REPORTER 17.0

REPORTER 17.0 – Contents

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User Interface Improvements

New Icons and GUI Themes

The REPORTER user interface has been comprehensively updated:

- Two new GUI themes have been added: a Light theme (the new default) and an alternative Dark theme. The Legacy theme is still available for use but may not be supported in the future.

- The button icons have been modernised.

- The Tools are now also grouped into categories. Categories can be collapsed into a single button using the 'Group tools' checkbox at the bottom of the Tools bar. Similarly, 'Show labels' can be used to add labels to each button.
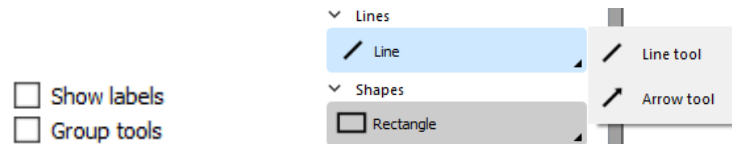
Light   Dark

Improved Item Attributes Control

New toolbars have been added to the right hand side of the main window to enable editing the attributes of all selected Items:

- **Geometry** provides a means of controlling the precise size and location of Items on a page.
- **Style** can be used to change the line style, line width, line colour, fill colour and text colour for any Items that support these options.
- **Font** can be used to change the font, font size, and style (bold, italic, underline) for Items in the Text and Tables categories.
- **Paragraph** can be used to change the horizontal and vertical alignment of text within Items in the Text and Tables categories.
- **Arrange/Align Items** can be used to change the positioning of Items relative to one another or relative to the page.
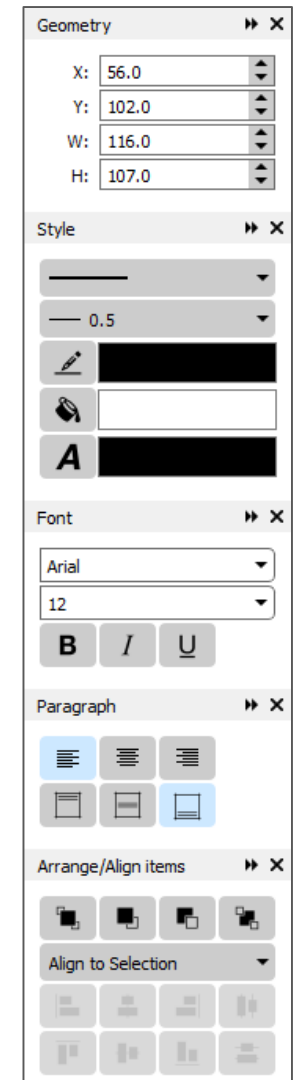
New Toolbars

New tools have been added to the top toolbar:

- Page Master button:
  - Access Page Master for the current template
- Generate buttons:
  - Generate Report, current Page, or Selected Items
- Page navigation:
  - Up/Down 1 Page, Jump to Page, Add Page, Delete Page, Duplicate Page
- D3PLOT and T/HIS link:
  - Open linked sessions of D3PLOT and T/HIS in order to capture results images

New Library Features
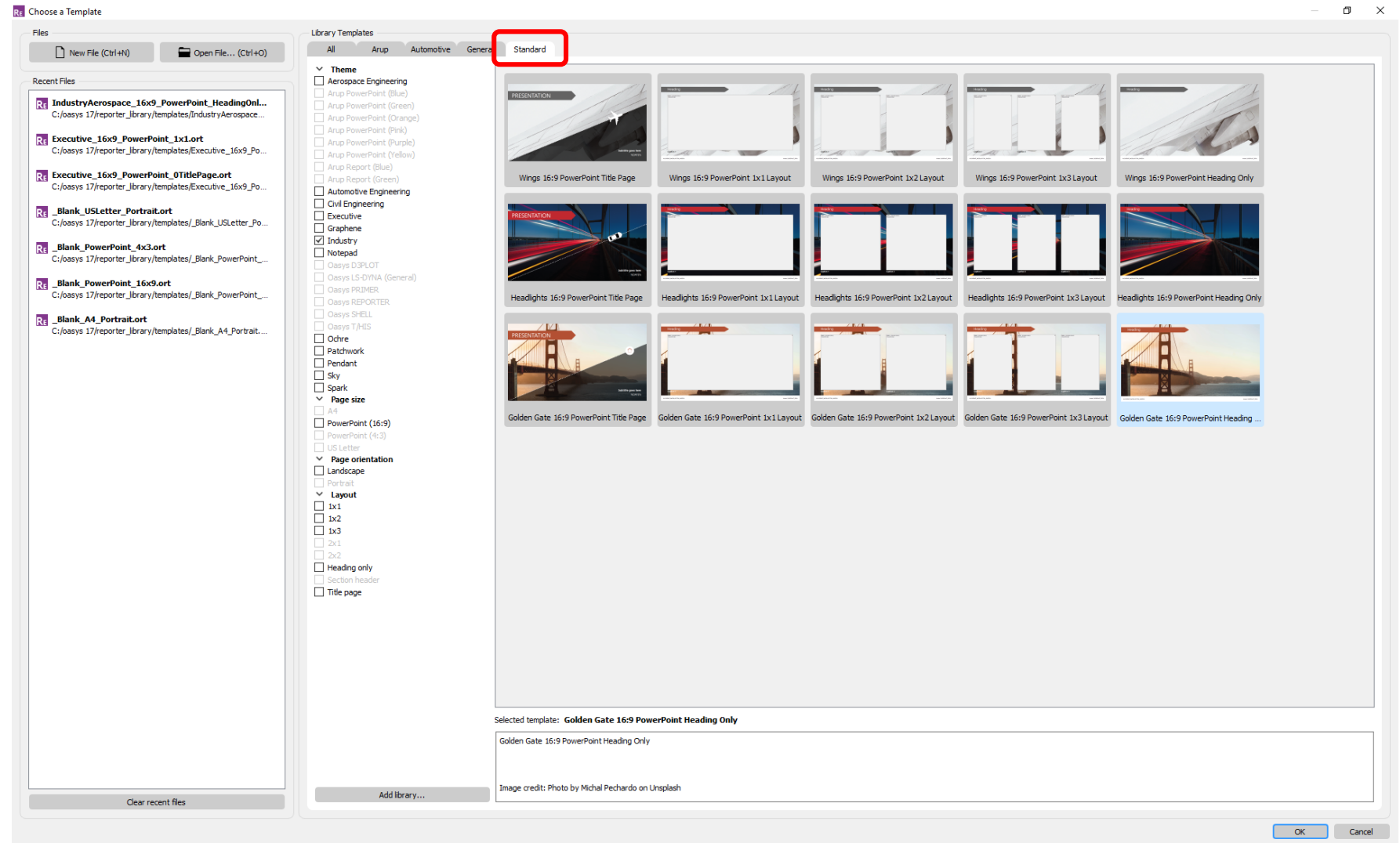
Choose a Template

When REPORTER starts, we now present a menu for selecting a library or user-made template with some helpful options:

