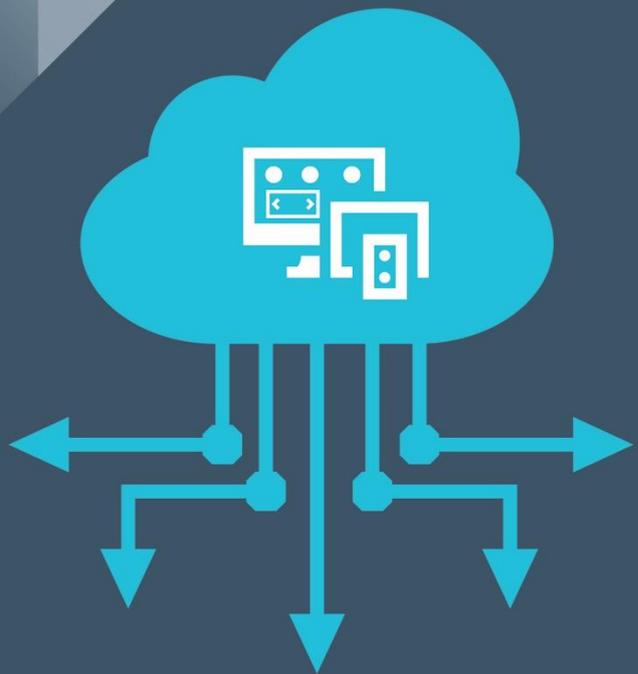


# SYSPRO Avanti Overview Guide

Version: 007

Published: January 2021



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# WHAT'S CHANGED?

| SYNOPSIS  | READ MORE...  |
|---|---|
| Forgot Password and Change Password functions in Avanti.                          | <a href="#">Forgot Password and Change Password functions</a> |
| Add toolbar items to web views using the <b>Visual Designer</b> .                 | <a href="#">Adding toolbar items to a web view</a>            |
| Define personal Settings in Avanti.   | <a href="#">Defining personal settings in Avanti</a>          |
| Automate a <b>program</b> from the browser URL.                                   | <a href="#">Automating Avanti</a>                             |
| SYSPRO Avanti automatically remembers the position and size of all modal windows. | <a href="#">Using Windows in Avanti</a>                       |
| Conditional formatting, Auto Sum, Custom columns for grids in Avanti              | <a href="#">Modifying the Avanti grid</a>                     |
| Task Automation in Avanti   | <a href="#">Task Automation in Avanti</a>                     |
| Customize an application in Avanti  | <a href="#">Customizing Applications in Avanti</a>            |
| Developers can create their own applications that connect to Avanti               | <a href="#">SYSPRO Avanti Development</a>                     |

## ANNOTATION

*This document provides information about SYSPRO Avanti, the web-based version of SYSPRO. For the remainder of this document SYSPRO Avanti is referred to as Avanti.*

*The contents of this document are subject to change.*

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# INTRODUCING SYSPRO AVANTI

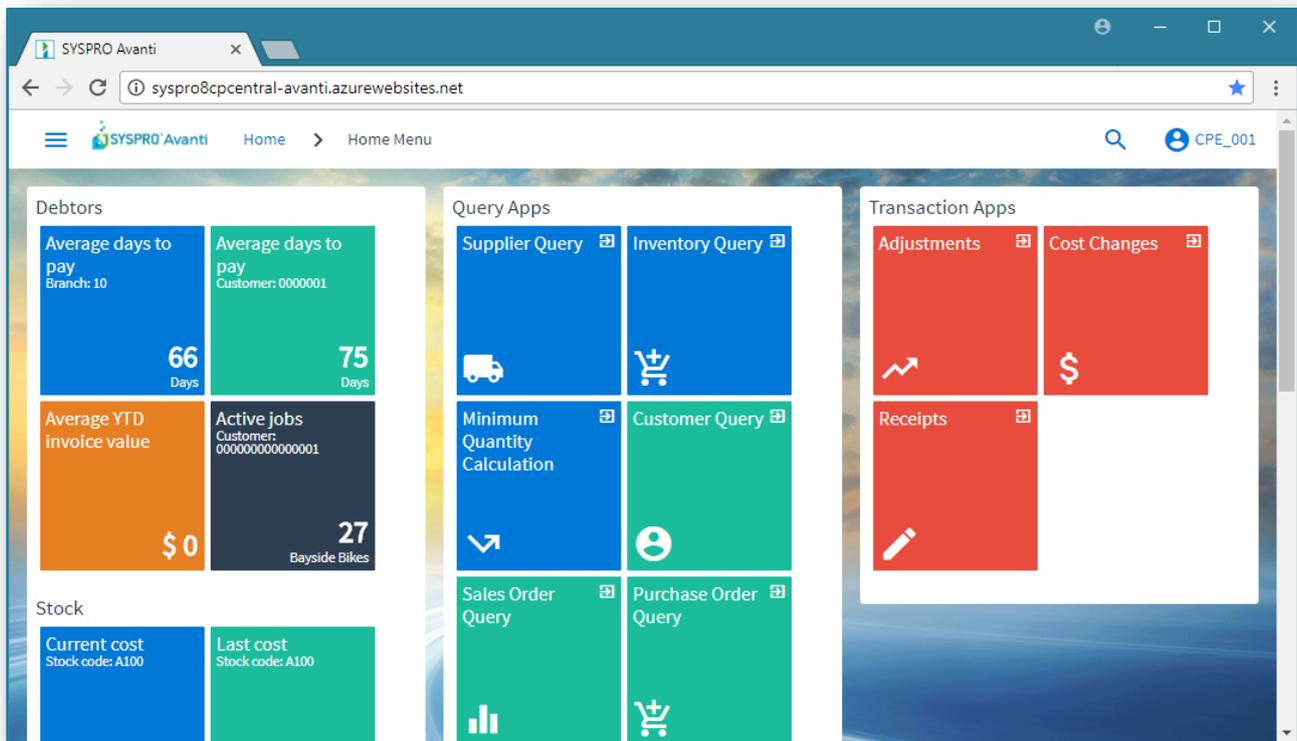
Avanti is SYSPRO's web-based offering.

Avanti (an Italian word meaning *forward* or *ahead*) is designed to run SYSPRO's applications in the private or public cloud, but Avanti can also be deployed on premise.

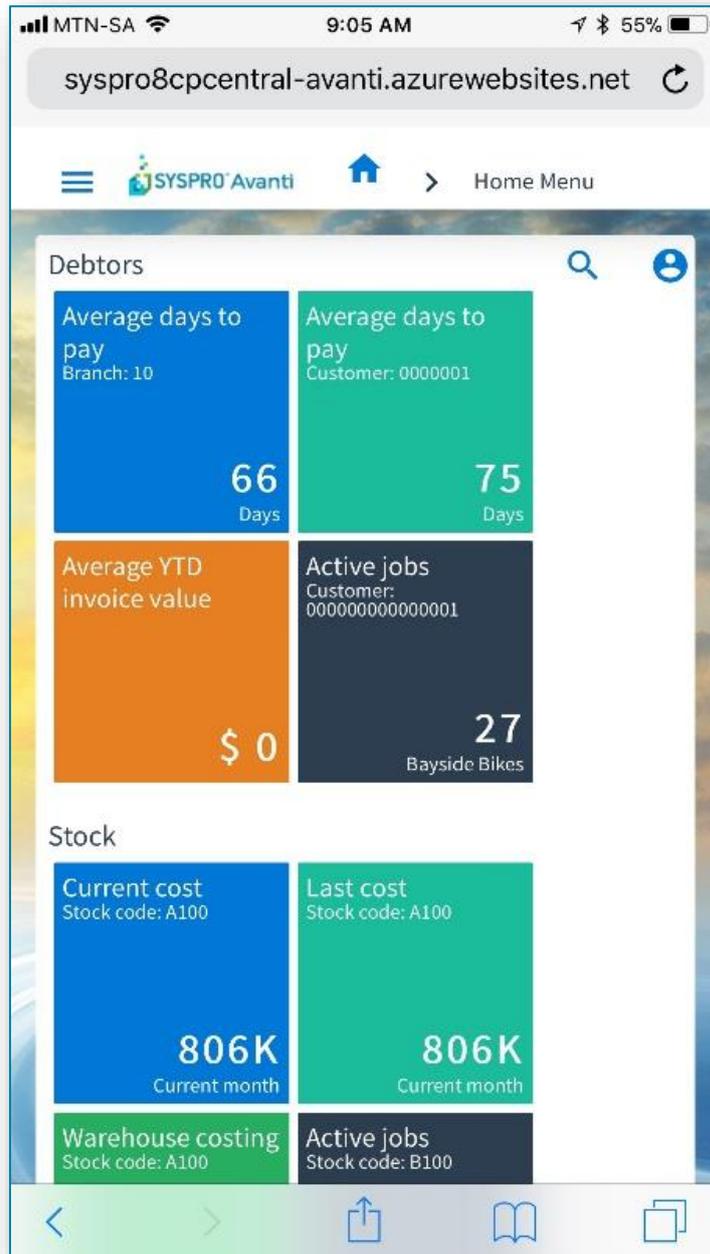
Avanti can be used in parallel with the SYSPRO Windows Client version, allowing a user to use either Avanti or the Windows client version to complete the same task.

Being a native web application, Avanti is accessible on any device, on any platform, from anywhere.

## RUNNING AVANTI ON THE DESKTOP



# RUNNING AVANTI ON THE IPHONE



## AVANTI'S BENEFITS

---

Users may selectively deploy either Windows or the web-based solution.

A dual user interface provides customers with the ability to select the best UI for the specific task at hand.

- **Familiarity**

For customers used to the SYSPRO Windows client version, Avanti will be quite familiar as the behavior of the applications is designed to be similar.

- **Ease of deployment**

Avanti does not require any installation on the Windows desktop or device. All that is required is a web browser.

- **Consistent design across all applications**

Avanti is designed to be intuitive and easy to navigate, with consistent layouts that make it easier for users to become quickly adept at the execution of tasks, and with a minimum of clicks to complete tasks.

- **Tailoring**

Avanti has a **Visual Designer** that allows administrators to change the layout of any application, and to add or remove functionality. This allows customers to streamline any operation. Additionally, some of the customization implemented in the same SYSPRO Windows client application will be automatically applied in Avanti.

Avanti also allows users to create completely new functionality and to have this available in Avanti.

## THE DIFFERENCES BETWEEN AVANTI AND ESPRESSO

While SYSPRO Espresso and SYSPRO Avanti have similar characteristics (they are browser-based applications, and both were created using modern web technologies), the two products are designed for different types of users.

Espresso is specifically targeted at mobile workers who don't require the full and complex functionality of SYSPRO but require offline capability.

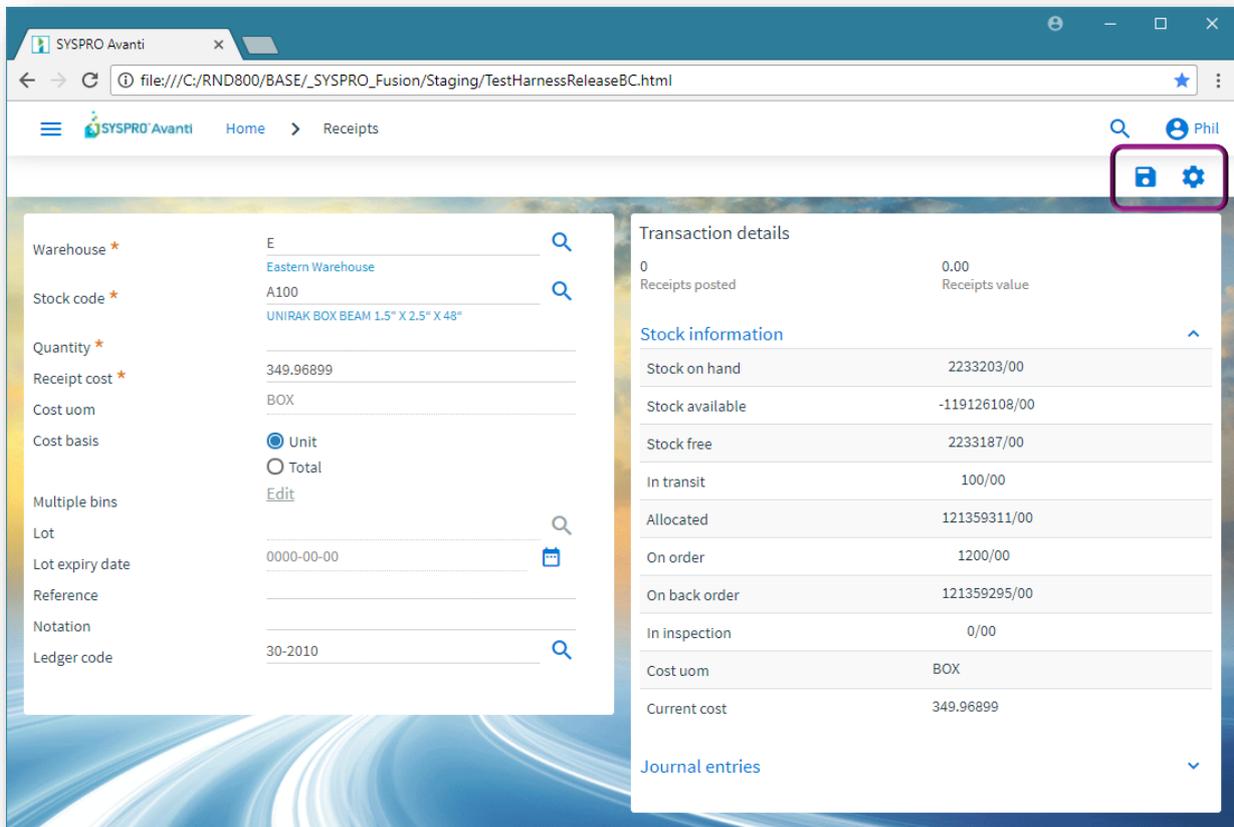
Avanti is aimed at users who require the full-featured functionality of SYSPRO but want to access it from a browser.

| SYSPRO ESPRESSO  | SYSPRO AVANTI   |
|--|---|
| Natively designed for mobile devices                                   | Natively designed for the browser   |
| User experience optimized for mobile devices                           | User experience optimized for the browser   |
| Offline capability   | No offline capability   |
| Applications are purpose-built and require development effort          | Applications are created using the <b>Visual Designer</b> and require no development effort |
| Espresso is charged by user logon                                      | User access is based on the concurrent SYSPRO user license                                  |
| Espresso applications may be chargeable and are licensed by user count | Any application in SYSPRO may be available in Avanti as part of the concurrent licensing    |

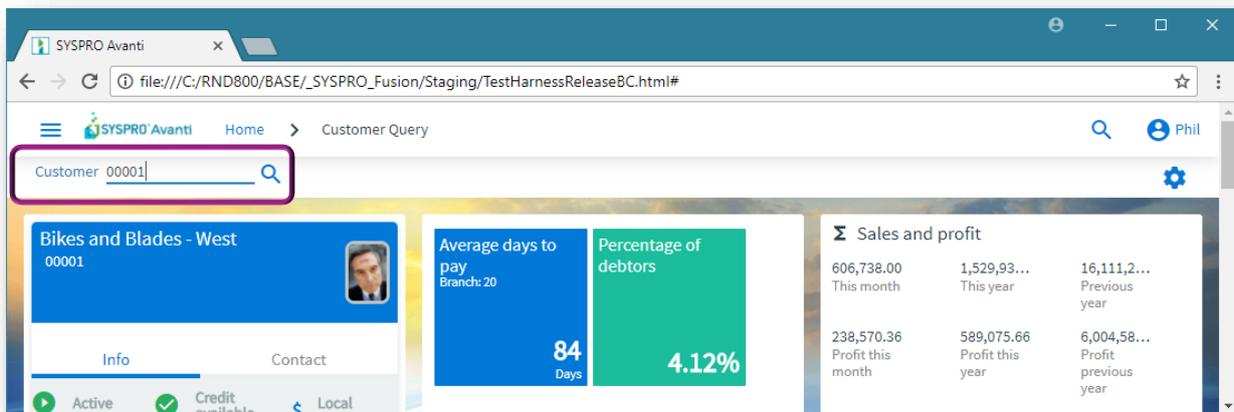
# USER INTERFACE

Avanti's design guidelines provide a consistent and intuitive user interface.

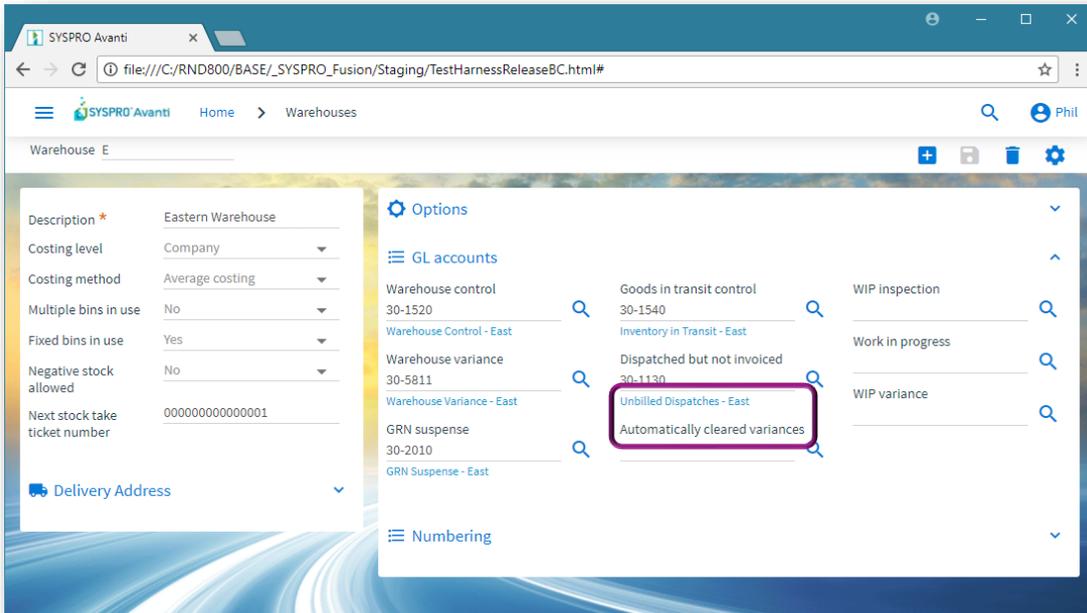
Action buttons are always located on the right of the toolbar of the current application:



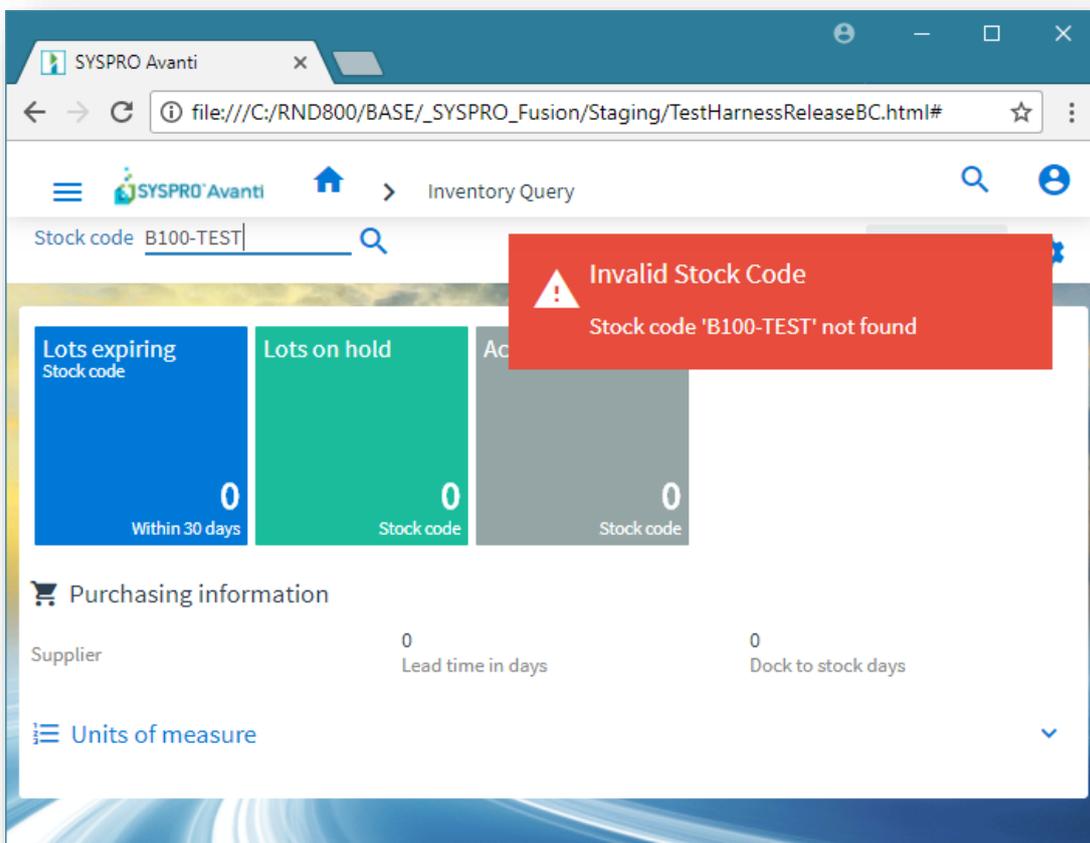
Entry fields on the toolbar are located on the left:



Descriptions for form fields appear beneath the key value:



Toast notifications provide unobtrusive messages if entries are not correct:

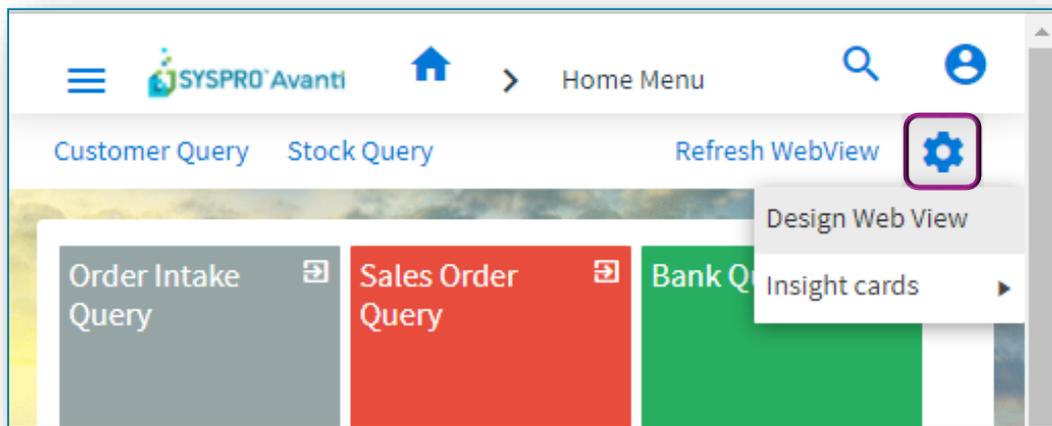


# TAILORING AVANTI

## DESIGNING APPLICATIONS

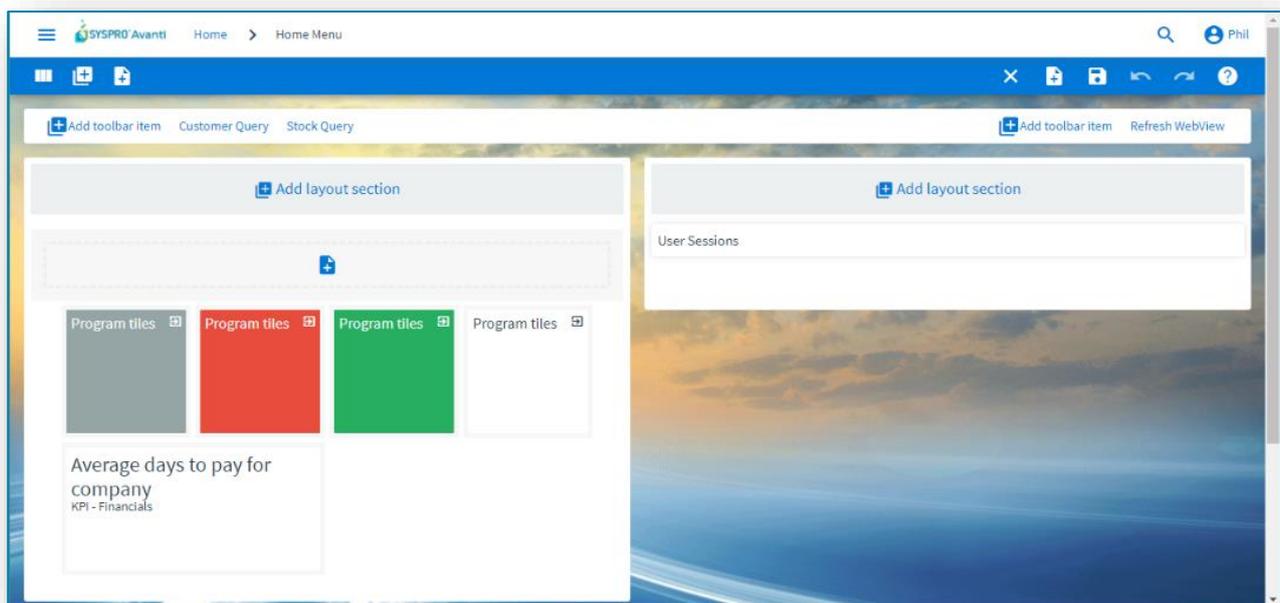
You can use the **Visual Designer** in either Avanti or the Windows client version to design applications for use in Avanti.

In Avanti, click on the Settings icon at the top right of the page to design the view:

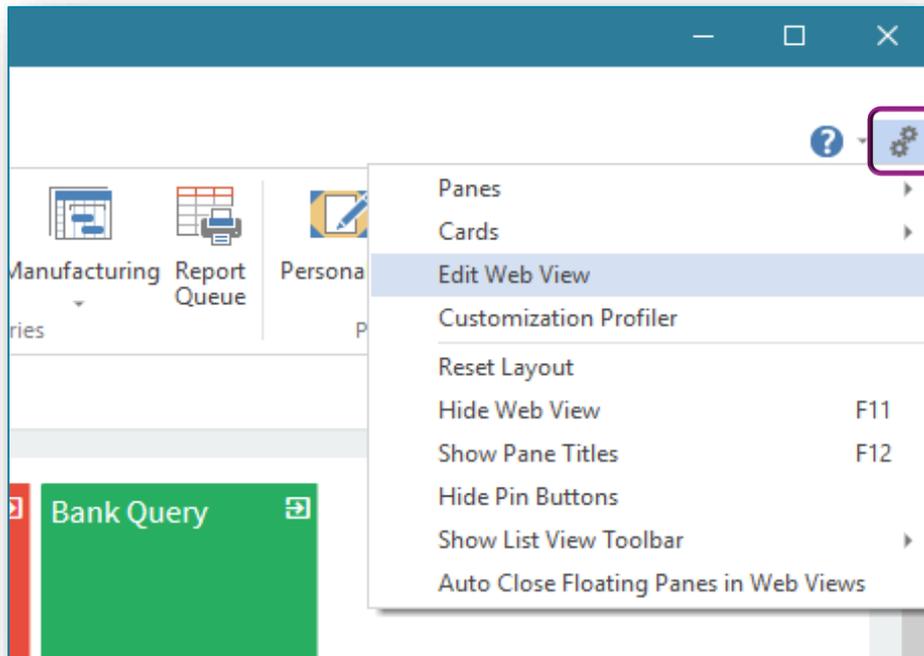


The **Visual Designer** displays the current layout.

You can add or remove components, or start from new to design your own view:



**Note:** If you wish to design applications at the **Role level** or **SYSTEM-WIDE** level, then you must be in Design Mode within the SYSPRO Windows client version. You can then launch an application in SYSPRO Windows client and select the option to **Design Web View** from the settings icon:



Designing applications is simply a matter of selecting the Form field, Grid list, Tile or Card and add it to the layout. There is no development coding required by the user to design layouts.

**Note:** To design a web view the operator security option **VBScript editing** must be enabled:

| Allowed                             | Activity description   | Sequ...    | e.net specific a... | M..             | Activity nu... |
|-------------------------------------|--|------------|---------------------|-----------------|----------------|
| <input checked="" type="checkbox"/> | Custom form entry  | 094        |                     | Custo...        | 053            |
| <input checked="" type="checkbox"/> | Listview/Forms - Export or print data                                | 095        |                     | Custo...        | 075            |
| <input checked="" type="checkbox"/> | Forms - Customization by operator                                    | 096        |                     | Custo...        | 103            |
| <input checked="" type="checkbox"/> | Toolbars - Customization by operator                                 | 097        |                     | Custo...        | 250            |
| <input type="checkbox"/>            | <b>VBScript editing / Design Web Views / Design Customized Panes</b> | <b>098</b> |                     | <b>Custo...</b> | <b>606</b>     |
| <input checked="" type="checkbox"/> | Docking panes - do not prompt when removing windows                  | 099        |                     | Custo...        | 253            |
| <input checked="" type="checkbox"/> | Save docking layout when using roles / industry / system-wide        | 100        |                     | Custo...        | 247            |

Once you have designed your own web view, you can always delete the web view, either by using the **Visual Designer** in SYSPRO, or when you click on the Settings icon in Avanti the option **Delete Web View** will appear beneath **Design Web View**.

## ADDING TOOLBAR ITEMS TO A WEB VIEW

To add a toolbar item to a web view:

Select the **Add toolbar item** option from the left-hand side of the **Visual Designer** to add items to the left-hand side of your web view. Likewise, there is an identical button for the right-hand side of the **Visual Designer**.

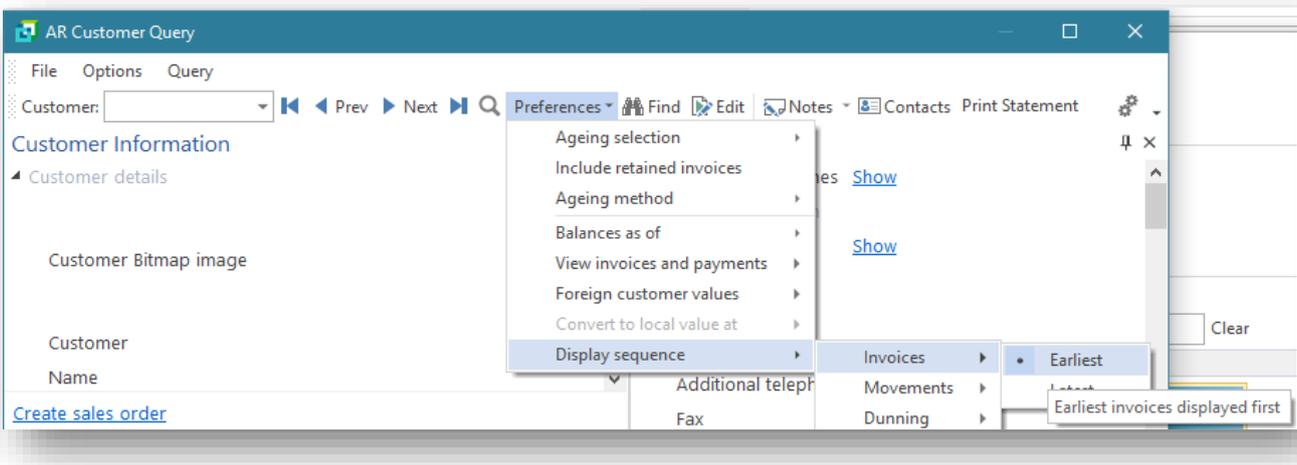
**Note:** Toolbar buttons correspond to their equivalent in the core SYSPRO product.

For this explanation, we'll use the **Customer Query** program (i.e. ARSPEN).

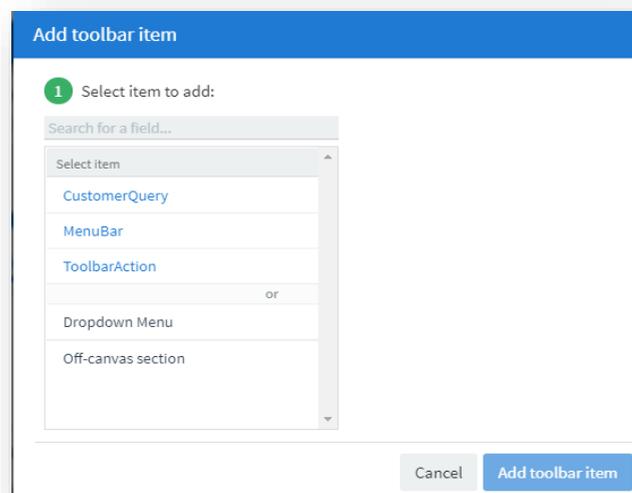
This program has 2 primary toolbars on the main window:

- The top toolbar (known as the **MenuBar**)
- A main toolbar (labelled **CustomerQuery**) that contains the Customer entry and other toolbar items.

Notice the **Preferences** button is a dropdown button containing multiple item levels:



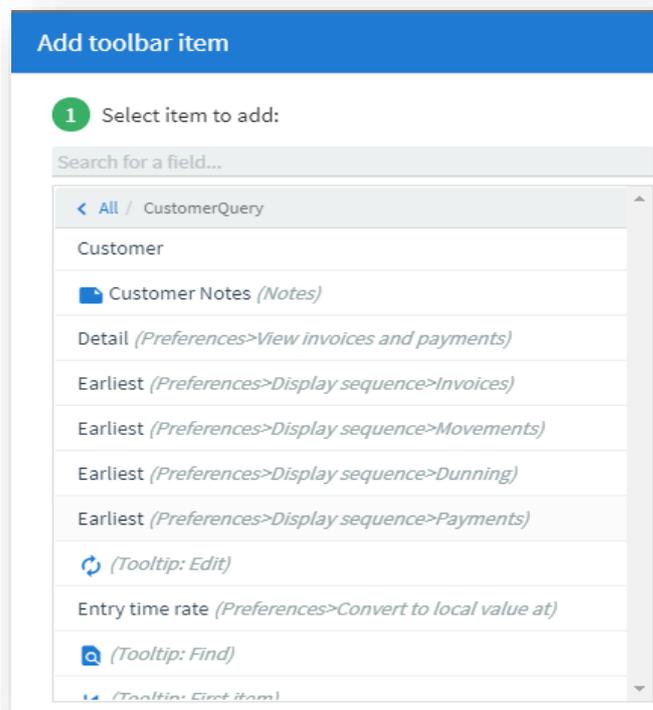
When you add a toolbar item in the **Visual Designer** for Avanti, you will be presented with this window, which displays the various toolbars that can be found in the **Customer Query** application:



There are 3 items displayed:

- **CustomerQuery**  
This contains the toolbar items for the main toolbar on the main Customer Query window.
- **MenuBar**  
This contains toolbar items located in the menu bar on the main Customer Query window.
- **ToolBarAction**  
This contains toolbar items in toolbars associated with forms. In Customer Query some forms have specific toolbars linked to the form itself.

If you select **CustomerQuery**, you will be presented with an alphabetical list of all the toolbar items found in this toolbar:



You will notice that there are different types of toolbar items:

- Those with captions that are located on the main toolbar.  
An example is the item **Customer**.
- Those that have no caption but have an icon.  
For example, the **BROWSE** button to the right of the Customer field has no caption but has a tooltip of *Browse*.  
This will be displayed like this:



**Note:** You should not add BROWSE buttons to any toolbar in a web view, as these are automatically catered for using the generic Avanti search capability.

- Those that have icons that are automatically translated to the Avanti equivalent. For example, the **FIND** button in ARSPEN is displayed like this:

 (Tooltip: Find)

- Those that located within a popup or subgroup collections. An example is the preference option **Earliest**, located beneath the Display sequence for Invoices. This is represented with the caption followed by the popup hierarchy, as indicated below:

Earliest (*Preferences>Display sequence>Invoices*)

This makes it much easier to identify the required toolbar item to be added, especially if the caption by itself is not uniquely identifiable.

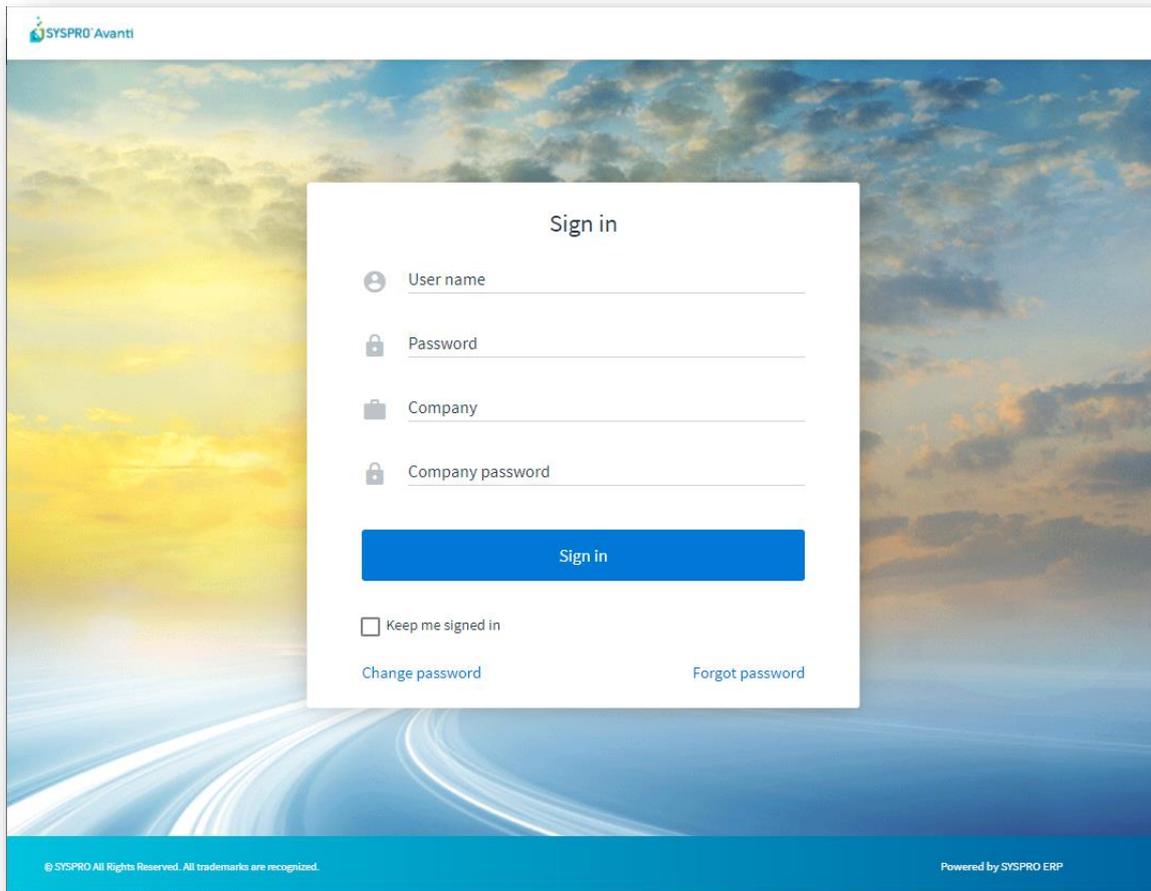
# USING AVANTI

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Avanti is a web-based product and as such the user experience differs to that of a Windows client. This section details these differences.

## LOGGING INTO AVANTI

The login page for Avanti is similar to that in the Windows client version:



When you login to Avanti, it is equivalent to logging into the Windows client version, in the sense that it uses the same user credentials, and the same concurrency licensing model.

You may use Avanti and the Windows client version at the same time, if the user is allowed concurrent use. If you login to Avanti using an operator name that is already logged in (and without the operator setup option **Allow concurrent use of this operator** enabled) then the other operator will be logged out.

Security and other options defined for the user apply equally no matter if you login to Avanti or the Windows client version. Similarly, the security principles and options apply in Avanti for whichever company you select.

## MULTI-FACTOR AUTHENTICATION

Multi-Factor Authentication is a process that identifies a user by validating two or more authentication methods from independent credential categories. This ensures that a user is only granted access after successfully presenting two or more pieces of evidence to the authentication mechanism.

Avanti supports Multi-Factor Authentication.

**Note:** Currently, only the default MFA method defined for an operator can be used when logging into Avanti.

For more information about MFA, view the feature topic on SYSPRO's help site:

[SYSPRO Help - Multi-factor Authentication](#)

## FORGOT PASSWORD AND CHANGE PASSWORD FUNCTIONS

The **Forgot Password** and **Change Password** functions on the login screen let you reset your SYSPRO password without requiring the assistance of a system administrator.

- **Forgot Password**

Once you select the request a password reset from the login screen, you are then notified via email that a request for a password reset has been received and that the password has been reset. The email includes a temporary password which is valid for a specified time period.

When next you log into SYSPRO using the temporary password, you'll need to enter a new password.

- **Change Password**

This function enables you to change your current password and uses the `_ESP` operator in SYSPRO. Therefore, you must ensure that the **Operator locked out** option is disabled for the `_ESP` operator code in the **Operator Maintenance** program, or users will receive an error when attempting to change their passwords.

