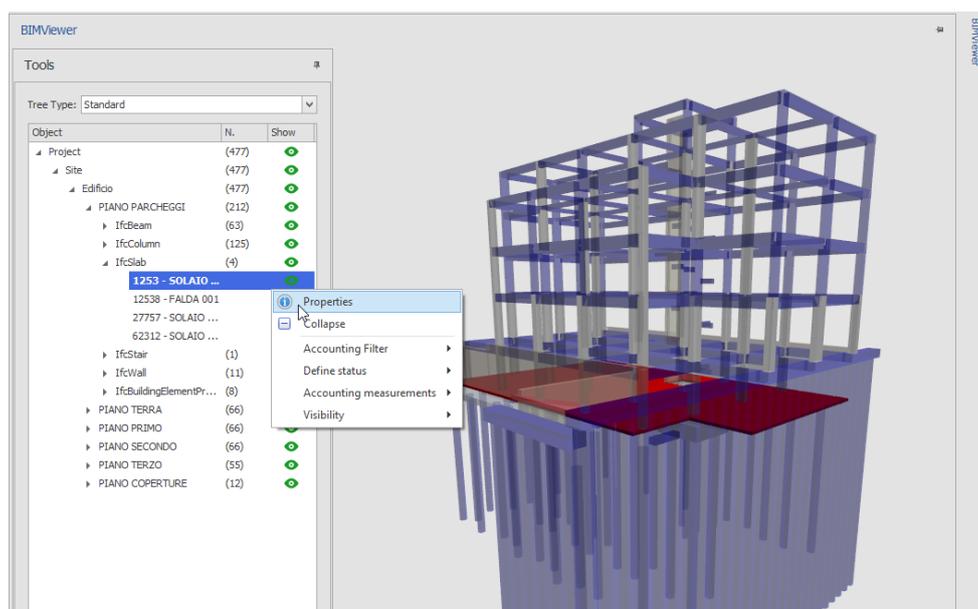
Both in the Handbook of Procedures working document, as well as in the Progress of internal work registration working document it is possible to use the dimensional properties of one or more BIM objects to calculate the quantities.

As in the case of generation of calculation rows via take off, we proceed as follows:

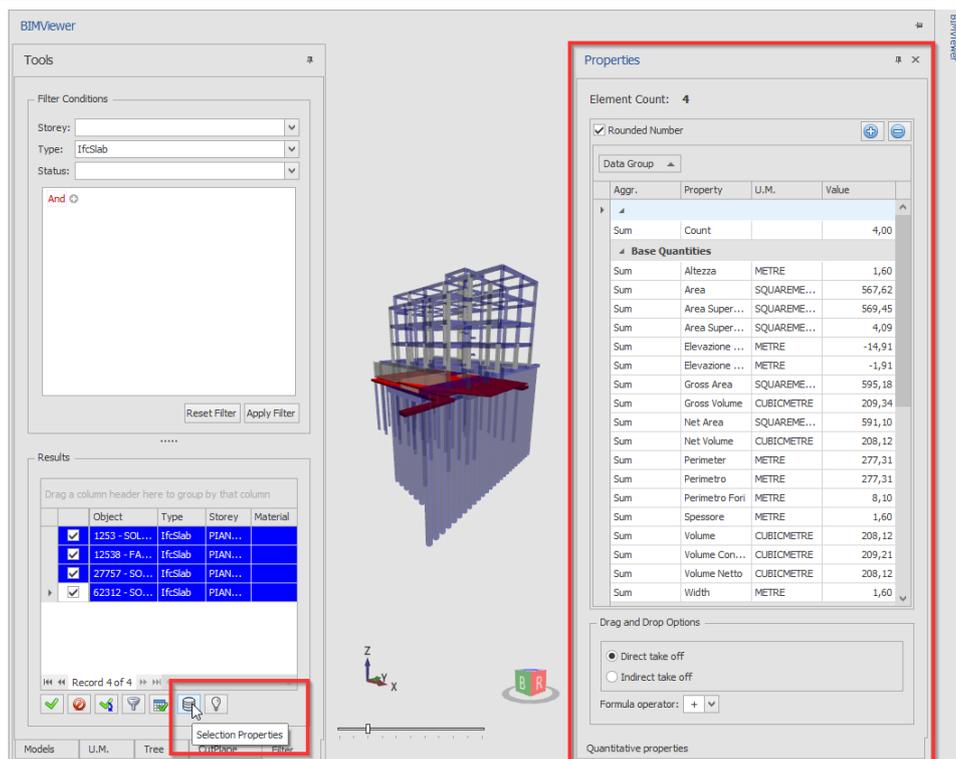
- a) Create a new row (Handbook or Progress) by right clicking and selecting "add" or using the "add" button in the toolbar. Insert an item based on the different modes made available by STR Vision CPM.
- b) Enable one or more models in the BIM Viewer from the BIM Viewer Models Tab.
- c) Select one or more BIM objects based on the different possible methods:
 - i) through direct selection in the viewer: by right clicking and selecting the Properties menu item, the system activates and displays the properties panel common to the selected objects.



