

# SYSPRO Avanti Guide

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# Document Amendments

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Here is a list of what's changed since the last version of this guide:

Sub topic	Location in guide
System-wide Web Views can now be displayed.	<ul style="list-style-type: none"><li>▪ <a href="#">Showing Alternative Views in HOME menu</a></li></ul>
Designing Web Views now loads the Visual Designer into a new instance of Avanti in a separate browser TAB.	<ul style="list-style-type: none"><li>▪ <a href="#">Using the Visual Designer in Avanti</a></li></ul>
Web Views for SYSPRO Client are now separated from those designed for Avanti.	<ul style="list-style-type: none"><li>• <a href="#">Using the Visual Designer in SYSPRO</a></li><li>• <a href="#">Upgrading to SYSPRO 8 from SYSPRO 7</a></li></ul>

## ANNOTATION

*This document provides information about SYSPRO Avanti, the web based version of SYSPRO. In 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

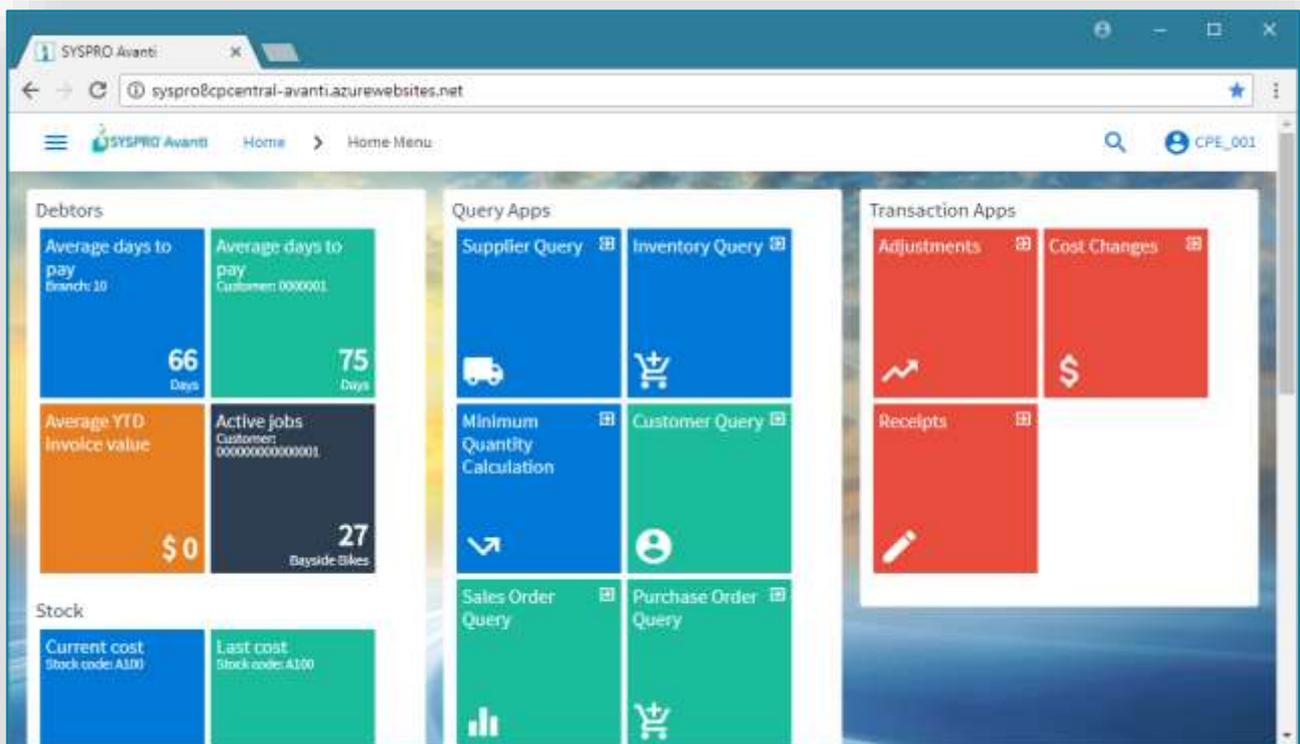
Avanti is SYSPRO's web based offering.

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.

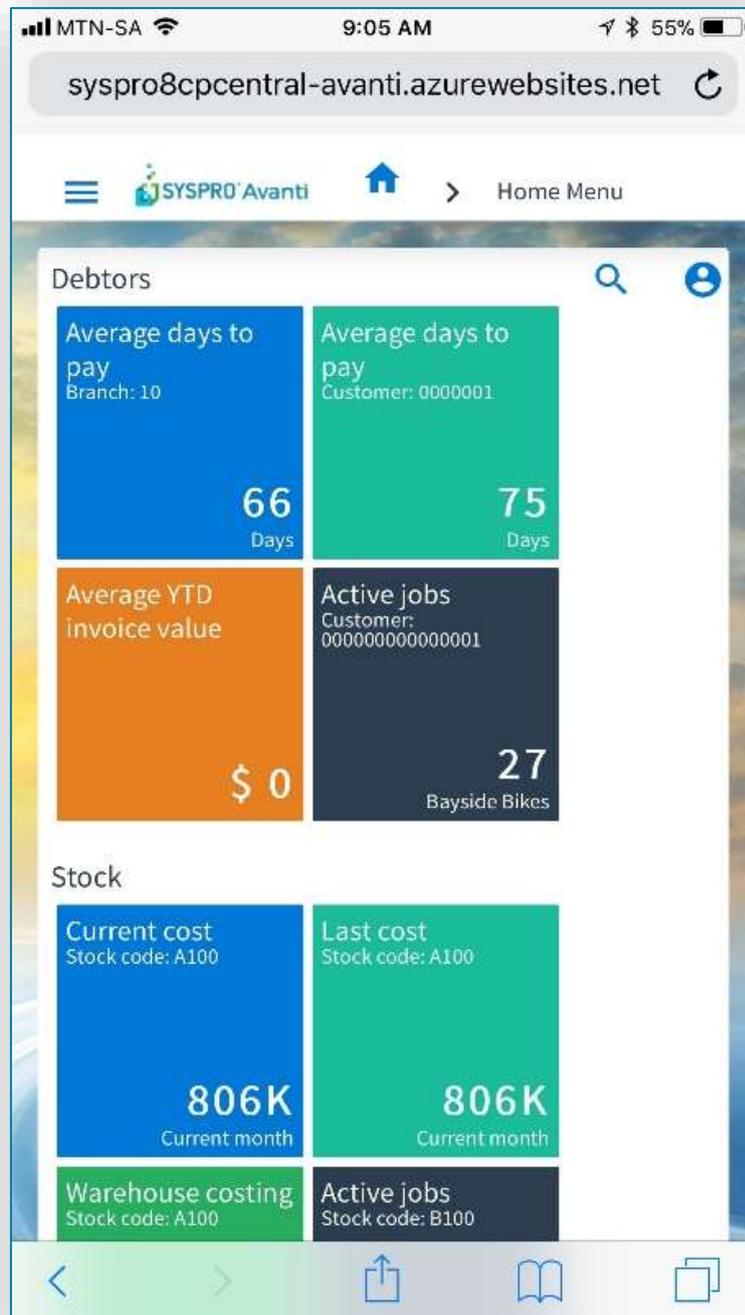
Avanti can be used in parallel with the SYSPRO Windows Client version, allowing a user to use either Avanti or the Windows client version to complete the same task.

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





# What are Avanti's benefits?

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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.

# What's the difference 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.

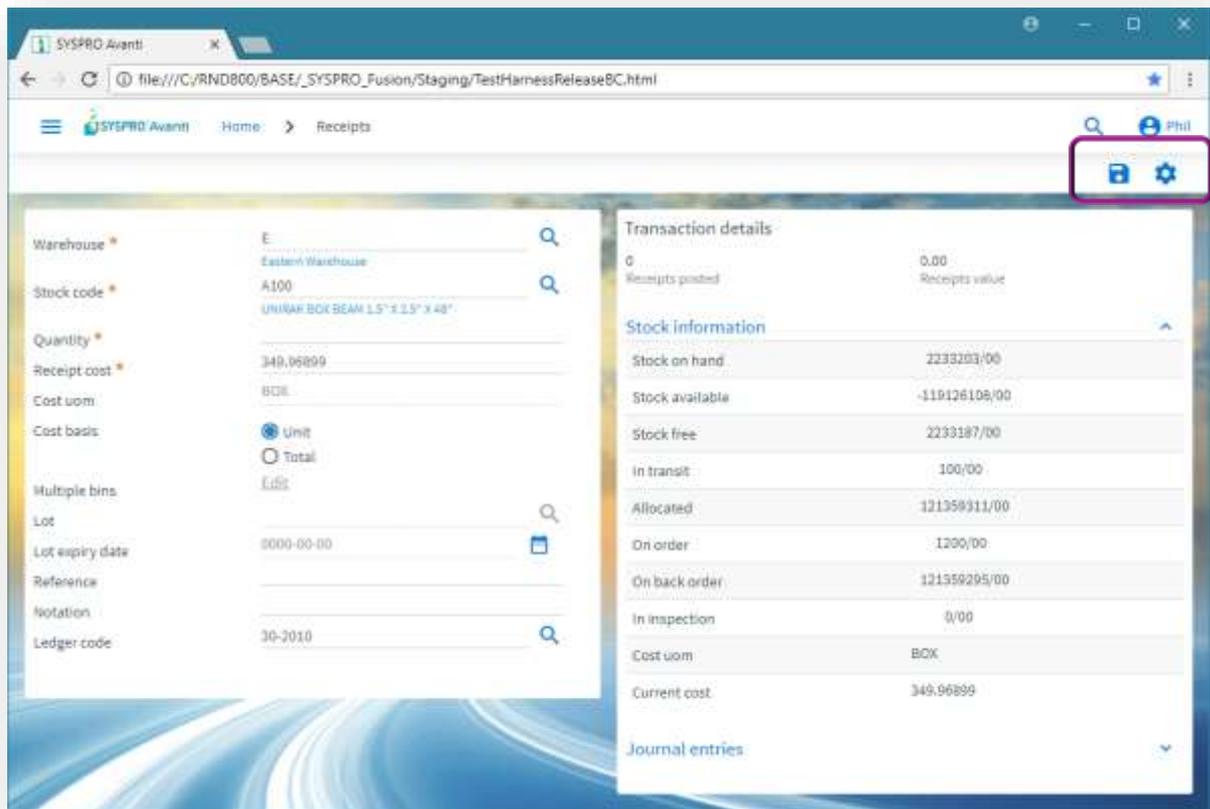
Avanti is aimed at users who require the full-featured functionality of SYSPRO, but want to access it from a browser.

<b>SYSPRO Espresso</b>	<b>SYSPRO Avanti</b>
Natively designed for mobile devices	Natively designed for the browser
User experience is optimized for mobile devices	User experience is optimized for the browser
Offline capability	No offline capability
Applications are purpose-built and require development effort	Applications are created using the Visual Designer 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

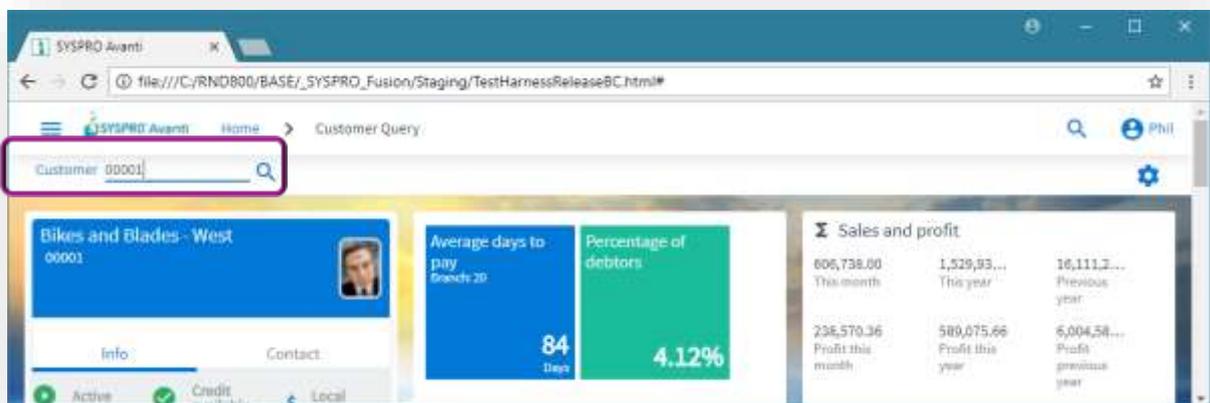
# User Interface

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

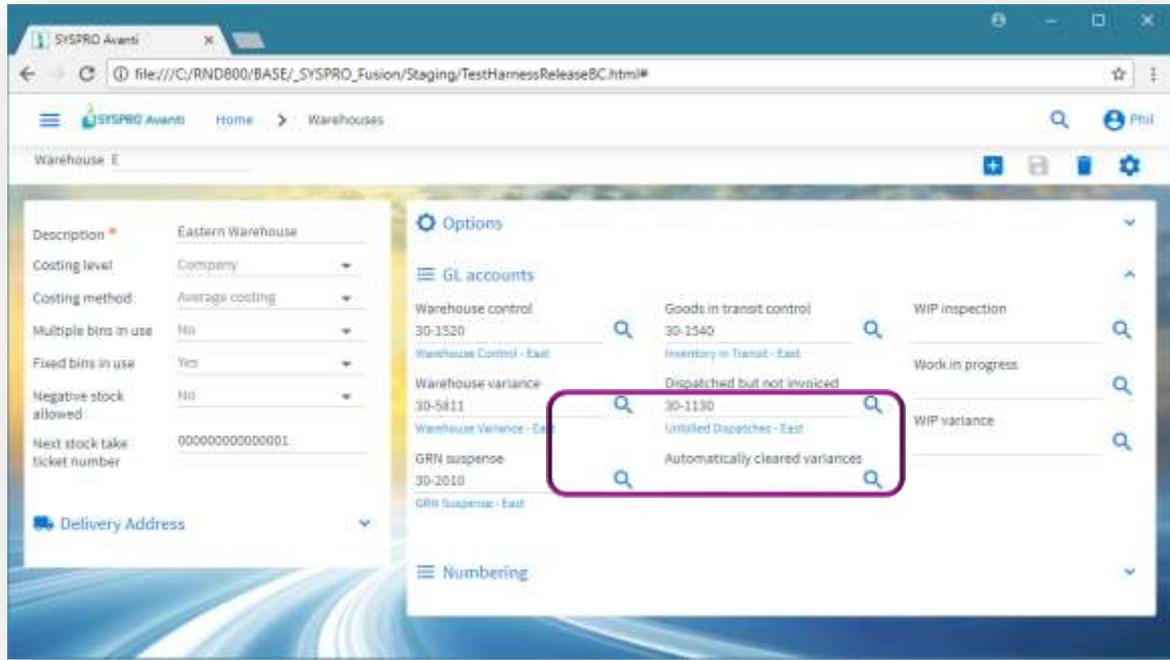
- Action buttons are always located on the right of the toolbar of the current application:



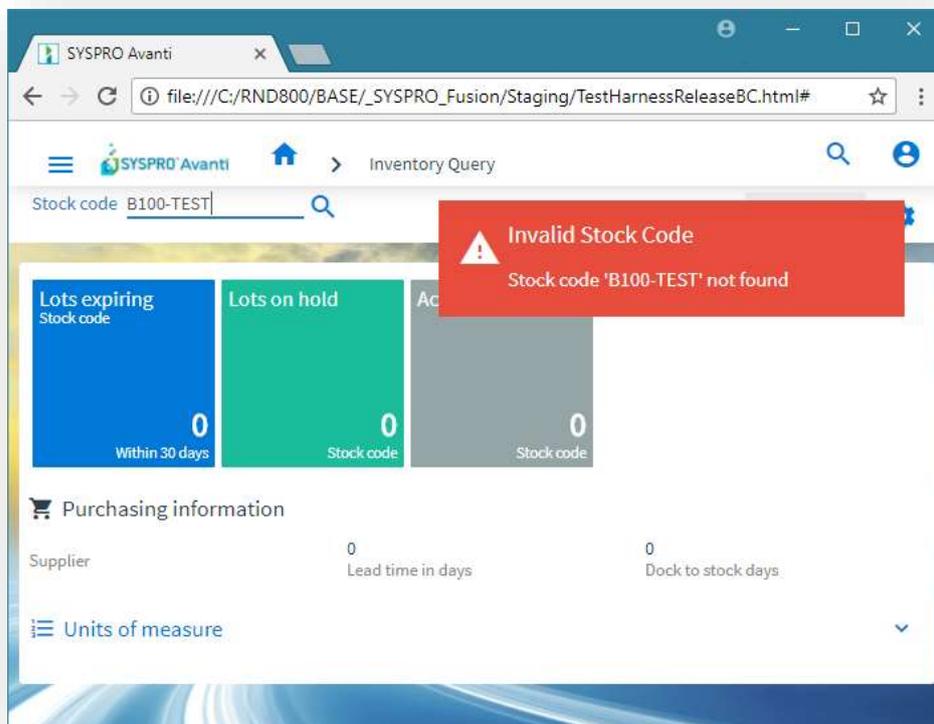
- Entry fields on the toolbar are located on the left:



- Descriptions for form fields appear beneath the key value:



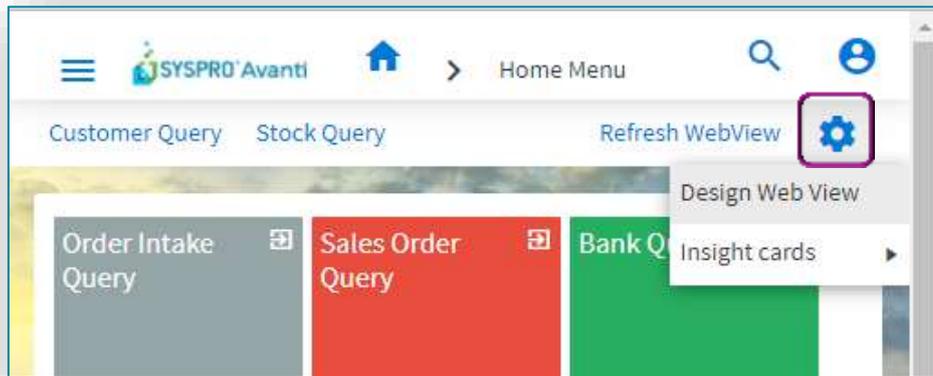
- Toast notifications provide unobtrusive messages if entries are not correct:



# Tailoring Avanti

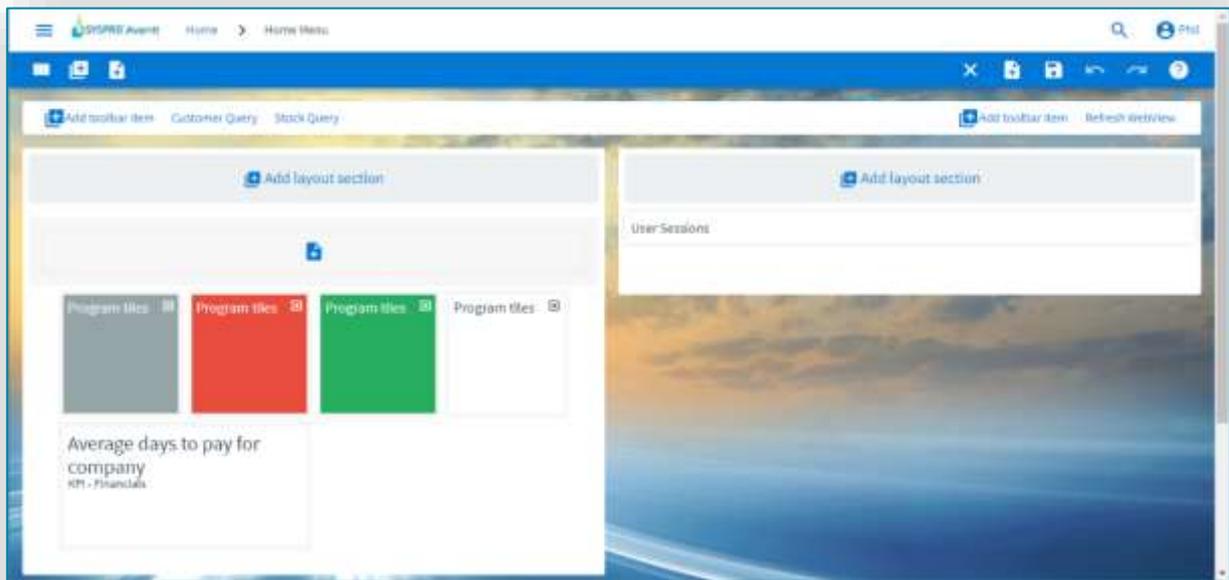
You can use the Visual Designer in either Avanti or the Windows client version to design applications for use in Avanti.

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



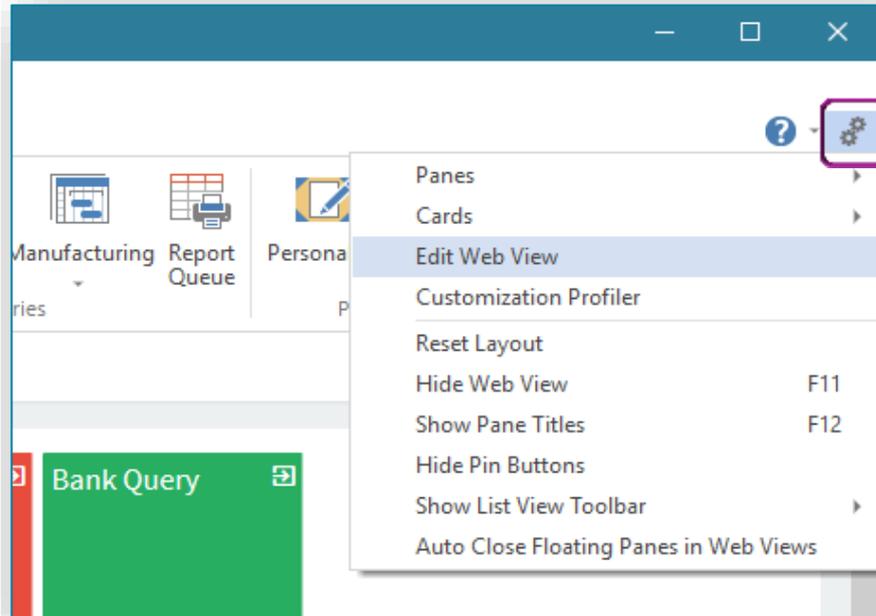
The Visual Designer displays the current layout.

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



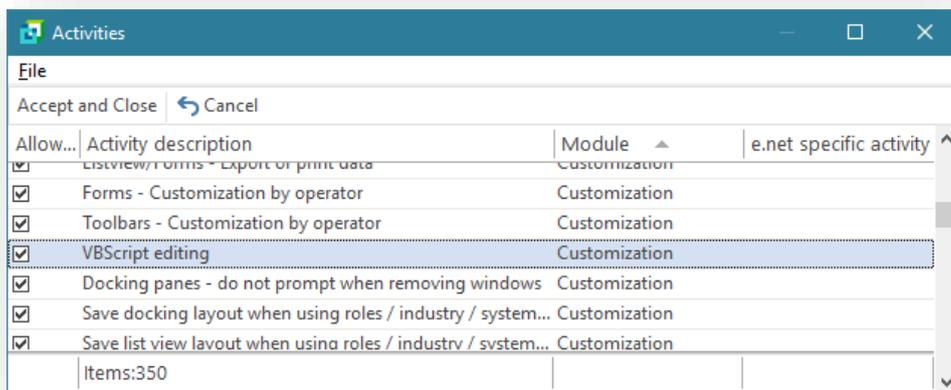
**Note:** If you wish to design applications at the **Role level** or **SYSTEM-WIDE** level, then you must be in Design Mode within the SYSPRO Windows client version.

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.

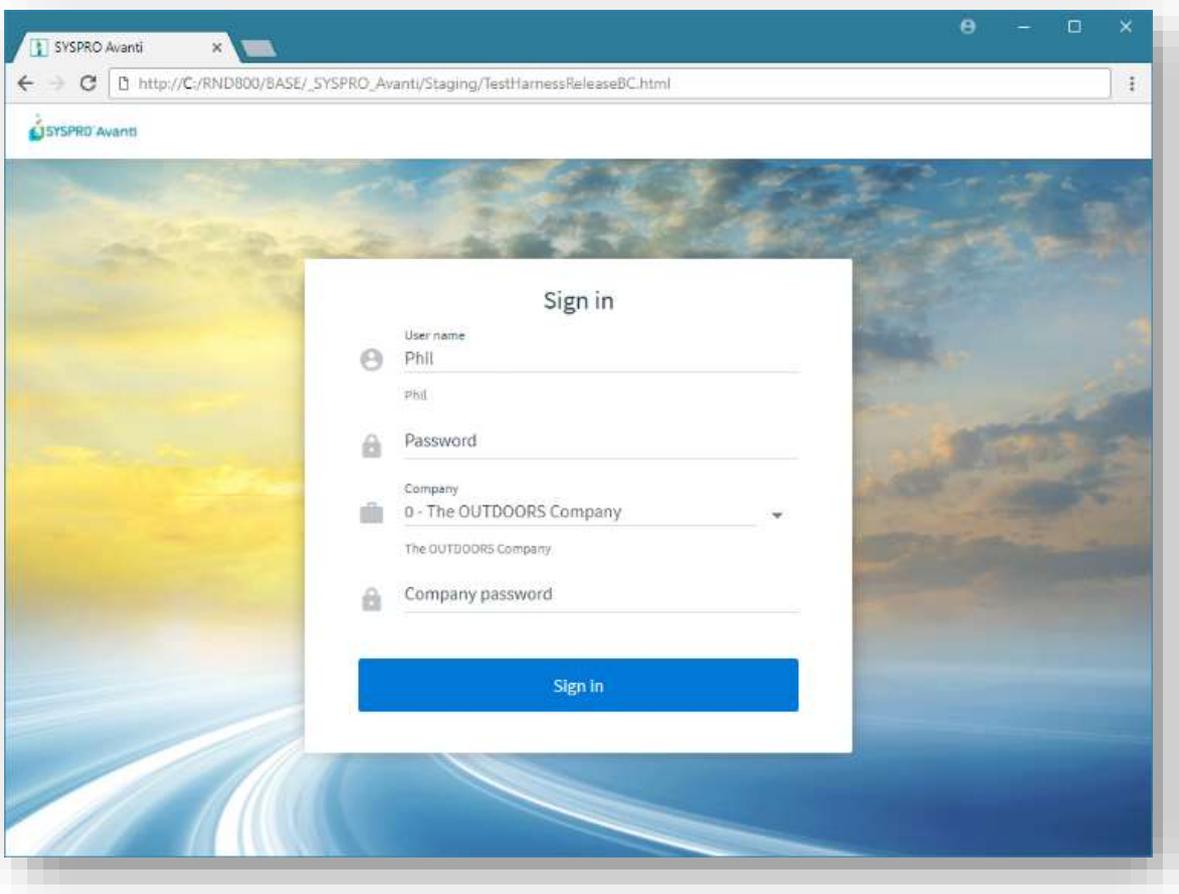
**Note:** To design a web view the operator security option **VBScript editing** must be enabled:



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**.

# Using Avanti

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



When you login to Avanti it is the 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, as long as 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** checked) then the other operator will be logged out.

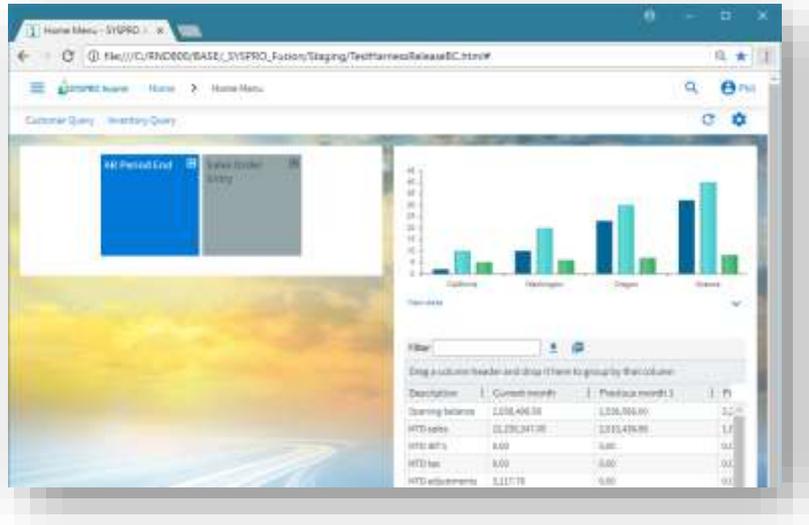
Security and other options defined for the user apply equally no matter if you login to Avanti or the Windows client version. Similarly, the security principles and options apply in Avanti for whichever company you select.

Avanti is a web based product and as such the user experience differs to that of a Windows client.

This section documents these differences.

# Navigating around Avanti

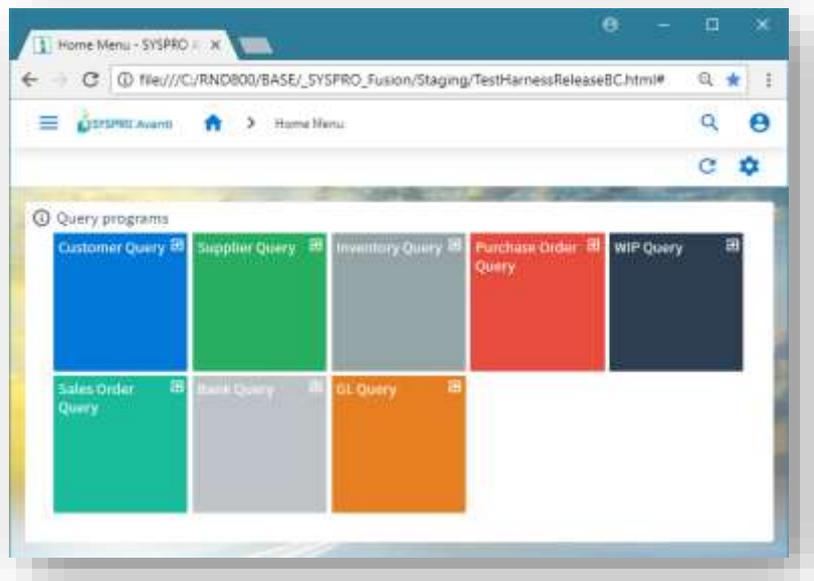
Applications in Avanti are launched either by clicking on a Tile in the Home Page, or from the Menu option.



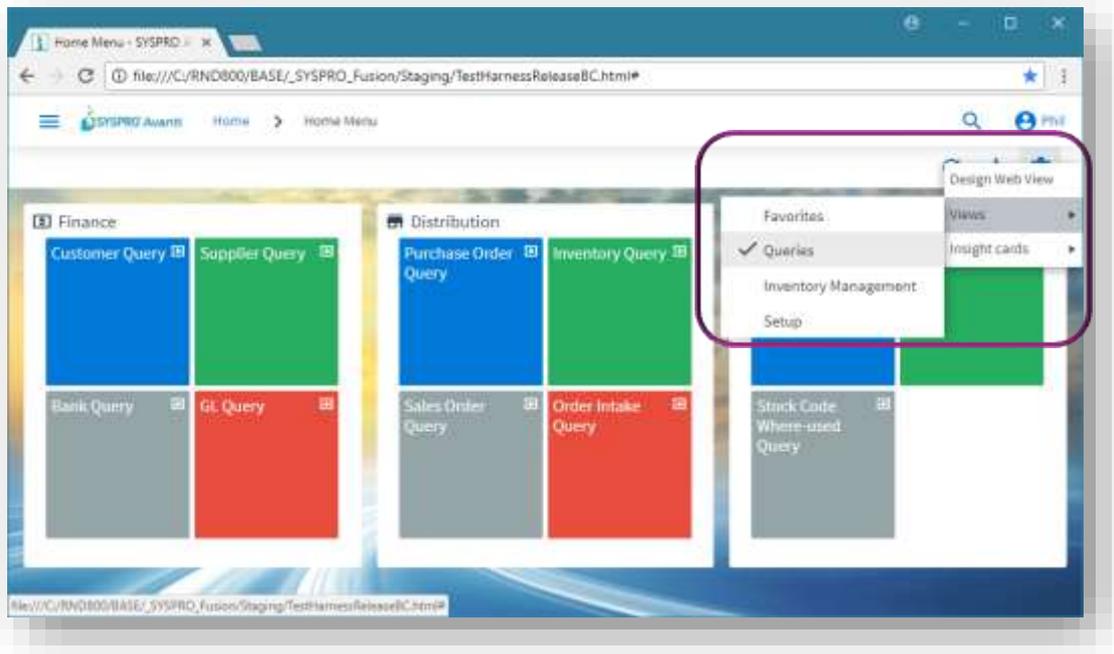
The Home Page in Avanti is defined using the Visual Designer and typically can contain a mixture of Business Insights, Program Tiles, and Cards.

Unlike the Windows client version, the Home Page in Avanti can be defined at the Role level, giving administrators 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 'primary view', which may look like this:



Click on the SETTINGS icon to switch to alternative views:



Once you have defined your own view, it will always be shown as the default view labelled **Favorites**.

