

WEBCON BPS

Updates for WEBCON BPS version 2019.1.1

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1. Introduction

WEBCON BPS 2019 introduces a multitude of brand new features centered on the presentation layer, multiple new installation options for various environment configurations, and a general reorganization to system privileges.

Implementing these functionalities forced a complete rebuild of certain internal mechanisms, and heavy rearrangement to some configuration areas.

The following changelog is a comprehensive guide to all changes introduced between versions 2017.1.3 and 2019.1.1. All new features, and changes to existing features, have been accounted for.

Please refer to this document for a complete technical description of all new configuration options, changes to existing configuration options, and the reorganization of the privilege structure in WEBCON BPS 2019.

2. What's new?

2.1. WEBCON BPS Portal

WEBCON BPS 2019 introduces a lot of new features that center on the presentation layer of a business application. The goal is to design graphic interfaces which enable end users to make efficient use of available business processes. The new configuration options in WEBCON BPS Designer Studio will allow you to organize your business processes into applications, navigate between them, prepare and present data.

WEBCON BPS 2019 is still fully integrated with the Microsoft SharePoint platform, which allows users to continue to work using existing forms and workflow configurations. However, alongside this classic solution, a new parallel platform named WEBCON BPS Portal is provided as well.

WEBCON BPS Portal is a new graphic interface for WEBCON BPS users that serves as a coherent and uniform working platform. WEBCON BPS Portal organizes processes into applications within which users work and carry out tasks assigned to them. The new interface allows you to create and view public and private reports, organizing application presentation elements on the dashboard (personalized desktop) and starting new workflows. To complete the WEBCON BPS Portal user experience, we provide users with new, integrated functionalities. The end user can quickly search for workflow instances, browse most recent user activities in the application, the brand new search engine and artificial intelligence elements provide suggestions to the user of things that require their attention.

WEBCON BPS Portal is a cutting-edge interface which was designed to fit seamlessly with the full screen Office 365 application, also allowing for integration with Microsoft's cloud solutions.

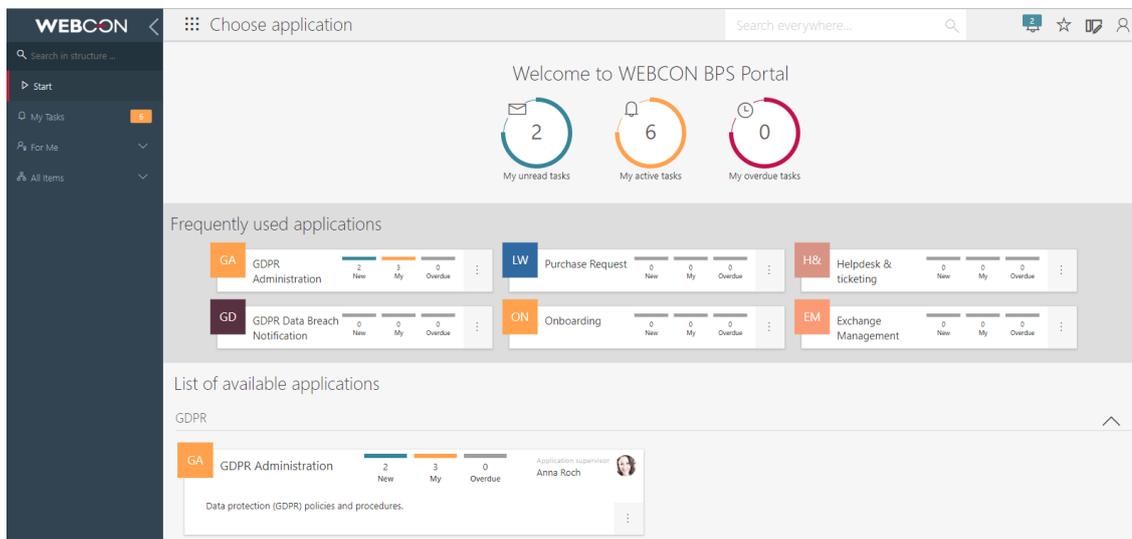
2.1.1. Application

WEBCON BPS 2019 introduces the concept of **applications**. An application is series of logically interconnected business process, for which the administrator can create a standardized presentation layer. Apart from the process definitions themselves, which model business logic and behavior, an equally important aspect of configuring an application, is the method for presenting information so that it is efficient and intuitive for the end user working within the application. For each defined application, the administrator is given an option to create reports, views, dashboards – these can be created from both WEBCON BPS Studio and from WEBCON BPS Portal levels.

An independent, dedicated privilege definition was created which allow to define user groups that can view the application or modify its content. Data access level which is synonymous to visibility of specific process elements on reports is still independently defined for each of the processes.

2.1.2. WEBCON BPS Portal main page

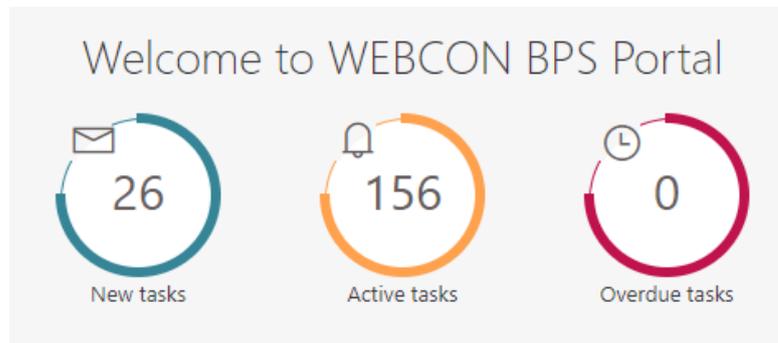
The main page is a place where the user starts his work in WEBCON BPS while using the WEBCON BPS Portal interface.



The main page is created from many standardized elements – a task counter for the current user, a list applications created in WEBCON BPS that the current user has access to, or various quick search tools that users can employ to find relevant applications and preview forms for existing workflow instances.

Task counters

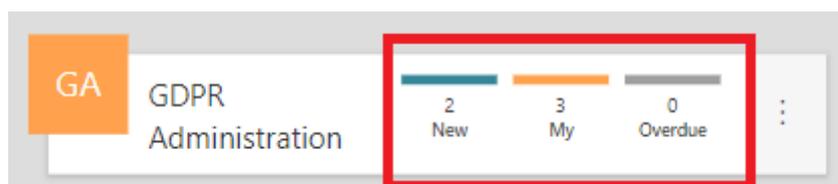
Task counters on main panel inform about the total number of system tasks assigned to the current user. Counters provide information about tasks from all applications and processes in the system in which user has tasks assigned.



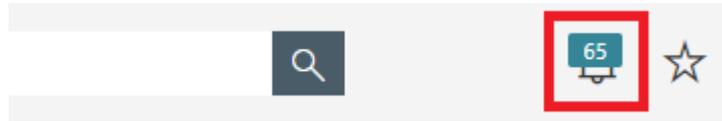
Counters are grouped into three categories:

- **New tasks** – shows number of all new tasks to complete for which the user haven't displayed items' form. After displaying the appropriate form the counter will decrease regardless if the user has taken any action.
- **Active tasks** – shows number of all tasks assigned to the user. Counter will decrease after completing the task.
- **Overdue tasks** – shows number of all tasks assigned to the user for which the completion time is exceeded. Counter will decrease after completing the task.

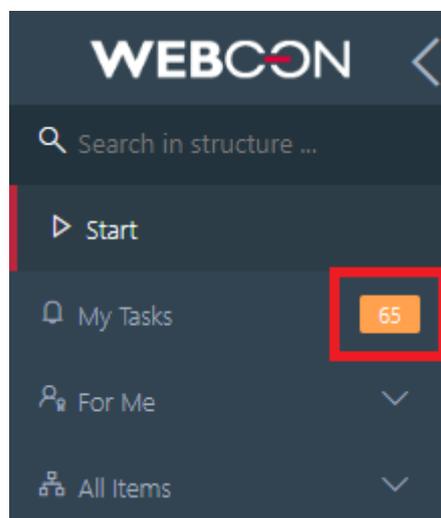
On WEBCON BPS Portal main page task counters are available also for each application for which the user has privileges to. Task counters in applications are visible both in *frequently used applications* panel as well as in *Available applications* panel.



The toolbar has an icon with a number of new tasks in the system. This counter is available regardless of the chosen application and informs the user about new tasks on a regular basis.



Navigation bar displays a counter of active tasks. Its number changes depending on chosen application. On WEBCON BPS Portal main page, the counter presents a total number of tasks in the system which are assigned to the user.



Task counter presents the actual number of tasks assigned to a logged-in user independently of the source of the task creation (whether it was created in SharePoint or in WEBCON BPS Portal).

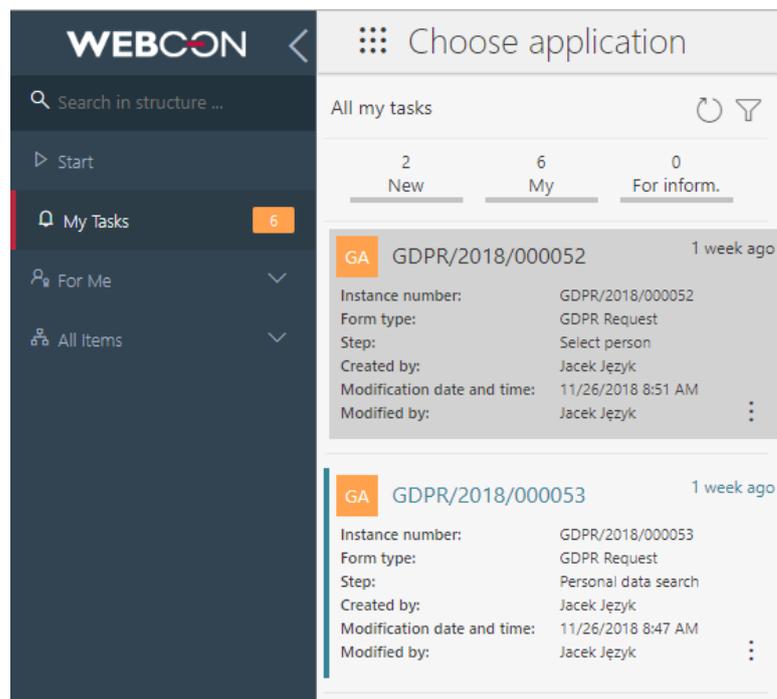
Clicking on a specific counter will move the user to a task list narrowed down to a chosen category.

“My tasks” view

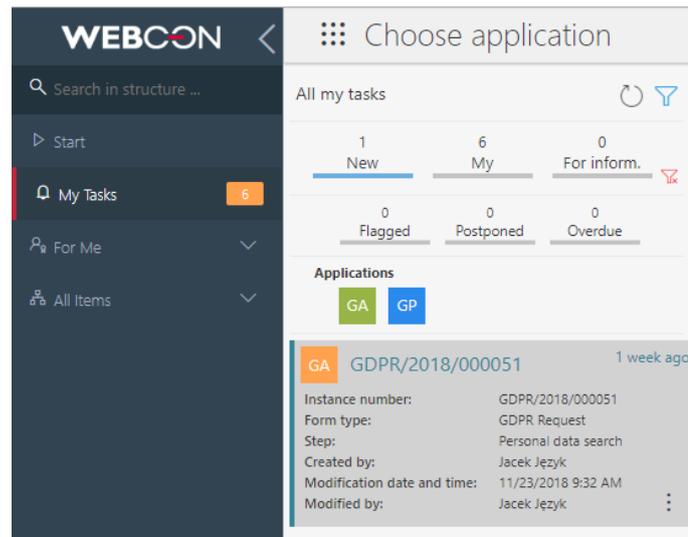
The task list available in the navigation panel as the “My tasks” page has information about all active tasks for the current user.

