Highlights by Release

SYSPRO 8

Reference Guide

ㄷ! SYSPRO™

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User Experience

SYSPRO Avanti Enhancements

User Interface

The user-interface includes the following improvements for a more intuitive and engaging user experience:

- GeoLocation support

  When working with address fields in a web view, you can now use the **Resolve Address** feature to ensure that the customer or shipping address is correct, or the **Map Directions** feature to get directions using Google Maps.

  > ℹ️ You can configure how GeoLocation works within *SYSPRO Avanti* using the **Setup Options** program (*Setup Options > System Setup > System-Wide Personalization*).

- Multimedia object inclusion

  Using the **Visual Designer** or **Customize Application** programs you can now select the **Multimedia** button to add multimedia objects (e.g. images, documents, etc.) associated with key fields.

- Multiple web page handling

  The *SYSPRO Avanti* infrastructure has been enhanced to allow for a new browser tab to be opened for a given URL.

- Simplified interface customization

When adding a custom form field using the **Customize Application** program, you can now select to automatically add the field to the web view, without having to use the **Visual Designer**.

- Easier program navigation by role

  A **Program List** card that mimics the functionality of the **Avanti Program List** in the hamburger menu has been added to the **Visual Designer** to allow easier navigation of programs by certain user roles.

- Program name and version visibility

  For improved debugging purposes, you can now access the (**Admin Shift+F7 System Information**) program from the **Gear** menu to view the name and version of a program in *SYSPRO Avanti*.

- Quicker grid entry

  Editable grids in *SYSPRO Avanti* that support the notion of automatically adding rows now enable you to paste the contents of your clipboard directly into the grid.

- Help popups & group headings on forms

  To assist you when configuring new or existing setup options within the **Setup Options** program, form fields now include descriptive group headings and you can hover over fields to view Help text for each option.

Enhanced initialization service

The **SYSPRO 8 Avanti Initialization Service** has been enhanced to improve performance and enable more concurrent *SYSPRO Avanti* user sessions.

Increased stability and reduced memory usage

A number of enhancements have been made to increase stability and reduce memory consumption, including:

- The ability to limit the number of *SYSPRO Avanti* instances.
- Improved support for comments in cells.
- Minimal CPU consumption when idle.
- Decreased memory usage per user upon initial login to the home page.
- Increased robustness when handling rapid data entry in data grids (specifically to prevent data corruption in grid rows).

Reduced file system persistence

The footprint on the file system has been reduced by moving non-static data (e.g. setting files) to the SQL database.

When you enable the **PERSIST OPERATOR UI SETTINGS TO SQL** setup option (*Setup Options > System Setup > System-Wide Personalization*) the `ADMPRO.DAT` indexed file is converted to the AdmProControl table in the system-wide database and thereafter any records are stored in this table. The `ADMPRO.DAT` file contains information about custom fields, table master and scripted fields that have been added to forms.

App store plugin

An App Store plugin has been developed that allows you to activate or deactivate SYSPRO applications in *SYSPRO Avanti*. The `SYSPRO.AvantiAppStore.Avanti.Plugin.dll` plugin is accessible from the hamburger menu.

User Interface changes

System-wide Personalization/Setup Options

The previous release outlined the consolidation of all the options from the **System-wide Personalization** program to the **Setup Options** program.

At the time, you could still run a standalone version of the **System-wide Personalization** program (i.e. IMPFRB) from the SYSPRO Ribbon bar or using the **Run a Program** function (CTRL+R).

From the *SYSPRO 8 2021 R1* release, this program is no longer available and all settings must be managed from within the **Setup Options** program (*SYSPRO Ribbon bar > Setup > Setup Options > System Setup*):
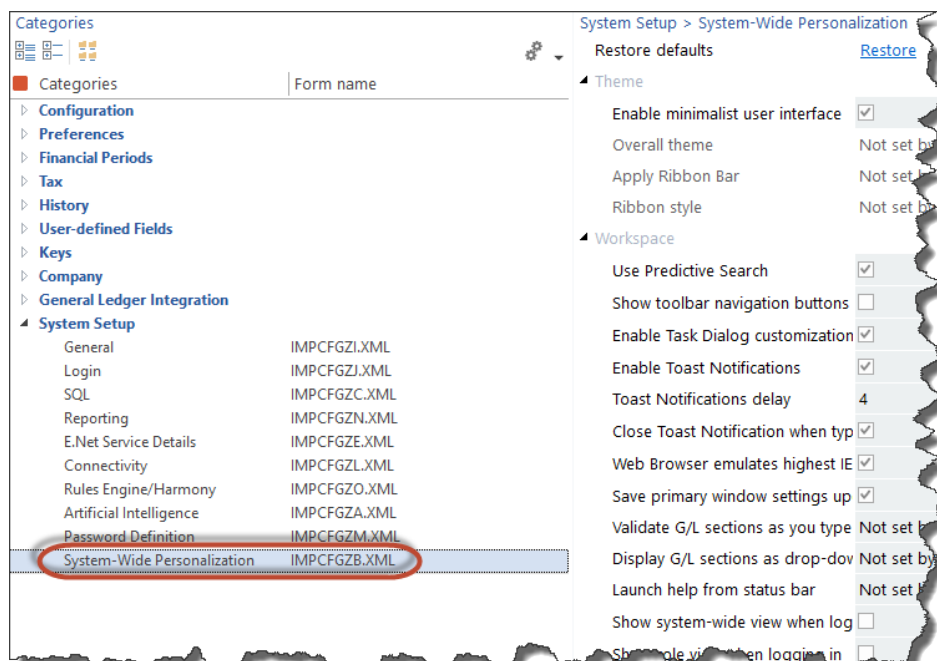
Simplified Administration

Reduced file system usage

As part of the journey to reduce file system persistence, when running **_SYSPRO 8 on-premise_** you can opt to retain the following RTF and CMS data in the SQL database (instead of the file system):

- RTF notepad documents attached to entities

- CMS Activity body RTF documents

- CMS Activity attachments

- CMS Organization lists

> ℹ️ This functionality is available from the new **Migrate Files To SQL** program _Program List > Administration > General Setup_) that lets you migrate these files to your SQL database (and vice versa). You can also run the program from the **Migrate Files to SQL** option from the **Functions** menu of the **Setup Options** program.

Advantages of moving this data from the file system to the database includes:

- Centralized access to all related data

- Reduction of file system usage

- Simplified portability of data and backup strategy

- Improved performance

- Provision for enhanced scalability in future releases

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SQL Optimized SRS Document Printing

During the **SYSPRO 8 2020 R2** release, the *custom* SRS Document Print XML control files were migrated to **Microsoft SQL Server** as part of the initiative to reduce file system usage.

Continuing on this journey, the setup and printing processes for SRS Document Printing is now optimized to reduce file persistence and address the overhead of loading the control information into memory when using SRS Document Printing.

The *standard* SRS Document Print XML control files and templates are now loaded into a set of three global SQL temporary tables for each instance of SYSPRO as they are required:

- Standard document types
- Standard document samples
- Available archive fields

In addition, the SRS Document Print programs that read the control files are now SQL-optimized for faster retrieval and updating of data. This improves performance, eliminates the use of in-memory collections and reduces the scope of resource locks.

> The scope of the resource lock is now reduced to only lock the document type that is being maintained and the document that is being maintained or designed (i.e. multiple users can now maintain different document types and different documents at the same time.

Licensing Changes

SYSPRO's licensing system has been extended for both **SYSPRO 8 on-premise** and **SYSPRO Cloud ERP** sites.

> The **e.net System Manager** is required to access these new modules.

SYSPRO Ken the BOT

The BOT infrastructure and technology (available as an early adopter product for the past few **SYSPRO 8** releases) is now a purchasable, licensed module.

Tax Connectors

The following modules are now available for licensing to run in **SYSPRO Avanti** and the core **SYSPRO 8** product:

- Avalara Tax Connector
- Vertex Tax Connector

Enhanced Diagnostic Capabilities

To assist service personnel in providing speedy resolutions, the diagnostics capability of **SYSPRO 8** has been extended to record a log of identified problems in SQL Server for current and future analysis. A *Black-box* capability has also been introduced to record what was happening on a system prior to failure. Recording the information in SQL is vital for the **SYSPRO Cloud ERP** offering where the file system cannot be used to persist information.

SYSPRO Run Time Errors

When the SYSPRO Run Time System (RTS) detects a problem, diagnostic files are now written to the `\Work\Diagnostics` folder using a naming convention that includes the date and time. The current contents of the black box are also appended to the existing log, providing a trace of the events leading up to the RTS error.

SYSPRO64.DLL exceptions & Client-server failures

A single log file per exception or message is written to the `\Work\Diagnostics` folder instead of all exceptions or messages being concatenated into a single file. This simplifies the SQL Server handling of log files on an individual basis and improves the performance during the upload process. It also lets you check each exception or message as an individual record in the AdmDiagDetail table.

Micro Focus unhandled exceptions

If an unexpected error occurs in the underlying run time when you log into SYSPRO, the system first verifies whether the `mfdebug.log` file exists in the `\Base` folder before moving it to the `\Work\Diagnostics` folder. The system then creates the new `mfdebug.log` file for the current unhandled exception in the `\Base` folder.

This effectively retains a record of all exceptions instead of just the last example (previously, the original file was overwritten by a subsequent unexpected error).

SYSPRO Cloud ERP Service Accounts

The introduction of Service Accounts in **SYSPRO Cloud ERP** aims to provide controlled access for selected SYSPRO personnel and partners to assist with various support related tasks like implementation, system configuration and training.

SYSPRO Cloud ERP administrators can now designate an operator as a service account, assigning the email address of the support person to the account (the email address is the unique identifying attribute used as part of the cloud authentication).

Although the service account operator can access the **SYSPRO Cloud ERP** environment without affecting the Named User licensing, the local site administrator retains full control over the account (i.e. the service account is treated as a regular user and all the standard access permissions, logging and auditing capabilities are available). These service accounts have no effect on **SYSPRO 8 on-premise** sites.

To implement this feature, the account status of the operator must be enabled within the Operator Maintenance program, as well as the **SYSPRO Cloud ERP** Active Directory (managed by the **SYSPRO Cloud ERP** team).

SMTP email using Office 365

In a server-side reporting environment, the SYSPRO Reporting Services infrastructure caters for using the operator's Office 365 account when sending emails. This provides visibility to the recipients of distributed reports by displaying the address of the operator who emailed the report.

This only applies if a valid Office 365 account is configured and enabled within the **Personal Settings** program (*SYSPRO Ribbon bar > Home > Personal Settings*) and the appropriate Email/SMTP settings for emailing via Office 365 are configured at company or system-wide level (depending on your setup options).

> If the **USE SYSTEM-WIDE SMTP DETAILS** company setup option is enabled (*Setup Options > Company > General*) then ensure that the correct Email/SMTP settings are configured against the system setup options (*Setup Options > System Setup > Connectivity*).

SYSPRO Installer Application

The **Utilities** panel lets you download all product files (including hotfixes) to your local SYSPRO Deployment folder.

The download process occurs in the background so you can continue using the **SYSPRO Installer Application**, or close the app and leave the download to continue overnight.

> This is useful as it ensures that you have all the required installation files before proceeding with an install.
>
> SYSPRO partners can also use this feature to download and copy product files to a storage device to save time when installing off-site (typically at a customer site with unstable internet connectivity).

The **Utilities** panel also lets you delete downloaded media files, such as product and hotfix files.

Mobility

Order Picking in Espresso

The **Order Picking** application has been added to *SYSPRO Espresso*. It lets operators remain on the shop floor to conduct order picking in a quicker and more efficient manner.

The *SYSPRO Espresso* application is equivalent to the **Pick Maintenance** program in the core SYSPRO product and lets you maintain order picks with the following functionality:

- Start, stop, complete and cancel a pick.
- Start, complete and cancel a pick line.
- Complete selected pick lines.

> ℹ️ The **Order Picking** application uses the SO PICK QUERY[1] business object to output pick line information and the SO PICK STATUS CHANGE[2] business object to post the updated pick details.

---

[1]Business object: SORQPN
[2]Business object: SORTPS

Manufacturing

WIP by Branch improvements

The **WIP by Branch** feature (which initially introduced ledger integration for work in progress at branch level) has been extended to include separate control accounts at work center level - useful when jobs are in transit during the production process.

A job transfer feature has also been added to let you track the total costs of a job when transferring a job between operations. The job's total cost is transferred to the WIP branch ledger account of the next operation. The WIP branch defined for the work center is used when posting labor transactions.

> If ledger Integration for WIP is by job classification within the WIP branch, then the ledger account for the job classification is used for the job master as well as labor and material allocations.

BOM Cost Implosion Optimized for SQL Server

This feature optimizes the BOM Cost Implosion for SQL without using the file system as a temporary scratch pad.

Affected Programs

- Cost Implosion

  The feature is *disabled* by default so that existing systems work unchanged. To enable the new SQL-optimized BOM Cost Implosion, you must *uncheck* the new processing option: **RUN COST IMPLOSION IN LEGACY MODE**.

- BOM Cost Implosion

The BOM COST IMPLOSION[1] business object is used to calculate and update costs using SQL-only statements (instead of temporary files). The business object is only used if you uncheck the **RUN COST IMPLOSION IN LEGACY MODE** option of the **Cost Implosion** program.

---

[1]Business object: BOMTCI

Distribution

Flexible consolidated dispatch invoice pricing

Because the price of an item can change after a dispatch is created, a new setup option (**USE SALES ORDER PRICE ON INVOICE**) lets you choose to use the sales order price when consolidating dispatch notes for invoicing instead of defaulting to the original dispatch invoice price.

Enhanced Flexibility when Maintaining Sales Orders

A new operator preference has been added to the **Sales Order Entry** and **Sales Order Entry Express** programs that lets you indicate that the back order quantity must be updated before the ship quantity when maintaining orders. Previously, the ship quantity was impacted first when you adjusted the order quantity of an existing order line.

The **Adjust b/order when order qty changed** preference is available from the **Options** tab of the **Preferences** pane and requires that the **Automatically put order qty in b/order** operator preference is also enabled.

When you decrease the order quantity, the back order quantity is decreased first, followed by the ship (or reserved) quantity, if there is not enough stock on back order to satisfy the change. Similarly, when you increase the order quantity for an existing line, the additional quantity goes into back order.

Intrastat Reporting

Intrastat reporting now includes freight and miscellaneous charges for dispatches as well as service charges on non-stocked lines for arrivals. This addresses the need for European countries to record and report on Intrastat transactions that occur when goods are purchased from or delivered to other countries within the EU.

Other enhancements include:

- Supplier invoice values can now be used to report on Intrastat arrival transactions (no longer Goods Received Notes).

- The supplementary unit factor and method can be captured for sales orders and purchase orders to ensure recording of the actual quantity invoiced.

- Goods for demonstration purposes and goods on consignment that are transported to a warehouse outside the supplier's country are included.

> Quick Sales, Counter Sales, Point of Sale and Credit Notes are not included in this enhancement.

Point of Sale

Improved Access Control

The existing access control in *SYSPRO Point of Sale* has been extended in the **Manage Orders** program so that you can control an operator's access to the **Invoice** function, regardless of the order's type or status.

Previously, this function was accessible except when working with deposit or suspended orders. You can now hide or disable the **Invoice** button by configuring your requirements within the **Access Control Setup** program (available from the **Setup** menu).

> If you previously defined the `<InvoiceOnlyButtonManageOrdersAlwaysDisabled>` element in the `SystemConfig.xml` file to be TRUE, then you need to reconfigure the access to this button using the **Access Control Setup** program after updating to *SYSPRO 8 2021 R1*.

Enhanced searchability

The search capability in *SYSPRO Point of Sale* has been extended to barcodes when searching for stock items.

In addition, when you use the **Add/Edit Line** screen of the **Manage Orders** program, you can now add stock items using a stock code, serial number or barcode (normal or integrated). Previously, this was only possible using stock codes.

You can also define your preferences as follows:

- Default filter options for the **Manage Orders** program can now be defined by barcode or serial number within the **Search Defaults** screens of the **Branch Settings** program.

- Default filter options for the **Search** program can now be defined by barcode within the **Search Defaults** screen of the **Manage Users** program.

- You can't use serial numbers when adding stock items to a quote.
- You can only use normal barcodes when searching for stock items, as integrated barcodes are not supported within the search.

Centralized logging for debugging purposes

To simplify the debugging process and reduce the persistence of files to the file system, SQL logging within *SYSPRO Point of Sale* is now recorded within the SQL database.

Previously, each query logged was output to a unique file on disk. From *SYSPRO 8 2021 R1*, it is now logged to the `SQLQueryLogging` database table to ensure that all information relevant to debugging is centralized and located at a single point for reference.

SQL query logging exclusions

To simplify the fault-finding process when SQL Query Logging is enabled, *SYSPRO Point of Sale* and its `SystemConfig.exe` file have been altered to limit the logging of SQL queries executed, to functional queries only.

Previously, when SQL logging was enabled, multiple *miscellaneous* queries were logged which increased the size of the log file and made it difficult to identify queries.

From *SYSPRO 8 2021 R1*, a standard exclusions list is now included in the `SystemConfig.exe` file and allows for the exclusion of certain SQL queries by name. A new XML node `<SQLQueryLoggingExclusions>` has been implemented at parent level and the ChildNodes are named `<QueryNameToExclude>`.

Although you can add further queries to the list if required, the following SQL queries are now excluded by default:

- BranchSqlConnectionForBranchSelect
- OfflineService
- PoSTransactionListToProcessSelect
- SystemSettingsSelect
- UserSessionsCurrentUserStatusSelect

Each query included in the new exclusions list of the `SystemConfig.exe` file is not logged when the `<OutputSqlQueries>` element is set to TRUE.

Improved transaction tracking

The assigning of receipt numbers within the **Account Payments** program has been extended to the **Account Payment Reallocations** program.

From *SYSPRO 8 2021 R1*, receipt numbers are assigned (using the same numbering method as account payments) to both the reversal payment and new payment when you process an account payment reallocation in *SYSPRO Point of Sale*.

In addition, the receipts related to these transactions are now available to view, print or reprint within the **Account Payment Query** program.

Improved governance

To improve governance around account payment re-allocations, you can now enable supervisor authorization for these transactions by configuring the **Allow Account Payment Reallocation** option within the **Branch Settings** program.