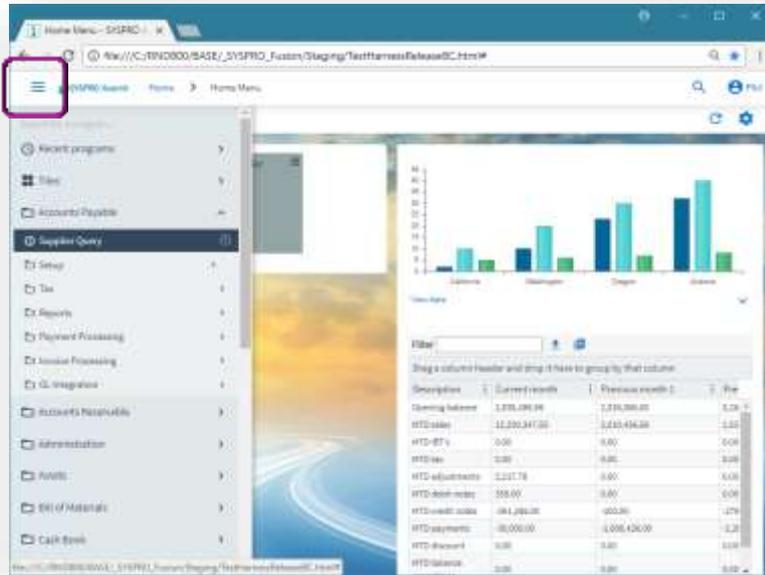
## Showing Alternative Views in HOME menu

You can switch to any available alternative view or back to Favorites whenever you like. Alternative Avanti HOME views are located in the ...\\base\\samples folder as UX\_APP\_IMPLMNLZ\*.JSON, and are shipped as standard with Avanti.

If you have designed a Web View for the **System-Wide View** then it will also be shown in the alternative views.

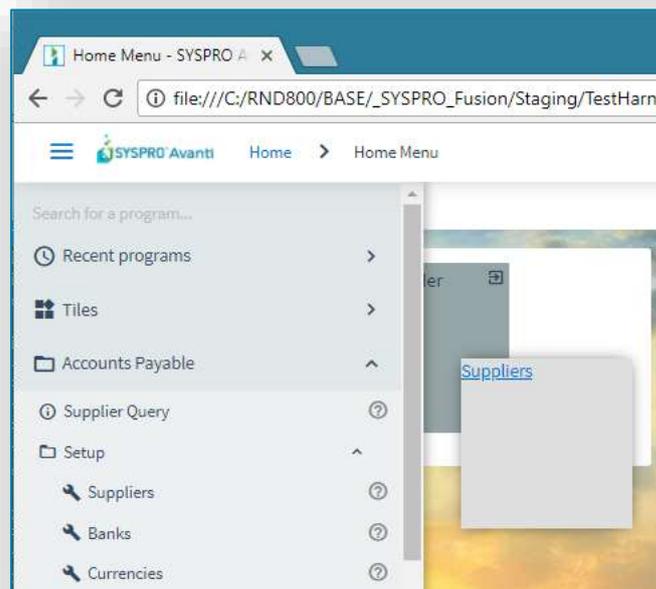
## Using the Hamburger menu

Clicking on the Menu icon (the hamburger at the top left of the Home Page) shows a list of available Avanti programs:

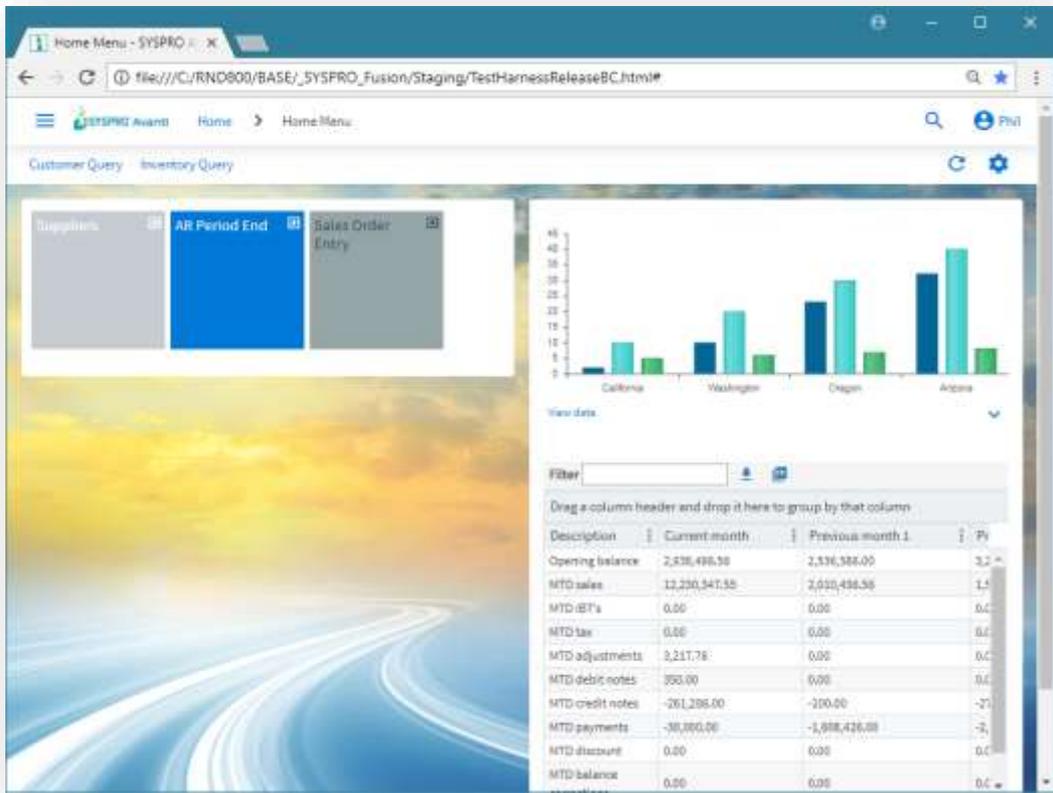


You click on a program to run it.

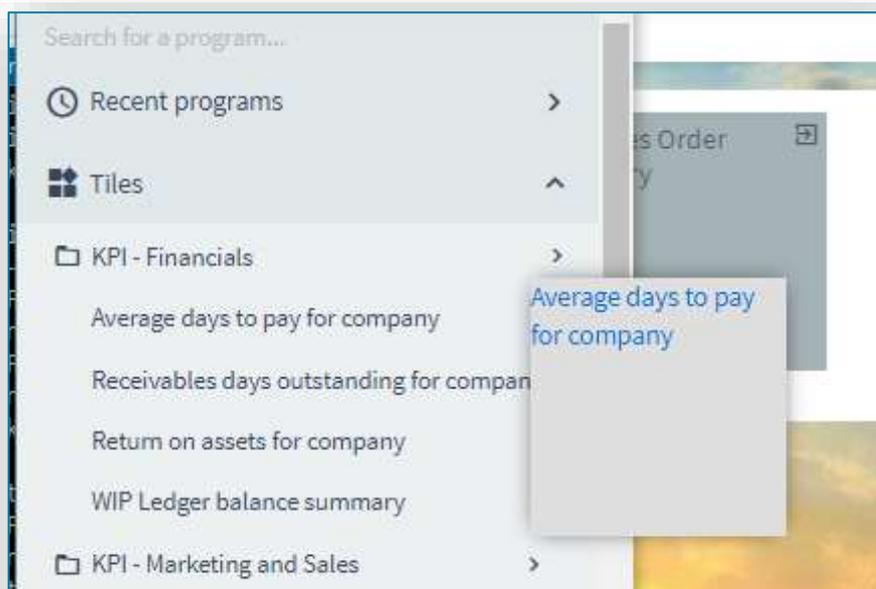
Alternatively, you can add a program to your current web view either by designing the view using the Visual Designer, or you can drag items off the menu directly onto a Tile section.



In the above screen shot, the SUPPLIERS program is being dragged onto the tile section, which will then look like this:

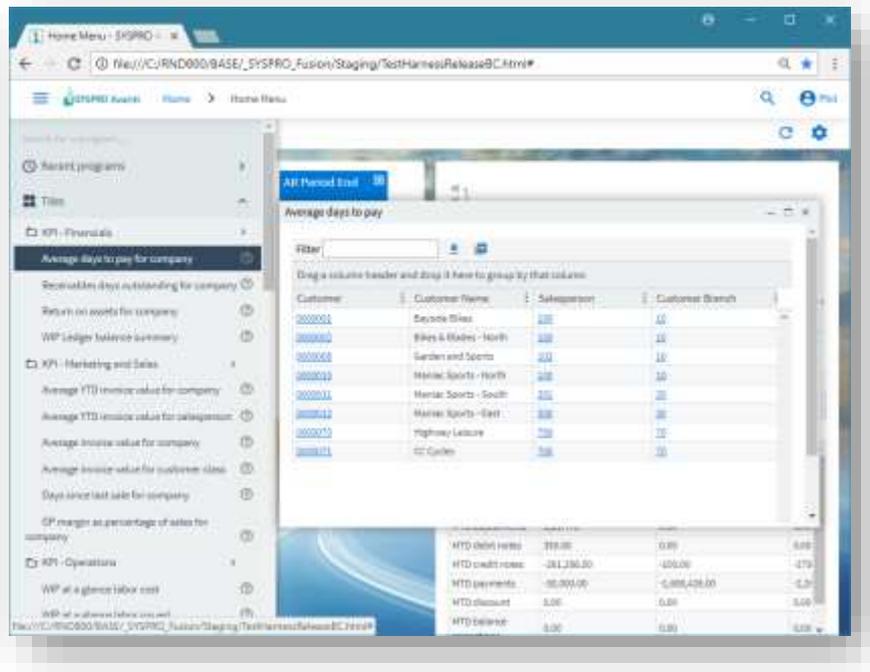


Similarly, you can drag any Business Insight onto a tile section:

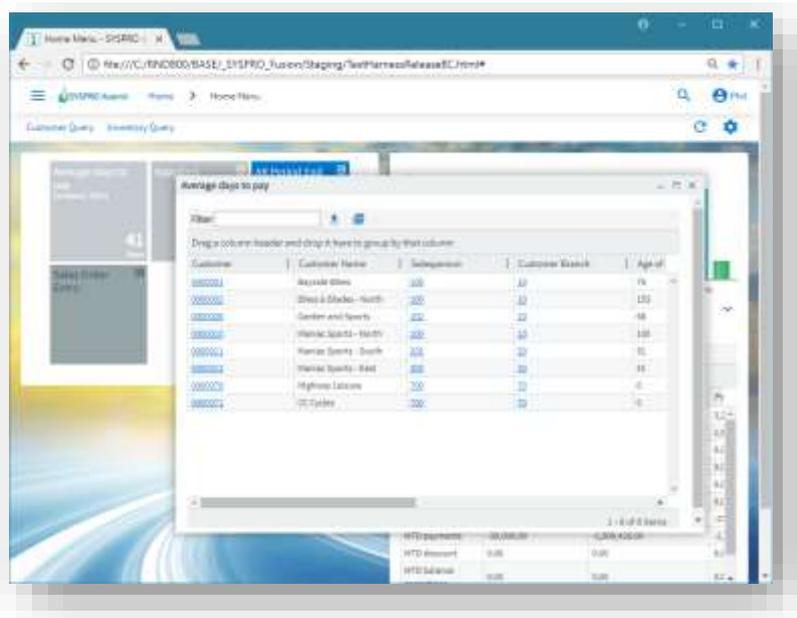


Additionally, you can drill down to the detail of any Business Insight simply by clicking on the item, either in the menu list, or by clicking on the 'tile' itself after it has been dragged onto a tile section.

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



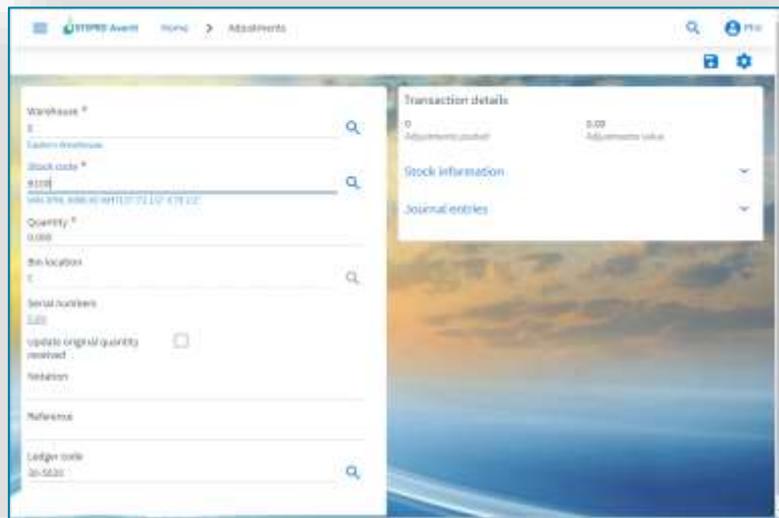
...or clicking on the tile itself after it has been dropped into a tile section, will show the insight detail:



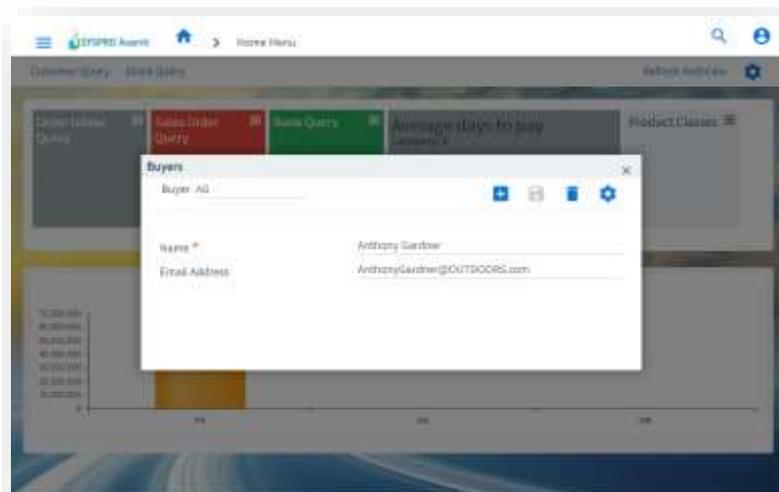
**Note:** As soon as you have dragged a program or business insight onto a tile section, Avanti will save that view for you. If you are in the Home Page, then this will now become your personal view.

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:

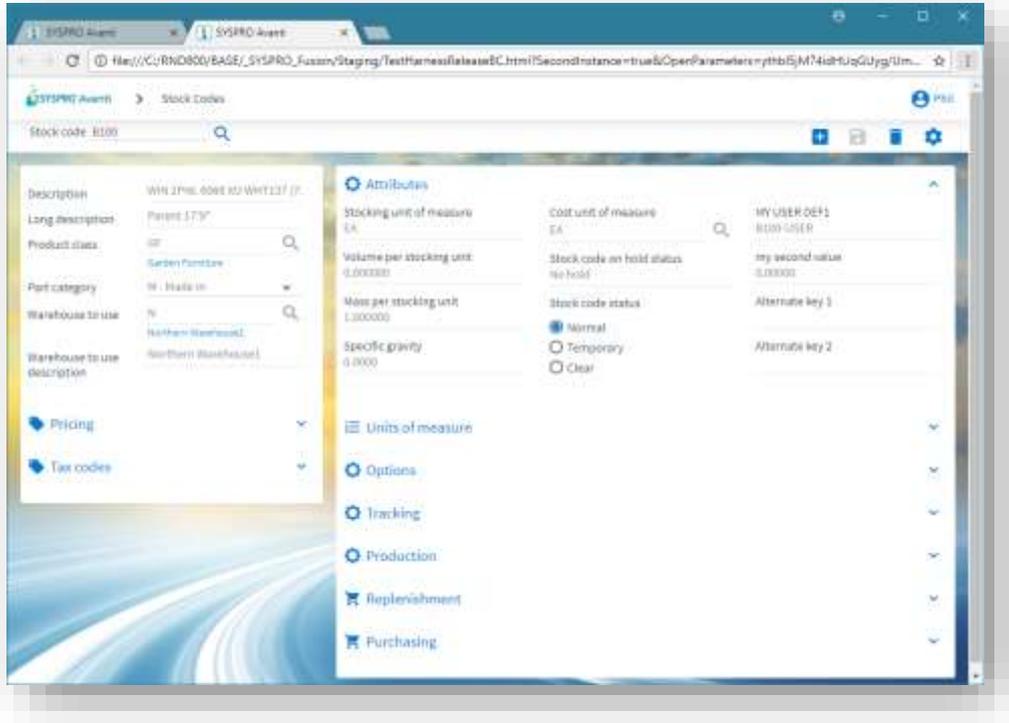


But if the application only surfaces a few fields, then it is shown in a popup window, as in the following example for the maintenance of Buyers:



To use another application, you can click on **Home**, 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 shown 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.