At the main page level (without having any application selected), the tasks list consists of all user tasks created in the system (in all applications). On this level, the user has access to his tasks even if he doesn't have application view privileges.

At application level, the list consists only of the task from this specific application.

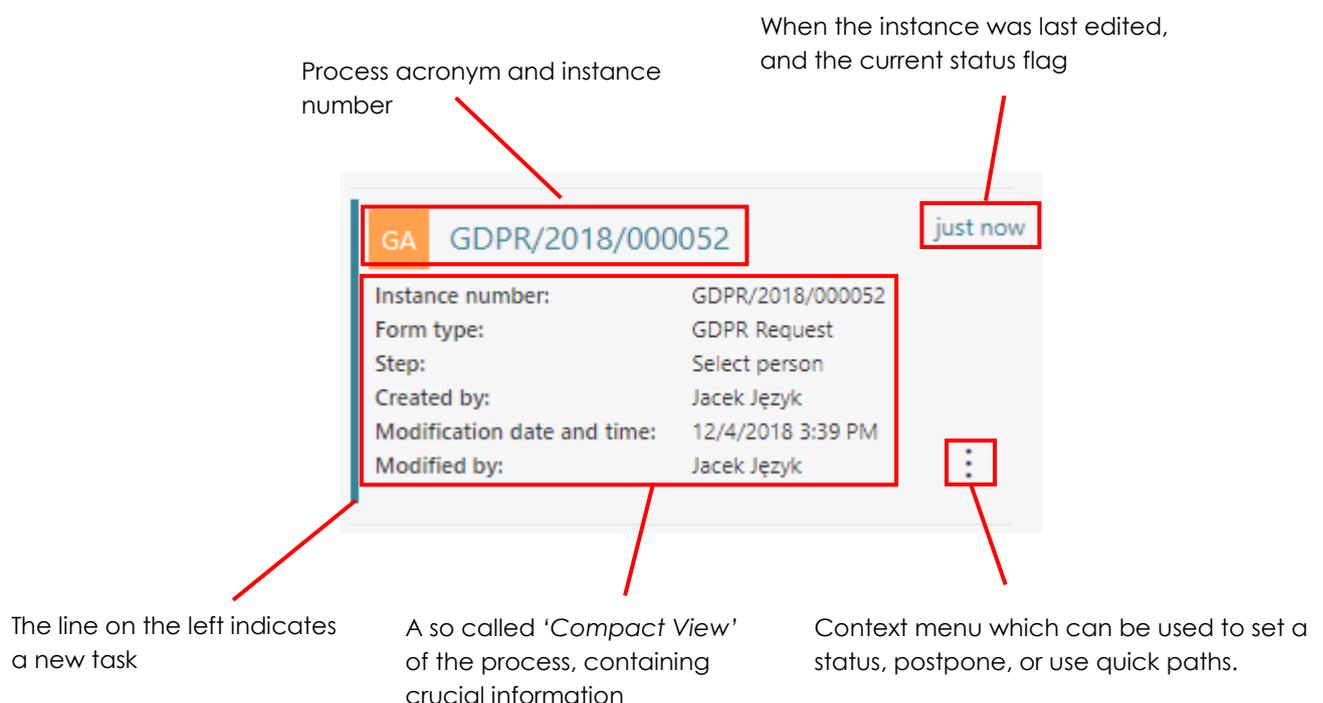


It is possible to narrow down the presented elements displayed on the list depending on the tasks type by clicking on a specific filter. After expanding additional filters (by clicking on filter icon) it is possible to narrow down the list depending on the task flagging and application from which this task originates.



The tile representing a task has basic information about the instance that it refers to. It is possible to adjust the amount of displayed data by tweaking the configuration of the *Compact* view tab in the process configuration using WEBCON BPS Designer Studio.

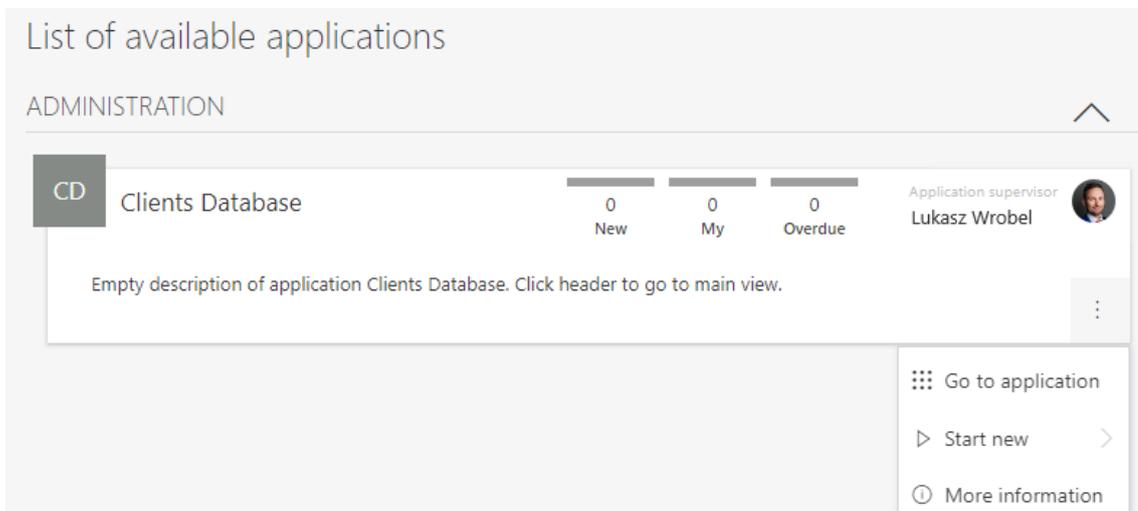
Additional information such as instance number, time of last update, flagging, and new task indicator, help to quickly identify the task. The context menu is available directly on the tile, which allows users to quickly flag tasks and even traverse paths, if the instance has *quick paths* configured on its current step.



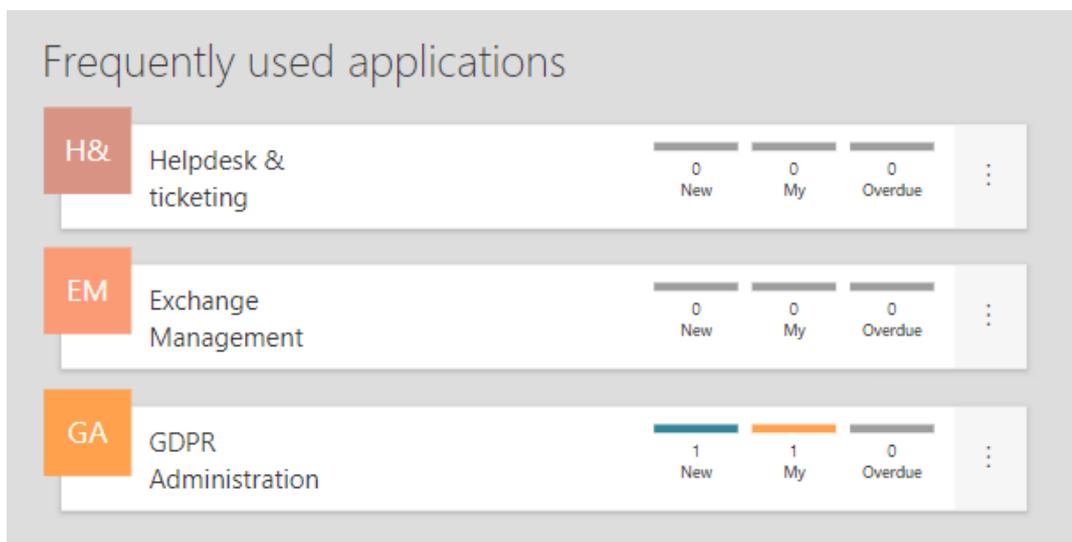
The instance preview is an integral part of task list. It allows to edit the selected task, change value or move along the path. The form of the instance connected with this task is presented on the right side of the list.

Application list

The list of available applications defined in the system is displayed in two ways. *Available application list* consists of all applications to which the user has privileges. This view organizes applications into expandable application groups ordered alphabetically.

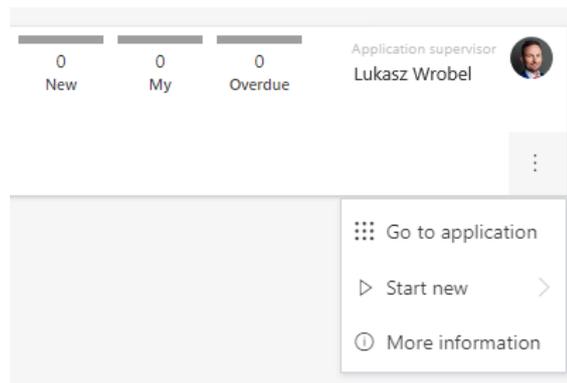


Frequently used applications view displays those applications which user most frequently uses in the system. It allows for a quick transition to application which is commonly used.

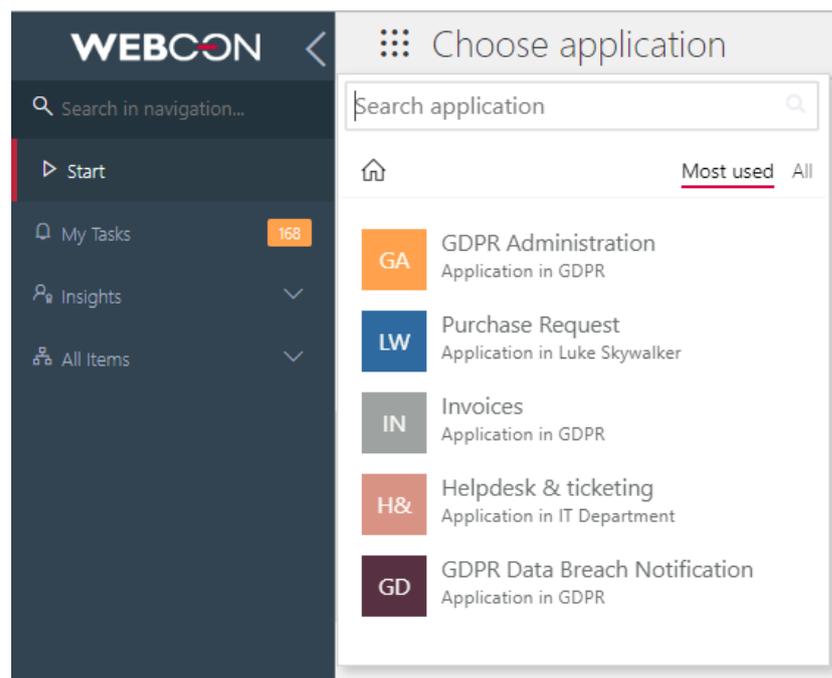


Next to the basic information, such as name, description, and application supervisor, there is a task counter for each application on the list. It displays the number of tasks in each application. After clicking on a specific counter, an adequately narrowed down *Task list* is presented.

The context menu allows users to start a new instance without the need to open the application's site. Starting options which are available here can be defined both from the level of WEBCON BPS Designer Studio as well as from the level of application website in WEBCON BPS Portal.