- ii) through selection in the objects navigation tree: by right clicking and selecting the Properties menu item, the system activates and displays the properties panel common to the selected objects.



- iii) using filters: starting from the list of objects returned by applying the filter, by clicking the "Properties" button, the system activates the properties panel common to the selected objects.



- d) Next we drag & drop a dimensional property from the properties panel to the cell (Like for Like, Length, Width, Height) desired in the details of the Handbook of Procedures / Progress of internal work registration row; the operation can be repeated with more properties in different cells or within formulas in the same cell.
- e) Click the Save button

Progress of work / Progress of internal work registrations using Calculation Rules

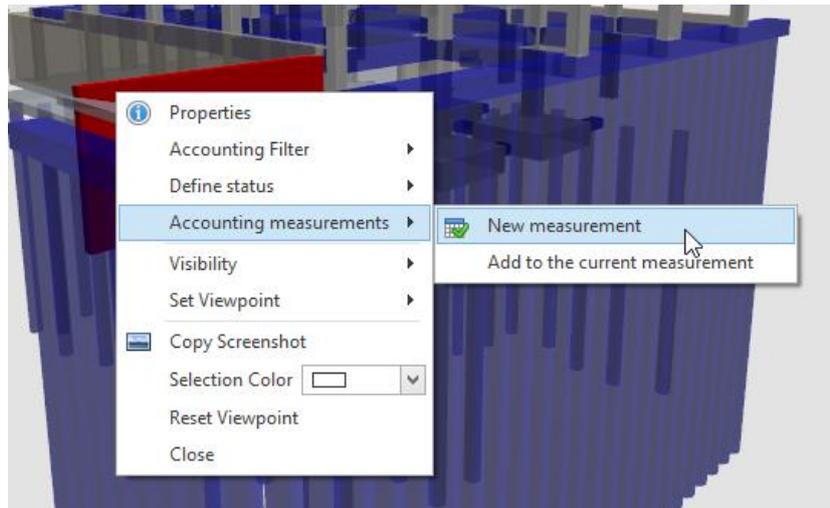
Similar to the computation phase, project or system level Calculation rules can be created to calculate the quantities referring to Handbook of Procedures / Progress of internal work registration rows. In the Accounting phase, the model(s) used can be as follows:

- case A: the Buildable model(s)
- case B: the As Built model(s)