## Logging out of Avanti

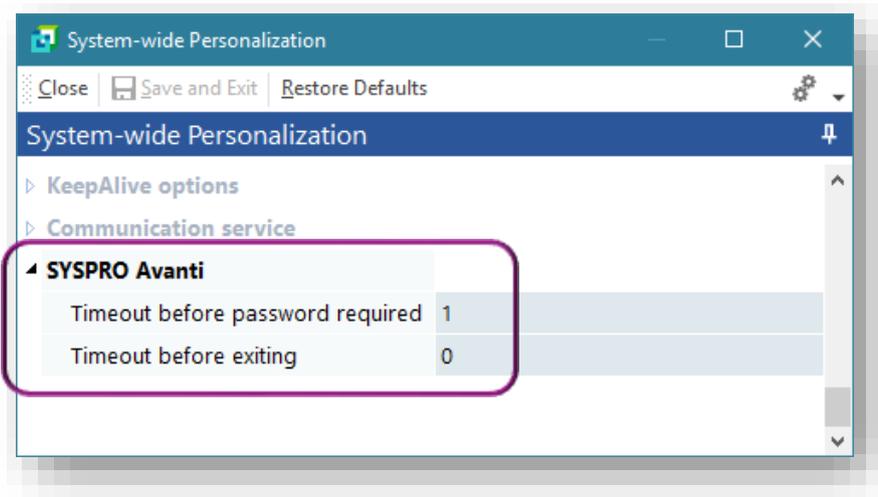
To exit Avanti, simply close the browser, or click on the **Sign out** button to exit Avanti and return to the Logon page (to change to a different company or user).

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

## 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 System-Wide Personalization program and adjust the option **Timeout before password required** as appropriate:



In addition, you can impose a further timeout (in minutes) after password window has appeared.

If the timeout expires then Avanti will exit completely back to Login screen. In both cases, a timeout value of 0 indicates no timeout.

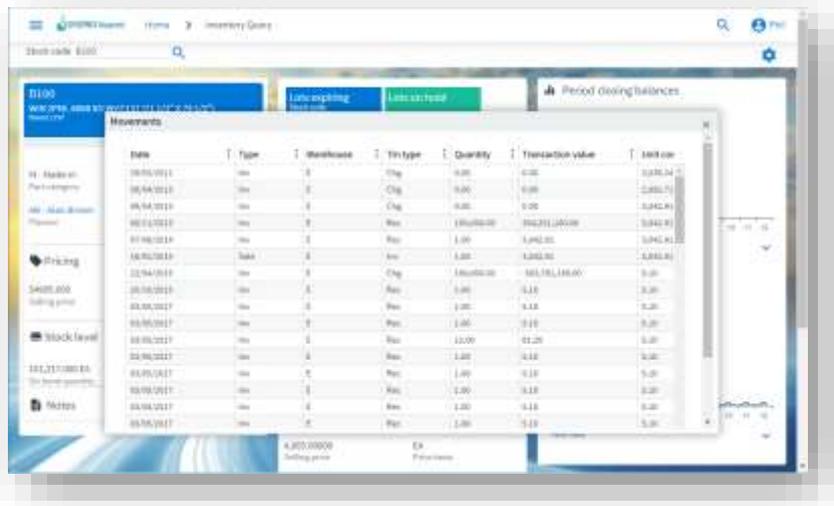


# Using Windows in Avanti

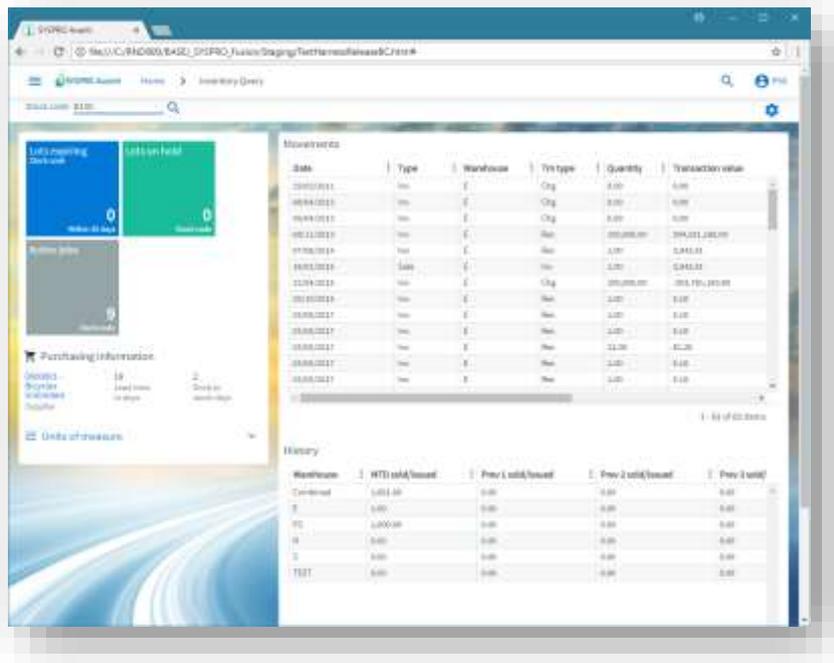
Applications in Avanti are designed to show most information in a single page. Where appropriate, the use of popup windows can surface additional information. For example, in the Inventory Query users can view Movements and Warehouse history lists.

Such lists are shown 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 listview shown as a popup window:



And the same application, but with Movements and History listviews shown within the page:



## Using Cards in Avanti

Cards are pre-built discrete functional components.

A card is a self-contained HTML5 page whose data is derived typically (but not exclusively) from a business object.

A card may run as a separate entity in its own window or can be embedded in a view.

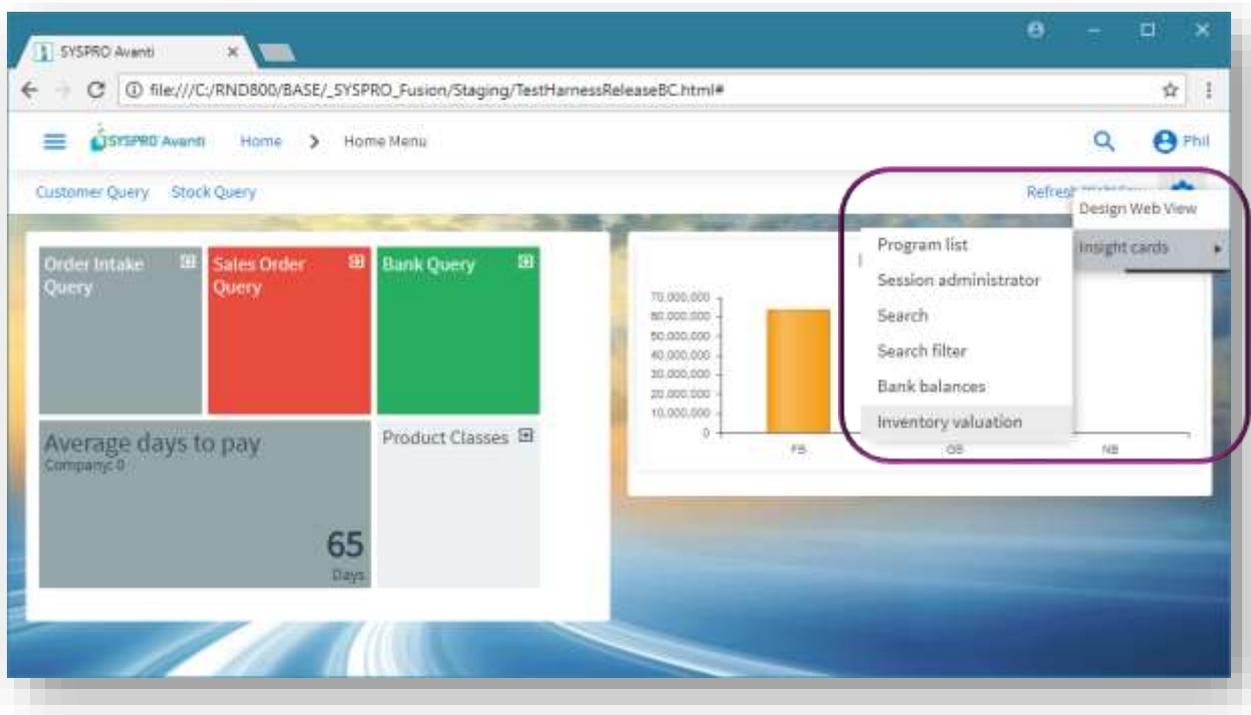
A card may require a 'key value' (such as a Customer or Stock code key) to execute, whereas other cards require no such key – the latter are known as 'Insight cards' (an example might be 'Bank balances', or 'Sales order commitments').

While Avanti ships with a set of pre-built cards, it is relatively easy to construct new cards for any additional required functionality.

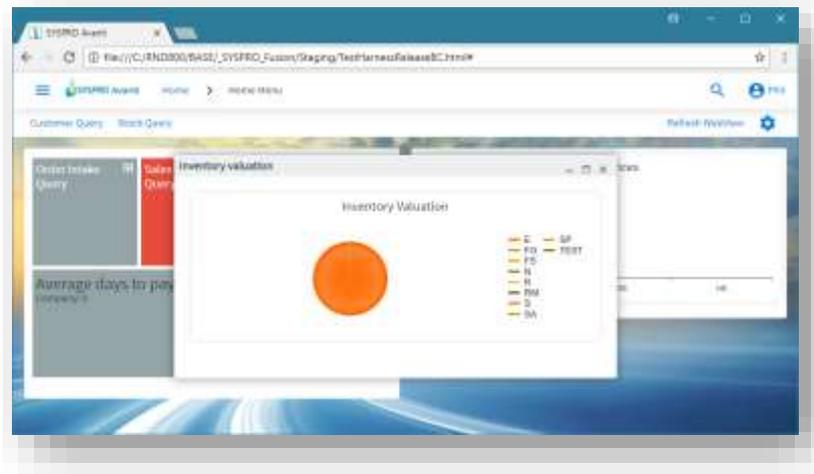
To add a card to any view, you can use the Visual Designer.

### Showing Insight Cards

To show 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 shown in a popup window:

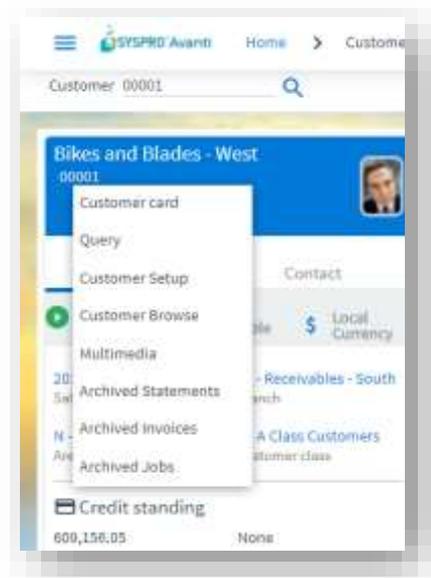


The card can be positioned anywhere within the browser, and can be minimized or maximized within the browser. Avanti will remember any cards shown like this, and will show them again next time you login.

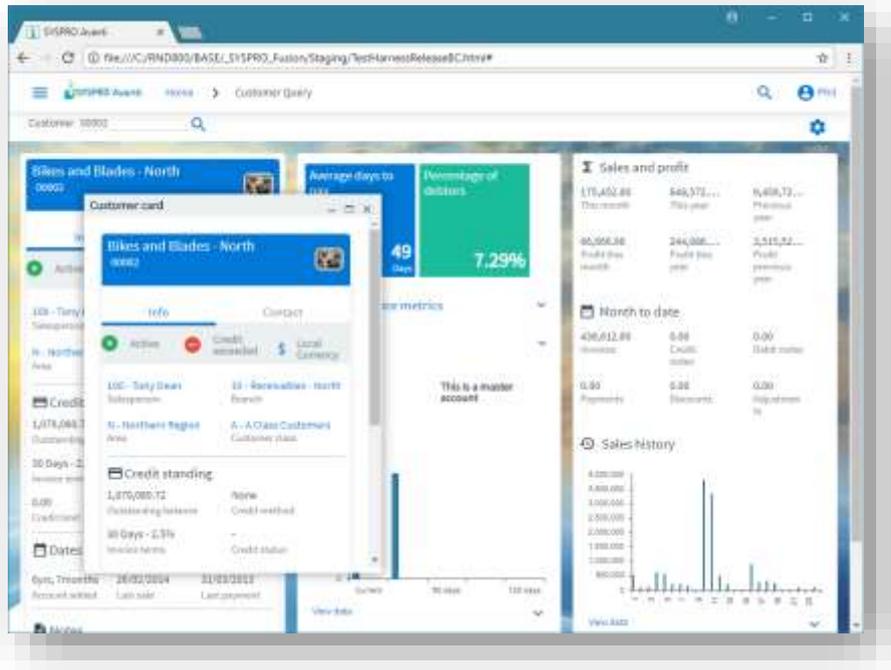
## Showing 'key' cards

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

To show a key card as a popup window, you select from the SmartLink context menu. This is the same context menu that is available in the SYSPRO Window client version.



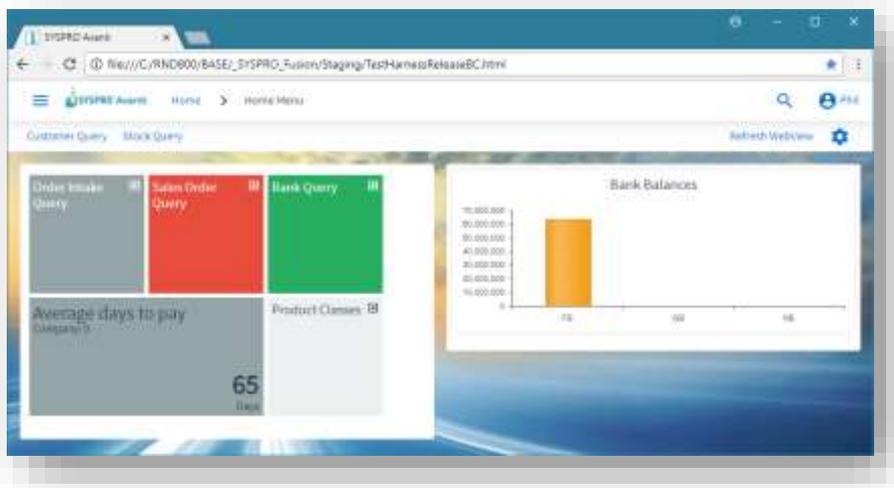
The Customer card is now shown as a popup window:



## Using Business Insights and Tiles in Avanti

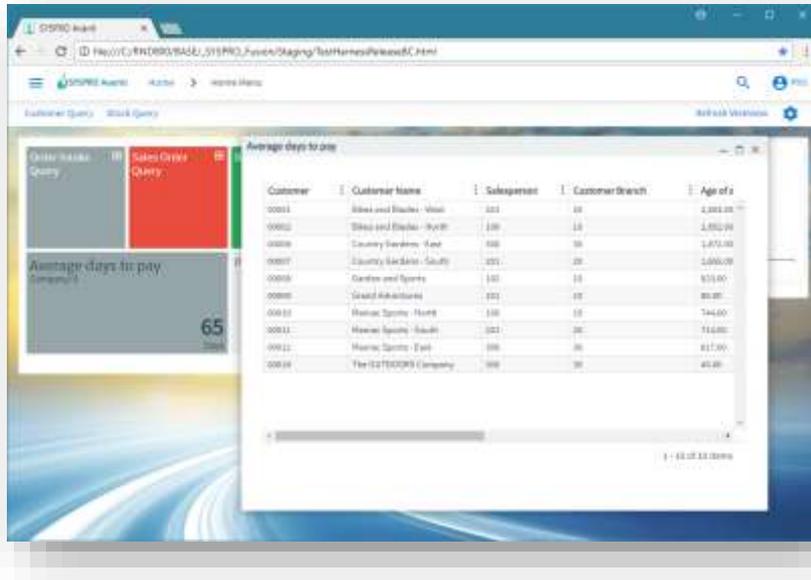
Business insights are discrete views of KPI data and are displayed within Tiles. These tiles can be added to any view using the Visual Designer. Additionally, a tile can represent a program that can be launched.

If we look at the view shown below, which is the Home Page for Avanti, there are 3 Program Tiles, and two Business Insight tiles.



Clicking on Order Intake Query, for example, will launch that application.

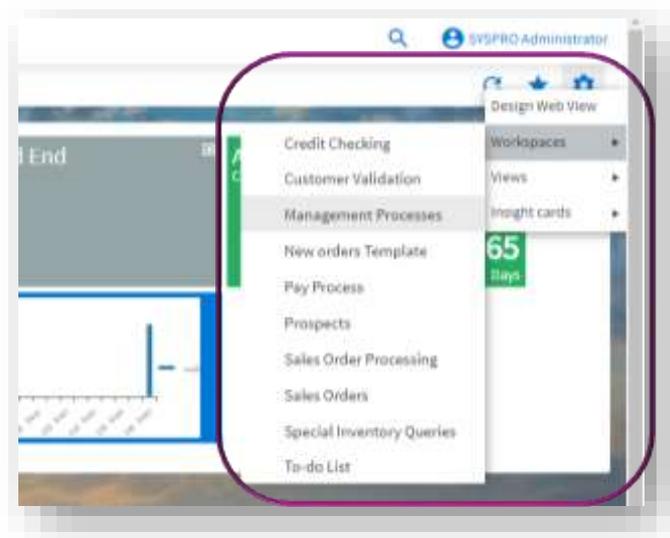
Clicking on Average days to pay (which is a Business Insight tile) will show the detail behind that KPI:



## Using Workspaces by Role in Avanti

A workspace is a way of grouping tasks or processes in a meaningful way for an individual. It is like a Favorites menu except that it is defined at a role level. You can have an unlimited number of workspaces for each role.