Application list view is available also on the taskbar of WEBCON BPS Portal. It allows for a quick preview of available and most commonly used applications. However its main advantage is possibility to search for applications by providing part of its name or a whole name. Clicking on a selected instance allows users to move to application website and use all of its functionalities.



“Insights” view

This view displays system instances which are processed in an unusual way. The evaluation of how much the data is non-standard compared to other instances is done based on artificial intelligence and neural-net mechanism (AI). This mechanism analyzes values on the form, relations between them even those which are not explicitly defined in the configuration. Result of the analysis is a set of rules based on which every process element is verified. Every deviation is presented as an anomaly which help the person who manages the process to find them and react in an appropriate manner.

This analysis uses AI engine and it requires OCR AI license.

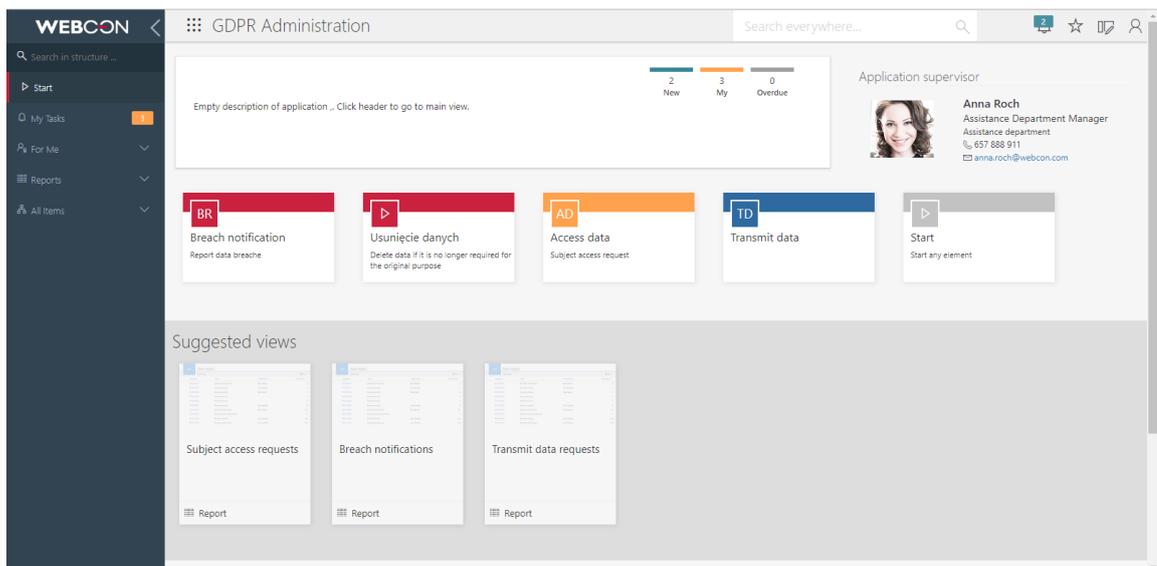
“Searching structures” view

The searching structures view allows to display any system instance report based on standard grouping. They are navigated by going to lower and lower aggregation levels, grouped by application, process, workflows, form types and steps. It allows the user to find items in the system even when the administrator did not prepare a specific report presenting those instances.

2.1.3. Application website

The application website organizes several logically related processes together. Application website composition is standard (every application has the same set of components) and uniform. Within one website, there are files which allow to start instances, browse the number of tasks, create reports as tables and charts and compose dashboards, which help to organize the workspace.

Applications' website layout is predefined, but its content can be configured by a user with adequate privileges both from WEBCON BPS Portal website and WEBCON BPS Designer Studio.



The top area of the site is a space for the application description and information about the application supervisor – this is for the end users' convenience only.

The application website contains task counters which work within the specific application and allow for a direct transition to task list after clicking an appropriate counter.

Suggested dashboards and reports

This component helps users navigate within the application. Suggested dashboards and reports is a list WEBCON BPS Portal elements, suggested to the user by the system as those which are most used. Clicking on a file moves the user to a specific report, view or a dashboard.

Recent activities in the application

The list of recent activities in the application is a short summary of all activities conducted by users inside the application. The list consists of ten last activities of following types: creating a new instance, moving along the path or instance editing. There is a possibility of browsing activities of your own, of your subordinates or of all users working in the application.

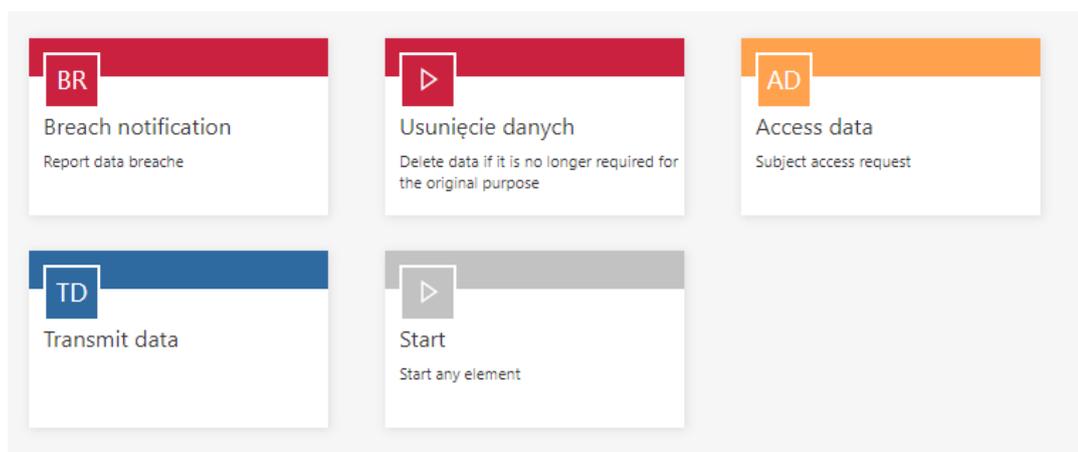
2.1.3.1. Active tasks in the application

Active tasks view is very similar to tasks list available on the WEBCON BPS Portal main page. It contains information about users' all active tasks within the application. It is possible to narrow down the list by task type and process type in which it was assigned. Analogously as on task list available on main WEBCON BPS Portal website, the user can preview the form connected to a specific task and conduct an action of moving along the path, data edit, flagging or delaying the task.

2.1.3.2. Instance starting

Each application's website has a fixed, predefined space for tiles dedicated for starting new workflows. These tiles are analogous to Start Workflow Web Parts.

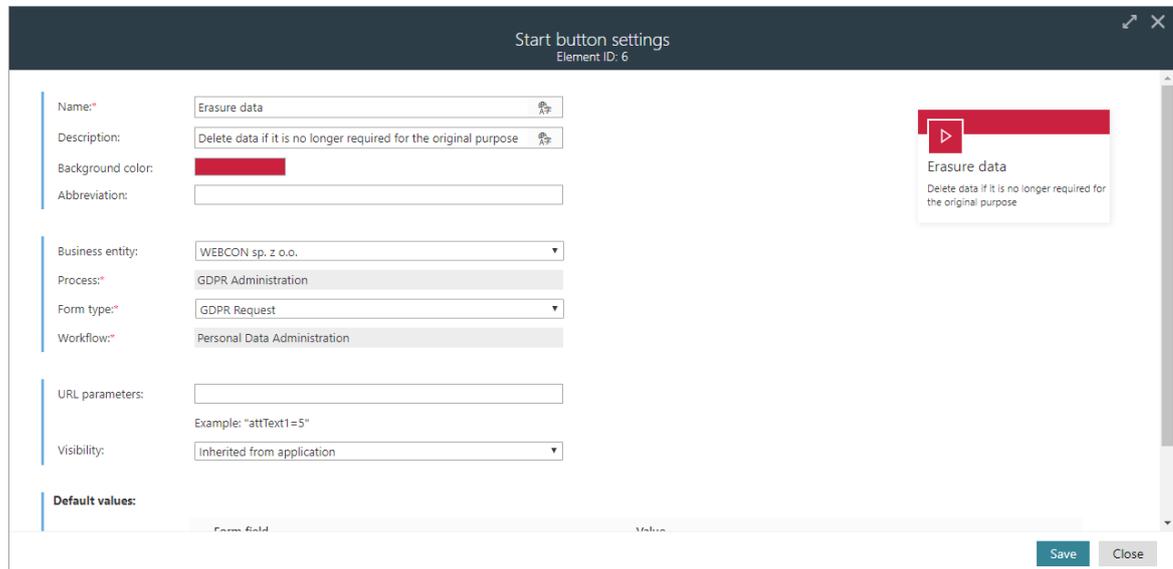
The tiles present the user with a short name and a description which allows to determine which type of instance will be started. To differ the looks or underline the meaning of specific instances in relation to other ones, tiles can have different colors.



All of those configuration elements can be defined by the user with "Application administrator" or "Portal designer" privileges while configuring the starting tile.

Configuration also covers additional options such as setting initial parameters, default form field values, choice of starting process, workflow and form.

Starting button configuration is possible both in WEBCON BPS Portal edit mode and in WEBCON BPS Studio.



Each application has a standard button for starting instances from any workflow in the application. Choosing which processes' and workflows' instance has to be started happens in the first window right after clicking on start button.



Using standard start button provides the user with complete freedom to use any workflow which is available to him.

If the users starts to more frequently use a certain type of settings during instance start, he can save a pre-configured start button on the application main page by choosing the option "Publish to main site". From now on the new start button will be available to all users using this application.

The option to start any instance is available for users with application edit privileges.

Start element ✕

Business entity:

Process:*

Form type:*

Workflow:*

Start
Pin to start

Close

2.1.3.3. Reports

Reports are available in every application defined within WEBCON BPS Portal and are a developed version of existing Show Workflow Elements reports and Show Workflow Charts which are available as Web Parts for the SharePoint version.

The screenshot shows the WEBCON BPS Portal interface. The main content area displays a report titled 'All purchase requests' under the 'Purchase Request' application. The report includes a table with the following data:

Instance number	Title	Initiator	Applied on	Step	Value
PR/2018/0030	Microsoft SQL	Luke Skywalker	11/22/2018	Manager approval	29,060.00 €
PR/2018/0027	Our new purchase	Luke Skywalker	11/21/2018	Board approval	24,000.00 €
PR/2018/0026	WEBCON BPS Purchase	Luke Skywalker	11/21/2018	Manager approval	18,000.00 €
PR/2018/0023	ERP sales module	Luke Skywalker	11/20/2018	Approved	24,950.00 €
PR/2018/0022	Microsoft SQL Server Enterprise	Luke Skywalker	11/19/2018	Manager approval	14,530.00 €
PR/2018/0017	WEBCON BPS	Luke Skywalker	10/18/2018	Manager approval	20,500.00 €
PR/2018/0016	WEBCON BPS	Luke Skywalker	10/17/2018	Manager approval	72,970.00 €
PR/2018/0012	Age of Empires 2200	Pawel Jawien	09/29/2018	Manager approval	0.00 €
PR/2018/0010	Office	Pawel Jawien	09/27/2018	Manager approval	5,350.00 €
PR/2018/0009	Test mobile iOS	Luke Skywalker	09/27/2018	Rejected	20,050.00 €
					470,853.00 €

Contrary to their SharePoint version, WEBCON BPS Portal reports merge graphic and table presentation into one. It leaves the user with a choice of one or the other type of view.