The following options must be configured within the **Setup Options** program to use these functions:

*Setup Options > System Setup > Connectivity:*

- Email/SMTP Settings

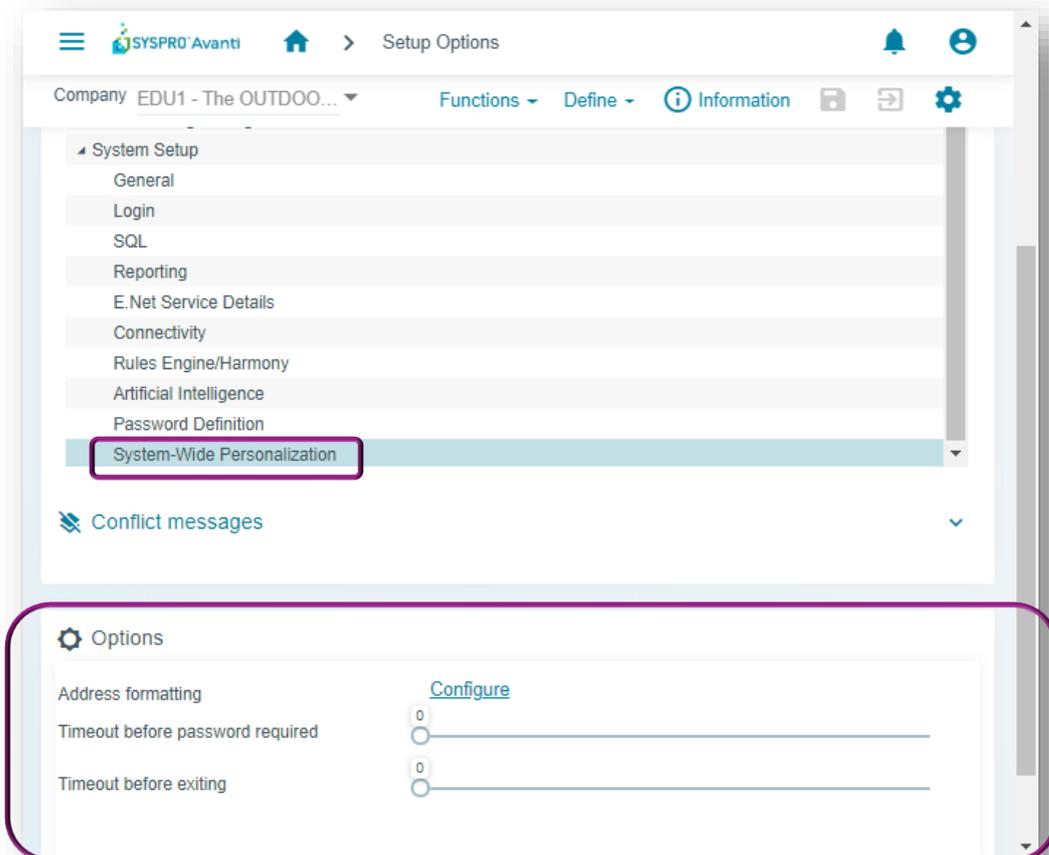
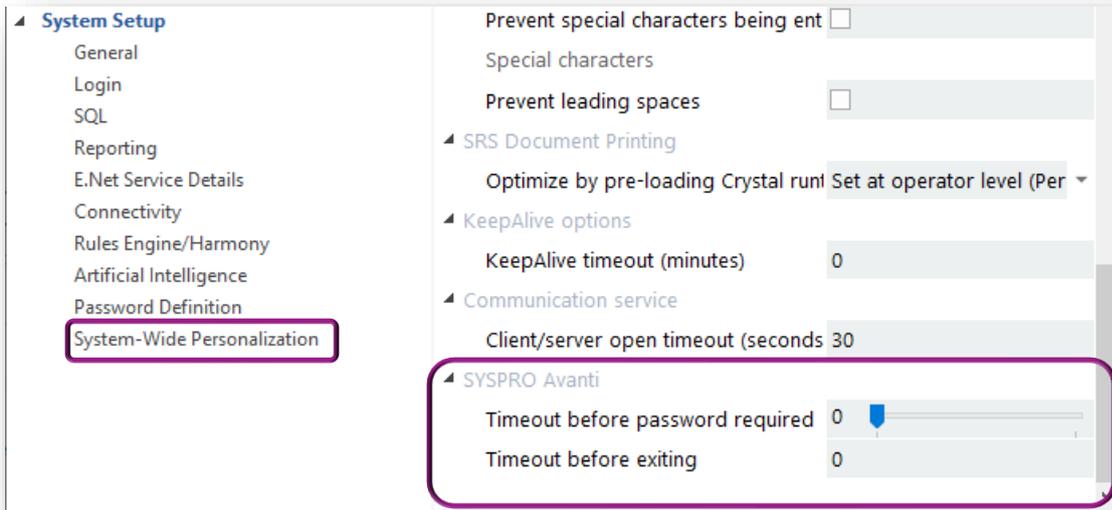
*Setup Options > System Setup > Password Definition:*

- Password options
- Forgotten password options
- Notify when login attempt exceeded

## PASSWORD PROTECTION IN AVANTI

By default, a timeout of 10 minutes is imposed on any user who logs in to Avanti. After this timeout the system will request the operator's password to continue (even if that password is blank).

You can adjust the period of the timeout using the **Setup Options** program (i.e. IMPCFG) in SYSPRO: or in Avanti and adjust the **Timeout before password required** option as you require:





In addition, you can impose a further timeout (in minutes) after the password window has appeared. If the timeout expires, then Avanti will exit completely back to the Login screen.

In both cases, a timeout value of 0 indicates no timeout.

**Note:** Against the operator definition is an option for a timeout in menu and queries. This setting is ignored when in Avanti.

## LOGGING OUT OF AVANTI

To exit Avanti, simply close the browser, or click on the **Sign out** button to exit Avanti and return to the Logon page (to change to a different company or user).

If you are currently in a transactional application, then you will be prompted if you wish to leave the site.

## ACCESSING THE SYSPRO HELP IN AVANTI

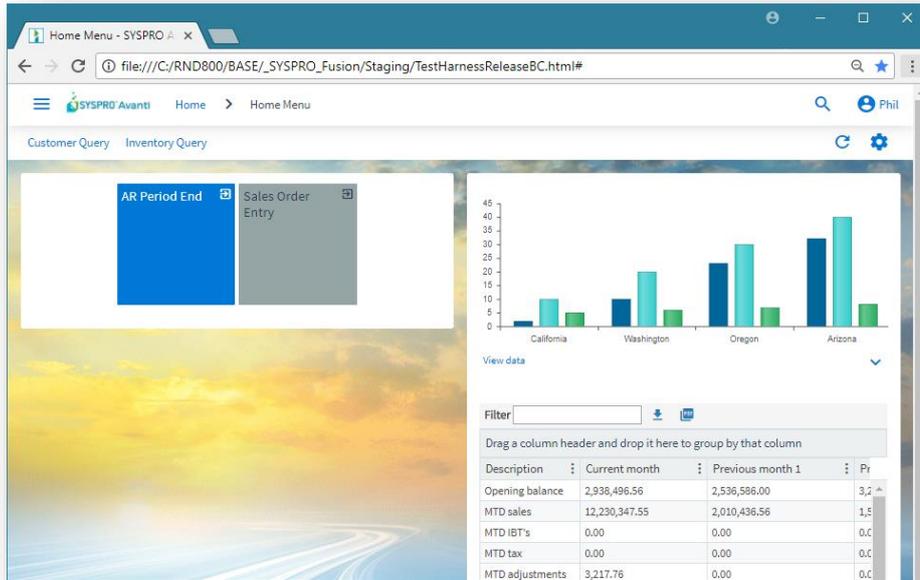
If you want to access Help and Reference information, simply press **F1** from within Avanti and the SYSPRO Online Help will open in a new browser tab.

**Note:** The SYSPRO Help is version dependent as this ensures that when you invoke the help from within SYSPRO 8, you are directed to the content appropriate to your current SYSPRO version.

For example, if you are currently using **SYSPRO 8 2020 R1**, then pressing **F1** within Avanti will take you to the **SYSPRO 8 2020 R1 help site**. Whereas if you are using **SYSPRO 8 2020 R2**, pressing **F1** takes you to the **SYSPRO 8 2020 R2 help site**.

## NAVIGATING AROUND AVANTI

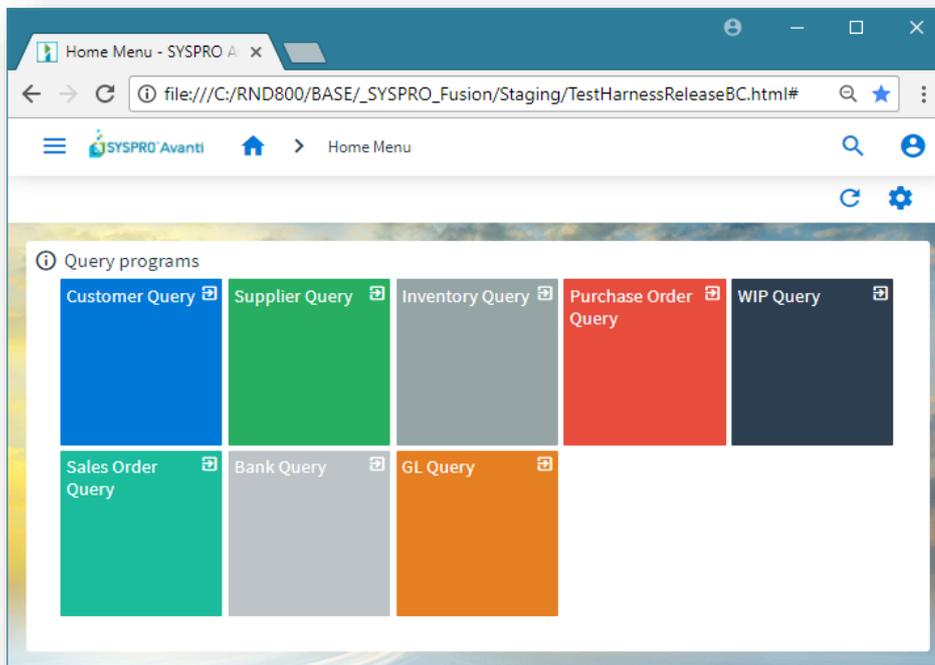
Applications in Avanti are launched either by clicking on a tile in the **HOME Page** or from the Hamburger Menu options.



The **HOME Page** in Avanti is defined using the **Visual Designer** and can typically contain a mixture of Business Insights, Program Tiles, and Cards.

Unlike the Windows client version, the **HOME Page** in Avanti can be defined at Role level, providing administrators with the ability to decide on the content for users.

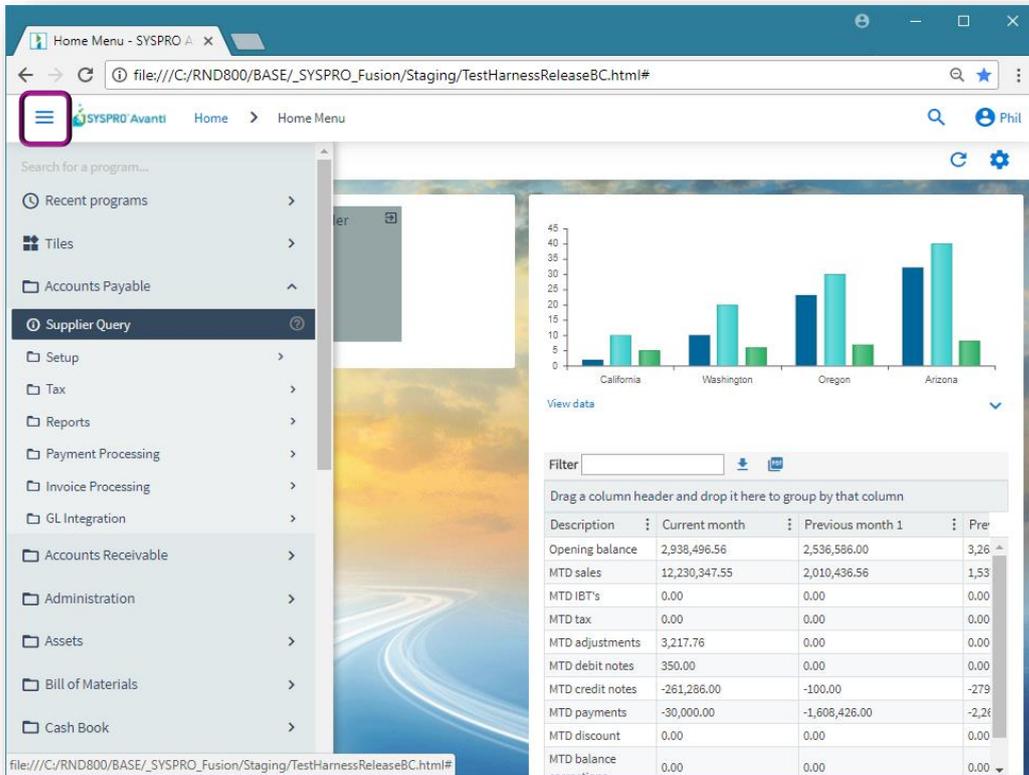
If your **HOME Page** has yet to be defined either at the role level or for personal use, then you will be presented with a pre-defined 'default layout', which may look like this:



Once you have defined your own view, it will always be displayed as the default view (labelled **Default layout**).

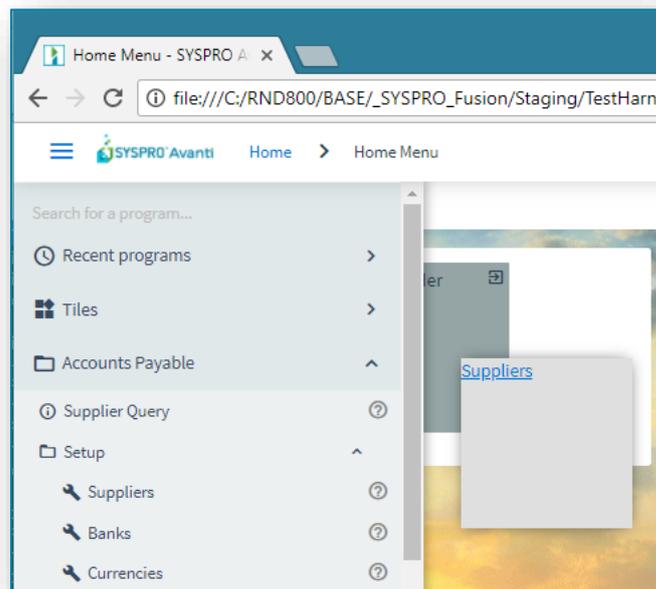
## USING THE HAMBURGER MENU

Clicking on the Menu icon (i.e. the hamburger at the top left of the **HOME** Page) displays a list of available Avanti programs:

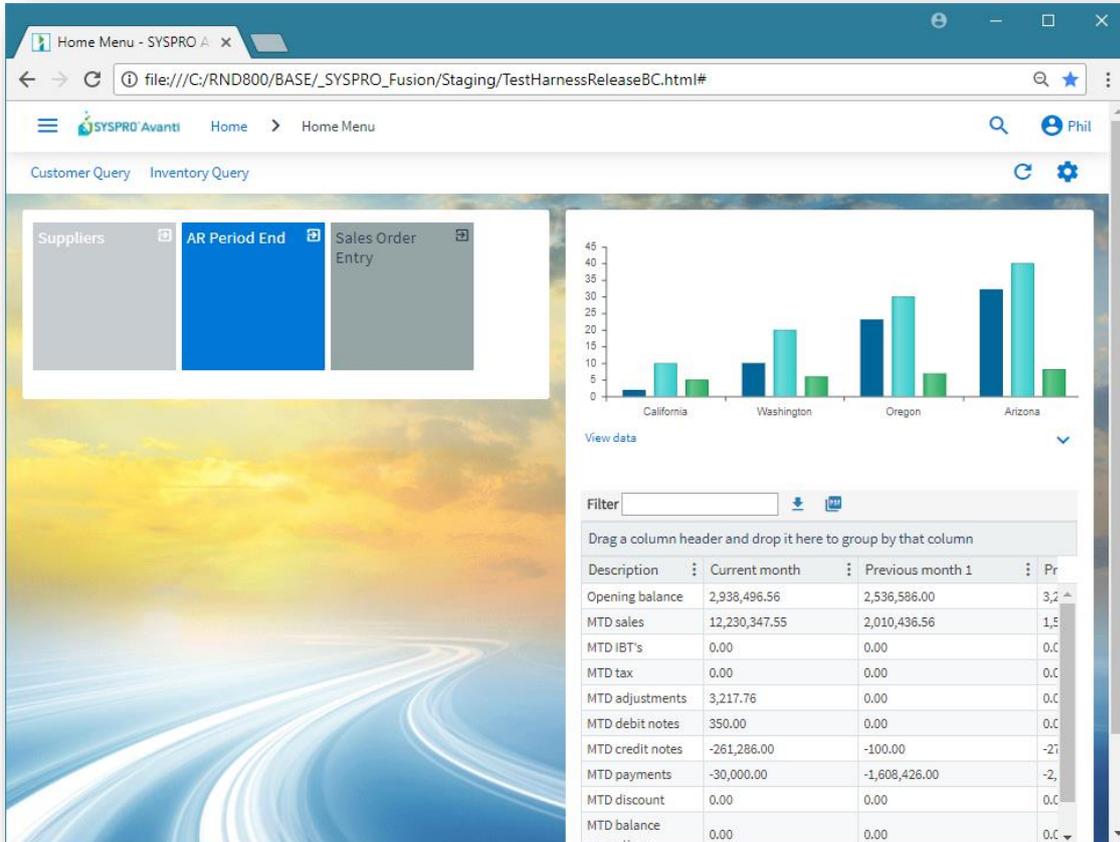


You click on a program to run it.

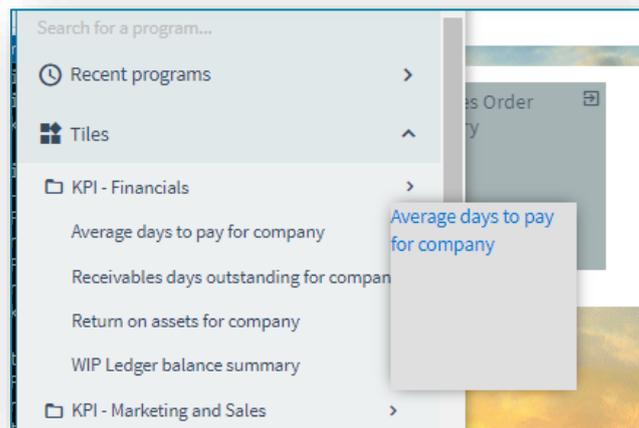
Alternatively, you can add a program to your current web view by either designing the view using the **Visual Designer** or dragging items off the menu directly onto a tile section.



In the above screen shot, the **Suppliers** program (i.e. APSPSP) is being dragged onto the tile section, which then looks like this:

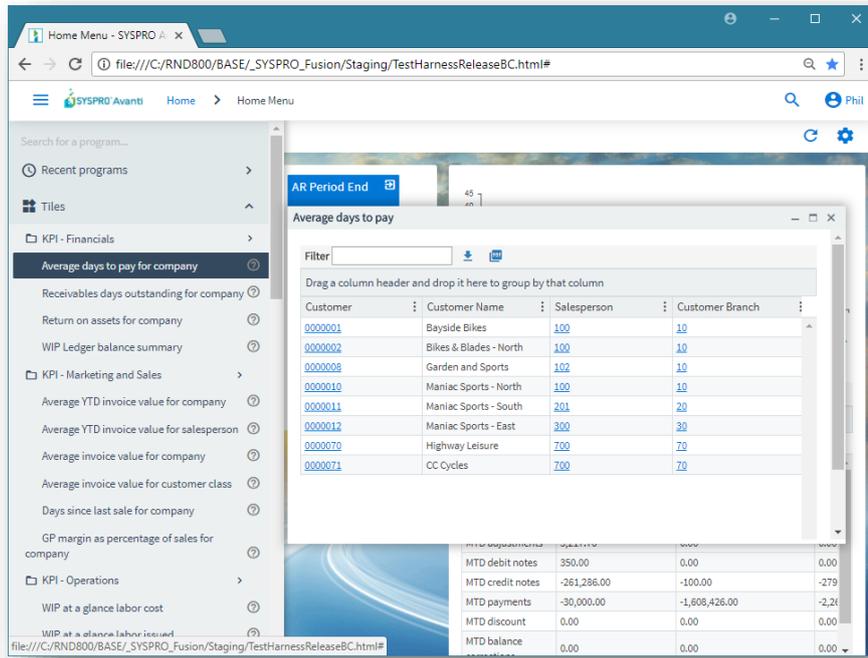


Similarly, you can also drag any Business Insight onto a tile section:

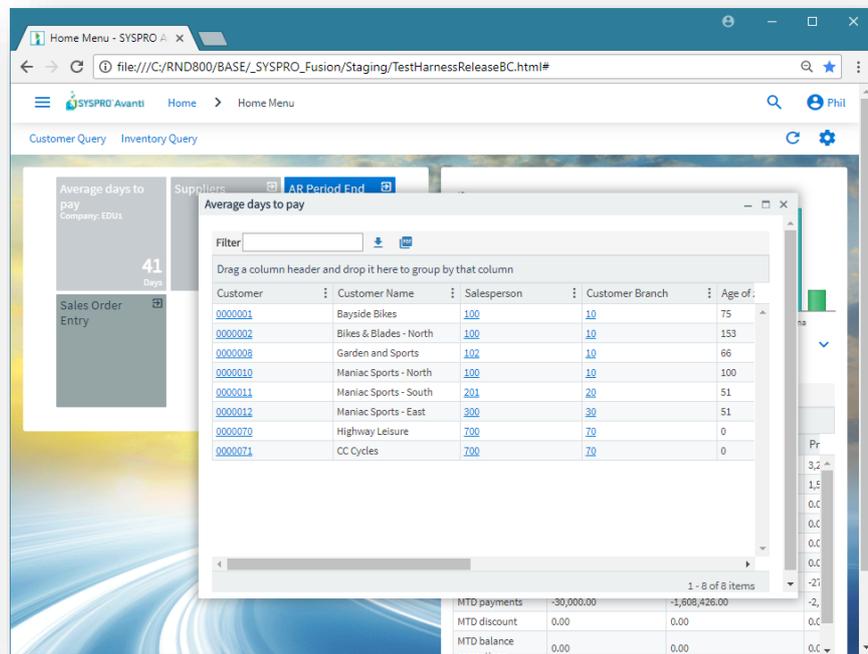


In addition, you can drill down to the detail of any Business Insight simply by clicking on the item, either in the menu list, or by clicking on the 'tile' itself after it has been dragged onto a tile section.

Thus, clicking on the menu item **Average days to pay for company**:

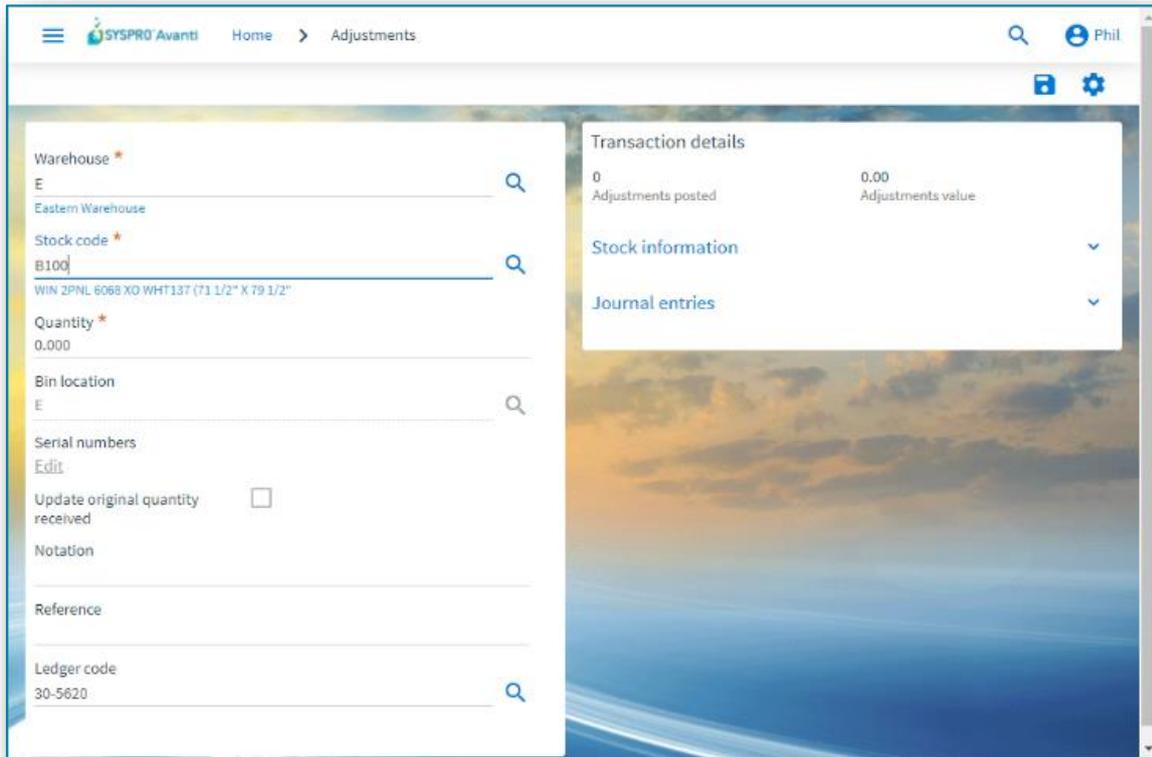


...or clicking on the tile itself after it has been dropped into a tile section, will display the insight detail:

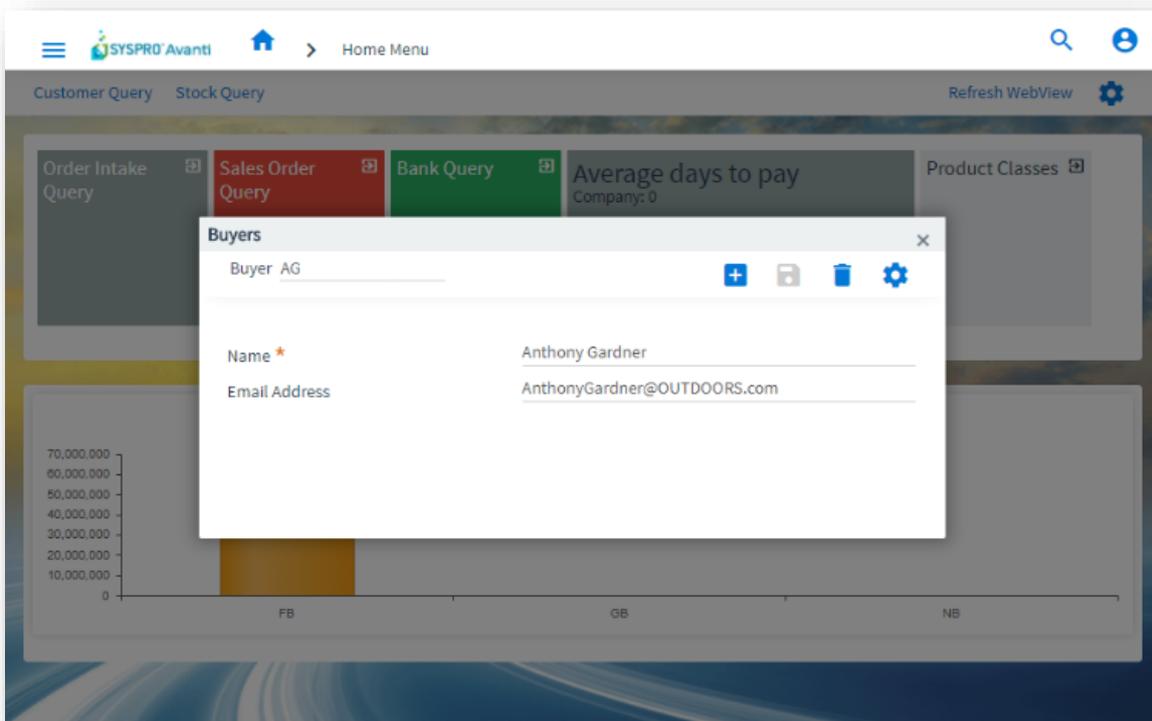


**Note:** As soon as you have dragged a program or business insight onto a tile section, Avanti will save that view for you. If you are in the **HOME Page**, then this will now become your personal view. If you wish to adjust your **HOME Page** even further, then you will need to use the **Visual Designer** (see further on in this document).

Avanti applications typically consume the entire page:

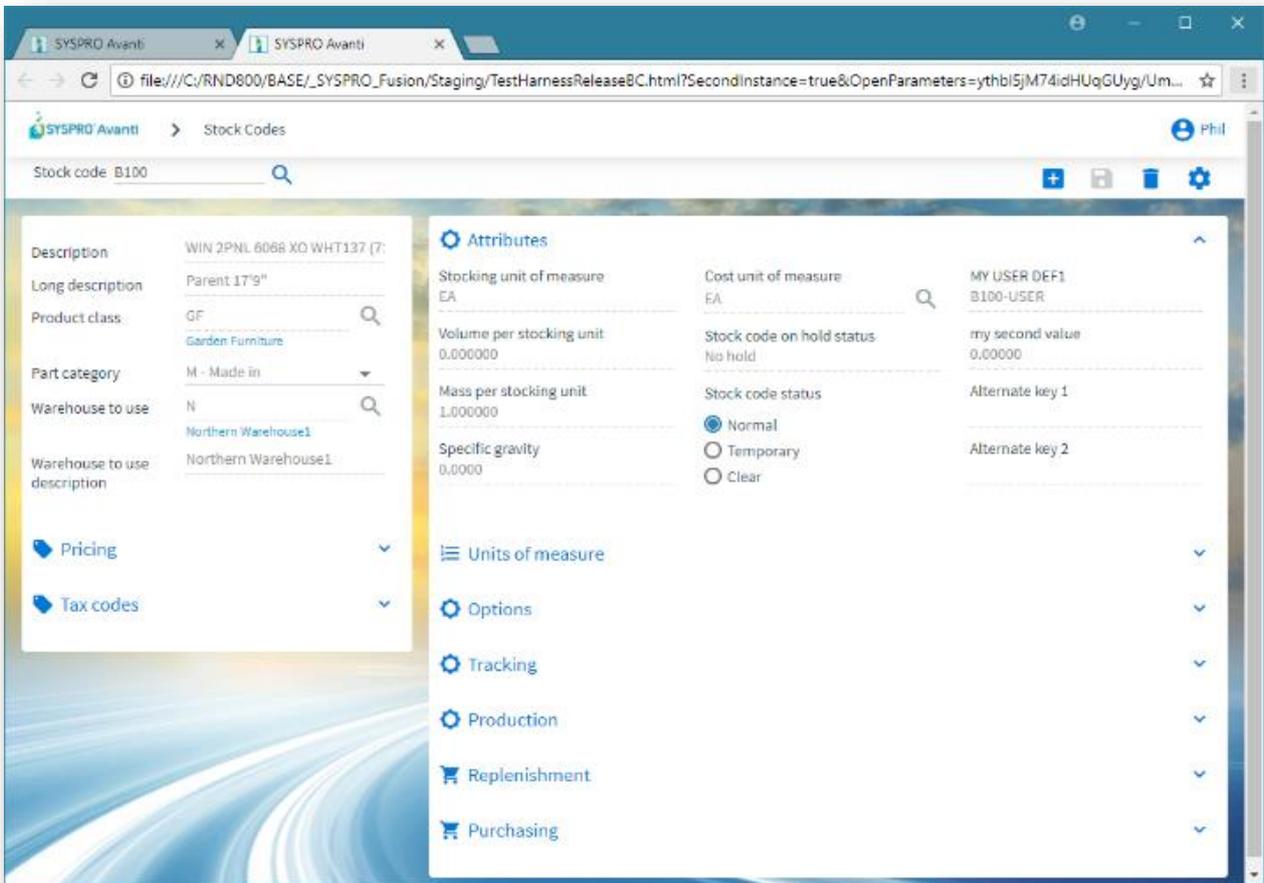


But if the application only surfaces a few fields, then it is displayed in a popup window, as in the following example for the maintenance of **Buyers**:



To use another application, you can click on the **HOME** button, which will return you to the **HOME Page**.

Alternatively, you can remain in the Avanti application and click on the Menu icon to select another application. In this case, the selected application will be displayed in a new TAB in the browser:



In this way you can have multiple applications running simultaneously and you can switch between them as required.

## DEFINING PERSONAL SETTINGS IN AVANTI

In Avanti, individual operators can define various personal preferences.

On the **HOME Page**, click on the Settings icon and select **Personal Settings**.

**Personal Settings**

**Company date**

Set company date  For the company  Temporary

New company date 17/09/2020

**Avanti settings**

Reset Window positions [Reset](#)

Reset Grid layouts [Reset](#)

**Office 365 credentials**

Email option Microsoft Office 365

User name \*

Password \*

Tenant to use System-wide tenant

Tenant ID

Client ID

Exchange web service https://outlook.office365.com/ews/exchan

From here, you can:

- Set the company date for everyone, or temporarily for the run of Avanti (if your operator code has the correct security access to do this).
- Reset saved settings for Grids and Window positions. Avanti automatically saves window positions and changes to grid layouts by operator. However, an operator can reset these to their default values using the links provided.
- Configure your own Office 365 credentials.

## AUTOMATING AVANTI

You can make Avanti automatically run a program when you log in to the system.

In the browser URL, append a question mark followed by startup parameters using this syntax:

**?StartupParameters=/prog=ARSPEN /link=1**

This will run the **Customer Query** program (i.e. ARSPEN) passing it the Customer number 1.

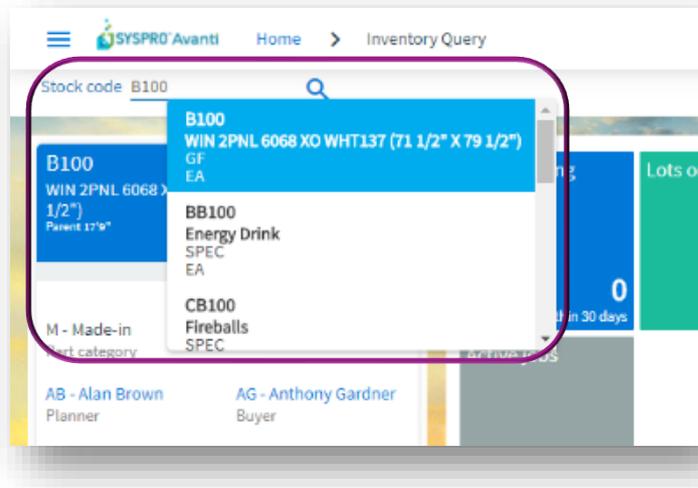
**Note:** You will need to know the name of the Avanti program to use this capability.

If the user has not enabled the **Keep me signed in** option, the normal login page will appear first and after logging in then the program will be run.

## PREDICTIVE SEARCH AND SEARCHING IN AVANTI

Predictive Search is optional in Windows client, whereas in Avanti it is automatically in use. Moreover, the method of 'browsing' in Avanti is quite different to that used in SYSPRO.

As you start typing into a 'key field' (such as **Stock code** or **Customer**) predictive search will display the items that match the filter criteria.

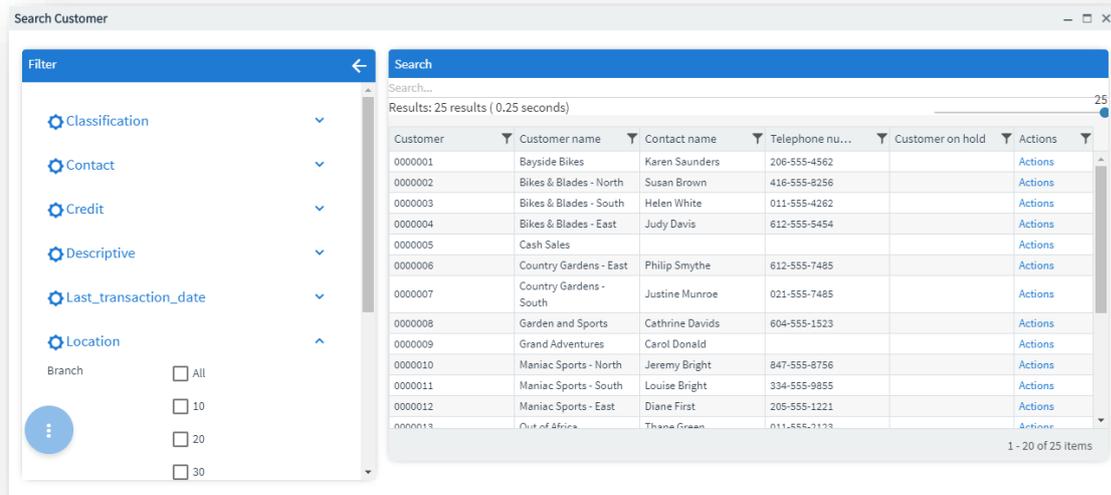


**Note:** You can use the **Search Configuration** program (i.e. ESPSRC) in the Windows client version to modify how these filter criteria behave.

Next to any key field in Avanti is the Search button: 

Most searches will be displayed in a generic search window, explained below. Occasionally, a search is too complex for the generic search and in that case a special search window will be displayed.

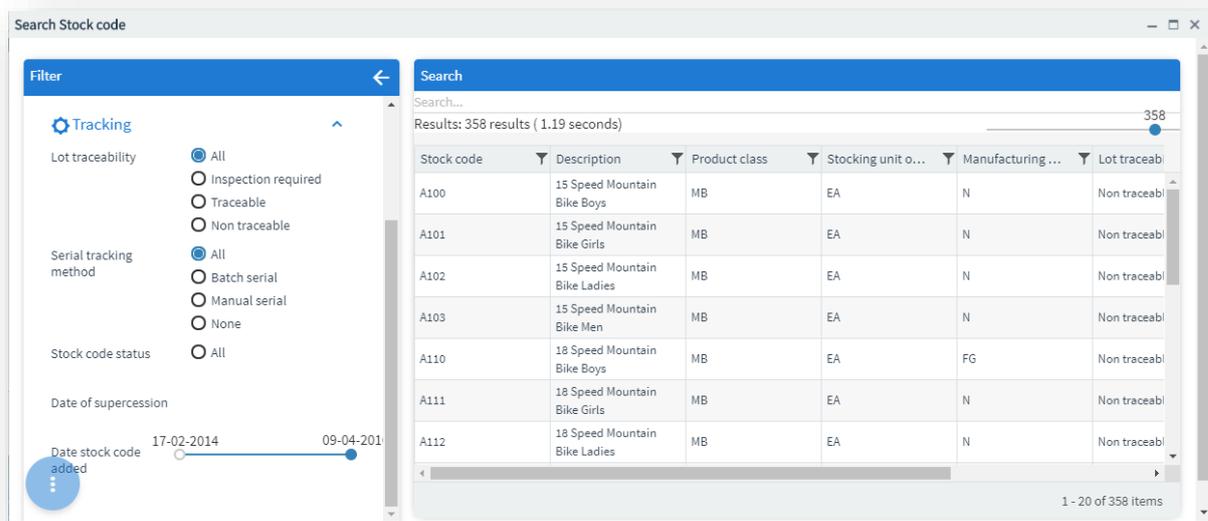
The generic search window displays a **Filter** pane, and a **Search** pane:



Clicking on a row in the grid will return the key value.

You can filter the data returned in two ways:

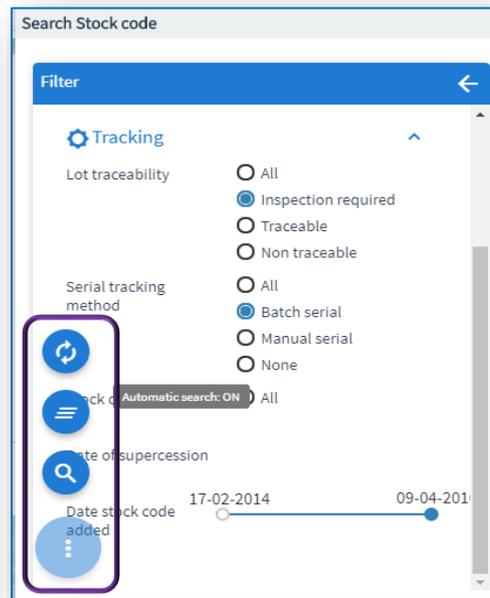
1. Type the value you are searching for in the **Search...** box.  
The data is filtered across all columns in the database as you type, like a Google search. As an example, if you are looking for a customer whose telephone number contains **4562**, simply type in **4562**.
2. Some searches are displayed with special filters in the **Filter** pane.  
For example, the CUSTOMER search will automatically display a filter across all BRANCHES in the LOCATION category. Simply click the Branch or Branches you would like to include, and the data will be instantly refreshed. Note that the filters work across all customers. Here is another example, using the STOCK CODE search, so that you can select specific types of items such as TRACEABLE only.



Click the  button for additional actions:

- Clear all filters.
- Switch off automatic searching.

This allows you to select multiple search criteria and then click on the search button. With automatic searching on, as you change criteria the data is being immediately searched.



The FILTER pane and the COLUMNS displayed for each key type are pre-built into Avanti and cannot be currently changed. In a future release, you will be able to customize the FILTERS pane and adjust the column headers displayed.

Additional features available:

- Click on a column header to sort the data.
- The grid displays by default the first 50 rows, but you can use the slider to show as many rows as you would like.

## USING WINDOWS IN AVANTI

Applications in Avanti are designed to display most information in a single page. Where appropriate, the use of popup windows can surface additional information.

For example, in the **Inventory Query** users can view **Movements** and **Warehouse history** lists.

Such lists are displayed by default in popup windows that can be resized and repositioned in the browser.

It should be noted that such behavior can easily be changed using the **Visual Designer** and make these lists appear in the single page.

Here is the **Movements** list view displayed as a popup window:

The screenshot shows the SYSPRO Avanti Inventory Query page for stock code B100. A popup window titled "Movements" is displayed over the main content. The popup window contains a table with the following data:

| Date       | Type | Warehouse | Trn type | Quantity   | Transaction value | Unit cos |
|------------|------|-----------|----------|------------|-------------------|----------|
| 29/03/2011 | Inv  | E         | Chg      | 0.00       | 0.00              | 3,038.24 |
| 08/04/2013 | Inv  | E         | Chg      | 0.00       | 0.00              | 2,992.71 |
| 09/04/2013 | Inv  | E         | Chg      | 0.00       | 0.00              | 3,042.91 |
| 08/11/2013 | Inv  | E         | Rec      | 100,000.00 | 304,291,160.00    | 3,042.91 |
| 07/08/2014 | Inv  | E         | Rec      | 1.00       | 3,042.91          | 3,042.91 |
| 16/02/2015 | Sale | E         | Inv      | 1.00       | 3,042.91          | 3,042.91 |
| 22/04/2015 | Inv  | E         | Chg      | 100,000.00 | -303,781,160.00   | 5.10     |
| 20/10/2015 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 12.00      | 61.20             | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |
| 03/05/2017 | Inv  | E         | Rec      | 1.00       | 5.10              | 5.10     |

The popup window also shows a "Period closing balances" chart on the right side. The main page behind the popup shows the stock code B100, a search bar, and various filters like "Lots expiring" and "Lots on hold".

And the same application, but with Movements and History List views displayed within the page:

The screenshot shows the SYSPRO Avanti Inventory Query page for stock code B100. The page is divided into several sections:

- Summary Cards:** "Lots expiring" (0), "Lots on hold" (0), and "Active jobs" (9).
- Purchasing information:** Supplier: 000001 - Bicycles Unlimited, Lead time: 19 days, Dock to stock days: 2.
- Movements Table:** A table with columns: Date, Type, Warehouse, Trn type, Quantity, Transaction value. It contains the same data as the popup window in the previous image.
- History Table:** A table with columns: Warehouse, MTD sold/issued, Prev 1 sold/issued, Prev 2 sold/issued, Prev 3 sold/issued. It shows data for warehouses Combined, E, FG, N, S, and TEST.

The page also includes a search bar for stock code B100 and navigation links like "Home" and "Inventory Query".

Some windows are displayed as 'modal', meaning that the user cannot click behind the window and must complete the task within the current window. In other words, it forces the user to interact with the window before returning to the previous window.

You can move and resize these modal windows as required. The position and size of the window is automatically remembered for the user so that when the window is displayed again it is repositioned to the same location.

**Technical note:** Avanti modal window positions are saved on the application server in the text file ...\`Settings\AVANTI\ModalWindowsAdditional_operator.txt`.