- Recent files list

- Search filters and tabs
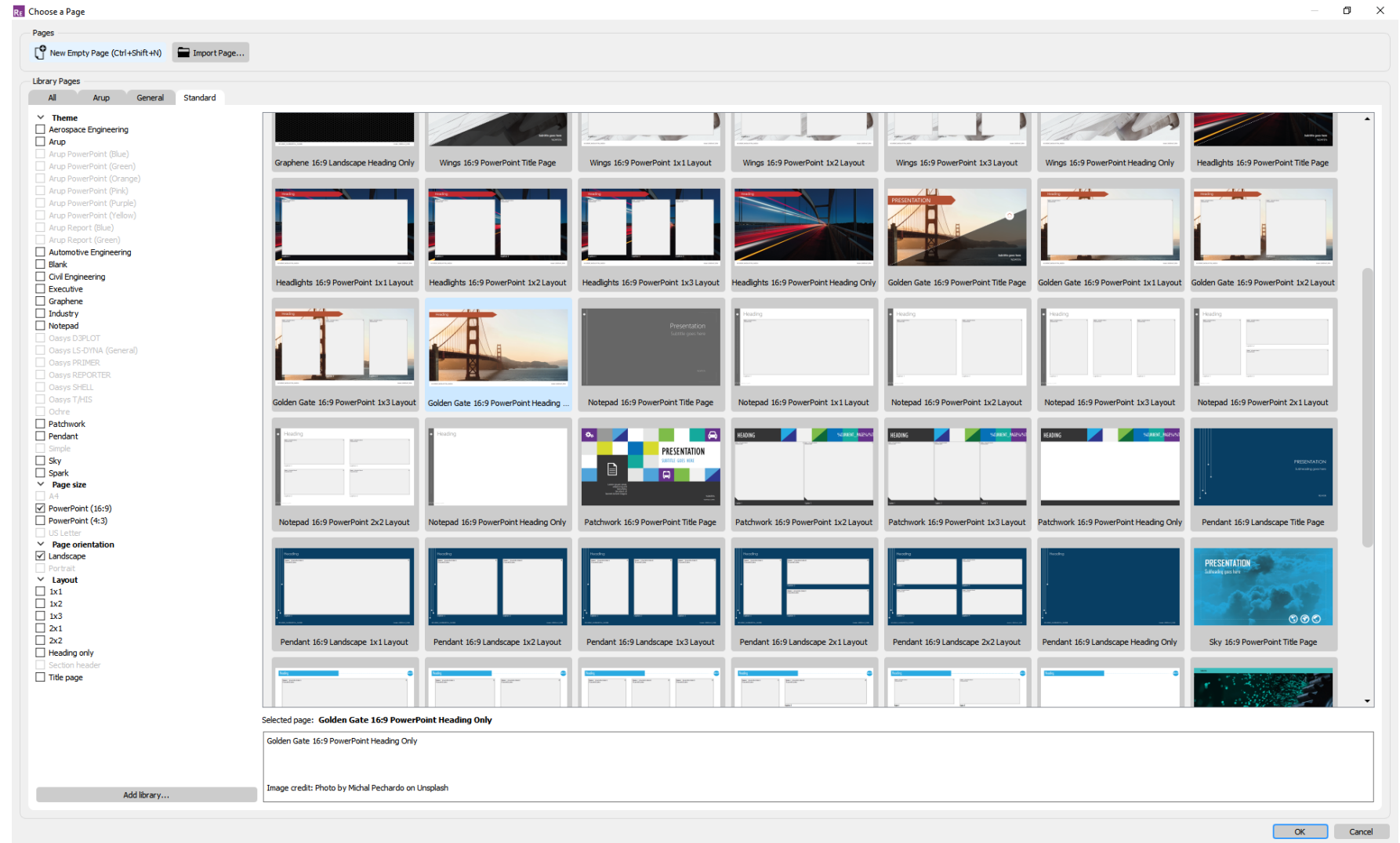
- Template selection
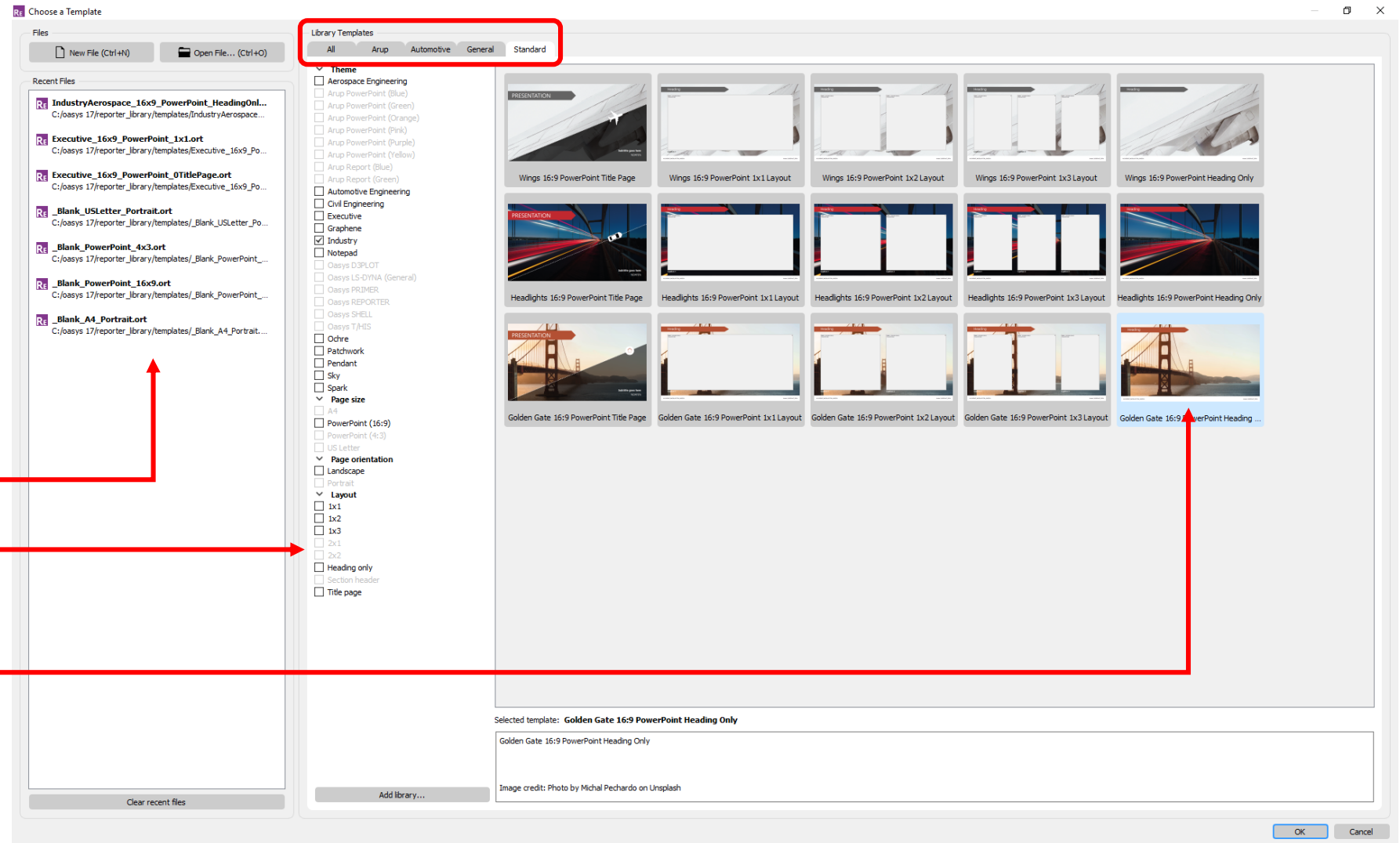
Standard Template Designs

The **Standard** tab has a range of premade templates to help you start creating reports, and to provide some inspiration.
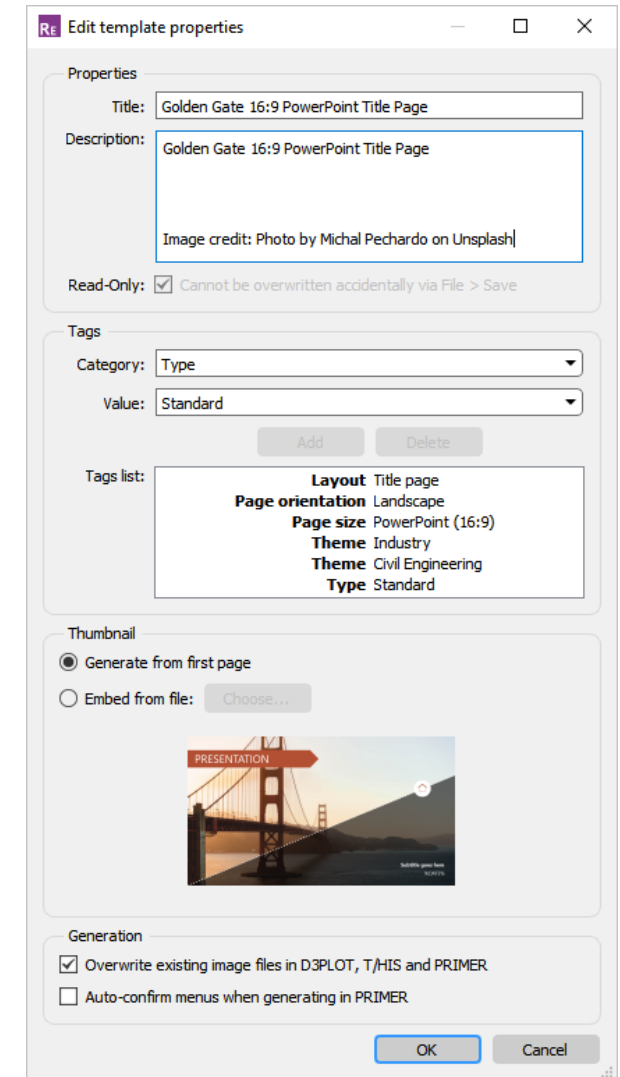
Choose a Page

The *Choose a Page* window presents similar options for adding library or user-made pages to an existing template.

Template Properties

Information about the current template can now be accessed and edited via the new *Template → Properties* menu.

- In order to aid in the categorisation and filtering of Templates (and Pages), each Template now has an associated Tags list comprised of **Category : Value** pairs. The **Type** category determines the tab in which the template appears in the *Choose a Template* window.

- The thumbnail displayed in the *Choose a Template* window is determined here – either generated from the first page or embedded from a file.

- Template generation options concerning interaction with D3PLOT, T/HIS and PRIMER can also be set.
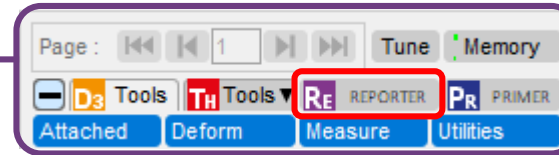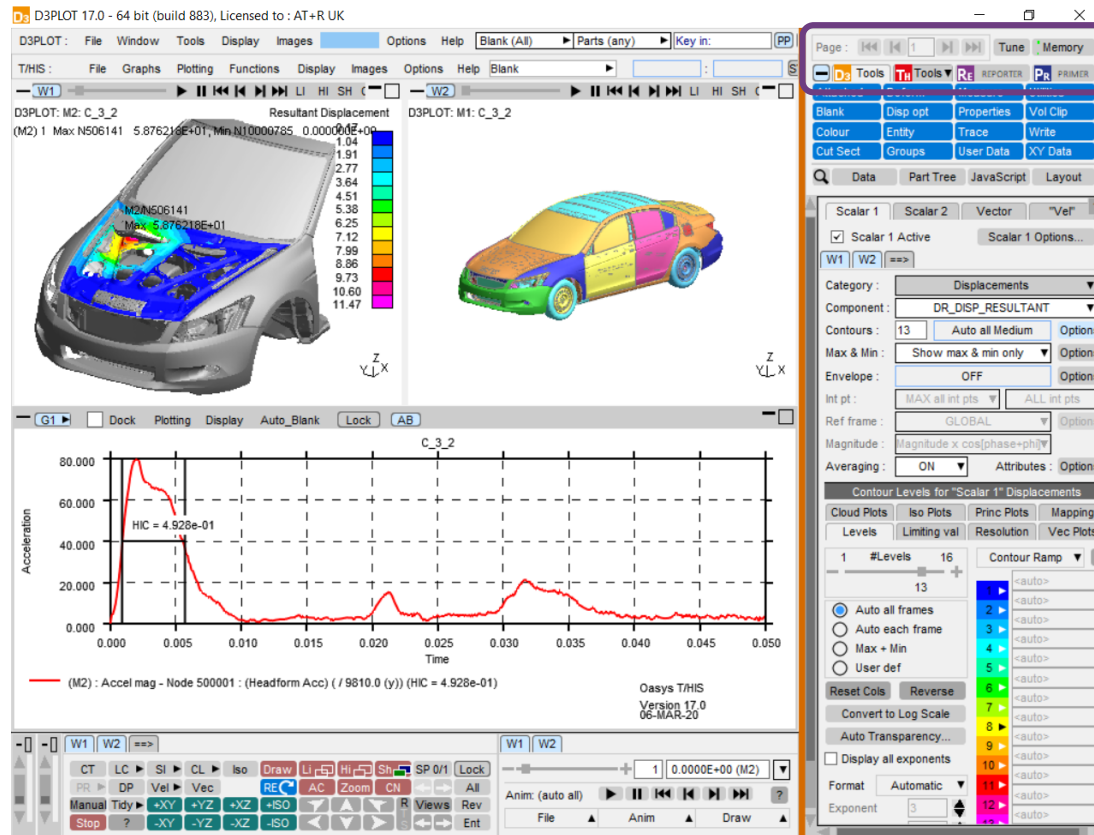
Add REPORTER to your Workflow

In version 17.0, REPORTER has been fully integrated with D3PLOT and T/HIS. Now, you can seamlessly add plots and graphs to reports as part of your normal post-processing workflow. Automated LS-DYNA reporting is just a few clicks away.