Workspaces are shown, sorted by description, beneath the Settings icon:



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.

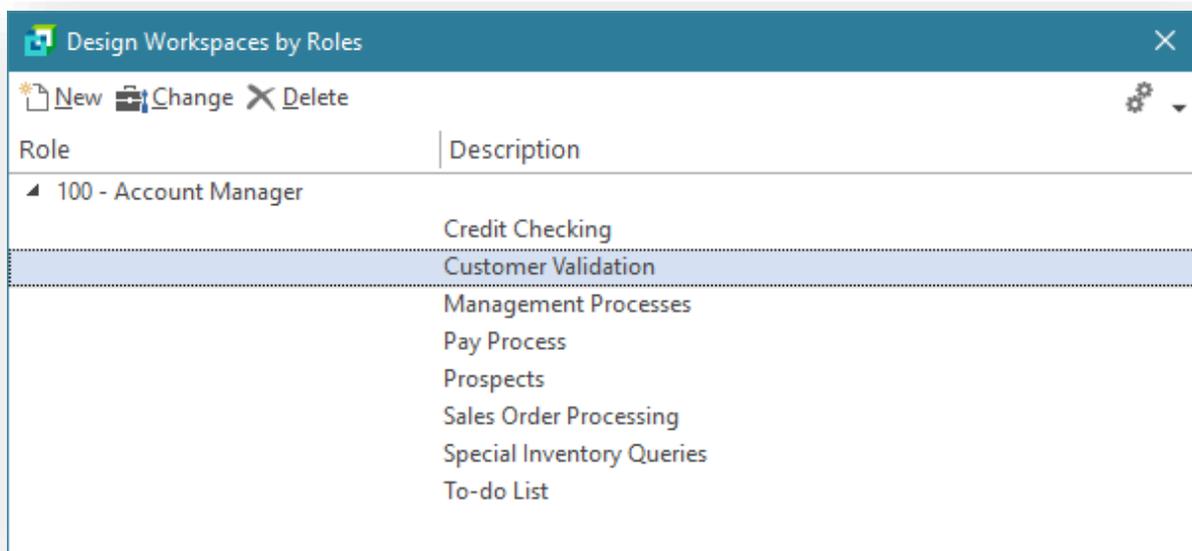
The name of your current workspace will be shown in the status bar of Avanti.

## Designing Workspaces

Workspaces are designed from within SYSPRO.

Click on the Administration tab of the Ribbon Bar and then click on **Design Workspaces** (this button will be disabled unless the option **Role layout design** against the operator is checked).

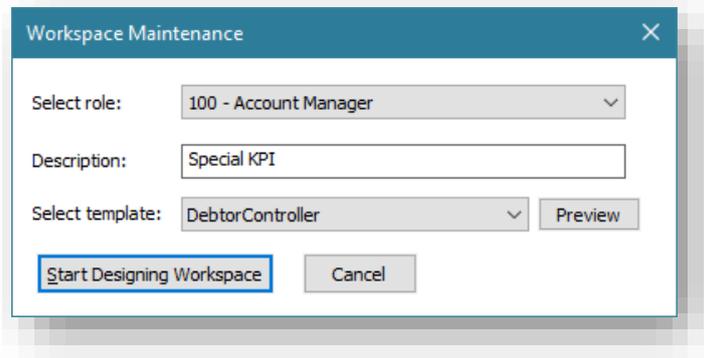
This will show all the defined workspaces across all roles:



Role	Description
▲ 100 - Account Manager	Credit Checking
	Customer Validation
	Management Processes
	Pay Process
	Prospects
	Sales Order Processing
	Special Inventory Queries
	To-do List

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

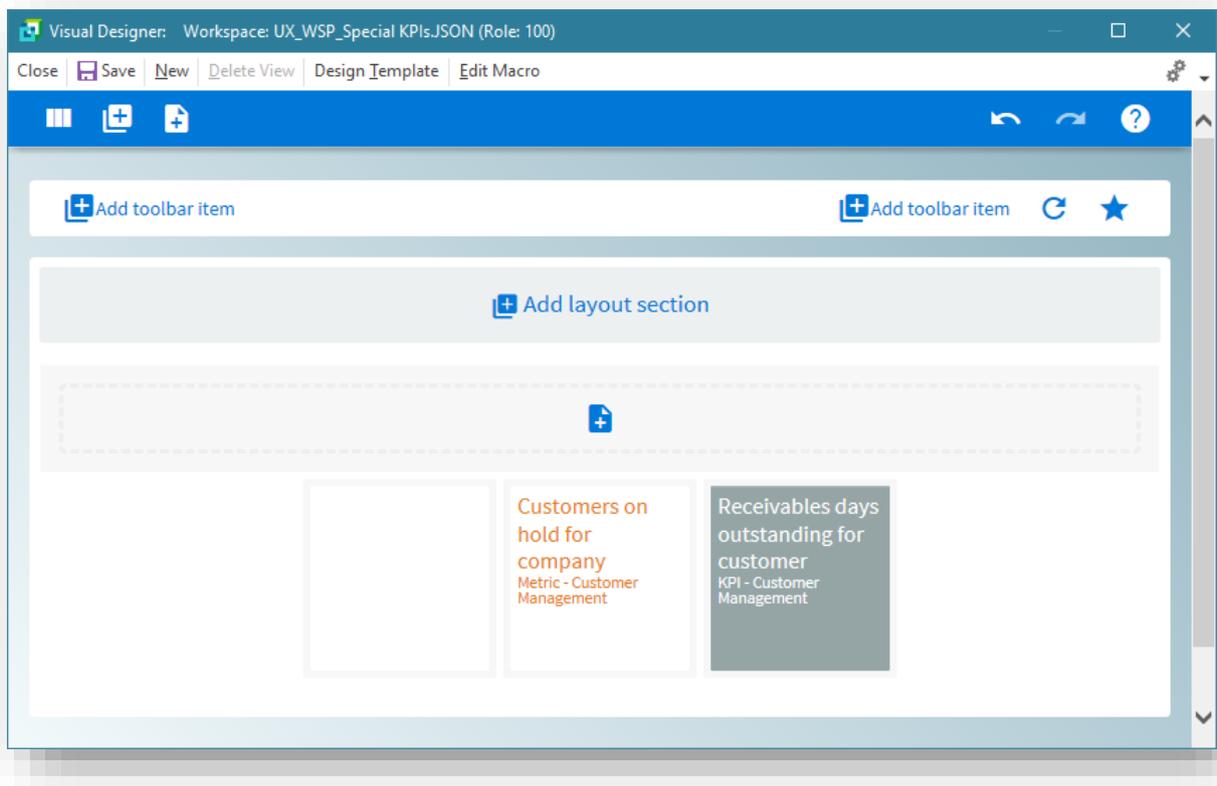
Select the role for which you wish to define a workspace, enter a description:



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

Click on **Start Designing Workspace**.

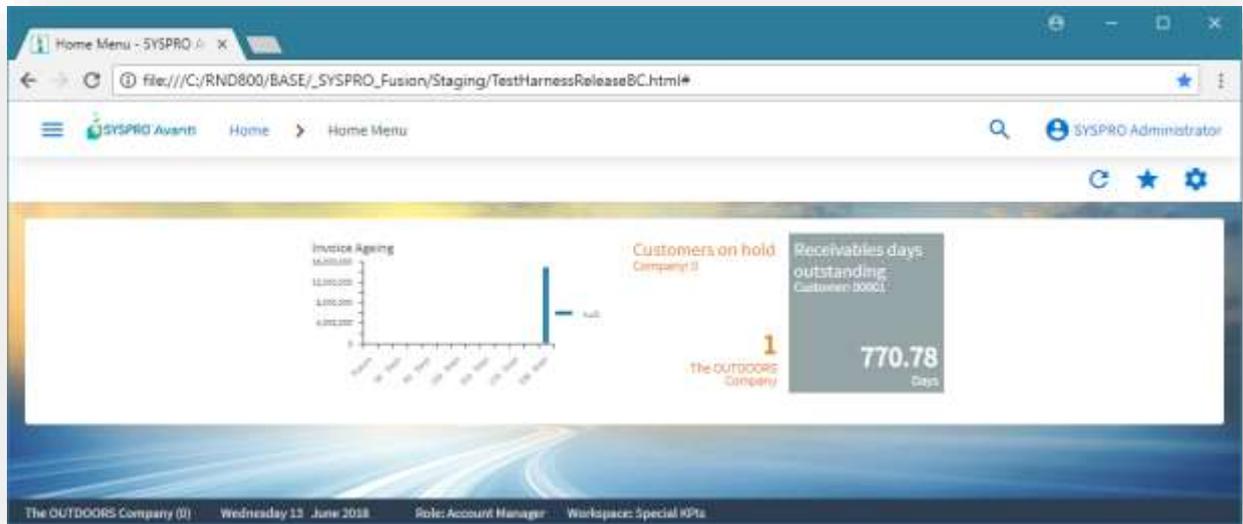
The Visual Designer will be launched:



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

Click on **Save** to save the workspace.

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



## Workspace technical information

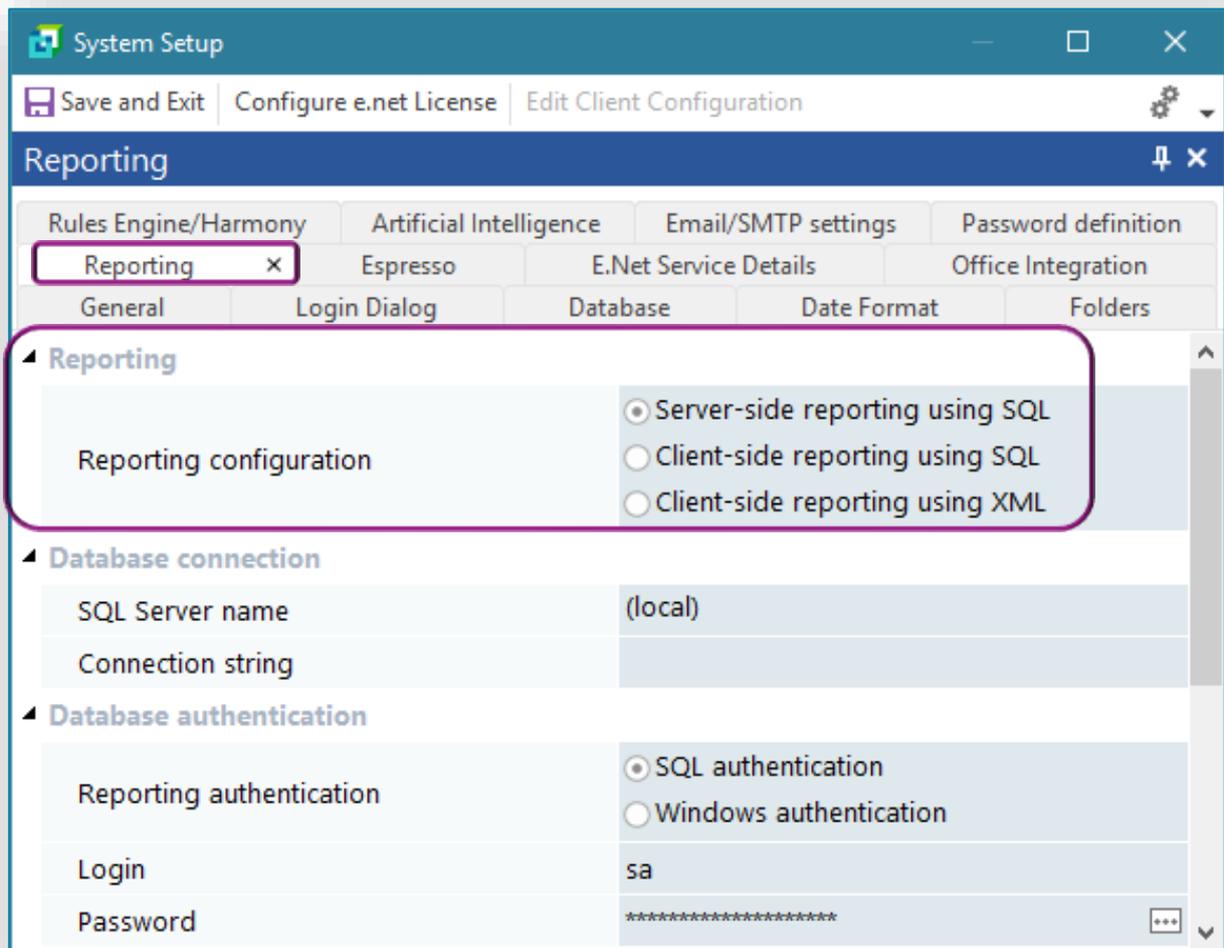
Workspaces are held as JSON files.

SYSPRO template workspaces for roles are located in the ...\\base\\samples folder with the prefix UX\_WSP, as in the example: **UX\_WSP\_InventoryController.JSON**

Workspaces designed by an Administrator are located in the ...\\settings\\Role\_xxx folder with the prefix UX\_WSP and the description, as in the example: **UX\_WSP\_Special KPIs.JSON**.

## Printing Documents in Avanti

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 program:



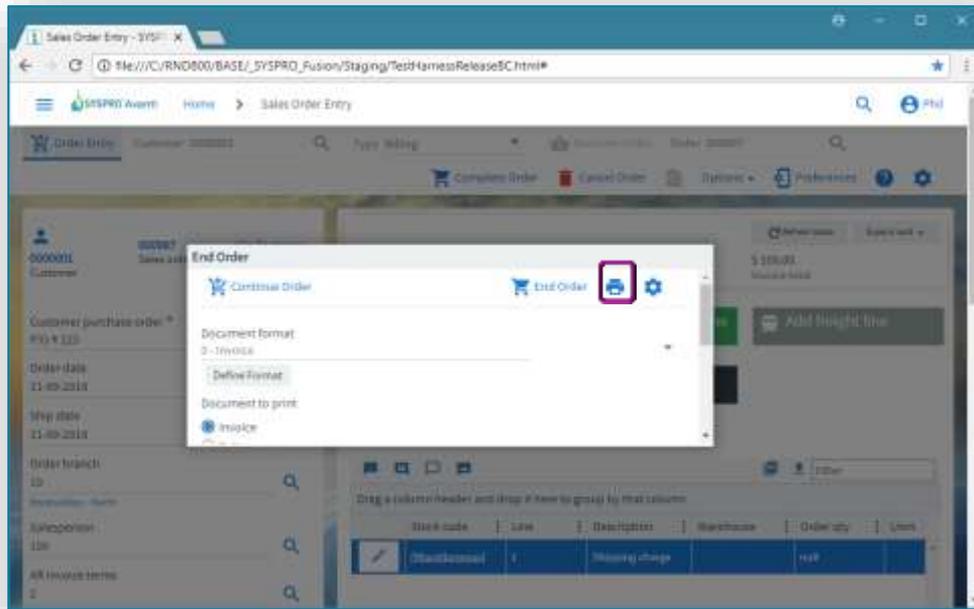
### Prerequisites

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

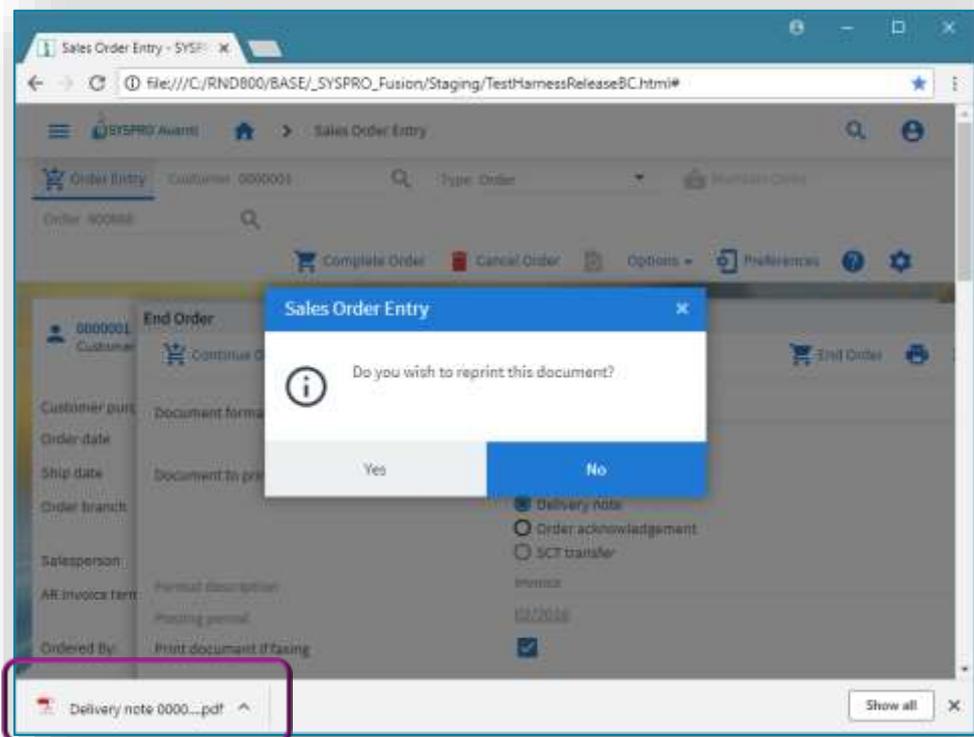
### Printing documents

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.