Application reports have a detached data structure definition, including data pre-filtering and independent view definition, in which this structure is presented.

Data structure available in the report can be created only by the application administrator who has access to all processes definitions within a defined application. The administrator can freely choose form fields displayed in views, and narrow down data which limits access to data that should be unavailable to the user.

Graphic report representation is created based on a defined report data structure and this is also what the views are made of.

In short – the administrator defines the data content and basic filtering parameters for a report, and may then create any number of specialized views for the report, which further filter and embellish the desired data.

Public and private views

Each report can have many views defined. Each view may take on the form of a table or graphic chart, with the latter having the option to create multiple levels of nested chart levels.

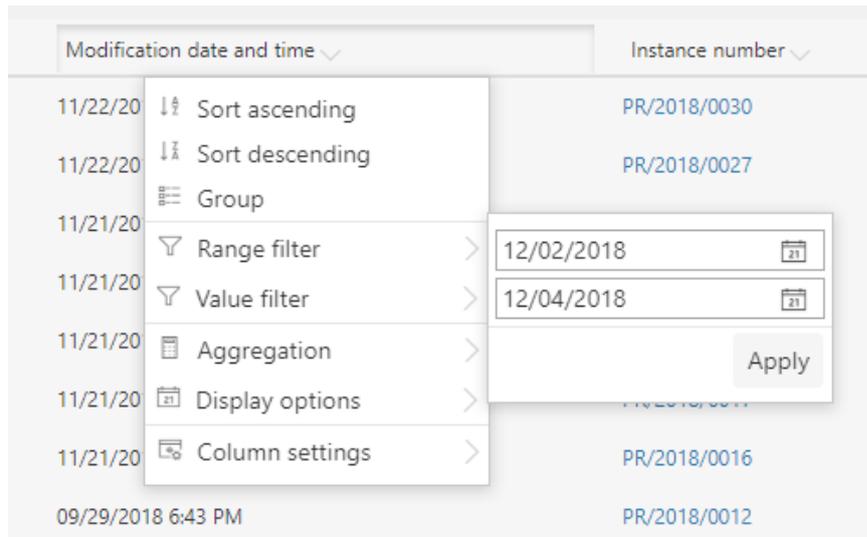
Each view can have an independent set of columns presented in it. However, this set is limited to columns provided by the administrator as the data structure of the main report, for which the view was being created. In other words, views can be supplemented with additional columns only if they were made available by the administrator as part of the report.

View definition boils down to deciding which columns should be visible, their order, additional filters, and data grouping. Application administrator can create public views that are visible to each user that has access to the application. However there is a way of creating (based on public view) a private view, visible only to its creator. It is available to every user that has access to application and the report.

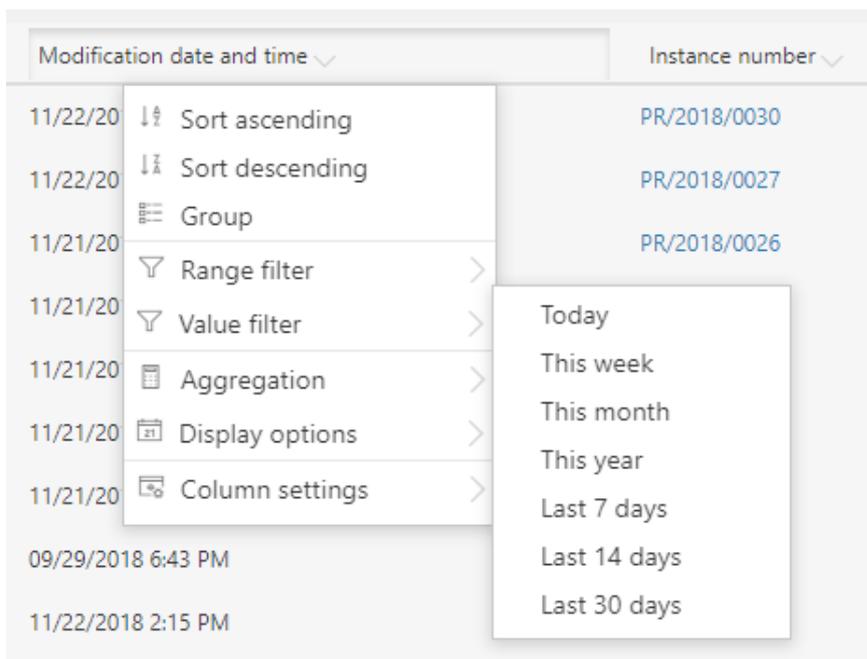
Filtering

Data presented in table view can be filtered by the user in many ways. Reports provide a handful of filtering methods which allow the user to freely manage the amount of displayed data.

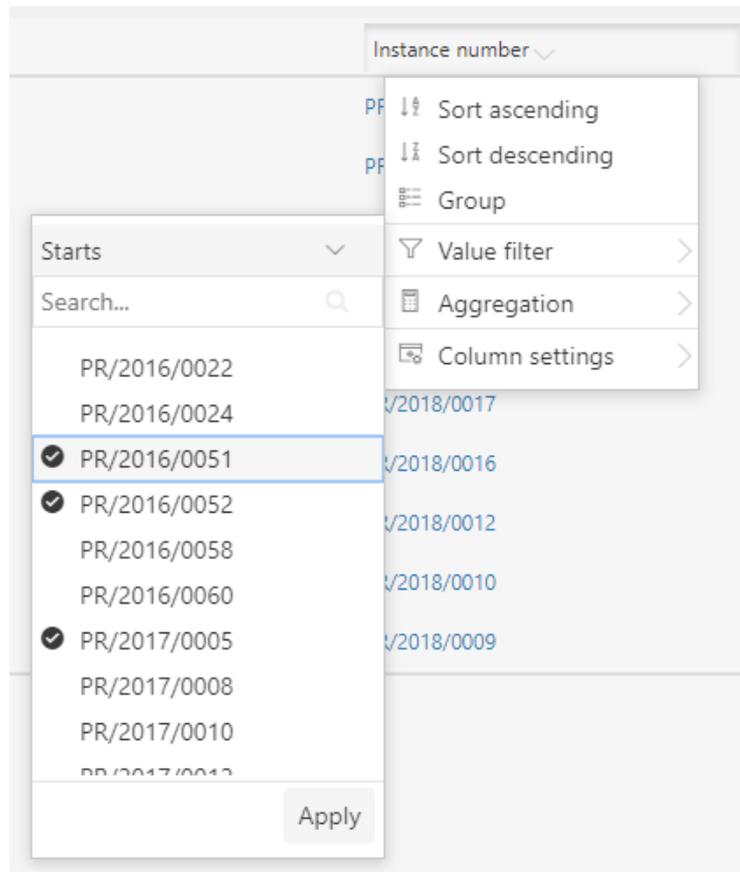
Data range filter can set the data/number interval within which data will be displayed in the view.



For data type columns a value filter is available. It allows to choose standard data range from a predefined list.



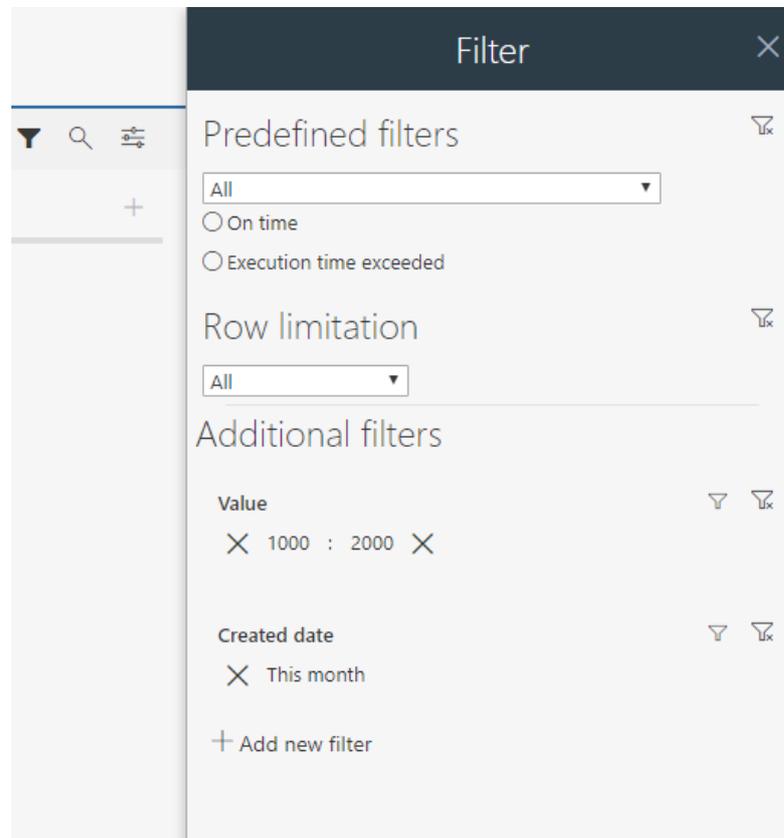
For number/text data columns value filter allows to choose one or more values from the report an in this manner narrow down presented data.



Filters can be set simultaneously for multiple columns. To make identification of currently used filters easier for the user, reports feature functionality of filter preview available after clicking the filter icon on report toolbar.

All purchase requests* 	
Instance number 	Value 
PR/2018/0030	29,060.00 €
PR/2018/0027	24,000.00 €
PR/2018/0026	18,000.00 €

Filter preview displays currently set of applied filters, and also provides option to modify them, add new, or clear existing ones.



Grouping

The table view allows the user to group by any column available in the report.

Assigned to	Value
M	29,060.00 €
A	24,000.00 €
M	18,000.00 €
M	24,950.00 €
M	14,530.00 €

Assigned to	Value
M	29,060.00 €
A	24,000.00 €
M	18,000.00 €
M	24,950.00 €
M	14,530.00 €

Group view allows to display grouping options as a tree. Clicking on elements of this sort of grouping tree, the view is automatically narrowed down to a chosen group

The screenshot shows a web interface for 'All purchase requests'. On the left, there is a 'CATEGORY' tree with 'ASSIGNED TO' sub-categories. The main area is a table with columns for 'Modification date and time' and 'Instance number'.

Modification date and time	Instance number
11/22/2018 2:54 PM	PR/2018/0030
11/22/2018 2:55 PM	PR/2018/0027
11/21/2018 5:46 PM	PR/2018/0026
11/21/2018 5:51 PM	PR/2018/0023
11/21/2018 5:29 PM	PR/2018/0022
11/21/2018 5:53 PM	PR/2018/0017
11/21/2018 5:54 PM	PR/2018/0016
09/29/2018 6:43 PM	PR/2018/0012
11/22/2018 2:15 PM	PR/2018/0010

Column actions

User has an absolute freedom in creating a view also when it comes to column visibility. Columns can be moved, hidden and shown by simple dragging & dropping.

Each of those changes can be done by the user and saved as a private view.

This screenshot is identical to the one above, but it highlights the 'Instance number' column header and the first data row, demonstrating the column action feature.

Modification date and time	Instance number
11/22/2018 2:54 PM	PR/2018/0030
11/22/2018 2:55 PM	PR/2018/0027
11/21/2018 5:46 PM	PR/2018/0026
11/21/2018 5:51 PM	PR/2018/0023
11/21/2018 5:29 PM	PR/2018/0022
11/21/2018 5:53 PM	PR/2018/0017
11/21/2018 5:54 PM	PR/2018/0016
09/29/2018 6:43 PM	PR/2018/0012

Quick preview of the form

For each instance report it is possible to move to its form (for example by clicking link in an instance number) to browse data or do specific tasks.