REPORTER can now be launched from D3PLOT and T/HIS

- You have been post-processing an analysis and want to put an image into a report.

- Press the "REPORTER" button above the TOOLS menu to launch REPORTER in a linked, shared memory mode.

Choose a Template to start creating your Report
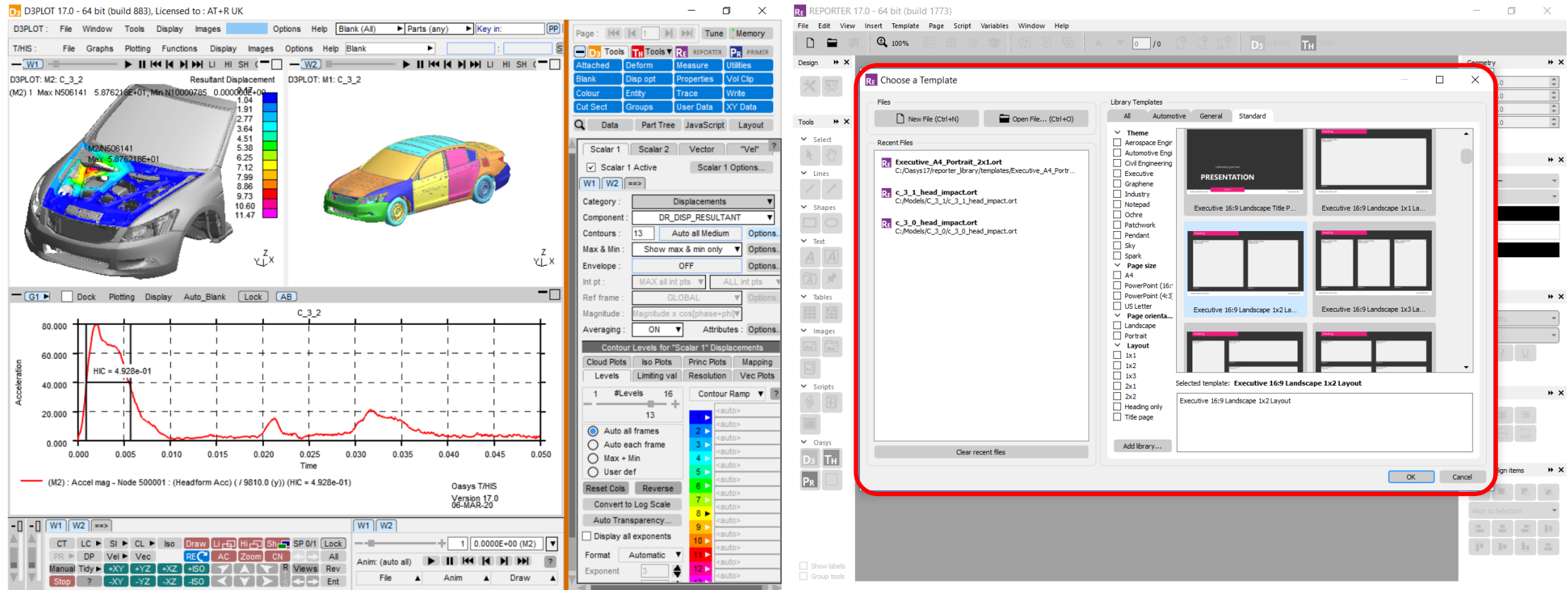
- Open a new blank template, an existing template or choose from a range of standard layouts to start creating a report.

Ensure Image looks right at Target Aspect Ratio
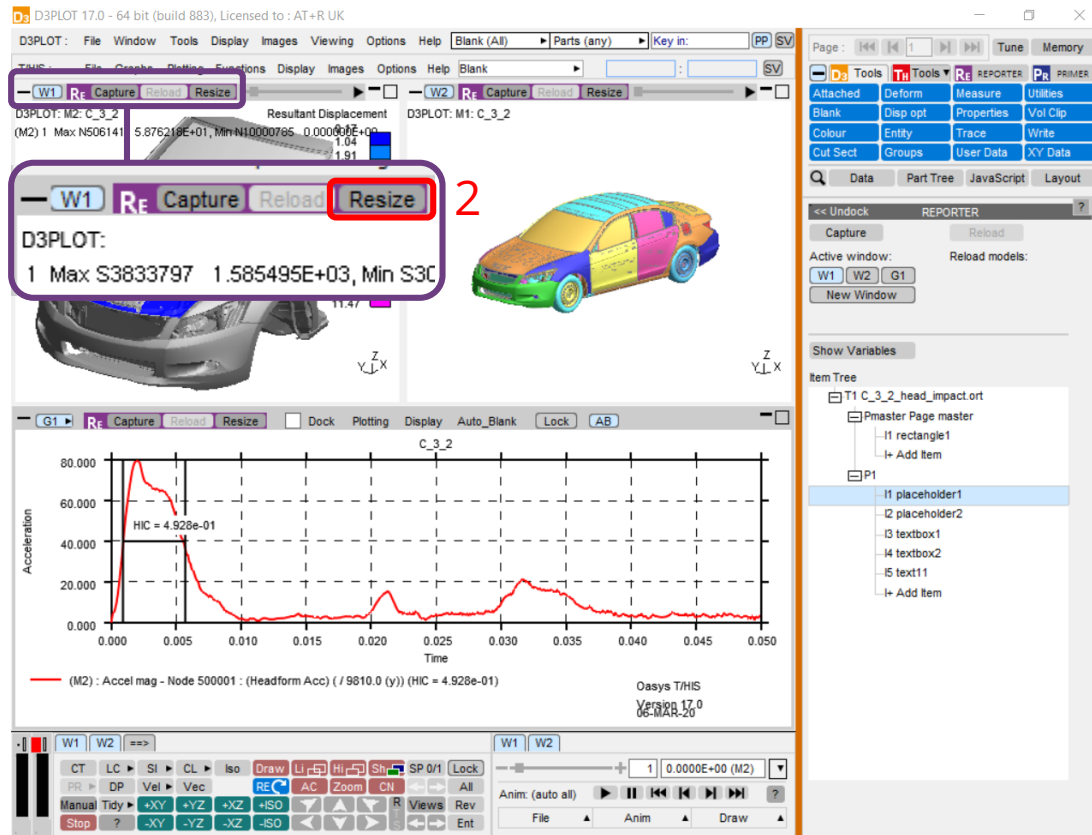
2. Press "Resize" button at the top of the D3PLOT window to resize to the REPORTER item aspect ratio.
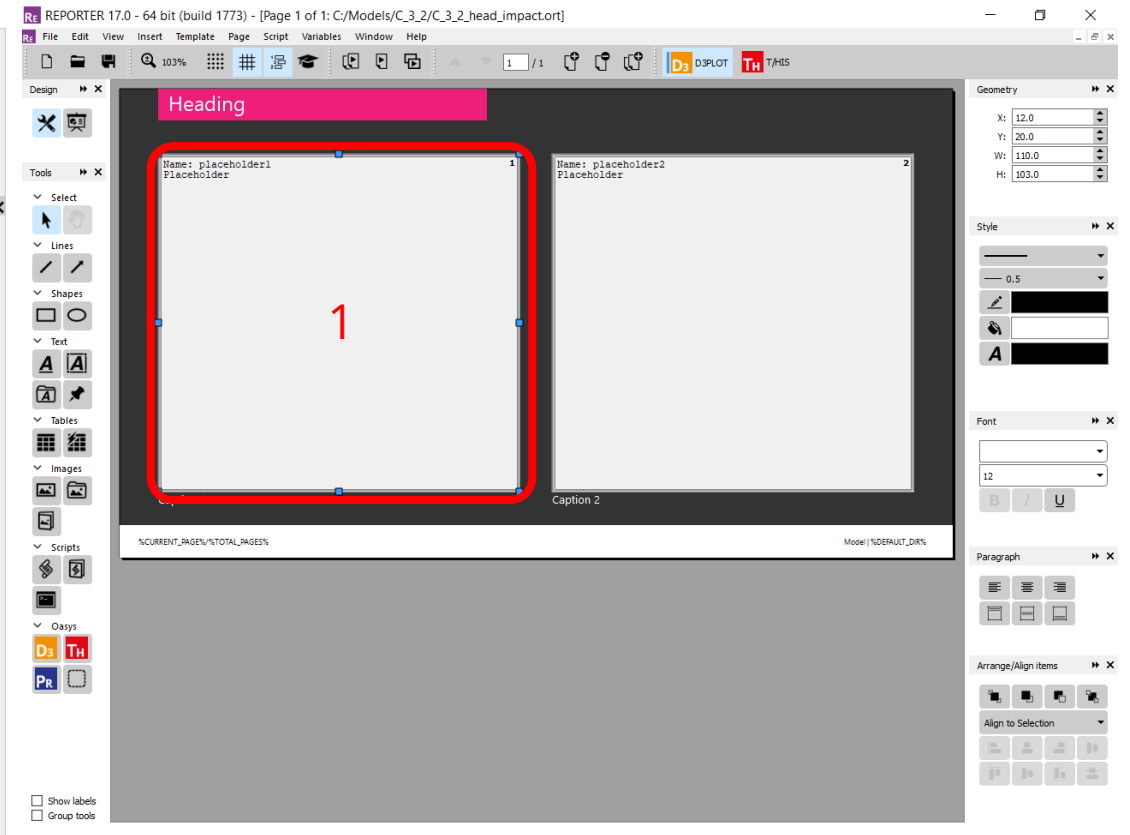
1. Select item in REPORTER that you want to capture into.