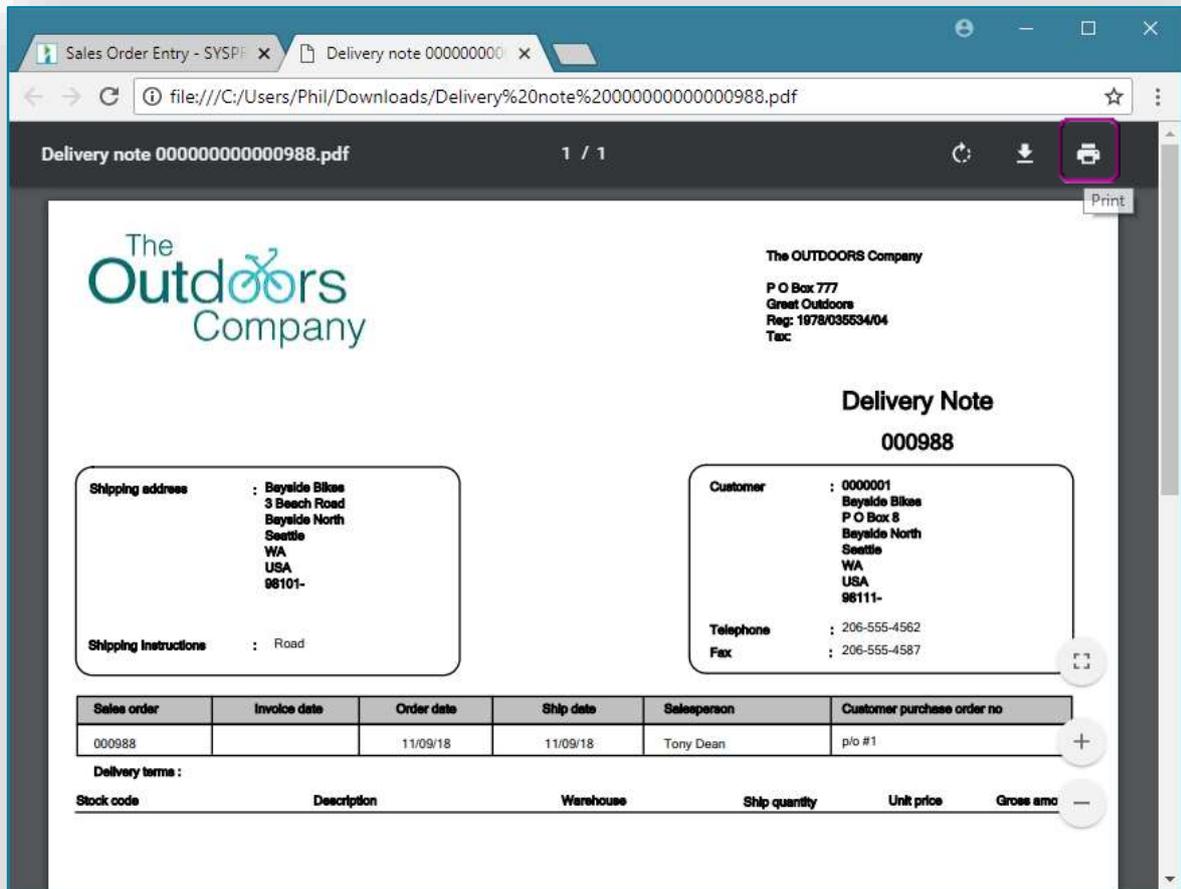
As an example, the following screenshot shows the **END ORDER** screen for **Order Entry**:



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



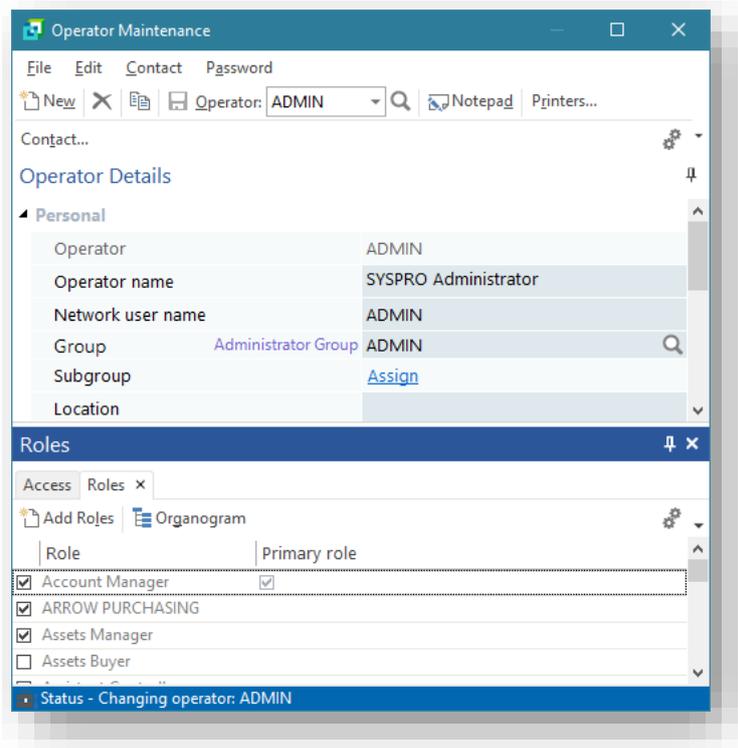
Click on the PDF button in the browser to show the PDF document, allowing you to print the document:



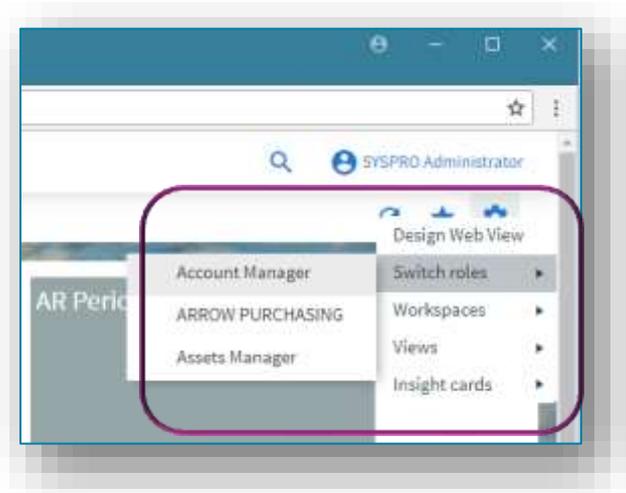
# Switching Roles in Avanti

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.

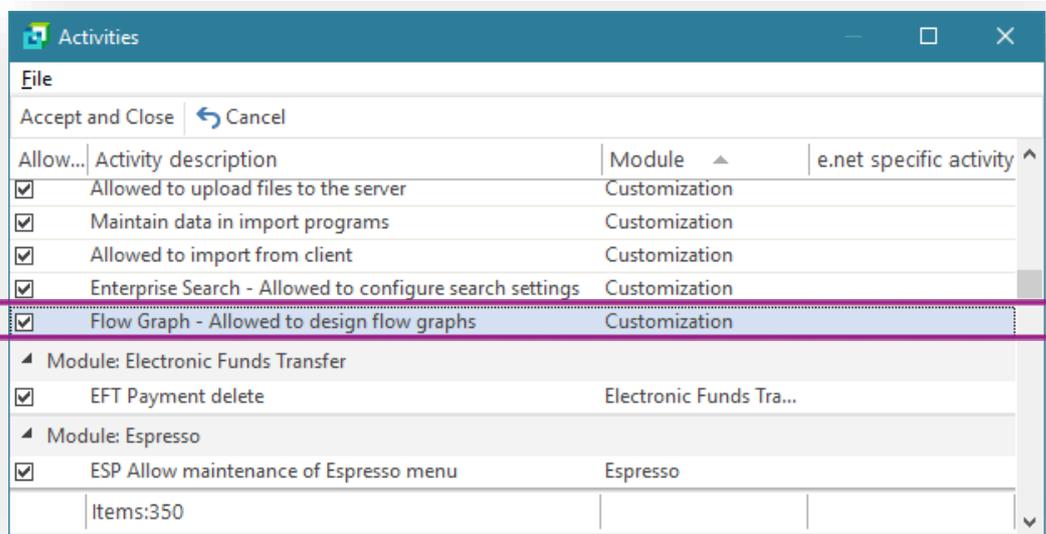
# Using Flowgraphs in Avanti

Flowgraphs in Avanti contain shapes that can be linked together visually. A shape can be optionally defined to run an Avanti program or execute a business insight.

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

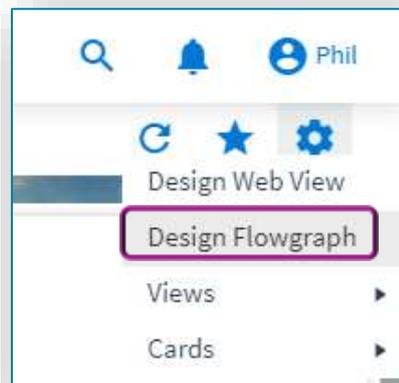
## Prerequisites

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

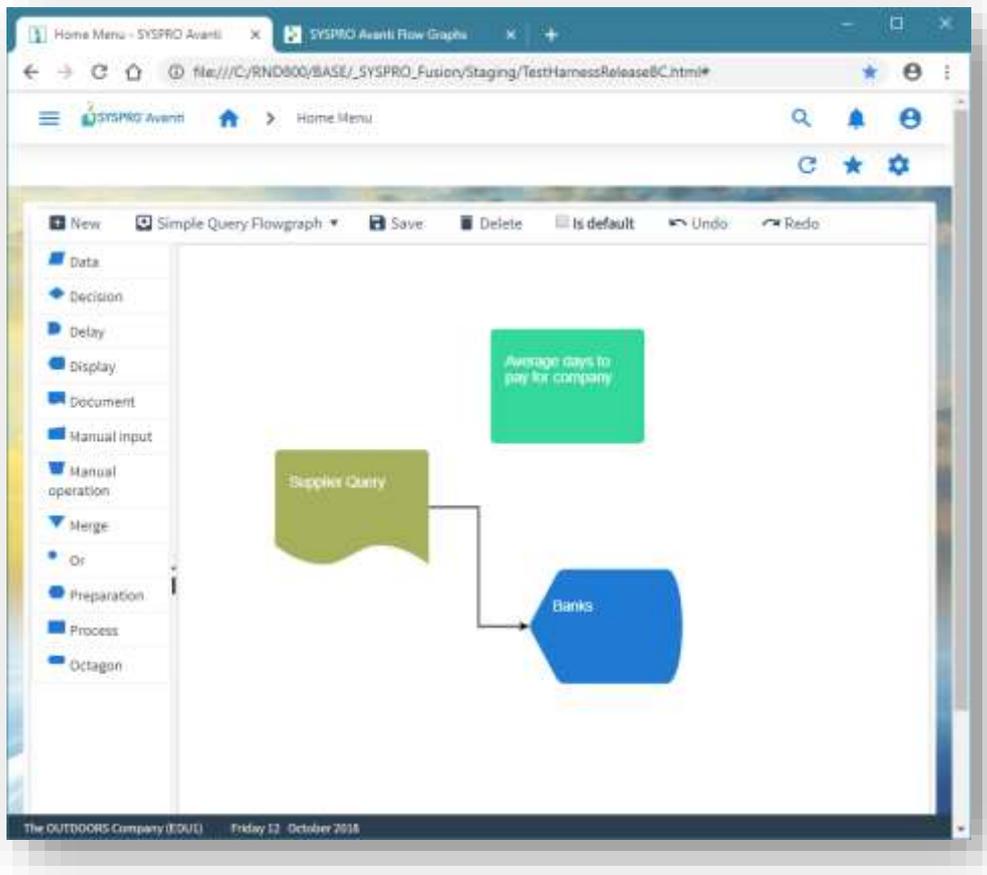


## Designing a Flowgraph

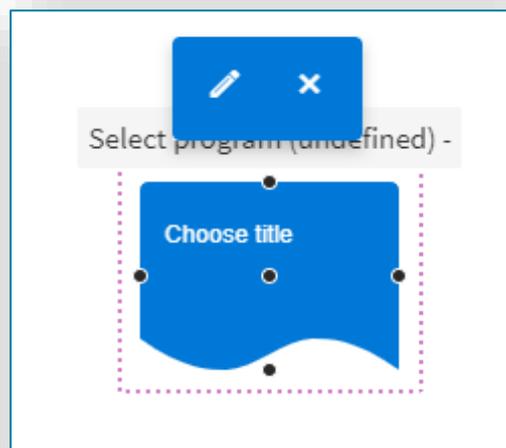
In Avanti, click on the **SETTINGS** icon in the Home Menu to design a Flowgraph:



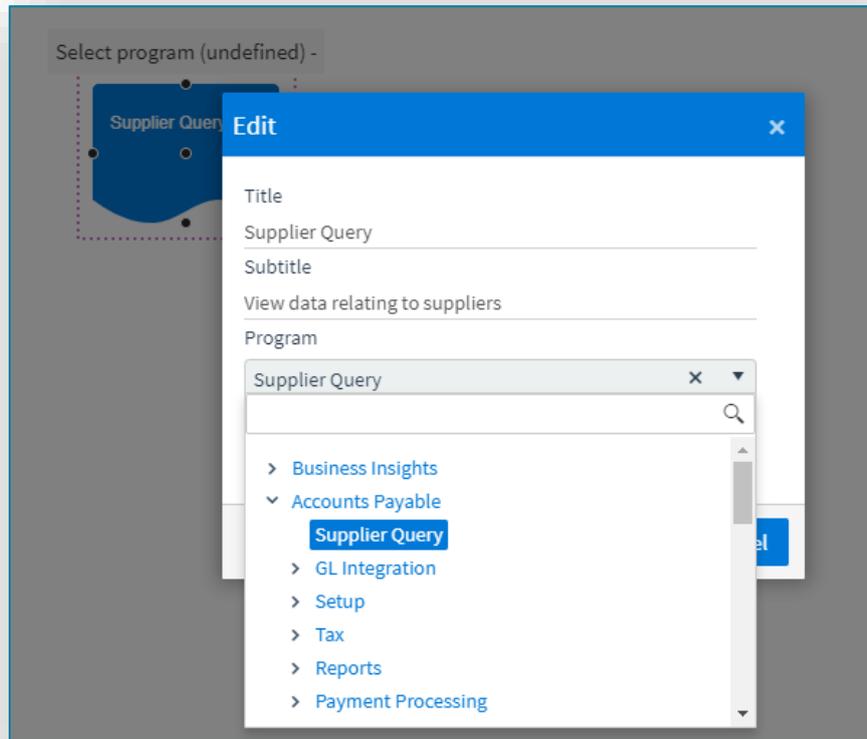
The **Flowgraph Designer** will be displayed:



Drag a shape onto the blank canvas area:

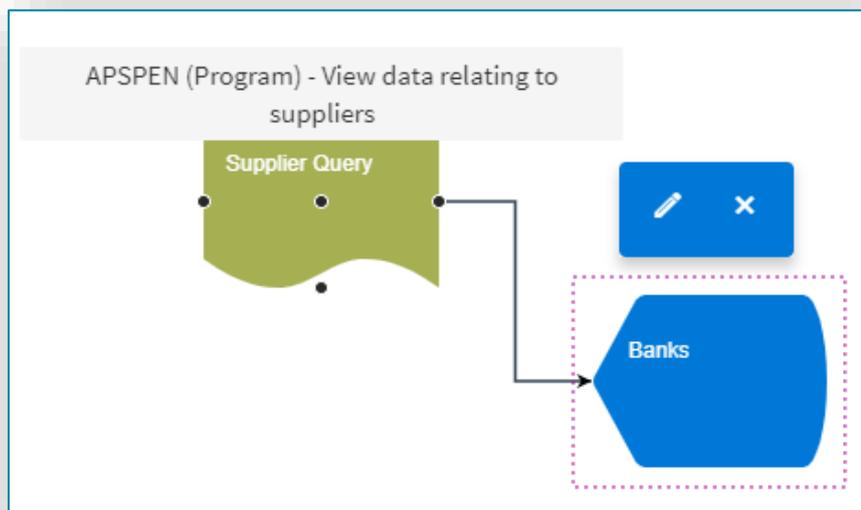


Click the **EDIT** button to enter a shape title and define a program to run:

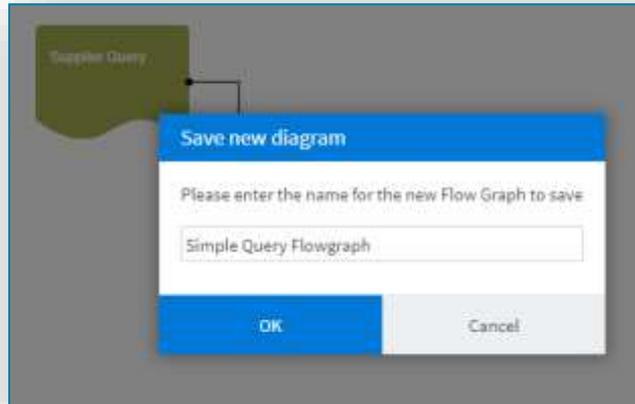


The list of available programs is identical in structure to that shown in the main menu. You can run any Avanti program, or you can add a business insight. Selecting a program will automatically update the **Title** and **Subtitle** (which is shown as a tooltip).