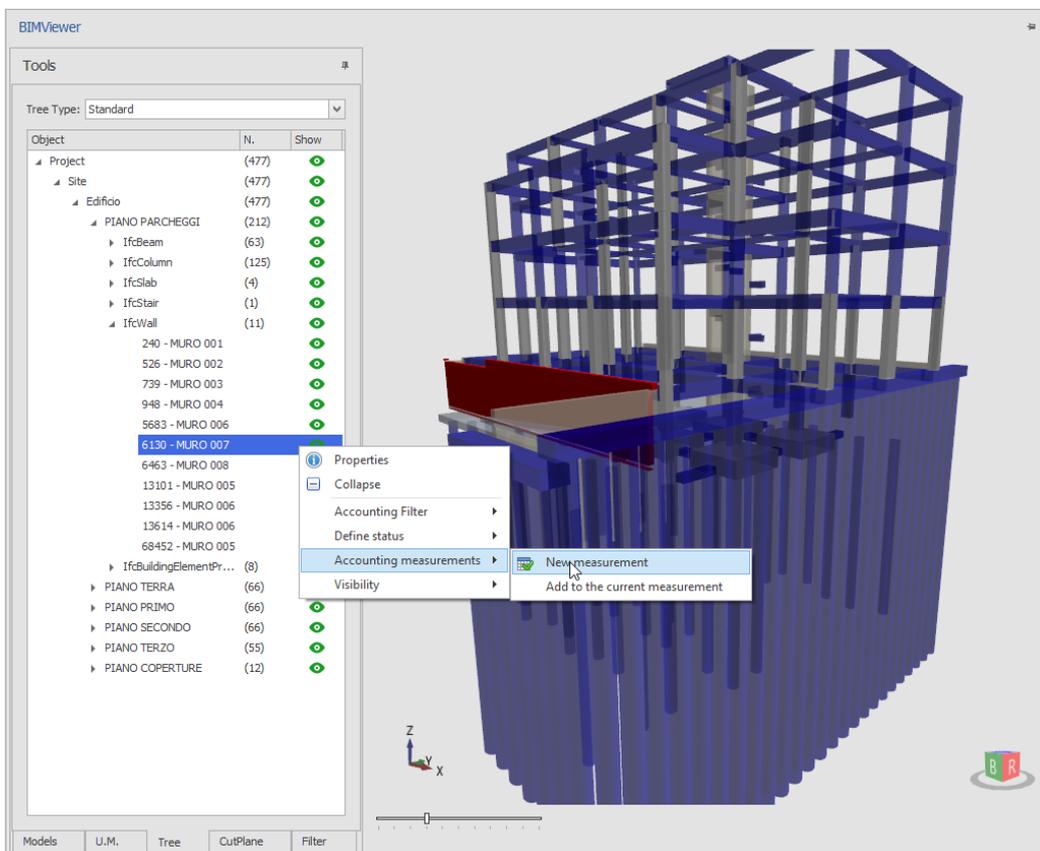
In both cases, the system allows the insertion of a relative or absolute progress percentage by which to multiply the quantities read from the model(s) objects.

To create or enable a calculation rule, proceed as follows:

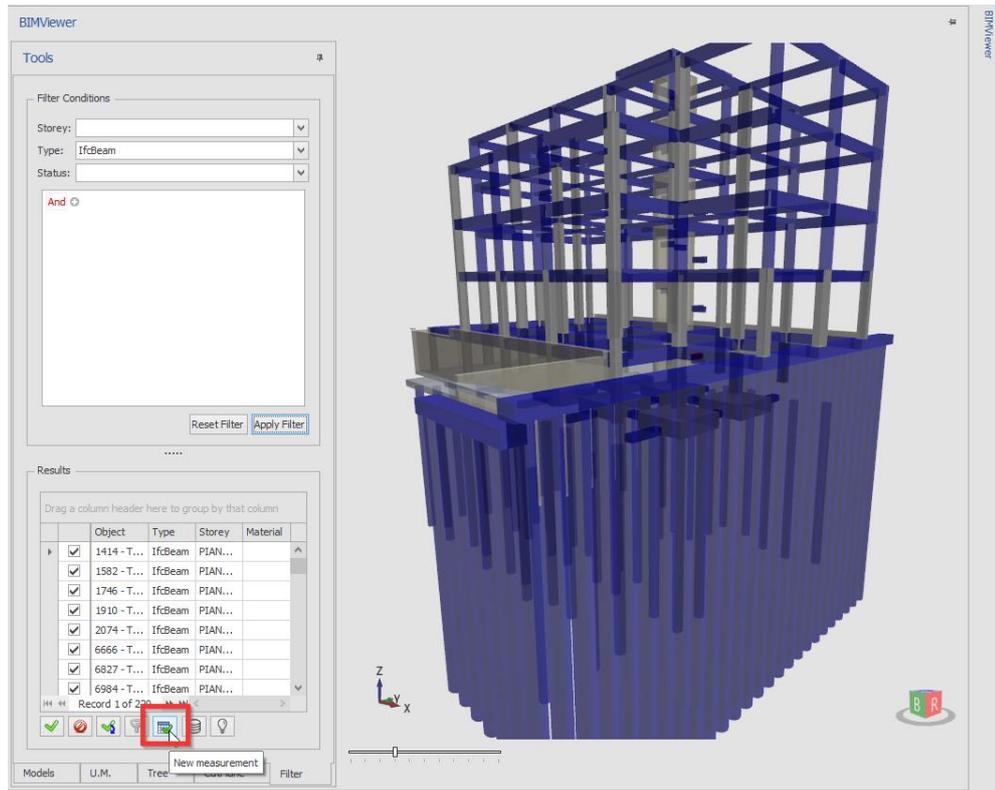
- f) Enable one or more models from the BIM Viewer Models Tab.
- g) Select one or more BIM objects based on the different possible methods:
 - i) through direct selection in the viewer: by right clicking and selecting the "Handbook of Procedures registrations" menu item -> "New registration from selection" (or "Progress of internal work registrations" -> "New registration from selection"), the system brings up the Calculation Rule panel;



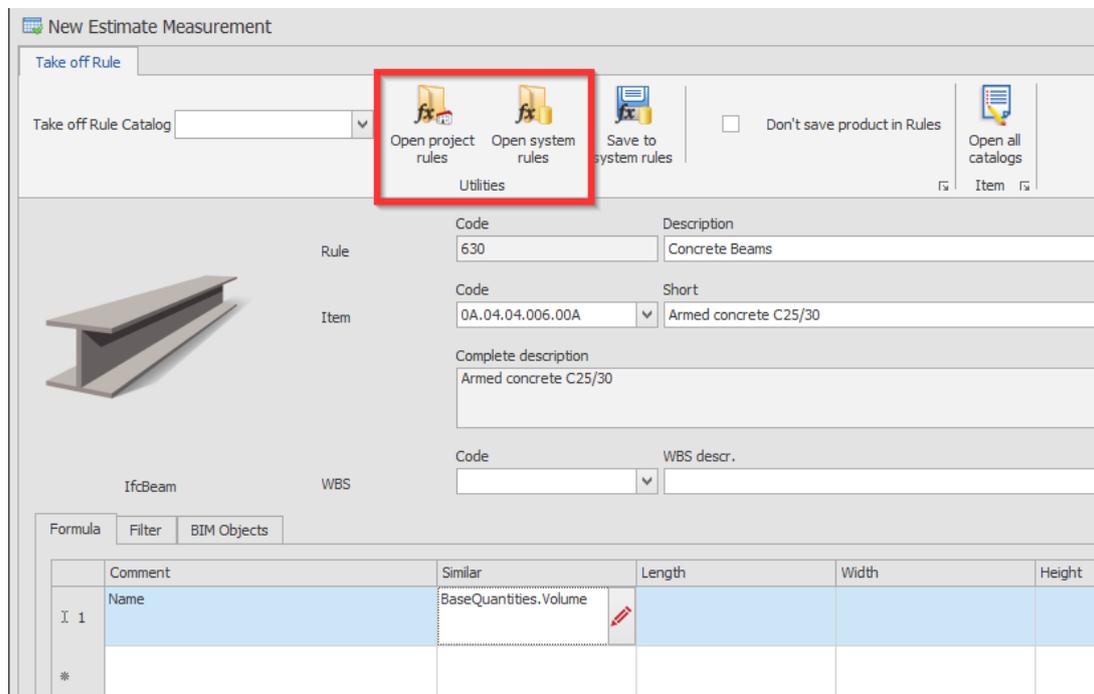
- ii) through direct selection in the objects navigation tree: by right clicking and selecting the “Handbook of Procedures registrations” menu item → “New registration from selection” (or “Progress of internal work registrations” -> “New registration from selection”), the system brings up the Calculation Rule pop-up box;