Capture an Image
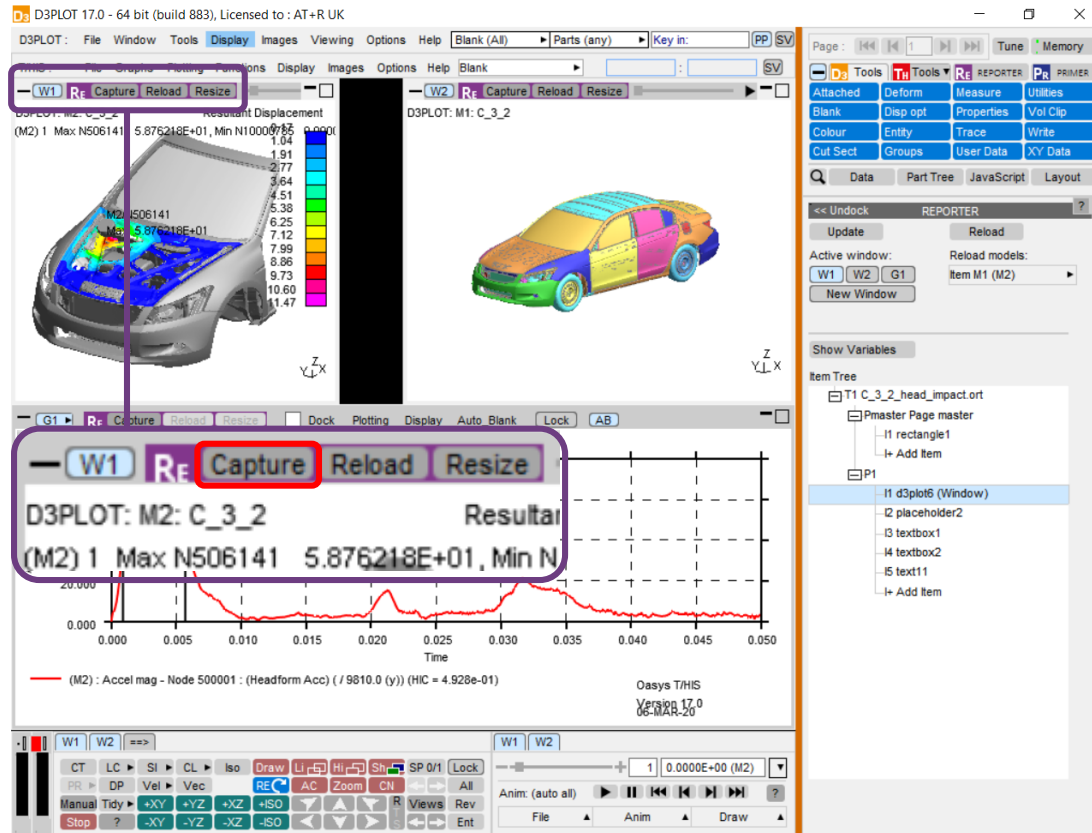
- Press the **Capture** button at the top of the D3PLOT window to send the capture to REPORTER.
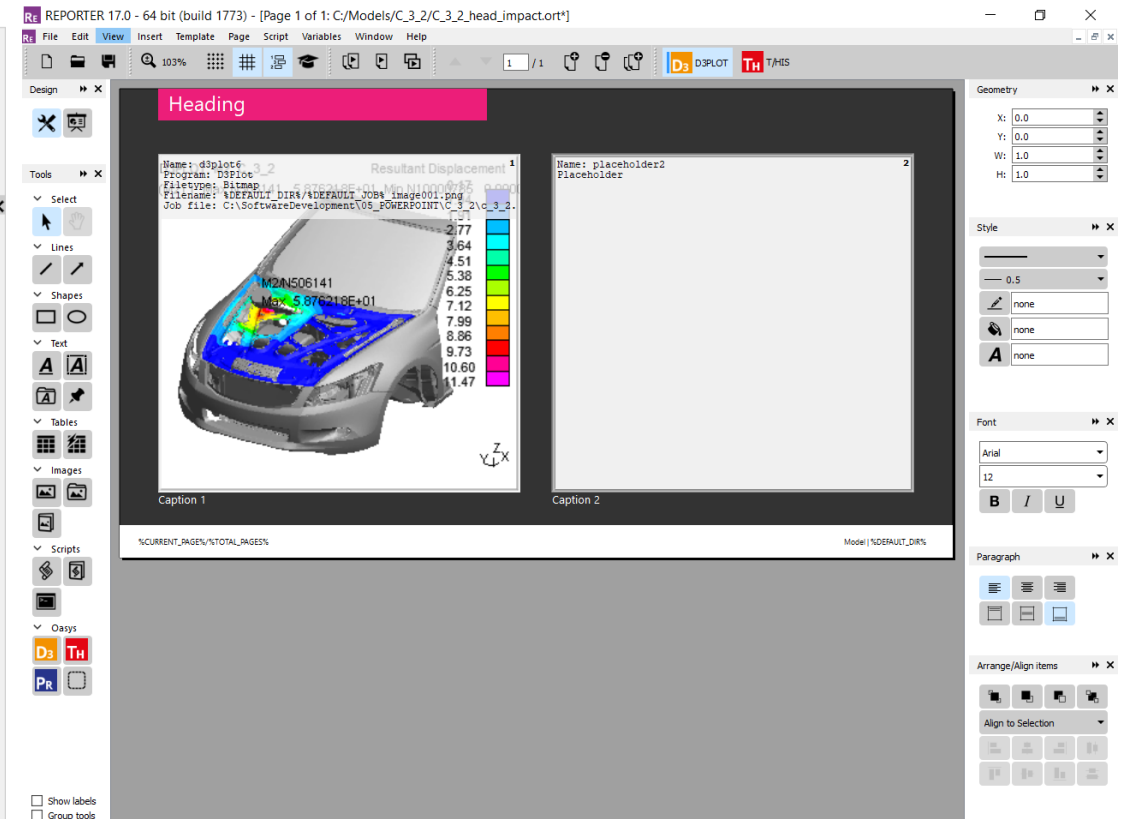
- Capture information populates item in REPORTER.

Reload items from existing REPORTER Templates

- Select item in REPORTER that you want to reload.

Items can be reloaded into a live POST session
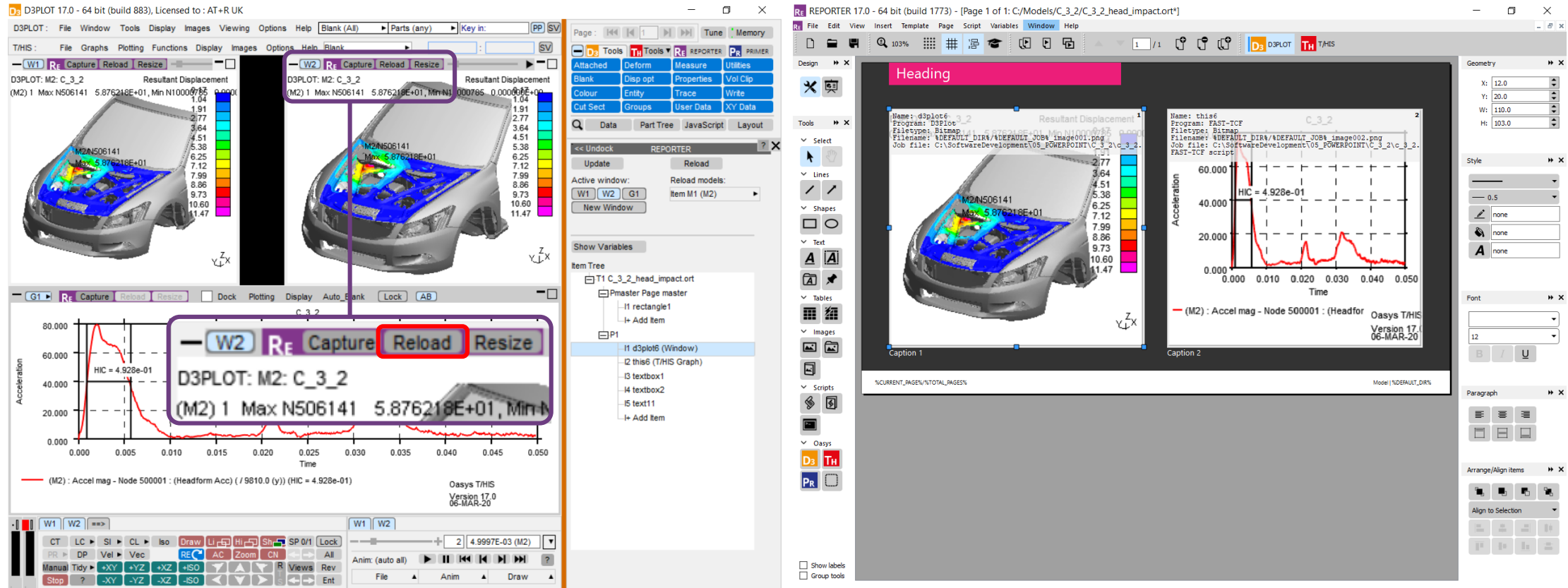
- Selected REPORTER item is reloaded into the selected window in POST.

Generate Templates from REPORTER

- Generate your template by selecting:

  File → Generate

- Generation takes place in existing linked POST sessions, reducing the time taken to generate reports.