Reports provide a functionality of a quick instance preview thanks to which user can browse its details, which are not present on a report, but without opening the full form. Clicking on a specific record opens a preview window with full access to all form fields or attachments.

The screenshot displays the 'All purchase requests' report interface. The main table lists various purchase requests with the following data:

Instance number	Initiator	Applied on	Step	Value
PR/2018/0030	Luke Skywalker	11/22/2018	Manager approval	29,060.00 €
PR/2018/0027	Luke Skywalker	11/21/2018	Board approval	24,000.00 €
PR/2018/0026	Luke Skywalker	11/21/2018	Manager approval	18,000.00 €
PR/2018/0023	Luke Skywalker	11/20/2018	Approved	24,950.00 €
PR/2018/0022	Luke Skywalker	11/19/2018	Manager approval	14,530.00 €
PR/2018/0017	Luke Skywalker	10/18/2018	Manager approval	20,500.00 €
PR/2018/0016	Luke Skywalker	10/17/2018	Manager approval	72,970.00 €
PR/2018/0012	Pawel Jawien	09/29/2018	Manager approval	0.00 €
PR/2018/0010	Pawel Jawien	09/27/2018	Manager approval	5,350.00 €
PR/2018/0009	Luke Skywalker	09/27/2018	Rejected	20,050.00 €
				470,853.00 €

The 'Preview' window on the right shows a bar chart titled 'Purchases vs budget (YTD)'. The chart compares 'Purchases Value (YTD)' (light blue bar) and 'Current Year Budget' (dark blue bar). The Y-axis ranges from 0 to 120,000. The 'Current Year Budget' is approximately 110,000, and the 'Purchases Value (YTD)' is approximately 50,000. Below the chart, there are sections for 'Additional opinions' (Supervisor opinion, Requested item) and a scrollable area for 'MS SQL Enterprise Server 2Cores'.

Reports search

The report table view provides the option to search for an instance by selected criteria. Search panel is available by clicking the “magnifying glass” icon on report toolbar.

A set of search criteria that can be entered is defined by administrator while preparing report configuration. Depending on requirements of specific report, search can be done based on value of specific form fields or by entering searched phrase in “Search everywhere” field. In this case full content of all reports’ instances will be searched.

Search is conducted with usage of previously set filters.

Search within the report utilizes MSSQL Full-Text-Search mechanism.

The screenshot displays a report interface with a search panel overlaid on the right. The report table shows the following data:

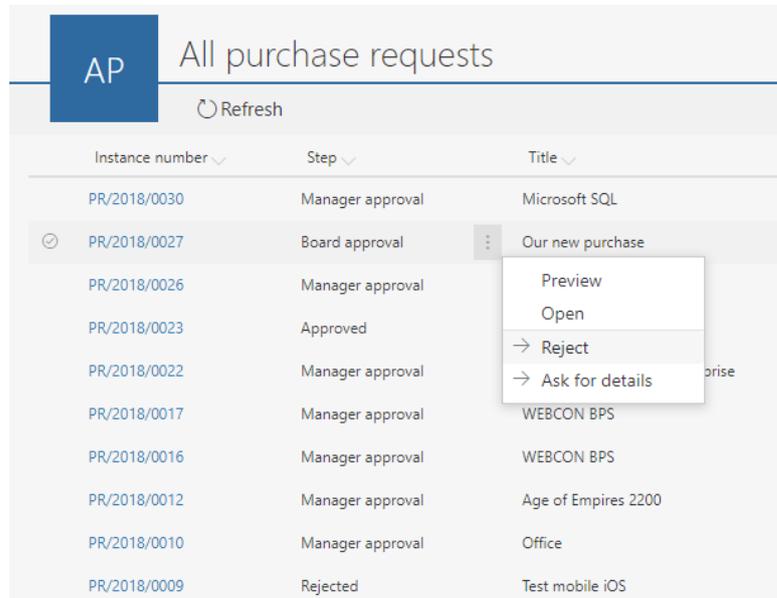
Initiator	Applied on	Value
Luke Skywalker	11/22/2018	29,060.00 €
Luke Skywalker	11/21/2018	24,000.00 €
Luke Skywalker	11/21/2018	18,000.00 €
Luke Skywalker	11/20/2018	24,950.00 €
Luke Skywalker	11/19/2018	14,530.00 €
Luke Skywalker	10/18/2018	20,500.00 €
Luke Skywalker	10/17/2018	72,970.00 €
		204,010.00 €

The search panel on the right includes the following fields and options:

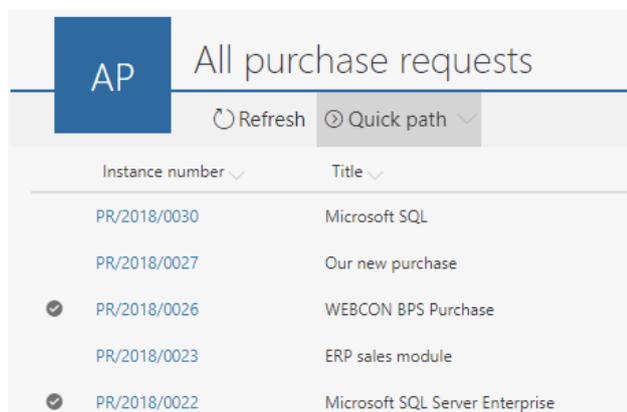
- Search everywhere:** A text input field.
- Instance number:** A text input field.
- Category:** A text input field.
- Initiator:** A text input field containing "Luke Skywalker".
- Department:** A text input field.
- Applied on:** Date range selection with "From:" (10/01/2018) and "To:" (12/04/2018) fields.
- Additional options:**
 - Search in attachments
 - Search in item lists
- Buttons:** "Search" and "Clear" buttons at the bottom right.

Quick paths

For all instances displayed in table view of the report, it is possible to move them along defined quick paths without the need to open the form preview. If completion of certain tasks doesn't require filling in the data on the form, and the information available on the report is sufficient to decide about the action (e.g. accepting the invoice), then selecting an appropriate path from the context menu will move this instance to the next step.



In scenarios where many instances displayed on the report can be moved down a path at once, the user can use collective instance transfer to the next step. After selecting a number of workflow instances in report view, as long as those instances are in the same step, the user has access to a context menu where one of the options is a common transition path – allowing you to quickly transition many workflow instances.



Both in the case of operating on a single instance, and performing mass operations, it is possible to mark instances as postponed or flagged.

Paging

If report table view will present a large number of instances, a comfortable solution is to split them and display on separate pages. While defining the report, application administrator decides how many records will be visible on the website.

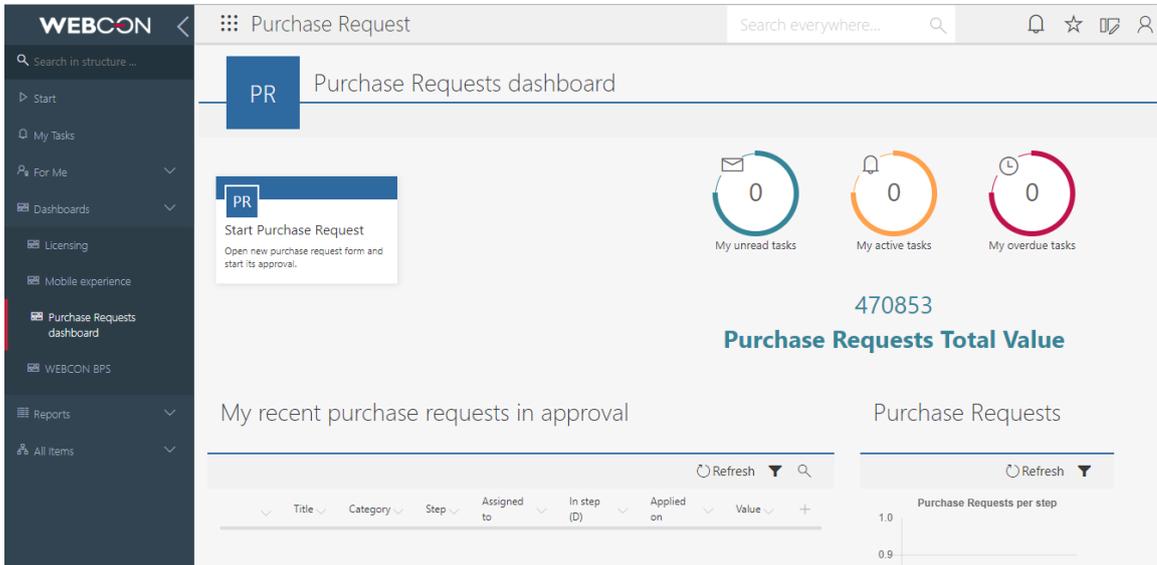
Applied on ▾	Step ▾	Value ▾	+
11/21/2018	Board approval	24,000.00 €	
11/21/2018	Manager approval	18,000.00 €	
11/20/2018	Approved	24,950.00 €	
11/19/2018	Manager approval	14,530.00 €	
		470,853.00 €	
			< 1 2 3 >

By locking the number of rows on a website to a large number, the administrator who is configuring the report can change its behavior so that data is displayed on a single page. Its content can then be scrolled up and down. In this case, the header with column names is fixed to the top of the view and does not scroll along with the content. Despite a lot of data, the user can still see the column header at all times so identifying data type is much easier.

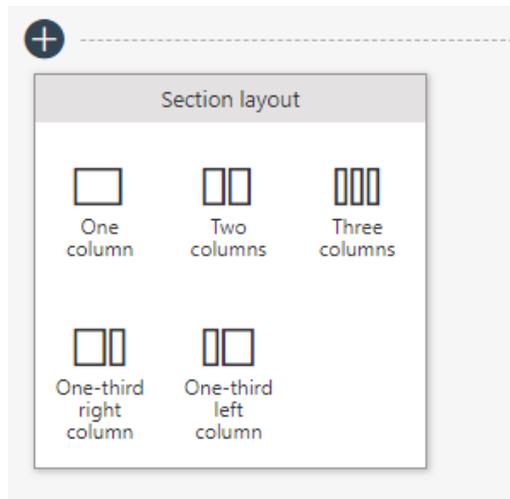
This option is available in Firefox and Chrome only.

2.1.3.4. Dashboards

In each and every application WEBCON BPS Portal allows to organize workspace in a form of a virtual desktop which is a dashboard for the applications.

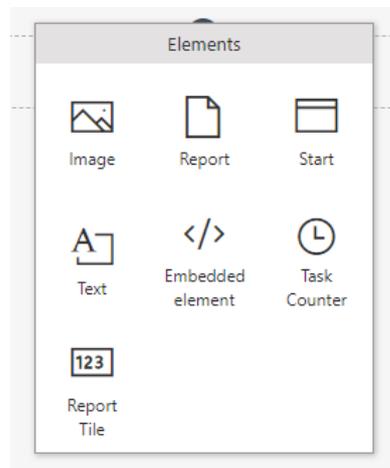


Dashboards allow to divide the website into sections. The variety of sections and multiple ways in which they can be arranged allow to freely shape working space and its adaptation to specific needs.



Each of the sections can be used to house application presentation elements such as starts, report views, and task counters.

Apart from placing application presentation elements in dashboards, you can also place any formatted text or a picture, making it more readable or just more user-friendly.



One of the elements of expanding dashboard is using embed code from an external system which also means integrating many tools on one view.