- iii) using filters: starting from the list of objects returned by applying the filter, by clicking “New registration from selection”, the system brings up the Calculation Rule pop-up box;

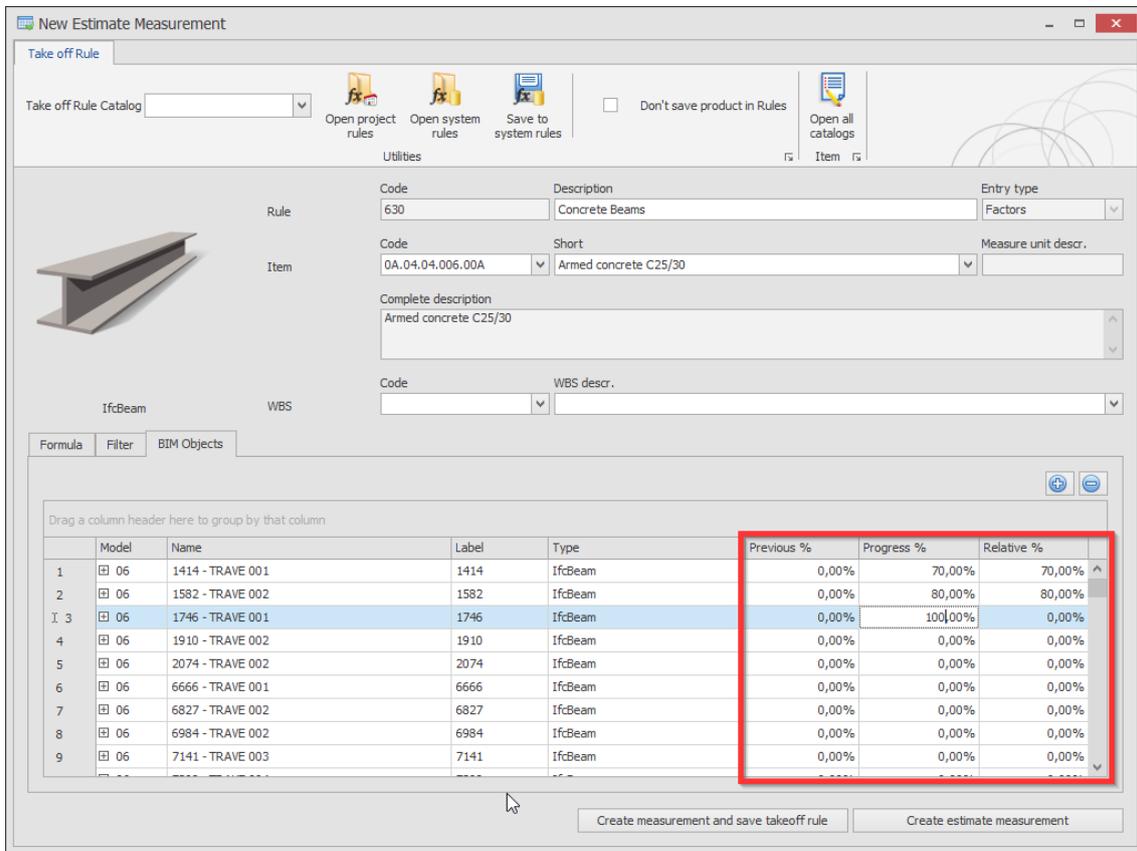


- h) From the Calculation Rule pop-up, it is possible to create a new rule or recall an existing rule using the buttons: Open project rules or Open system rules