- Use REPORTER variables to generate your template after each LS-DYNA simulation.
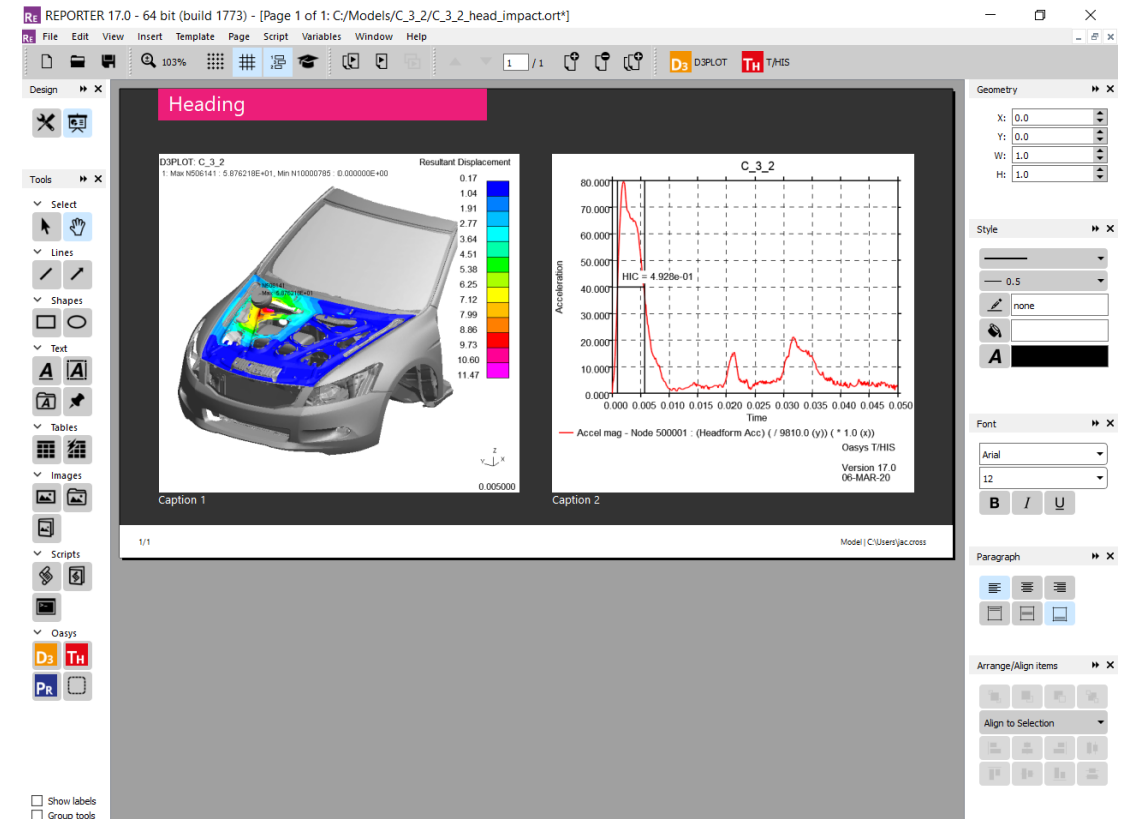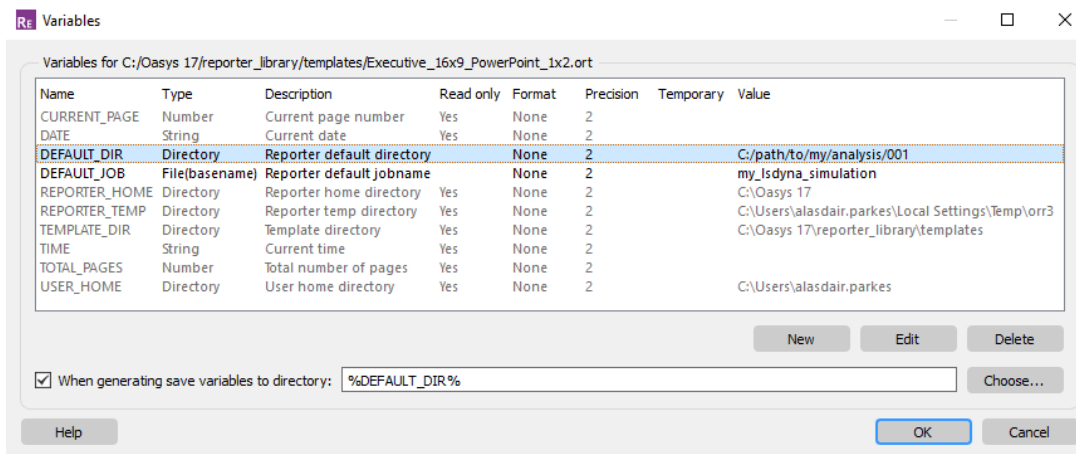
Useful to know...

- PRIMER item capture and generation are unchanged from earlier versions.

- REPORTER has a new Placeholder item type that can be filled with any of D3PLOT, T/HIS or PRIMER items.

- REPORTER can link to both D3PLOT and T/HIS in the same session.

- Captures are now single window / graph – to capture a multi-window layout, capture each window into individual REPORTER items and then design your page layout with greater flexibility in REPORTER.

- Variables are now easier to work with and accessible though the REPORTER panel in D3PLOT and T/HIS.

- Existing templates are fully supported and can be edited and generated using the 16.0 method with a simple option in REPORTER.

New Automotive Library Templates

Automotive Library Templates

The library templates for the automotive industry are now accessed from the new **Automotive** tab in the *Choose a Template* window.
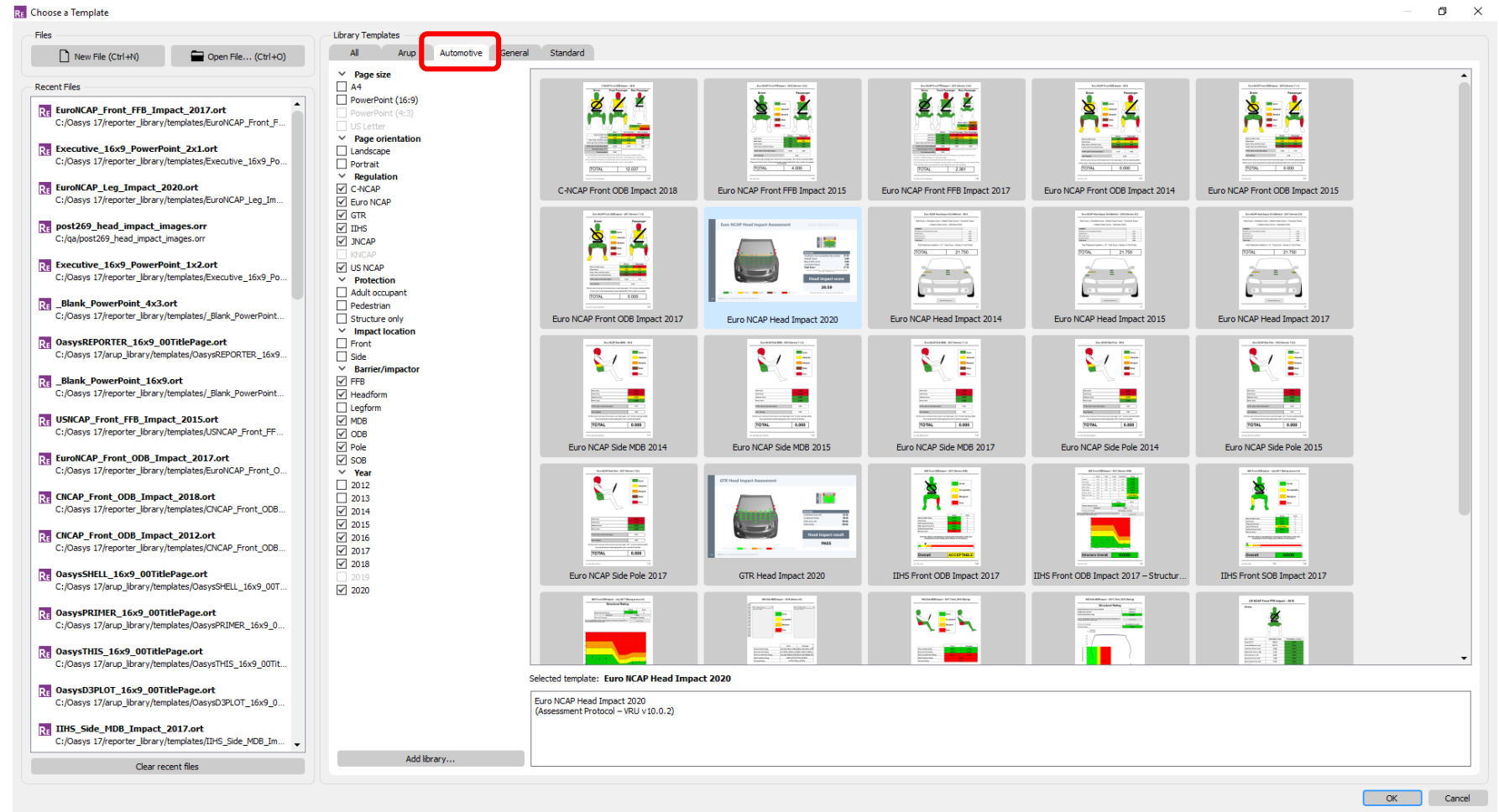
New Pedestrian Head Impact Templates