## USING CARDS IN AVANTI

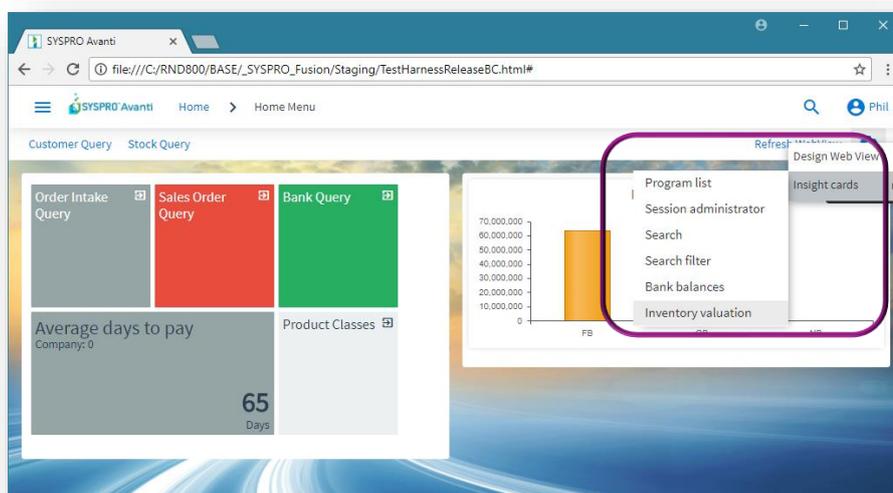
Cards are pre-built discrete functional components with the following characteristics:

- Self-contained HTML5 page whose data is derived typically (but not exclusively) from a business object
- May run as a separate entity in its own window or can be embedded in a view
- May require a 'key value' (such as a Customer or Stock code key) to execute, whereas other cards require no such key – the latter are known as 'Insight cards' (an example might be 'Bank balances', or 'Sales order commitments')

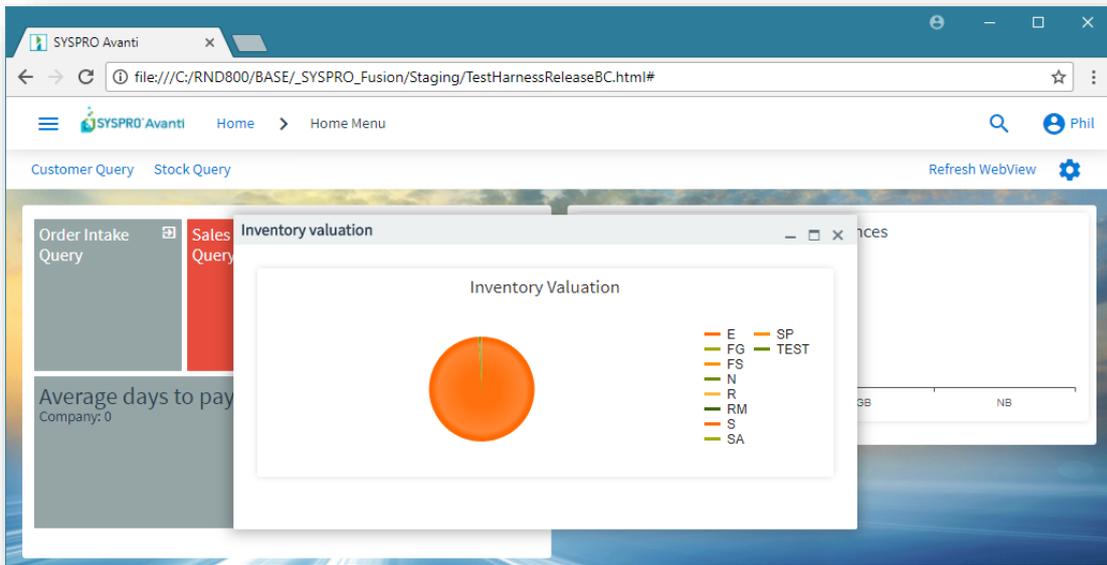
While Avanti ships with a set of pre-built cards, it is relatively easy to construct new cards for any additional required functionality. To add a card to any view, you can use the **Visual Designer**.

## SHOWING INSIGHT CARDS

To display an Insight card as a popup window, click on **Insight Cards** from the Settings icon while on the **HOME Page**, and select the required item:



The Card is displayed in a popup window:



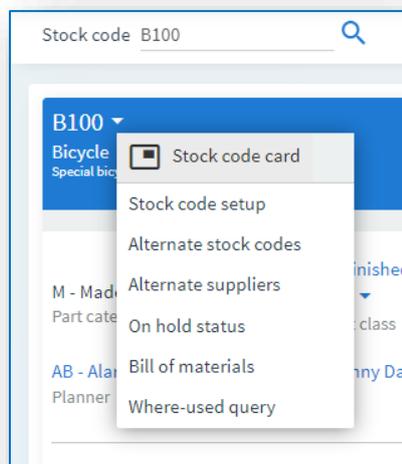
The card can be positioned anywhere within the browser and can be minimized or maximized within the browser.

Avanti will remember any cards displayed like this and will display them again next time you login.

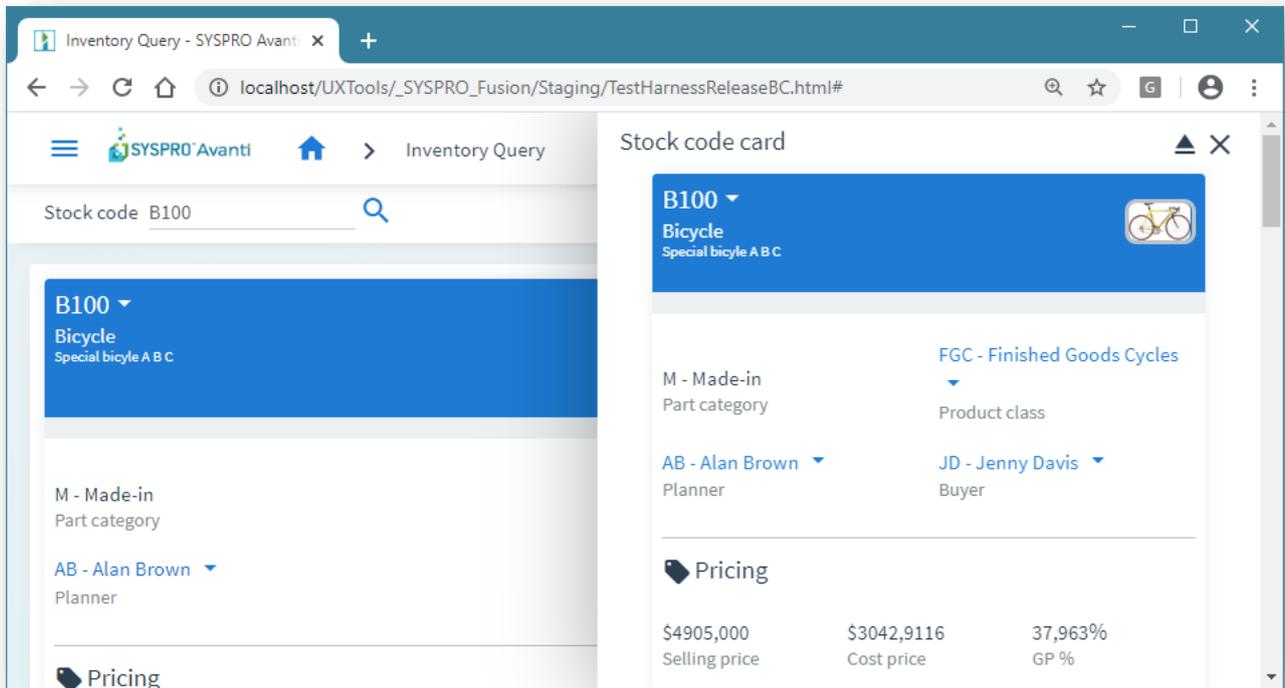
## SHOWING 'KEY' CARDS, DOCKED AND UNDOCKED

Cards that are associated with key fields can be embedded in a view or can be displayed in popup windows or can be docked. Such cards are automatically refreshed whenever the key value in a toolbar or form field is changed.

To display a key card, you select from the SmartLink context menu (this is the same context menu that is available in the SYSPRO Windows client version).

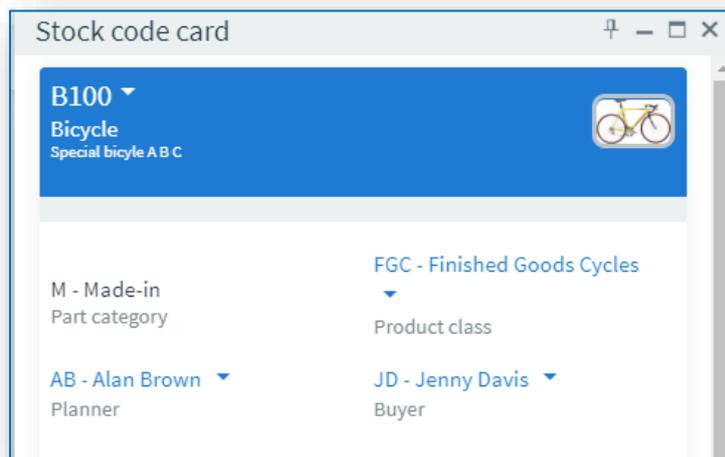


Click on **Stock code card** and this will be initially displayed 'docked' on the right-hand side of your browser:



The card will remain docked, even if you navigate back to the **HOME Page** – until you close the card (click **X**) or you undock the card (click **▲**).

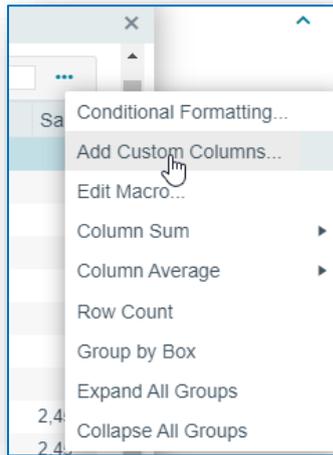
An undocked card then becomes a normal floating card which can be minimized, maximized or closed:



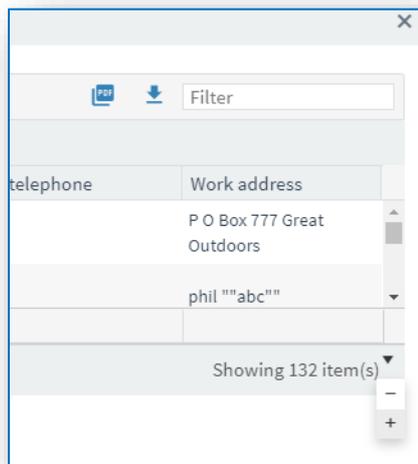
## USING GRIDS IN AVANTI

A grid in Avanti has some common characteristics:

- Built-in functions (output as PDF document, output to Excel, and Filtering) are displayed in the grid toolbar on the right-hand side.
- The ... button displays more capabilities, such as conditional formatting, adding custom columns, column totalling and editing a script:

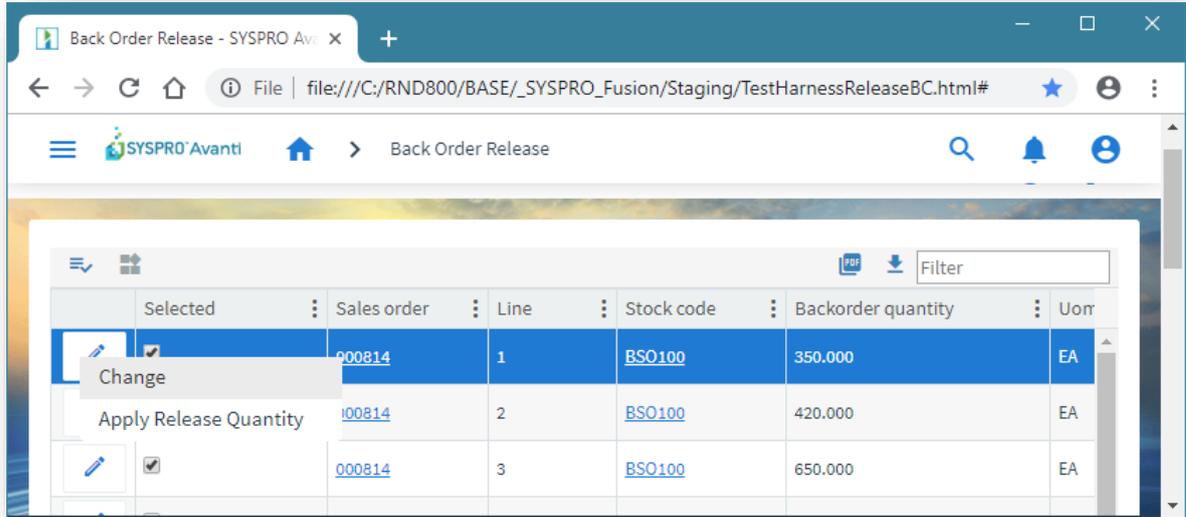


- Buttons that are specific to the application are displayed on the left-hand side.
- The height of the grid can be adjusted, either by using the **Visual Designer** to fix the size to be small, medium or large; or by clicking on the - or + buttons displayed in the grid – this dynamically adjusts the height:

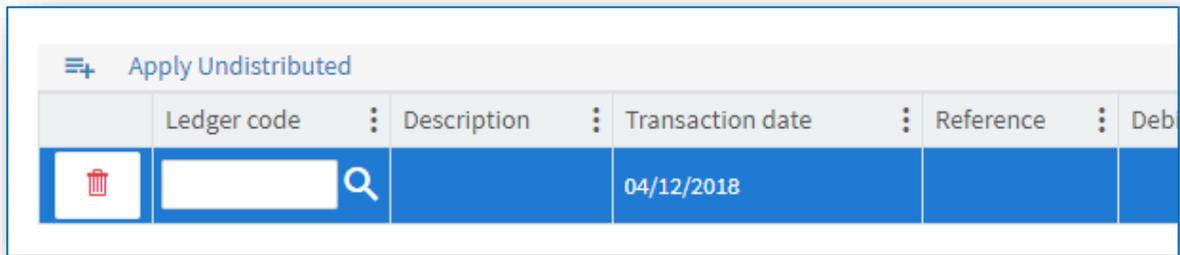


- If there are some actions available for an editable grid, then these are typically displayed as buttons to the left of each row.

In the example below, selecting the **Edit** icon displays a context menu:



The following example shows a **Delete** icon that, when selected, will remove the row:



The grid list column sequence in Avanti is initially provided from the equivalent list view from within the SYSPRO program. Thereafter, any changes to the grid when running in Avanti (such as moving columns around, removing columns, sorting or grouping) are automatically saved on the application server in ...\**Base**\Settings\**AVANTI**\ as:

**List\_operator\_gridname\_AVANTI.XML**

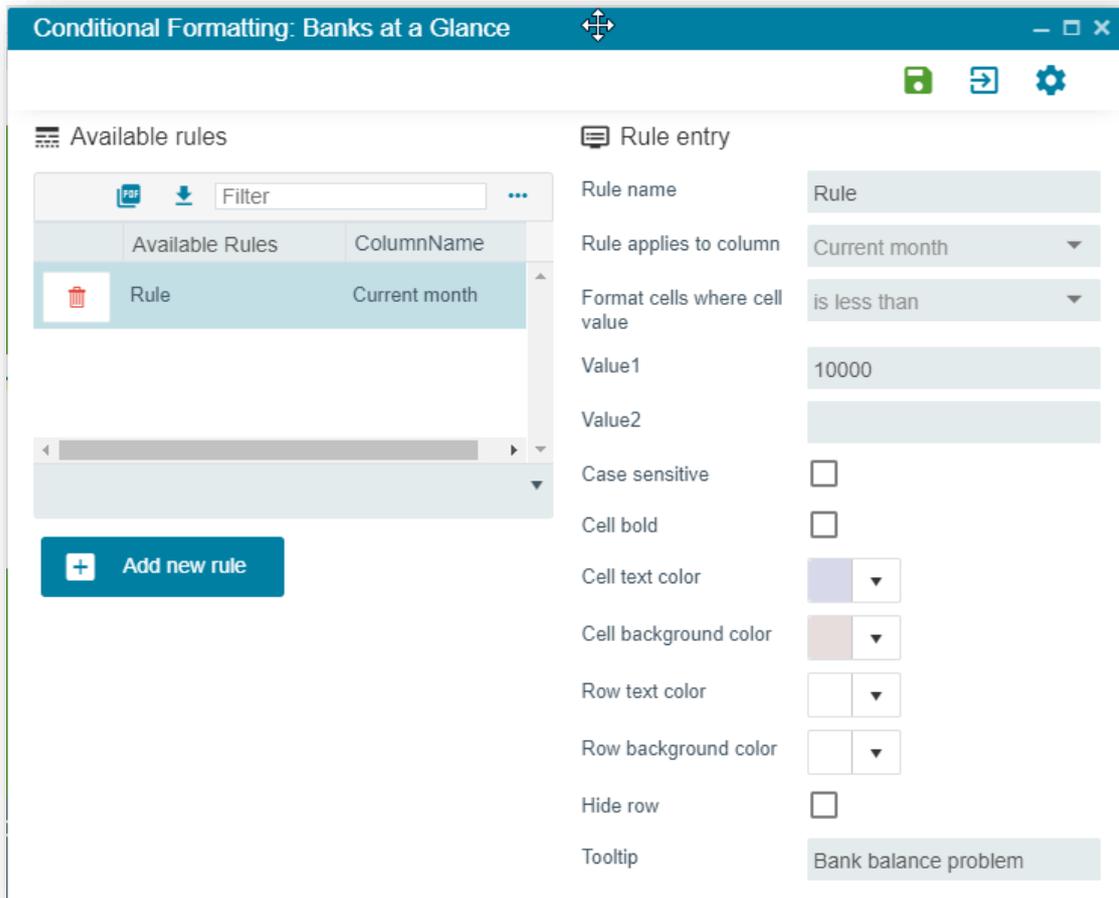
**Note:** Changes to grid layouts are not saved if you are logged into Avanti using a role.

## MODIFYING THE AVANTI GRID

You can modify the contents of any Avanti grid by using the following capabilities:

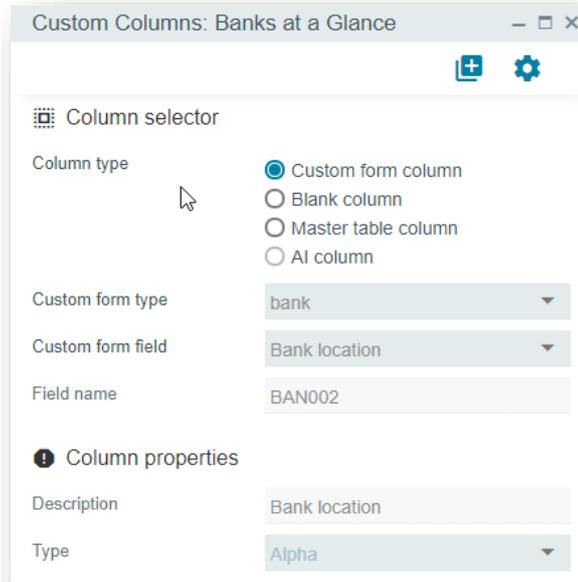
- **Conditional formatting**

This allows you to apply formatting against any column in the grid based on simple rules:

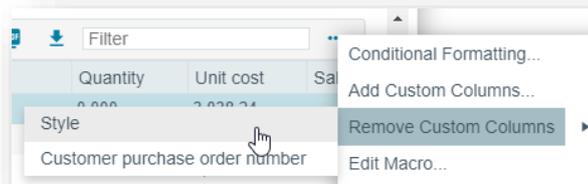


- **Custom columns**

You can add columns to the grid based either on custom form fields or from master table data. The custom columns that may be added are determined by the 'keys' that are available in the grid columns:



Once you have added custom columns to a grid, you can remove them at any time:

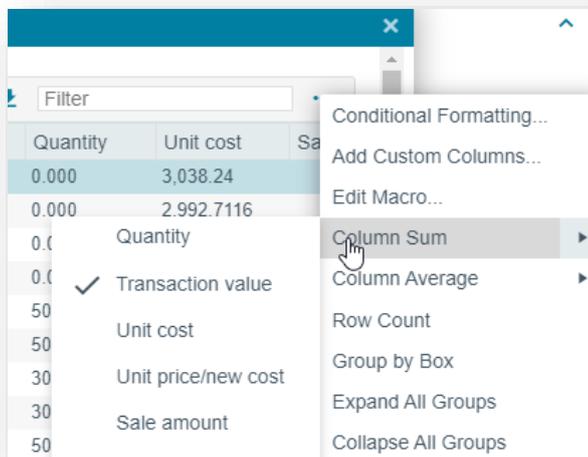


- Column sum, Column average and Row count**

You can select any numeric column to be either 'summed' or 'averaged', however, you cannot have both for the same column.

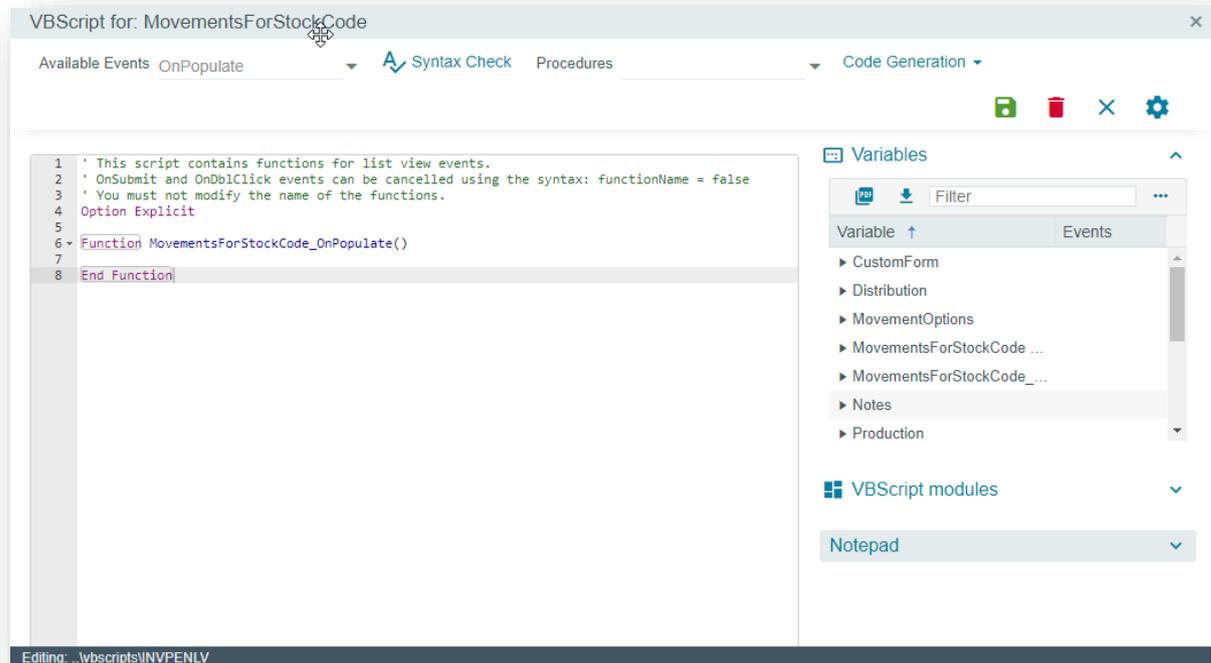
If you select to display a row count, this will be displayed in the grid footer for the first column in the grid.

Once you have added a sum, average or row count, you can then remove it by clicking on the same item:



- **Editing a macro for a grid**

You can create a script to execute against the grid for various events, such as when the grid is populated with content, or when a grid's contents are about to be submitted to the database.



You should refer to the **Power Tailoring** guide for a full explanation on the scripting capabilities.

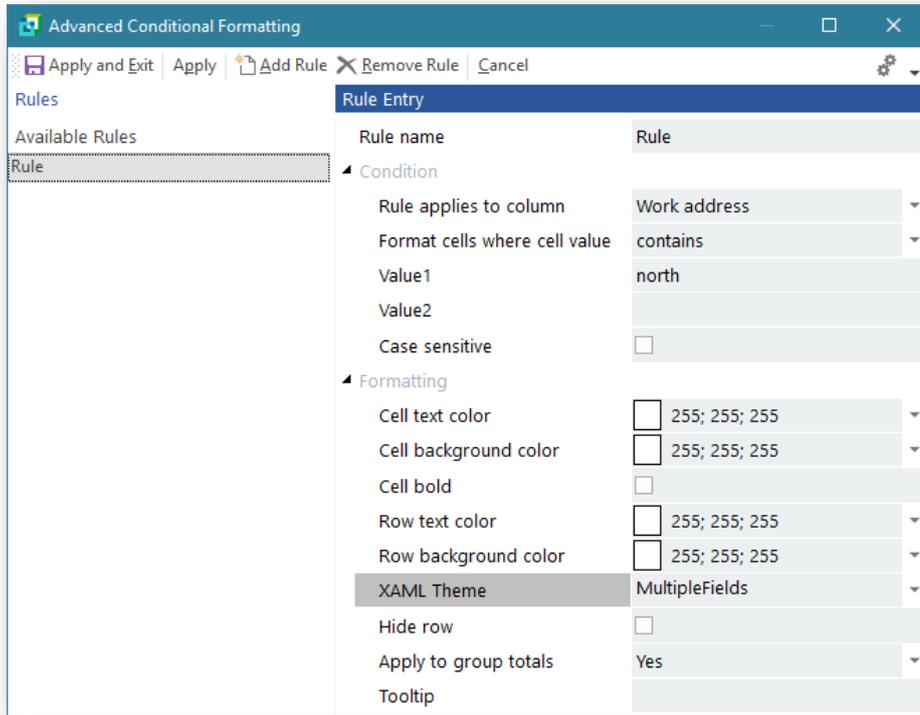
**Note:** This capability is controlled by security access. Additionally, you cannot edit a script for a customized pane grid here – instead, you should use the **Customize Application** facility.

## CONDITIONAL FORMATTING IN GRIDS

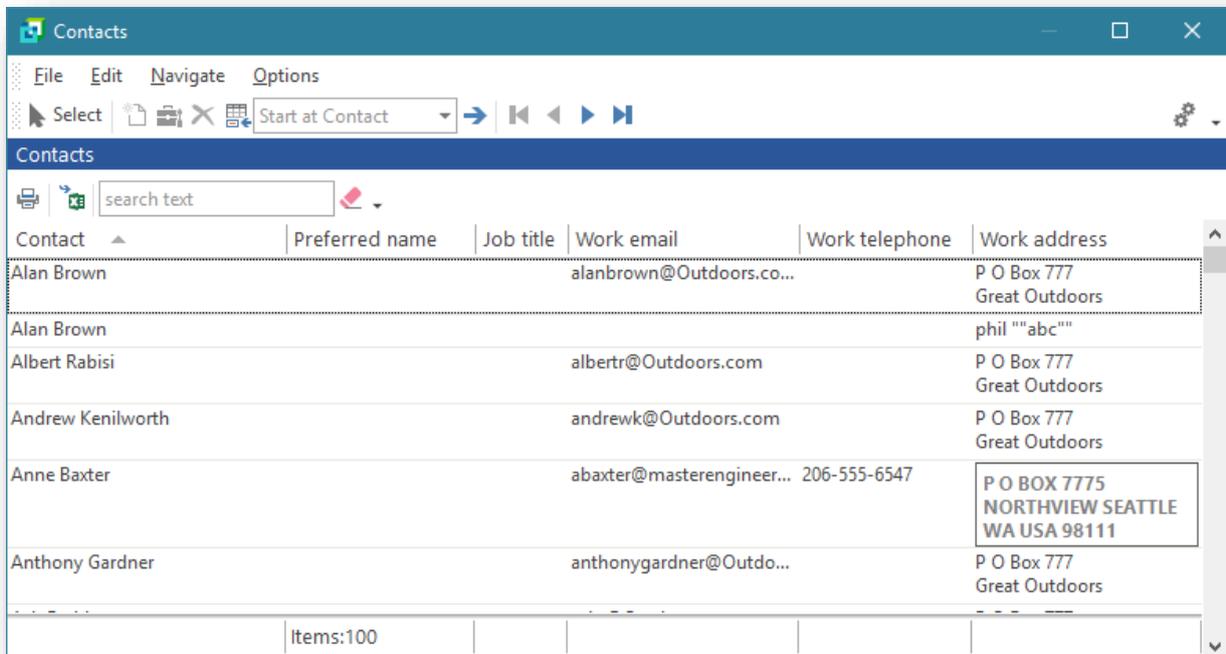
Advanced conditional formatting can be applied to any grid in SYSPRO, and generally the formatting also applies to the equivalent grid in Avanti.

You can also apply a XAML theme to any column in a SYSPRO grid, but there is no equivalent to XAML in a Web Browser, and instead in Avanti a grid will make use of an HTML Template.

Consider the formatting rule applied below to the Contacts browse:



By applying a XAML theme of '**MultipleFields**' to the Work Address column, we can change the style of the cell as displayed below:



In Avanti, this formatting rule will use the template **Form\_MultipleFields.html** (located in the ...\**Samples** folder) to achieve an equivalent result:

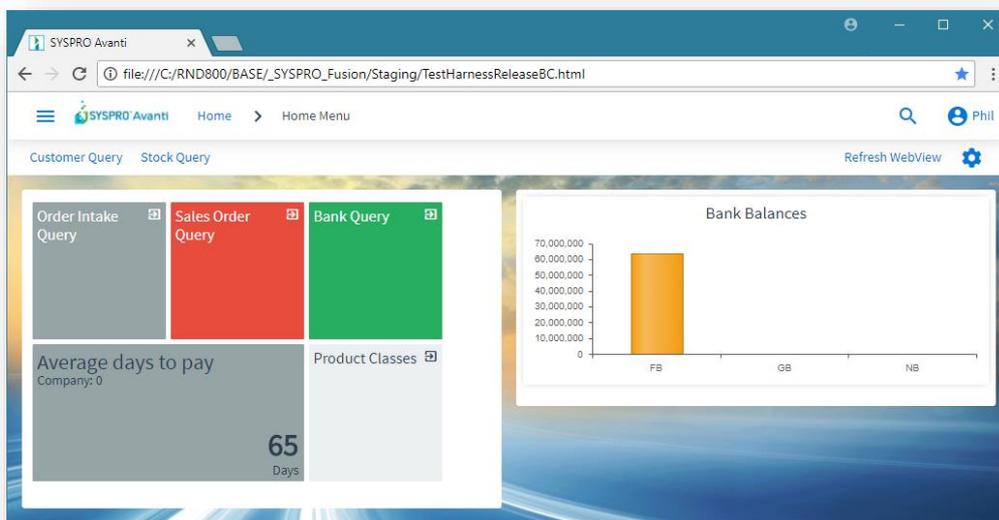
| Cont...           | Preferred name | Job ti... | Work email                  | Work telephone | Work address   |
|-------------------|----------------|-----------|-----------------------------|----------------|--|
| Alan Brown        |                |           | alanbrown@Outdoors.com      |                | P O Box 777 Great Outdoors                                 |
| Alan Brown        |                |           |                             |                | phil ""abc""   |
| Albert Rabisi     |                |           | albertr@Outdoors.com        |                | P O Box 777 Great Outdoors                                 |
| Andrew Kenilworth |                |           | andrewk@Outdoors.com        |                | P O Box 777 Great Outdoors                                 |
| Anne Baxter       |                |           | abaxter@masterengineers.com | 206-555-6547   | <b>P O BOX 7775<br/>NORTHVIEW SEATTLE<br/>WA USA 98111</b> |
| Anthony Gardner   |                |           | anthonygardner@Outdoors.com |                | P O Box 777 Great Outdoors                                 |
|                   |                |           | ashr@Outdoors.co            |                | P O Box 777 Great  |

Thus, any XAML theme can be substituted with an equivalent HTML template when running in Avanti.

## USING BUSINESS INSIGHTS AND TILES IN AVANTI

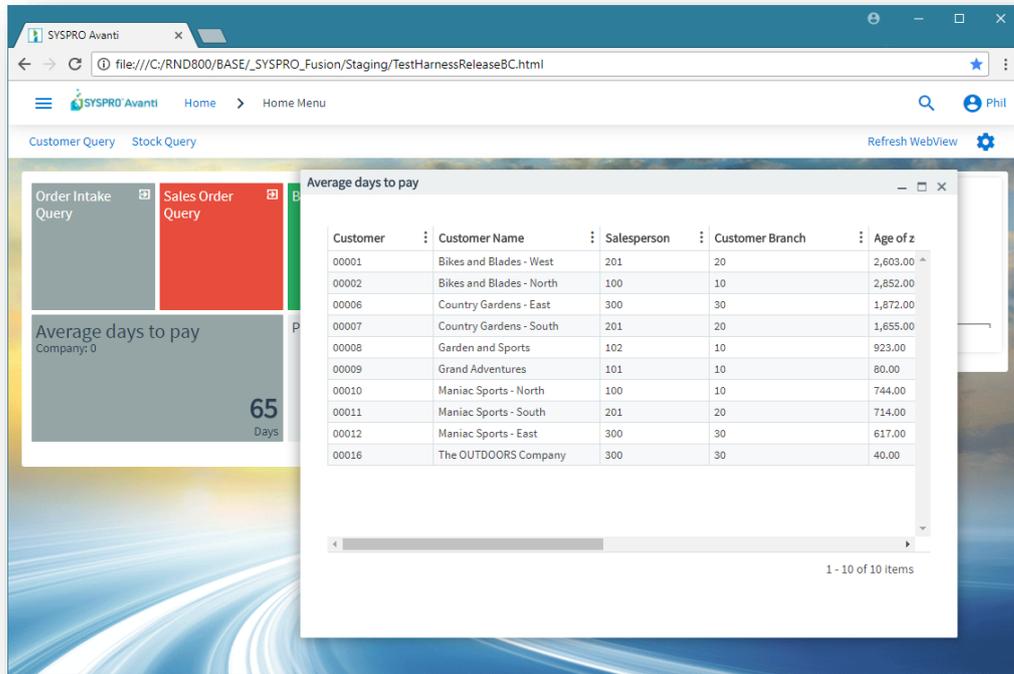
Business insights are discrete views of KPI data and are displayed within Tiles. These tiles can be added to any view using the **Visual Designer**. Additionally, a tile can represent a program that can be launched.

If we look at the view displayed below, which is the **HOME Page** for Avanti, there are 3 Program Tiles, and two Business Insight tiles:



Selecting **Order Intake Query**, for example, will launch that application.

Selecting **Average days to pay** (a Business Insight tile) will display the detail behind that KPI:



## UNDERSTANDING WORKSPACES

A workspace is a way of grouping tasks or processes in a meaningful way for an individual. Another way of looking at a Workspace is that it is a web view designed to be surfaced when you are in the **HOME Menu**.

**Note:** Workspaces are only available when you are in the **HOME Menu** in Avanti.

If you are in a Role, then typically the Workspace is designed by the Administrator ([Designing Workspaces by Role in SYSPRO](#)).

If you are not in a role, then you can design your own Workspaces ([Designing Workspaces in Avanti](#)).

Typically, Workspaces are designed either at the operator level or by role. However, it is possible to design a **HOME** layout that is universally available across the organization regardless of whether you are in a role or not.

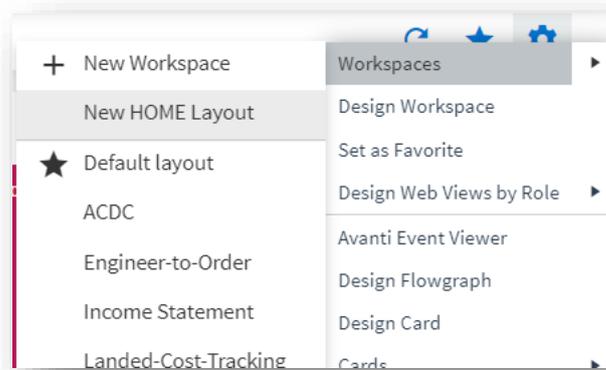
## DESIGNING WORKSPACES IN AVANTI

Workspaces for a non-role user are designed from within Avanti and you can have an unlimited number of workspaces.

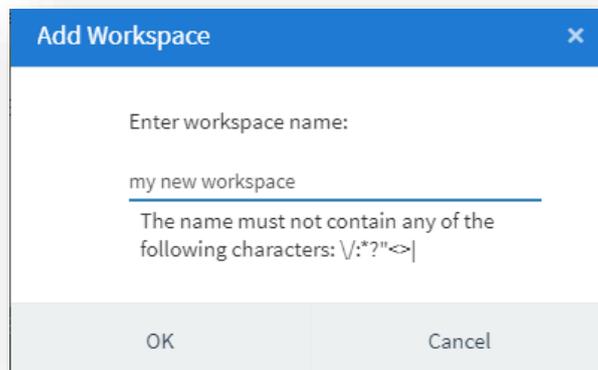
To be able to design or delete or add a workspace, the security option against the operator **Avanti – Allow to design Workspaces** must be switched on. This option is switched on by default and must be explicitly switched off to prevent an operator from being able to design or add a workspace.

Click on the **Settings** icon when in the **HOME Menu** and select **Workspaces**. A list of available workspaces is displayed.

**Note:** You will always have a **Default layout** workspace, and this will be selected by default when you log into Avanti:



To add a new workspace, select the **New Workspace** option.



The workspace will be saved as a filename as:

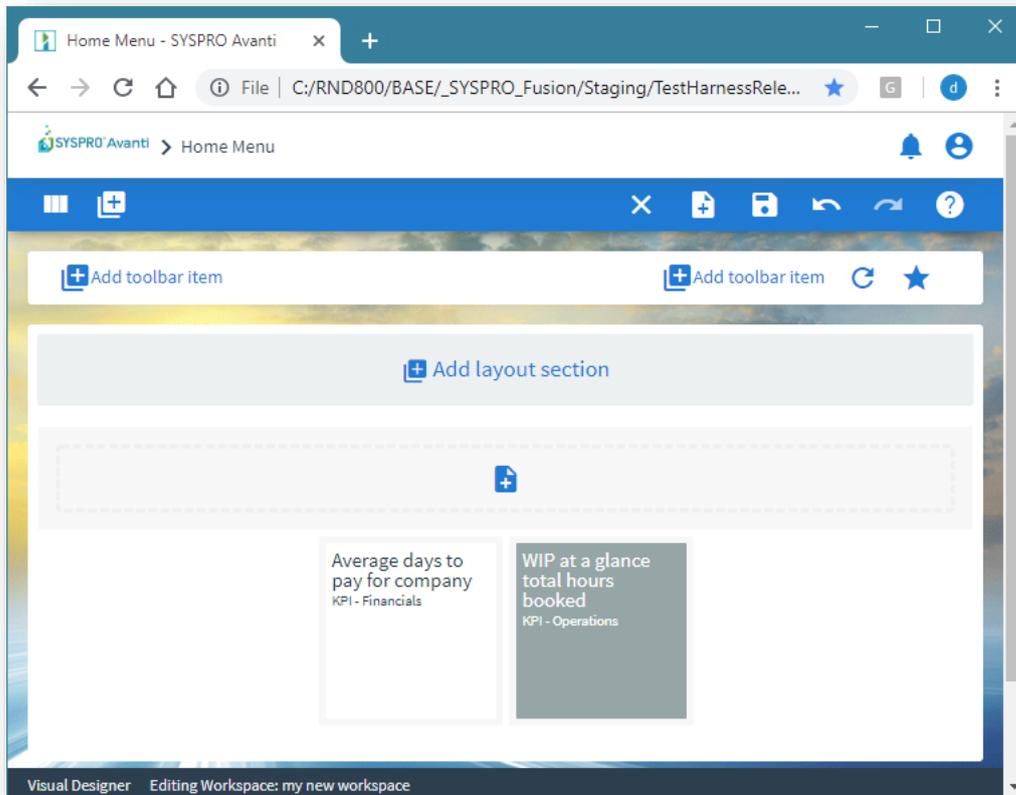
`...\Settings\UX_operator_IMPMENTLZworkspaceName.JSON.`

**Note:** Because this is a filename, you cannot include invalid characters such as \ or /.

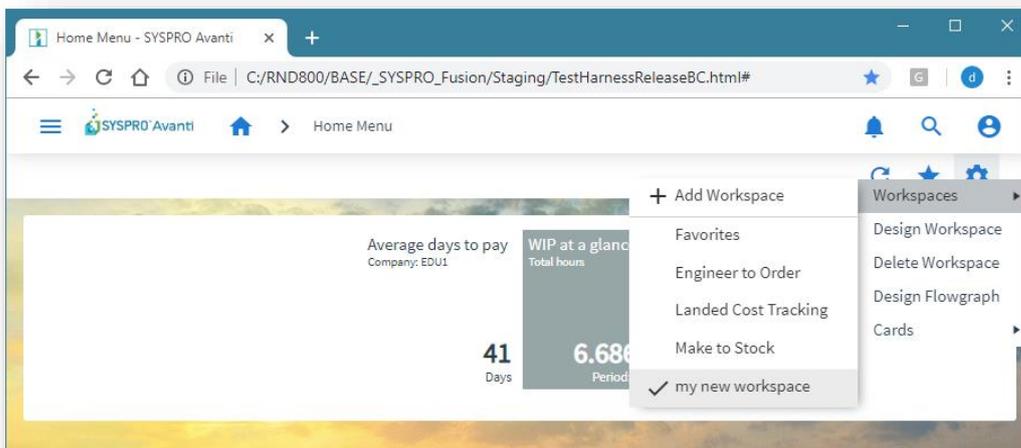
Click on **OK** and the **Visual Designer** will load, indicating the workspace you are editing in the status bar.

Next, add the elements you wish to display in your workspace.

In the following example, two TILES have been added:



After saving the Workspace, it will be refreshed in the **HOME Menu**:



To change the Workspace, select the **Design Workspace** option. To delete the Workspace, select the **Delete Workspace** option.

**Note:** You cannot delete your **Default layout** workspace as this is your primary view in the **HOME Menu**.

You can set any workspace as your 'Favorite' – simply select the workspace and then select the **Set as Favorite** option.

## DESIGNING A HOME LAYOUT

Optionally, you can design a HOME layout.

This layout is universally available no matter if you are logged in as a role or not. Additionally, once you have designed a HOME layout then this is always the first layout displayed.

This is useful if the business requires a standard layout to be displayed by default to everyone in the organization. A user can then still select any available workspace.

To design a HOME layout, select **Workspaces** and then click **New HOME Layout**.

Once a HOME layout has been created it can be subsequently designed or deleted.

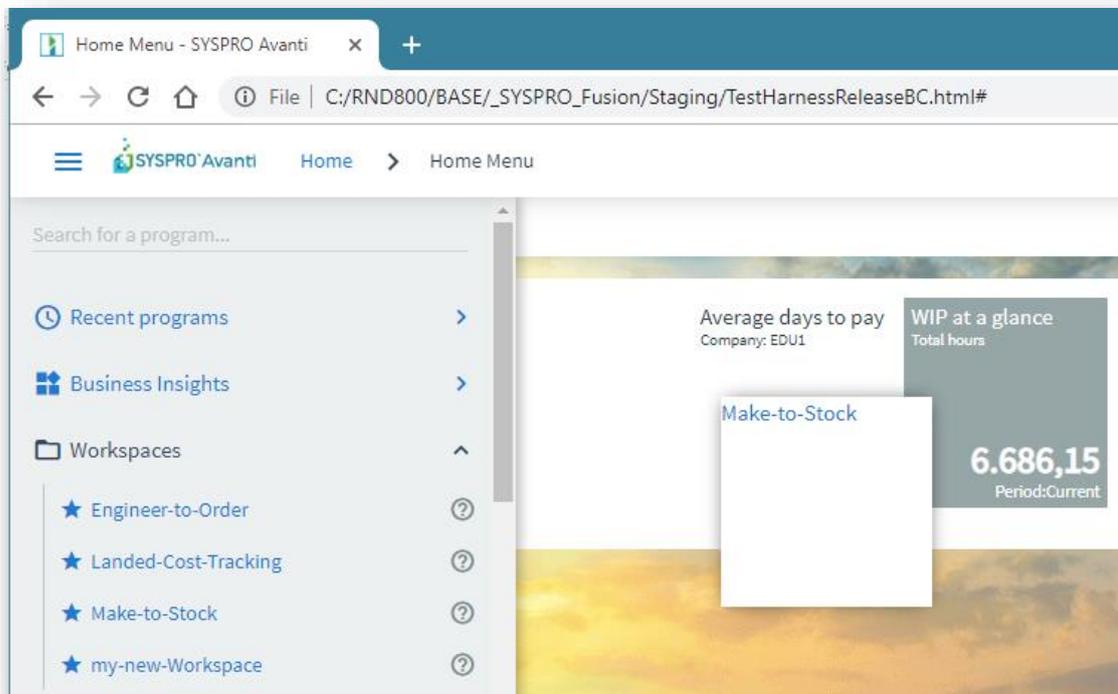
To quickly access the HOME layout when in the **HOME Menu**, just click the **HOME** button.