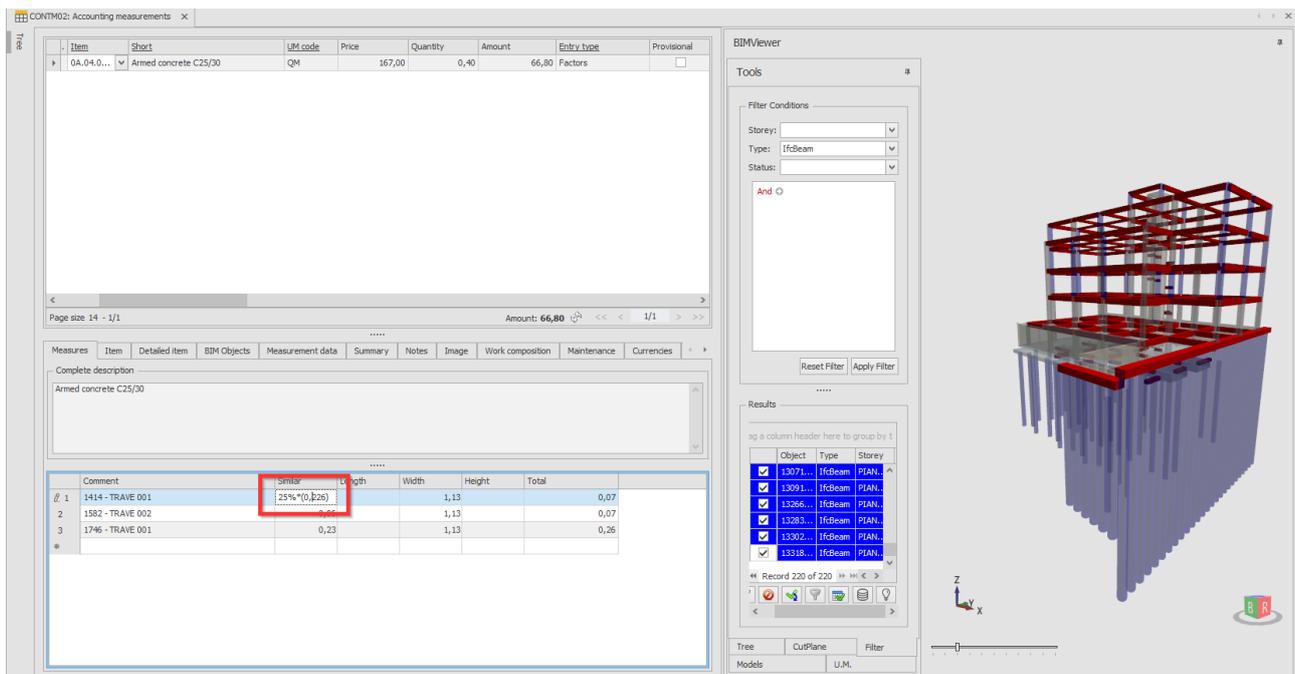


- i) In the Calculation Rule pop-up, in the BIM Objects tab, the system displays:
- i) The list of selected objects for which progress is to be calculated.
 - ii) A calculated "Progress of work perc." column, that calculates the percentage of completion of the object, by retrieving the previous records with the same WBS and item.
 - iii) Two editable columns to be applied in the current calculation of the quantities produced and: "progressive %" and "relative %". By entering the "progressive %" the system calculates and automatically displays the "relative %" as ["progressive %" – "Previous Progress of work %"]; by entering the "relative %" the system calculates and automatically displays the "progressive %" as ["relative %" + "Previous Progress of work %"].