Improved performance

The *SYSPRO Avanti* framework for *SYSPRO Point of Sale* has been enhanced to cater for providing data directly to *SYSPRO Avanti*.

This removes the need to first save data to disk - improving the grid layout and data binding speed when running *SYSPRO Point of Sale* in *SYSPRO Avanti*.

Financial

Streamlined tax integration with Avalara and Vertex

The **SYSPRO 8** architecture has been re-engineered to cater for connecting to cloud-based tax calculation systems. This provides a more sophisticated tax capability that allows you to remain compliant when facing complex tax scenarios in your business.

The following tax connector modules are now available for **SYSPRO Cloud ERP** and **SYSPRO 8 on-premise** (both in **SYSPRO Avanti** and **SYSPRO Windows Client**):

- Avalara Tax Connector
- Vertex Tax Connector

Once you obtain the appropriate licensing for these connected services and configure your preferred tax connector, you can establish a direct link between these platforms and SYSPRO using a prebuilt connection that allows for seamless interaction.

SYSPRO sends transaction data to Avalara or Vertex and receives the tax total in return, enabling the following capabilities:

- Calculate tax requirements.
- Record tax transactions in Avalara and Vertex.
- Use the tax transactions recorded in Avalara and Vertex for reporting purposes.
- Record invoices.
- Create, maintain and store Avalara tax exception certificates (only applicable to Avalara Tax Connector).
- Perform other tax-related functions.

Benefits include:

- Simplified sales and use tax processes for all US states and Canadian provinces (from tax determination on transactions to exemption certificate management and tax returns).

- Monthly updates to ensure constant application of current tax rates.

- Analysis capability by state, county and city.

- Enhanced VAT process efficiency (from indirect tax determination to reporting).

- Improved accuracy and reliability of tax calculations at the federal, state, and local levels in the US and Canada.

Digital Tax improvements

The following enhancements were introduced to the **Digital Tax System** for this release:

- You can now capture the **VAT registration number** and **User tax reference** field at company and branch level.

- The **Digital Tax Tool** program lets you design a template with your preferred input and output options while the new **Browse on Digital Tax tool Template** program lets you search and choose an existing template.

- The **Consolidated Tax Return** program lets you identify records that still require submission in the selected financial period, by displaying transactions that have been submitted, not submitted and not printed.

- The **Tax Transaction by GL Allocation Account** report includes the **VAT registration number** and **User tax reference** field.

- The **Digital Tax Tool Status** report displays the status of the tax return for the selected financial period.

- The **VAT at a Glance** program displays the month-to-date printed and unprinted VAT transactions for the current financial year.

Tax totals for SRS sales order documentation

The **Tax totals for SRS sales order documentation** feature (exclusive to SYSPRO Reporting Services) is designed to comply with the Canadian and US legislation that requires tax total amounts to be shown on sales order documentation. All calculations relating to order and line totals in **Sales Order Entry** and **Point of Sale Entry** are performed using a 3rd party tax system.

Totals you can add when using a 3rd party tax system include:

- Canadian GST and PST

- US State, County and City tax

This feature is available once you have enabled the **APPLY USA 3RD PARTY TAX IN SALES ORDERS** setup option (*Setup Options > Tax > Sales and Use Tax*).

AP Group Payments

The **AP Group Payments** feature simplifies the allocation of a single supplier remittance to multiple related suppliers, in a single transaction.

This avoids errors typically associated with the manual preparation of transactions related to secondary suppliers and improves the administrative time taken to process them.

> **i** Processing payments to suppliers across multiple SYSPRO companies is not yet available.

AR Group Payments

The **AR Group Payments** feature simplifies the allocation of a single payment from a customer to multiple related customers, in a single transaction.
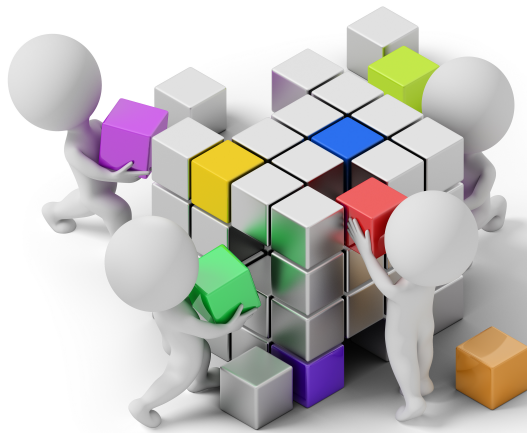
This avoids the errors typically associated with the manual preparation of transactions related to secondary customers and improves the administrative time taken to process them.

> **i** Processing payment from customers across multiple SYSPRO companies is not yet available.

Business Objects

Setup Objects

- The AP SUPPLIER GROUP MAINTENANCE[1] business object lets you configure supplier groups, writing records to the ApSupplierGroup table.

- The AR CUSTOMER GROUP MAINTENANCE[2] business object lets you configure customer groups, writing records to the ArCustomerGroup table.

- The REGIME CODE MAINTENANCE[3] business object lets you maintain regime codes stored in the SalRegimeCode table.

Query Objects

- The AP GROUP SUPPLIER CASH REQUIREMENTS[4] business object lets you query cash requirements for a supplier group.

- The AR CUSTOMER GROUP QUERY[5] business object lets you query customer groups in the ArCustomerGroup table.

- The ASSET BALANCE HEALTH CHECK[6] business object is used to report on and create log files of any integrity errors detected within tables of the *Assets* module, without actually updating any values.

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[1]Business object: APSSSG
[2]Business object: ARSSCG
[3]Business object: SALSRG
[4]Business object: APSQGR
[5]Business object: ARSQCG
[6]Business object: ASSQBF

- The SO CUSTOMER BALANCES QUERY[1] business object forms part of a suite of business objects that lets you identify imbalances between the active orders in SYSPRO and records held in the ArCustomer table.

- The BRANCH TRANSFER QUERY[2] business object lets you query WIP branch transfer transactions recorded in the WipBranchTransfer table.

Transaction Objects

- The ASSET BALANCE HEALTH FIX[3] business object is used to report on, fix and create log files of any integrity errors detected within tables of the *Assets* module.

- The CSH DEPOSITS AND WITHDRAWALS[4] business object lets you enter details of deposits and withdrawals; change existing transactions; reconcile or unreconcile transactions and process inter-bank transfers in Cash Book. It can also be used to process foreign currency transactions through either a local or foreign bank account.

- The BOM COST IMPLOSION[5] business object is used to calculate and update costs using SQL-only statements (instead of temporary files). The business object is only used if you uncheck the **RUN COST IMPLOSION IN LEGACY MODE** option of the **Cost Implosion** program.

- The STOCK TAKE CANCELLATION[6] business object is called when you run the **Stock Take Cancellation** program from the core SYSPRO product.

- The STOCK TAKE SELECTION[7] business object lets you select the stock codes you want to include in a stock take count. The selection of stock items to count is the first step in the stock take process.

- The SO CUSTOMER BALANCE FUNCTION[8] business object forms part of a suite of business objects that lets you correct imbalances between the active orders in SYSPRO and records held in the ArCustomer table.

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[1]Business object: SORQCB
[2]Business object: WIPQJB
[3]Business object: ASSTBF
[4]Business object: CSHTWD
[5]Business object: BOMTCI
[6]Business object: INVT6C
[7]Business object: INVT60
[8]Business object: SORTCB

Highlights: SYSPRO 8 2020 R2

User Experience

SYSPRO Avanti Power Tailoring

New power tailoring functionality in *SYSPRO Avanti* lets you customize the platform to suit your own personal requirements:

Customize applications

SYSPRO Avanti lets you customize applications (such as adding scripts to change the behavior of form fields or grid data) or extend the capabilities of any application to display more information, either from the SYSPRO database or from any external application.

All applications in *SYSPRO Avanti* or SYSPRO generally comprise grids, form fields, charts, notepads and toolbar buttons. You can also add user-defined customized panes to any application which can contain a grid, form or a number of other types of controls.

To customize aspects of the SYSPRO application in the core product, you would previously right-click on a form field, toolbar, grid column header or docking pane window title, which enabled you to access the **VBScript Editor**, add a customized pane or to generally access customization capabilities.

All customization capabilities in *SYSPRO Avanti* are controlled by a single program: **Customize Application** which you can access from the **Settings** icon ⚙ in any application. The program is only available if the VBScript security option is enabled and are not logged in as a role.

The program provides 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

Considerations:

- You can also access the **Customize Application** program with identical capabilities from the gear ⚙ icon in core SYSPRO..

- In *SYSPRO Avanti*, it is typically a two-stage process for a web view to be enhanced with new content or controls:

    1. Customize the application to add capabilities.
    2. Modify the web view using the **Visual Designer** to position the new controls or content.

Define personal settings

Individual operators can define the following personal preferences in *SYSPRO Avanti* by selecting

the **Personal Settings** option from the ⚙ icon (**Settings**) on the home page:

- Define the company date for all operators, or temporarily for the current run of *SYSPRO Avanti*.

  > 📝 This is dependent on the operator having the correct security access.

- Reset the saved settings for window positions and grid layouts.

  SYSPRO Avanti automatically saves window positions and changes to grid layouts by operator. However, you can now reset these to their default values using the links provided.

- Configure your own **Office 365** credentials.

Modify a grid

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

- **Conditional formatting**

  This lets 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 can be added are determined by the *keys* that are available in the grid columns.

- **Column sum** | **Column average** | **Row count**

  You can select any numeric column to be either *summed* or *averaged*.

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

- **Edit a macro**

  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.

Add toolbar items to a web view

You can add toolbar items to a web view using the **Visual Designer**.

Select the **Add toolbar item** option from the left or right-hand side of the **Visual Designer** to add items to the left or right-hand side of your web view.

> Toolbar buttons correspond to their equivalent in the core SYSPRO product.

Automate startup parameters

You can configure *SYSPRO Avanti* to automatically run a program when you log into the system. Open the browser URL and append a question mark, followed by startup parameters using the following syntax:

```
?StartupParameters=/prog=xxxxxx /link=y
```

where `xxxxxx` indicates the name of the program and `y` indicates the entry to be used in the program.

> **FOR EXAMPLE:**
>
> If you want to automatically launch the **Customer Query** program for customer `1` when opening *SYSPRO Avanti*, your browser URL should reflect the following syntax:
>
> ```
> ?StartupParameters=/prog=ARSPEN /link=1
> ```

The login page is displayed first if you haven't enabled the **Keep me signed in** option on the login page. The program defined in the startup parameter is then launched once you are successfully authenticated.

Automate tasks

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

sequentially by selecting the **Task Automation workspace** option from the ⚙ icon (**Settings**) on the home page.

> **FOR EXAMPLE:**
>
> You may want 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 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.

When a task group has completed, the executed tasks are then displayed in the **Task Messages** grid.

Move and re-size modal windows

Applications in *SYSPRO Avanti* are designed to display most information in a single page and, where appropriate, the use of pop-up windows enables additional information to be surfaced.

> **FOR EXAMPLE:**
>
> You can view **Movements** and **Warehouse history** lists as pop-ups in the **Inventory Query** program.

Lists such as these are displayed by default in pop-up windows that can be re-sized and repositioned in the browser. However, you can change this behavior using the **Visual Designer** to make these lists appear in the single page.

Some windows are displayed as *modal*, meaning that you can't click behind the window and that you must first complete the task within the current window before returning to the previous screen.

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

> Modal window positions for *SYSPRO Avanti* are saved on the application server in the text file `\Settings\AVANTI\ModalWindowsAdditional_operator.txt`.

SYSPRO Avanti Software Development Kit

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

A **Microsoft Visual Studio** extension (included in the SDK) provides templates for new projects (and controls used within those projects) together with a number of development productivity features. In addition, the extension allows for debugging of *SYSPRO 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 *SYSPRO Avanti*, to entire embedded applications in the *SYSPRO 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 includes:

- Better 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 **SYSPRO Avanti** API.

> 💡 Resources will be made available on the **SYSPRO Learning Channel**.

SRS Document Printing in SYSPRO Avanti

Document printing in **SYSPRO Avanti** has been simplified with the addition of new format setup programs that let you view the SRS document options.

You can now define format templates for SRS document printing in **SYSPRO Avanti** :

- AP Check Format for SRS
- AR Permanent Entries Format for SRS
- AR Statement Format for SRS
- AR Discount Cr Dr Notes Format
- AR Dunning Letter Format for SRS
- Cash Book Remittance Format for SRS
- Inventory Document Format for SRS
- Purchase Order Format for SRS
- Inspection Document Format for SRS
- Quotation Document Format for SRS
- RMA Document Format for SRS
- SO Document Format for SRS
- Factory Documentation Format for SRS
- WIP Inspection Document Format for SRS

User Interface changes

This version of **SYSPRO 8** includes a number of significant user interface changes.

System-wide Personalization/Setup Options

In a move aimed at further easing the workload on system administrators, all the options from the **System-wide Personalization** program have been moved to the **Setup Options** program. This forms part of the process of consolidating SYSPRO setup options into a single centralized program (the previous release saw the relocation of all the **System Setup** options to the **Setup Options** program).

> ⚠️ In order to control access to system-wide personalization options, you will need to configure security access against the **Setup Options** program (i.e. IMPCFG) as well as the standalone version of the **System-wide Personalization** program (i.e. IMPFRB) which you can still run from the SYSPRO Ribbon bar or using the **Run a Program** function (CTRL+R).

Revised program toolbars

Toolbar options in numerous programs have been relocated to improve the navigation experience.

From within the core **SYSPRO 8** product, you can locate the toolbar options from the context-sensitive menu when you right-click a data record in a list view. Some toolbar options now have a separate **Options** pane that is typically hidden on the left of the window, but expands when selected.

From within **SYSPRO Avanti**, tools are located in the top right-hand side of the program (or above the data grid). You can also view additional information by clicking the hyperlink against data records in list views.

Simplified Administration

Reduced file system usage

SYSPRO 8 is on a journey to reduce files being persisted to the file system by migrating them to **Microsoft SQL Server**. This offers many benefits, such as helping simplify your backup strategy, improving performance, protecting your data and providing controlled access to third parties, where relevant.

Because of this, you will notice an increase in the size of your database once you update to *SYSPRO 8 2020 R2*. The increase in size will be proportional to the size of the data being migrated from the file system. Also note that the majority of the files uploaded to SQL Server are migrated to your system-wide database.

During the migration, the system will determine if your SRS Report Archive files are significant in size (over 500MB) in which case you can choose to defer the migration of these files to allow the rest of the upgrade process to complete and users to start transacting as normal.

Choosing to defer the import means that reports archived prior to *SYSPRO 8 2020 R2* won't be available for viewing until they are migrated. This is performed by running the **SRS Import Archive Files to SQL** program (*Ctrl+R > SRSPAL*).

The areas of the product that are affected by this change are as follows:

Operator Settings

As part of the effort to decrease SYSPRO's footprint on the file system, you can enable the new **PERSIST OPERATOR UI SETTINGS TO SQL** setup option (*Setup Options > System Setup > System-Wide Personalization*) to store all operator UI settings files in the SysSettings table of the system-wide database (usually stored in the `\Base\Settings` folder).

License File

From **SYSPRO 8 2020 R2** the **License Manager** is used to select and import a provided license. The license information resides in the AdmSystemLicense table of your system-wide database in **Microsoft SQL Server**.

From **SYSPRO 8 2020 R2** all software that requires the license will automatically locate the current license in the system wide database.

If you are using the **SYSPRO Cloud ERP** environment, the license import is applied automatically.

SRS Reports and Documents

From **SYSPRO 8 2020 R2**, enhancements to SRS architecture cater for the migration of content to the system-wide database:

- Document and report printing
- Report archiving
- Report scheduling
- Report customization

The custom reports and documents mentioned above are automatically uploaded to **Microsoft SQL Server** during the minor database upgrade to **SYSPRO 8 2020 R2**

All future custom reports and documents, archived reports and documents and other SRS-related files will be stored in **Microsoft SQL Server**.

In addition, the document archiving architecture has been changed to save the archived documents to the company database when SYSPRO is run in a **SYSPRO Cloud ERP** environment.

SYSPRO Reporting Services Upgrade

From **SYSPRO 8 2020 R2**, you'll be upgraded to use **SAP Crystal Reports 2016 SP8** as the reporting technology for both server-side and client-side reporting. The upgrade is mandatory for server-side reporting and optional if you are using client-side reporting.

This means that when using server-side reporting, part of the upgrade process involves uninstalling **SAP Crystal Reports 2013** from your server and installing the later **SAP Crystal Reports 2016 SP8** version. You should be aware that the uninstall and install process can take a significant time because of the complexity of the Crystal Reports product (some customers have reported this taking 2 or more hours).

When using client-side reporting, your clients can remain on the existing Crystal Reports version and upgrade to **SAP Crystal Reports 2016 SP8** later when required (i.e. they can continue to produce reports using the previous Crystal Reports version).

Server-side Reporting

SYSPRO Reporting Services for server-side reporting now uses the following from **SYSPRO 8 2020 R2**:

- SAP Crystal Reports Server 2016 SP8
- SAP BusinessObjects BI platform .NET SDK Redistributable 64bit 4.2 SP8
- SYSPRO 8 Reporting Host Service (64bit)

> The **SYSPRO Reporting Services** upgrade is mandatory if you are using server-side reporting.
>
> Please note that the upgrade process can take some time.

Client-side Reporting

The changes to SYSPRO Reporting Services for client-side reporting from **SYSPRO 8 2020 R2** are as follows:

- The Report Designer has been upgraded to use SAP Crystal Reports 2016 SP 8.
- The new client runtime used is SAP BusinessObjects BI platform .NET SDK Redistributable 32bit 4.2 SP8.
- The updated SYSPRO 8 Reporting Components that are installed include the native xml driver and necessary Java runtime.

> The **SYSPRO Reporting Services** upgrade is optional if you are using client-side reporting. Therefore, existing customers do not need to roll out the upgrade to all client machines at the same time.

SWS Document Printing Activity

A new document printing activity (SA_DocumentPrinting) is available within **SYSPRO Workflow Services** so that invoices, order acknowledgments and delivery notes can be saved, emailed and printed as part of a workflow process (e.g. the capture of an order initiates a workflow that produces the document which is available for sending to the customer).