2.1.3.5. “Insights” view

This view display application instances which are processed in an unusual way. The evaluation of how much the data deviates from standard set by other instances is based on neural-net (AI).

Its functionality is identical with an analogous view on the main WEBCON BPS Portal website, however the analysis is limited only to instances created in the current application.

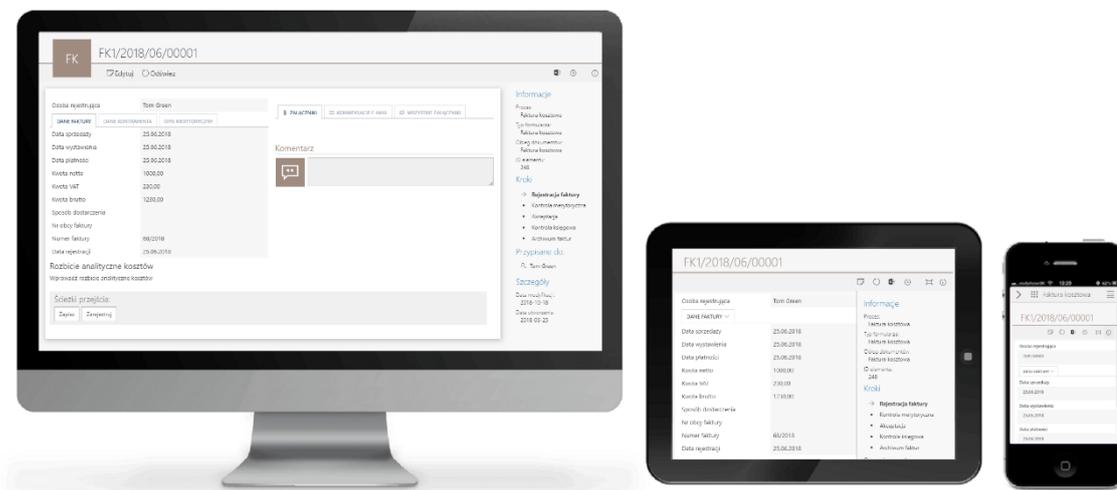
Anomalies view is available for users with application administrator or portal designer privileges.

2.1.3.6. All instances

All instances view displays any system instances report based on standard grouping. It is navigated by going to lower and lower instances grouped by application, process, workflows, form types, and steps. It allows the user to find instances in the system even when the administrator did not prepare a specific report presenting them. In application view, base instance structure is narrowed down to this specific application.

2.1.4. New form

WEBCON BPS Portal introduces a new form which presents workflow instances. The new form automatically fits to the size of the screen that it is displayed on. Because of that it is much more readable and useful both when displaying it on classic desktop browser and on a smaller tablet or mobile device screen.



The attachment section of the new form was enhanced with popup preview window of the attached files. Apart from being able to preview standard formats such as TXT, DOCX, PDF, PNG, JPG, it is also possible to quickly preview the content of MS Excel files and mails attached as e-mail conversations.

The refurbished form also features a new instance history, presenting all activities done on an instance. Value changes in form fields are highlighted. In addition to the contents of the form, it is possible to check the timeline at the top to see what events (actions, task assignment) took place on and between steps.

GA GDPR_EX/2018/04/00014

Go back to instance Expand all Collapse all

Luke Skywalker 04/24/2018 2:52 PM

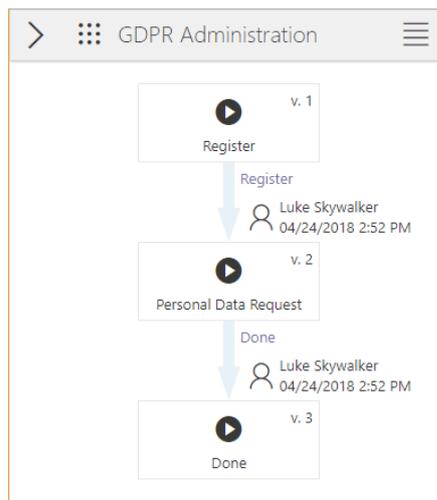
Luke Skywalker 04/24/2018 2:52 PM

Register Done

Version	Register v. 1	Personal	Done v. 3
Version author	Luke Skywalker	Luke Skywalker	Luke Skywalker
Form type	External system	External system	External system
Form subtype			
Signature	GDPR_EX/2018/04/00014	GDPR_EX/2018/04/00014	GDPR_EX/2018/04/00014
Company	WEBCON sp. z o.o.	WEBCON sp. z o.o.	WEBCON sp. z o.o.
Request information			
Registered by	Anna Puka	Anna Puka	Anna Puka
Registered on	04/23/2018	04/23/2018	04/23/2018
Responsible	Luke Skywalker	Luke Skywalker	Luke Skywalker
Type of request	Erasure	Erasure	Erasure
Deadline	04/30/2018	04/30/2018	04/30/2018
Description	Dear Mr/Mrs, please remove all my personal data from your systems. Kind regards, Havelock Vetinari	Dear Mr/Mrs, please remove all my personal data from your systems. Kind regards, Havelock Vetinari	Dear Mr/Mrs, please remove all my personal data from your systems. Kind regards, Havelock Vetinari
System name	SalesForce	SalesForce	SalesForce
Information from DPO	Erasure	Erasure	Erasure
Comments			

Assigned to Default Form Completion - any ✓ Luke Skywalker

The instance history also scales itself to be displayed on a small screen of mobile devices. Because of that, all status and content changes can be browsed on a mobile phone as well.

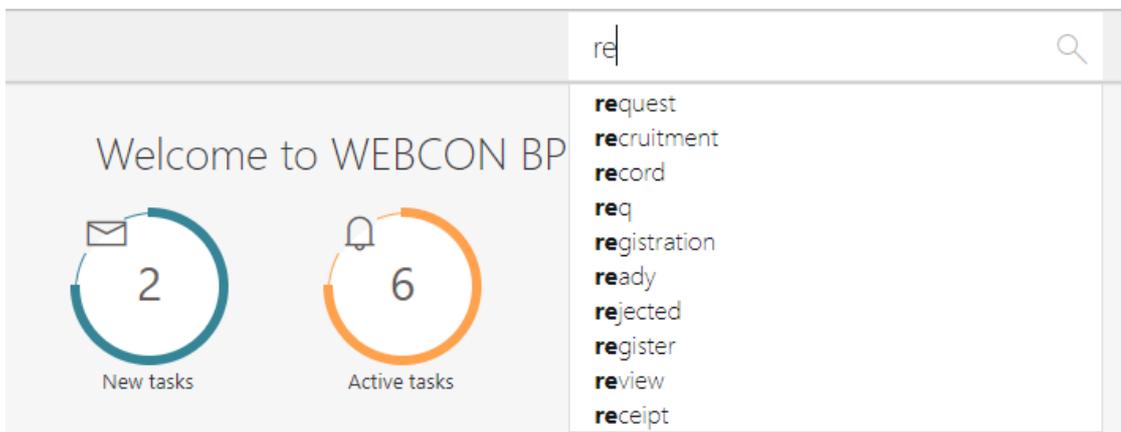


2.1.5. Instance search in WEBCON BPS Portal

WEBCON BPS Portal introduces a brand new way of instance search in database. Search is based on SOLR search engine. This solution quickly searches for the content even if the data source is very large.

The **Search everywhere** function is available at any time in WEBCON BPS Portal, in the top right section of the interface. It will work both on the main page and after choosing specific application. The only difference is automatic narrowing down of search result to the current application if the search was started within the context of one.

To start searching, start typing the phrase you're looking for in WEBCON BPS Portal toolbar search field. With each letter/phrase the system suggests a set of matching results.

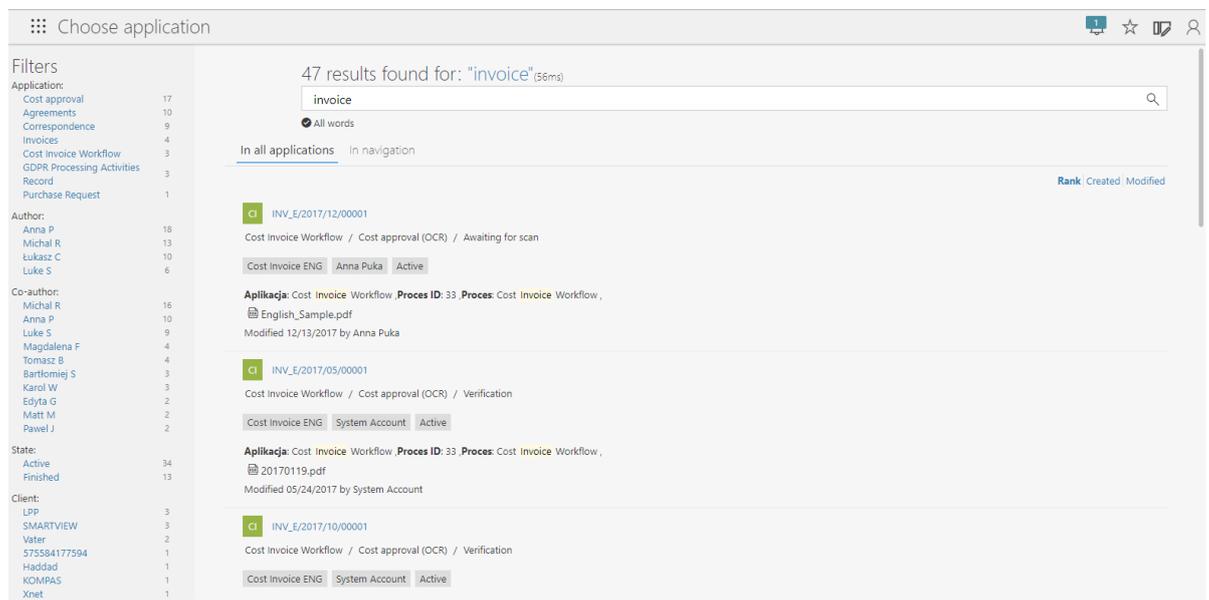


Search results are displayed in a list with option to preview a specific instance or its attachments.

The search results view has an option to change search parameters, make the query more precise or narrow down the results more precisely.

The results are automatically grouped by key tags common for searched instances and displayed as a possible filter. By clicking on one of these tags, the user can view instances created by specific users or on a given day. When narrowing down the results, the system suggests more groups which make it possible to more precisely find what you are looking for.

Apart from filtering, there is an option to sort the results by search relevancy, creation date, or modification.