There are new pedestrian head impact templates for the Euro NCAP and GTR assessment protocols.
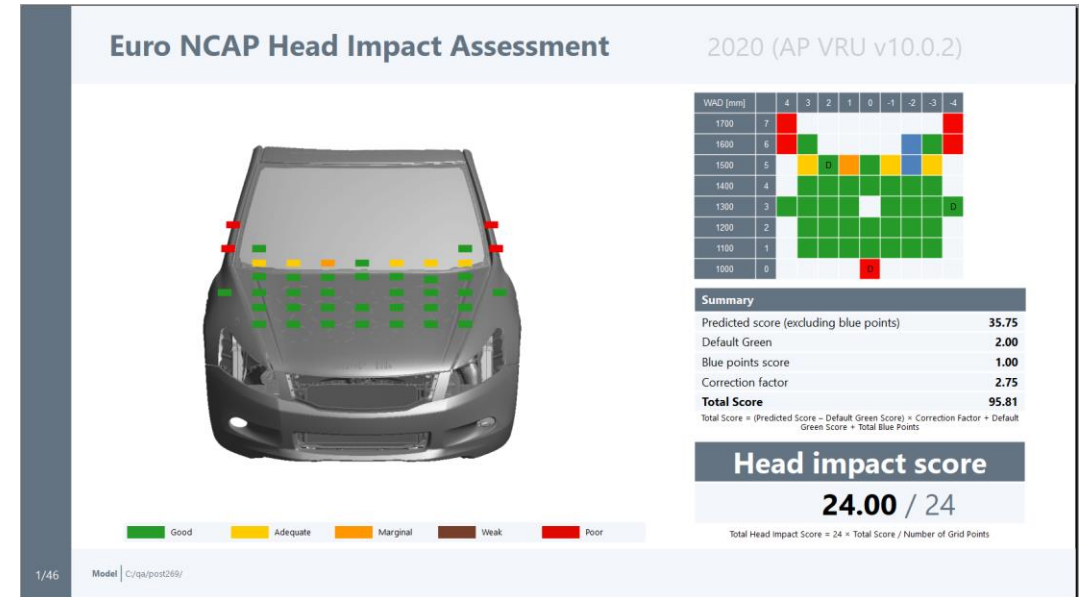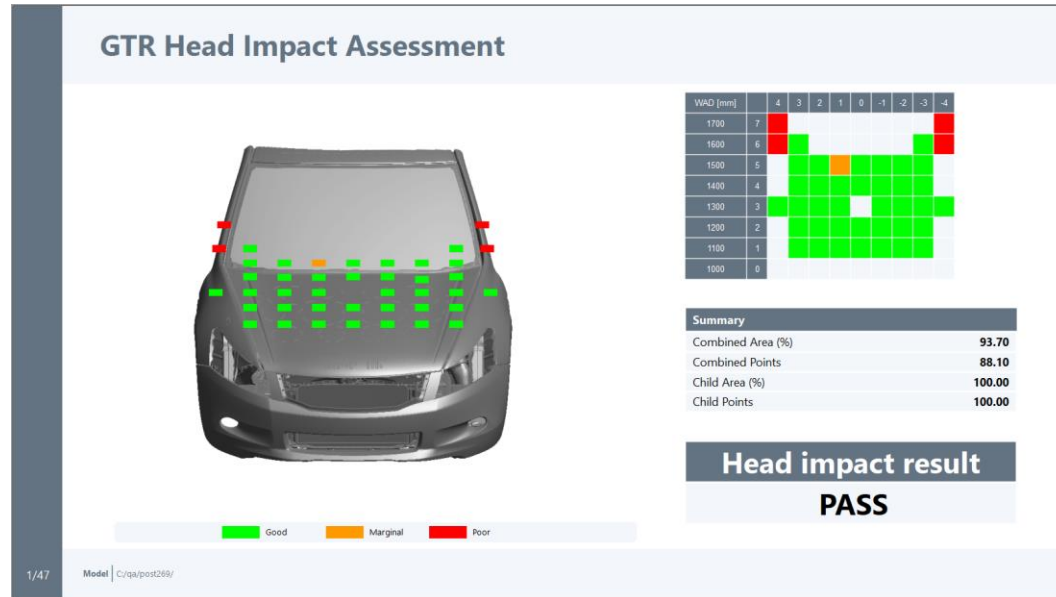
New Pedestrian Head Impact Templates

The new head impact templates link with the HIC Area Calculator in PRIMER to show band and area sensitivity results (see PRIMER New Features for more details).
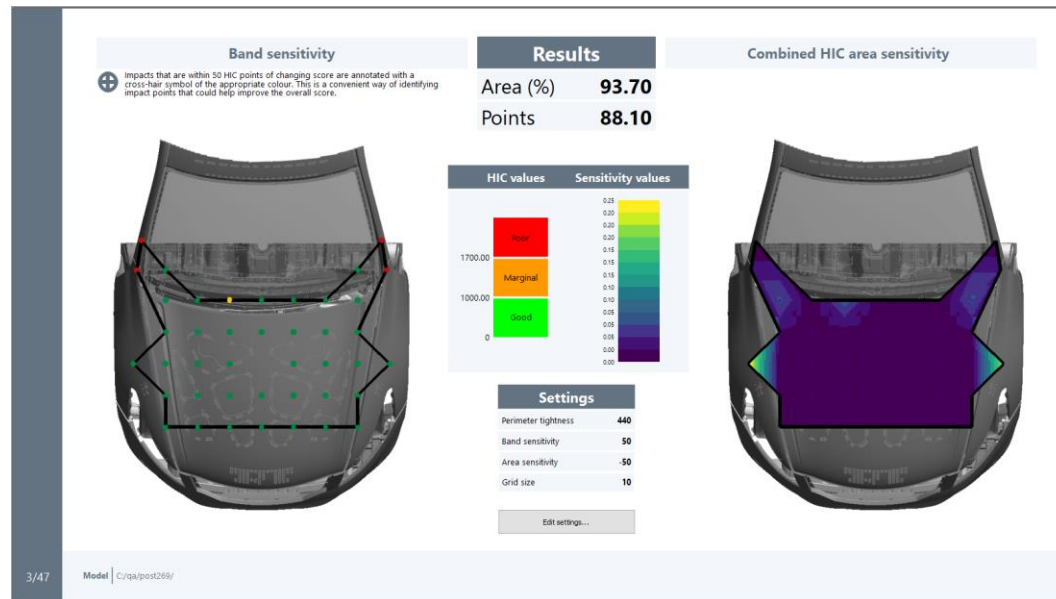
New Pedestrian Leg Impact Templates

There are new pedestrian leg impact templates for the Euro NCAP, JNCAP and KNCAP assessment protocols.
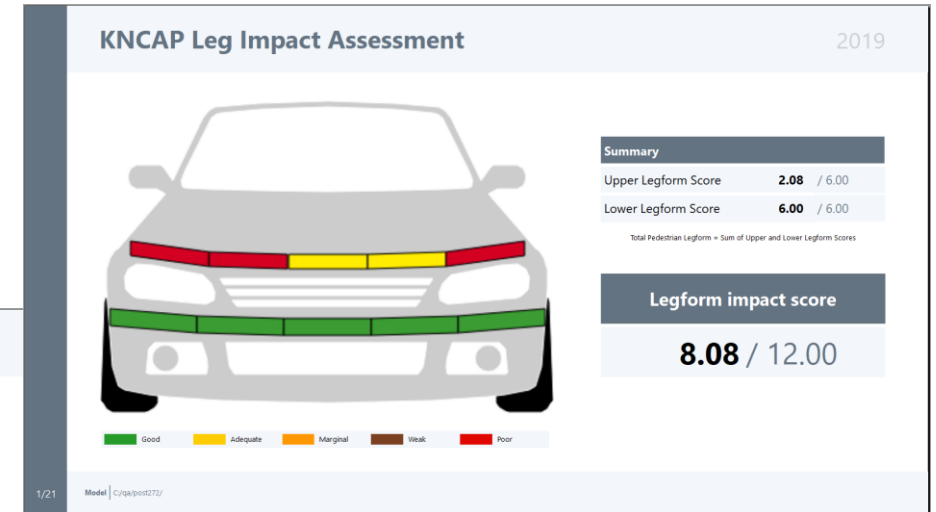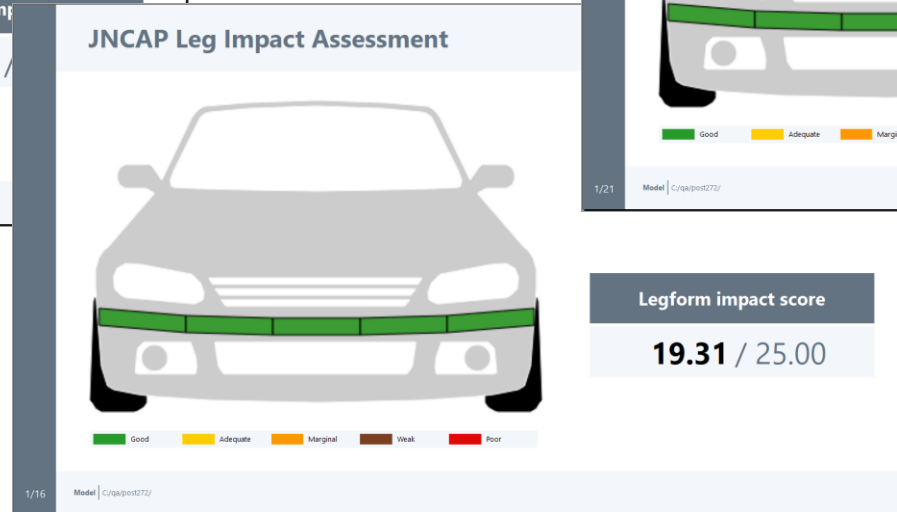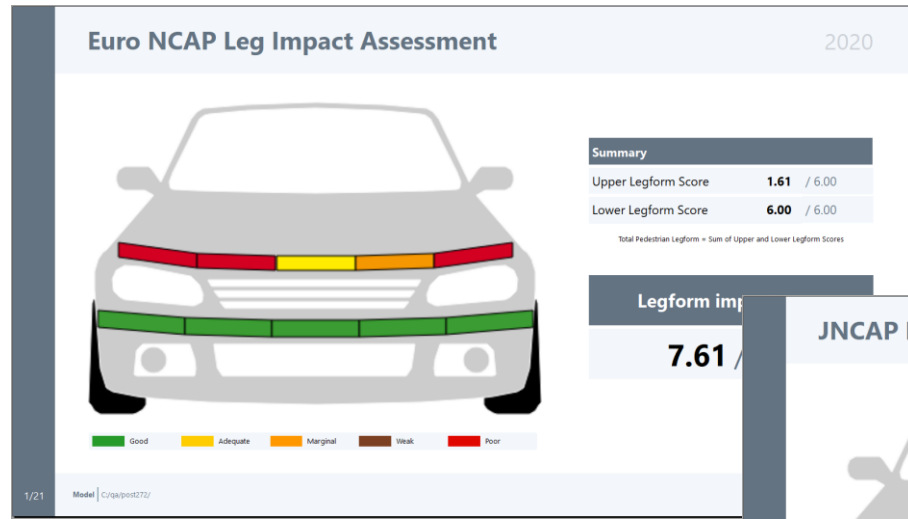
'Structure Only' IIHS Templates