Prerequisites include:

- The **SYSPRO 8 Workflow Service** must be installed.
- The **SYSPRO 8 Reporting Host Service** must be installed.
- The **Server-side reporting using SQL** option must be selected against the **REPORTING CONFIGURATION** setup option and details must be configured for the **REPORTING SERVICE** setup option *Setup Options > System Setup > Reporting*.
- The **E.Net Service Details** must be configured in the **Maintain E.Net Service Details** program.

> The activity needs to be added from the **Dependencies** pane as it is not added to the **Toolbox** by default.

Digital Technologies
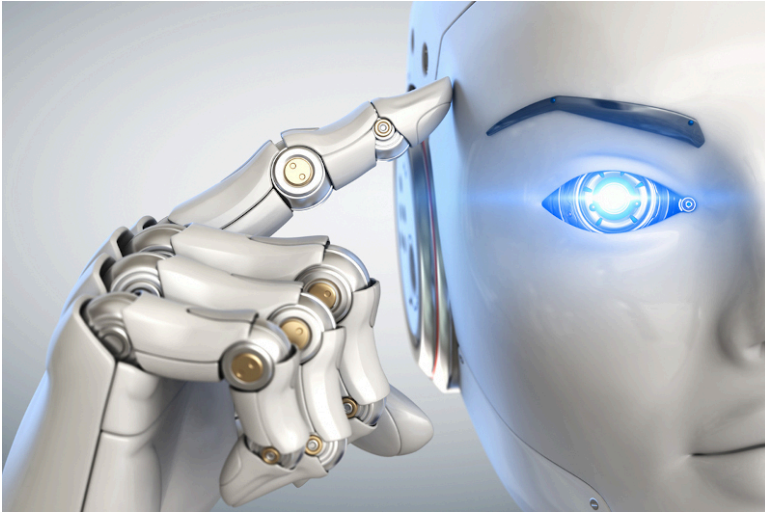
SYSPRO Bot

Skills Expansion

The **SYSPRO Bot** set of skills now lets you query purchase order balances, GRN details and ledger balances.

These new skills include:

- PO Balance Query

  This skill lets you view purchase order balance details.

- PO GRN Query

  This skill lets you view *summary* purchase order details and GRN information.

- PO GRN Detail Query

  This skill lets you view *detailed* purchase order details and GRN information.

- GRN Query

  This skill lets you view GRN details.

- General Ledger

  This skill provides the new General Ledger menu within the **SYSPRO Bot**.

- GL Query

  This skill lets you view ledger details.

- GL Balance Summary Query

  This skill lets you view the module, ledger control and recalculated difference information.

Custom Search Expansion

New custom searches are available to the `Skill.GLBalanceSummaryQuery` skill that lets you query the ledger for a specific module and period without having to enter this information manually.

- GLModule
- GLModulePeriod

Manufacturing

WIP by Branch

The **WIP by Branch** feature extends ledger integration options to include integration at branch level (only job classification was available before). This means that each branch and job classification can have separate WIP ledger control accounts. Previously, you could only define a single WIP control account and WIP variance account per company.

You can enable WIP branches for the following:

- Jobs
- WIP inspections
- Job numbering
- Job classification

Distribution

New business objects

Inventory Stock Take Tickets Query

The INVENTORY STOCK TAKE TICKETS QUERY[1] business object generates stock take tickets for items you are counting within a warehouse and prints the report using the **Stock Take Tickets** program.

Inventory Label Print Report

The INVENTORY LABEL PRINT REPORT[2] business object generates and prints up to 9999 labels for every selected stock code using the **Inventory Label Print** program.

Sales Order Label Print Report

The SALES ORDER LABEL PRINT REPORT[3] business object generates and prints up to 9999 labels for every selected sales order or dispatch note using the **SO Label Print** program.

Intrastat Triangulation

Intrastat Triangulation occurs when three EU states are involved in a transaction, where one orders goods from a second while goods are sourced from a third.

- The state receiving goods records an Intrastat arrival.
- The state dispatching goods records an Intrastat dispatch (declaring the ordering state as a recipient).
- The intermediary or agent state records nothing for Intrastat purposes.

---

[1]Business object: INVQ62
[2]Business object: INVQLP
[3]Business object: SORQLA

When a requisition, purchase order or sales order is created, the triangulation role of agent, supplier or customer is selected, as well as the dispatch and destination states. These details are specified at order line level for stocked and non-stocked goods, so they are used when creating dispatch notes, credit notes or reprint files, and when receipting in stock from inspection.

You can view and change tariffs on the Intrastat triangulation transactions using the **Maintain Intrastat Dispatches** and **Maintain Intrastat Arrivals** programs. Intrastat transaction values are reported in the **EC Triangulation Transactions - Dispatch** and **EC Triangulation Transactions – Arrivals** reports.

Point of Sale

Crediting Kit Receipts

SYSPRO Point of Sale capabilities have been extended so that customers can now process credits against all kit type items directly in *SYSPRO Point of Sale* (previously this would have to be performed manually in the core SYSPRO product).

Kit types can now be credited either from the original invoice, or manually in the **Credit Note** program (available from the **Store** menu) or **Manage Credit Notes** program (available from the **Store Management** menu).

Requirements:

- Default bins must be defined in SYSPRO for parent and component lines for the warehouse.
- The `ShowKitComponentLines` element in the `SystemConfig.xml` file must be enabled (i.e. its value must be defined as *true*).

Limitations:

- This doesn't apply to the **Point of Sale**, **Manage Quotes** and **Exchanges** programs (available from the **Store** menu).
- Lot, bin and serialized items in kits are not supported. Therefore, this does not apply if the **MULTIPLE BINS** option is enabled.
- Kit type **F** is not supported, so you cannot enable the **Ship from default bin** option in *SYSPRO Point of Sale*.

> Kit optional components are always added in *SYSPRO Point of Sale*.

Template Design with SYSPRO Reporting Services

The print template design process in *SYSPRO Point of Sale* has been simplified to use *SYSPRO Reporting Services* to support custom documents. This replaces the previous printing designer (**Stimulsoft**).

Petty Cash Transaction Governance

SYSPRO Point of Sale lets you monitor, control and report on all petty cash transactions to improve governance at branch level.

Petty Cash Query

The new **Petty Cash Query** program (accessible from the **Query** menu) lets you query, review and reprint petty cash transactions. You can search petty cash transactions by branch, document number, or date range.

Petty Cash Transactions

The existing **Petty Cash** transaction screen improves traceability for petty cash transactions by including petty cash document numbers for all petty cash transaction types.

Petty Cash Report

The existing **Petty Cash Report** caters for petty cash document numbers, as well as a reprint capability.

To enable the printing of the new receipt numbers, you need to update the petty cash template with the latest default template or dictionary and add the field onto the existing report.

Branch Settings

New options were added to the **Petty Cash** tab of the **Branch Settings** program that let you define transaction limits for petty cash expenditure and receipts, as well as configure whether supervisor authorization is required when limits are exceeded. The options are disabled by default:

- Enforce Petty Cash Expenditure
- Petty Cash Expenditure Limit
- Enforce Petty Cash Receipt Limit
- Petty Cash Receipt Limit

SCT Access Control

The existing access control within *SYSPRO Point of Sale* lets administrators more closely control various aspects of supply chain transfer functionality to improve governance at store level.

The following functions within the **Manage SCT's** program can now be controlled at Branch, Role, User and Device level:

- Add Item
- Edit Item
- Add Other
- Delete Item

- Allocate B/O
- Release B/O
- Invoice SCT
- Cancel SCT
- Update Header

Access Control

The new **Access Control** program (available from the **Setup** menu) serves as the interface for all newly added or existing access control items that have been enhanced. It lets administrators define the following types of visibility and/or functionality where relevant:

- **Visibility**

  These options let administrators define what functions (i.e. controls) are visible to operators, by selecting one of the following permission levels:

  - Collapsed: The function is hidden from the operator.
  - Visible: The function is visible to the operator.
  - Inherit: The system must check higher up in the access control hierarchy to determine the function's visibility.

  > All current controls default to `Visible`, but any new controls added in future will default to `Collapsed`.

- **Functionality**

  These options let administrators define the functionality available to operators, by selecting one of the following permission types:

  - Deny: The function is disabled.
  - Allow: The function is enabled and requires no supervisor authorization to proceed.
  - Allow (Auth req): The function is enabled but requires supervisor authorization to proceed.
  - Inherit: The system must check higher up in the access control hierarchy to determine the function's accessibility.

  > All current controls default to `Allow`, but any new controls added in future will default to `Deny`.

Increased stock & bin visibility when adding orders and quotes

The following programs in **SYSPRO Point of Sale** have been enhanced to assist operators to quickly identify stock availability and bin locations when adding a sales order or quote:

- **Manage Orders** (available from the **Store Management** menu)
- **Point of Sale** (available from the **Store** menu)
- **Manage Quotes** (available from the **Store** menu)
- **Exchanges** (available from the **Store** menu)

Administrators can now define an operator's visibility access (within the **Access Control** program) for the following display fields when adding sales orders or quotes:

- Quantity on hand
- Default bin

> The **Visibility** permission for these functions defaults to `Collapsed`.

This increased visibility provides operators with vital information when they need it.

> ⚠️ If you installed `hotfix KB8050234` in the ***SYSPRO 8 2020 R1*** release (which let you view these fields by defining the `<QtyOnHandAndDefaultBinIsVisible>` setting in the `SystemConfig.xml` file) then you will need to reconfigure the access to these fields using the new **Access Control** program.

Transaction Audit Trails

Improved transaction tracking and governance has been included in *SYSPRO Point of Sale* by providing an audit trail of all data changes relating to transaction processing and printing. You can now monitor, control, and report on key functions (e.g. granting of discounts).

You can configure which audit trails you require in the new **Audit Trail Setup** tab of the **System Settings** program. The new audit trail reports (available from the new **Audit Trails** menu tab in *SYSPRO Point of Sale*) include:

Supervisor authorizations

Two new programs (**Header Authorization Audit Trail** and **Detail Authorization Audit Trail**) detail all occurrences where a supervisor authorization has been applied to a sales order or quote header change (e.g. tax override, credit notes, price margin, etc.).

Detail line deletions

A new **Line Delete Audit Trail** program details all occurrences where a line has been deleted from a quote or sales order.

Special Discounts

A new **Price And Discount Audit Trail** program details any change made to a price or discount on sales order or quote lines in the **Point of Sale** or **Manage Quotes** programs (available from the **Store** menu).

The report also indicates whether a supervisor authorization was applied, including the details that were applied.

Document Printing

A new **Print Audit Trail** program provides an audit trail of any printing or reprinting of sales invoices and quotes performed in **_SYSPRO Point of Sale_**.

Changes to Ship methods

A new **Ship Method Audit Trail** report provides an audit trail of any changes made to the ship method on quotes and sales orders in the **Point of Sale** or **Manage Quotes** programs (available from the **Store** menu).

The report also indicates whether a supervisor authorization was applied, including the details that were applied.

Tax Code Changes

A new **Tax Code Audit Trail** report details any changes made to tax codes on quotes and sales orders in the **Point of Sale** or **Manage Quotes** programs (available from the **Store** menu).

Considerations:

- The `EnableAuditTrailLogging` element in the `SystemConfig.xml` file can be enabled or disabled per site.
- The new audit trail database (`SysproComp_POS_AuditTrails`) contains the following new tables:
  - `_SystemAuditTrailPrinting`

    This stores an audit trail of any prints performed.
  - `_SystemAuditTrail`

    This stores audit trail-specific information.

Limitations:

- Supply Chain Transfers are not included in the audit trail reports as **_SYSPRO Point of Sale_** posts SCT-related information directly to SYSPRO in real time. However, you can access SCT information directly from the SorAdditions, SorChanges and SorCancelled tables.
- Transactional data is not replicated in the SYSPRO company database to offline branches.

Return Merchandise

Sales order discounts on RMAs

You can now automatically apply the discounts given on the original sales order when processing an exchange or cross shipment of an RMA.

When adding RMA cross shipment details, the discounts from the original invoice are displayed by default at header or line level, as per the original sales order. If the RMA is not linked to an invoice, the discounts set up against the customer are displayed by default. These can then be accepted or updated when generating the sales order for replacement goods.

When an item was returned, and the sales order is created for the replacement goods, the discounts from the original invoice are applied to sales order by default. The discounts can then be accepted or changed.

Securing transactions

New eSignatures can be applied to RMA transactions to improve governance and control. These let you manage and secure the RMA process and cover adding and changing RMA's as well as adding, changing, receipting and crediting RMA lines.

Financial

VAT reverse charges for tax submission

The **VAT reverse charges for tax submission** feature lets SYSPRO record VAT that would've been paid by a company if services were procured from within their EU state, but which were in fact procured from another EU state. It caters for VAT requirements in UK and EU countries that need to disclose reverse charges when submitting tax reports.

The notional tax transactions are accumulated and made available for subsequent reporting using the MTD 9-Box **Tax Return** report and the **Digital Tax Tool**.

To determine the reverse charge amounts, a notional invoice is raised with the same value as is reflected on the actual invoice. Tax is then calculated using local tax rates. A notional tax credit note is generated to contra and therefore cancel the notional invoice.

Changes on the MTD 9-Box Return:

- The notional tax value of the invoice is displayed in box 4 (VAT Reclaimed).

- The notional tax value on the credit note is added to box 1 (VAT Due).

- The effect on the Net VAT in box 5 is thus zero.

> The notional invoice and tax credit notes are pro forma entries with implied costs and are not recorded against the supplier.

Highlights: SYSPRO 8 2020 R1

User Experience

Multiple Tenants for Office 365

The SYSPRO architecture now supports multiple tenants for **Microsoft Office 365**.

A **Microsoft Office 365** tenant is a regional location that provides cloud services dedicated to an organization (e.g. **Exchange Online**, **SharePoint Online**, **Teams**, etc). It falls within the overall **O365 Data Center** and can be seen as an organization's sandbox environment, housing all its digital assets (e.g. users, domains, subscriptions and data).

You can maintain multiple tenants in SYSPRO using the new **Office 365 Tenant Maintenance** program (*Program List > Administration > General Setup*) which stores the information in the AdmOfficeTenants system-wide table.

Once configured, you can use SYSPRO's **Personalize** program (*SYSPRO Ribbon bar > Home*) to select the tenant to use when operators communicate with **Microsoft Office 365**.

> If you have a single tenant or have already configured your system and operators accordingly, this works unchanged.

SYSPRO Avanti

A host of new capabilities has been added to SYSPRO's web-based platform.

Multi-Factor Authentication

SYSPRO Avanti now supports **Multi-Factor Authentication** (i.e. the process of identifying a user by validating two or more methods of authentication from independent credential categories).

SYSPRO Reporting Services

- Reports can be processed and viewed immediately.

  1. Select **Process report and preview** to view the report as PDF in your default PDF viewer.

  2. Select **Add to print queue** to print the report.

  > Both options also add the report to the report queue for later viewing.

- Reports can be archived using the **Report Archive** program.

  Archived reports can be viewed as PDFs and purged using this program.

- Report data can be exported to additional formats (e.g. `xls`, `csv`, `txt` and `xml`).

- Reports with Crystal Report parameters can be processed.

Card builder

This lets you create customized cards based on business objects or `XML` files.

- Design a card from various layout types (e.g. tabs, section headings, carousels, accordions and tables).

- Map XML fields from SYSPRO business objects (or other `XML` files) to populate fields.

- Define and customize values of `XMLIn` fields.

Themes

The look and feel of *SYSPRO Avanti* can be changed by applying a theme.

1. Select the **Themes** option from the **User name** field to use a theme.

Keep me signed in

A **Keep me signed in** option was added to the *SYSPRO Avanti* **Sign in** window which lets users access *SYSPRO Avanti* without needing to supply login credentials.

> Logon details are still be requested under certain conditions:

- If your logon credentials change.
- If you are signed out of **SYSPRO Avanti** using the **Sign out** option (instead of just closing the browser).

User Interface changes

This version of **SYSPRO 8** includes a number of significant user interface changes.

System Setup/Setup Options

All the options from the **System Setup** program have been moved to the **Setup Options** program.

Review the **System Setup options moved to Single Setup program** highlight under the **Simplified Administration** banner for more details.

VBScript Editor

The **VBScript Editor** program has been restructured to provide a simpler and streamlined look.

Loading the program takes you straight to the workspace area (previously you were presented with a window from which you first needed to select the field or form level event).

The **Variables** and **Field Properties** panes default to being docked together on the right-hand side of the screen (but can re-positioned as required).

From the **Variables** pane, you can access the **Events** hyperlink to quickly insert a field-level event.

The **Code Generation** drop-down combines various existing functions (e.g. call business objects, send push notifications, execute workflows, launch programs, and customize toolbar buttons).

The **View** drop-down lets you show or hide the **Sample Code Window**, the **VBS Modules Window**, and the **Notepad**.

Simplified Administration

System Setup options moved to Single Setup program

The enhancement centralizes SYSPRO's system-wide and company-wide setup options into the **Setup Options** program.

The aim is to ease the workload of system administrators by letting them manage these options in a single location.

> 💡 Administrators can also take advantage of extra functionality already available in the **Setup Options** program (e.g. using the search to locate options, as well as the import and export functions).

Where to find the new options

The following table will help you navigate the transition of **System Setup** options to the **Setup Options** program by indicating where the new options are now located.

Location in the System Setup program	NEW location in the Setup Options program
General	General
Login Dialog	Login
Database	SQL
Date Format	General
Folders	General
Reporting	Reporting
	SQL

Location in the System Setup program	NEW location in the Setup Options program
Espresso	Connectivity
E.Net Service Details	E.Net Service Details
Office Integration	Connectivity
Rules Engine/Harmony	Rules Engine/Harmony
	SQL
Artificial Intelligence	Artificial Intelligence
Email/SMTP settings	Connectivity
Password definition	Password Definition
Avanti	Connectivity
Multi-Factor Authentication	Login
Single Sign-On	Login

System-wide Maintenance

This feature lets administrators place the entire system into maintenance mode. This solves the issue of having to maintain each SYSPRO company to prevent users from logging in while maintenance is in process (e.g. when upgrading to a new release).