**Note:** The HOME layout is saved as ...\**Settings\UX\_APP\_HOME.JSON**.

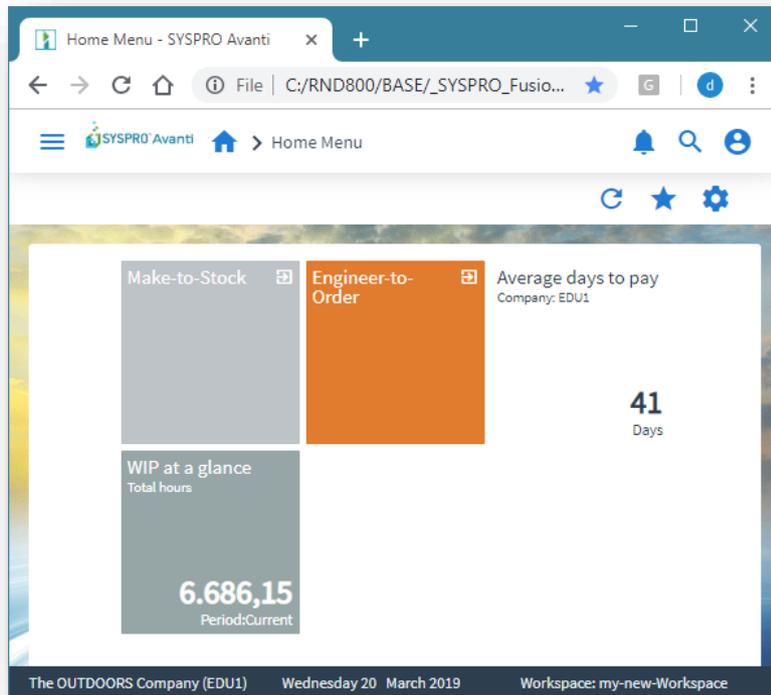
## SWITCHING WORKSPACES

You can switch Workspaces in one of the following manners:

- Select the Settings icon and select from the Workspaces displayed,
- Select the Favorites icon – this will load the workspace designated as your 'Favorite'.
- Drag a Workspace item from the Hamburger menu onto the Tile section (if you have a **Tile** section in your Workspace):

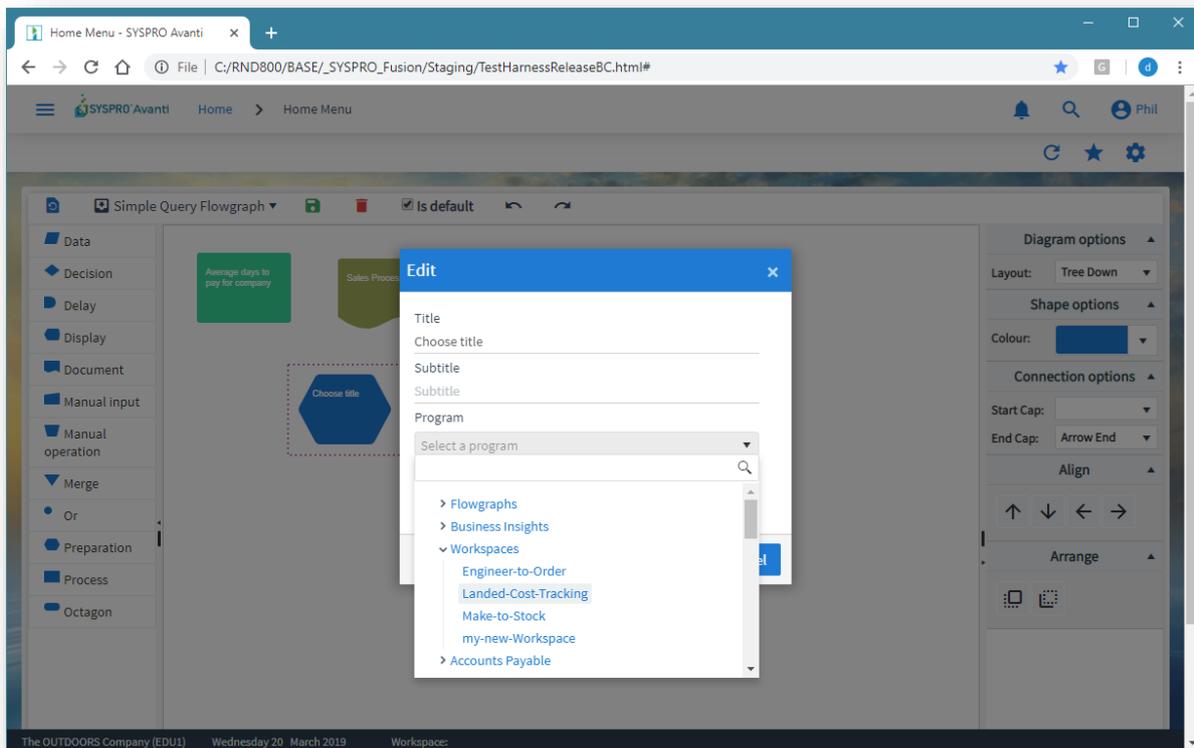


Selecting the workspace tile will switch to the nominated workspace:



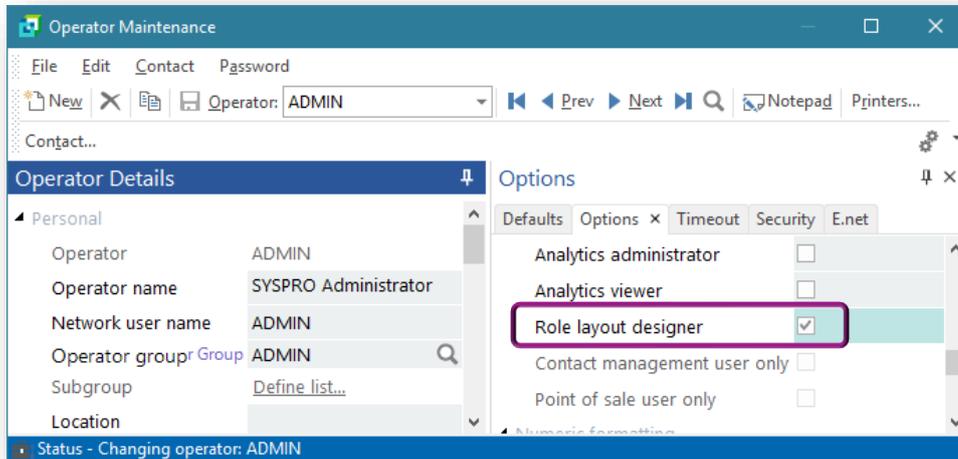
You can also switch to a different Workspace using the Flowgraph:

Call up the **Flowgraph Designer**, add the design element, click on the **EDIT** button and select the Workspace from the **Workspaces** list:



## DESIGNING WEB VIEWS AND WORKSPACES FOR A ROLE IN AVANTI

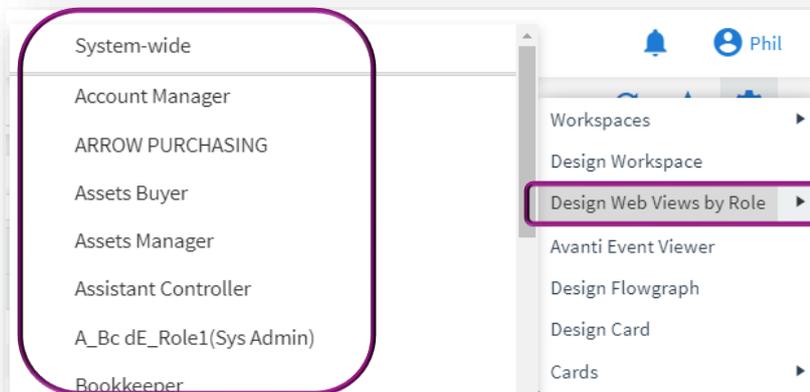
You can design a web view or workspace for any role when running in Avanti, if the operator option **Role Layout Designer** is enabled:



After logging into Avanti, follow these steps to design web views and workspaces for a role:

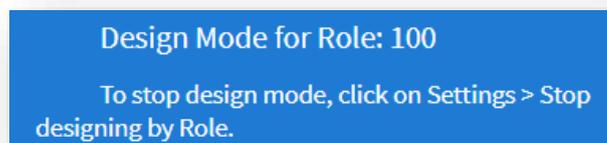
### **Step 1:**

Select the Role to be designed from the Settings icon in the **HOME menu**. You can also select to design at the **System-Wide** level.



**Note:** Only roles whose user interface has been 'configured by role' will be displayed in the list. The **Role Management** program (i.e. IMPMOL) can be used to set this property against each role.

A message indicates that you are now in design mode:

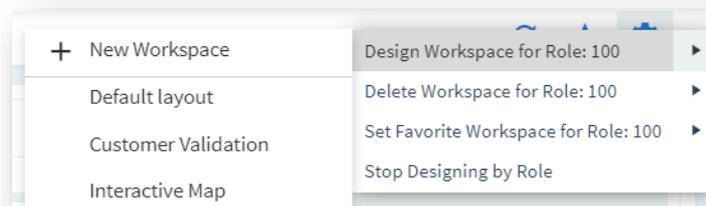


## Step 2:

If you click again on the Settings icon in the **HOME menu**, the following functionality is available:

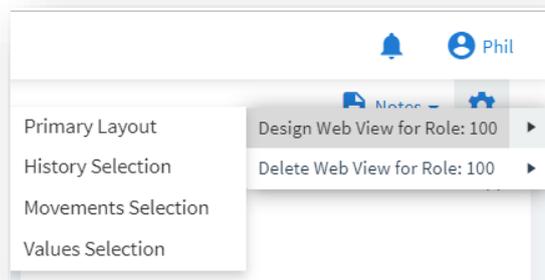
- Stop design mode (at any time)
- Add a new Workspace for the Role
- Modify an existing Workspace
- Delete a Workspace
- Set a specific Workspace to be the 'Favorite'

If you set a workspace for a role as 'Favorite' then that workspace will be initially displayed when an operator for that role logs into Avanti.



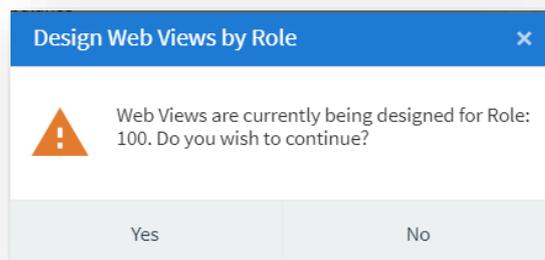
## Step 3:

If you are in an Avanti program and you click on the Settings icon, then you can either design a web view or delete an existing one. Some programs have multiple web view layouts, and they will be displayed in the context menu:



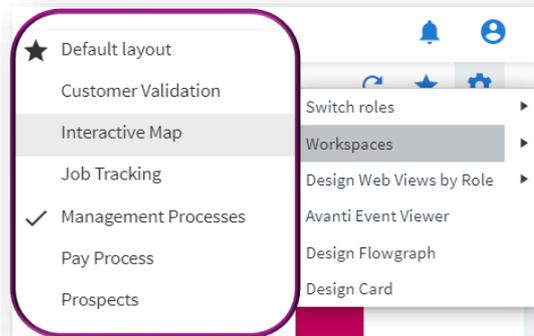
**Note:** When you start design mode for a role, a file is written to the SYSPRO 'Base' folder. The file is named **SYSPROAvantiDesignByRole\_xxx.txt**. This file is deleted when you stop design mode, or you simply exit out of the browser.

If another operator attempts to start design mode for the same role, then this message will be displayed:



## USING WORKSPACES BY ROLE IN AVANTI

Workspaces by role are available when you are in the **HOME Menu**, and are displayed beneath the **Settings** icon (sorted by description):



A workspace may contain anything that can be designed in the **Visual Designer**:

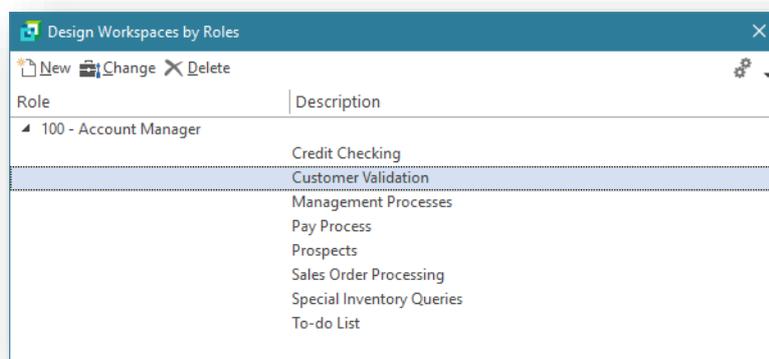
- Business insights
- Program Tiles
- Charts
- Flowgraphs
- Cards
- Grids
- Forms
- Any Customized Panes associated with the role itself

You can switch between workspaces at any time when you are at the **HOME Menu** in Avanti. The name of your current workspace will be displayed in the status bar of Avanti. Clicking on the Favorite icon will show the workspace designated as the Favorite.

## DESIGNING WORKSPACES BY ROLE IN SYSPRO

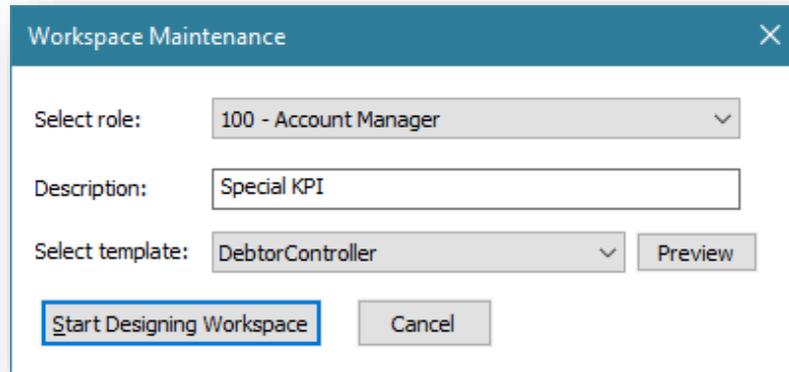
Workspaces by role can be designed from within SYSPRO or from within Avanti. And you can have an unlimited number of workspaces for each role.

Within SYSPRO, from the **Administration** tab of the Ribbon Bar, select **Design Workspaces** (this button is only available if the **Role layout design** option against the operator is enabled). This displays all the defined workspaces across all roles:



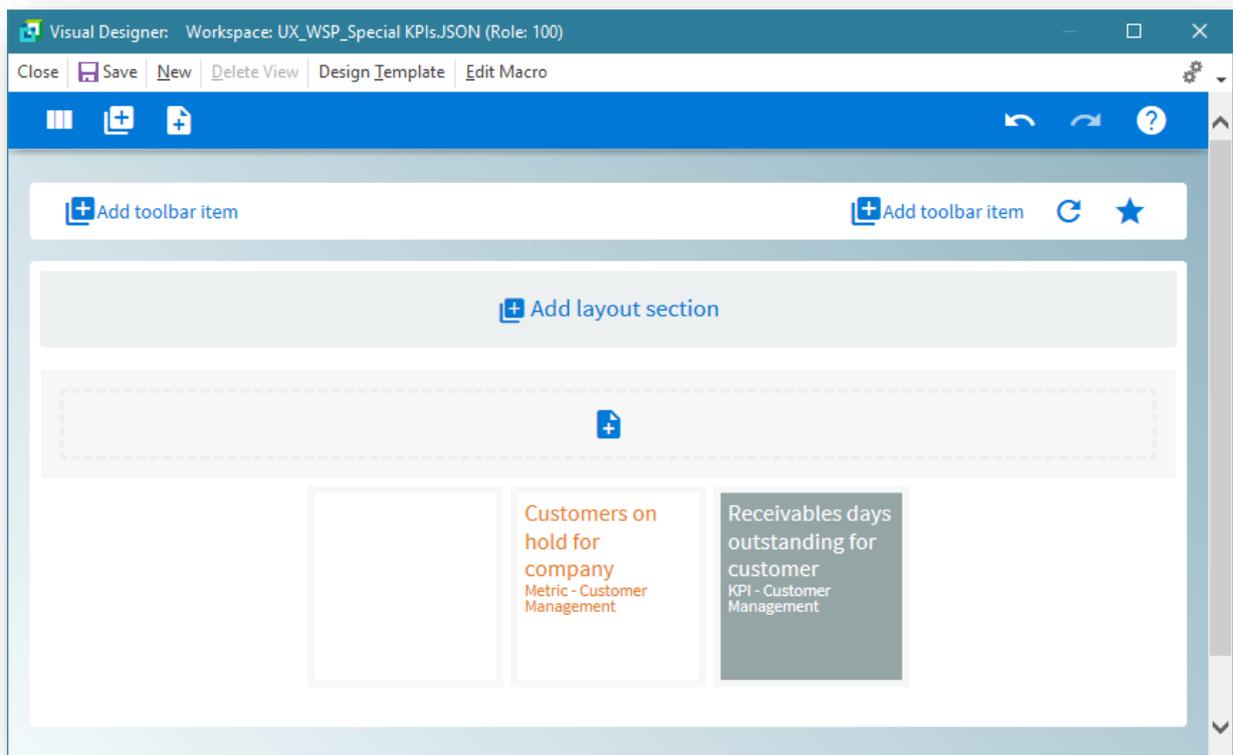
Click on **New** to create a new workspace.

Select the role for which you wish to define a workspace, and enter a description:



Optionally, you can select a pre-defined template to use as the basis for your workspace.

Select **Start Designing Workspace** and the **Visual Designer** is launched:



In this example, three Business Insights have been added to this workspace.

Select **Save** to save the workspace.

From within Avanti, selecting this workspace displays the view below. The Role and Workspace names are displayed in the status bar.



## TECHNICAL INFORMATION REGARDING WORKSPACES

Workspaces by Role are held as JSON files.

- **Role Workspaces**

SYSPRO template workspaces for roles are located in the following folder:

```
... \Base \Samples
```

Prefix:

```
UX_WSP
```

An example of this:

```
UX_WSP_InventoryController.JSON
```

- **Administrator designed Workspaces**

Workspaces designed by an Administrator are located in the following folder:

```
... \Settings \Role_***
```

Prefix:

```
UX_WSP and the description.
```

An example of this:

```
UX_WSP_Special KPIs.JSON.
```

- **Non-role user Workspaces**

Workspaces for non-role users are held as JSON files in the following folder:

```
... \Settings
```

An example of this:

```
... \Settings \UX_ADMIN_IMP MENLZ Make to Orderd.JSON
```

## TASK AUTOMATION IN AVANTI

You can create a series of tasks (i.e. programs) in Avanti that can be executed sequentially.

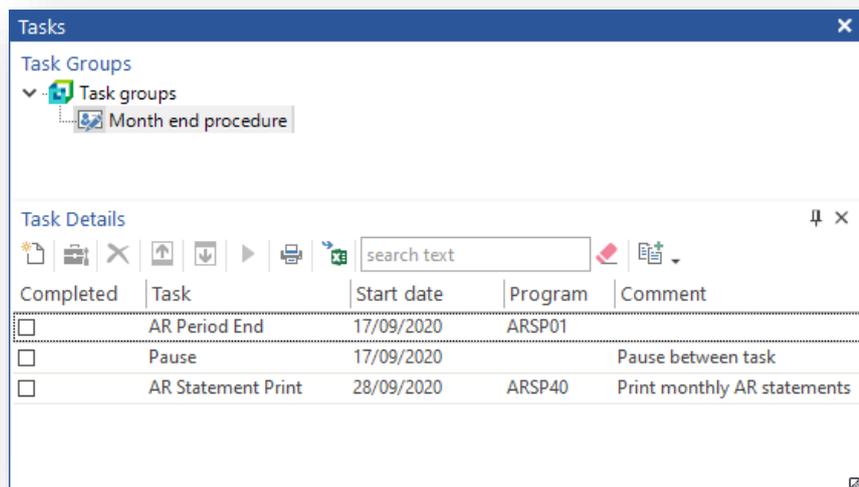
Perhaps you wish to create a month-end procedure that must run a series of programs one after the other. This can be automated so that when you start to run the task group, all programs are automatically run one after the other until the group is complete.

A full description of how tasks work can be found in the online help for SYSPRO ([SYSPRO Help - Tasks](#)). Therefore, this section explains at a high-level how to create and run tasks in Avanti:

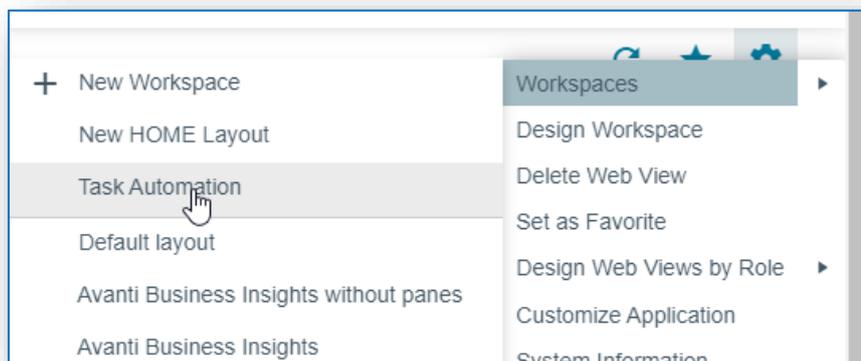
1. In the **HOME Page**, select the Settings icon and select **Workspaces > Task Automation**. A special workspace will be presented.
2. Click on the **NEW TASK GROUP** option to create a new group.

**Note:** In SYSPRO, a task group can be automated directly from the Windows scheduler. This is currently not possible to achieve in Avanti.

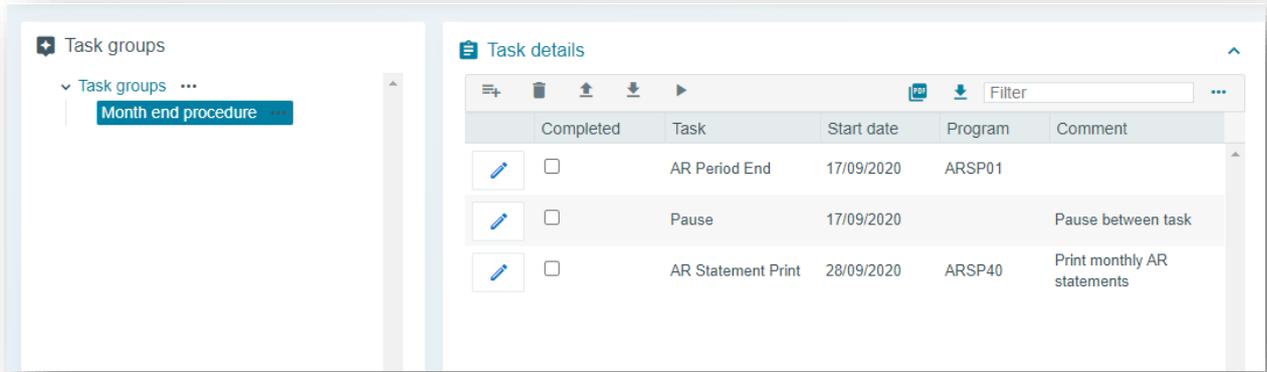
In SYSPRO, task groups are defined and run from the **TASKS** window:



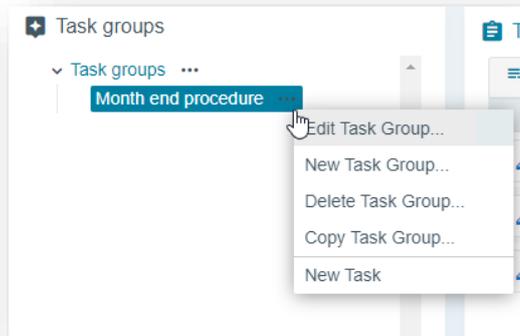
In Avanti, tasks are defined by selecting the **Task Automation** workspace from the **Settings** icon in the **HOME Page**.



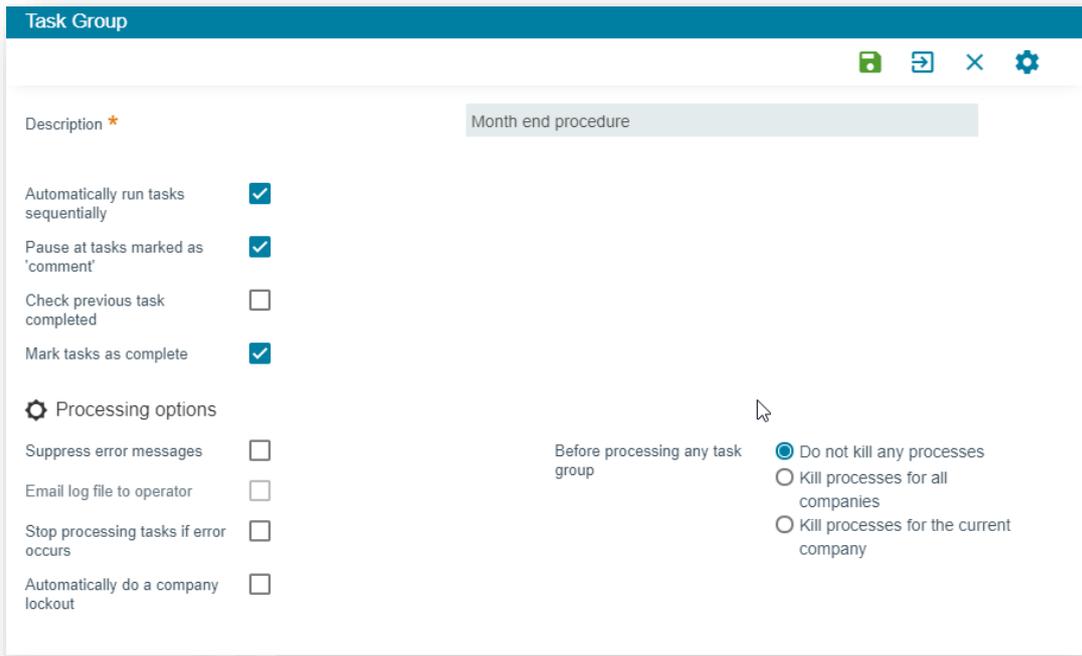
Here you will see the same list of Tasks as defined in SYSPRO:



In Task Groups, click the ellipses (i.e. '...') button for various Task Group functions:



Creating or editing a task group allows you to describe how the group should behave:



You can then add a task item to the group.

A task item can run a program or report and can be scheduled to run on a certain day and optionally recur daily, weekly or monthly. Programs can also be automated so that they apply specific values to form fields.

**Task Item**

Associated with group: Month end procedure

Task: AR Period End

Start date: 17/09/2020

Comment:

**Program details**

[Select program](#)

Program: ARSP01

Description: AR Period End

Program type: SYSPRO program

Group name: Form Design...

[Apply automation parameters](#)

[Automation design](#)

Task order:

Add this task after last task for this date

Insert after selected task

Insert before selected task

Select a task:

Set reminder if due:

Insert into Microsoft Outlook:

**Recurring**

Task occurs:  Once only

Daily

Weekly

Monthly

Task start: 17/09/2020

In the **Task Details** pane, you can add a new task, delete a task or move a task up/down the list.

You can also start to run the tasks by clicking on the **Run** button:

**Task details**

| Completed                | Task               | Start date | Program | Comment                     |
|--------------------------|--------------------|------------|---------|-----------------------------|
| <input type="checkbox"/> | AR Period End      | 17/09/2020 | ARSP01  |                             |
| <input type="checkbox"/> | Pause              | 17/09/2020 |         | Pause between task          |
| <input type="checkbox"/> | AR Statement Print | 28/09/2020 | ARSP40  | Print monthly AR statements |

When a Task Group has finished, the tasks that have executed will be displayed in the **Task Messages** grid:

The screenshot shows two sections: 'Task details' and 'Task messages'. The 'Task details' section contains a table with three rows of task information. The 'Task messages' section contains a table with one row of message information.

| Completed                           | Task               | Start date | Program | Comment                     |
|-------------------------------------|--------------------|------------|---------|-----------------------------|
| <input checked="" type="checkbox"/> | AR Period End      | 17/09/2020 | ARSP01  |                             |
| <input checked="" type="checkbox"/> | Pause              | 17/09/2020 |         | Pause between task          |
| <input checked="" type="checkbox"/> | AR Statement Print | 28/09/2020 | ARSP40  | Print monthly AR statements |

Showing 3 item(s)

| Task group          | Task               | Completed                           | Task message | Program | Program description |
|---------------------|--------------------|-------------------------------------|--------------|---------|---------------------|
| Month end procedure | AR Statement Print | <input checked="" type="checkbox"/> |              | ARSP40  | Statement Print     |

Showing 1 item(s)

If any of the task items were schedule to recur on another day, then this message will popup:

A popup message box titled 'Recurring Task Group' with a close button. It contains an information icon and text explaining that all tasks are complete and recurring tasks can be recalculated. At the bottom, there are three buttons: 'Update group', 'Do not change group', and 'Delete group'.

**Recurring Task Group**

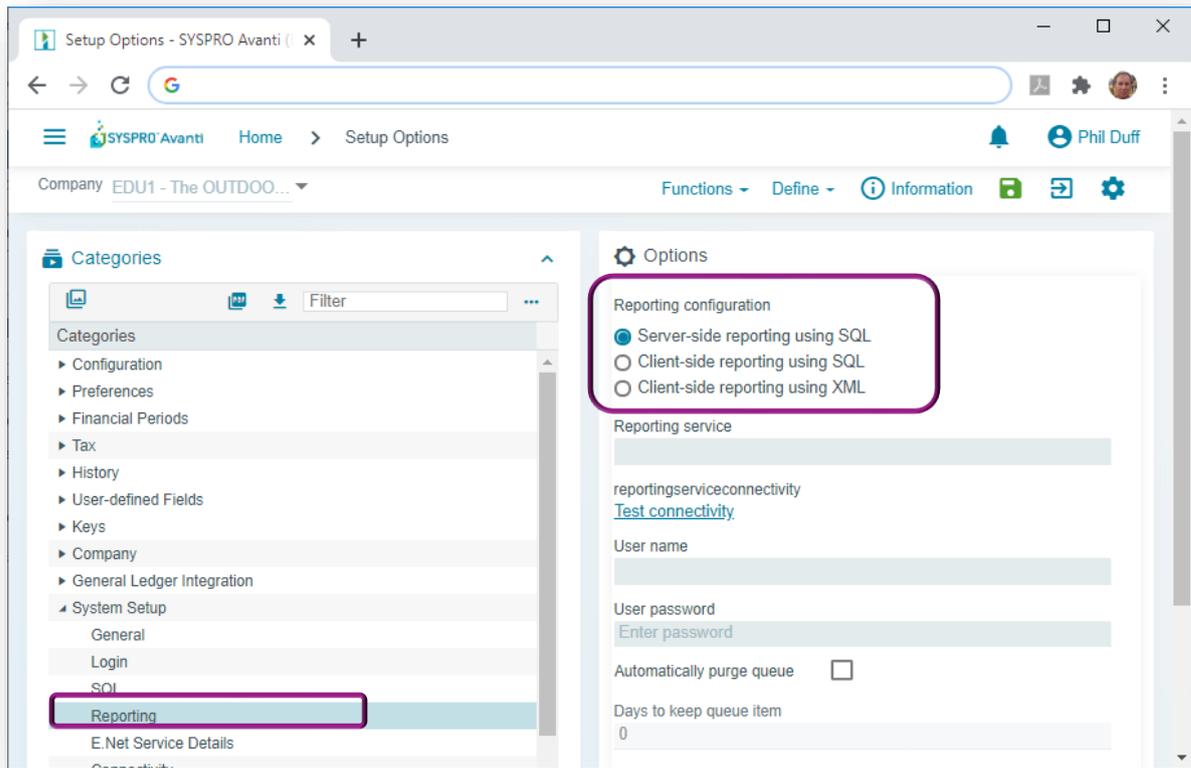
**i** All tasks for this group are now complete.  
Any recurring tasks associated with this group can be recalculated with next scheduled start dates.

Update group   Do not change group   Delete group

# PRINTING DOCUMENTS IN AVANTI

## PREREQUISITES

- To print a document in Avanti requires the **Reporting Configuration** option to be enabled as **Server-side reporting**. This is implemented in the **System Setup, Reporting** section of the **Setup Options** program (i.e. IMPCFG):

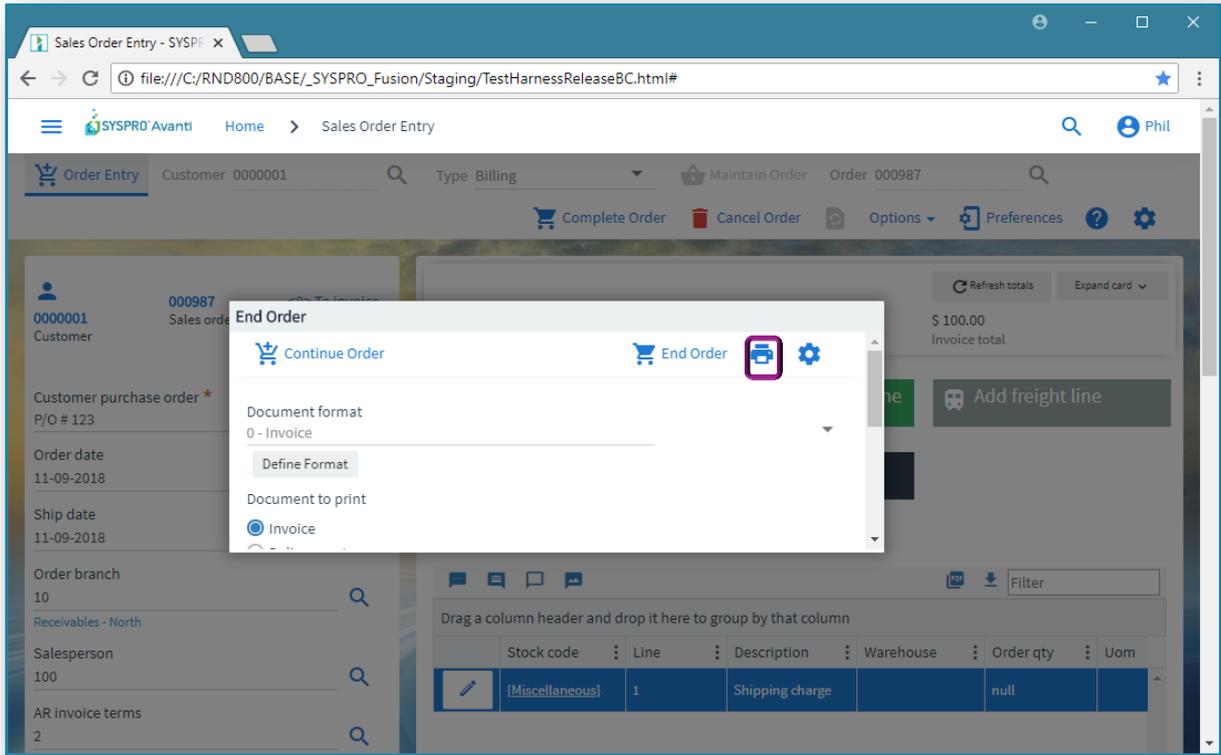


- You may have to install the SRS server-side reporting system. Without this, you cannot print documents or any SRS reports from within Avanti.

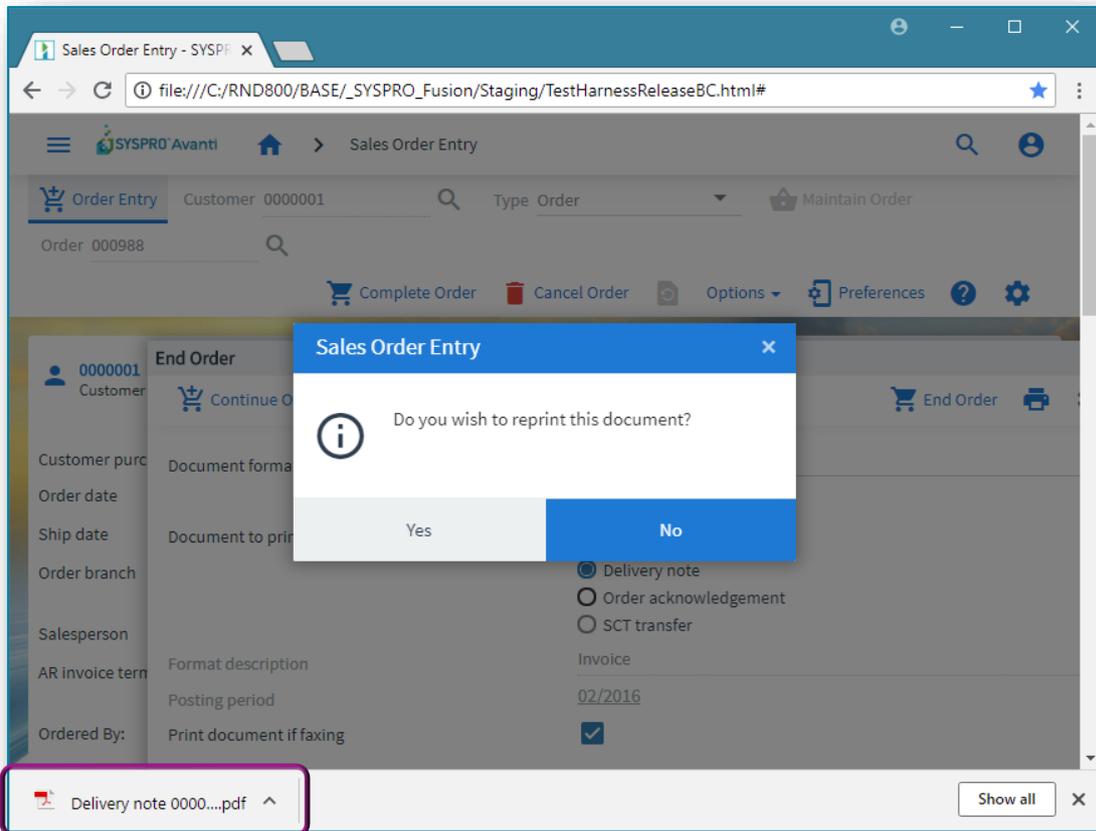
## PRINTING DOCUMENTS

Clicking on a **PRINT** button to produce an online document will cause the document to be produced as a PDF document and will be downloaded to the browser.

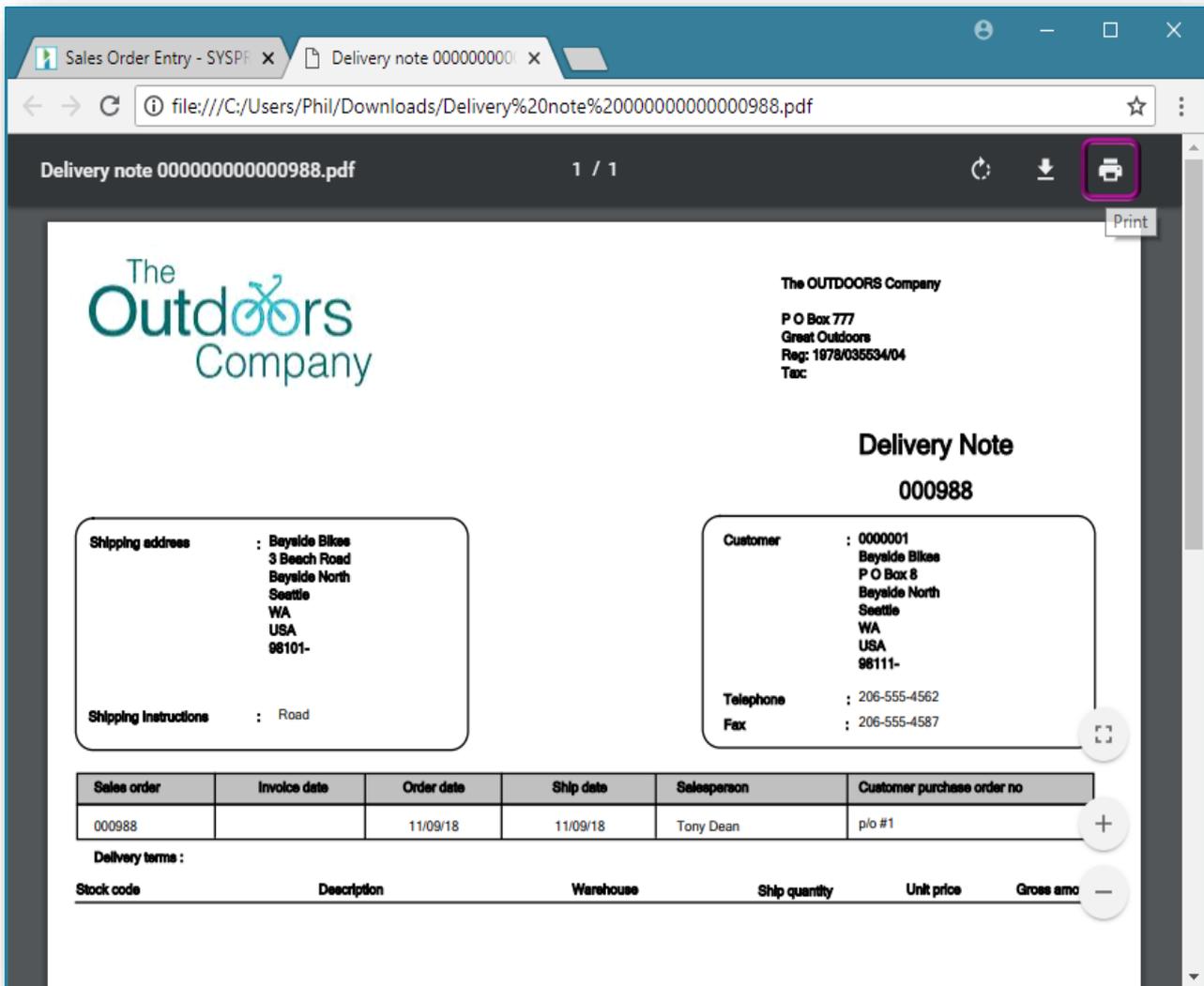
As an example, the following screenshot shows the **END ORDER** screen for **Order Entry**:



After clicking on the **PRINT** button, the document will be created and displayed as a PDF in the browser download area:



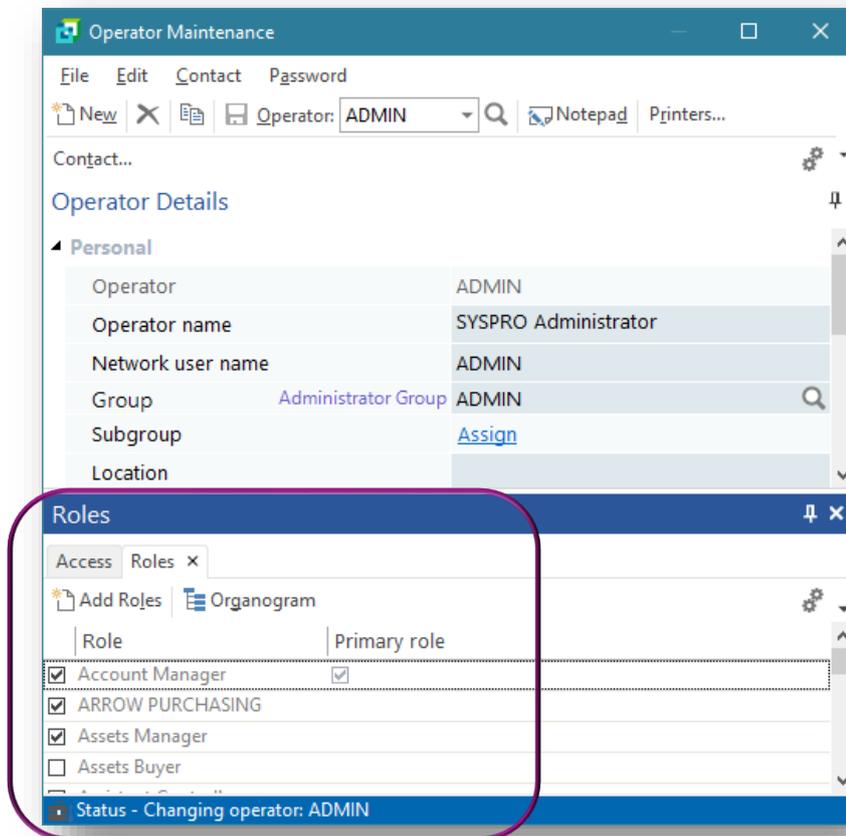
Select the PDF button in the browser to display the PDF document. This allows you to print the document:



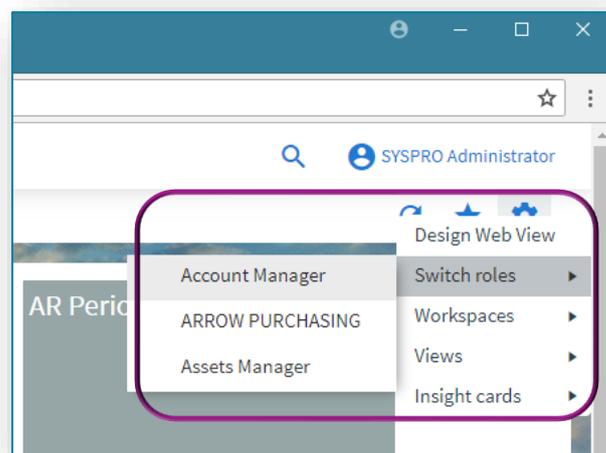
## SWITCHING ROLES IN AVANTI

If you are logged into Avanti using a role, and your operator is associated with more than one role, then you may switch to any of the other roles while you are in the main Avanti menu.