There are now 'Structure Only' versions of all of the IIHS templates, for when you are focused on structural performance.
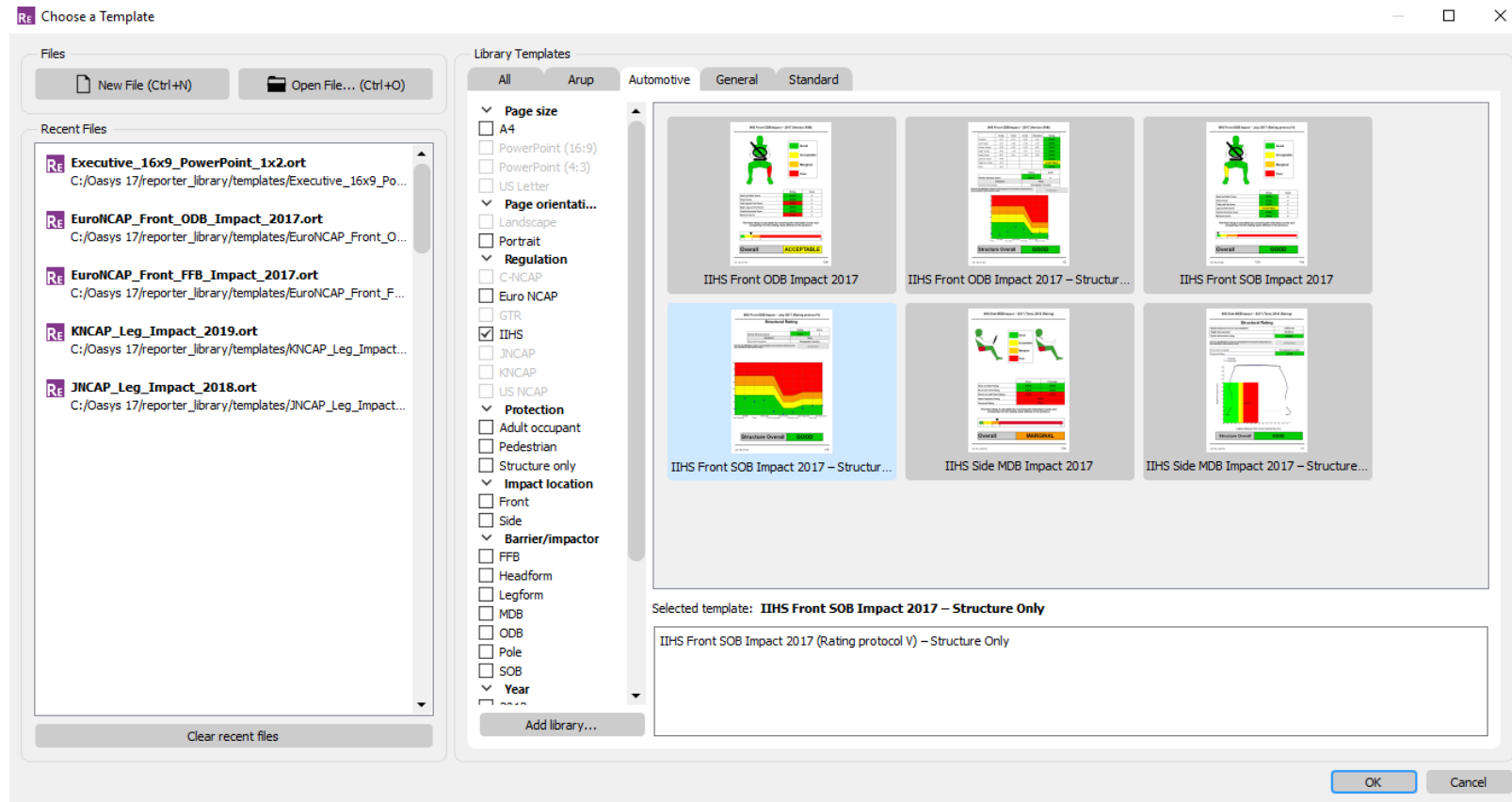
Support for Occupant/Impactor Models

The Automotive library templates now support a range of occupant/impactor models from different suppliers:

- DYNAmore ES2-re v6.0
- Humanetics Flex-PLI v1.0.2
- Humanetics HIII 50M v1.5
- Humanetics HIII 5F v2.02
- Humanetics SID IIs SBLD v.4.3.1
- Humanetics SID IIs SBLD v.4.3.2

- LSTC HIII 50M Detailed v190217_beta
- LSTC HIII 50M Fast V2.0
- LSTC HIII 50M v130528_beta
- LSTC HIII 5F Fast v2.0
- LSTC HIII 5F v2.0

- LSTC SID IIS-D v0.150.beta
- LSTC Upper Leg Impactor v2.3.2
- LSTC Upper Leg impactor v2.3.3
- PDB WS 50M v4.0

If the occupant models that you use are not listed above, please contact us for further support.

Default Input Labels

- The default entity IDs/labels are now provided to make setup easier. Select your dummy model and label offset, and the inputs table is populated for you.
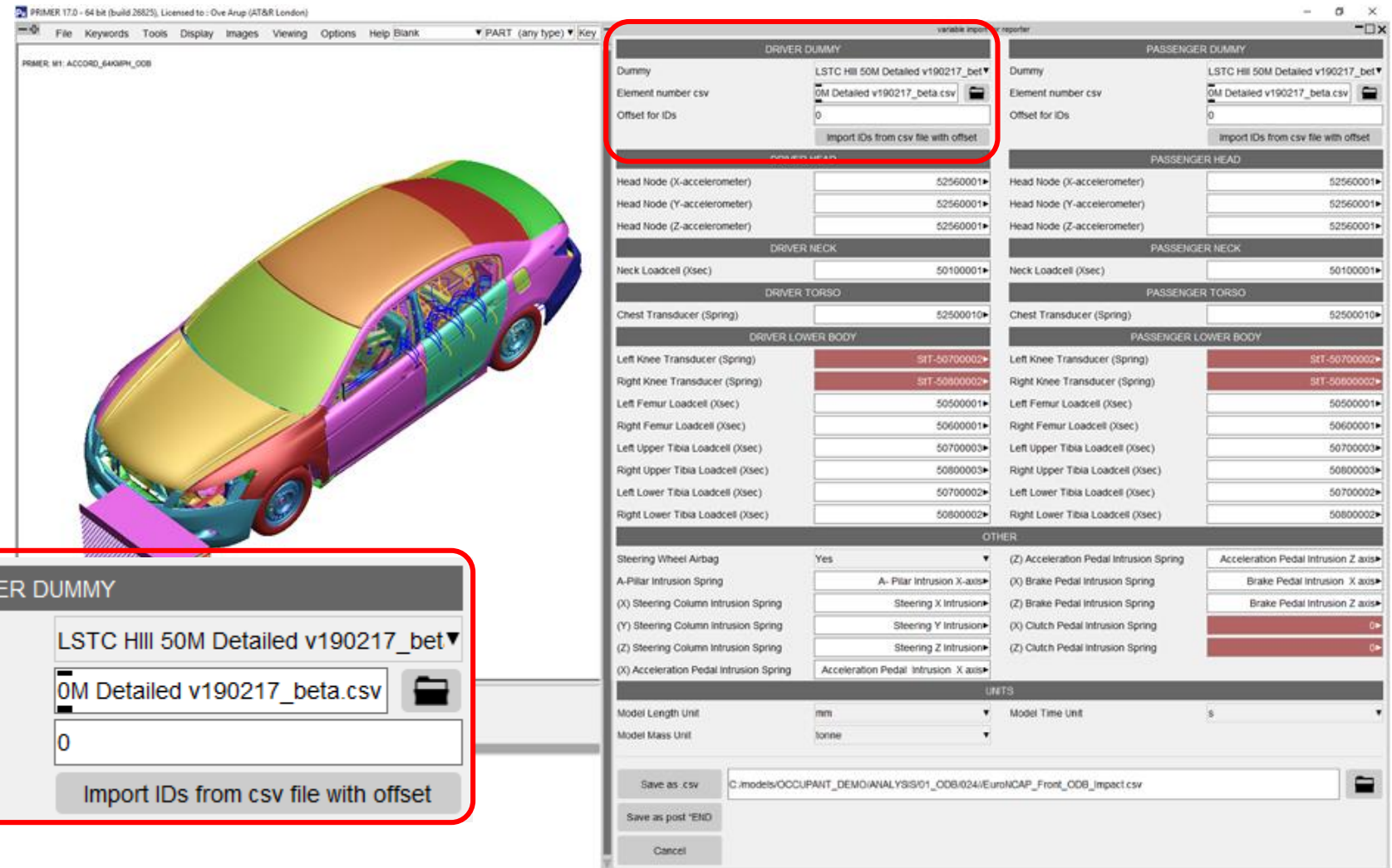
User Experience Improvements

Preferences

REPORTER preferences can now be edited and saved from directly within REPORTER using the Preferences window, located at *File → Preferences*.

Pressing Save Preferences will save to the *oa_pref* file in your HOME directory.