- iv) In applying the calculation rule algorithm, the system will read the quantitative properties of the model objects and will multiply them by the "relative %", corresponding to the current record.
 Note: it is expected that in the case of records on buildable models, the subsequent "relative %" will be used; in the case of as-built models as the modeled objects are those actually created at the construction site, a "relative %" of 100% will be used.



- j) In the Handbook of Procedures or Progress of internal work row generated the "relative %" will be inserted as a multiplier parameter in the Like for Like field.



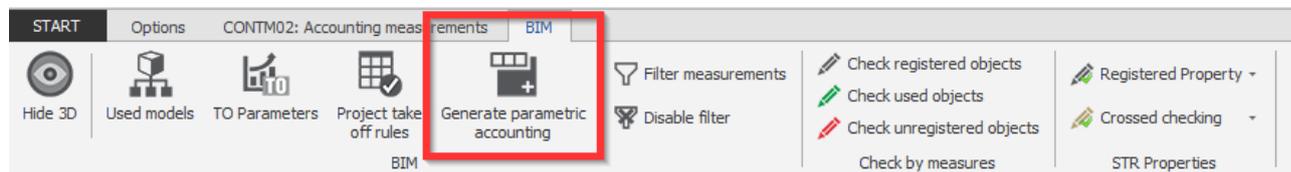
- k) Click the Create Registration button

The Handbook of Procedures or Progress of internal work row created will have a BIM Objects Tab showing the progress % values compared to the previous Progress of work.

Parametric accounting

Both in the Handbook of Procedures working document, as well as in the Progress of work registration working document, the system calculation rules can be applied to a maximum on one or more active models, analogously to what happens in the Parametric Estimate available in the metric calculation.

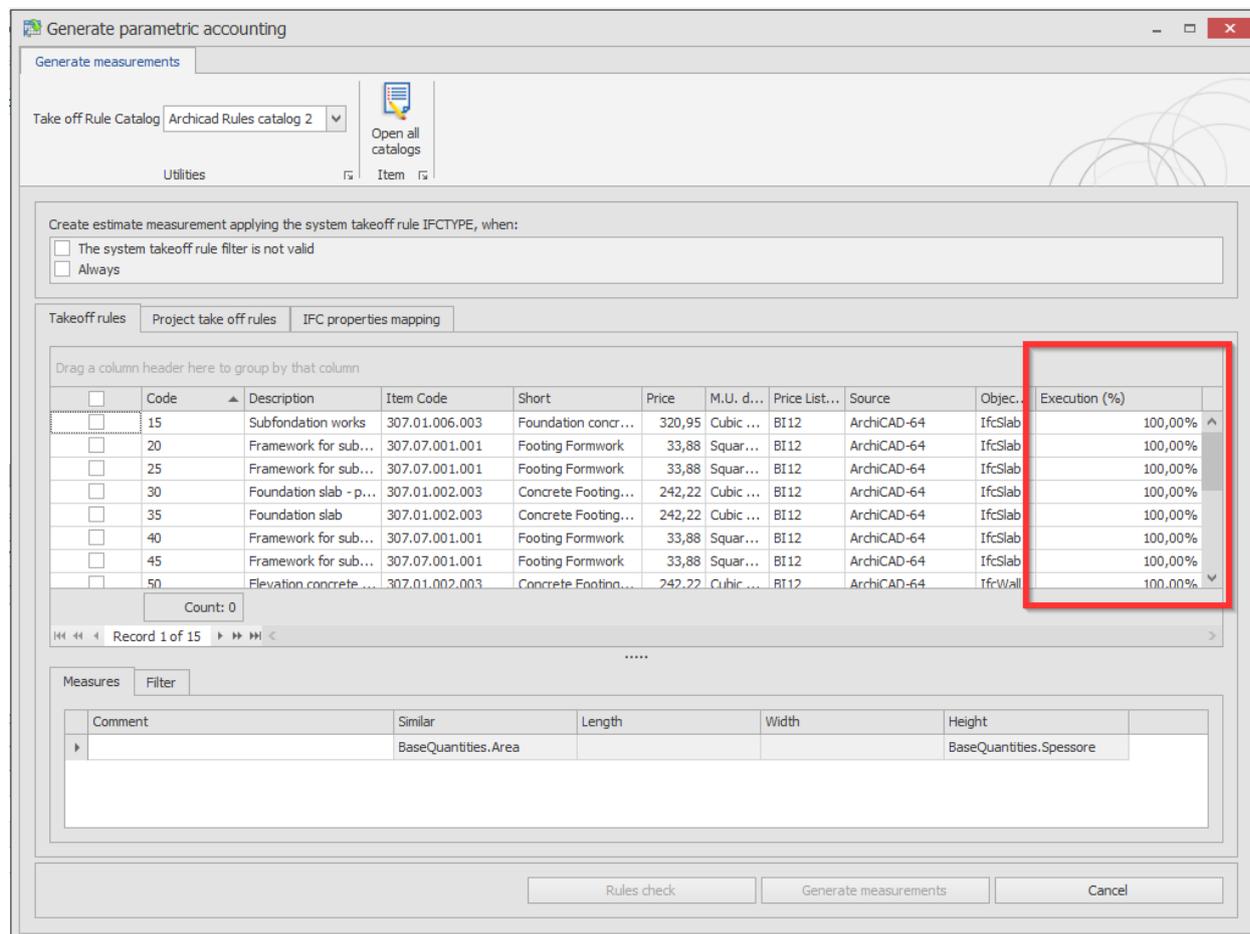
From the BIM toolbar select Create Parametric Accounting.



