2021 Highlights

SYSPRO 8

Reference Guide

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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*):
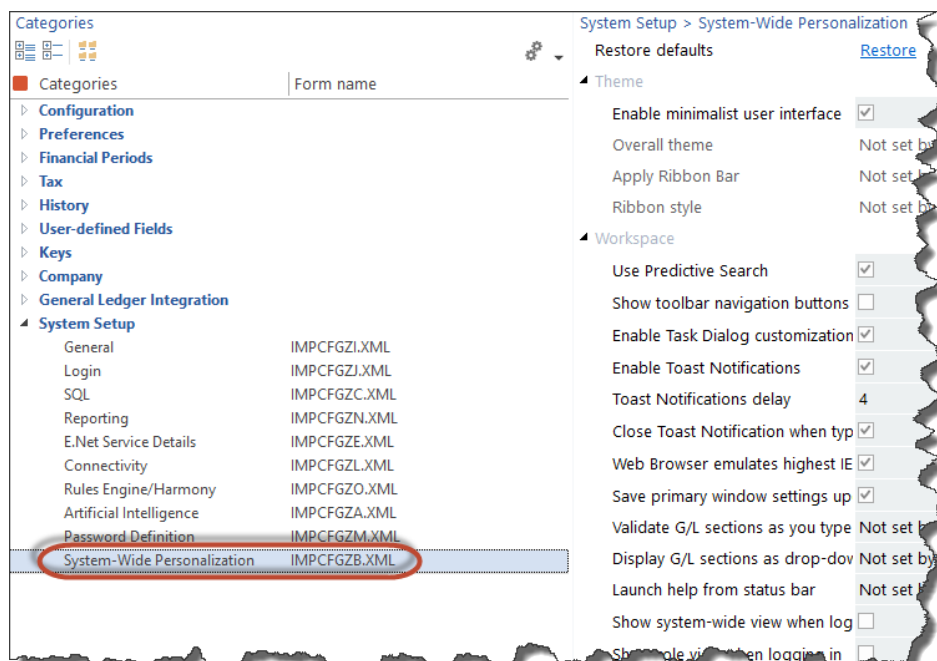
Simplified Administration

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

> ℹ 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

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.

> i 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.

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[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.

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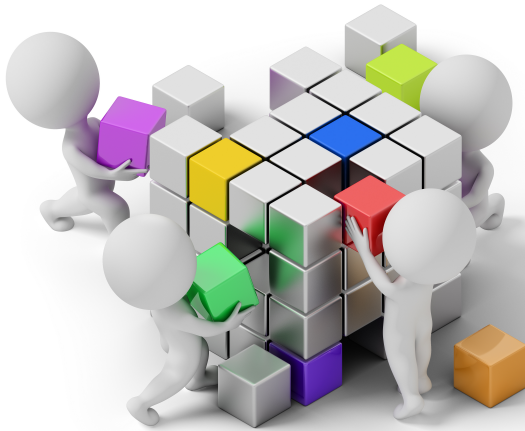
This avoids the errors typically associated with the manual preparation of transactions related to secondary customers and improves the administrative time taken to process them.

> **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

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