As an example, the screen shot below shows that Operator ADMIN is linked to three roles:



In Avanti, you click on the **SETTINGS** icon in the **HOME Menu** to switch to another role:



When you switch roles, the security settings and web views defined for the new role will be applied.

## USING FLOWGRAPHS IN AVANTI

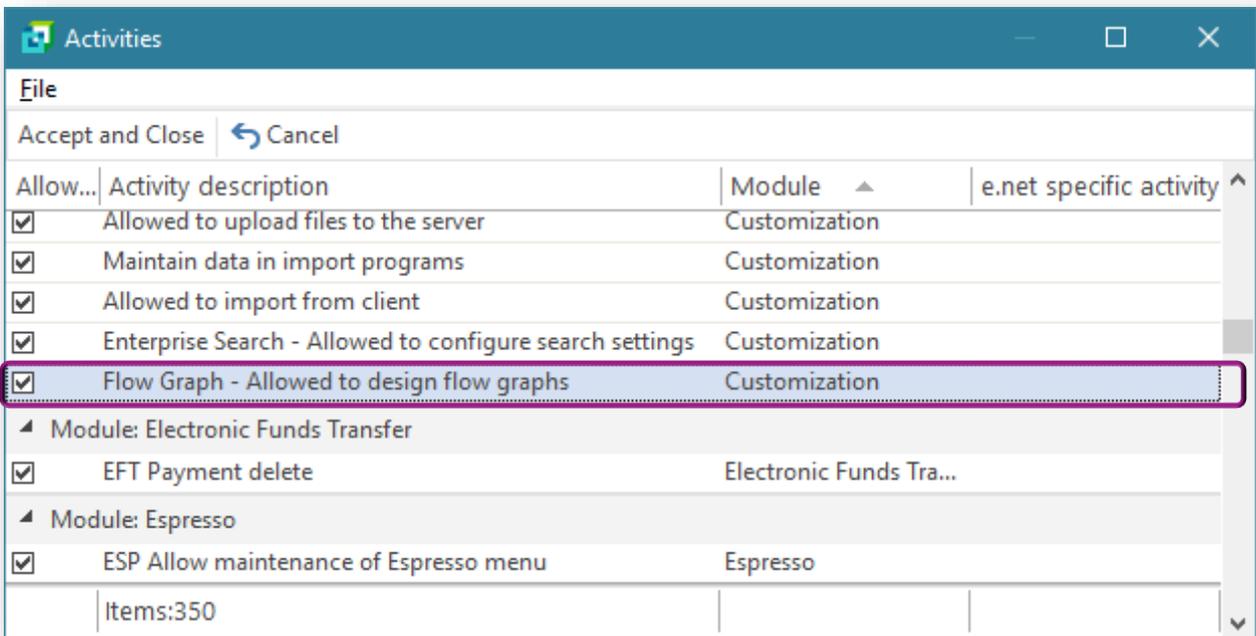
Flowgraphs in Avanti contain shapes that can be linked together visually. A shape can be optionally defined to action any of the following:

- Run an Avanti program
- Execute a business insight
- Switch to an alternative Workspace
- Switch to a different Flowgraph

**Note:** Currently, Flowgraphs are created and viewed only at the operator level.

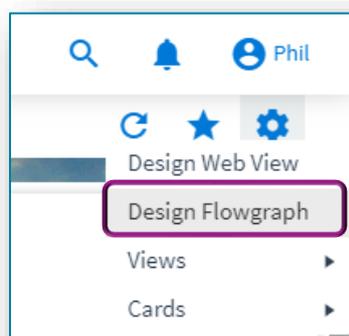
### PREREQUISITES

To design a Flowgraph you must enable the operator security activity **Flow Graph - Allowed to design flow graphs** in the **Operator Maintenance** program (i.e. IMPPMP):

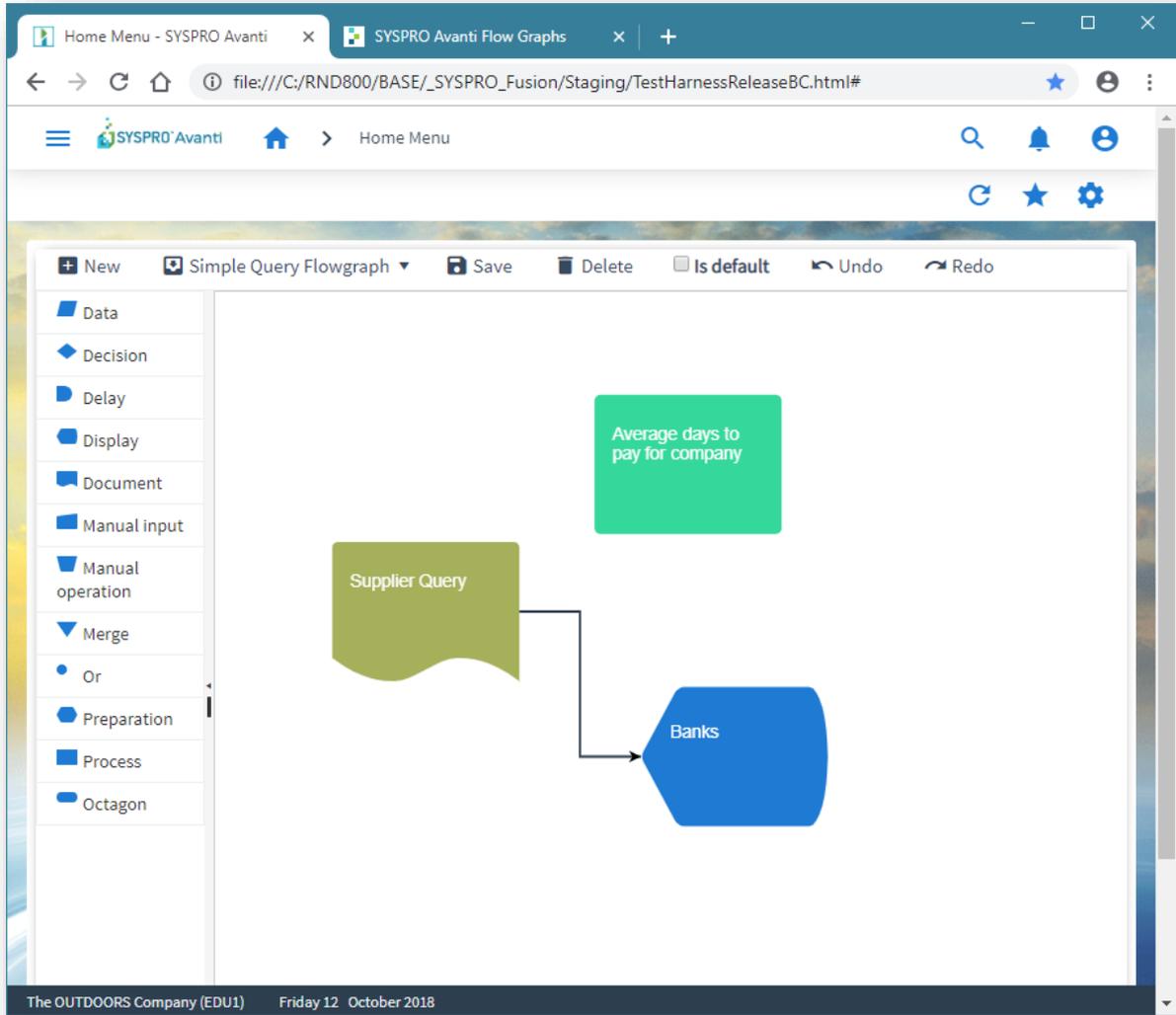


### DESIGNING A FLOWGRAPH

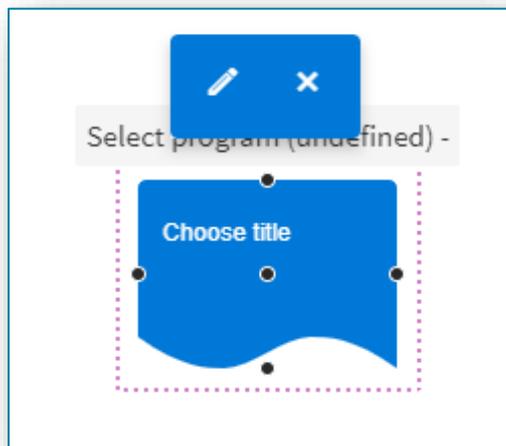
In Avanti, click on the **SETTINGS** icon in the **HOME Menu** to design a Flowgraph:



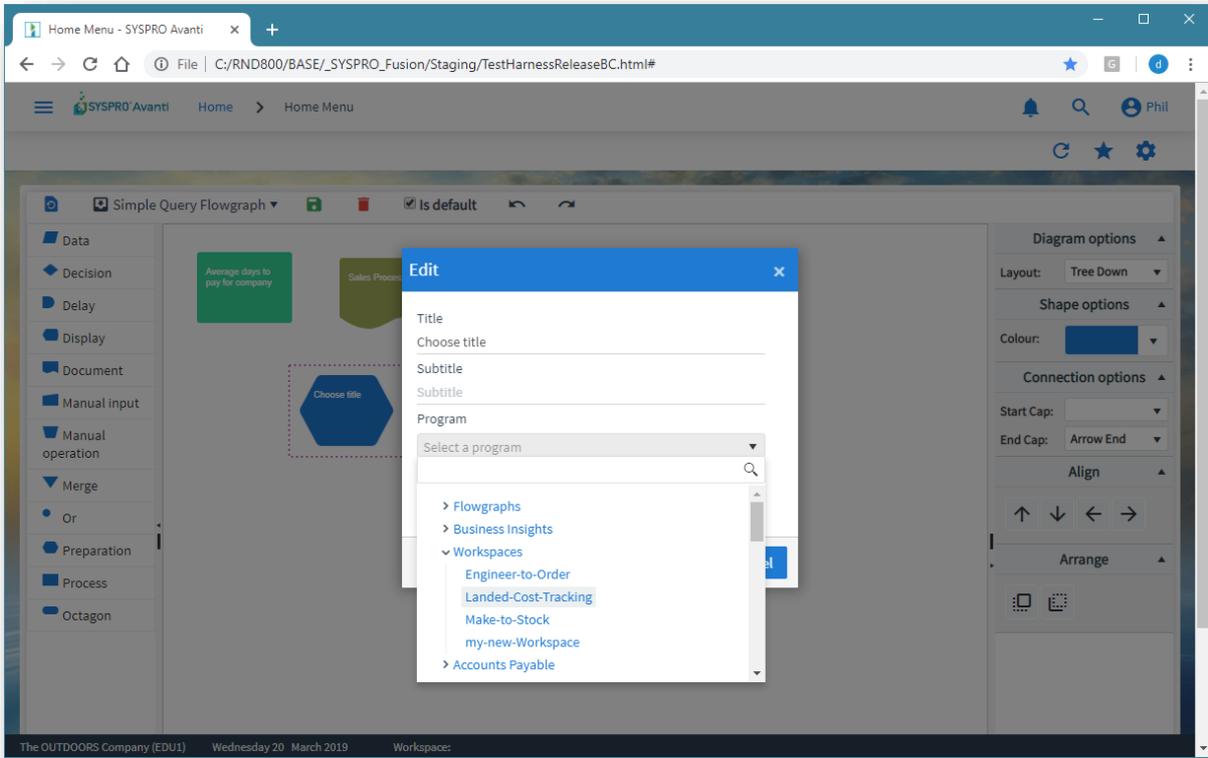
The **Flowgraph Designer** is displayed:



Drag a shape onto the blank canvas area:



Click the **EDIT** button to enter a shape title and select to run a program, Business Insight, another Flowgraph or another Workspace:

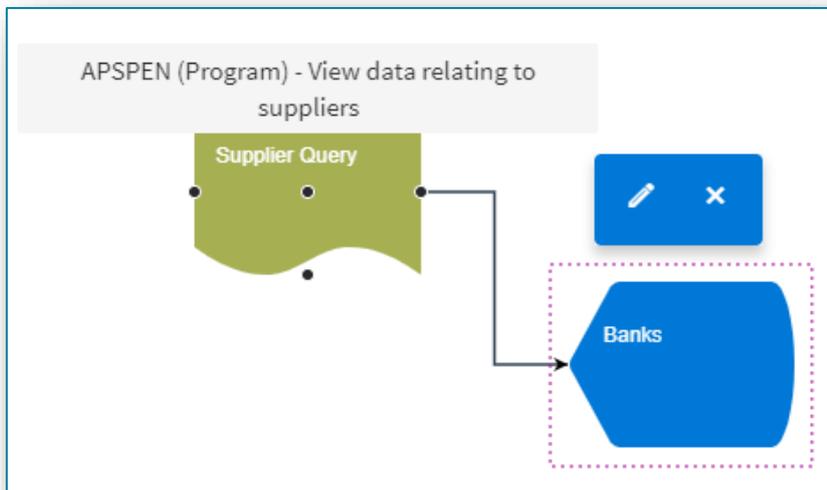


The list of available programs is identical in structure to that displayed in the main menu.

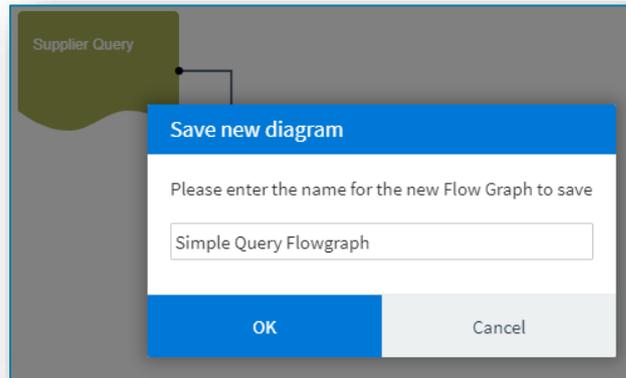
You can run any Avanti program, add a business insight or select another Flowgraph or Workspace.

Selecting a program will automatically update the **Title** and **Subtitle** (which is displayed as a tooltip).

You can visually link shapes by clicking on a connector button and dragging the arrow to another shape:



Select the **SAVE** button when you are finished and enter a name for the Flowgraph:



You can optionally make your current Flowgraph the default to be displayed in the viewer – just check the option is **Default**.

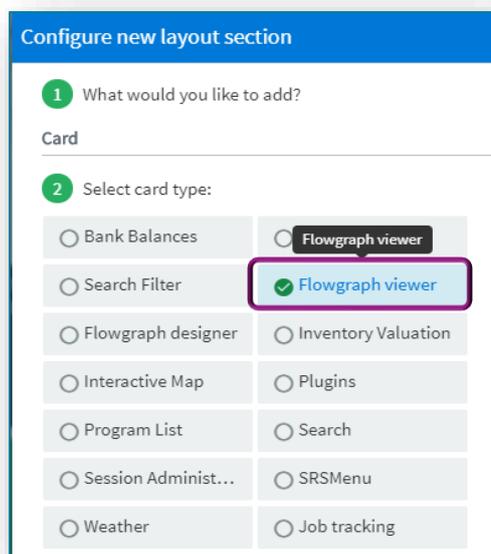
## EXITING THE FLOWGRAPH DESIGNER

To exit the Flowgraph Designer, click on the **HOME** button.

## VIEWING A FLOWGRAPH

To view a Flowgraph:

1. Add the Flowgraph Viewer 'card' to any web view using the **Visual Designer**.
2. Add a layout section to your web view.
3. Select the **Flowgraph Viewer** card.



In the example below, the viewer has been added to the **HOME Menu**.

You select the Flowgraph you would like to view from the drop-down menu in the viewer.

The screenshot displays the SYSPRO Avanti web application interface. A window titled "Average days to pay" is open, showing a table with columns: Customer, Customer Name, Salesperson, Customer Branch, and Age of zero bal invoices(N). The table lists data for various branches (10, 20, 30, 70) and customers. A "Simple Query Flowgraph" viewer is also open, showing a flowgraph with a green shape labeled "Average days to pay for company" and a blue shape labeled "Banks". The flowgraph shows a flow from "Supplier Query" to "Banks".

| Customer          | Customer Name          | Salesperson | Customer Branch | Age of zero bal invoices(N) |
|-------------------|------------------------|-------------|-----------------|-----------------------------|
| <b>Branch: 10</b> |                        |             |                 |                             |
| 0000001           | Bayside Bikes          | 100         | 10              | 75                          |
| 0000002           | Bikes & Blades - North | 100         | 10              | 153                         |
| 0000008           | Garden and Sports      | 102         | 10              | 66                          |
| 0000010           | Maniac Sports - North  | 100         | 10              | 100                         |
| <b>Branch: 20</b> |                        |             |                 |                             |
| 0000011           | Maniac Sports - South  | 201         | 20              | 51                          |
| <b>Branch: 30</b> |                        |             |                 |                             |
| 0000012           | Maniac Sports - East   | 300         | 30              | 51                          |
| <b>Branch: 70</b> |                        |             |                 |                             |
| 0000070           | Highway Leisure        | 700         | 70              |                             |
| 0000071           | CC Cycles              | 700         | 70              |                             |
| 0000071           |                        |             |                 | 496.00                      |

Click on a shape to run the associated Avanti program.

Alternatively, if the shape has been defined for a Business Insight, then clicking on it will display the Insight detail.

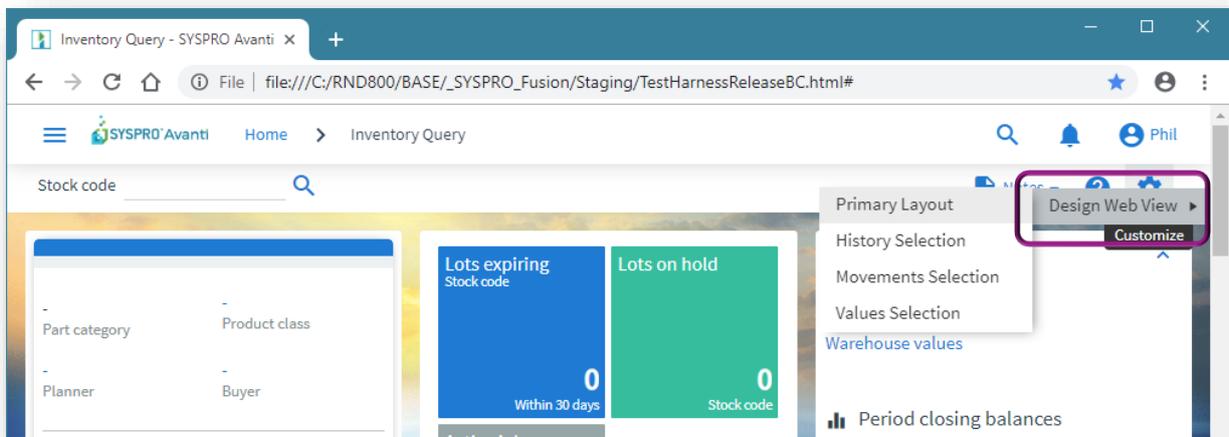
# USING THE VISUAL DESIGNER

## USING THE VISUAL DESIGNER IN AVANTI

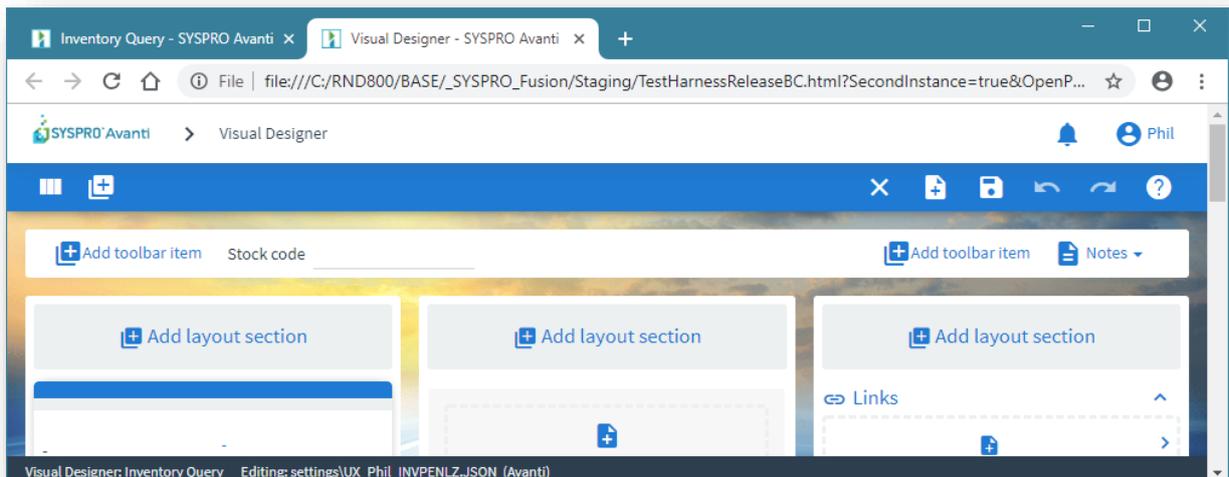
To modify any web view in Avanti, you use the **Visual Designer**.

**Note:** Any web view customized using the **Visual Designer** in Avanti will only appear in Avanti. If you wish to design a web view for use in the SYSPRO Client, please read the section [Using the Visual Designer in SYSPRO](#).

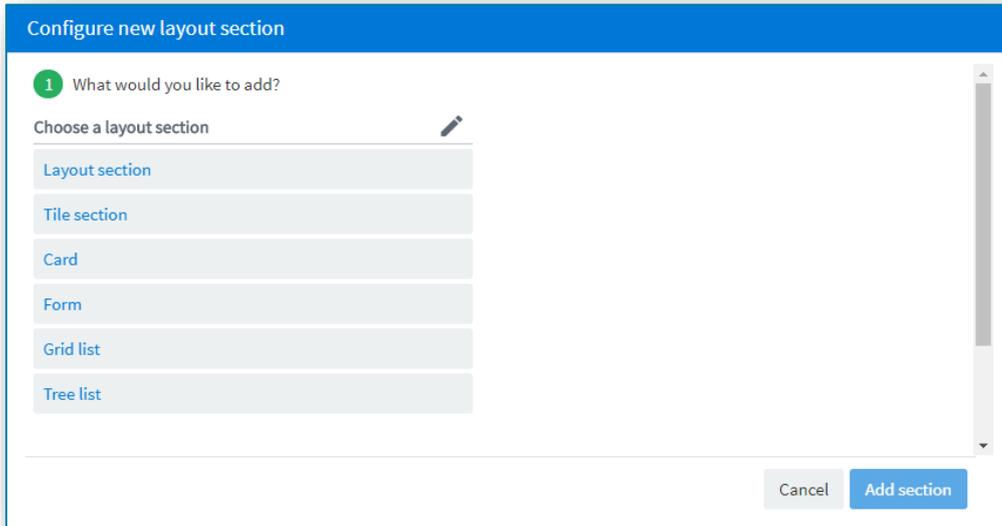
For example, to add or modify a Business Insight shown in a Tile, click on **Design Web View** from the **SETTINGS** icon (  ):



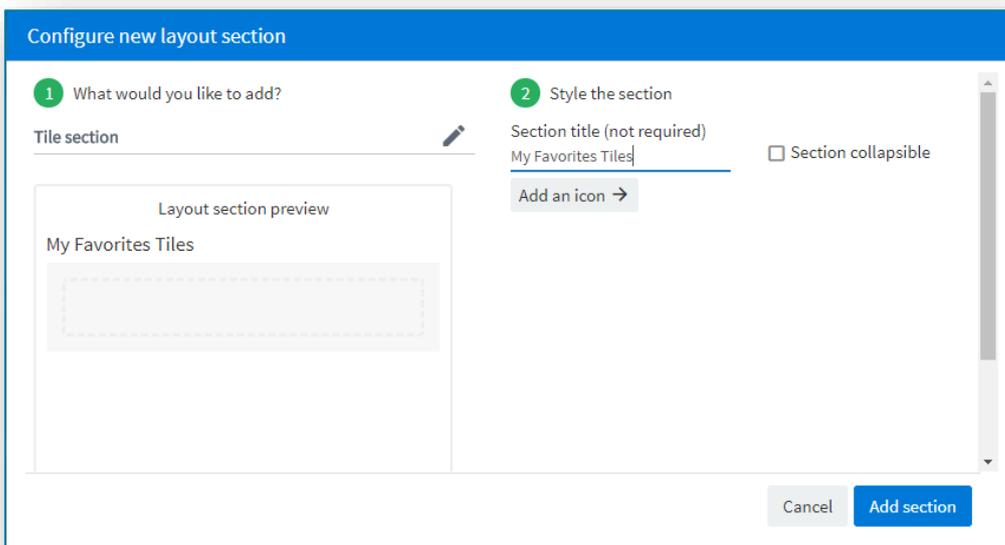
Except for when editing the **HOME Page**, the **Visual Designer** will be displayed in a new instance of Avanti in a separate browser TAB:



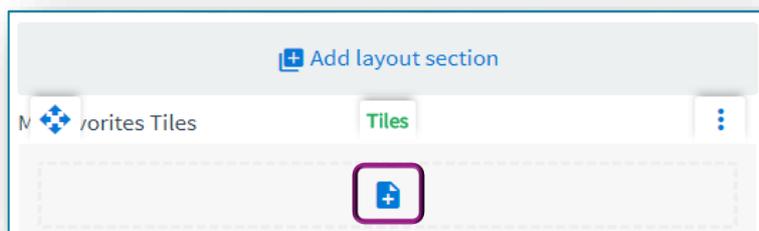
Click on the **Add Layout Section** to add another 'Tile' section:



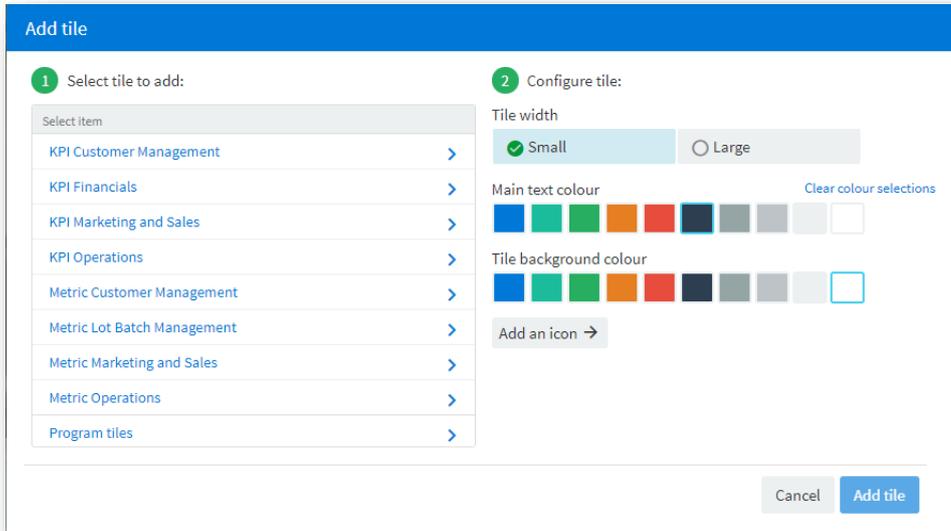
Select **TILE SECTION**, optionally style the section, and click **Add Section**:



Now click on the **ADD** button to add a tile:

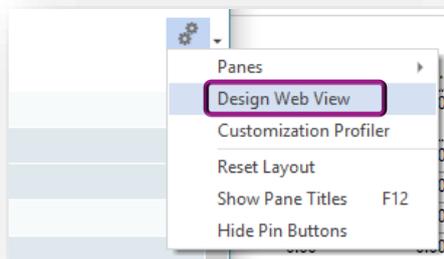


And then select the KPI or program tile to be added:



## USING THE VISUAL DESIGNER IN SYSPRO

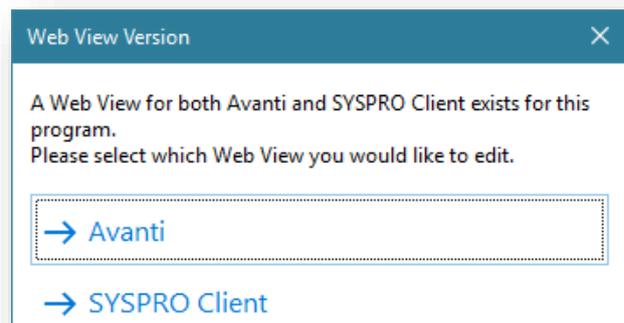
To design a web view in SYSPRO, click on the Settings icon and select **Design Web View**:



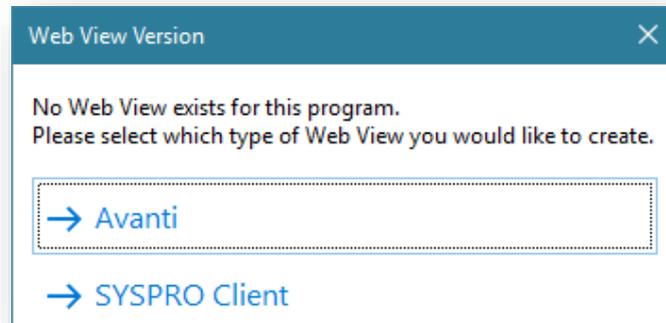
The **Visual Designer** in SYSPRO is used to create web views for use in SYSPRO as well as for Avanti.

Therefore, as the **Visual Designer** loads in SYSPRO, the following checks take place:

1. If an Avanti web view pre-exists it will be automatically loaded for editing.
2. If a SYSPRO Client web view pre-exists it will be automatically loaded for editing.
3. If both Avanti and SYSPRO Client web views pre-exist then a message box will appear asking which web view is to be loaded for editing:



4. If neither Avanti nor a SYSPRO Client web view pre-exists, then a message box will appear asking which type of web view you would like to create:



## USING THE VISUAL DESIGNER IN CLIENT/SERVER MODE

If you are in client/server mode in SYSPRO, you will not be able to create or edit a web view for Avanti, unless you are designing by Role.

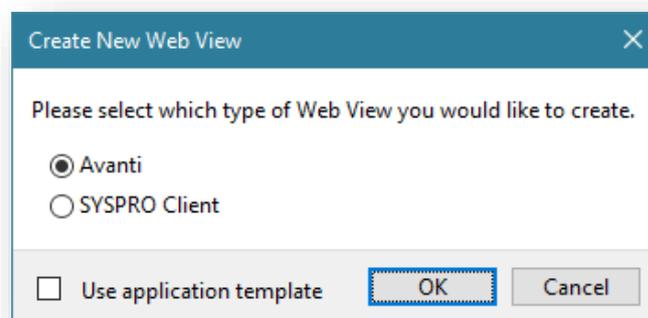
The reason for this is that all customization files for non-role users are saved on the client machine. Avanti cannot access such customization files since Avanti can only access files on the SYSPRO server.

You can, however, use the **Visual Designer** in Avanti to create or design web views for non-role users, since this does not rely on customization files residing on a client machine.

If you are designing for a role, then you can create and design a web view for Avanti even when running in client/server mode. This is because all customization files for roles are saved on the application server, to which Avanti has access.

## CREATING A NEW WEB VIEW

From within the **Visual Designer** on the toolbar, select **New** to create a web view for either Avanti or for the SYSPRO Client:



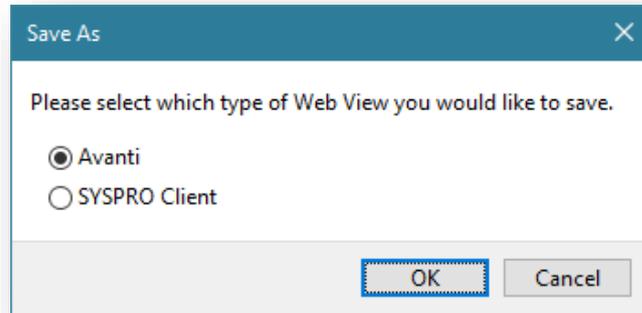
If a standard template for the application exists, then you can check the **Use application template** to apply the template as your starting point for your web view.

## SAVE AS A DIFFERENT WEB VIEW

You can select to save the current web view as a different type of web view.

In the **Visual Designer**, click on **Save As** to select to save the web view as a different type.

For example, if you are editing an Avanti web view you can save it as a SYSPRO Client web view, and vice versa.



## TECHNICAL INFORMATION REGARDING WEB VIEWS

web views are saved as JSON files, named by the program.

- **Operator level**

When designing at the operator level, web views are saved in the following folder:

`...\Settings`

An example of this for a web view for Avanti:

`UX_operator_ARSPENLZ.JSON`

An example of this for a web view for SYSPRO Client:

`UX_operator_ARSPENLZ_SYSPRO.JSON`

- **Role level**

When designing at the ROLE level, web views are saved in the following folder:

`...\Settings\Role_***`

An example of this for a web view for Avanti:

`ARSPENLZ.JSON`

An example of this for a web view for SYSPRO Client:

`ARSPENLZ_SYSPRO.JSON`

Workspaces by Roles will be assumed to be for Avanti only, as there is no mechanism for surfacing such web views in SYSPRO at present.

## DISPLAYING CUSTOMIZED PANES IN AVANTI

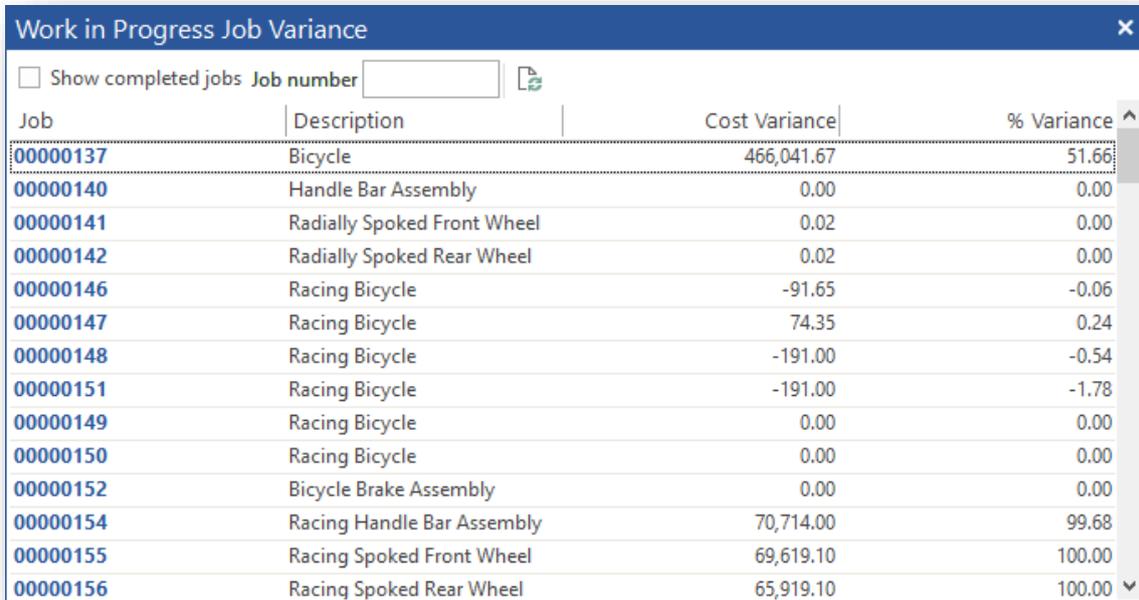
Some types of Customized Panes in SYSPRO can be displayed in Avanti.

The following table indicates which types of Customized Panes can be added to a web view using the **Visual Designer**:

| TYPE OF CUSTOMIZED PANE    | CAN BE ADDED TO A WEB VIEW  | WILL EXECUTE WHEN RUNNING IN AVANTI       |
|----------------------------|---|---|
| <b>Graph</b>               | Yes   | Yes                                       |
| <b>List view</b>           | Yes   | Yes                                       |
| <b>Form</b>                | Yes   | Yes                                       |
| <b>.NET User Control</b>   | No  | Depending on option<br><i>(see below)</i> |
| <b>SRS Report</b>          | No<br><i>All SRS reports can be displayed in Avanti from the main menu.</i> | No  |
| <b>PDF Viewer</b>          | No  | No  |
| <b>Search Window</b>       | No  | No  |
| <b>Executive Dashboard</b> | No  | No  |
| <b>RTF Notepad</b>         | Yes   | Yes                                       |

## HOW TO ADD A CUSTOMIZED PANE TO A WEB VIEW TO DISPLAY IN AVANTI

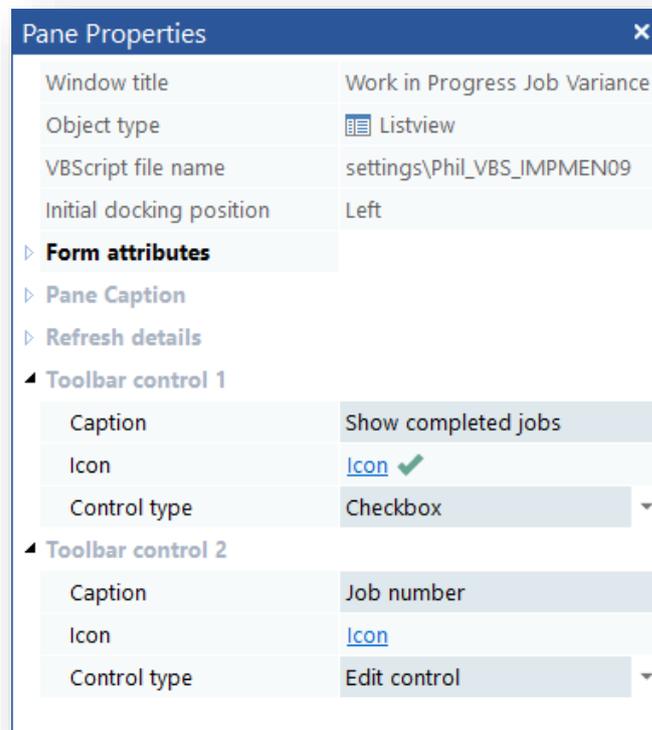
To explain how to add a Customized Pane to a web view, we will use the standard **WIP Job Variance list view** that's available as a Customized Pane template, and we will add this to SYSPRO's main menu.



| Job      | Description                 | Cost Variance | % Variance |
|----------|-----------------------------|---------------|------------|
| 00000137 | Bicycle                     | 466,041.67    | 51.66      |
| 00000140 | Handle Bar Assembly         | 0.00          | 0.00       |
| 00000141 | Radially Spoked Front Wheel | 0.02          | 0.00       |
| 00000142 | Radially Spoked Rear Wheel  | 0.02          | 0.00       |
| 00000146 | Racing Bicycle              | -91.65        | -0.06      |
| 00000147 | Racing Bicycle              | 74.35         | 0.24       |
| 00000148 | Racing Bicycle              | -191.00       | -0.54      |
| 00000151 | Racing Bicycle              | -191.00       | -1.78      |
| 00000149 | Racing Bicycle              | 0.00          | 0.00       |
| 00000150 | Racing Bicycle              | 0.00          | 0.00       |
| 00000152 | Bicycle Brake Assembly      | 0.00          | 0.00       |
| 00000154 | Racing Handle Bar Assembly  | 70,714.00     | 99.68      |
| 00000155 | Racing Spoked Front Wheel   | 69,619.10     | 100.00     |
| 00000156 | Racing Spoked Rear Wheel    | 65,919.10     | 100.00     |

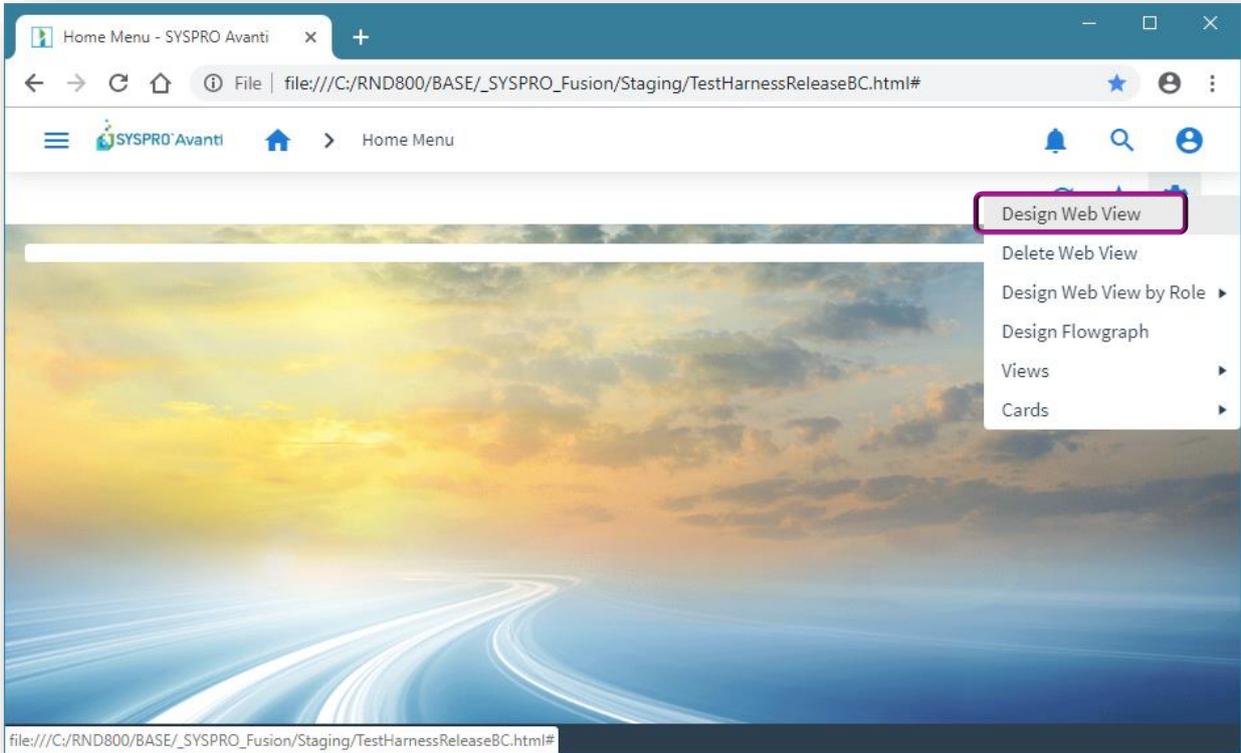
In addition, two toolbar captions have been added to this pane – a **Show completed jobs** checkbox and a **Job number** field.