In the pop-up select a catalog of rules from the Catalog dropdown field.

The system loads the list of rules which can be selected.

Next select (using the flags) the rules that you wish to apply, and in the "Execution (%)" column enter the relative execution percentage to be applied to all objects involved rule by rule.



For both the Handbook of Procedures or Progress of internal work row calculations the execution percentage will be applied for all the detail lines referring to each object, as a multiplier parameter in the Like for Like field.

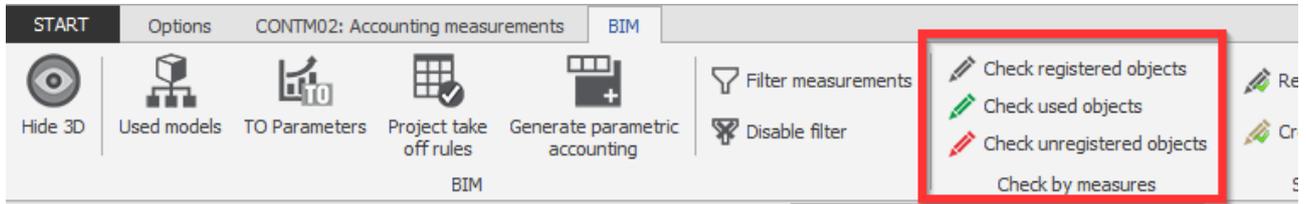
Control of the relationship between BIM objects and rows of the Handbook of Procedures or Progress of internal work registrations

Both in the Handbook of Procedures working document, as well as in the Progress of work registration working document, for rows created using a calculation rule or using the drag and drop of one or more properties, the system generates a link with BIM objects whose dimensional properties have been used.

The "BIM" toolbar contains the following buttons:

- a. View recorded

- The button functions in relation to the correctly selected Handbook of Procedures / Progress of internal work and highlights in the active model(s) the objects used to calculate the quantity based on a "Direct Computation" method.
- b. View used
The button functions in relation to the correctly selected Handbook of Procedures / Progress of internal work and highlights in the active model(s) the objects used to calculate the quantity based on a "Indirect Computation" method.
 - c. View to record
The button highlights in the active model(s) in the BIM Viewer objects that have never been used for the calculation of quantities.



The other buttons in the toolbar enable the similar functionality relative to the metric calculation based on the availability of the QTO module, described in the technical manual.

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9.1***