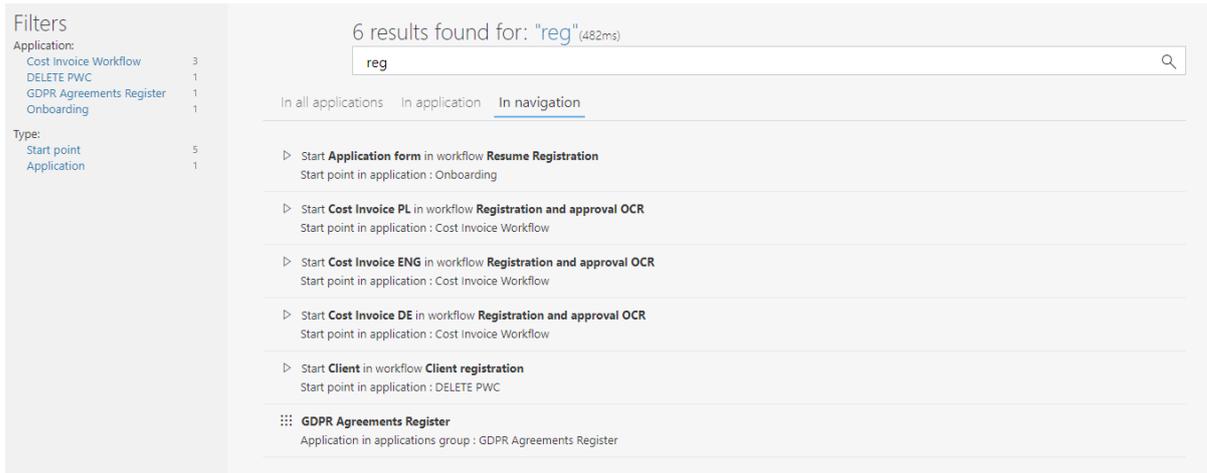


The search engine takes into account linguistic inflections, so the searched phrase doesn't have to be entered in the precise form. The system will automatically guess and suggest instances which contain the searched phrase, including its variations. At this moment, the system supports inflections for following languages: Polish, English, German, Spanish, French, Hungarian and Russian.

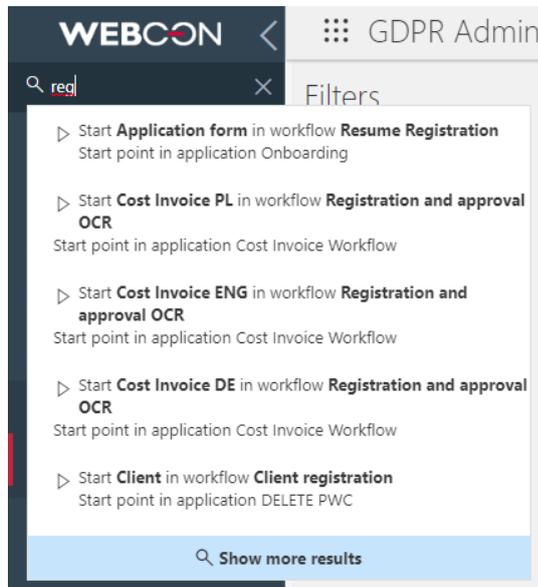
Data entered to the system by users is indexed on the fly, which means that the information can be searched for almost instantaneously after appearing in the system. The engine searches through the values of all the form fields and item list columns. All text documents which appear as attachments to forms are searched as well. Apart from pure text formats, such as TXT, RTF, XML, HTML, SQL the engine also searches through Word documents (DOC, DOCX, DOCX, ODT), Excel (XLSX, XLSM, XLS), PDF, and e-mail messages files (EML, EMLX, MSG, OFT, MBOX, TNEF).

2.1.6. Search in navigation

The search engine can also search for various Portal navigation elements: applications, processes, start buttons, reports, dashboards etc. This search can be conducted from the level of the aforementioned *Search everywhere* field. To find Portal navigation elements matching your searched phrase, go to the "In navigation" tab. In this view, the user can also use filters (on the left-hand side) to narrow down the search results.



In addition to the *Search everywhere* field, a dedicated **Search in navigation** field is also available on the level of navigation panel where the user can enter whole phrase or a part of it. Results are displayed while typing and automatically narrow down when the phrase becomes more precise. By clicking on a navigation element from the result list, the user can instantaneously move to a desired report or start a new workflow instance.

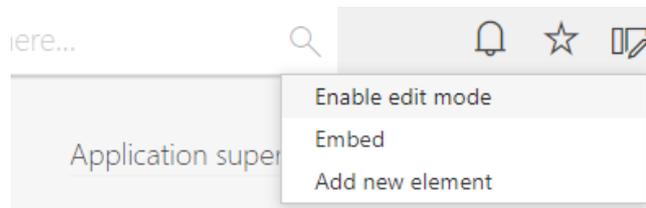


2.1.7. Portal edit possibilities

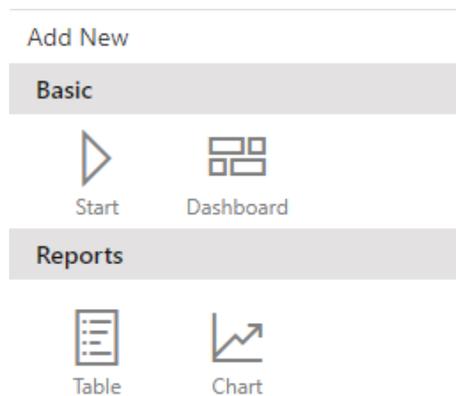
In order to create an application, define processes, construct workflows with steps and paths, one must use WEBCON BPS Designer Studio. Designer Studio provides the application designer with full edit possibilities also when it comes to WEBCON BPS Portal presentation elements. Independently of WEBCON BPS Designer Studio, many of the WEBCON BPS Portal presentation elements can also be modified and defined directly from the browser – allowing for a new group of power-users, **Portal Designers**, to modify the front-end segment of an application without access to Designer Studio.

The ability to modify and create new application content is available to users with „Application administrator” or „Portal designer” privileges.

Users with such privileges can turn on the application edit mode from the toolbar.



In application edit mode, the user can add new elements by choosing one from the menu.

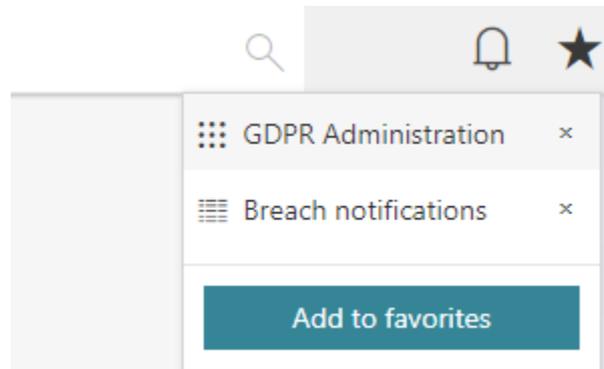


Application edit mode also allows to change starting buttons' configuration, composition of the dashboards, or report definitions.

After saving, changes are instantaneously visible to all users working with the application.

2.1.8. Saving favorite Portal sites

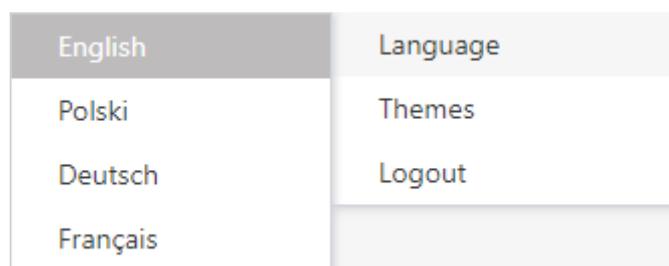
Every user can save any page displayed on WEBCON BPS Portal platform to their favorites. It can be a report, view, dashboard or a specific form. Access to the list of favorite pages is possible by clicking a star on a toolbar.



List of favorite pages allows to user to personalize and adjust platforms' work to his own demands. Important pages which are worth remembering or frequently visited are available at any time while working in WEBCON BPS Portal.

2.1.9. Multilingualism

WEBCON BPS Portal allows users to display its content in one of the available languages: Polish, English, German and French. Choosing language by the user results in changes in WEBCON BPS Portal content and form translations to the specified settings.



2.1.10. Themes

WEBCON BPS Portal has many themes to choose from which alter the graphical interface of the website.

Users with administrator privileges can also define their own motives and create, for example, a motive corresponding with the corporate color scheme.

2.1.11. Substitution configuration

Substitution functionality known from previous WEBCON BPS versions allows to choose a person responsible for tasks completion in case of absence. This provides work and decision making processes continuity.

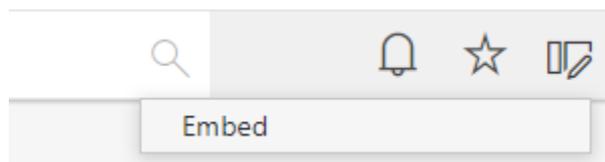
Defining substitutions is also available in WEBCON BPS Portal. Every user can name a person who in his/her absence will be their substitute in their tasks. It is also possible to define a substitution for the substituted person which allows the supervisor to manage substitutions for subordinates.

List of active substitutions is displayed in a simple and clear way with an option to present a view of your own substitutions, your subordinates' substitutions and all active substitutions.

2.1.12. Embedding portal elements

In addition to existing Web Parts, WEBCON BPS 2019 introduces new types which allow for embedding WEBCON BPS Portal, and its components, on SharePoint websites. This includes applications, dashboards, reports, task view, task counters, and the entire Portal overview. This integration exists for SharePoint 2013/2016/2019 versions as well as for Office 365.

Another way of sharing Portal elements is the usage of embed codes. This method allows to integrate with every system which is capable of embedding this sort of code on its website. This option is available for user with application administrator privileges after choosing "Embed codes" from toolbar menu.



Selection of the element to be embedded
↗ ✕

Mode:

Width:

Height:

Application:

Collapse navigation menu

Code to embed:

```

<iframe
src="https://demo.webconbps.com/bpsportal/embed/v
1/app/78ad2f43-9adb-656b-980b-40ea7e6667f1?
menucollapsed=false" width="400px" height="400px">
</iframe>

```

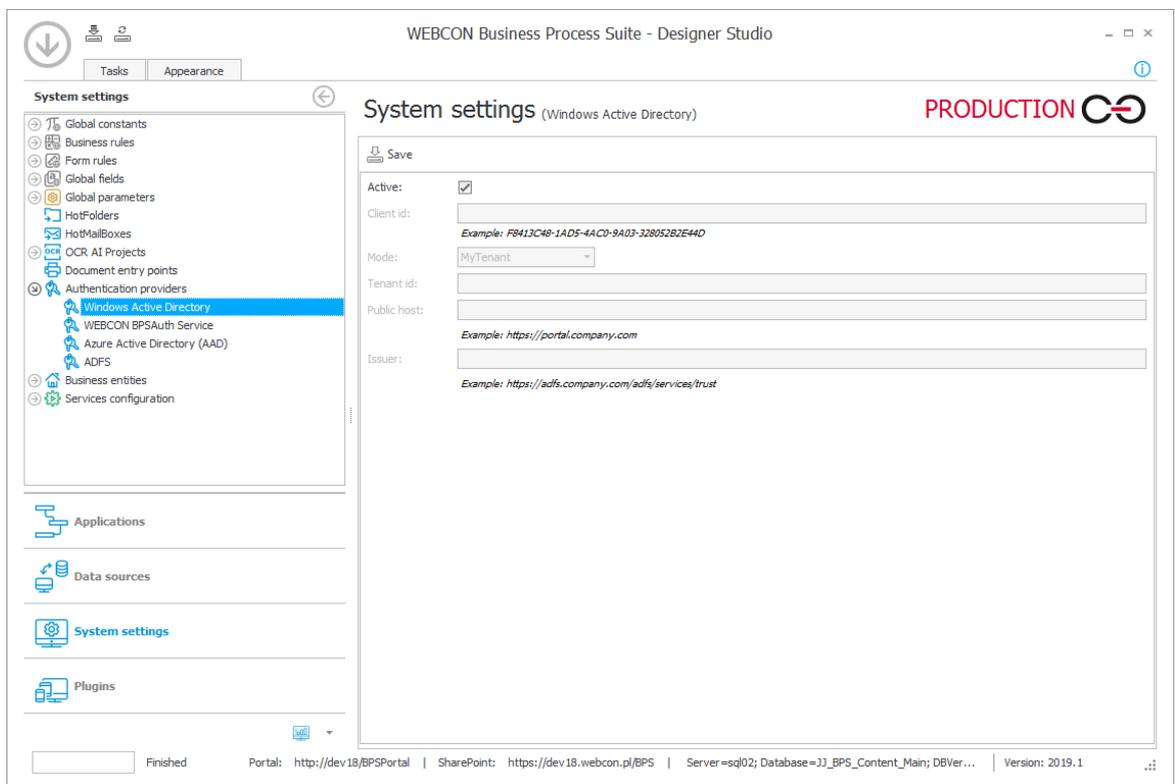
An embed code generated for a specific WEBCON BPS Portal element can be copied and inserted on a target website e.g. WordPress.