The feature is enabled by switching on the **PREVENT LOGIN** setup option (*Setup Options > System Setup > General*). The SYSPRO and *e.net Solutions* login process first checks the system-wide configuration before checking the company-specific configuration to either allow or deny access to the system.

Simplified Licensing

Managing your SYSPRO product licensing is now so much easier.

Enhanced process

The process of importing SYSPRO licenses and applying them to one or more companies has been simplified with the **License Manager** program.

This new licensing platform (available from within the **Company Setup** program) enables the following:

- View current license information.
- Apply a new or current license across all existing companies.

- Apply a new or current license to a single company.

- Apply a new or current license to multiple selected companies.

- Change a company name to one of the licensed names.

One of the key benefits of the new **License Manager** is when you have any changes to your system-related license parameters (e.g. the number of Concurrent users, Point of Sale users, Espresso seats, Licensed Workflows, Analytics seats, Portal seats or other system-wide settings).

In addition, the process of applying an updated annual license is greatly simplified.

License history

All `Licence.xml` files are saved with a unique file name in the `\Work\license.sav` folder, and are recorded in the AdmSystemLicense table of the system-wide database.

This provides a history of all licenses that have been selected.

SYSPRO and SQL Server Encryption

As data encryption technologies form a vital part of any security and privacy data compliance strategy, this feature lets administrators configure the connection between SYSPRO and **Microsoft SQL Server** using **Transport Layer Security** (TLS) to provide **Data Encryption in Motion**.

The feature assists with compliance to stringent privacy regulations and government acts, as it focuses on securing data from SYSPRO when using **Microsoft SQL Server**.

Data Encryption in Motion

This describes a technique of configuring SYSPRO and **Microsoft SQL Server** so that all communication between the two is encrypted. Now data encryption can enabled from the client, instead of only controlling encryption within the **Microsoft SQL Server** instance.

The following data is encrypted when using this type of configuration:

- Initial connection information
- SQL statements issued
- Actual data passed to and from **Microsoft SQL Server**

SQL Health Dashboard improvements

The **SQL Health Dashboard** program was improved to provide quicker performance when analyzing the health of tables, columns and foreign keys on a company database.

The dashboard now also includes the following information:

Instance Information

- Connection driver

  This indicates the ODBC driver used when connecting to **Microsoft SQL Server**.

- Connection encryption

  This indicates whether the connection to **Microsoft SQL Server** is encrypted.

- Connection protocol

  This indicates the protocol used when connecting to **Microsoft SQL Server** (i.e. TCP, Named pipes or Shared memory).

Database Information:

- TDE encryption status

  This indicates if **Transparent Data Encryption** (TDE) is in use and the current status of the encryption.

Support for Large Rich Text Notes

SYSPRO's **Admin Notepad Editor (Rich Text)** has been standardized to support Rich Text Format (RTF) documents of any size.

You can also now insert images in the **Admin Notepad Editor (Rich Text)** program because of the increased file size support.

> Images aren't included when printing documents like sales order acknowledgments, invoices, etc.

This facility is available in the standard product as well as *SYSPRO Avanti*.

Notepad Date Stamp Standardization

When editing notes in various text editing scenarios in SYSPRO, the date stamp inserted is now standardized to use the SHORT DATE FORMAT (*Setup Options > System Setup > General*).

> The date stamp format may differ from the previous format because of this standardization. However, you can now customize the format consistently across all note types.

> You can override this at company level using the OVERRIDE SYSTEM DATE FORMAT option (*Setup Options > Company > General*) in which case the SHORT DATE FORMAT defined against that company is used.

MFA Operator History Query

This program lets you view the history of successful MFA authentications for the company.

SYSPRO automatically tracks each time an operator successfully authenticates themselves to SYSPRO through **Multi-Factor Authentication** and logs which authentication method is used. Its purpose is to assist system administrators in effectively managing system security.

Multiple Monitor Support

To better support multiple monitor environments, the SYSPRO architecture responsible for window positioning and sizing was re-engineered for the login window, the SYSPRO main menu and subsequent windows.

This improves consistency in how windows are sized and positioned, particularly when extending your desktop across two or more monitors.

As before, SYSPRO defaults to display on the primary monitor. However, if you subsequently move the SYSPRO main menu to another monitor, all subsequent programs loaded from the menu are shown on the same monitor as the menu.

Document Flow Manager

Various changes have been made to assist administrators in managing SYSPRO's *Document Flow Manager* module.

Affected Programs

- DFM Document Queue Query
  - A **Workflow path** column (displaying the last successful step in the workflow) helps administrators establish where and why a document failed. This lets an administrator fix the error and resubmit the previously failed document for processing.

- A **Resubmit** action is displayed in the **Action** column if a queue item fails and the system allows you to resubmit the file.
- The **Date and time** indicates when the file was placed in the queue.

- DFM Service Maintenance

  You can define the interval in which 0KB files should be deleted (at the **File delete interval** column).

Enhanced Logout User Process

The SYSPRO architecture has been enhanced to simplify the process of logging out users and their associated SYSPRO processes when using the following programs:

- Display Users Logged in
- View Users
- Windows Task Manager

In addition, a new AdmPidHistory table has been added to the system-wide database to store details of processes linked to users that have been logged out.

Simplified process

The ability to kill associated processes when logging out users resolves the issue of unknown SYSPRO processes on the application server with no information about the process or the user to whom it relates.

The **Logout function ends process** option has been standardized across the following programs and lets an administrator kill the associated SYSPRO process when logging out a user:

- Display Users Logged in
- View Users

Enabling the option applies for the current run of either program, so administrators can log out multiple users (as well as end the associated SYSPRO processes) without having to reselect the option.

> When using this option to kill the associated process, the system also updates the operator logged in flag of the AdmOperator table. This ensures that concurrent license usage is updated when operators are logged out.

Increased visibility

A new **Unknown process details** pane in the **View Users** program provides an administrator with insight into unknown processes resulting from a user being logged out.

It details the process information that was recorded in the AdmPidHistory table when the user was logged out without ending the process (i.e. with the **Logout function ends process** option disabled).

Digital Technologies
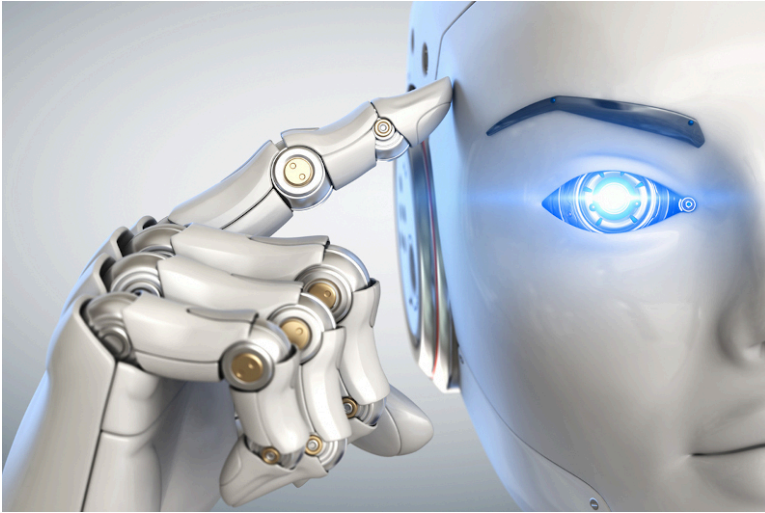
SYSPRO Rules Engine

Notifications and Actions

The usability of the **SYSPRO Rules Engine** has been extended to include the following actions within the **Rules Administrator** of *SYSPRO Avanti*:

Action	Description
Email	This action lets you send an email.
Workflow Action	This action lets you call into a *SYSPRO Workflow Services* operation.

SYSPRO Bot

SYSPRO Bot Customization

The new **SYSPRO Bot Customization** program in *SYSPRO Avanti* lets you modify various permission aspects of the **SYSPRO Bot**.

Things you can do in this program include:

- Configure the SYSPRO Bot skills available at role or operator level
- Customize the action buttons associated with each SYSPRO Bot skill
- Customize the skills available on the SYSPRO Bot main menu for specific roles or operators

Document Format Customization

The following **SYSPRO Bot** format settings can be defined system-wide, by company, by role or by operator (in the **Espresso Custom Configuration** program against the `SYSPROBotDocumentFormatOptionsParameter` entry located under the **XML Parameters** folder):

- Order Acknowledgments
- Delivery notes
- Invoices
- Quotes
- Purchase Orders

Skills Expansion

The following new skills are available with the **SYSPRO Bot** to let you create quotes that are not customer-specific:

- Add Quote Line Menu
- Add Quote Comment Line
- Change Quote Line
- Confirm Quote
- Delete Quote Line

Custom Search Expansion

The following new custom search is available with the **SYSPRO Bot**:

- QuoteChangeLineItem

SYSPRO Bot Software Development Kit

This feature extends the **SYSPRO Bot** functionality beyond the standard skills provided by SYSPRO.

You can now easily create the functions (i.e. skills) that your organization requires without having to host a completely new bot.

These skills can then connect to SYSPRO business objects, external data sources and external applications.

> **FOR EXAMPLE:**
>
> You can create a custom skill for employees to process their leave applications, which connects to your internal leave application system.

> 💡 Resources will be made available on the **SYSPRO Learning Channel**.

Artificial Intelligence and Machine Learning improvements

The **AI administrator** program was expanded to include an **importance** gauge for AI projects.

The **Feature importance** graph (displayed below the **Model information**) displays a score for each SQL column in the AI project, indicating which data affects the predicted value the most.

This graph and a link to the corresponding data is also displayed when selecting an AI tile in **SYSPRO Avanti**.

> Existing trained projects must be retrained to recreate the compact model to include the feature importance.

Manufacturing

MRP Optimized for SQL Server

This feature optimizes the MRP calculation for SQL without using the file system as a temporary scratch pad.

Affected Programs

- Requirements Calculation

  The feature is *disabled* by default so that existing systems work unchanged. To enable the new MRP SQL Optimization, you must uncheck the new processing option: **Run calculation in legacy mode**.

  If you are retaining the legacy processing method, then ensure that the snapshot folder still exists.

  > When using the new MRP SQL Optimization process, the progress bar only displays the text: **Processing Requirements Calculation** during the entire process.

- MRP Requirements Calculation object

  The MRP REQUIREMENTS CALCULATION[1] business object takes advantage of this feature to perform the MRP calculation.

---

[1]Business object: MRPTRC

Job Nesting

The **Job Nesting** feature has been extended to include manufacturing units of measure (MUM). This means you can use the stocking, alternate, manufacturing or other units of measure when issuing stock to the nested job.

Affected Programs

- WIP Nest Processing

  The **Unit of measure** field was added to the **Issue Materials** pane. This lets you select the unit of measure when issuing materials to the job nest.

Recall Management

The **Recall Management** feature now includes any traceable parent item that has been received into stock. This ensures it can be quickly and easily located in the supply chain.

By implication, it means that lot and serial traceable items received through jobs, inventory movements, backflushing or purchase orders are now included when selecting items you want to recall using the **Product Recall Selections Review** program.

Recorded Dates

You can now capture and save dates against specific lots to manage the shelf life and expiration dates of traceable items. These dates include: **Use by date**, **Sell by date**, **Internal expiry date**, **Manufacturing date**, **Dispatch date** and **Best before date**.

In most cases, the additional lot date fields are hidden by default and must be selected using the **Show Captions** option from the context-sensitive menu.

Affected Programs

- Purchase Order Receipts
- Purchase Order Inspection
- Shipment Receipt
- Bins, Lots & Serial Capture
- WIP Inspection Document Print
- Job Receipts
- WIP Inspection
- WIP Inspection Accept into Stock
- Job Receipts
- Factory Documentation Format

eSignatures

Access and maintenance of recorded dates are included in and controlled by the following eSignatures:

- WIP Stocked job receipts
- WIP Stocked job receipts e.net
- PO Apportion quantity receipt
- WIP Inspection (accept)
- WIP Inspection (accept) e.net
- Inv Receipt
- Inv Receipt e.net

Distribution

Request for Quote System

The **Request for Quote System** feature has been enhanced:

- Improvements to the governance of the RFQ process ensures that an RFQ can be sent directly to suppliers using the **SYSPRO Supply Chain Portal**. Once you end the RFQ, you can email it to suppliers, inviting them to submit a quote via the portal.

- You can use the **Send Email** program to configure the RFQ invitation email template that is sent to suppliers.

User interface changes

- The **Expiry date** wording was changed to **Closing date**. The supplier can submit a quote on or before the closing date of the RFQ and a quote can only be accepted after the closing date.

- The supplier cannot change the pricing unit of measure (i.e. the supplier must quote in the unit of measure provided).

- Only requisitions of type **Normal** can be accepted for RFQs using the **Requisition Entry** program.

  The **Accept for RFQ** tool is disabled if the requisition type is **Issue** or **Transfer**, as these are used for stock and/or warehouse management.

SYSPRO Supply Chain Portal improvements

SYSPRO's portal architecture now caters for dedicated **PORTAL SUPPLIER** and **PORTAL CUSTOMER** fields against each operator.

Previously, when a portal user logged into the **SYSPRO Supply Chain Portal**, the system used the DEFAULT SUPPLIER code entered in the **E.net** pane of the **Operator Maintenance** program as the supplier code.

The new PORTAL USER fields are maintainable within the **Options** pane of the **Operator Maintenance** program.

> The PORTAL CUSTOMER field is currently not in use and will only become relevant with a later release of SYSPRO.

> If you configured RFQ portal users prior to this change, the supplier codes are seamlessly migrated as part of the upgrade to the *SYSPRO 8 2020 R1* release. No additional configuration is required.

Quick Quotes

The **Quick Quotes** functionality has been enhanced to allow you to add the quick quote number field to the **Quick Sales Order Entry** program. This lets you search for quick quotes, as well as view the quick quote number on various sales order and printing programs once the quote has been converted.

The quote reference number is auto-generated according to the defined QUICK QUOTES setup options (*Setup Options > Keys > Distribution - Sales Management*).

Affected Programs

- SO Quotes
- Document Print
- Sales Order Entry
- Sales Order Query
- AR Branch Maintenance
- SO Document Formats

> The **Quick quote number** field is hidden by default. You can reinstate it using the **Field Selector** option from the context-sensitive menu (displayed by right-clicking any field in the pane). Simply select the field from the **Sales Order Quote Header** and drag it onto the pane.

Order Picking - L&F Account

The **Order Picking** feature has been extended to let you configure how you want to account for stock shortages in the warehouse. Stock shortfalls can be processed as stock adjustments using inventory journals, or missing stock can be transferred to a separate lost and found warehouse. When using a lost and found warehouse, you can offset shortages when stock is found during

stock takes or cycle counts.

A sales order and order line that is in status R - RELEASED TO PICKING or P - IN PICKING can't be invoiced, as the picking cycle hasn't been completed. Once picking is completed, the sales order status returns to 1 - OPEN ORDER LINE for invoicing.

Affected Programs

- Warehouse Maintenance

  The ACCOUNTING FOR SHORTAGES option lets you select whether you want to process stock shortfalls as an adjustment against the warehouse or place the missing stock items in a separate warehouse.

- Sales Order Entry

  When stock can't be picked because of shortages, the quantity on the sales order is not adjusted, as the stock quantity is placed in back order.

- Pick Maintenance

- Pick Review

- Lost and Found Warehouse Review

  This program lets you view and manage the stock items placed in a lost-and-found warehouse during order picking and cycle counting.

Cycle Counting - L&F Account

The **Cycle Count** feature has been extended to let you manage stock surpluses discovered during cycle counting. You can also capture cycle count information from within the **Browse on Cycle Counts** program.

Affected Programs

- Cycle Count Review and Confirm

  You can review and transfer surplus stock by selecting the **Review** link in the **Lost and Found warehouse/Increasing** column. The selected stock will be transferred from the lost and found warehouse to the bin that was counted during cycle counting using the **Lost and Found Warehouse Review** program.

  The Review link is only displayed if *surplus* stock was captured for the cycle count.

- Browse on Cycle Counts

  You can capture counted quantities by selecting the **Action** link at the **Functions** column and choosing **Capture a cycle count**. The **Cycle Count Capture** program is displayed.

- Inventory Lost and Found Warehouse Query

  This new business object lets you view all items in the lost and found warehouse.

GIT Amendment Journals

This enhancement lets you view goods in transit information.

When the GOODS IN TRANSIT AMENDMENT JOURNAL setup option is enabled, amendment journals are created when GIT detail records are added or updated (*Setup Options > Preferences > Distribution > Inventory*). This occurs in a variety circumstances (e.g. processing a transfer in, creating or printing a transfer out, updating a transfer due date, etc).

The **GTR Detail Amendment Journals** program displays a list of amendment journals and the corresponding before and after values.

Business objects for consolidating dispatch notes

The new SO DISPATCH NOTE CONSOLIDATION[1] business object lets you consolidate dispatch notes for invoicing.

You can use this business object to merge printed dispatch notes into a single invoice. You can consolidate dispatch notes that are either linked to a specific sales order or to a specific customer.

Once consolidated, the dispatch note status is updated to status 8 - CONSOLIDATED FOR INVOICING.

Business objects for kit component lines

Business objects for credit note and sales order lines of a kit component can now be maintained.

The SO CREDIT NOTE CHANGE KIT COMPONENT LNS[2] business object lets you maintain credit note lines of a kit component, while the SO SALES ORDER CHANGE KIT COMPONENT LNS[3] business object lets you maintain sales order lines of a kit component.

Both business objects maintain the following:

Components of a kit type **K**:

- The price, price code and discount on optional and mandatory components.
- The quantity on optional components.
- The description on optional and mandatory components.
- The product class on optional and mandatory components.

Components of a kit type **S**:

- The quantity on optional components.
- The description on optional and mandatory components.
- The product class on optional and mandatory components.

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[1]Business object: SORTCD
[2]Business object: SORTCR
[3]Business object: SORTSU

SYSPRO Point of Sale

Custom Integration - Hook-On-Line-Level

The **Hook-On-Line-Level Assembly** custom integration for third party developers within *SYSPRO Point of Sale* has been enhanced to allow for operator input.

Third party developers now have access to an external assembly that enables a prompt for operator input while processing a sale, credit, exchange or quote in *SYSPRO Point of Sale*.

The following options are now available:

- **Notify operator of order changes**

  This sends a message to operators each time they perform an action that intercepted by the external assembly, notifying them that the transaction has been modified by the custom integration.