Several new preferences have also been added to improve customisation. The Template Generation preferences have been moved to the new *Template → Properties* menu.
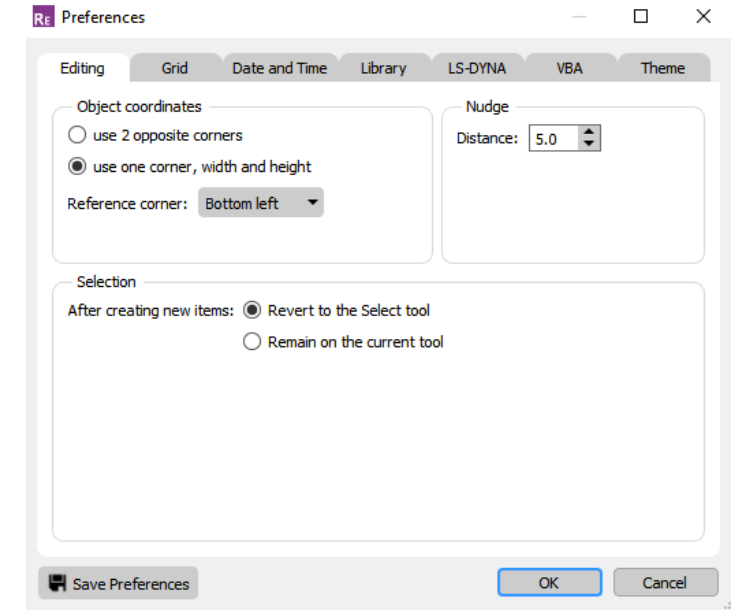
Item Selection

The Select tools have been improved in a number of ways.

- It is now possible to select all items on a page using *Ctrl+A*. All Items can be deselected using *Ctrl+Shift+A*. Individual items can be added or removed from a selection using *Ctrl+Click* or *Shift+Click*.

- The **s** and **h** keys can now be used to quickly access the Select and Hand tools.

- Newly-created items now remain selected so that they can be more conveniently moved, resized, or deleted. This behaviour can be modified in Preferences.

DATE Variable Formatting

Formatting control for the DATE variable has been added using **%DATE(format)%**.

- The default formatting for the date variable is such that if the day were Saturday 1st February 2020, **%DATE%** would be generated as **Sat Feb 1 2020.** This is the same as **%DATE(ddd MMM d yyyy)%** using the options from the table.

- Any input characters not included in this table will be treated as regular text. This allows for further customisation (e.g. **%DATE(ddd-MMM/d.yyyy)%** for **Sat-Feb/1.2020**).

- Similar options are also available for the **%TIME%** variable. See the REPORTER manual for a full description.

Expression	Output
d	The day as a number without a leading zero (1 to 31)
dd	The day as a number with a leading zero (01 to 31)
ddd	The abbreviated localised day name (e.g. 'Mon' to 'Sun')
dddd	The full localised day name (e.g. 'Monday' to 'Sunday')
M	The month as a number without a leading zero (1 to 12)
MM	The month as a number with a leading zero (01 to 12)
MMM	The abbreviated localised month name (e.g. 'Jan' to 'Dec')
MMMM	The full localised month name (e.g. 'January' to 'December')
yy	The year as a two digit number (00 to 99)
yyyy	The year as a four digit number

Tables and Autotables

The way in which cells are resized in Tables and Autotables has been revised.

- A new checkbox is present which, when ticked, maintains the overall table size while adding/deleting/resizing rows and columns using proportional cell scaling.

- When unticked, rows/columns are unaffected by changes to other rows/columns in the table and maintain their original size. The overall table size is altered.

- For Tables, this applies to both rows and columns. For Autotables, this only applies to columns.

- Column widths and row heights should no longer ever be reset unless the user explicitly presses one of the 'Reset heights' or 'Reset widths' buttons.

JavaScript API

JavaScript API Improvements

Various enhancements have been applied (and bugs fixed) in the Javascript API.

- For the Page class:

    - A new constructor has been added for the Page class, with an options Object argument allowing page name, colour and index to be specified. The original constructor is now deprecated.

- For the Image class:

    - Images are now drawn with antialiasing to improve image quality.

    - Image size can now be controlled for 'Blank' PRIMER, D3PLOT and T/HIS items (so that any images created via scripts or command files can have image size control).

    - It is now possible to set an alternative background colour (including 'none') via a new third argument in the Image constructor.

    - Setting *lineColour* to 'none' or *lineWidth* to 0 now results in no line being drawn.

JavaScript API Improvements

Various enhancements have been applied (and bugs fixed) in the Javascript API.

- For Table items in the Item class:
    - Problems encountered when modifying individual Table cell border widths via the JavaScript API, especially when reducing the existing border width, have been fixed.
    - (16.1) It is now possible to get/set the *lineColour* property for Table items via the Javascript API.
    - (16.1) In the JavaScript API, some of the properties in the objects returned by **Item.GetCellProperties** and **Item.GetColumnProperties** were incorrect for Program and Library Program cells. These have been fixed. A new *<output>* property has been added for **Item.GetCellProperties**, and a new *<programArgs>* property has been added for **Item.GetColumnProperties**. Also, the *<program>* and *<programArgs>* properties were not set correctly by **Item.SetCellProperties** and **Item.SetColumnProperties**. Now fixed.

JavaScript API Improvements

Various enhancements have been applied (and bugs fixed) in the Javascript API.

- (16.1) If an item containing a Program or Library Program was generated via the **Item.Generate** method in a Script item, the Program or Library Program output would not be returned. Now fixed.

- Arguments for methods that are integers are now checked more thoroughly. A warning is given if the number is not an integer and the number will be rounded to the nearest integer.

- Arguments for methods that are numbers are now checked for validity. If the value isNaN (Not a Number) then an exception is now thrown.

Extending Classes

There have been a few instances where users have extended an existing class in REPORTER by adding their own property.
When we add new functionality to the API this potentially causes a conflict.

For Arup to be able to extend and enhance the API in the future any constant, property or method names beginning with a lowercase or uppercase letter are reserved.
If you need to add your own properties or methods to one of the existing classes then to avoid any potential future conflict you should ensure that the name begins with either an underscore (_) or a dollar sign ($) or the name is prefixed with your own unique identifier.

For example if company 'ABC' need to add a property called 'example' then to avoid any potential future conflict use one of:

- _example

- $example

- ABC_example

IntelliSense

Writing scripts can be time consuming when trying to remember which functions are available and the number and order of arguments in the functions. To find out, you would normally have to go searching for it in the manual and doing this over and over again is frustrating and time consuming.

One way to speed up writing scripts is to use software that provides information as you write your script. One such program is call **Visual Studio Code** (produced by Microsoft and free to use) which uses something called 'IntelliSense' to list objects, functions and parameters as you type, e.g.,
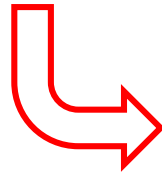
List of functions/properties

Select the function

Press 'Tab' to select
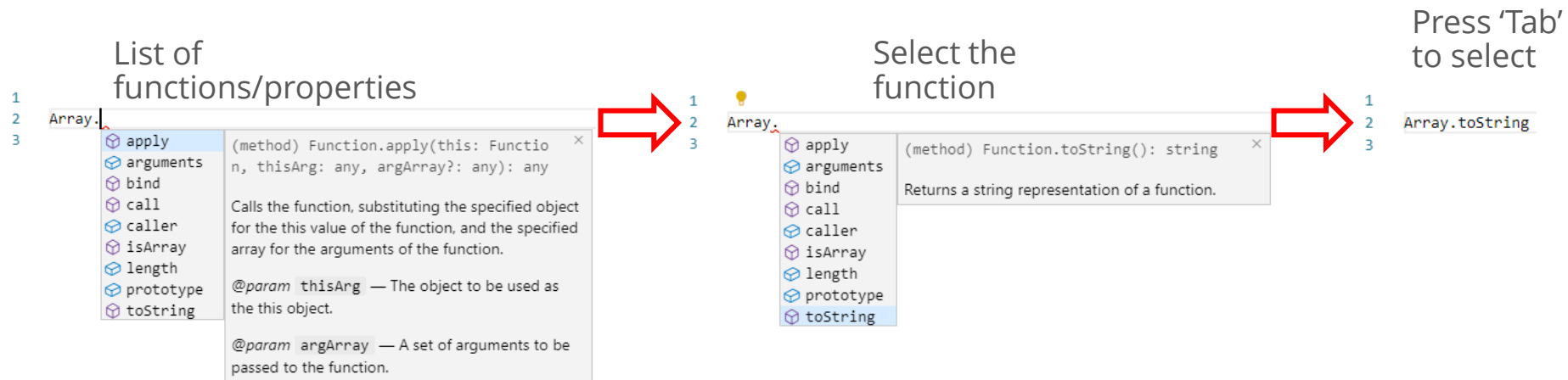
IntelliSense

In Oasys Suite 17.0 a ***reporter.d.ts*** file located in the '***Oasys 17/Intellisense***' directory has been added to provide IntelliSense for the REPORTER JS API, e.g.,

```
2    var t = Template.GetCurrent()
3    var page = new Page(t);
4    var item = page.GetItem(1);
5
6    var props = item.get
```

List REPORTER JS-API functions.

- GetCellProperties
- GetColumnProperties
- GetColumnWidth
- GetCondition
- GetGeneratedData
- GetRowHeight
- generatedRowHeight
- Generate

```
2    var t = Template.GetCurrent()
3    var page = new Page(t);
4    var item = page.GetItem(1);
5
6    var props = item.GetCellProperties()
```
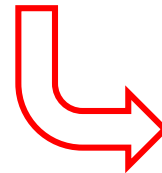
GetCellProperties(row: number, column: number): GetCellPropertiesReturn

The row index of the cell of interest. Note that indices start from 0.

Get the properties of the specified cell. Valid for item type Item.TABLE and Item.AUTO_TABLE.

Describe the function, parameters and the return type.

For functions that return objects list the properties of the object.

```
6    var props = item.GetCellProperties(0, 0);
7    props.
```

- bottomBorderWidth
- colspan
- column
- columnMergeOrigin
- conditions
- fillColour
- fontName
- fontSize
- fontStyle
- height
- hyperlinkHTML
- hyperlinkPDF

(property) GetCellPropertiesReturn.bottomBorderWidth: number

Cell bottom border width. Can be 0.0, 0.1, 0.5, 0.75, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0. Other values will result in no border.

A word document in the '***Oasys 17/Intellisense***' directory gives instructions on how to download Visual Studio Code and set things up to use the IntelliSense file.

Contact Information

ARUP

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