Here are the Pane properties for this Customized Pane:



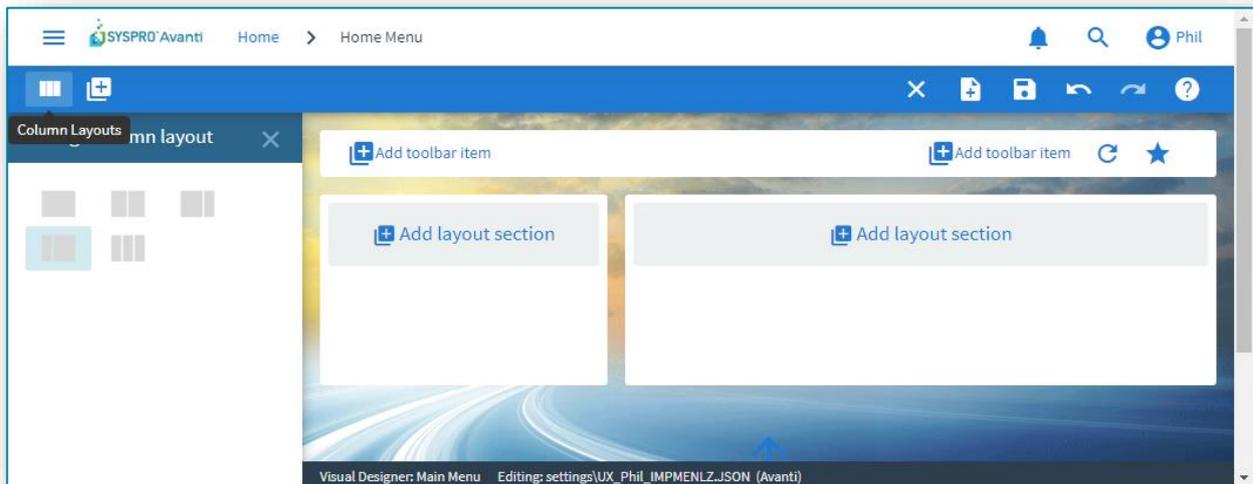
| Pane Properties            |                               |
|----------------------------|-------------------------------|
| Window title               | Work in Progress Job Variance |
| Object type                | Listview                      |
| VBScript file name         | settings\Phil_VBS_IMP MEN09   |
| Initial docking position   | Left                          |
| ▶ <b>Form attributes</b>   |                               |
| ▶ <b>Pane Caption</b>      |                               |
| ▶ <b>Refresh details</b>   |                               |
| ▲ <b>Toolbar control 1</b> |                               |
| Caption                    | Show completed jobs           |
| Icon                       | Icon ✓                        |
| Control type               | Checkbox                      |
| ▲ <b>Toolbar control 2</b> |                               |
| Caption                    | Job number                    |
| Icon                       | Icon                          |
| Control type               | Edit control                  |

Now launch Avanti, and select to **Design Web View** from the **HOME Menu**:



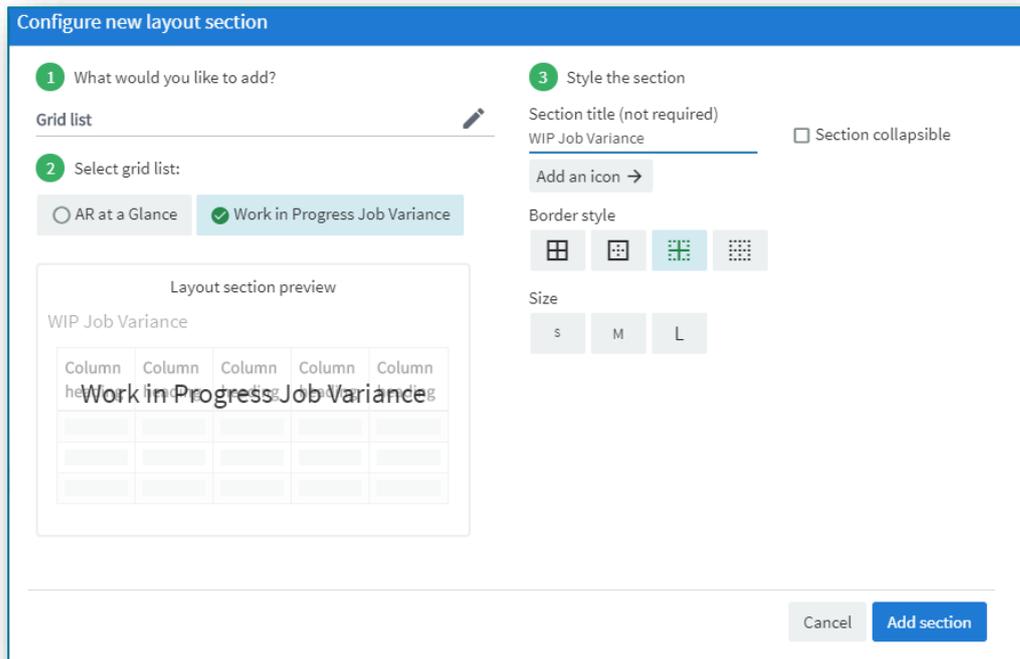
Select a two-column layout:

- The first column being small (to hold the Customized Pane toolbar buttons)
- The second column being larger (to hold the data grid)

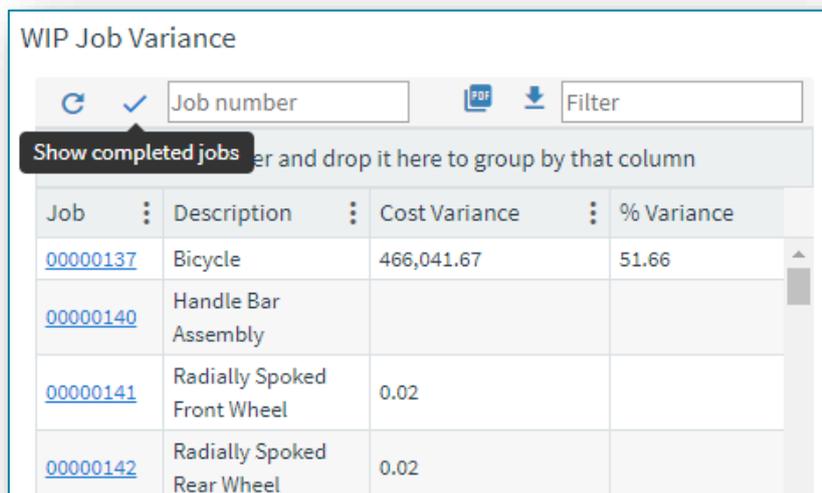


Select to add a Layout Section to the larger layout section.

Select **Grid List**, followed by the **Work in Progress Job Variance** option and click on **Add Section**:



Click on **Save layout**, and Avanti will refresh your **HOME Menu** and you will see the **Job Variance** list view:



For most Customized Panes you will now have to add any toolbar buttons to the web view, but a list view is different in that it will automatically display the **REFRESH** and any other pane toolbar buttons in the grid toolbar area. Thus, in the example above, the **REFRESH** button, **JOB NUMBER** field and **SHOW COMPLETED JOBS** are displayed in the grid toolbar.

The **REFRESH** and **SHOW COMPLETED JOBS** are displayed as icons in the toolbar because of their associated icons in SYSPRO.

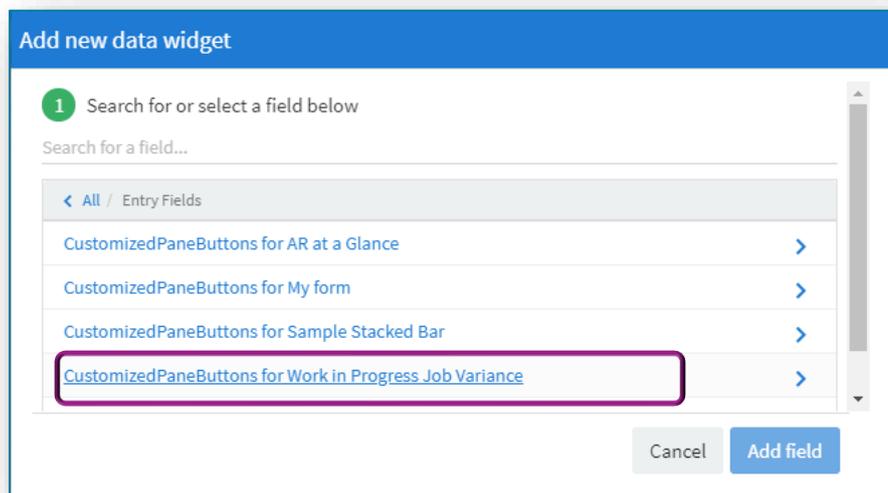
For the purposes of this example, we will now add the customized pane toolbar buttons to the web view.

**Note:** Toolbar buttons that are edit controls (i.e. entry field and check box type) should be added to a **FORM** in a web view, and simple (non-editable) buttons should be added to a **LAYOUT** section.

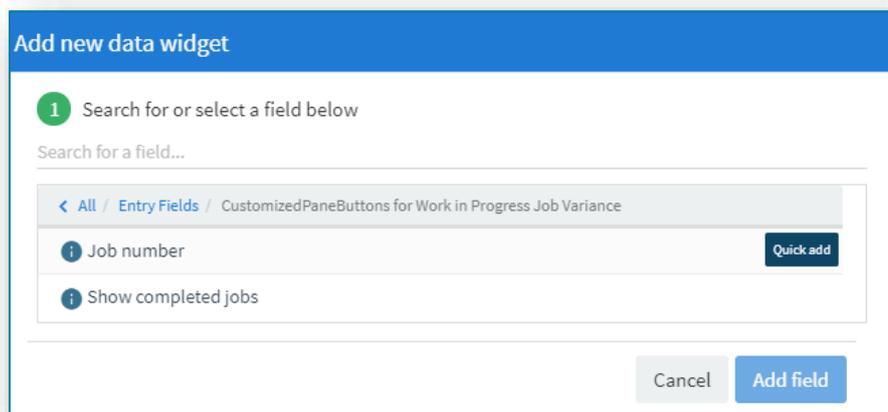
Select **Design Web View** and add a **FORM** layout section (Single Form) to left-hand section.

Click on the **PLUS** icon to add fields to the Form.

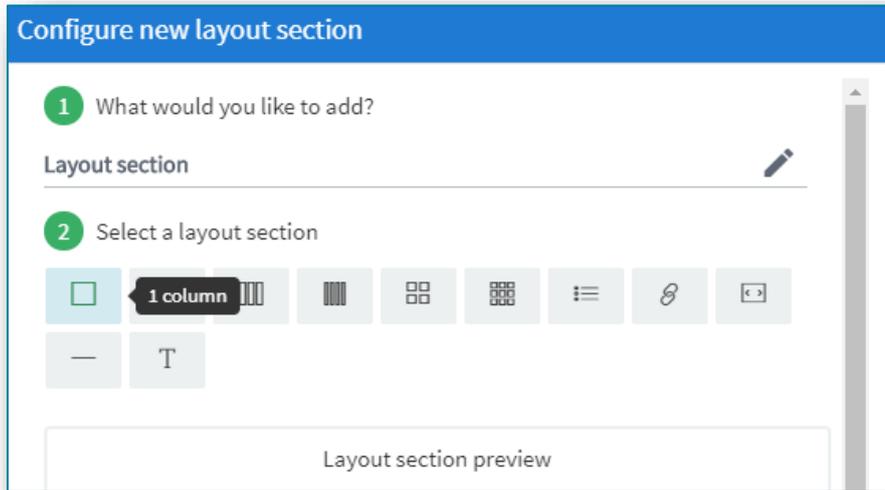
Click on **Entry Fields**, and select **CustomizedPaneButtons for Work in Progress Job Variance**:



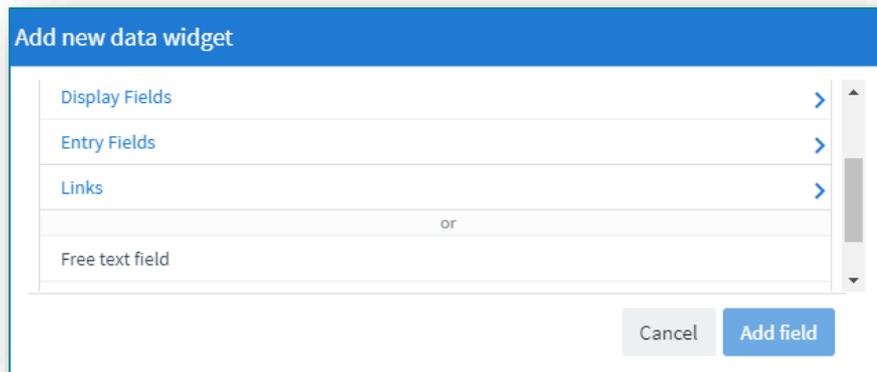
Add the two fields **JOB NUMBER** and **SHOW COMPLETED JOBS** to the form:



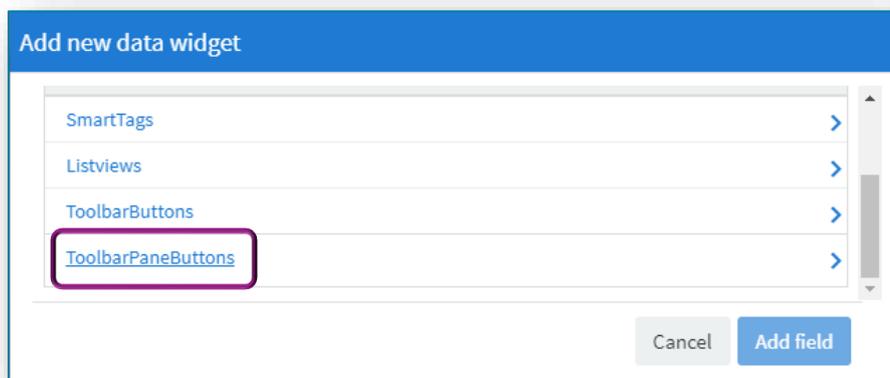
To add the **REFRESH** button to the web view, add a single-column layout section:



Click on the **PLUS** icon to add a widget to this layout, select **Links**:

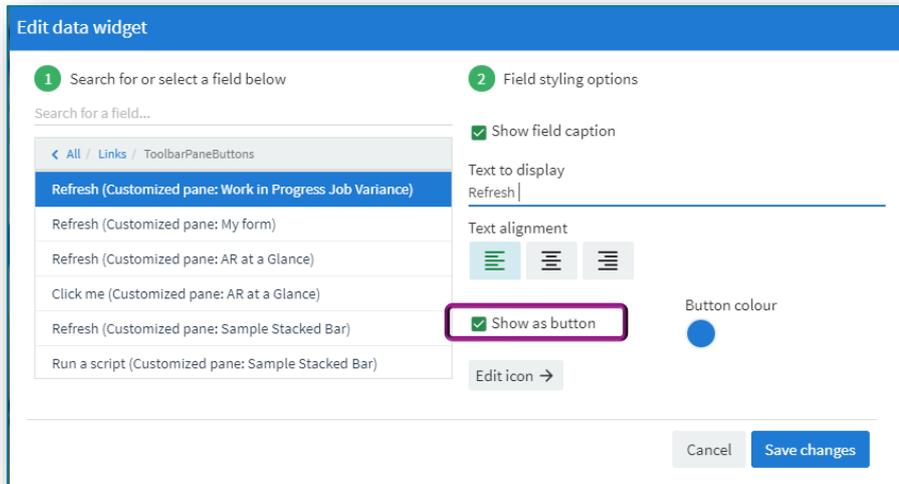


Select **ToolbarPaneButtons**:



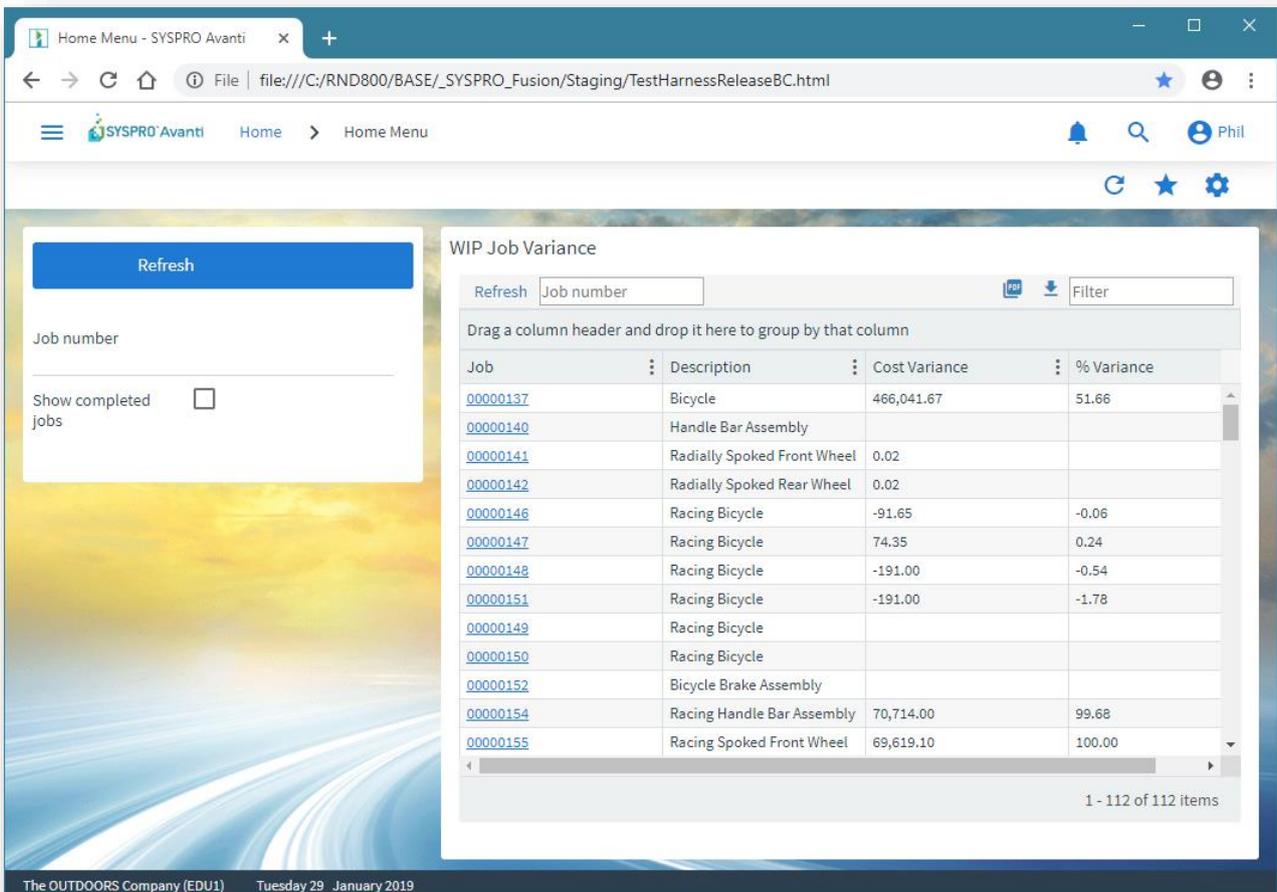
And then select and add the field **Refresh (Customized Pane: Work in Progress Job Variance)**.

To enhance the appearance of the field, select the **Show as button** option.



Now click on **Save Layout**.

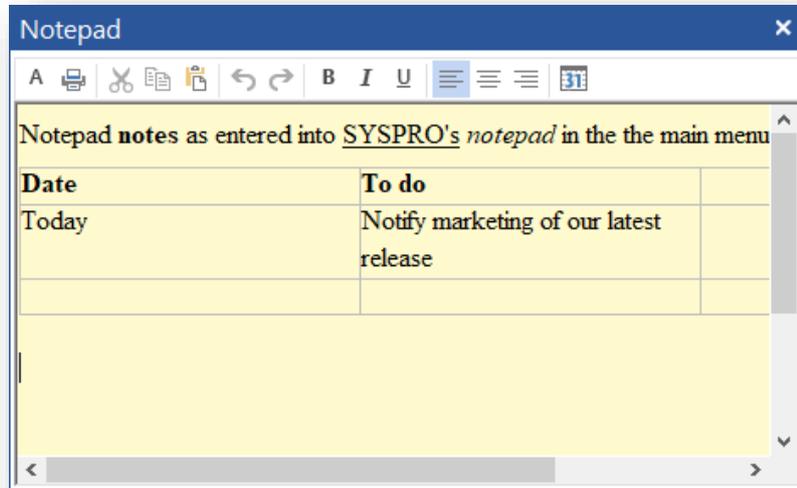
The **HOME Menu** web view should now look like this:



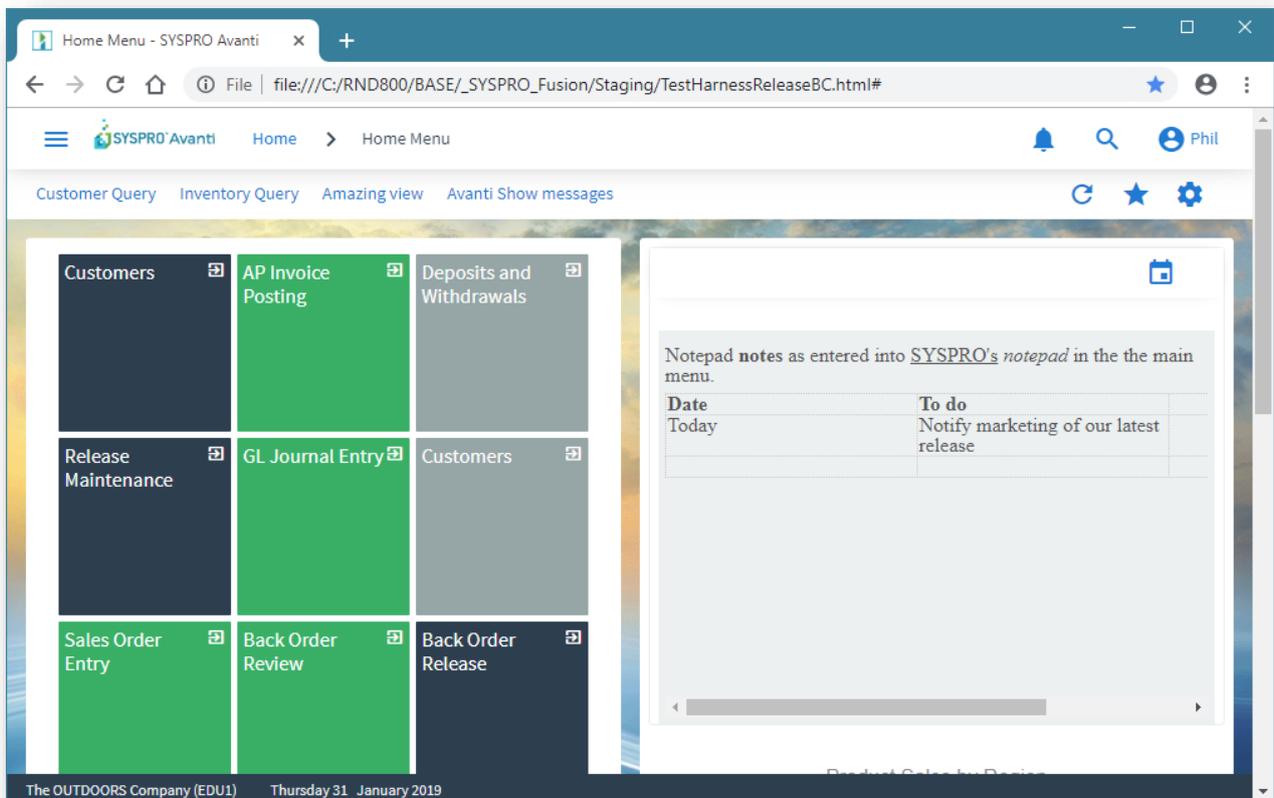
## ADDING A NOTEPAD TO AVANTI

Notepads that are built into a SYSPRO application, or Customized Panes that use the notepad control, can be added to a web view to be displayed in Avanti.

Here's an example of SYSPRO's notepad that's included in the main menu:

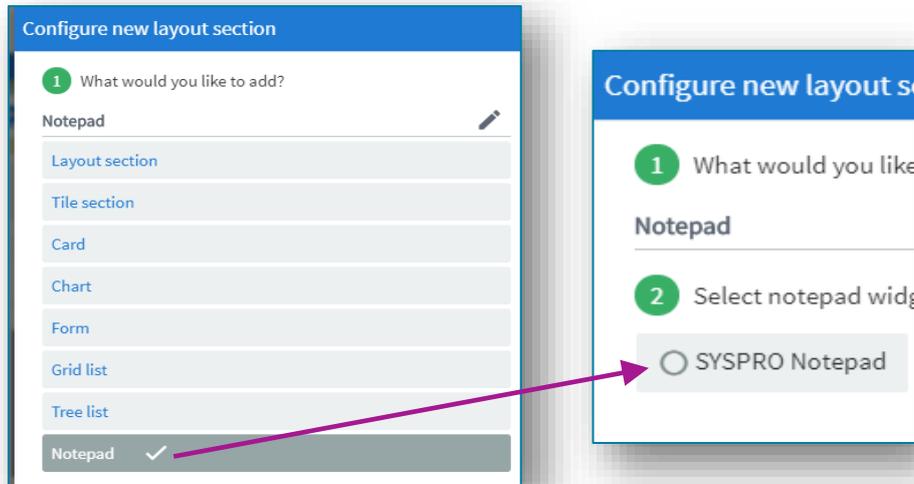


And here are the same notes displayed in Avanti:



To add a notepad to a web view, launch the **Visual Designer** and select to add a new Layout Section.

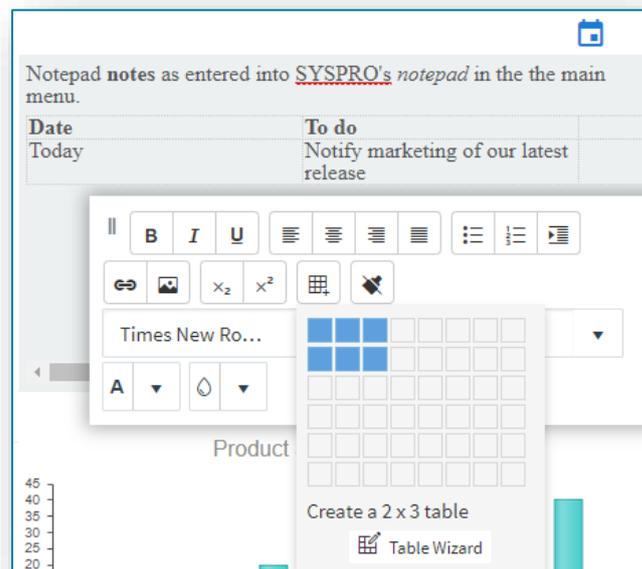
If the application includes a notepad control this will be indicated:



Both built-in notepads and any customized pane notepads will be displayed here.

Select the notepad, click on **Save Layout** and any notes associated with the notepad will automatically be displayed in Avanti's notepad.

When you click anywhere in the Avanti notepad, a popup menu bar will display the available functionality:



### Considerations:

- The notes entered in Avanti are in HTML format and these are converted on-the-fly to the RTF (rich text format) required by SYSPRO's notepad control.

- If the notepad in SYSPRO includes a **SAVE** button, then this will be displayed in Avanti's notepad toolbar as well.
- Notes in Avanti are automatically saved where appropriate, just as they are in SYSPRO itself. For example, there is no SAVE button in SYSPRO's main menu notepad because any notes entered there will be automatically saved when you exit SYSPRO. And in Avanti the same principle applies: when you exit Avanti then any changed notes will be automatically saved.

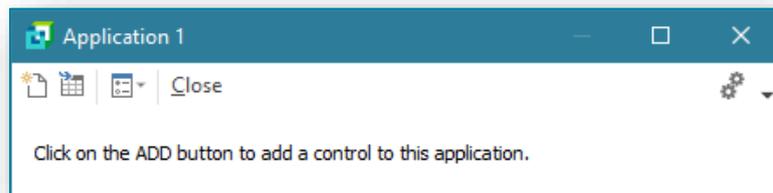
## HOW TO PRESENT APPLICATION BUILDERS IN AVANTI

The **Application Builder** in SYSPRO is a collection of customized panes hosted in a SYSPRO program.

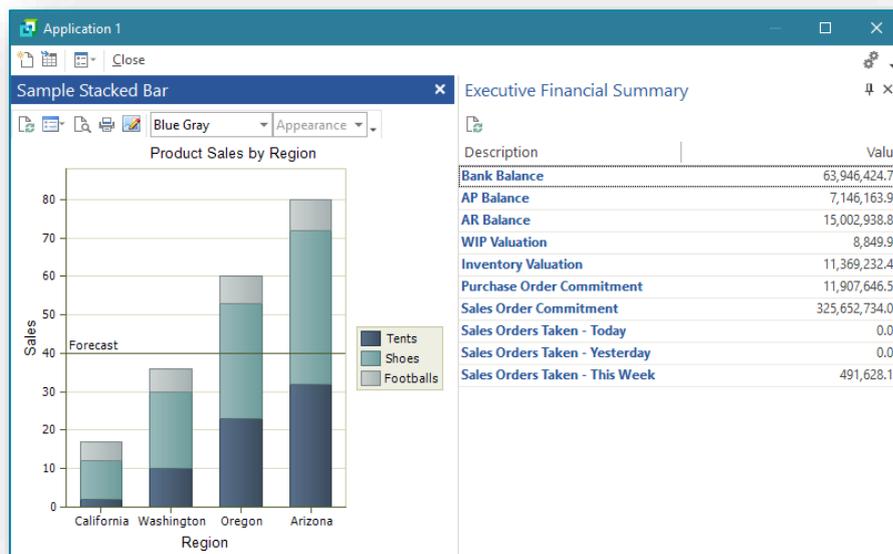
Up to 20 such programs (named **IMPDH1** thru **IMPDH9**, and **IMPDHA** thru **IMPDHK**) can be built in SYSPRO, and these can be surfaced in Avanti, either at the operator or role level.

To present an application builder in Avanti, follow these steps:

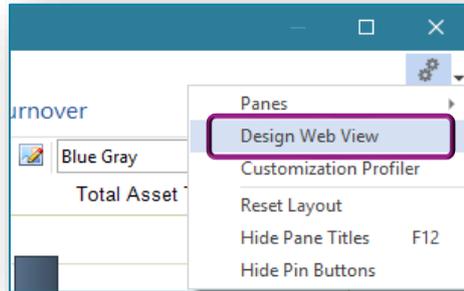
1. Create the Customized Panes in SYSPRO first.  
For example, here's a blank Application 1 in SYSPRO (**IMPDH1**):



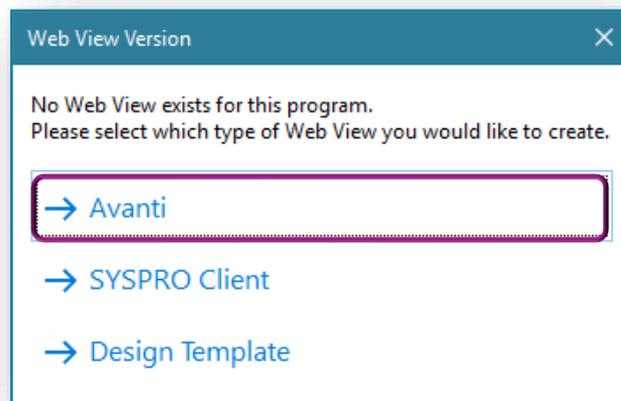
After adding two Customized Panes using the built-in samples for a list view (Executive Financial Summary) and a graph (Sample Stacked Bar), it looks like this:



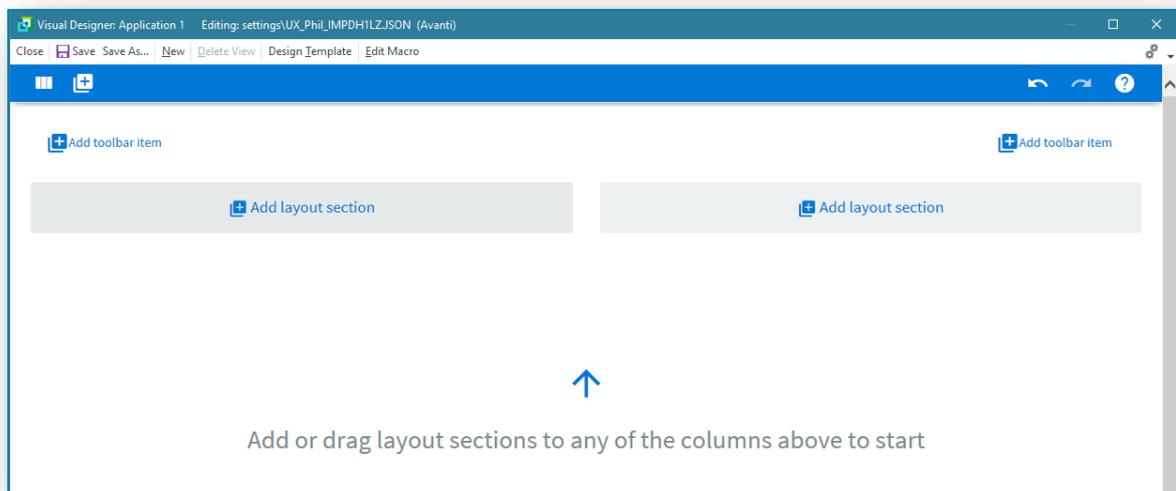
- Exit out of the Application Builder to save away any new Customized Panes just added.
- Relaunch the Application Builder and select **Design Web View**:



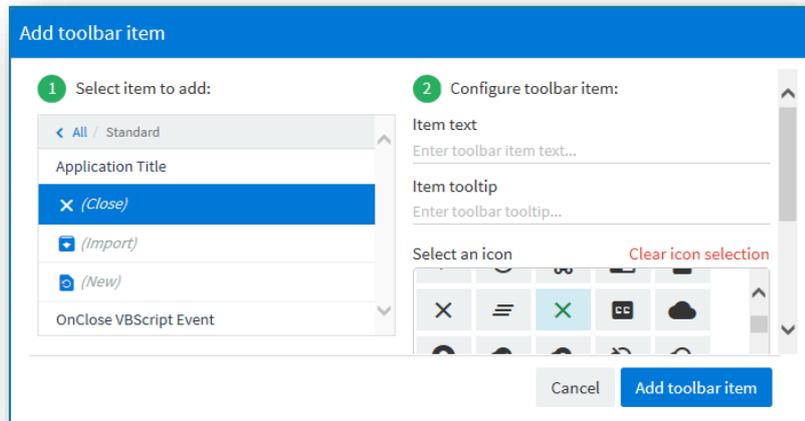
- Select to design for Avanti:



- Click on **Add layout section** and add the Grid List **Executive Financial Summary** and the chart **Sample Stacked Bar**.

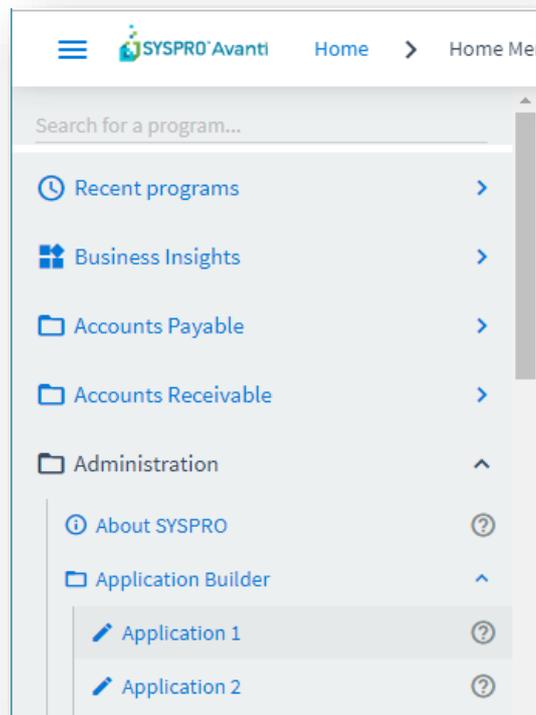


6. Remember to add a CLOSE button to the toolbar:



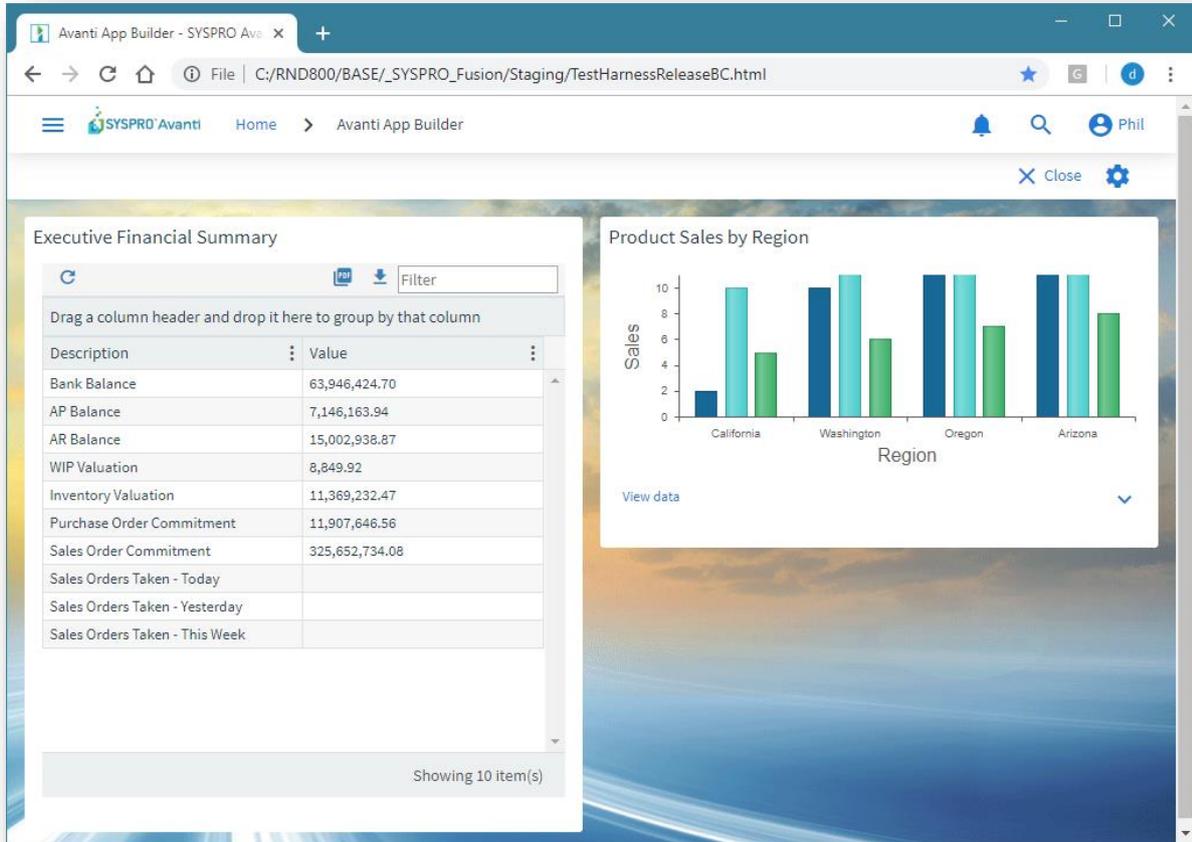
7. Save your web view.

In Avanti, to run this Application Builder, click on the hamburger menu, open the **Administration** folder and click **Application 1** to run:



Your Application 1 will now be launched.

The title of the Application Builder will be displayed in the Avanti menu bar:

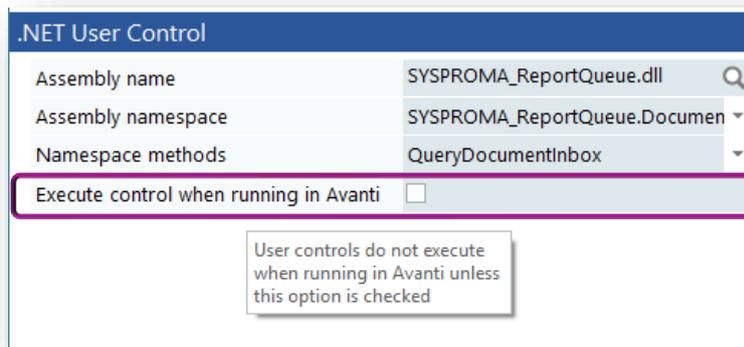


## NOTES ON .NET USER CONTROLS AND AVANTI

By default, .NET User Controls added to an application in SYSPRO will not execute when you are running Avanti because the control is not necessarily suitable to be rendered in a Web page.

However, the output from a user control could be directed, for example, to a list view which in turn can be displayed in the **Visual Designer**.

The control must be explicitly informed that it must be executed by enabling the **Execute control when running in Avanti** option:



If a .NET User control has any User Interface interaction, then this will not appear in Avanti.

Here are some suggestions on how to convert User Controls for use in Avanti:

**Option 1: Convert to SYSPRO UI and use VBScript**

The business logic can be kept the same, but all UI must be removed and instead sent to SYSPRO via events to create list views, forms and charts using VBScript Customization and power tailoring.