- **Allow operator override with authorization**

  This allows an operator to bypass the interception with supervisor authority, so that the transaction behaves as it normally would (i.e. the external assembly is not used).

This external assembly is stored within the `C:\inetpub\wwwroot\SYSPRO8POS_ EDU1\SYSPROPOS\ExternalAssemblies` folder.

You can configure this within the **Hook on Line Level Assembly** tab of the **General Settings** program (available from the **Setup > System Settings** menu in *SYSPRO Point of Sale*).

The name of the external assembly (`SysproPointOfSaleHookAtLineLevel.dll`) is inserted and you can select the test option to confirm that *SYSPRO Point of Sale* can read the assembly.

Conversion to SYSPRO Avanti

The *SYSPRO Point of Sale* software suite is now completely available on the *SYSPRO Avanti* platform.

Benefits:

- Cloud-related functionality (e.g. web interface).
- Screen customization and full use of SYSPRO custom form fields.
- The availability of Point of Sale on Cloud type devices (e.g. tablets).

Sales Dashboard

The *SYSPRO Point of Sale* architecture has been enhanced to enable you to create your own custom dashboards, based on your specific business needs.

These dashboards make use of SYSPRO's Business Insights technology and can provide key information regarding the sales and performance of a Point of Sale branch.

To create a dashboard, simply use the **Visual Designer** when designing your home screen in *SYSPRO Avanti*. SYSPRO provides 2 samples which you can use to get you started.

Point of Sale branches can now set their own targets, over and above corporate budgets, to monitor their performance.

An example of what can be done using this new functionality, would be a sales dashboard:

Statistics regarding the intensity of a Point of Sale branch's performance can be highlighted, down to hourly trading, enabling you to actively monitor and manage your sales.

Trends that can be highlighted include the following:

- **Sales Value**

  This indicates the net value of sales, after all discounts, and excluding any sales tax.

- **Footfall**

  This indicates the number of transactions (i.e. sales invoices generated).

  SCT's and other non-revenue related inventory movements are excluded.

- **Average Purchase Value**

  This indicates the average value of sales to customers.

  This is determined by dividing the **Sales Value** by the **Footfall** for a specified time period.

Negative Stock Processing by Warehouse

You can now define negative stock capacity at warehouse level for *SYSPRO Point of Sale* transactions.

Allowing negative stock for a specified warehouse utilized by a branch solves the problem of having a customer at the till with goods in hand, but the till operator not being able to process the sale due to the system showing no stock on hand.

This configuration is available on the **Warehouse 2** tab of the **Branch Settings** program within *SYSPRO Point of Sale*. From here you can also indicate if a warning must be displayed when a transaction will cause a negative stock situation.

Password Standardization

SYSPRO Point of Sale now supports the same level of password control as SYSPRO and provides the following capabilities:

- Automatically expire user passwords after a defined period of time.
- Enforce rules regarding the construction of a password to ensure greater security.

Therefore, when a user changes their password in *SYSPRO Point of Sale* for any reason, it will be validated against these setup options to ensure the password meets the minimum requirements.

This configuration is available on the **Password Settings** tab of the **System Settings** program in *SYSPRO Point of Sale*.

Deposit Management

The management and governance of deposits at branch level has been improved with new trial balance and audit trail capabilities.

The **Deposits Trial Balance** produces a deposit payment trial balance of all unapplied deposit liabilities recorded in *SYSPRO Point of Sale* for improved governance:

- All deposit values are listed by customer.
- Information is derived from the ArInvoicePay table, and is subtotaled by customer.
- The report is branch specific.
- Zero value balances are excluded by default, with an option for inclusion.
- The report defaults to the current system date, with an option to change the date to an earlier date. If you select an earlier date then the report excludes all entries subsequent to the selected date.

The **Deposits Audit Trail** provides an audit trail of deposits taken for sales orders in *SYSPRO Point of Sale*:

- New deposits, deposit applications against sales and deposit refunds are identified separately.
- All deposit transactions processed in *SYSPRO Point of Sale* are included, as recorded in the ArInvoicePay table.
- The report is branch specific and provides for financial period and date range selections.

These new programs are both available from the **Query** program in *SYSPRO Point of Sale*.

Online and Offline Receipt Numbers

SYSPRO Point of Sale governance regarding the management and control of account payments has been enhanced.

The system now retains a list of receipt numbers and allocates a unique document number for all account payments received and processed at a Point of Sale store.

This occurs for both online and offline processing to prevent duplicate receipt numbers when the system is back online.

> This is particularly useful in an offline situation, as it enables you to instantly provide a customer with their proof of a payment.

In addition, the new **Account Payments** program (available from the **Query** menu) provides Point of Sale administrators a view of all account payment processing for their store. By default, access to this program is only assigned to the `Admin` role.

Things you can do in this program include:

- View an audit trail report of all account payments.
- Query account payments by your preferred selection criteria.
- Reprint an account payment.

This significantly improves the management of and governance over account payment transactions processed through *SYSPRO Point of Sale*.

> This functionality does *not* apply to customer account payment re-allocations.

Supply Chain Transfer Security

SYSPRO Point of Sale administrators can now control various aspects of supply chain transfer functionality at a more granular level, improving the governance and security over SCTs.

The new **Access Control** program (available from the **Setup** menu) includes the following capabilities at branch, role, user or device level:

- **Visibility**

  This pane enables you to define whether or not the option is available to the operator.

- **Functionality**

  This pane enables you to define an operator's access to various functions as follows:

  - Denied
  - Allowed without supervisor authorization
  - Allowed with supervisor authorization
  - Inherit access control according to hierarchy

You can therefore use this program to define the following abilities of a user for SCT transactions:

- Add item
- Edit item
- Add other
- Delete item
- Allocate back order
- Release back order
- Invoice SCT
- Cancel SCT
- Update header

Shipping Method Security

Governance regarding the delivery of goods to customers has been improved, with new security in terms of a user's ability to change shipping methods in the **Manage Orders** and **Manage Quotes** programs of *SYSPRO Point of Sale*.

The new **Access Control** program (available from the **Setup** menu) enables you to define an operator's access to various functions (at branch, role, user or device level) as follows:

- Denied
- Allowed without supervisor authorization
- Allowed with supervisor authorization
- Inherit access control according to hierarchy

You can therefore use this program to define a users access rights for changing shipping methods on new or existing orders in *SYSPRO Point of Sale*.

Financial

Trial Balance Totals

The suite of GL Trial Balance programs now includes summary totals for the current financial period according to the defined GL accounts. This is displayed in the final page of the report in a **Company totals - Summary for current period** page.

This feature includes the following programs:

- GL Trial Balance
- GL Trial Balance for Excel
- GL Trial Balance by Group

   This report also displays an account type breakdown at the end of each group defined for ledger codes (if you are generating the report for a current period or year-to-date).

Digital Tax Developments

UK VAT Return Reports

SYSPRO's suite of tax programs has been bolstered by functionality that lets you generate, print, reprint and submit a 9-box-grid UK VAT return.

Affected Programs

- **Tax Return**

   This program lets you generate a report that consolidates sales tax information for ease of submitting tax returns to authorities.

   The report is designed to meet the MTD tax requirement as set out by UK legislation.

   The printing and/or reprinting option was enhanced to facilitate the following:

- Print unprinted transactions.
- Reprint all transactions.
- Reprint non-submitted transactions.
- Reprint and submit non-submitted transactions.

- **Tax Return Status**

This program lets you generate a report displaying the total number of tax return transactions that haven't yet been printed; that have been printed but not submitted; and that have been printed and submitted according to the defined tax years and periods.

Because you now have a record of the status of tax return submissions, you can make informed decisions regarding the criteria for which you would like to generate the **Tax Return** report.

- SYSPRO's **Executive View** includes two new customized panes:

    - **Tax Return Status** (**Summary**)

    This customized pane lets you view the total number of tax return transactions that have not yet been printed; printed but not submitted; and printed and submitted according to the defined tax years and periods.

    - **Tax Return Status** (**Detail**)

    This customized pane lets you view details of transactions that have not been printed and not submitted, for the range specified. Information such as **Journal**, **Invoice Reference**, **Tax value** and **Status**, could be required for query purposes.

    As with the **Summary** view, you can view the total number of tax return transactions which have not been printed, submitted and not yet submitted.

> 💡 These panes let you check the submission status without running the reports.

> 📋 The data displayed (extracted from the AdmTaxReturn table) is only for the current and previous two periods.

Cash Book Tax Distribution by Tax Code

Accumulated tax amounts on deposits and withdrawals can now be defined by ledger code or by tax code (by selecting the **GL code by tax code** option at the DEFAULT TAX CODE setup option (*Setup Options > Tax > Cash Book*)).

You must define the ledger codes and descriptions per tax code, using the **Tax Code Setup** program.

When the deposit or withdrawal transaction is posted, the ledger codes and tax amounts can be viewed in the following programs:

- Tax Return
- Cash Book Journal
- Cash Book Tax Report
- Cash Book Print

Tax on Settlement Discount

The **Tax on Settlement Discount** feature lets you distribute the tax portion across multiple tax codes associated with the original invoice. This is controlled by the DETERMINE TAX BASED ON INVOICE PAID setup option.

All programs in the *Accounts Receivable* and *Accounts Payable* modules handle **withholding tax** and **tax on settlement discount** concurrently, depending on the configuration settings.

Affected Programs

The following programs in the *Accounts Payable* module were enhanced to calculate the tax amounts per tax code:

- Payment Cycle Maintenance
- AP Release Invoices to Pay by Review
- AP Automatic Release of Invoices to Pay
- Execute AP Payment Run
- AP Manual Check Entry

Tax Transaction by GL Allocation Account

SYSPRO's suite of tax programs has been bolstered by the addition of the **Tax Transaction by GL Allocation Account** report program.

This report lets you generate a tax return breakdown by ledger code, indicating those accounts to which tax-related transactions have been posted for electronic or manual submission to tax authorities.

It gives tax authorities extra assurance that returns have been accurately completed.

Highlights: SYSPRO 8 2019 R2

User Experience

SYSPRO Scheduler

The **SYSPRO Scheduler** lets you schedule a pre-determined activity at a given time in the future and then send a trigger for that activity at the appropriate time.

A calendar view (similar to **Microsoft Outlook**) is accessible from programs that have been designed to use the **SYSPRO Scheduler**. This lets you view existing tasks that have been scheduled as well as create and maintain schedules using the **Maintain Schedules** program.

Features currently using the **SYSPRO Scheduler**:

- Cycle Count

  This creates a cycle count schedule of stock counting policies.

SYSPRO Avanti

A number of new capabilities have been added to SYSPRO's web-based platform.

SYSPRO Supply Chain Portal

The **SYSPRO Supply Chain Portal** allows users beyond a SYSPRO site to connect, interact and transact using the *SYSPRO Avanti* HTML5 user interface.

Adding Portal users to your SYSPRO configuration provides external user access to specific functionality (using a dedicated user interface and menu system) based on the portal features available.

Features currently available from the **SYSPRO Supply Chain Portal**:

- Request for Quote System:

  This lets you collaborate with your suppliers by automating the quote process and enabling suppliers to action an RFQ.

Translation

All fields in *SYSPRO Avanti* can be translated into a different language (with the exception of the logon screen).

This is applied when the language is configured within the **System Setup** program of the SYSPRO core product.

Support for Large Rich Text Notes

Notepads that have been built into a SYSPRO application (or Customized Panes that use the notepad control) can now be added to a web view to be surfaced in *SYSPRO Avanti*. There are two types of notepads: simple text notepads and Rich Text Format (RTF) notepads.

The rich text notepad displays a special toolbar with all the formatting options. This toolbar does not appear for a notepad that only supports simple text (e.g. the **Additional Notes** in the **Customer Query** program).

Considerations:

- In SYSPRO, all complex notepads are stored in RTF format. Because this format is not supported in a web browser, it needs to be converted to HTML format for rendering in *SYSPRO Avanti*. The converse is also true - when saving notes entered in *SYSPRO Avanti*, the system must convert the HTML format to RTF format.
- If the notepad in SYSPRO includes a **Save** button, then this will also be shown in the notepad toolbar of *SYSPRO Avanti*.
- As in SYSPRO, notes in *SYSPRO Avanti* are automatically saved where appropriate (e.g. there is no **Save** button in SYSPRO's main menu notepad because any notes entered are automatically saved when you exit SYSPRO.

Visual Designer by Role

You can now design web views by role in *SYSPRO Avanti*. From within a *SYSPRO Avanti* program, select **Design Web View by Role** from the **Customize**⚙ icon and then specify the role for which you would like to design the web view.

Customized Pane support

Toolbar buttons for **Customized Panes** are now surfaced in the Visual Designer and can be added to a web view.

Gantt, Pie and Funnel chart support

You can now add Gantt, Pie and Funnel charts to visually represent data in *SYSPRO Avanti*.

Global help support

The SYSPRO Online Help can be accessed by pressing `F1` in *SYSPRO Avanti*.

Forgotten password

The **Forgot Password** functionality (which allows operators to reset their SYSPRO passwords without administrator assistance) is now available for *SYSPRO Avanti*.

Workspaces

You can define multiple workspaces in the home menu, when it is not associated with a role.

Additional VBScript Support

Although VBScript provides functions and sub-routines, basic date/time and string manipulation, math functions, user interaction, error handling, and regular expressions, additional functionality can be added using ActiveX technologies.

> VBScript Desktop Alerts are now surfaced as Toast Notifications in *SYSPRO Avanti*.

The following VBScript functions are now supported for grids in *SYSPRO Avanti*:

- OnPopulate
- OnSubmit
- OnRowSelected
- OnDblClick
- OnLinkClicked
- OnAfterChange

Additionally, the `OnDELPressed` and `OnChecked` functions are now supported for customized pane list views.

Sort search by relevance

The order of preference or relevance that is displayed in search results (based on the search term or phrase entered) returns more accurate and relevant results.

The relevance of results and weighting is determined by the order in which the fields are displayed, or ordered in the search. You can now configure whether relevance is applied against a search using the **Espresso Search Configuration** program in the SYSPRO core product.

> If you have previously created your own customize searches, the relevance option is not automatically applied to them. If you want to enable relevance, you will have to do it manually.

Simplified Administration

Optimized SRS Document Printing performance

There is a new **Optimize print** option available from within the **Maintain SRS Document Templates** program.

In a server-side environment, this option lets you print documents as soon as the data becomes available as well as archiving the documents at the same time.

Although this dual capability of printing and archiving applies to both single and batch modes, the performance benefit is more visible when printing in batch mode.

Document Batch Printing

When you enable the **Optimize print** option and are batch printing in a server-side environment, the XML file that is generated for each batch is now only generated once, resulting in improved performance (i.e. a document can be sent to the print queue as soon as the data is extracted and the previous document has completed).

Using the Document Printing API architecture, this XML file is now generated from the core program instead of the applicable document printing program (e.g. **Statement Print**) and is then sent to the **SYSPRO 8 Reporting Host Service** to produce the document.

Document Archiving

When you enable the **Optimize print** option and are printing in a server-side environment that requires document archiving, the process is now simplified by combining the process of printing and archiving (i.e. you don't need to split your archiving into multiple batches).

Document types

When you enable the **Optimize print** option, it applies only to the following document types:

- A/R Statement Print
- Purchase Orders – Foreign
- Purchase Orders – Local
- Quotation - Multiple Column
- Quotation - Multiple Line
- Quotation – Single
- Delivery note
- Dispatch note
- Invoice
- Order acknowledgment
- Factory Documentation

> The **Optimize print** option is only applicable when the following grouping options for a document template are disabled:
> - Spool multiple documents as a single job
> - Group by email address
> - Group by contact information

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.

In SYSPRO, the traditional user name and password has been bolstered by the addition of Email and Google authentication to improve security during the login process.

- **Email authentication** sends an email to MFA-defined operators containing a Time-based One-time Password (TOTP) required as part of login verification.
- **Google authentication** uses an app to generate a QR code for first time user configuration and a Time-based One-time Password (TOTP) is required as part of the verification process for subsequent logins.

Single Sign-on

Single Sign-on in SYSPRO provides a simple to setup and robust method of using **Microsoft Active Directory (AD)** to control SYSPRO users.

Once configured, it enables a complete single sign-on experience as SYSPRO users are authenticated by **Windows** and then simply use a shortcut to run SYSPRO without being prompted for a user name and password at the login screen.

It means that a SYSPRO site can use **Microsoft Active Directory (AD)** to add, change, disable and delete operators virtually seamlessly. Any changes to user attributes automatically reflect against the SYSPRO operator without manual intervention.

Benefits

- Increased security around SYSPRO logins (you can lock-down users and only allow them access to SYSPRO using their specific operator code).
- Convenient administration of SYSPRO operators managed by **Microsoft Active Directory (AD)**.
- Simplified login process for SYSPRO operators.

Maintaining SQL Users

As an administrator, you no longer have to create and configure SQL logins for SYSPRO operators using **Microsoft SQL Server Management Studio** before capturing the SQL login and password details against the operator in SYSPRO.

This is now possible from within SYSPRO, with functionality added to the **System Setup** and **Operator Maintenance** programs. The process creates the following for a SYSPRO operator:

- SQL login
- SQL user

> This is used to access the relevant databases with the required permission access enabled (i.e. `DataReader` and `DataWriter`).

Diagnostic Extract Utility

The **Diagnostic Extract Utility** lets you supply support teams with relevant information about the configuration and usage details of all companies in your SYSPRO environment. The aim is to facilitate the diagnostic process for the speedy and efficient resolution of issues you may encounter.

The extracted information is encrypted and compressed before being emailed to SYSPRO for analysis and troubleshooting by the relevant support team.

> This program is intended for advanced support purposes only and must not be used unless directed by an appropriate SYSPRO support entity.