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



Click on 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 shown in the viewer – just check the option is **Default**.

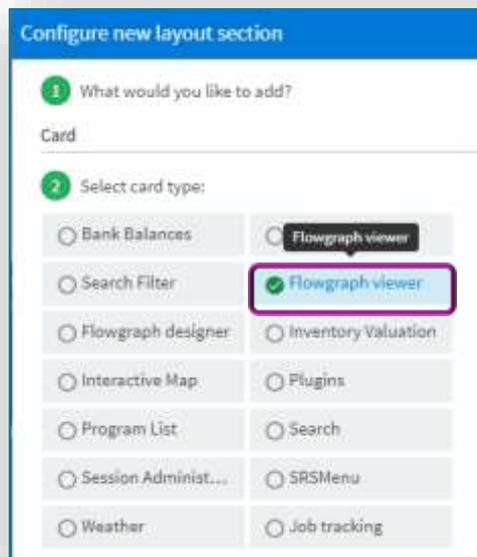
## Exiting the Flowgraph Designer

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

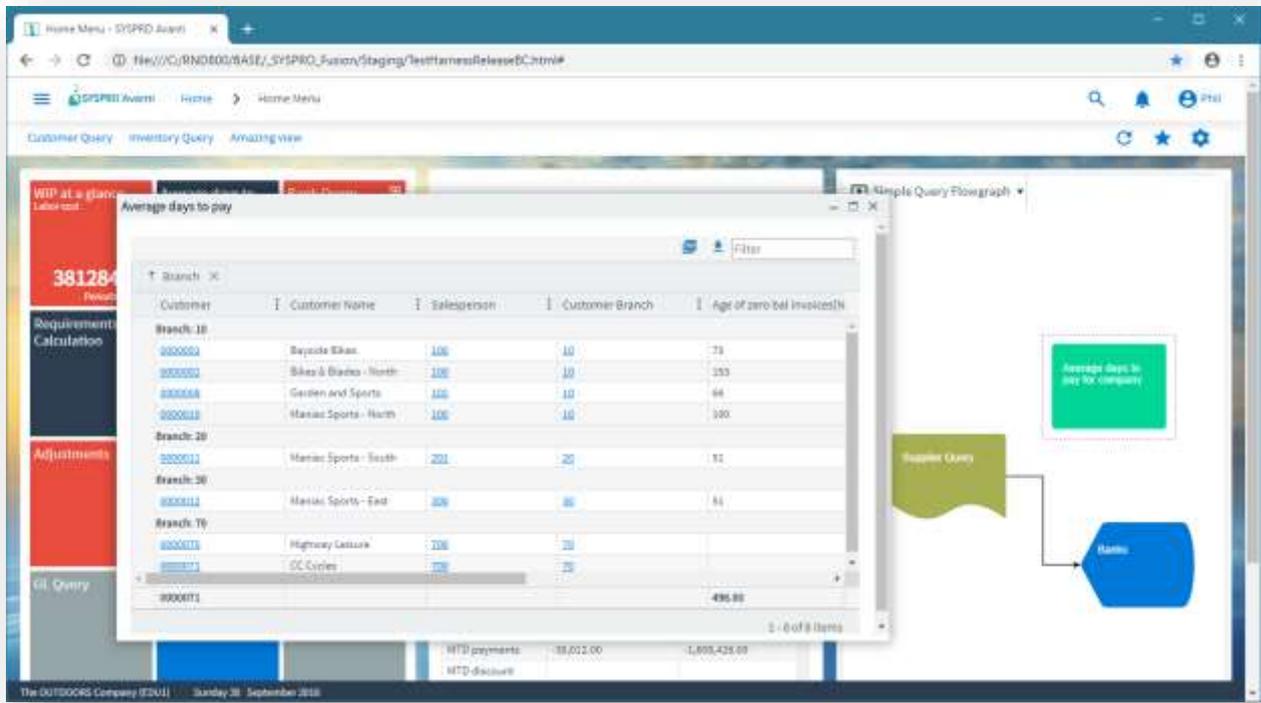
## Viewing a Flowgraph

To view a Flowgraph, add the Flowgraph Viewer 'card' to any Web View using the **Visual Designer**.

Add a layout section to your Web View and 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.



Click on a shape to run the associated Avanti program.

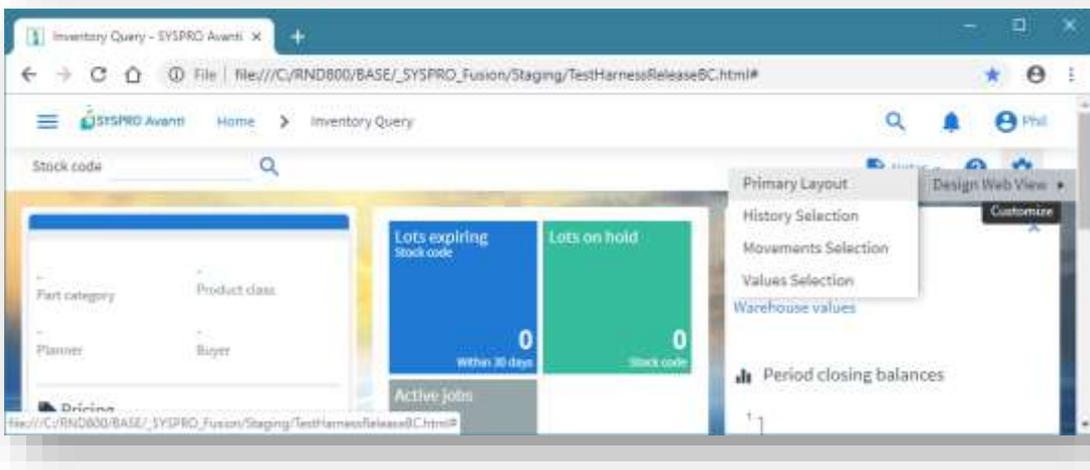
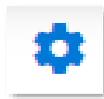
Alternatively, if the shape has been defined for a Business Insight, then clicking on it will show the Insight detail.

# Using the Visual Designer

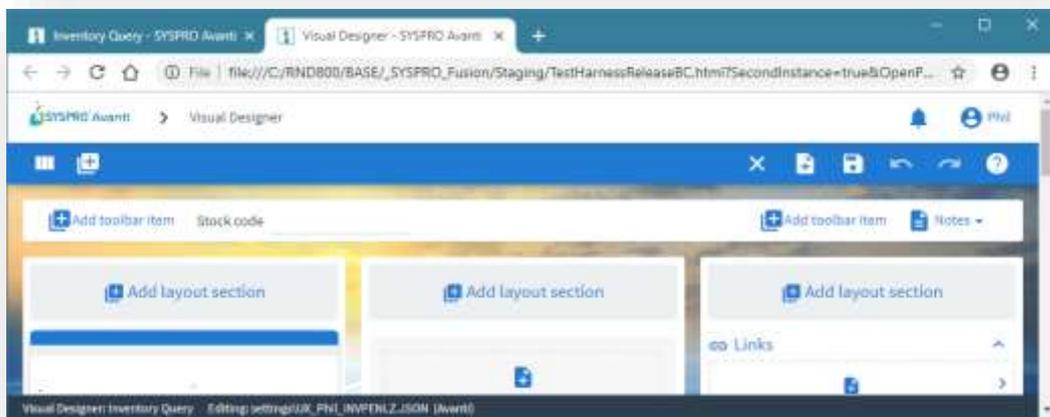
## Using the Visual Designer in Avanti

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

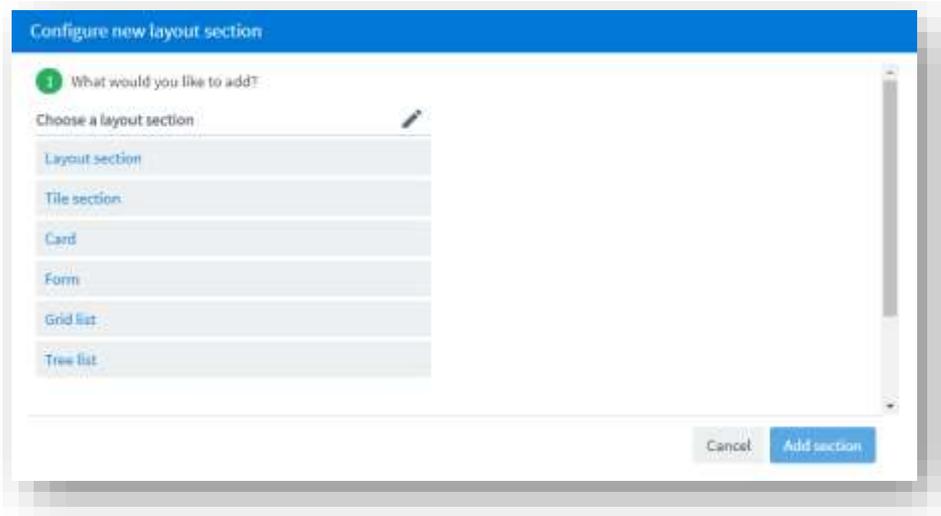
For example, to add or modify a Business Insight shown in a Tile, click on **Design Web View** on the SETTINGS icon:



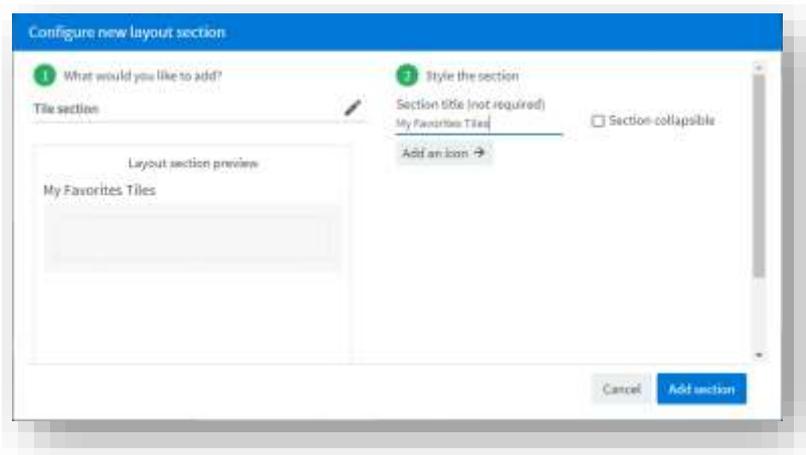
The Visual Designer will be shown in a new instance of Avanti in a separate browser TAB.



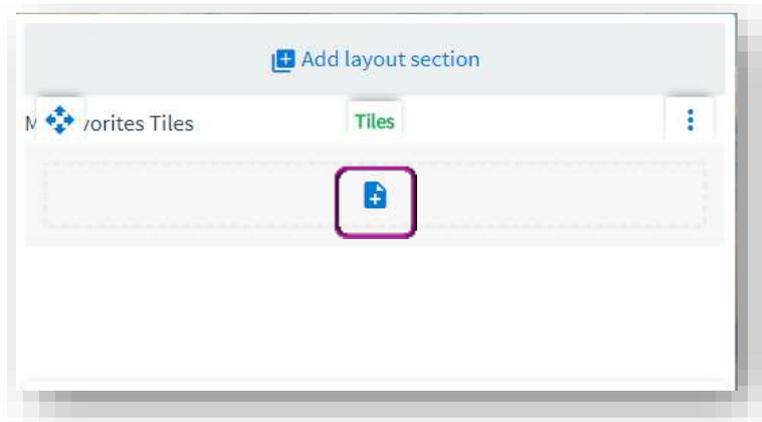
Now click on the **Add Layout Section** to add another 'Tile' section:



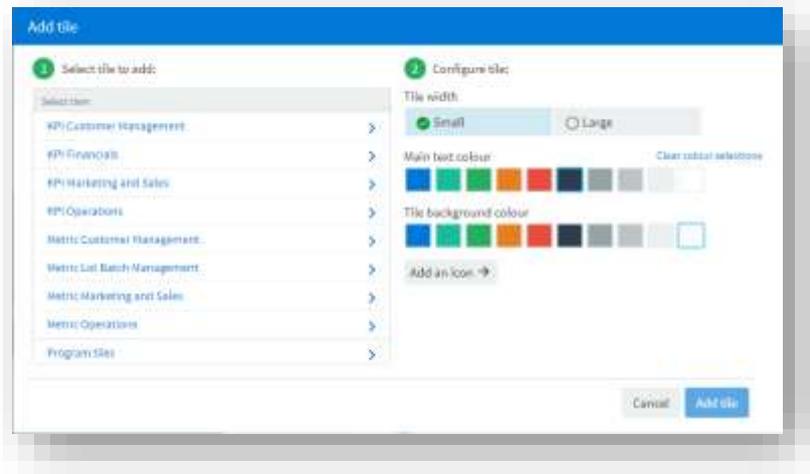
Select TILE SECTION, optionally style the section, and click Add Section:



Now click on the ADD button to add a tile:

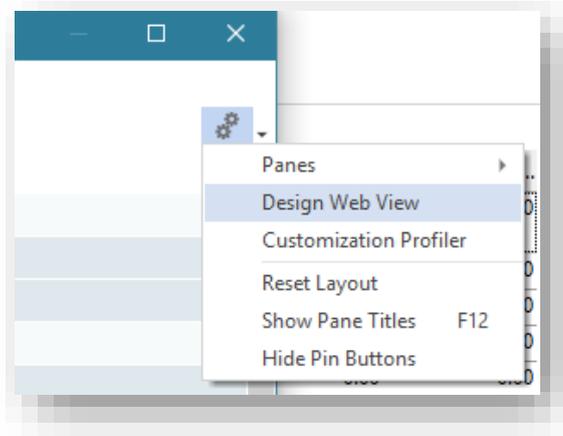


And then select the KPI or program tile to be added.