**Option 2: Create Customized Cards**

UI controls that are not supported for Avanti would need to be built as a card with HTML and JavaScript.

*Skills required: HTML, JavaScript, JQuery.*

Cards can be used in both Avanti and web views within SYSPRO, making them ideal for cross-platform use.

The Card builder allows you to build a customized card based on a business object or xml file. Therefore, using the "Builder" card enables the following:

- **Design a card**

Create a new card by selecting from various layout types (i.e. tabs, section headings, carousels, accordions and tables).

- **Map fields**

Map XML fields (from SYSPRO business objects or any .XML file) to the layout and once the card is created, the fields are populated with the data. If required, you can also change description fields easily by selecting them from the preview.

- **Define XMLIn**

If a SYSPRO business object was selected, the XMLIn fields for the business object are displayed in a tree structure and values can be customized by selecting a field and changing it accordingly.

**Note:** There is no validation on the selection made as this happens when the business object is called with the customized values.

When you select an .XML file instead of a business object, you can define a **BindFunctionName** which executes when the card is selected in SYSPRO.

- **Save card**

Once you save the card, the \*.html and \*.xml files are stored in the \Samples folder.

### Option 3: Native Avanti Application

A development extension for Visual Studio is available from **SYSPRO 8 2020 R2** to allow third party developers to develop new plugin modules for Avanti entirely in C# .NET. These will be completely debuggable, able to call Business Objects and will get all of Avanti's customization and personalization functionality out of the box for anything they develop.

See the [SYSPRO Avanti Development](#) section for more information.

## USING E-SIGNATURES IN AVANTI

When an e-signature in SYSPRO is triggered various actions can take place.

The following actions will not work correctly in Avanti:

- Running an application (an .EXE)
- Running an SRS report
- Emailing

# CUSTOMIZING APPLICATIONS IN AVANTI

This section describes how to customize applications in Avanti, such as adding scripts to change the behavior of form fields or grid data or extending the capabilities of any application to display more information, either from the SYSPRO database or indeed from any external application.

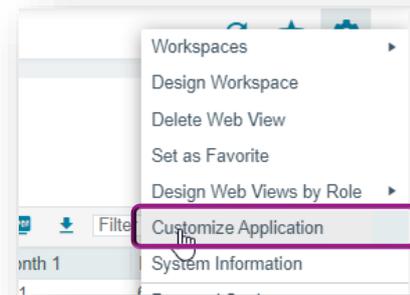
This area of the product is known as **Power Tailoring** in SYSPRO and there are two books devoted to this subject that can be found on the Internet (search for 'SYSPRO Power Tailoring Part 1' and 'SYSPRO Power Tailoring Part 2').

A full understanding of Power Tailoring and what's possible in terms of customization is beyond the scope of this document, and instead this serves to provide a high-level explanation of how to achieve the same end result in Avanti.

Just as a starting point, to customize aspects of a SYSPRO application you would typically right-click on a form field, a toolbar, a grid column header or docking pane window title in order to access the VBScript editor, or to add a customized pane or to generally access customization capabilities.

In Avanti, there is no notion of a 'right-click' using a mouse. Instead, all the customization capabilities in Avanti are controlled by a single program called **Customize Application**.

This can be accessed from the **Settings** icon in any application, including the **HOME Page**:



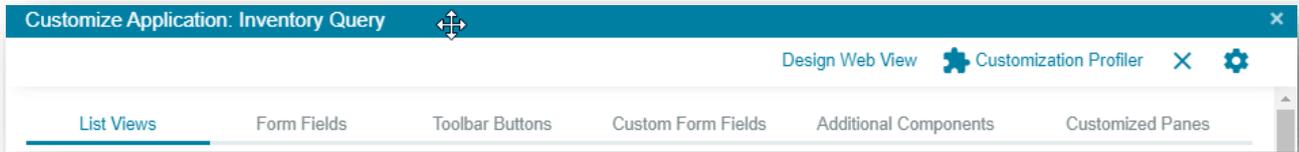
## Considerations:

- This menu option is only available if the operator has the VBScript security option enabled and is not logged in as a role.  
In SYSPRO, the same program can be accessed (from the Gear icon) and used with identical capabilities.
- In Avanti, it is typically a two-stage process for a web view to be enhanced with new content or controls.  
First, you customize the application to add capabilities, and second you modify the web view (using the **Visual Designer**) to position the new controls or content.

For this section, we will customize the **Inventory Query** program (i.e. INVPEN).

All applications in Avanti or SYSPRO are generally made up of grids, form fields, charts, notepads and toolbar buttons. You can also have user-defined 'customized panes' added to any application; a customized pane can contain a grid, a form or indeed a number of other types of controls.

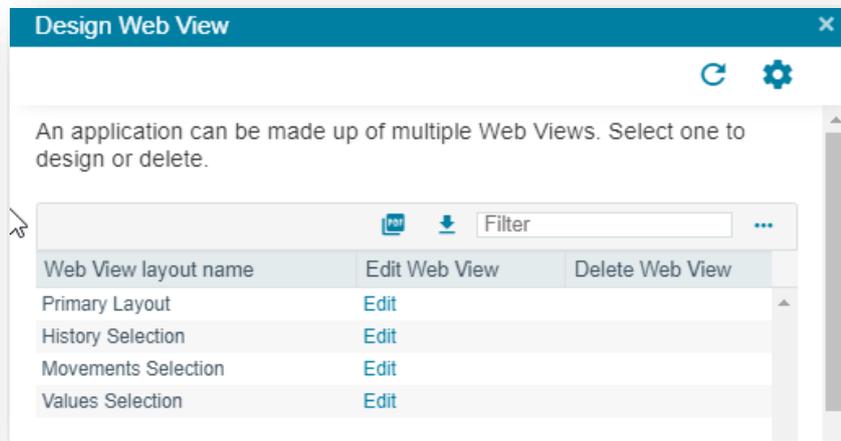
The **Customize Application** is displayed with the following capabilities:



- **List views**
  - Add a custom column
  - Edit a VBScript
  - Apply conditional formatting
  - Add or remove a grid column's visibility
  - Remove a custom column
  
- **Form fields**
  - Edit a script for a form or form field in the application
  - Add or remove a field's visibility in SYSPRO
  - Remove a custom form field
  
- **Toolbar buttons**
  - Edit a script for any toolbar button used in the application
  
- **Custom form fields**
  - Create or modify a custom form field
  - Add a custom form field to the application
  - Add a field from an associated Master Table to a form
  - Add a scripted field to a form
  
- **Additional components**
  - Create your own customized pane or component
  - Add a pre-built component to the application
  
- **Customized panes**
  - Edit or remove any existing customized panes
  - Reset the layout for the application

In addition, you can edit the web view(s) associated with the application by clicking on **Design Web View**. However, this is not allowed if you are customizing the **HOME Page**, as web views there are known as **Workspaces** and are handled differently.

All applications have a **Primary Layout**, and some have multiple web views that collectively make up the Avanti user interface:



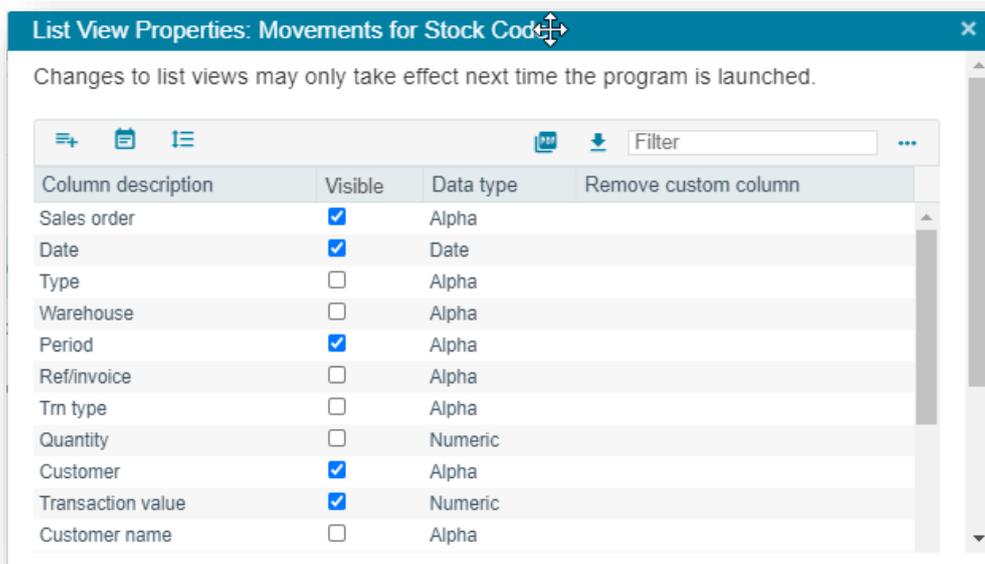
Select **Edit** to design or modify the web view – this calls up the **Visual Designer** in a separate TAB in the browser.

If a web view has already been designed, then you may click on the **Delete** hyperlink.

To view all the customizations applied to the application, select the **Customization Profiler**, which is especially useful to view all the scripts that have been defined.

## LIST VIEWS

To change the behavior of a list view or grid, click on the required item.



You can then perform one of the following actions:

- Add a custom column
- Edit a VBScript
- Apply conditional formatting (see the [Modifying the Avanti Grid](#) section for more information)
- Add or remove a grid column's visibility
- Remove a custom column

**Note:** These changes will not reflect in Avanti until you exit the program being customized and reload it.

## FORM FIELDS

This TAB page displays all the form fields that are available in the application and indicates any custom form fields that have been added.

You can adjust the visibility of any form field – but that only affects the form field when running SYSPRO.

In Avanti, to edit a field's visibility in a web view, you use the **Visual Designer** to design a web view.

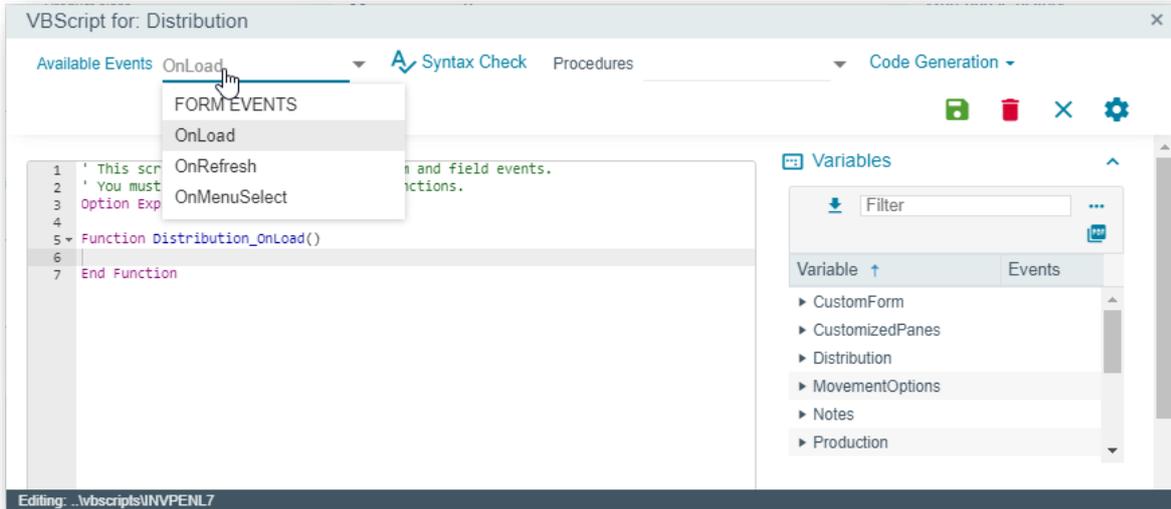
This shows all the form fields in this application.

| Form fields                   | Script               | Data type              | Visible in SYSPRO                   |
|-------------------------------|----------------------|------------------------|-------------------------------------|
| ▶ Distribution                | <a href="#">Edit</a> |                        |                                     |
| ▶ Movement Options            | <a href="#">Edit</a> |                        |                                     |
| ▶ Notes                       | <a href="#">Edit</a> |                        |                                     |
| ▶ Production                  | <a href="#">Edit</a> |                        |                                     |
| ▲ Stock Code Details          | <a href="#">Edit</a> |                        |                                     |
| Style                         |                      | Drop down (Custom:STK) | <input checked="" type="checkbox"/> |
| Stock code                    |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Description                   |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Long description              |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Dangerous goods               |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Stock code on hold flag       |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Date of supersession          |                      | Date                   | <input type="checkbox"/>            |
| Uses preferred supplier       |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Stocking unit of measure      |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Alternate unit of measure     |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Other unit of measure         |                      | Alpha                  | <input checked="" type="checkbox"/> |
| Manufacturing unit of measure |                      | Alpha                  | <input checked="" type="checkbox"/> |

Form fields are grouped together logically to make it easier for identification.

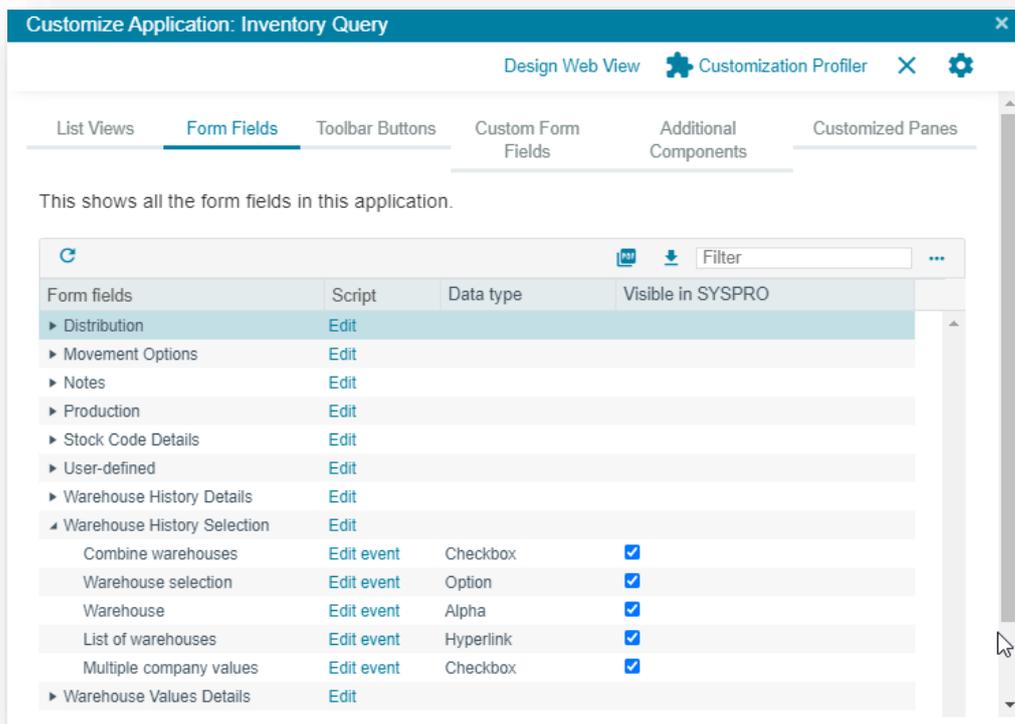
Scripts that modify the behavior of a form or form field are linked to each form. To edit a script for a form, click on **Edit**.

A display form has only three events – **OnLoad**, **OnRefresh** and **OnMenuSelect**:

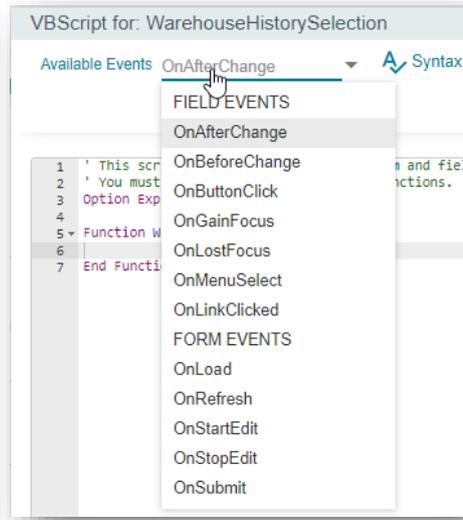


If the form is editable, you can:

- select **Edit** to use the script editor.
- select a specific field and click on **Edit Event**.  
*See the section [Using the Script Editor](#) for more information.*



An editable form has many available events, as indicated in the example below:



## TOOLBAR BUTTONS

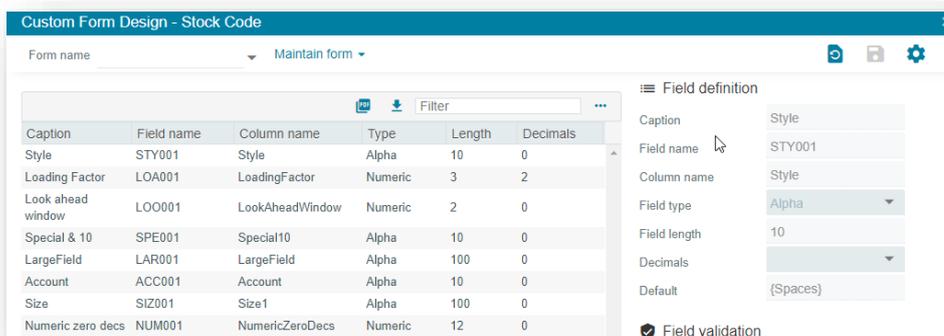
This TAB page indicates all the toolbars used in the application. Each toolbar can have its own script that can modify the behavior of a button.

## CUSTOM FORM FIELDS

This TAB page displays all the available custom fields that can be added to the application. Once added, they can be surfaced in a web view using the **Visual Designer**.

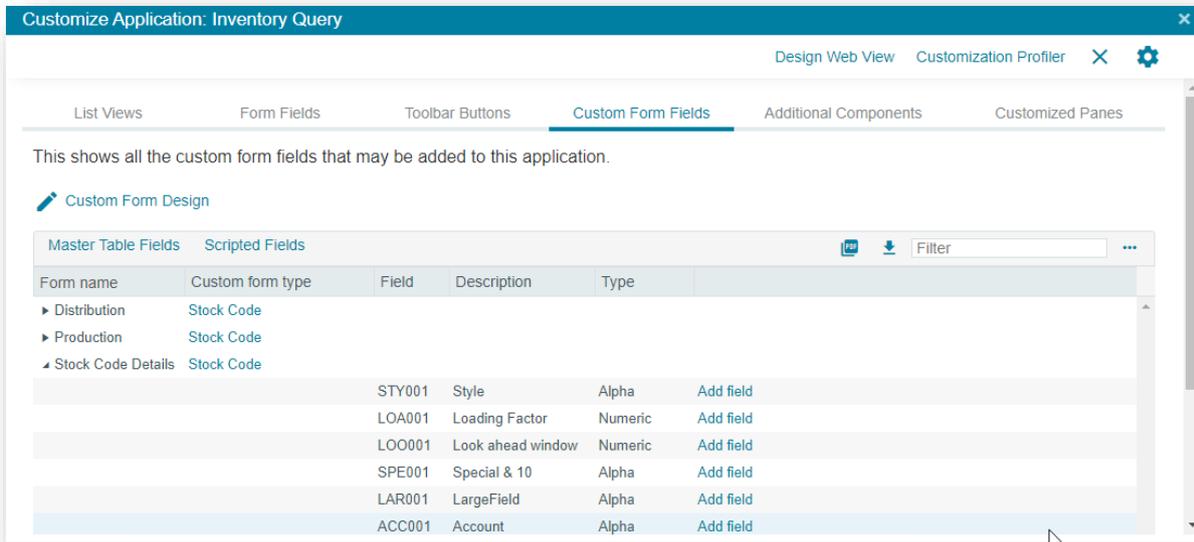
Custom form fields are linked to 'key fields', such as a Stock Code or Customer. Select the **Custom Form Design** option to view all the available custom form types. You can then start to create your own custom form fields.

Alternatively, you can select the hyperlink in the Custom Form Type column to access the **Custom Form Design** for the specific type:



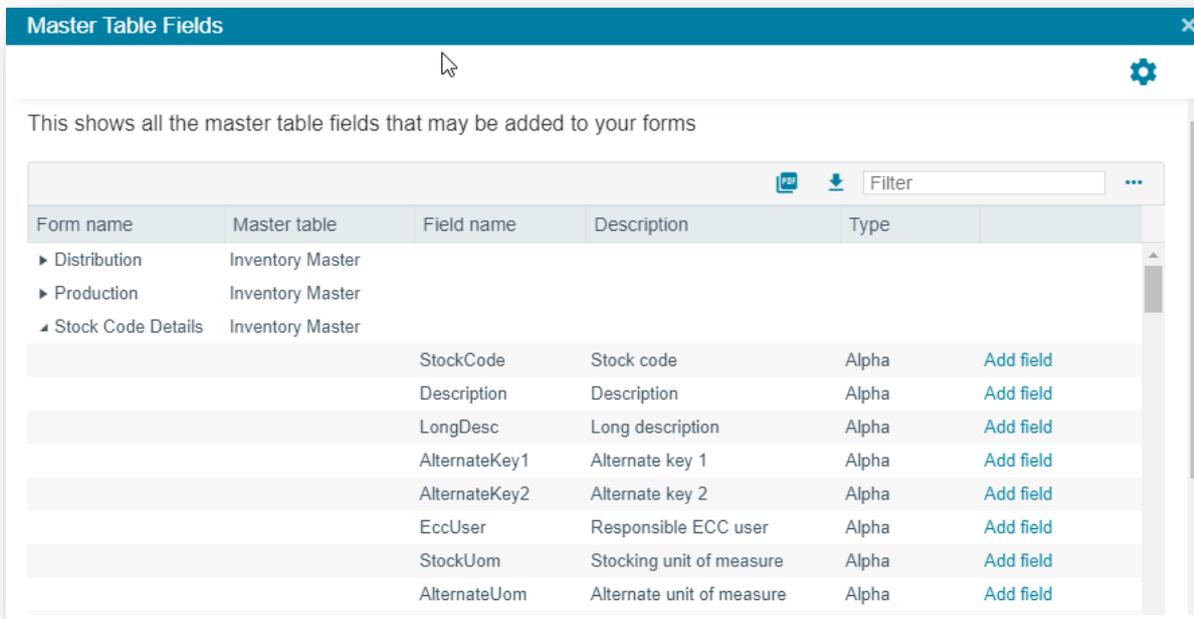
In this TAB page, the system identifies all the key fields used in the forms and presents the list of custom form fields.

Click on **Add Field** to add the field to the form.



In addition, in a similar manner to custom form fields, you can also add fields from any Master Table linked to each form.

Click on **Master Table Fields**, select the field and click on **Add Field**. Note that you will not be allowed to add a field if it has already been added to the form.



And finally, you can also create and add 'scripted fields' to any form. Scripted fields are not associated with any table or custom form; instead, they serve as containers for whatever data you wish to hold or edit. The only way to populate such fields or to use the captured data, is via a script.

Select **Scripted Fields** to choose a field to add to any form, or to delete a scripted field, or to add a new one.

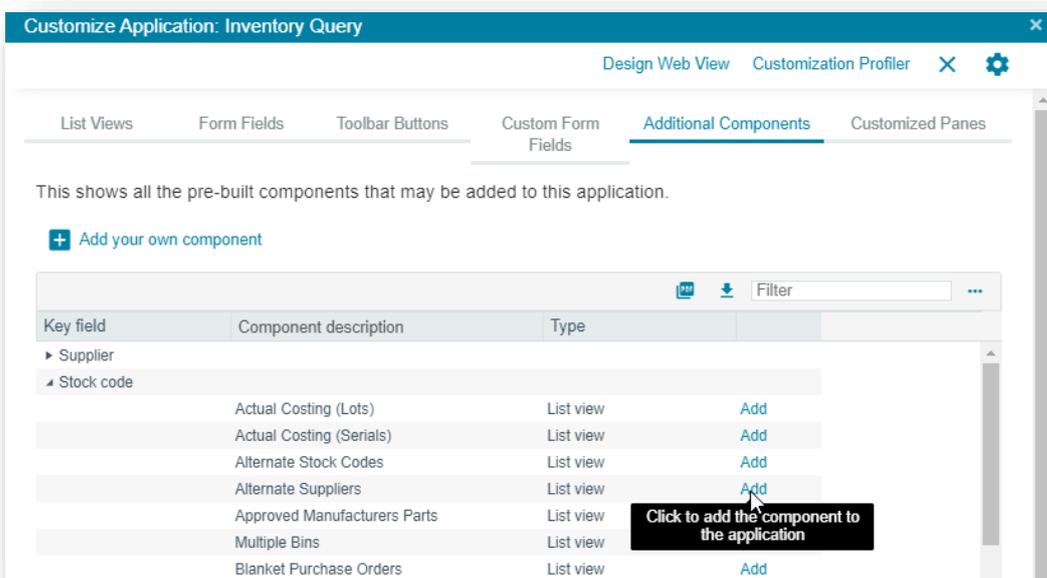


## ADDITIONAL COMPONENTS

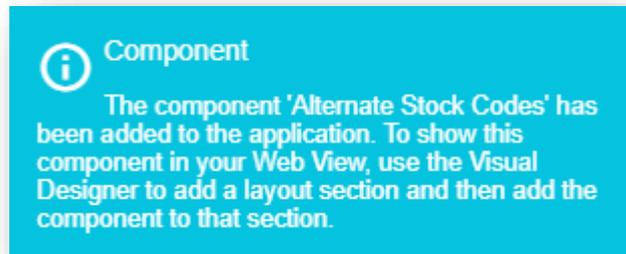
This TAB page displays all the pre-built components that may be added to the application. These components are automatically linked to the key fields found in the form fields in the application. This means that whenever the value in a key field in a form changes (either by direct user input, or the program changing the value) then the associated component is automatically refreshed.

Select **Add** to add the component to the application.

To surface the component in a web view, you must separately call up the **Visual Designer**, locate the grid or chart just added, and then add that to a layout section.



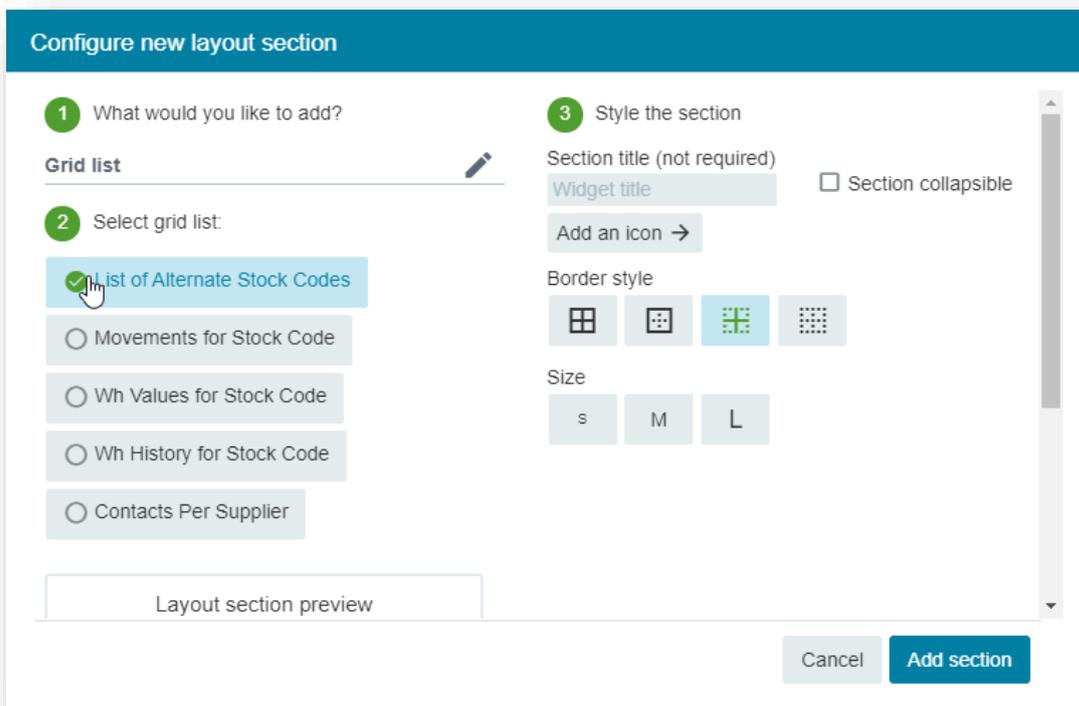
As an example, let us click on the **Alternate Stock Codes** component shown above. The following message is displayed:



Next, click on **Design Web View** and select to edit the Primary Layout (the **Visual Designer** is launched).

Click on **Add Layout Section**, select **Grid List** and you will see the **List of Alternate Stock Codes** item.

Click on **Add Section** to add this grid to your web view.

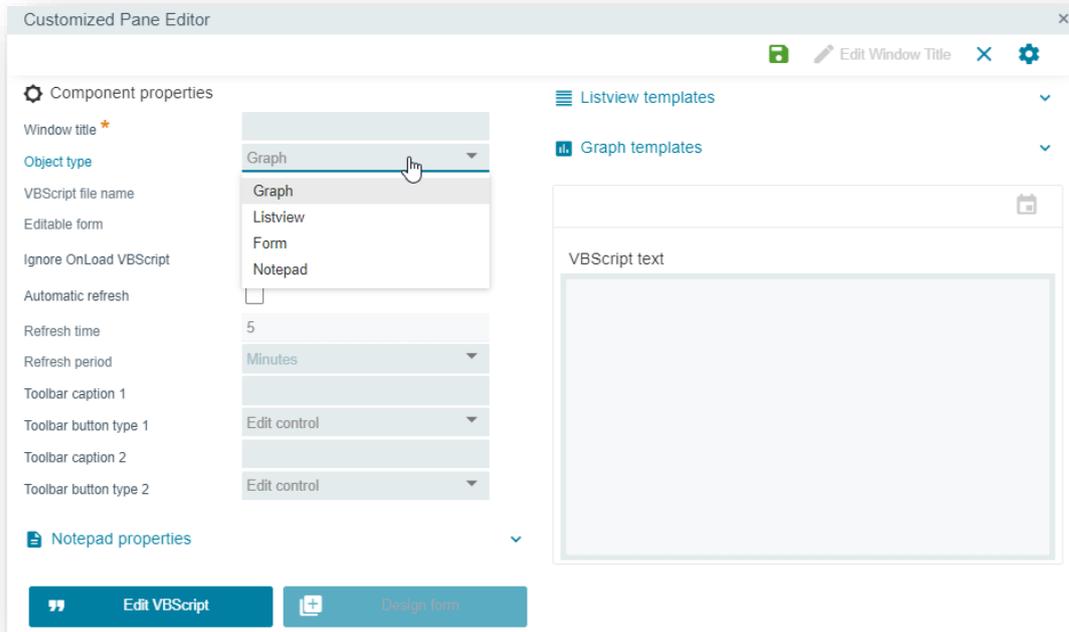


## ADDING YOUR OWN COMPONENT

You can also create your own component.

**Note:** This may require some understanding of Power Tailoring, depending on the complexity of the requirements.

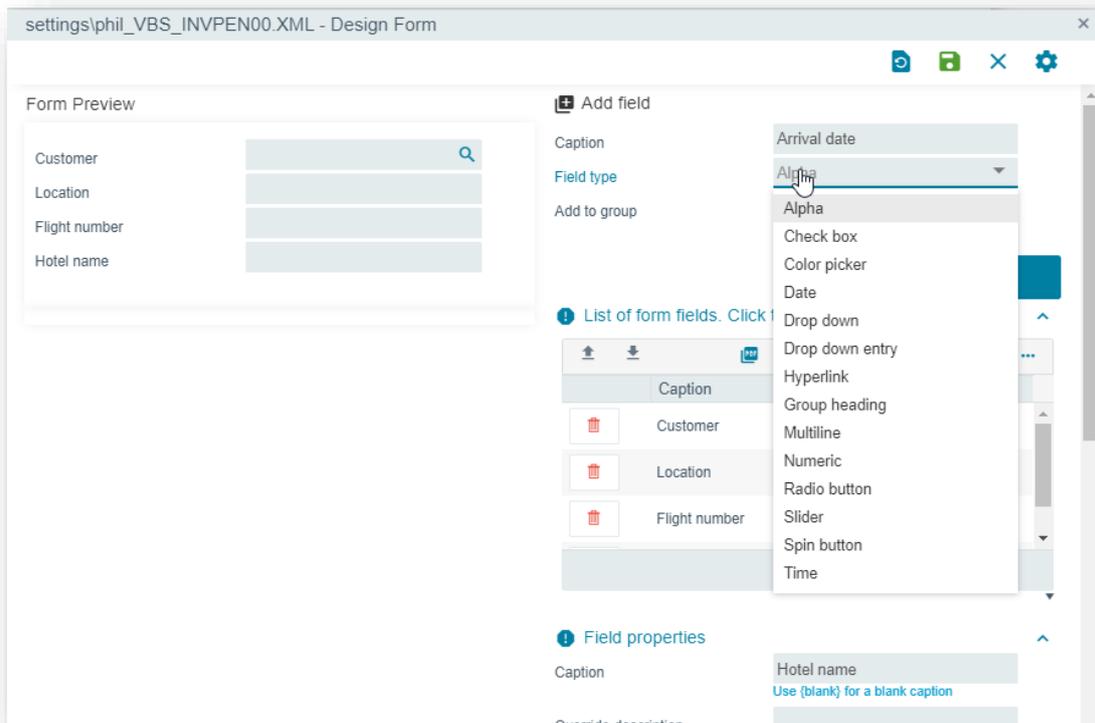
Select **Add your own component** and the customized pane editor is presented:



Select the type of object or control that you wish to create. For list view and Graph objects, there are several pre-built templates you can select from, and then modify as required.

You can then click on **Edit VBScript** to create or modify the script associated with the control.

For a FORM object, you can design the form by selecting **Design Form**:



To create a new form field, simply enter the CAPTION, select the Field Type and click on **Add Field**. A preview of the form is displayed. You can then provide extra field properties as required.

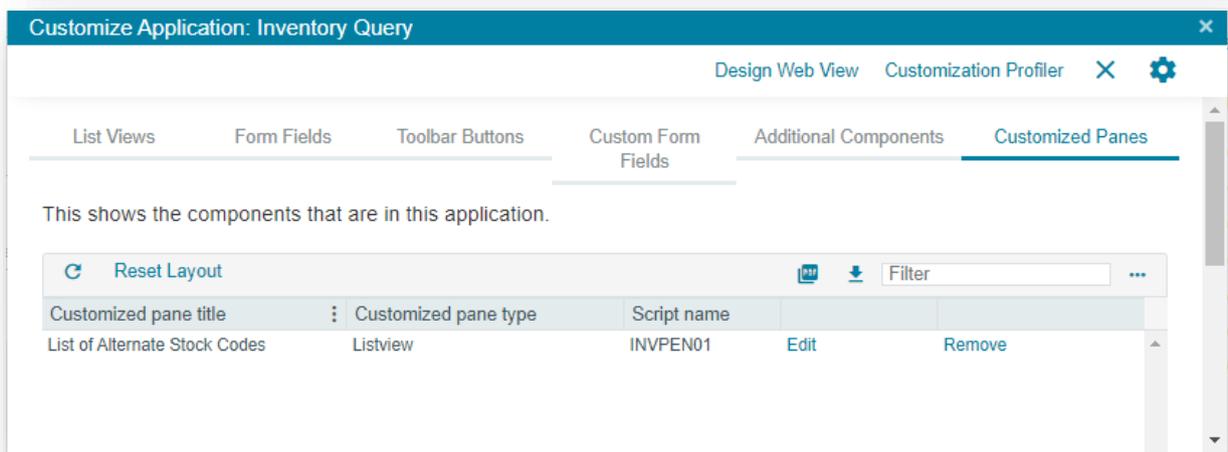
**Note:** When you save the form within a customized pane, you must then go into the **Visual Designer** and select the fields you would like to see in your web view.

## CUSTOMIZED PANES

This TAB page displays all the customized panes that have been added to the application.

From here, select **Edit** to launch the **Customized Pane Editor**.

Selecting **Remove** will remove the component from the application. However, you should note that if you remove a component which has been referenced in your web view, then the component in the web view will not function.



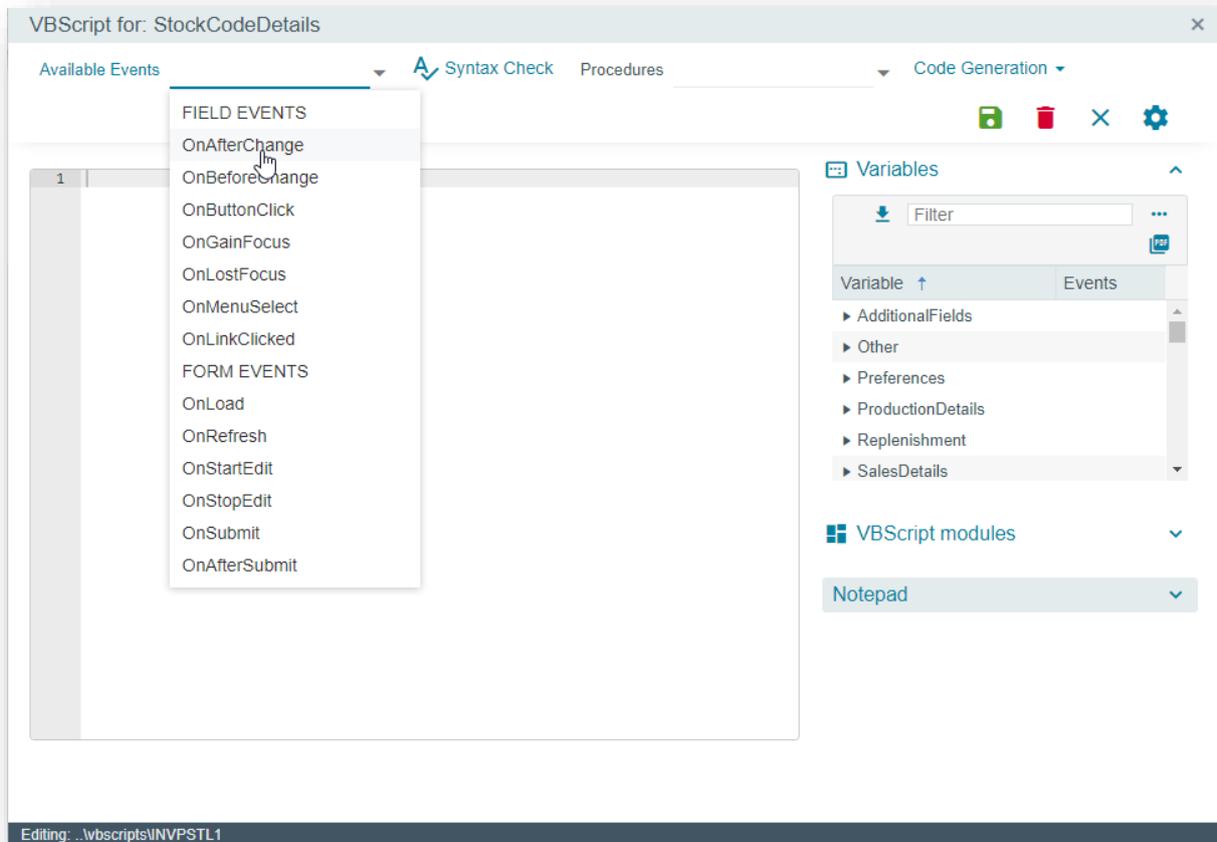
## USING THE SCRIPT EDITOR

The script editor allows you to modify the behavior of any control in SYSPRO or Avanti.

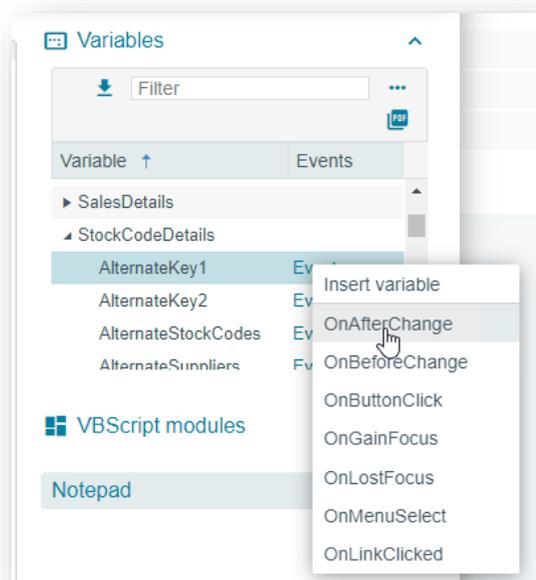
Once a script has been defined, it will work unchanged in both SYSPRO and in Avanti (apart from the differences noted in this document).

For this section, we will script the **Stock Code Setup** program (i.e. INVPST). The **Stock Code Details** form has been selected specifically, and within that, the `Stock Code` event was selected.

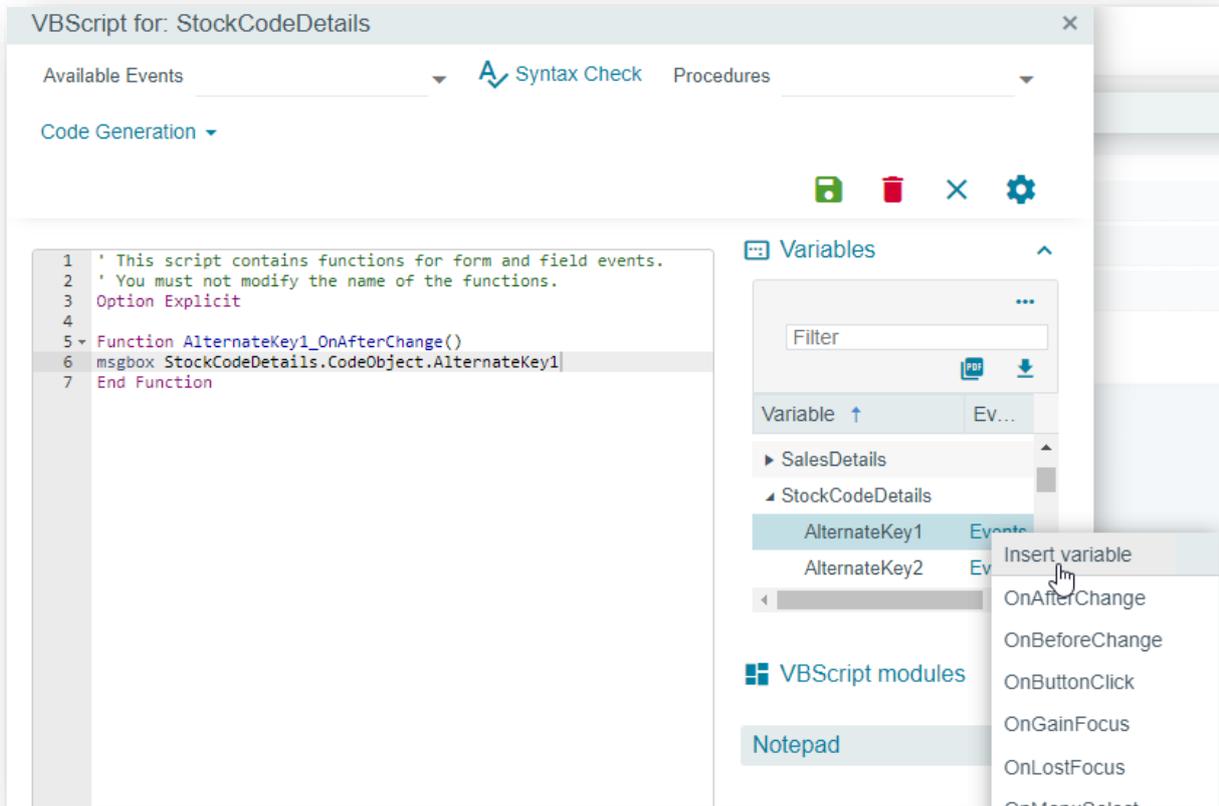
The script editor displays the available events for the current field, and the events for the form:



All the available form fields (including any custom form fields that have been added) are displayed in the **Variables** pane. If you want, for example, to script the behavior of the `AlternateKey` field, select the **Event** hyperlink and select the required event.