SYSPRO Installer Application

The following capabilities were added to the **SYSPRO Installer Application** to improve and enhance the deployment functionality:

- Update SQL Server credentials
- Update deployment service credentials
- Run the deployment service as named user
- Rename a server/machine
- Install SYSPRO Additional Services
- Clone machine or deployment group
- Manage hotfix notifications

Notepad

SYSPRO's **Notepad** (rich text and plain text) has been standardized to support larger text files. This is available in the core product as well as *SYSPRO Avanti*.
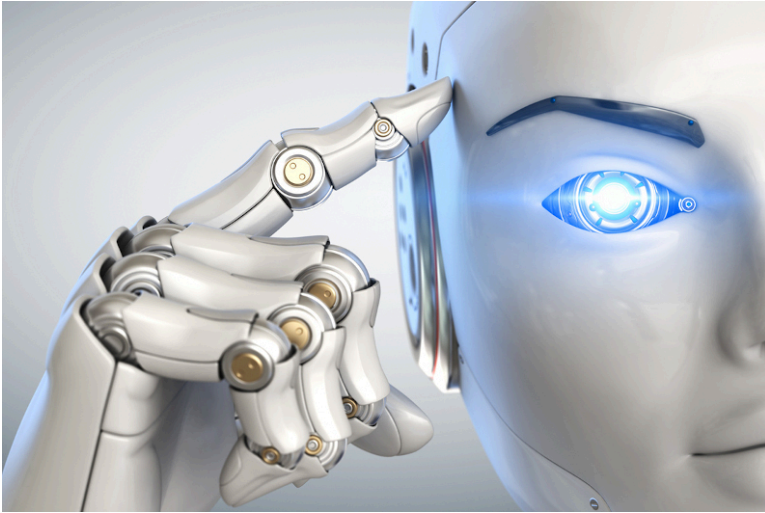
> The **Admin Notepad Editor (Rich Text)** is still limited to 32,000 bytes of data, but this will be changed in a future version.

Use System-wide SMTP

This feature solves the issue of a SYSPRO administrator having to capture the same SMTP email options for each company in the system.

Digital Technologies

SYSPRO Rules Engine

The **SYSPRO Rules Engine** helps you streamline your business processes by acting as a sophisticated *if/then* statement interpreter (i.e. rule translator).

A set of services monitor your SYSPRO transactions in real time and (once a specific set of rules is defined) they analyze and determine when something you're interested in happens. Your configured actions required by each rule are then processed accordingly.

Rules are applicable to all SYSPRO transactions, regardless of where they originate (e.g. SYSPRO core product, *SYSPRO Avanti*, *SYSPRO Espresso*, etc.).

Benefits:

Incorporating rules that monitor your SYSPRO database log enable the following capabilities:

- **Stay informed**

  Always be aware of what's happening in your business by configuring rules that inform you when specific transactions take place.

  > **FOR EXAMPLE:**
  >
  > When a customer reaches their credit limit, SYSPRO can push a notification to *SYSPRO Avanti*, begin a conversation using the **SYSPRO Bot** and surface a *SYSPRO Harmony* beat.

- **Automate processes**

  Automate actions that are required when particular events occur.

  > **FOR EXAMPLE:**
  >
  > Track the history of a specific database column.

- **Predict outcomes**

  Use predictions supplied by the **SYSPRO 8 Machine Learning** service within any part of a rule.

  The **SYSPRO Rules Engine** automatically picks up any active AI Models focused on the same table as your target table, making these outputs available within your list of variables.

  This lets you add conditions to a rule, as well as use prediction outcomes in your actions.

  > **FOR EXAMPLE:**
  >
  > If the probability of a purchase order being late is higher than 80%, then push a **SYSPRO Harmony** beat that states `'There is an 87% change that order 000164 will be late'`.

Rules Administrator

The **Rules Administrator** lets you create and maintain rules within *SYSPRO Avanti*.

You can define the following parts for rules:

Part	Description
Target	This indicates the table (and operation on the table) that should initiate a rule.
Variables	These are used to define or manipulate any values required in the **Conditions** or **Actions**. They include fixed values (e.g. strings, integers, dates) C# snippets and SQL retrieval.
Conditions	This is a set of conditional expressions that must be met before any actions are performed. To execute a specific action, conditions act as triggers that are initiated according to how the condition was configured.
Actions	Actions are executed when the rule conditions are met.

AI Integration

You can now use predictions supplied by the **SYSPRO 8 Machine Learning** service within any part of a rule.

> **FOR EXAMPLE:**

The **SYSPRO 8 Rules Engine Service** automatically picks up any active machine learning models focused on the same table as your target table, making these outputs available within your list of variables.

This lets you add conditions to a rule (e.g. if the probability of a purchase order being late is higher than 80%, then continue to the actions) as well as use conditions in your actions (e.g. a Harmony message could state: 'There is an 87% chance that order 000164 will be late').

Notifications and Actions

A number of new actions can now be executed by the **SYSPRO 8 Rules Engine Service**:

Action	Description
Avanti Notifications	These are messages sent to an operator in **SYSPRO Avanti**.
Espresso Notifications	These are messages sent to an operator in **SYSPRO Espresso**.
SYSPRO Bot Messages	These are messages sent to an operator on the **SYSPRO Bot** (using the proactive messaging feature).
Delete Rule	This deletes a rule after all its actions have executed (useful for once-off rules).
Disable Rule	This disables a rule after all its actions have executed.

Sample Rules

A number of sample rules have been added to the **Rules Administrator**:

LCT shipment might arrive late

Description	Notifies an operator that a shipment might arrive more than 10 days late.
Actions	■ Sends an Avanti notification ■ Posts a Harmony beat
Uses	Sample Machine Learning model `LctDaysLate`.

Job status rule

Description	Notifies an operator if a new job will be Late or On time.
Actions	■ Sends an Avanti Notification.
Uses	Sample Machine Learning model `JobStatus`.

New stock code added

Description	Notifies an operator when a new stock code is added to the inventory list.
Actions	- Posts a Harmony beat - Sends the SYSPRO Bot a proactive message - Sends an Avanti notification

WIP Material Cost

Description	Notifies an operator when the actual material cost exceeds the expected material cost.
Actions	- Posts a Harmony beat - Sends the SYSPRO Bot a proactive message - Sends an Espresso notification - Sends an Avanti notification

AR Invoice Late Payment Predicted

Description	Notifies an operator when a late invoice payment is predicted for a customer.
Actions	- Posts a Harmony beat - Sends an Avanti notification
Uses	Sample Machine Learning model `CustomerInvoicePayDays`

Sales order return reason

Description	Notifies an operator why sales orders over a certain value might be returned.
Actions	Sends an Avanti notification.
Uses	Sample Machine Learning model `LostSaleReason`

Predict supplier payment

Description	Predict supplier payments.
Actions	Sends an Avanti notification
Uses	Sample Machine Learning model `ApInvoicePayment`.

Artificial Intelligence and Machine Learning

Versioning and Status Support

The **Administration UI** program within *SYSPRO Avanti* has been enhanced to allow you to :

- Activate a selected project that you require to be used for all predictions.
- De-activate active projects when they are not required.
- Delete a de-activated project that is no longer required.

Download and Import projects

The **Administration UI** program within *SYSPRO Avanti* has been enhanced to allow you to download and import projects (i.e. you can now download a selected project in the project tree list using the browser and import it at another site).

This is particularly helpful when a SYSPRO partner builds a project off-site as they can now easily import it to the customer's machine.

Gauges Infrastructure (KPI Integration)

For regression models, AI tiles can now use gauges to display a predicted value, indicating whether it is positive or negative (tile type: **MLGauge**).

You can use the **Insight Tile KPI Definition** program (core SYSPRO) to define a KPI for your tile. *SYSPRO Avanti* will use this KPI to render the AI tiles.

Anomaly Detection

The following anomaly project samples have been added to the **Administration UI** program in *SYSPRO Avanti*:

- Purchase Order Line Anomaly
- Sales Order Line Anomaly

Business Scenario Expansion

Additional sample business scenarios are now available using predictive and exception machine learning and artificial intelligence:

- PO receipting process and scrap
- Predicted supplier performance
- LCT expected delivery
- Chance of a machine producing a fault
- Sales of stock codes by location
- Payment of invoices by customer
- Lost sales reason predicted

SYSPRO Bot

Bot Skill Development Platform

You now have access to a development platform that enables the development, testing and deployment of Bot skills, customized to situational requirements.

Proactive Messaging

You can now create rules via the Bot or within the Rules Administrator that activates any of the trained skills and which can trigger the Bot to initiate a conversation.

> **FOR EXAMPLE:**
>
> If you set a price alert on a stock code via the Bot, this creates a rule in the Rules Engine, which in turn initiates a Bot conversation when the alert is triggered.

Skills Expansion

The following new skills are now available with the SYSPRO BOT:

- Delete Alert Rule
- Disable Alert Rule
- Enable Alert Rule
- Statement Print
- Print Purchase Order
- Print Quote
- Reprint Quote
- Reprint Purchase Order
- Pricing
- Standard Price Query
- Set Price Alert
- Query Purchase Order
- Purchase Order Menu
- Quotes
- Add Non-stocked Code
- Add Non-Stocked Quote Line
- Add Quote Line
- Cancel Quote
- Confirm Quote
- Create Non-Stocked Quote
- Requisitions

- My Alerts
- Bank Query
- Create purchase order
- Customer Quotes
- Inventory Query
- Add Purchase Order Line
- Predictions
- Create RMA
- Create Requisition
- Add Requisition line
- Requisition Query
- Requisition routing
- RMA Query
- Update Purchase Order Header
- Supplier Invoices
- Supplier Query
- Supplier receipts
- Requisition Approval

Mobility

SYSPRO Espresso

The following new capabilities have been added to SYSPRO's mobile platform:

Espresso Xpress Cart

You can add columns to customize the grid view of the **Espresso Xpress Cart** (e.g. to display the information you deem important). You can use the **Espresso Application Builder** program in the core SYSPRO product and the **Espresso Xpress Cart** in *SYSPRO Espresso* to customize the search to display these columns.

AI Integration

SYSPRO Espresso supports client certificates installed on devices to assist with validation at the time of logging in.

This adds additional security and prevents unauthorized devices from accessing *SYSPRO Espresso*.

Forgot Password

The **Forgot Password** functionality (that lets operators reset their SYSPRO passwords without administrator assistance) is now available in *SYSPRO Espresso*.

Manufacturing

Recall Management

Archive Maintenance

The **Include** function has a new **Product recall** selection option that lets you include product recalls when archiving files.

Purge and Archive

A **Product Recall Archive Details** section has been added that lets you specify criteria according to which you want to archive product recall details. Options include:

Field	Description
Product recall archive	Select this to include product recall data when archiving.
Product recall archive number	This indicates the archive file name that is generated.
Product recall completed	This indicates the cut-off date according to which you want completed product recall records to be archived.
Product recall comment	This lets you add a comment for archived product recalls.

Lot Product Recall Detail Report

This is a new program that lets you print a detailed report of product recall information.

Lot Product Recall Summary Report

This is a new program that lets you print a summary report of the most essential product recall data.

Recorded Dates

The **Recorded Dates** feature lets you better manage the life-cycle of your products by enabling you to record several industry-specific dates against items.

The dates are captured and saved against specific lots, allowing you to manage the shelf life and expiration dates of your products. Dates include: use by date, sell by date, internal expiry date, manufacturing date, dispatch date and best before date.

Distribution

Dispatch Note business objects

SO Change Dispatch Status

The new SO CHANGE DISPATCH STATUS[1] business object lets you change the status of dispatch notes.

Current status	Can be changed to:
Entered	- Suspense - Hold
Dispatch note printed	- Released to invoice - Suspense - Hold
Released to invoice	- Suspense - Hold
Suspense	The last status of the dispatch note before it was put in suspense.
Hold	The last status of the dispatch note before it was put on hold.

[1]Business object: SORTDS

SO Consolidate Dispatch Invoice Calculation

The new SO Consolidate Dispatch Invoice Calculation[1] business object lets you post invoices against consolidated dispatch notes.

The **Dispatch Note Consolidation** program creates the consolidation records against the invoice. When the invoice is posted, all required transactions and calculations are processed and saved to the SYSPRO database.

A copy of the invoice information is stored and can be printed/reprinted using the SO Consolidated Dispatch Inv Doc Query[2] business object or the **Document Print** program.

SO Dispatch Note Maintenance

The new SO Dispatch Note Maintenance[3] business object lets you reduce the dispatch quantity for a stocked or non-stocked sales order line.

When the dispatch quantity is reduced, the back order quantity against the sales order line is automatically increased.

Allocations for traceable or serialized stock items must be de-allocated in the stocking unit of measure. Stock allocations against the dispatch line can be reduced or deleted, but can't be changed to a different lot, bin or serial.

Request for Quote System

The **Request for Quote System** feature forms part of the procurement process and extends collaboration to your suppliers by automating the quote process and servicing of the RFQ by the supplier.

Suppliers are invited to bid or quote for stocked and non-stocked products. Once the potential supplier's quotation is received, it is either accepted (a purchase order can be created and submitted to the supplier) or rejected.

This feature is designed to be used with the **SYSPRO Supply Chain Portal**, which allows suppliers to submit their quotations online.

Return to Supplier

The **Return to Supplier** feature facilitates the return of goods or services to suppliers as a result of defects or other reasons for dissatisfaction.

It simplifies the process of returns and provides an efficient method of controlling items leaving site for returns or repairs. This ensures visibility and tracking of the item until the process is concluded.

Benefits:

---

[1]Business object: SORTCC
[2]Business object: SORQCD
[3]Business object: SORTDM

- Enables Quality Management

  Enables quality management of raw materials or finished goods by facilitating seamless returns to suppliers when defects are identified.

- Streamlines Workflows and Business Processes

  Provides complete visibility of returned inventory throughout the returns process and improves the associated record keeping or document management. It provides the ability to return defective goods immediately - isolating and removing them from any process.

- Helps Manage Inventory

  Ensures that items to be returned to the supplier are removed from the available stock and held in a review area while the terms for return are negotiated. Non-stocked items can be added on-the-fly during the review process.

- Facilitates Financial Control

  Tracks variances between cost of item and credit received. Allows for the creation of a GRN which can be matched against a supplier's credit note, and a purchase order for expected replacement items.

SYSPRO Supply Chain Portal

The **SYSPRO Supply Chain Portal** allows users beyond a SYSPRO site to connect, interact and transact using the *SYSPRO Avanti* HTML5 user interface.

Adding Portal users to your SYSPRO configuration provides external user access to specific functionality (using a dedicated user interface and menu system) based on the portal features available.

Features currently available from the **SYSPRO Supply Chain Portal**:

- Request for Quote System:

  This lets you collaborate with your suppliers by automating the quote process and enabling suppliers to action an RFQ.

Cycle Count

The **Cycle Count** feature lets you perform partial stock counts at specific intervals without disrupting daily operations.

This feature is designed to be used with the **SYSPRO Scheduler** to allow for the planning and scheduling of specific cycle-counts for particular areas in the warehouse.

The *Benefits:*

- Increased stock accuracy by continuously assessing your inventory.
- Limit the amount of disruption in your warehouse by shortening the time between your counting processes.

- Fewer stock write-offs by reducing inventory variances.
- Ongoing insight into inventory accuracy, resulting in better governance and timely adjustments.
- Convenient scheduling ahead of time.

Consolidated credit notes

You can now use the **RMA Issues and Receipts** program to consolidate credit notes when receiving returned stocked and non-stocked items.

Sales order lines from different invoices can be consolidated into a single credit note as long as the sales order headers have the same branch, area, salesperson and currency. Once created, the credit note can be allocated to a single invoice.

> 💡 If you want to link each credit note to the corresponding invoice, you should rather create one per invoice instead of consolidating them.

You can also create a single consolidated credit note for returned merchandise without specifying invoice numbers. If you choose to consolidate them, all RMA lines without invoice numbers are grouped together.

The **SO Consolidate RMA lines** eSignature has been added to control access to the credit note consolidation functionality.

SYSPRO Point of Sale

Conversion of POS to Avanti

The *SYSPRO Point of Sale* software suite is being converted to the *SYSPRO Avanti* platform.

Benefits:

- Cloud-related functionality (e.g. web interface).
- Screen customization and full use of SYSPRO custom form fields.
- The availability of Point of Sale on Cloud type devices (e.g. tablets).

Point of Sale Dashboard - Sales at Store Level

A new dashboard provides key information regarding the sales and performance of a Point of Sale branch.

Benefits:

- Key statistics regarding the intensity of a Point of Sale branch's performance are highlighted.
- Point of Sale branches can set their own targets (over-and-above corporate budgets) to monitor their performance.
- Trends are highlighted for sales values, footfall and average purchase values.

Kit Type K in Manage Orders

SYSPRO Point of Sale now caters for kit type K in the **Manage Orders** program, demonstrating the products' awareness of grouped components that are typically purchased together.

Generally used for special offers, you can now process kits where the kit grouping or parent part is notational only and the components of the kit are separately detailed (pricing is at parent level).

The ability to remove optional items from a kit is also provided.

Partial Credits of Kit Sales

SYSPRO Point of Sale now caters for the partial crediting of a kit and you can process a credit for an item that was sold as part of a special offer, via a kit.

Financial

Digital Tax Tool

The **Digital Tax System** feature lets you generate tax returns for electronic and/or manual submissions. This is in response to tax authorities around the world increasingly requiring businesses to submit VAT and GST returns in an electronic format.

The feature also assists with tax queries and reconciling VAT entries from the transactions in the company's general ledger.

Customer Complaint System

The **Customer Complaint System** feature forms part of the Quality Management System. It provides a platform for customers to raise complaints and for the organization to investigate and take the necessary action to address these complaints.

Once a complaint is received and categorized, possible corrective and/or preventative action can be developed and implemented to ensure customer satisfaction is maintained.

Detail Posting to Control Accounts

The **Detail Posting to Control Accounts** feature lets you configure control account integration to General Ledger in detail. Previously, transactions to control accounts were consolidated and written to the ledger in summary, regardless of your integration level. The detail lines are now printed on distribution reports and can be viewed using the **GL Query** program as well as from within the relevant ledger journal maintenance program.

The detail integration to control accounts facility has been added to the following modules:

- Inventory Control
- GRN
- Trade Promotions

- Work in Progress
    - Part Billings
    - Labor Posting

Tax on Settlement Discount

The **Tax on Settlement Discount** enhancement enables all programs in the ***Accounts Receivable*** and ***Accounts Payable*** modules to handle withholding tax and tax on settlement discount at the same time.

The user interfaces of the programs weren't changed, only the calculation for tax on settlement discounts was adjusted and is now calculated according to the selected tax codes. The same tax codes (and therefore percentages) that were applied to the invoice lines are applied to the settlement discount.