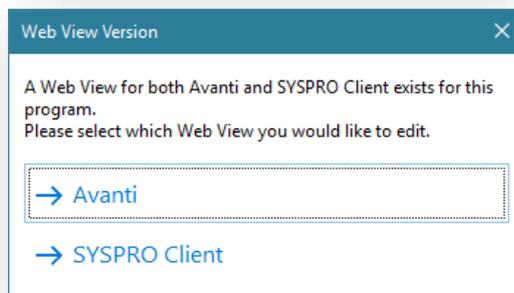
# Using the Visual Designer in SYSPRO

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

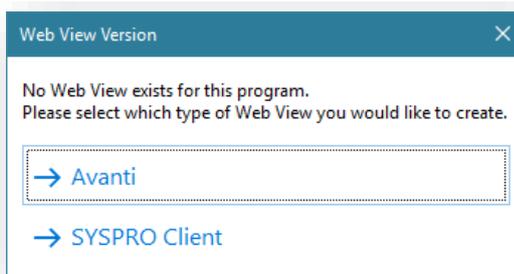


The Visual Designer in SYSPRO is used to create web views for use in SYSPRO as well as for Avanti. Therefore, as the Visual Designer loads in SYSPRO the following checks will take place:

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:

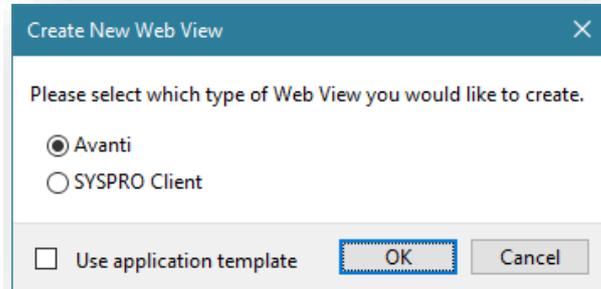


4. If neither Avanti nor a SYSPRO Client web view pre-exists then a message box will appear asking which type of Web View you would like to create:



## Creating a new Web View

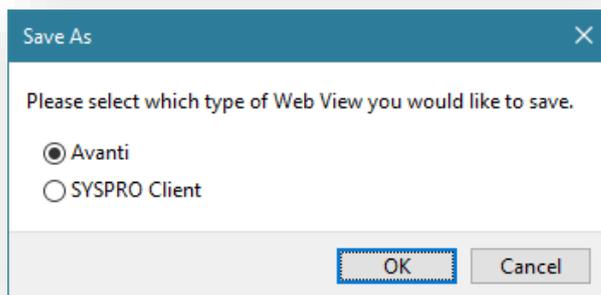
From within the Visual Designer on the toolbar, click **New** to create a Web View for either Avanti or for the SYSPRO Client:



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

Web Views are saved as JSON files, named by the program, in the following locations:

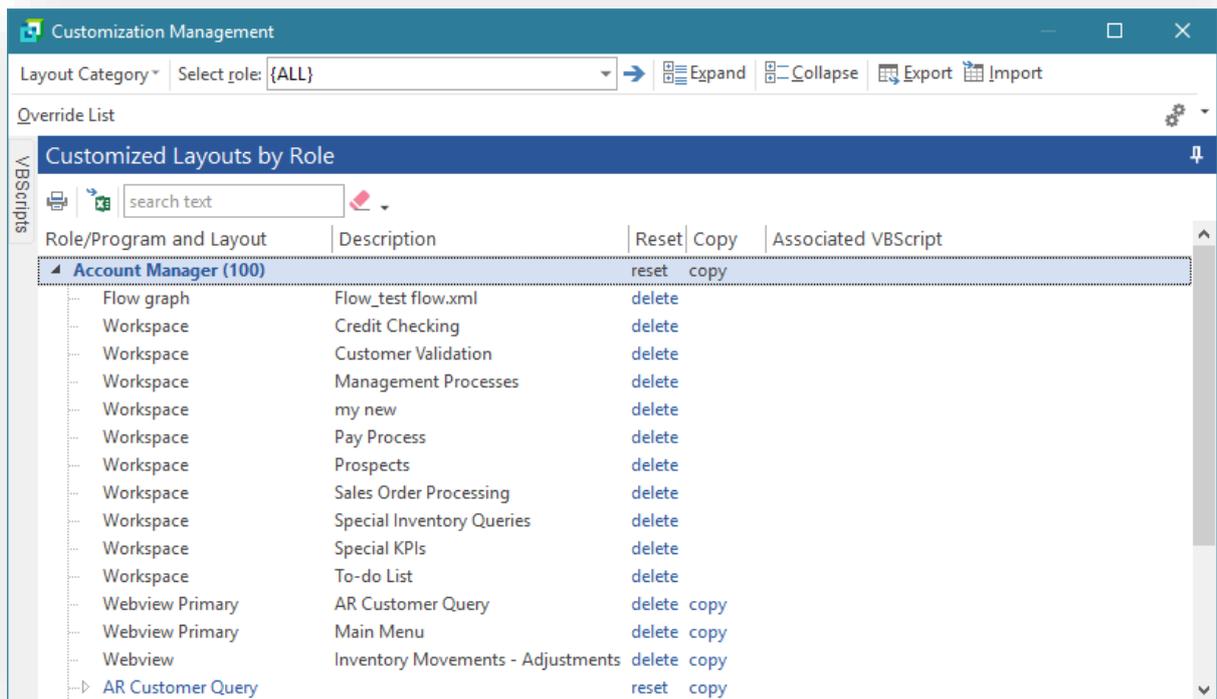
- When designing at the operator level, then web views are saved in the ...\\settings folder:
  - For a web view for Avanti UX\_operator\_ARSPENLZ.JSON
  - For a web view for SYSPRO Client UX\_operator\_ARSPENLZ\_SYSPRO.JSON
  
- When designing at the ROLE level, then web views are saved in the ...\\settings\\Role\_xxx folder:
  - For a web view for Avanti ARSPENLZ.JSON
  - 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.

# Customization Management by Role in Avanti

You can use the Customization Management program (see Ribbon Bar, Administration tab in SYSPRO) to manage customizations of Web Views or Workspaces by role.

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



# Behavioral differences between Avanti and Windows client version

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The table below describes restrictions in Avanti in this pre-release.

These restrictions will be removed in the future.

## Items not currently supported in Avanti

The following items are not currently supported in Avanti:

- Reporting and document printing
  - Note:** When this functionality is available, to print documents in Avanti will require server-side printing to be enabled.
- Structured GL entry (Ledger code entries are presented by sections in a drop-down list)
- The facility to print list views content (you can, however, export to Excel and PDF)
- Saving the grid list settings (if you move columns around in a grid list, then this is not saved and restored). The grid list columns sequence is initially provided from the equivalent list view from within the SYSPRO program.
- Form Actions are currently not surfaced in the Avanti Visual Designer and therefore cannot be shown in a Web View.
- Customized Task Dialogs
- Some VBScript functionality:
  - For example, changing the values or colours for cells in a list view in the **OnPopulate** event will have no effect in Avanti.
  - The **OnBeforeChange**, **OnLinkClicked** and **OnPopulate** events are currently ignored.

The following describes functionality that differs 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 by 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.

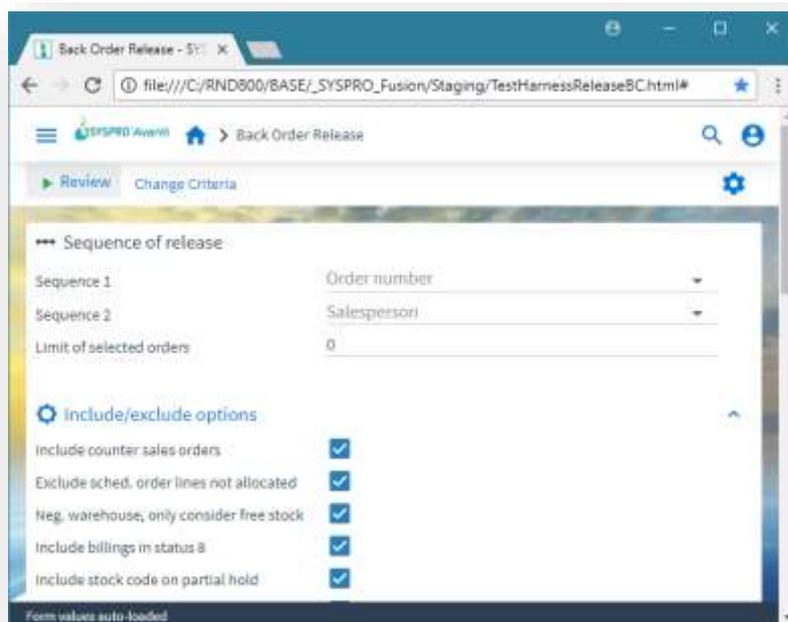
# Auto-loading of form values in Avanti

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.

In Avanti this is automatically in use.

As an example, any options changed in the criteria for the BACK ORDER RELEASE program (shown below) will be saved and re-applied when next the program is launched.

Any programs that are saving and loading previous form values will be indicated by the message **Form values auto-loaded** in the status bar.



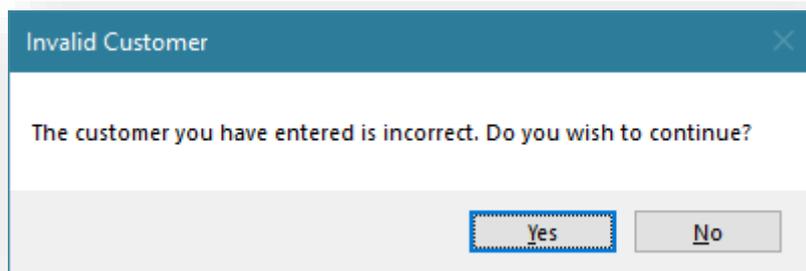
# Using MSGBOX and INPUTBOX functions in a VBScript in Avanti

Any **MSGBOX** and **INPUTBOX** functions in a VBScript will execute within the SYSPRO system on the application server.

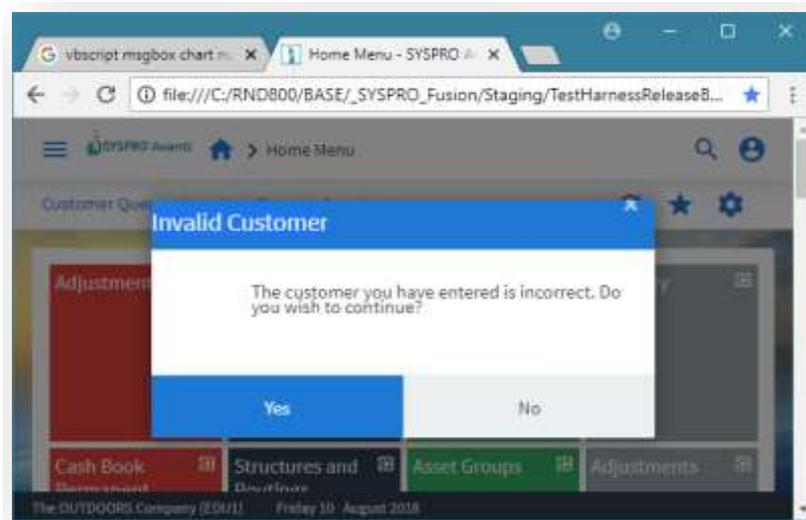
When running in Avanti such functions would cause Avanti to appear unresponsive as user action is required. To overcome this problem these VBScript functions are converted just before a script is to be executed so that the MSGBOX function calls a SYSMSG function, and INPUTBOX calls a SYSINPUT function.

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

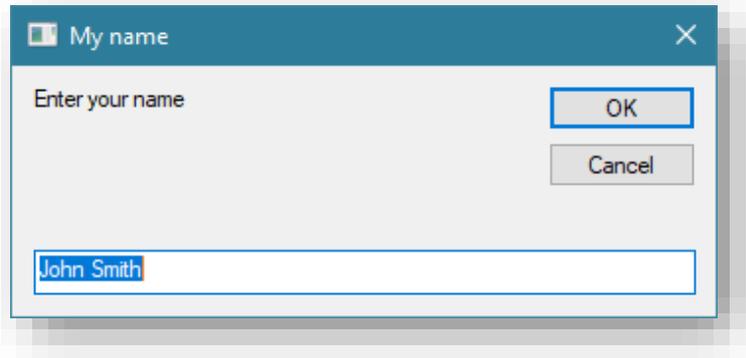
Thus, a MSGBOX in SYSPRO that looks like this:



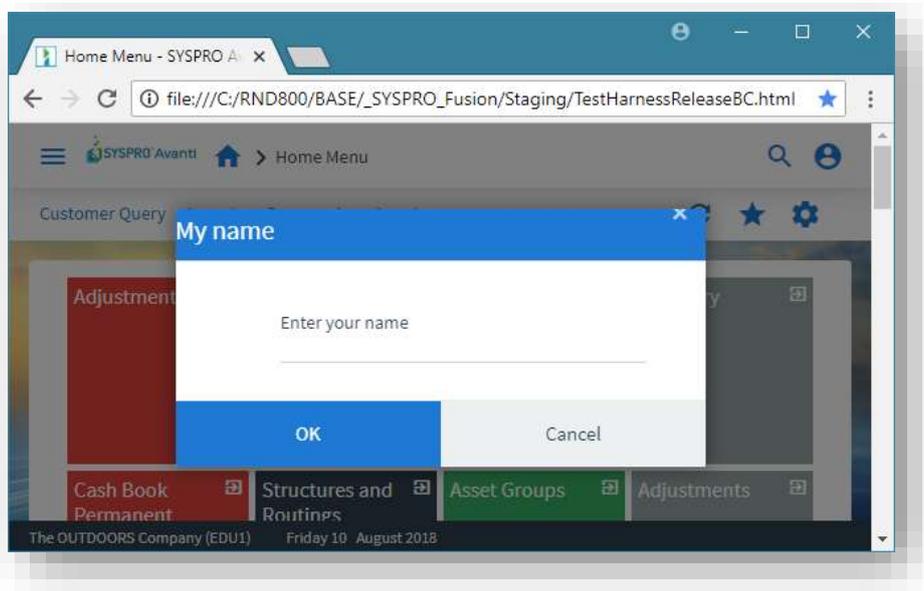
... will appear like this in Avanti:



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.

# 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 shows Business Insights in some SYSPRO programs might be very useful. Here's an example of the Customer Query program in SYSPRO that includes a Web View showing some Business Insights:

The screenshot displays the 'AR Customer Query' window. The top navigation bar includes 'File', 'Options', and 'Query'. The main area is divided into several sections:

- Customer details:** Customer: 0000001, Name: Bayside Bikes, Currency: \$ - Local Currency, On hold, Credit status, Credit status coc: 1, Master sub-acco, Over limit: 0.00, Credit limit: 9,999,999,999, AR invoice terms: 2 - 60 Days - Net, Credit checking: No credit check, Order value: 320,149,320.44, Order value rele: 0.00, No of orders: 72, Last payment: 06/06/2018.
- Contact information:** Contact name: Karen Saunders, Email: Accounts@BaysideBike..., Telephone: 206-555-4562, Extension: 1252, Additional telephone: 206-555-4565, Fax: 206-555-4587, Telex.
- Documents fax:** Number, Contact.
- Sold to address:** Building: P O Box 8, Street: Bayside North, City: Seattle.

The 'Business Insights' web view includes:

- Invoice Ageing:** A bar chart showing invoice aging over 300 days. The y-axis ranges from 0 to 16,000,000. A single bar is visible at approximately 210 days.
- Average days to pay:** 75 Days (displayed in a green box).
- Average YTD invoice value:** \$72K (displayed in a blue box).

At the bottom, there is a table with columns: Invoice, Type, Invoice date, Original amo..., Balance - Local, Month posted, Terms, Sales order, Customer pu..., Salesperson.

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

**Note:**

If you do use Web Views in the Windows client there are some differences:

- Predictive search is currently not enabled in toolbars or form fields
- The search button is not shown 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 shown.
- 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 most of the SYSPRO programs either by using a standard template (one already built for use with SYSPRO 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**.

# Architecture

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Avanti is built using modern web technologies.

Technically, Avanti 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 SYSPRO Avanti along with the key benefits.

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

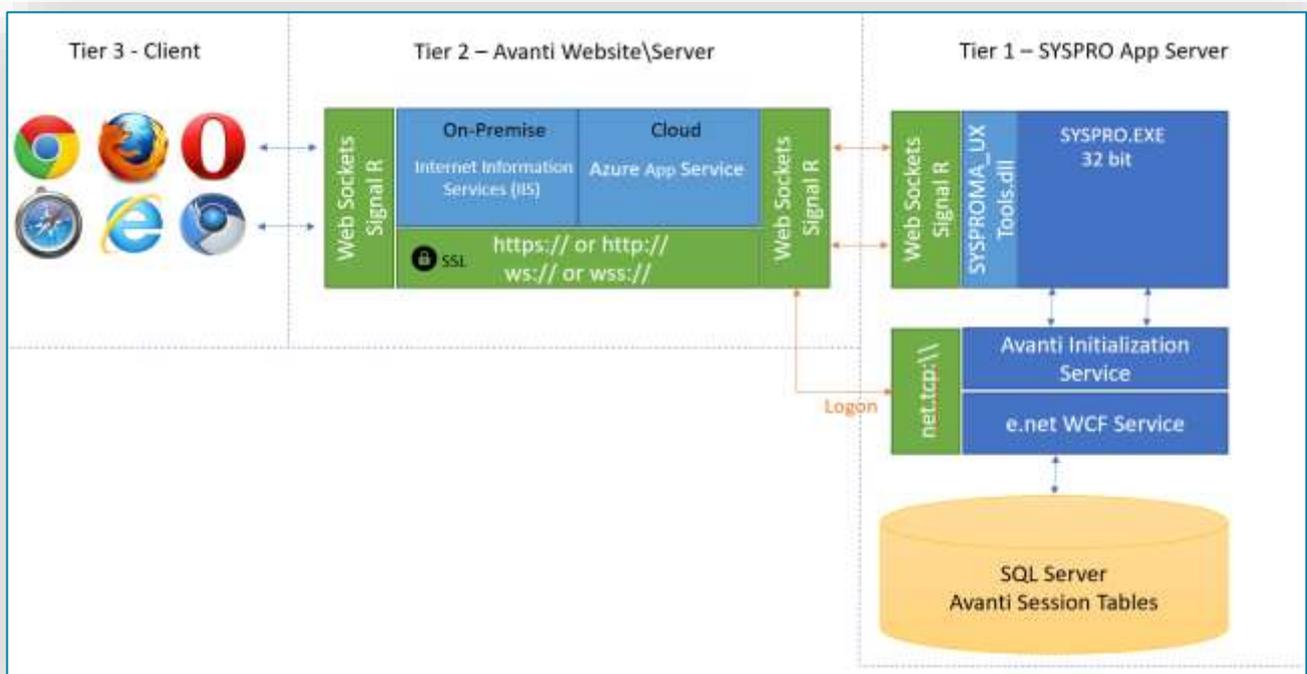
## How Avanti works

The following process/workflow describes how Avanti, authenticates and 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 into the browser, a logon screen will be displayed, allowing the user the capture their user name, password along with the company details.
3. When the logon button is clicked, a request is sent to the Avanti Website, which will 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. 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 to. 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 there are several out of the box benefits that customers inherit with running in the cloud, i.e.:

- **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 or 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 using Avanti.



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