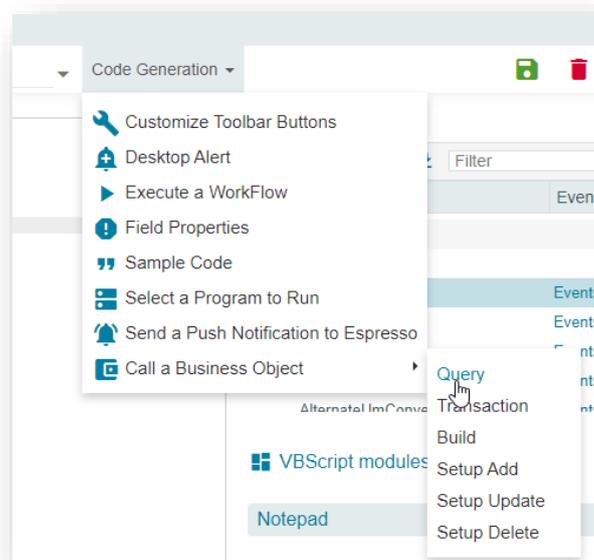


After selecting the **OnAfterChange** event, the script editor will insert the correct code, and then we can select to view the contents of the Alternate Key using the **msgbox** function and by inserting the variable itself:



## CODE GENERATION FACILITIES

Built into the script editor are various functions that automatically generate code that is inserted into the script editor.

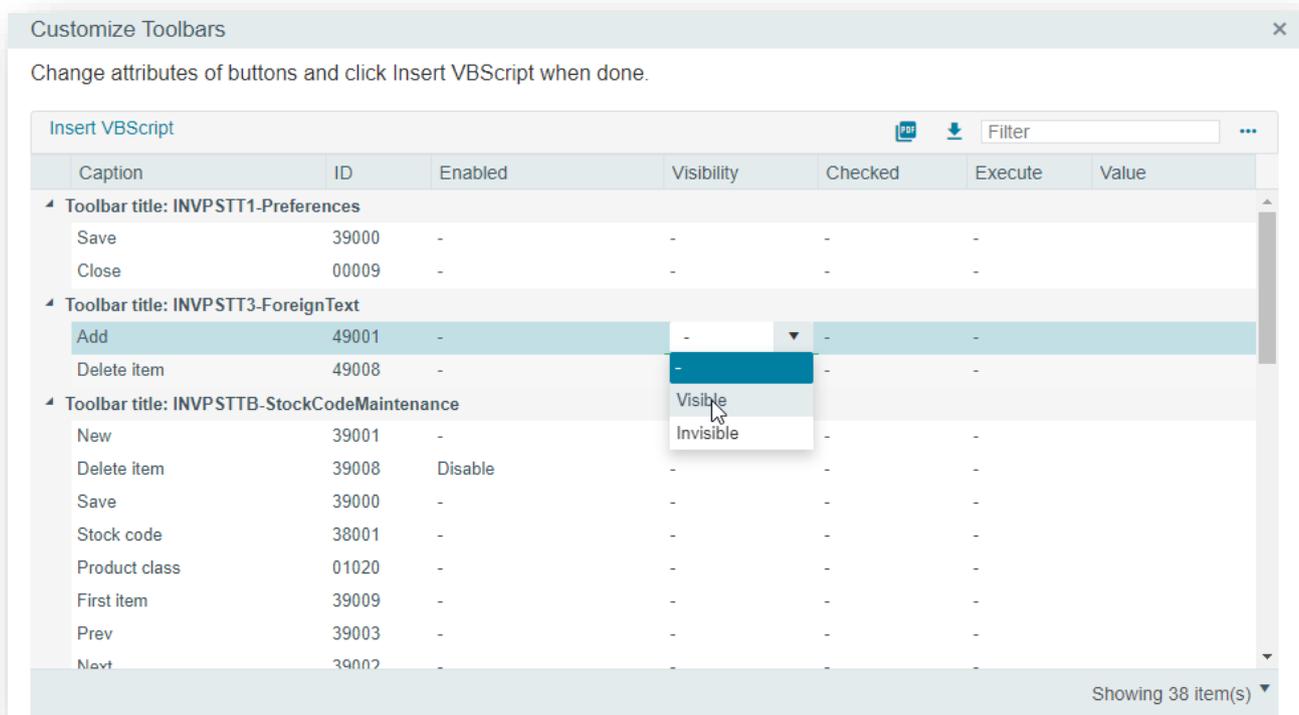


These features are fully documented in the **Power Tailoring** guide, except for **Customize Toolbar Buttons** which is explained below.

In this code generation window, the buttons that are associated with the toolbars in the application are displayed in a grid.

For each button you can select the following actions:

- Enable or disable a button
- Add or remove a button's visibility
- Check or uncheck a button
- Force a button to be 'executed' (i.e. as if you had clicked on it)
- Change the value of a button (this only applies to entry controls)



The screenshot shows a window titled "Customize Toolbars" with a close button (X) in the top right corner. Below the title bar, there is a subtitle: "Change attributes of buttons and click Insert VBScript when done." The main area contains a table with columns: Caption, ID, Enabled, Visibility, Checked, Execute, and Value. The table is grouped by toolbar titles. A context menu is open over the "Delete item" button in the "INVPSTT3-ForeignText" group, showing options for "Visible" and "Invisible".

| Caption   | ID    | Enabled | Visibility | Checked | Execute | Value |
|---|-------|---------|------------|---------|---------|-------|
| <b>Toolbar title: INVPSTT1-Preferences</b>          |       |         |            |         |         |       |
| Save  | 39000 | -       | -          | -       | -       | -     |
| Close   | 00009 | -       | -          | -       | -       | -     |
| <b>Toolbar title: INVPSTT3-ForeignText</b>          |       |         |            |         |         |       |
| Add   | 49001 | -       | -          | -       | -       | -     |
| Delete item   | 49008 | -       | -          | -       | -       | -     |
| <b>Toolbar title: INVPSTTB-StockCodeMaintenance</b> |       |         |            |         |         |       |
| New   | 39001 | -       | -          | -       | -       | -     |
| Delete item   | 39008 | Disable | -          | -       | -       | -     |
| Save  | 39000 | -       | -          | -       | -       | -     |
| Stock code  | 38001 | -       | -          | -       | -       | -     |
| Product class                                       | 01020 | -       | -          | -       | -       | -     |
| First item  | 39009 | -       | -          | -       | -       | -     |
| Prev  | 39003 | -       | -          | -       | -       | -     |
| Next  | 39002 | -       | -          | -       | -       | -     |

Showing 38 item(s)

Select the properties you wish to apply and click on **Insert VBScript**.

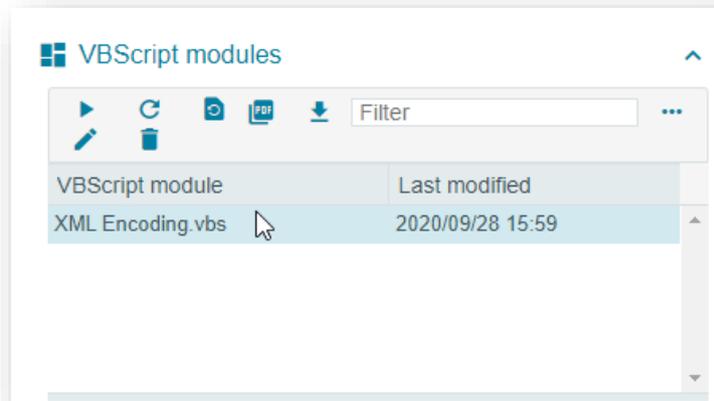
This will generate the following code in the script:

```
9 Function StockCodeDetails_OnLoad()  
10  
11 SystemVariables.CodeObject.ToolBarButton = "<Toolbars>" & _  
12 "<Toolbar Name='INVPSTT3' Id='49008' Enabled='False' Caption='Delete item' />" & _  
13 "</Toolbars>"  
14  
15 End Function
```

## VBSRIPT MODULES

You can also create script modules that allow you to create modular code.

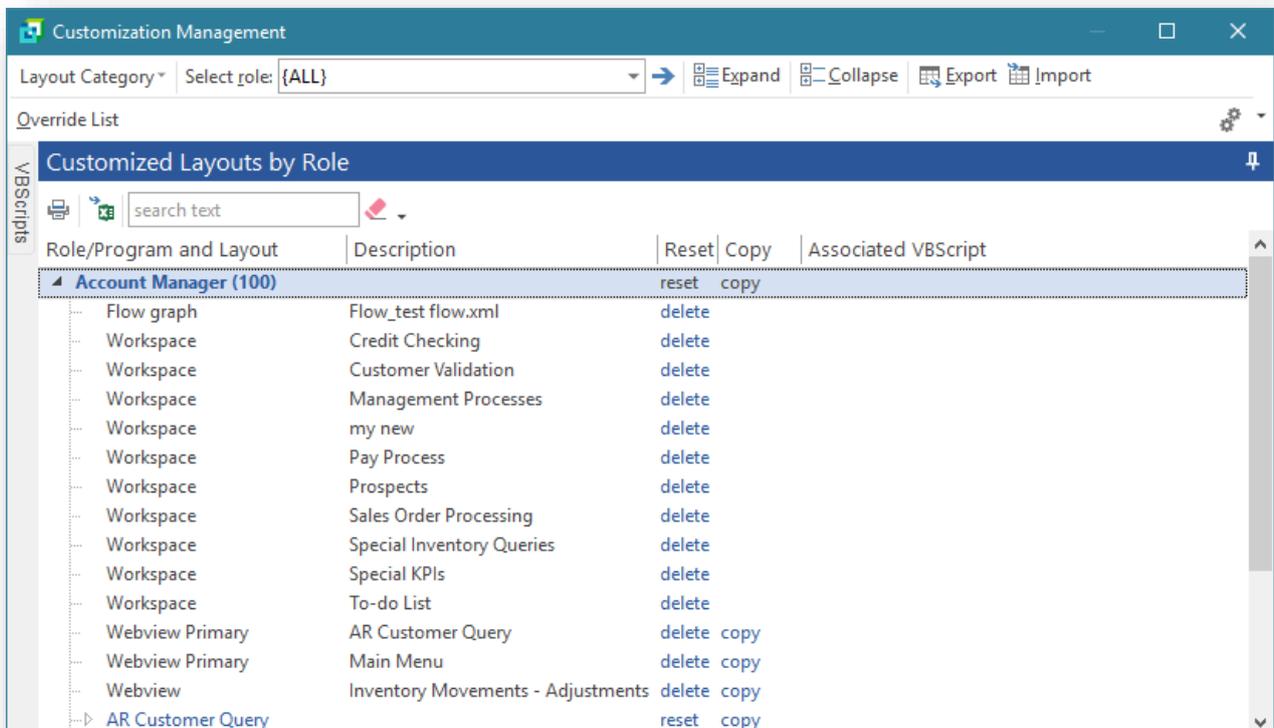
Each module can be called from your main script code.



## CUSTOMIZATION MANAGEMENT BY ROLE IN AVANTI

You can use the **Customization Management** program (i.e. IMPROL) in SYSPRO to manage customizations of web views or workspaces by role. This is accessible from the **Administration** tab of the SYSPRO Ribbon Bar.

From here you can view and manage the workspaces and web views created at the role level.



# CURRENT RESTRICTIONS IN AVANTI

## ITEMS CURRENTLY NOT SUPPORTED IN AVANTI

The following items are not currently supported in Avanti:

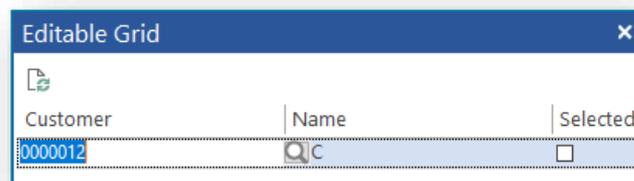
- Structured GL entry.  
Ledger code entries are presented by sections in a drop-down list in SYSPRO but not in Avanti.
- The facility to print list views content is not directly available in Avanti, however you can export to Excel and PDF.
- SYSPRO Customized Panes are partially supported in Avanti.  
(Please read the section [Displaying Customized Panes in Avanti](#) for more information)
- Form Actions associated with Forms in SYSPRO are currently not surfaced in the Avanti **Visual Designer** and therefore cannot be displayed in a web view.
- While Task Dialogs (message boxes and Toast Notifications) are fully supported in Avanti, any customizations done for Task Dialogs are currently being ignored.

## VBSRIPT FUNCTIONALITY SUPPORT IN AVANTI

Most of the VBScript functionality used within SYSPRO is supported in Avanti, except for the following VBScript form events which will have no effect in Avanti:

- **OnBeforeChange**
- **OnGainFocus**
- **OnLostFocus**
- **OnButtonClick**

The behavior of list views in Customized Panes differs slightly between SYSPRO and Avanti. Consider the following list view, constructed using a customized pane:



This is a simple editable grid, with 3 columns, and was constructed using the following two properties for the <Columns> element in the VBScript:

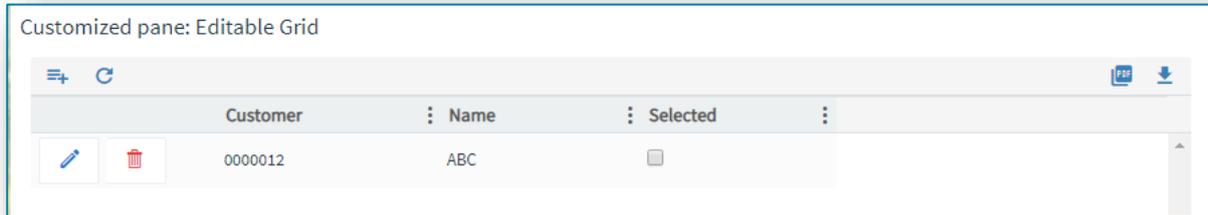
```
AutoInsert='true'  
AllowDEL='true'
```

These properties mean that you can add rows to the grid, and that you can press the DEL button to delete rows.

In addition, the script for this list view has an **OnDb1Click** event.

In Avanti, you cannot press 'DEL' and nor can you execute a 'double-click'. Instead, these button clicks are controlled through buttons added to each row.

And so, this is what this grid looks like in Avanti:



Selecting the **DELETE** button in the row will execute the `OnDELPressed` VBScript event. Selecting the **ACTION** button will execute the `OnDb1Click` VBScript event. And because the property `AutoInsert` is set to 'true', the **ADD** button has been added to the grid toolbar.

## DESKTOP ALERTS

Using VBScript, you can create alerts that appear in SYSPRO as popup messages.

The following simple script:

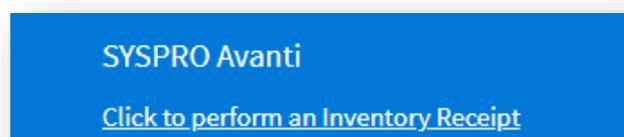
```
dim Popup
Popup = Popup & "<Popup Duration='05' Animation='Fade'>"
Popup = Popup & "<Heading Text='Click to perform an Inventory Receipt'
SYSPROProgram='IMP010' />"
Popup = Popup & "</Popup>"
CustomizedPane.CodeObject.DesktopAlert = Popup
```

... will result in the following desktop alert in SYSPRO:



Selecting the hyperlink will launch the **Inventory Movements** program (i.e. IMP010).

In Avanti, this desktop alert will look like this:



# BEHAVIORAL DIFFERENCES BETWEEN AVANTI AND WINDOWS CLIENT VERSION

## CUSTOM FORM FIELDS IN AVANTI

Custom fields that have been added to forms in SYSPRO Windows client can be surfaced in Avanti using the **Visual Designer**. By default, the applications that ship with Avanti do not and cannot include any custom form fields as it has no prior knowledge of them.

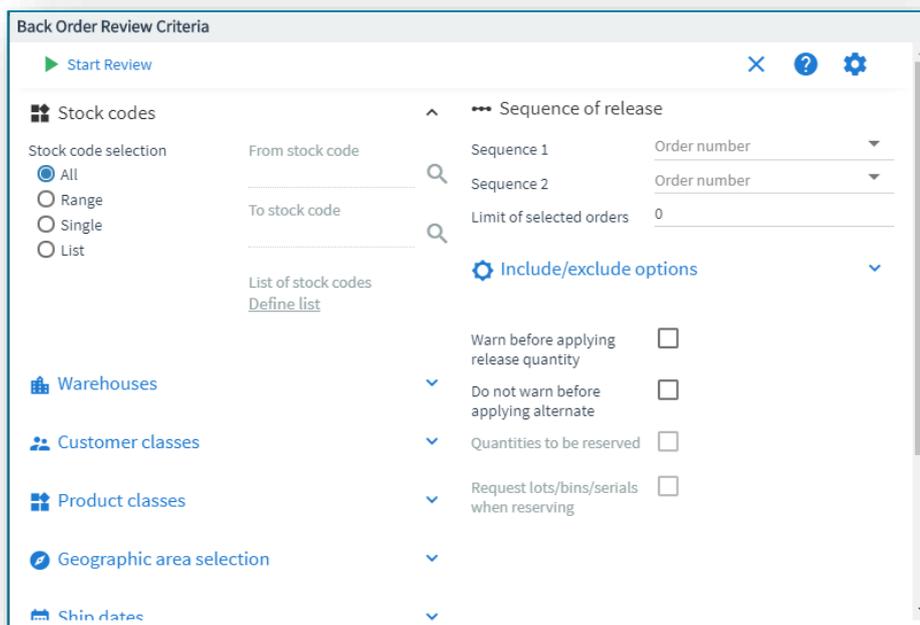
The same is true for any Customized Panes that have been added to an application. Such panes will need to be added to the web view using the **Visual Designer**.

## AUTO-LOADING OF FORM VALUES IN AVANTI

Against certain forms in the SYSPRO Windows Client you can switch on the option to **Load Previous Form Values**. This option indicates that SYSPRO will automatically remember any form options you have changed and reload them next time the program is launched. This only applies to forms that are editable and are appropriate to save their form values – typically, when the form values are criteria entries.

In Avanti this is automatically in use.

As an example, any options changed in the criteria for the **Back Order Review** program (i.e. SORP93) as shown below, will be saved and re-applied when the program is next launched.



## USING WEB VIEWS IN WINDOWS CLIENT VERSION

The web views that are used in Avanti can also be used in the Windows client version. However, this is not generally recommended. While technically this would work (apart from some differences noted below), the Avanti web view interface is quite different to that used in the Windows client version and it would be confusing to the user to have some programs displaying the web interface and others using the Windows interface.

Having said this, including a web view that displays Business Insights in some SYSPRO programs might be very useful.

Here's an example of the **Customer Query** program (i.e. ARSPEN) in SYSPRO that includes a web view showing some Business Insights:

The screenshot displays the 'AR Customer Query' window. The left pane shows 'Customer details' for Customer ID 0000001, 'Bayside Bikes', with a currency of '\$ - Local Currency' and an order value of 320,149,320.44. The right pane shows 'Contact information' for Karen Saunders, with email Accounts@BaysideBike.com and telephone 206-555-4562. The 'Documents fax' and 'Sold to address' sections are also visible. The Business Insights web view includes an 'Invoice Ageing' chart and two summary cards: 'Average days to pay' (75 Days) and 'Average YTD invoice value' (\$72K). Below the web view is a table of invoice data.

| Invoice | Type | Invoice date | Original amo... | Balance - Local | Month posted | Terms | Sales order | Customer pu...    | Salesperson |
|---------|------|--------------|-----------------|-----------------|--------------|-------|-------------|-------------------|-------------|
| 100466  | INV  | 09/02/2015   | 448,000.00      | 447,988.00      | 12/2015      | 0     | 000793      | BB801             | 100         |
| 100476  | INV  | 05/03/2015   | 914,000.00      | 914,000.00      | 01/2016      | 0     | 000803      | BB 805            | 100         |
| 100497  | INV  | 01/04/2015   | 584,800.00      | 584,800.00      | 02/2016      | 0     | 000815      | BB 809            | 100         |
| 100509  | INV  | 08/04/2015   | 2,110.00        | 2,110.00        | 02/2016      | 2     | 000837      | N900101-2004      | 100         |
| 100510  | INV  | 08/04/2015   | 784.00          | 784.00          | 02/2016      | 2     | 000837      | N900101-2004      | 100         |
| 100511  | INV  | 08/04/2015   | 2,390.10        | 1,190.10        | 02/2016      | 2     | 000838      | N900103-2005      | 100         |
| 100512  | INV  | 08/04/2015   | 16,493.75       | 16,493.75       | 02/2016      | 2     | 000839      | N900805-2005      | 100         |
| 100513  | INV  | 08/04/2015   | 2,041.20        | 2,041.20        | 02/2016      | 2     | 000840      | N900250-2004      | 100         |
| 100514  | INV  | 09/04/2015   | 2,100.00        | 2,100.00        | 02/2016      | 2     | 000872      | 567               | 100         |
| 100531  | INV  | 10/04/2018   | 22,000.00       | 22,000.00       | 02/2016      | 1     |             | Purchase order... | 200         |

## Considerations:

If you do use web views in the Windows client version, there are some differences:

- Predictive search is currently not enabled in toolbars or form fields.
- The search button is not displayed next to toolbar 'key' fields.
- The standard SYSPRO toolbar will be hidden if the web view contains a toolbar. The exception to this is that the Ribbon Bar in the main menu will always be displayed.
- Remember that web views designed for the SYSPRO client will not appear in Avanti. This means you can design web views for SYSPRO that are appropriate for the SYSPRO client interface.

You can implement a web view for SYSPRO programs either by using a standard template (one already built for use with Avanti), or by designing a new web view from scratch. In both cases you would use the **Visual Designer** to accomplish this.

## UPGRADING TO SYSPRO 8 FROM SYSPRO 7

If web views were created in SYSPRO 7 then these will be assumed to have been designed for Avanti and will therefore no longer appear in the SYSPRO Client.

If you wish any existing customized web views to appear in the SYSPRO Client, please read the section [Save as a different web view](#).

Prior to **SYSPRO 8 2019 R1**, any customized web view by operator or by role would have been assumed to be surfaced in both SYSPRO itself and in Avanti.

In later releases this is not the case and any such pre-existing web views will be assumed to be for Avanti only, as you must now explicitly state if a web view is targeted for SYSPRO or for Avanti.

Therefore, if you have created web views for prior versions of SYSPRO and wish them to appear in SYSPRO in future, you will have to either rename the JSON file, or use the '**Save as...**' option in the **Visual Designer** (please read the section [Save as a different web view](#)).

To rename an existing web view JSON extension residing in your ...\**Base\Settings** folder or in a **Role\_XXX** folder, you should add the **\_SYSPRO** extension.

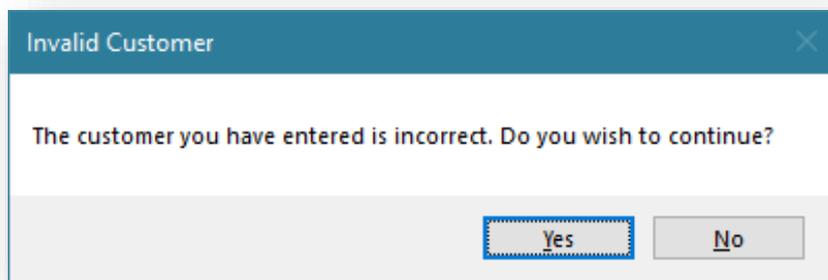
*Example:* If you have a web view in ...\**Base\Settings** (by operator) for the **Customer Query** application and you want the web view to continue being surfaced in SYSPRO, then the filename should be: **UX\_operator\_ARSPENLZ\_SYSPRO.JSON**.

## USING MSGBOX AND INPUTBOX FUNCTIONS IN A VBSCRIPT IN AVANTI

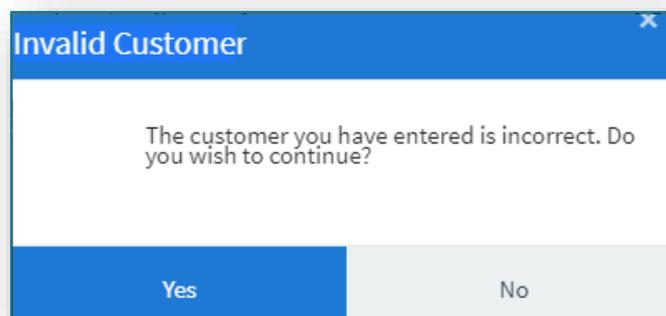
Any **MSGBOX** and **INPUTBOX** functions in a VBScript will execute within the SYSPRO system on the application server. When running in Avanti, such functions would cause Avanti to appear unresponsive as user action is required. To overcome this problem these VBScript functions are converted just before a script is to be executed so that the MSGBOX function calls a SYSMSG function, and INPUTBOX calls a SYSINPUT function.

SYSMSG and SYSINPUT are functions that convert a MSGBOX or INPUTBOX statement into an equivalent JSON Task Dialog format suitable for executing in Avanti.

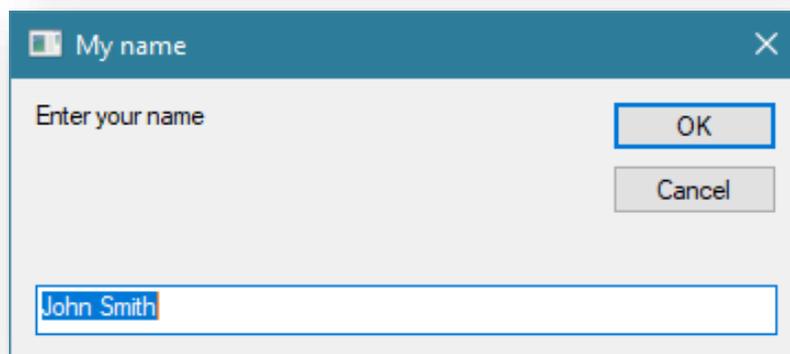
Thus, a MSGBOX in SYSPRO that looks like this:



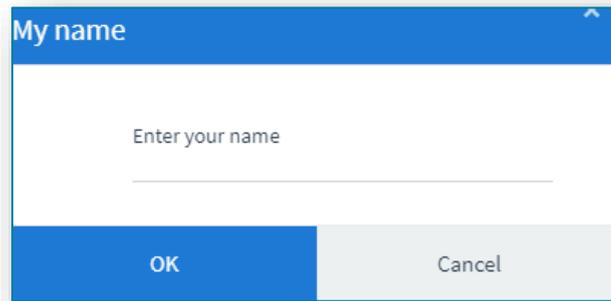
... will appear like this in Avanti:



Similarly, an INPUTBOX in SYSPRO that looks like this:



... will appear like this in Avanti:



In addition, the **Timeout** value for a script will be set as **-1**, indicating no timeouts will occur.

Again, this is to prevent the system from appearing to be unresponsive if a timeout message were to be displayed.

# ARCHITECTURE

---

Avanti is built using modern web technologies and has the following characteristics:

- **Avanti is a single-page application (SPA)**  
This allows Avanti to provide an experience akin to a native application on either a mobile device or a desktop browser. Avanti improves performance because only data is transmitted to the browser, which takes less time and bandwidth than constantly sending fully constructed HTML pages.
- **Avanti is a responsive web application**  
The design of the UI is fluid, meaning the web page content automatically fits into the available screen size, whether you are using a desktop browser or a smartphone. In short, Avanti ensures that it is effective and easy to use on any device.

The purpose of this section is to provide a high-level technical overview of the SYSPRO Avanti Architecture. It details the different deployment tiers as well as the technologies used by Avanti along with the key benefits.

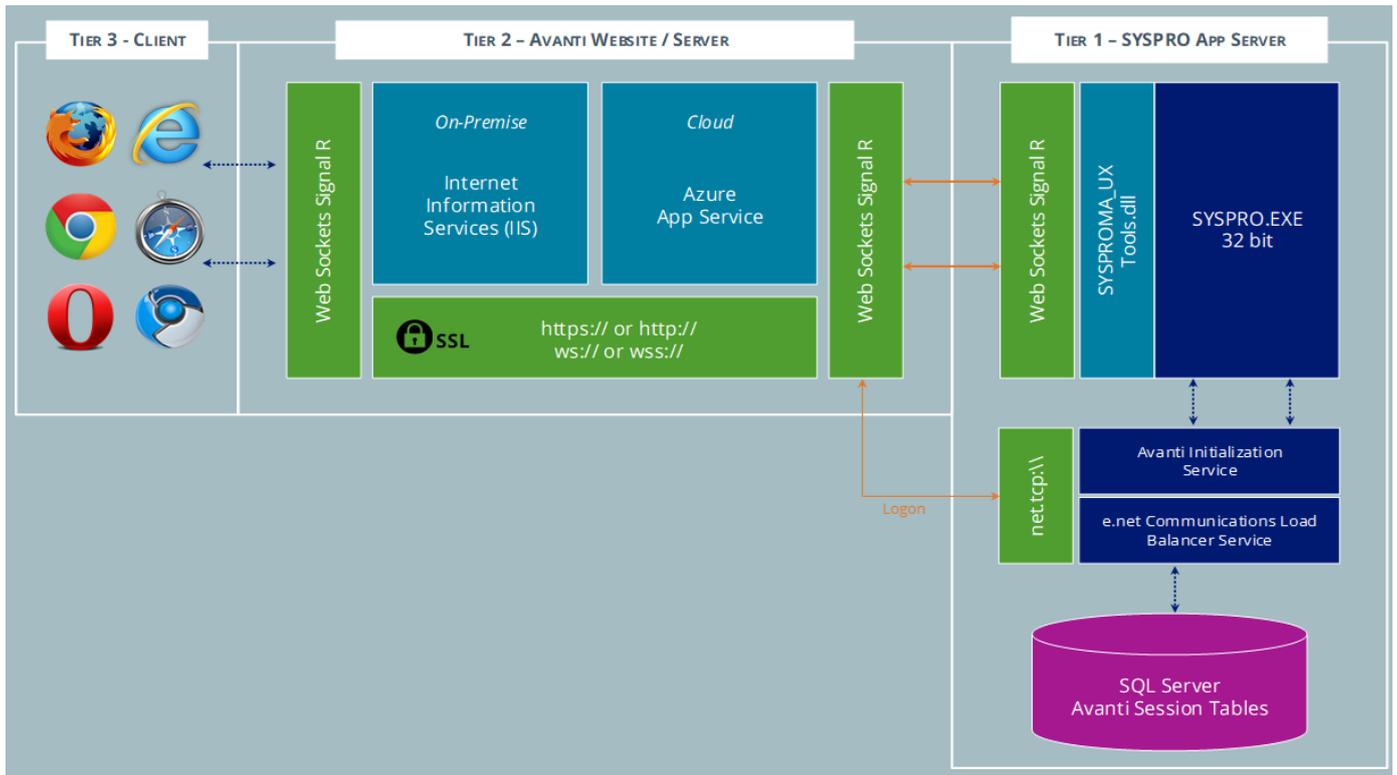
The technologies discussed will be both from an on-premise and cloud deployment perspective.

## HOW AVANTI WORKS

The following process/workflow describes how Avanti authenticates, as well as how information is passed from one tier of the architecture to the other:

1. A user will access Avanti through a web browser using an address specifically setup by the SYSPRO administrator for the installation of SYSPRO.
2. Once the address of the Avanti website is entered in the browser, a logon screen will be displayed, allowing the user to capture their user name, password and company details.
3. When the logon button is clicked, a request is sent to the Avanti Website, which in turn sends a request to the **Avanti Initialization Service** for the credentials to be validated. The initialization service does not have any authentication built into it as it relies on the “standard” authentication model of core SYSPRO.
4. Once authenticated, there will be no further workloads for the Initialization service until another user logs on. From there on in the SYSPRO executable will respond to any requests made by the web browser.
5. All requests and responses made from web browser will be routed to the Avanti website, then relayed to the SYSPRO App server, then back to the Avanti website and finally back to the browser.

## SYSPRO AVANTI ARCHITECTURE DIAGRAM



The above diagram illustrates the 3 different tiers.

### TIER 3 – CLIENT (THE BROWSER)

The client tier is the initial touch point for any users wanting to make use of SYSPRO Avanti.

Using a web browser that supports HTML 5, a user can browse to the website where Avanti has been installed. All UI (User Interface) elements in Avanti have been built using modern web based technologies such as [HTML 5](#), [JavaScript](#) and [CSS3](#).

Avanti has been developed from the ground up to adhere to [responsive web designs](#). This enables Avanti to run on any device and any platform, regardless of form or size factor. As the size of the device or web browser increases or decreases, Avanti will automatically adjust itself to best suit its environment.

Avanti has also followed the [SPA \(Single Page Application\)](#) design philosophy. This allows data to be dynamically bound to a page instead of the page being regenerated all the time, thus saving time, bandwidth and increasing the overall performance. This modern design also avoids disruption in the users experience within the application.

SYSPRO Avanti is delivered via a web browser and requires no pre-requisites or software to be installed on the user's machine, making Avanti have a zero footprint on the client.

## TIER 2 – AVANTI WEBSITE\SERVER

Tier 2 (the Avanti Website) is the tier that handles the requests/responses from the web browser to the SYSPRO Application Server. This tier can be installed on a traditional Windows Server running IIS (Internet Information Services) or it can be installed to an Azure App Service. This tier has been purposefully built to run in the cloud but can run on premise just as effectively.

The Avanti Website can be secured by the administrator using **SSL**. The data in transit from the Website to the web browser and vice versa is compressed by the Avanti infrastructure and provides compression levels of up to 95%, thus adding to the overall performance of Avanti.

A web technology called [WebSockets](#) in conjunction with **Signal R**, allows for robust communication between the Avanti Website and the web browser. With this technology, SYSPRO Avanti can reconnect to the SYSPRO App Server and web browsers when there is a drop-in network connectivity, once again adding to the reliability of SYSPRO Avanti.

When running Avanti on-premise, it has been optimized to have an auto update setting. This allows any new Avanti features that was released on a SYSPRO port to be updated on the Avanti Website automatically, without the need of the administrator.

When running Avanti in the cloud and making use of the Azure App Service infrastructure, we also make use of a technology call **ARM (Azure Resource Manager)** templates that allows the Avanti Website to be updated automatically. Along with this are several out-of-the-box benefits that customers inherit with running in the cloud, such as:

- **Cost**  
It is much cheaper to run in an Azure App Service. App Services make use of server less compute, so you only pay for the compute, that is, no windows licenses.
- **Scaling**  
You can scale the infrastructure up or down depending on your requirements. There is also an auto scale feature that will detect the workloads on the website and will automatically scale the infrastructure accordingly.
- **Phishing/DSA**  
The Azure App Service infrastructure has intelligent M/L algorithms that can detect Phishing attacks as well as Denial of Service attacks and can notify administrators before any major harm is done.

## TIER 1 – SYSPRO APP SERVER

There has been an introduction for an Avanti Initialization Service, this service's sole responsibility is to do a handshake between the SYSPRO executable and the Website for each user that has logged on.

A few new tables have been also included to the SYSPRO SQL Server company wide database which is used to maintain state for the users utilizing Avanti.

# SYSPRO AVANTI DEVELOPMENT

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The **SYSPRO Avanti Software Development Kit** lets developers create their own applications that connect to Avanti.

A **Microsoft Visual Studio** extension (included in the SDK) provides templates for new projects (and controls used within those projects) together with several development productivity features. In addition, the extension allows for debugging of Avanti plugins and supports the creation of bespoke cards.

The **SYSPRO Avanti Software Development Kit** supports a variety of use cases, from basic customization and scripting in Avanti, to entire embedded applications in the Avanti infrastructure.

You can still use VBScript customization for simple user interface customization and automation, but for more complex scenarios the **SYSPRO Avanti Software Development Kit** provides a powerful solution.

The benefits of this SDK over VBScript customization include:

- Improved performance
- Full development environment of **Microsoft Visual Studio** with productivity extension
- Intellisense and code completion
- Live debugging of code with breakpoints
- Access to the entire Avanti API

**Note:** Resources will be made available on the **SYSPRO Learning Channel**.

# FAQs

## SMARTLINKS

### HOW DO SMARTLINKS WORK IN AVANTI?

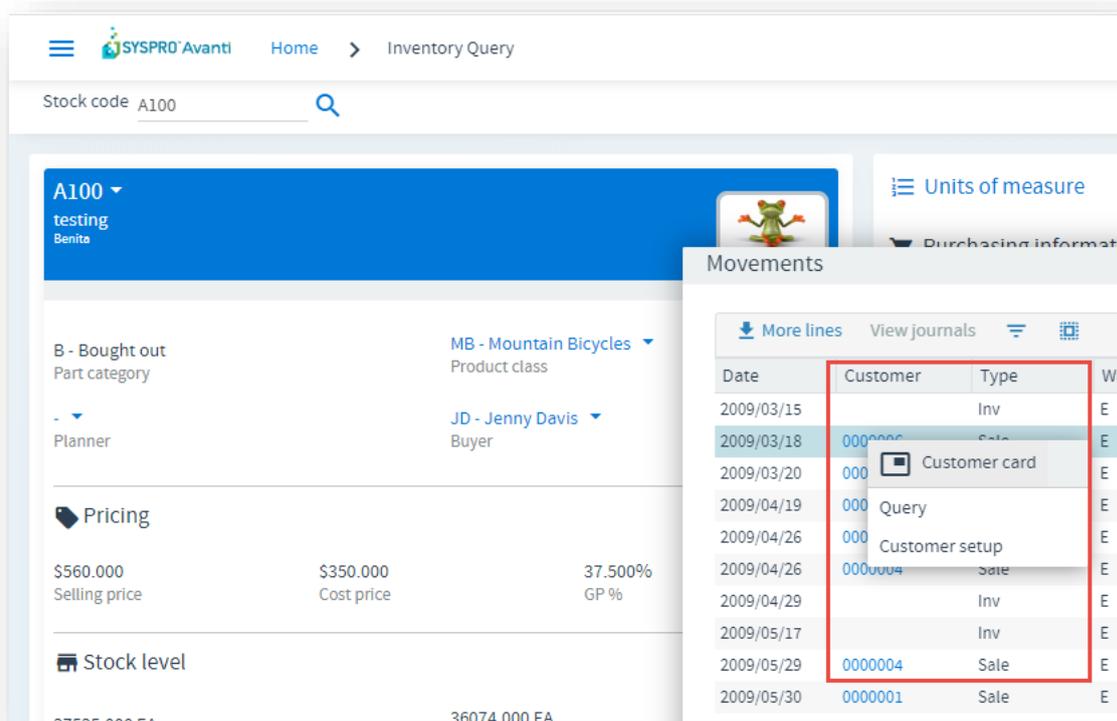
SmartLinks work slightly differently in Avanti versus the SYSPRO Windows Client version, as the following program types are ignored within the **SmartLink** menu in Avanti:

- Items that launch executables  
*This includes custom client-side programs.*
- Items defined as 'browse-style'  
*There are no 'browse' programs in Avanti.*
- Items for Multimedia  
*The **Admin Multimedia** program (i.e. IMPMCI) doesn't work in Avanti.*
- Items for SRS programs

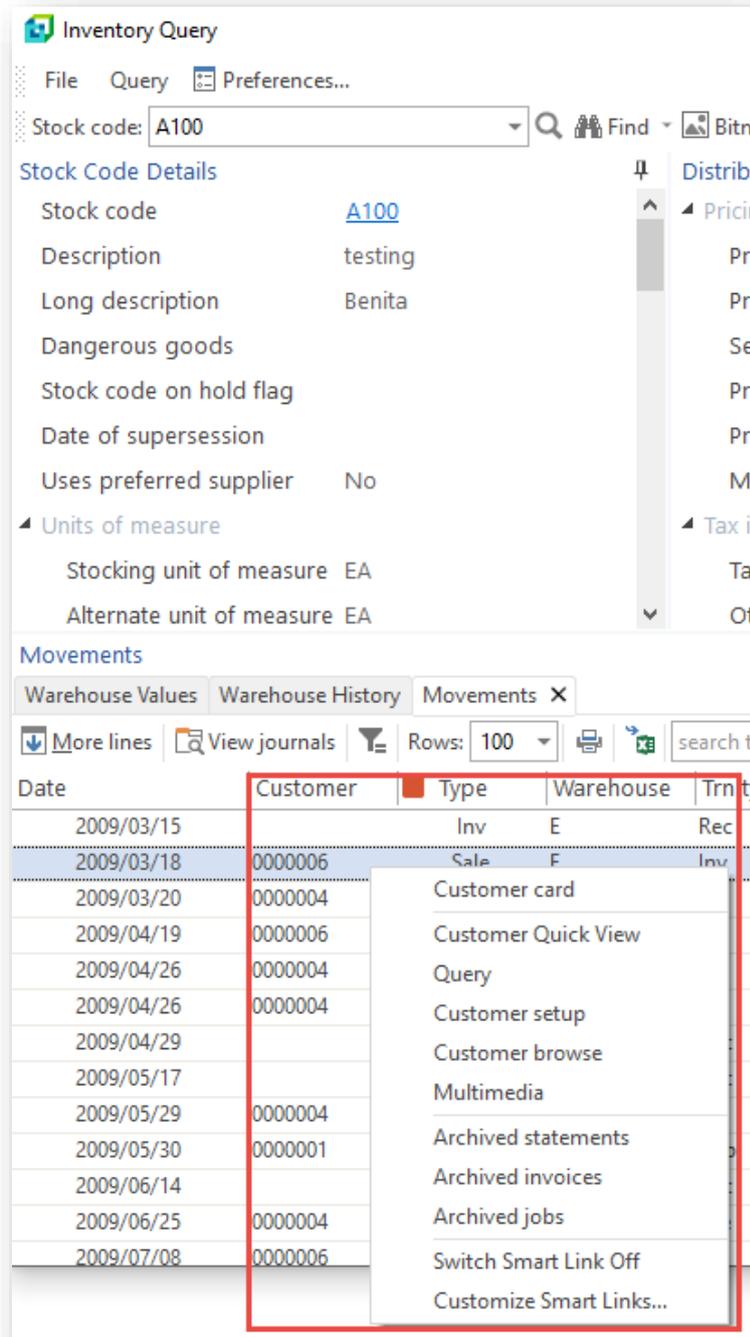
This explains why you don't see the same set of SmartLink menu items in Avanti as in the SYSPRO Windows Client version.

**Note:** The **Customize Hyperlinks and Exceptions** program (i.e. IMPFR1) has been updated to ensure that the SmartLinks not applicable are not displayed in Avanti.

Take for example the **Customer** SmartLink in Avanti, which can be found in the **Inventory Query** program (i.e. INVPEN) on the **Movement** tab/screen. Only a few options are displayed:



When compared with the SmartLink menu options in the SYSPRO Windows Client version, you will notice that more options are available than in Avanti:





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