Setup Options

The following setup options must be enabled to apply this feature:

CALCULATION FOR TERMS DISCOUNT

(*Setup Options > Preferences > Financials > Accounts Receivable*)

- Determine tax based on invoice paid
- Include tax
- Credit and/or debit notes

Affected Programs

- AR Payments and Adjustments
- AR Period End
- Cash Posting Worksheet
- AR Post Permanent Entries
- AR Finance Charge Calculation
- AR Initial Invoice Capture
- AR Currency Conversion
- AR Customer Code Conversion
- AR Collector Run Maintenance
- AR Post Dated Check Status
- AR Payment Run
- AR Credit Checking
- Master Sub-accounts
- AR Initial Invoice Capture

- AR Master/Sub Account Maintenance

- AR Invoice Posting

- AR Payment Run

- AR Payments Import

- Customers

- Cash Posting Worksheet

- Tax Return

- Document Print

- SO Counter Sales

- Customer-Supplier Contra

- Interface Import

- AR Payments and Adjustments business object

- Post Accounts Receivable Setup Options

- Query Accounts Receivable Setup Options

> The AP payment cycle process is not affected by this change.

Highlights: SYSPRO 8 2019 R1

User Experience

Avanti Change Password

SYSPRO Avanti lets users change their own password when logging in, reducing workload on system administrators.

This facility is available from the login screen, similarly to conventional SYSPRO.

Simplified Administration

Security Settings Dashboard

Configuring security and ensuring consistency across various operators is a complex process that typically involves a number of programs.

SYSPRO's **Security Settings Dashboard** program lets SYSPRO administrators query operator security settings within a single program.

Benefits:

- Query and view security information.
- Verify which operators have access (and how the access is configured) to various securable entities.
- View possible program conflicts.
- Amend security configuration in related programs via smart links.

SQL Managed Instances

SYSPRO running on Azure provides you with a choice of running **SQL Managed Instance** or SQL Server running on a Virtual Machine (VM).

With **SQL Managed Instance** – a cloud-based managed database - you provision the SQL environment based on CPUs, Memory and Disk usage, and SQL Server is automatically configured and enabled for you. There is, therefore, no need for you to provision a separate Windows Server VM and then install and configure SQL Server.

Benefits:

- Simplified SQL environment setup.

- PaaS environment - Automated patching and version updates, automated backups and high availability.

- Reduced management overhead and TCO – Improved IT flexibility and responsiveness.

- Flexibility to scale-up (and down) as required.

- Ability to exchange existing SQL Server licenses for discounted rates on SQL Managed Instance.

Hotfix Notification Maintenance

The new **Hotfix Notification Maintenance** program gives you more control over your site deployments.

Benefits:

- View who has conducted deployments on your site.

- Maintain who receives hotfix notifications.

Roaming Users

Roaming Users is the technology that provides a consistent personalized experience to each SYSPRO user, regardless of the client PC they use.

In our aim to make SYSPRO simpler, a new system-wide personalization has been added making it easy to configure SYSPRO to support Roaming Users.

The concept of Roaming Users, configuring your server environment and the new system-wide personalization option has been explained in the new technical guide: **SYSPRO – Roaming Users**, available from the **Resources** section.

Load Balancer process recycling

The **SYSPRO 8 e.net Communications Load Balancer** efficiently distributes network traffic to servers.

The resource usage of this service can grow beyond reasonable limits, which affects performance. To combat this, it now supports several settings that control when worker processes are recycled.

Benefits:

- Periodic recycling of worker processes.

- Detection and termination of hanging processes.

- Improved performance.

Manufacturing

Recall Management

The **Recall Management** feature caters for a request from a manufacturer to return a product after the discovery of safety issues or product defects that might endanger the consumer or put the organization at risk of legal action.

A product recall can be applied at warehouse, bin, stock code, lot or serial level (effectively placing them on hold) and may affect sales orders, jobs, parent parts and kits.

The product recall process includes stock items that were manufactured, sold and delivered to the customer, as well as items that were receipted into stock and are still residing in the warehouse.

LCT Bill of Landed Costs - Copy function

The **Bill of Landed Costs** program lets you copy a bill of landed costs from a specific stock code to a single, a range or a defined selection of stock codes.

Quality Management System - Recorded Dates

Phase 1 of this feature has been released and is focused towards the Food and Beverage industry (as well as similar industries like pharmaceuticals) where expiry dates are regulatory.

In order to properly manage the life-cycle of a product, there is often the requirement for a unique range of recorded dates that need to be attached to any product.

New functionality in the **Lot Number Maintenance** program enables industries to record a further range of dates, where previously **Expiry Date** was the critical date recorded.

Distribution

Order Picking

The **Order Picking** feature provides picking routines to improve order book fulfillment and the management of the pick processes.

It is an extension of the multi-bin functionality that is currently available in SYSPRO.

Benefits:

- Better stock visibility by tracking items and locations.
- Improved fulfillment times for sales functions.
- Picking tailored to suit your business based on your requirements for batch, wave, or order picks.
- Standardized receiving, put-away, and picking processes.
- Batch transactions based on locality for improved efficiency of location visits.
- Reduced cycle times for larger orders using coordinated team picking.
- Work-to-lists provide clear visibility into resource demands by discipline, locality and date/time-based requirements.

Purchase Order Bulk Emailing

The new Purchase Order Bulk Email functionality lets you email multiple purchase orders to corresponding suppliers in a single process.

Benefits:

- Improved purchasing efficiencies
- Quicker processing time

Custom Forms for Warehouse Inventory Control

The **Warehouse Maintenance** program lets you add and save custom forms for a warehouse.

Point Of Sale

New capabilities

- **Sales Orders** now allow for tax codes to be applied by line item.
- The **Quotes** search now includes the originating operator.
- The **Customer Query** now displays Contacts as recorded in Contact Management.
- The **Take Payments** program now allows operators to review payments before finalizing a transaction.
- A security option has been added to request operator validation before taking payment.
- The **Inventory Query** program now displays defined custom form fields against stock items.

Numbering

Invoice numbers and Quotation numbers can now be recorded separately as Point of Sale transactions.

Benefits:

- Supports governance requirements for Sales Tax Reporting
- Ensures sequential POS invoice numbering

Financial

GL Balancing Tool

This program lets you balance SYSPRO sub modules to General Ledger, allowing you to detect discrepancies between them. These discrepancies can occur because of data corruption (e.g. power outage during posting) unposted journal entries or journals being edited before posting to General Ledger. It is important that you resolve discrepancies, as inaccurate financials will have a detrimental effect on your financial reporting and planning.

Multi-currency Payments

The **Multi-currency Payments** facility lets you make payments to a supplier and receive payments from a customer in a different currency. It lets you manage funds across various currencies and countries, reducing the risk of errors arising from manual calculations. It eliminates the need to process receipts and payments in alternate currencies and provides a complete audit trail of the transactions.

Detail Posting to Control Accounts

The **Detail Posting to Control Accounts** feature lets you configure control account integration to General Ledger in detail. Previously, transactions to control accounts were consolidated and written to the ledger in summary, regardless of your integration level. The detail lines are now printed on distribution reports and can be viewed using the **GL Query** program as well as from within the relevant ledger journal maintenance program.

The detail integration to control accounts facility has been added to the following modules:

- Accounts Receivable
- Accounts Payable
- Assets
- Cash Book

Highlights: SYSPRO 8 2018 R2

User Experience

Avanti Workspaces

Workspaces are customizable dashboards in *SYSPRO Avanti* that supply user roles with everything they need to perform their tasks efficiently and effectively.

They are essentially web views for roles and can contain anything that can be designed in the Visual Designer (e.g. Business Insights, Program Tiles, Charts, Flow Graphs, Cards, Grids, Forms, and any customized panes associated with the role itself).

A workspace is a way of grouping tasks or processes together in a way that is meaningful or relevant for an individuals role (i.e. similar to a **Favorites** menu, except that it is defined at a role level).

Benefits:

- Users have access to a single, customizable and personalized workspace.
- A single dashboard provides a view of the activities, actions and events most relevant to the user.

Avanti Flow Graphs

The **Avanti Flow Graph Designer** lets you add flow graphs to programs as well as create custom flow graphs to streamline your daily activities. A flow graph typically contains programs, reports and tiles that form part of a business process that you can navigate by selecting the flow graph entities.

Simplified Administration

SQL Health Dashboard

The **SQL Health Dashboard** provides SYSPRO Administrators and SQL Database Administrators a one-stop-shop for viewing and managing the system for high availability.

The dashboard displays information on both the system and company databases to assist in identifying potential problems, as well as enabling the repair of certain issues found within the databases.

Improved Login UX

The login screen for *SYSPRO 8* has been improved:

- Simplified visual appearance of login dialog
- Incorporating Forgot password functionality

Forgotten Password

This lets you reset your SYSPRO passwords without requiring the assistance of a system administrator (you're typically locked out of the system after exceeding a pre-defined number of login attempts allowed).

You can request a password reset from the SYSPRO login screen (select **Forgot Password**) and 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.

Benefits:

- Password change email notification

- Login exceeded email notification

- Operator self-service reducing requirements for administrative resources

- Notification and logging for traceability

- Forgot password using new system-wide email settings

Relevant Hotfix Visibility

Enhancements around hotfixes that now enable:

- Administrator can see and zoom into relevant hotfixes.

- Mandatory or customer-specific hotfixes are shown.

Improved Third Party Support

SYSPRO 8 Custom Help now allows developers to ship help content for their own apps using custom packages.

Insights & Reporting

Insight Tile KPI Definition

Additional improvements have been made to the business insights feature:

- Simple and flexible warning and critical threshold definition.
- Color and/or Icon override when thresholds reached or exceeded.
- Operator, Role, Company and System-wide KPI definition.
- Definition provides single view of all KPIs.

Digital Technologies
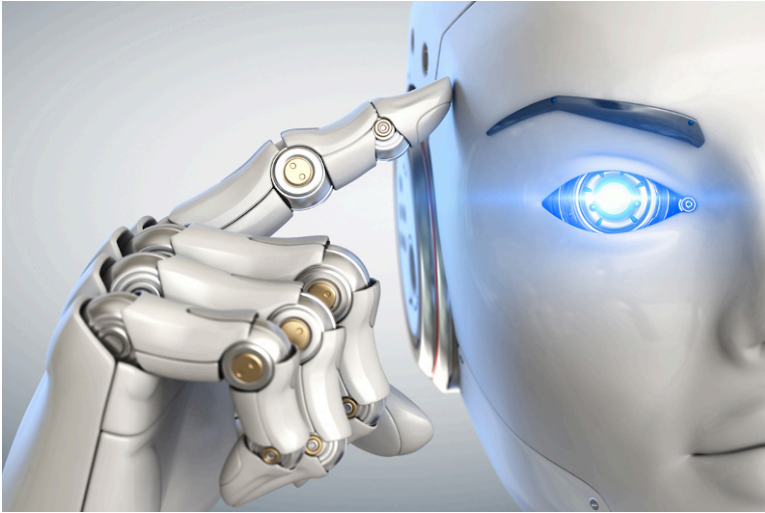
AI and Machine Learning

Machine learning forms part of the **_SYSPRO Artificial Intelligence_** module. It uses specific algorithms and statistics to examine historical data. The program then uses the data patterns to reveal trends and predict future outcomes, benefiting management by presenting the big business picture.

Although these predictions require minimal human intervention, they rely heavily on the data quality and the attributes of the SQL statement. Reliable predictions will support business processes and improve decision making by learning from past experiences.

SYSPRO Bot

Artificial Intelligence means customers deal with an intelligent and human-like chatbot that answers queries quickly.

Chatbots which answer and even predict customer queries automate customer service to free up resources in the business.

The (AI) web robot resides within the SYPRO ERP ecosystem and streamlines business functions through natural conversations with the BOT.

Mobility

Espresso Barcoding

A new function in **SYSPRO Espresso** lets you use any camera-enabled device (e.g. smart phone) to scan barcodes on all fields where the scanning icon (📷) is displayed.

Espresso Change Password

SYSPRO Espresso lets users change their own password when logging in, reducing workload on system administrators.

This facility is available from the login screen, similarly to conventional SYSPRO.

Financial

Optimized invoice terms and discount handling

The new AR INVOICE AGE AND TERMS[1] business object lets you query customers' invoice details and age them according to the invoice terms code defined using the invoice ageing methods available for current period, previous period 1 or previous period 2.

The invoices can also be aged using the supplied aged date, the aged buckets held against the customer, or you can elect to ignore ageing.

Available invoice selections include zero current period invoices and zero retained invoices.

It also caters for credit control options such as credit status, highest invoice due, average number of days to pay and available discount due.

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[1]Business object: ARSQAG

Highlights: SYSPRO 8 2018 R1

User Experience

SYSPRO Avanti

SYSPRO Avanti is SYSPRO's web-based user interface developed in HTML5. It lets you access SYSPRO using a web browser, on any device, on any platform, from any location, at any time.

It's available to anyone who has installed *SYSPRO 8* (whether on-premise, in the cloud, or both) using a concurrent single license. This lets customers choose the user interface best suited to the specific task at hand.

Benefits:

- Enables you to work where and when you want

  Access and experience the same SYSPRO solution on all devices 24/7 no matter your location - whether in the office, on the shop floor or on the move, you can choose the device that best suits the task at hand.

- Familiar experience

  SYSPRO Avanti, with its consistent user interface, uniquely gives you the same SYSPRO ERP experience through a browser on any device, without having to learn a different operating system.

- Quick and easy access

  If you're in manufacturing or distribution; whether you're upsizing, setting up a new company or expanding your multinational organization to new territories, SYSPRO's web interface gives you quick and easy access to SYSPRO through a browser.

- Flexibility and choice

Select the best user interface for the role, or specific task at hand.

- Engaging user experience

  SYSPRO's web interface is easy to use, intuitive and responsive, providing you with a simplified, engaging and rewarding experience.

- Personalize your workspace

  The *SYSPRO Avanti* web interface lets you personalize and design your workspace without the need for development skills.

Web Views

Web Views are self-contained HTML5 pages that can include **Fields**, **Charts**, **Cards** and **Tiles**.

They provide a complete picture on a single screen and have been designed to display the most important information in a manner that is intuitive and simple to use.

You can design and customize your own **Web Views** using the **Visual Designer** program. Once deployed, these **Web Views** can be viewed by pressing `F11` in the program for which one was created.

SYSPRO ships template **Web Views** with the product, which are located in the `\Base\Samples` folder of your SYSPRO installation.

Single Setup Program

SYSPRO's **Setup Options** program provides a central location from which implementers can quickly configure SYSPRO modules (and make information easily available to support staff) and significantly speed up the process to resolve issues.

Office 365

Microsoft Office 365 lets you access the latest versions of **Word**, **Excel**, **PowerPoint**, **Outlook**, **OneNote**, etc., wherever you go and across all your devices.

With **Microsoft Office 365** integrated to SYSPRO, you don't need a separate desktop installation of **Office 365**; you can integrate or combine SYSPRO data into an **Office 365** document directly from **Office 365**.

Toast Notifications

Toast Notifications are notification windows displayed briefly on the screen to alert you of a condition, before disappearing automatically without requiring any operator input.

Toast notifications with only a single button are presented as **auto-expiring** messages.

Task Dialogs

Task Dialogs are notification windows that display information requiring your response before continuing.

You can customize these dialogs to simplify processes and improve throughput - particularly on transactional screens.

Customizations range from removing buttons and changing the default action button, to preventing the dialog from being displayed at all.

Predictive Search

The **Predictive Search** facility in SYSPRO automatically shows suggested search results as you type text into any key field in the product (e.g. stock code, customer, supplier, etc).

The search uses a web service to interrogate the database and return values based on a pre-defined configuration.

Search Configuration

Search Configuration allows for the configuration of searches in the Predictive Search.

Benefits:

- You can configure the Predictive Search to filter on key fields, rows and order by, to return records while typing.

- Predictive searching helps you effortlessly get to the information you need by filtering the top records in the database based on what you have typed.

Simplified Administration

Improved Deployment

The software upgrade technology has been simplified and standardized for **SYSPRO 8**, allowing you to upgrade when it suits you.

Enhancements are made available as periodic releases several times a year, on top of which you can install hotfixes and security or other issues as they are identified and resolved.

Benefits:

- You can now plan to install a release with the features you require and have the stability of only installing hotfixes as required.
- This removes many of the issues with the monthly porting processes used in prior versions.

SQL-Optimized

SYSPRO 8 leverages Microsoft SQL Server's capabilities to provide enhanced performance, improved scalability, more robust security and increased system availability. Less planned downtime means more time to get the business benefits of **SYSPRO 8**.

Enhancements include:

- Reduced file system usage and improved security.
- Initial support for SQL as a Service.

Benefits:

- Our drive for simplification has also made the system easier to set up and administer, reducing requirements for valuable and scarce resources.
- Our benchmarks show up to 30% improvement in performance and scalability.

Improved System Availability & Scalability

Balancing Optimization

Balance functions in certain modules were either tied together with month-ends, which are de-coupled, or form part of a 'day-end, week-end or month-end' function. Moving the checking of imbalances to the SQL Health Check Service removes the need to run the balance function in the module.

In addition, if an imbalance is identified, the out-of-balance correction function can be run to specifically target only the issues encountered.

Benefits:

- This is a SQL-only facility. By targeting SQL, we can vastly reduce the current time taken to perform this function - in some instances from hours and minutes to seconds - thus greatly improving system availability.

Re-engineered e.Net architecture, re-engineered server architecture, simplified service infrastructure

Benefits:

- Improved memory handling and scalability with 64-bit architecture.

Health Check WIP – Balance function

The Health Check Service innovation is designed to reduce scheduled downtime to a bare minimum, improving your core business process availability.

Ensuring the health of your database is paramount. With SQL Health Check, you are able to ensure that all tables, columns, indexes, keys etc. are as they should be and, if required, to add missing data.

Benefits:

- Reducing scheduled downtime.
- Balancing and correction optimization.
- Ensuring the integrity of your database.

Insights & Reporting

Business Insights

Business Insights are essentially SQL scripts that are exposed as **Tiles** in a SYSPRO web view. These tiles are context-driven and enable you to act instantly on events, facilitating both informed business decisions and sound business behavior.

They are an individual employee performance management tool for all levels of engagement, providing an intuitive, real-time view of performance against KPIs, goals and targets.

KPIs on tiles can be used to highlight values that approach or exceed pre-determined objectives or thresholds. This lets you proactively keep an eye on approaching targets. These targets could be a certain value, company-wide goal or a specific agreed target for a person or a role within the organization.

Tiles can be added to the main SYSPRO menu to surface company information (e.g. the `total backorders for the company`) or they can be added to specific programs and provide the key field as a context (e.g. the `total backorders for a customer`).

Additionally, when you click on a Business Insight tile, you can drill down to more detailed information displayed in a list view that derives its context from the specific tile measurement parameters.

You can also create administration insights (e.g. failed transactions, users logged in, etc).

Benefits:

- Accelerate turnaround time and drive throughput by streamlining the actions and activities that occur between one task and the next.
- Increase decision-making capability with increased visibility into operational performance of the company by individual and department across the entire operation to determine where you are successful and where you need to improve.

- Measure and improve performance by assigning standard, or tailoring specific, key performance indicators and metrics designed with the ability to immediately action work-to-lists - converting KPIs into meaningful improvement.

- Empower the workforce to meet goals and targets by assigning insights in an intuitive, self-explanatory, easy-to-use interface, aligned with critical business drivers and work-to-lists to be actioned

Open Reporting API

The **Open Reporting API** lets developers and external applications call on SYSPRO to run and distribute reports and documents directly in the external application.

Leveraging the SYSPRO Reporting Service Server infrastructure, developers can query the SYSPRO database and produce the required documents which are added to the print queue from where they can be viewed, executed and managed. They can choose whether to access the document via the report queue or the API for further automation (a destination code indicates the origin of the queue item).

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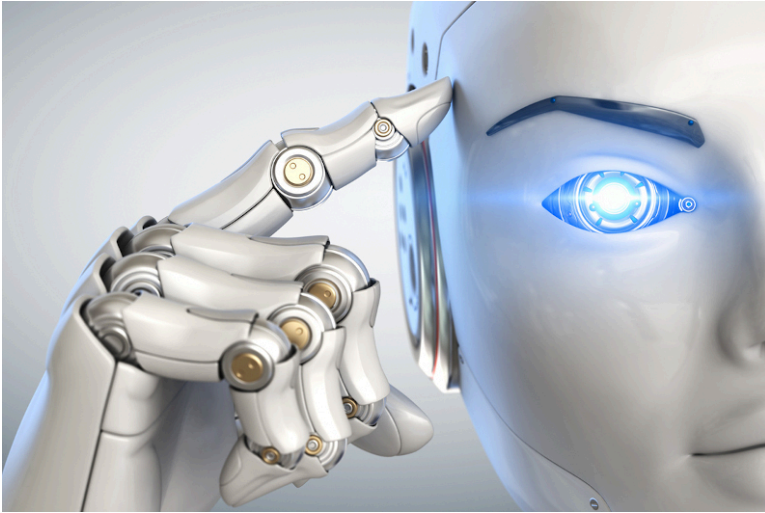
SYSPRO Harmony (Social ERP)

SYSPRO Harmony is a collaborative, user-friendly social platform at the core of ERP that gives users a familiar interface through which to interact with the SYSPRO ecosystem and conduct their daily business.

The platform is embedded in the SYSPRO product and combines a number of technologies (e.g. Social Media, Collaboration, Machine Learning, Cognitive Services and Data Analytics) into one application:

Benefits:

- View your company's operating status 24/7
- Drive user collaboration with social ERP conversations
- Harness the power of machine learning on your data to achieve sentiment analysis on your transactions
- Simplify complex technologies and business processes
- Enable faster decision making
- Follow relevant information and have this surface automatically
- Enable integration of SYSPRO data onto a messaging platform
- Enable trend analysis in conversations
- Improve user experience with a familiar, easy-to-use social media-type user interface
- Encourage system usage across the entire organization

Follow information

As with social media, Harmony users can follow, post and collaborate within the organization network using real-time information from the SYSPRO database. Using the data generated from these interactions, the system intelligently pushes pertinent information to the user using familiar

interfaces.

This provides a more personalized working platform for users, allowing them to create their own profile, follow and track key data, take action and provide and share insights relevant to both internal and external stakeholders, all from a single view.

Social ERP conversations

Harmony is a collaborative, user-friendly social platform at the core of ERP that gives users a familiar interface through which to interact with the SYSPRO ecosystem and conduct their daily business.

Sentiment integration

Data Sentiment enables a complete spectrum picture of customer opinion about your services or products for informed and strategic decision making. Visual ques (the equivalent of emoticons) help alert users by attaching sentiment to specific items.

Key notes attached to these items are detected to reveal the tone in terms of the state of an event, customer or component which tracks potential future issues regarding customer service and happiness before they arise.

Emoji	Sentiment
😄	Very happy
🙂	Happy
😐	Neutral
🙁	Unhappy
😣	Very unhappy

Trend Surfacing (Auto-Aggregation)

Most social media applications (like **Twitter** or **LinkedIn**) use intelligent machine learning algorithms to detect trends from the messages posted and then surfaces that information to the user according to relevance.

Similarly, Harmony uses predictive analytics to reveal trends that provide actionable insight. The difference is that not only does Harmony process machine learning and trend detection on conversations, it also processes these on the core SYSPRO database.

Harmony identifies transactions on the SYSPRO database, the key fields against which these transactions are being processed and then performs trend detection and aggregation on the data. It presents this information in chart form to reflect what is currently trending in the SYSPRO database.

> **FOR EXAMPLE:**
>
> A stock code could be used in a large number of sales orders, as well as some purchase orders and RMAs. In this case, that stock code would be trending.

This highlights critical information without you having to request it or consolidate reports across the different modules.

Mobility

Espresso Xpress Cart

The **Espresso Xpress Cart** provides manufacturers and distributors with an efficient, fast and simple-to-use mobile sales ordering app, extending the sales order experience directly to customers.

This is achieved using flexibility, efficiency, ease and speed of capturing orders online, mobility on the road and improved customer ordering experience.

Espresso Script Editor

The **Espresso Application Builder** program includes a script editor that lets you add scripting to an Espresso component. This allows you to build additional business logic into Espresso.

Espresso Customer Workbench

The **Espresso Customer Workbench** includes various customer components that lets you view customer data and add or update transactions within one application without having to leave the current application.

Espresso Printing Reports & Documents

When maintaining a sales order in *SYSPRO Espresso*, the *SYSPRO Espresso* **Sales Order Document Printing** application lets you generate invoices, delivery notes and order acknowledgments.

When generating a document, the current status of the document and built-in business rules determine the type of document that can be generated and the document formats that can be selected. You can also reprint documents that have already been printed.

Espresso SFDC

The **Espresso SFDC (Shop Floor Data Collection)** Workbench provides a mobile solution for capturing all production-related transactions directly from the shop floor.

It enables access to all job-related transactions and work-to-lists available to the shop floor via mobile devices.

Operators are directed to their work-to-lists, have insight into job specifications and are presented with a single point-of-entry for recording all their production progress.

Benefits:

- Reduce errors caused by manual data capture
- Eliminate shop floor paper
- Improve material accuracy and tracking
- Provide current production visibility for better decision-making support

Manufacturing

Job Nesting

The **Job Nesting** feature lets you combine several small jobs into one larger nested job process. This lets you view and select combinations of work orders that can be batched together into larger processes (e.g. you can nest multiple jobs using the same raw material or components).

The result is a reduction of waste and operational costs, optimized use of raw material and resources, and improved efficiencies.

Benefits:

- Group jobs requiring the same raw material (such as sheets) to a nested job. Optimize the raw material and labor usage against the nested job.

- Record actual raw material and labor usage against the nested job as well as results of the nest.

- Disburse material, labor and scrap against the original jobs on completion.

Manufacturing Operations Management (MOM)
Manufacturing Operations Management

SYSPRO's Manufacturing Operations Management solution helps manufacturers measure performance in a drive towards world-class standard of operations for overall equipment effectiveness (OEE), total effective equipment performance (TEEP) and overall labor effectiveness (OLE).

It increases productivity and lowers costs by minimizing loss within the business. Operational efficiencies are optimized through better workflow of core manufacturing activities (e.g. schedule, publish, collect, track, analyze and improve).

It facilitates the connection of machines and other devices to digitize the factory (Industry 4.0) and gain competitive advantage.

Benefits:

- Deliver to customers faster.
- Control labor and machine costs.
- Reduce downtime and bottlenecks.
- Measure and improve product quality.
- Increase productivity and output.
- Reduce cost to compete.

Any Device, Anywhere

Makes use of the latest technologies to provide intuitive mobile and browser-based UIs via Smartphones, PDAs, Tablets, Bar code scanners and PCs. Extensive online views make it easy for you and your team to gain visibility over any stage of the process, from any device.

Advanced Planning and Scheduling

Incorporates an advanced, finite capacity-based planning and scheduling (APS) system, allowing you to quickly and accurately schedule while minimizing downtime.

- Visual Planning Board - define your resources and their available capacity via the shifts that they operate. Create, optimize and share your production schedules online. Publish job lists to your resources for easy data collection.
- Dashboard - balance equipment utilization and order fulfillment to maximize factory output. View your most/least utilized resources, top orders by value and popular products by volume.
- Production Plan - view the agreed production plan. List and/or print shop packets. Review progress, including hours reported, quantities produced and issues logged to expedite and/or provide delivery information.
- Equipment Plan - review the impact of the production plan on your equipment. Drill down into each equipment card to view loading detail and expected daily output.

- Production Status - review open jobs to check their status. Use progress bars to gain visibility of hours booked, materials issued and overall progress at a glance. Drill down to view specific job details, including attached documents and production issues.

- Job Lists - view job and material lists by resource groups for today or this week designed for use with mobile and/or tablet devices.

- Production History - view activity history in relation to both open and closed jobs.

Shop Floor Data Collection and Tracking

Incorporates shop floor data collection (SFDC) from your employees and equipment with options to automatically connect your machines in order to read data without manual inputs.

- Workbench - collect data in real time both on and off the shop floor from your employees or equipment using a stopwatch style of recording for accuracy. Data recorded here is used to support the calculations of overall labor effectiveness (OLE) and overall equipment effectiveness (OEE).

- Connect equipment - digitize your factory by collecting data from your machines and other devices automatically.

- Dashboard - high-level view of your orders, products, employees and equipment. Select specific employees and equipment to view status and performance for a selected time period.

- Employee status - at-a-glance live view of your employees... their current status, what they are working on, and how they are performing during their shift. Drill down into each employee card for a detailed view. Use status indicators to access their workbench to help with clocking and other management issues.

- Equipment status - at-a-glance live view of your equipment... the current status, what jobs they are running, and how they are performing during the shift. Drill down into each equipment card for a detailed view. Use status indicators to access the equipment workbench for management purposes.

- Job status - review open jobs to check their status. Use progress bars to gain visibility of hours booked, materials issued and overall progress at a glance. Drill down to view specific job details, including attached documents and productions issues.

- Transaction review - review (edit, delete, add) and/or approve all transactions generated via the workbench or entered from timesheets. Automate the scheduled posting of approved transactions to SYSPRO for financial analysis. Manual 'sync now' option also available. Export to payroll systems (optional).

- Equipment performance - detailed analysis of an individual equipment performance with supporting detail, including audit trails and a record of the issues encountered.

- Employee performance - detailed analysis of an individual employee performance with supporting detail, including audit trails, daily clocked-hours reconciliation and a record of the issues encountered.

- Management reports - analytics associated with employee availability (uptime/downtime) for management purposes. Includes daily clock-hours reconciliation and option to create custom management reports using pivot tables.

Factory Digitization

Allows you to connect machines measuring equipment and other devices. You can automatically connect with machines to read data without manual inputs.

Gain real time visibility of:

- Start/stop and downtime.
- Job assignment.
- Operation status (e.g. operation completed).
- Machine status (e.g. warming up; idle; running; down).
- Parts count (total, good and bad).
- Component count (total, good and bad).
- Performance issues (e.g. slow running; equipment wear; component jam).
- Custom values (e.g. temperature; pressure; spindle speed).

Factory Performance and Loss Management

Provides out-of-the-box factory performance and loss analytics to allow your organization to drive to world-class standards for overall labor effectiveness (OLE), overall equipment effectiveness (OEE) and total effective equipment performance (TEEP).

Utilizes Six Big Loss analysis to identify, classify and quantify your loss, enabling you to determine counter measures to reduce them.

- Loss Management - dashboard realization of loss across your manufacturing operations with every loss identified, classified (Six Big Loss) and quantified to allow for countermeasures to be applied and continuous improvements to be made.
- Dashboard - factory-level analytics of your equipment showing both OEE and TEEP key performance indicators. Drill down to supporting metrics and measurement of Loading, Availability, Performance and Quality.
- Employee Analysis - detailed analysis of your employee performance. Filter by individual employees or analyze performance for a specific group of employees. Further analyze by date or diversion.
- Equipment Analysis - detailed analysis of your equipment performance. Filter by individual equipment or analyze performance for a specific group of equipment. Further analyze by date or diversion.

- Product Analysis - output and quality analysis for your products by employee and/or equipment.
- Loading - detailed analysis of the loading position of your resources with comparisons to last month and/or quarter to understand trends.
- Availability - detailed analysis of the availability of your employees or equipment with comparisons to last month and/or quarter to understand trends.
- Performance - detailed analysis of the performance of your employees or equipment with comparisons to last month and/or quarter to understand trends.
- Quality - detailed analysis of the quality output from your employees or equipment with comparisons to last month and/or quarter to understand trends.

Lean Manufacturing and Continuous Improvement

Helps to drive Lean Six Sigma continuous improvement initiatives with management alerts, issue logging and workflow, online documents and more.

- Management Alerts - receive performance management alerts to improve efficiencies and prevent issues becoming problems.
- Messaging - send and view messages to and from the shop floor.
- Issue Workflow - view, assign and resolve custom and/or performance-related production issues.
- Paperless Shop - manage and maintain static attachments or online forms related to jobs, operations, employees, equipment. Add hyperlinks to videos and/or document management systems where audit trail or document versioning control is required.
- Anytime, Anywhere - access mission-critical information whenever and wherever you need it via tablet and/or mobile devices.
- Safe and Secure - sign-in authentication with full organizational control to restrict information that can be viewed by workgroup or individual.
- Quality Assured - the solution has been formed around IEC62264, the globally recognized standard for manufacturing operations management - providing the tools and analytics essential for effective manufacturing operations management to help you compete in today's market.

Distribution

Preferred Supplier

The **Preferred Supplier** feature lets you configure and manage sourcing policies for your stock codes.

A sourcing policy determines who is the preferred supplier of a stock item and helps a company stay competitive by ensuring that purchasing agreements and policies are upheld when creating requisitions and purchase orders.

A purchasing strategy benefits buyers and suppliers - suppliers have guaranteed sales, while buyers can negotiate favorable terms.

Benefits:

- Improved value-to-price relationship (i.e. achieve cost reductions while maintaining or improving quality and service).
- Understanding of category buying and management processes to identify improvement opportunities.
- Examination of supplier relationships across the entire organization.
- Leveraging the entire spend of the organization.
- Developing and implementing multi-year contracts with standardized terms and conditions across the organization.
- Sharing best practices across the organization.

Bin to Serial Linkage

The **Bin to Serial Linkage** feature lets you accurately determine where (from a bins perspective) serialized items reside in a warehouse.

This provides efficient traceability of stock serial tracking across warehousing functions. You can now find and use serials in a more timely manner, as any stock movement can be traced at bin level for serialized stock codes. You can also view the specific bin location of the serial when receipting, issuing or selling serialized items.

Benefits:

- Improve Traceability:

  An improved method of tracking serials linked to bins provides for better visibility into serialized stock items in specific warehouses.

Bulk sales order release

The **Sales Order Release** function lets you release large quantities of sales orders from suspense.

Financial

Dunning System

The **Dunning System** feature manages the generating and distributing of periodic reminders for unpaid invoices.

This helps streamline the credit management process and reduce the risk of incurring bad debts. Once configured, the process can be automated to routinely send out payment notifications.

Improved Balance Routines

To optimize month-end and year-end processing, the **Balance** functions in the following modules have been created as separate business objects and are no longer automatically included in the month-end or year-end processing:

- Accounts Payable
- Accounts Receivable
- General Ledger
- Cash Book
- Asset Register
- Purchase Order
- Work in Progress

Previously, the balance function was always automatically performed in conjunction with the month/year end routines.

Benefits:

- Improve productivity with faster month-ends

Improved Payment Cycle

A payment cycle can be completed without needing to first print a check remittance.

You can select from the following printing options within the Accounts Payable module:

- Print checks and remittance advices combined on pre-printed stationery
- Print checks and remittance advices separately on different stationery and/or printers
- Print only remittance advices
- Print nothing at all (useful for electronic payments as remittance advices are often not sent when paying via EFTs)

AP/AR Exchange Rate Revaluation

This functional enhancement provides for better visibility, control and management of variances associated with purchase price variances and exchange rates in the purchasing cycle and sales cycle.

Benefits:

- Better visibility of exchange rate variances allows for better control over variances during your purchasing and sales cycle.

Electronic Tax Submissions

Supplementary Information: A tax reporting business object has been developed that produces a generic tax activity report in XML. This extract can be used in the creation of statutory tax reports.

Benefits:

- An export facility **Tax Submission Query** for your input/output tax submissions.
- You now can create your own tax reports using this feature.
- Functionality now exists to extract tax data (Sales Invoices, Purchase Invoices and Cash Book, etc.) based on your defined filters and date selections.
- A generic extract template is available that allows you to develop your own reports or import into other systems.

AR Tax on Settlement Discount

All programs in the *Accounts Receivable* and *Accounts Payable* modules handle **withholding tax** and **tax on settlement discount** concurrently, depending on the configuration settings.

The following programs in the *Accounts Receivable* module were enhanced to ensure that both types of taxes can be used at the same time:

- AR Payments and Adjustments
- AR Bank Deposit Slip
- AR Payments Distribution Query

- Payment Cycle Maintenance
- AP Manual Check Entry
- AP Release Invoices to Pay by Review

The **Re-establish Invoice** pane has been updated to accommodate this change.

SYSPRO

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