2.1.13. Authentication

WEBCON BPS Portal supports a number of authentication methods in the system. It is possible to configure one or more authentication providers:

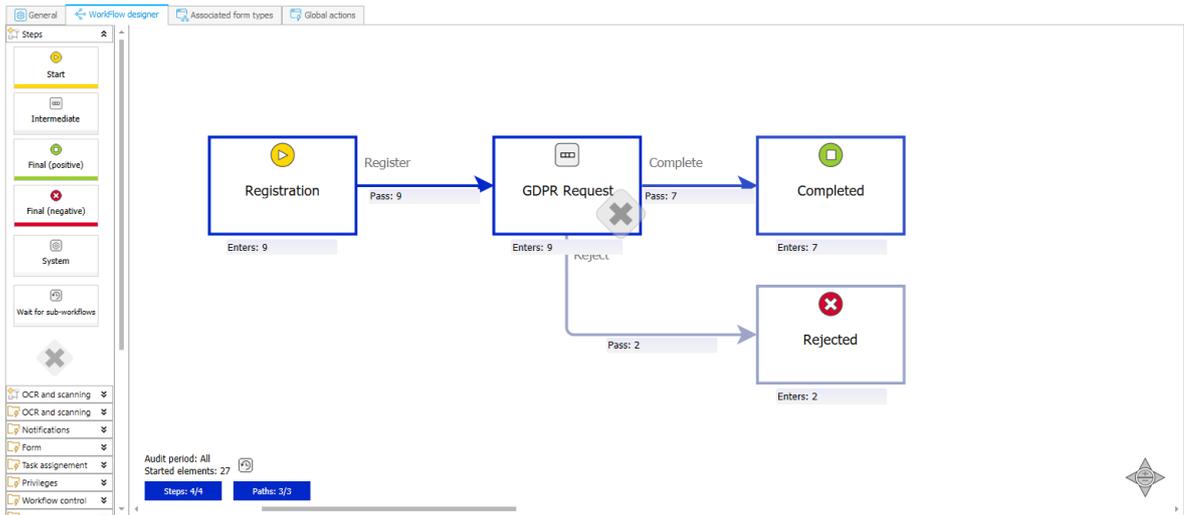
- Windows
- Azure Active Directory
- ADFS
- WEBCON BPSAuth (AAD, ADFS , Google, LinkedIn, LiveID)

Activation and configuration of authentication provider can be done in WEBCON BPS Designer Studio in System settings-> Authentication providers.



2.2. Process analysis

WEBCON BPS 2019 introduces new tool for process analysis. This functionality which is available on the *workflow designer* graphic creator in WEBCON BPS Studio, allows you to monitor the number of created instances in a certain amount of time, counts the number of step entries, and number of moves along different paths. Results are presented in a graphic form.



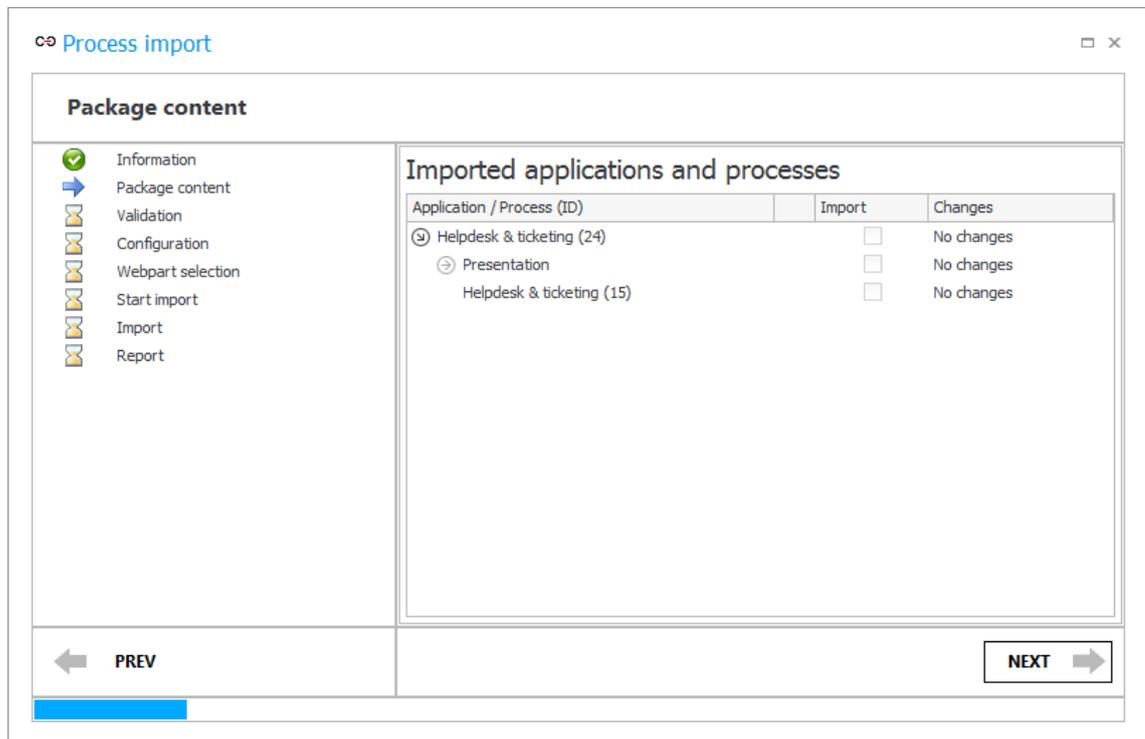
2.3. Complete Export-Import mechanism

The Export-Import mechanism was expanded by a couple of new elements, which make transferring and implementing solutions built in WEBCON BPS much easier and faster.

One of these elements is the ability to move SDK files used by the process together with the export package. Thanks to this, when importing, a whole coherent package is moved even if the workflow uses non-standard form fields or actions enabled by SDK.

Next, the manner in which exported objects are defined has been modified to accommodate the introduction of applications. The export wizard allows to point to a whole application with all its connections, but it's also possible to choose only one process or presentation element and moving it to the target environment.

The import wizard was enhanced with a function of choosing objects to import to the target environment without needing to import the whole content of an import package.



2.4. New REST API for SDK

WEBCON BPS 2019 introduces REST technology usage in creating programming integration solutions with the system. New REST API ensures full support and option to start new workflow instances, traversing paths, and modifying instance content.

2.5. Installation modes

For more information regarding installation, please consult the *Installation guide* included in each WEBCON BPS installation folder.

WEBCON BPS system installation is possible in the following variants:

Installation for SharePoint environments

WEBCON BPS Portal is installed as an IIS application working within SharePoint website. This type of installation requires a working Microsoft SharePoint server.

WEBCON BPS Portal installation variant with usage of SharePoint environment allows to choose one of two modes.

- Classic Mode (in this mode WEBCON BPS will be working if updated from an older version) installs components for working with forms in both SharePoint and WEBCON BPS Portal environments, allows to use local SharePoint connections when creating data sources (option to reference to SharePoint resources in the context of user logged in the system), allows to use SharePoint lists to edit documents added as attachments. This mode allows also to install components to embed WEBCON BPS Portal elements on SharePoint and Office 365 websites.
- MODERN mode installs components which allow working with WEBCON BPS Portal forms only, using SharePoint On-premises and Online connections while creating data sources, and use SharePoint lists to edit documents added as attachments. This mode allows also to install components to embed WEBCON BPS Portal elements on SharePoint and Office 365 websites.

Standalone install for Office 365

WEBCON BPS Portal is installed as an independent IIS website. This type of installation requires infrastructure in the shape of IIS server and servers for installation of Windows service. It is also required to have an active Office 365 subscription.

Standalone installation

WEBCON BPS Portal is installed as an independent IIS website. This type of installation requires infrastructure in the shape of IIS server and servers for installation of Windows service. Option to install additional components allows for integration with SharePoint On-premises and Office 365 and gives option to embed selected WEBCON BPS Portal elements on server websites. Standalone installation provides WEBCON BPS Portal graphic interface.

This mode of installation allows to edit documents added as attachments to a workflow instance by using WebDAV. However because of a lack of direct connection with SharePoint, it doesn't allow to use libraries and SharePoint lists as document repositories.

3. Changes to existing features

3.1. Information

Changes in this version will break compatibility of the Export-Import mechanism. Exported process packages created in versions 2017.1.3.x and older cannot be imported to the newest system version. In order for an import to be possible, update the environment to the newest version and export the processes again.

3.2. Changes in architecture

WEBCON BPS 2019 requires installation of WEBCON BPS Portal component available in system installer. WEBCON BPS Portal installation requires following libraries:

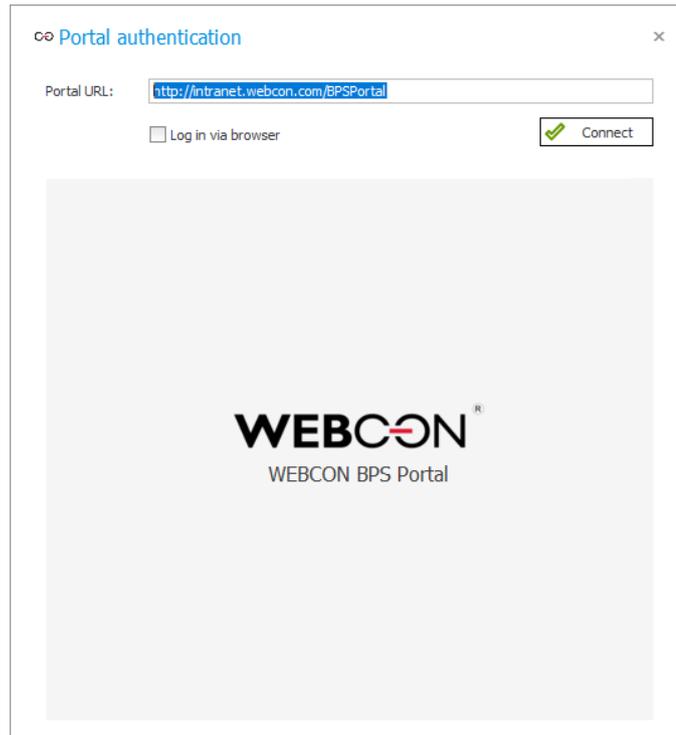
- .NET Core Hosting Bundle
- .NET Framework 4.7

WEBCON BPS Portal requires Internet Explorer browser in version 11 or higher. This requirement applies also to client environments using WEBCON BPS Word Add-In, WEBCON BPS Outlook Add-In, and WEBCON BPS Designer Studio.

For installations using the CLASSIC form type, all browsers compatible with MS SharePoint will be sufficient to work on SharePoint websites and forms.

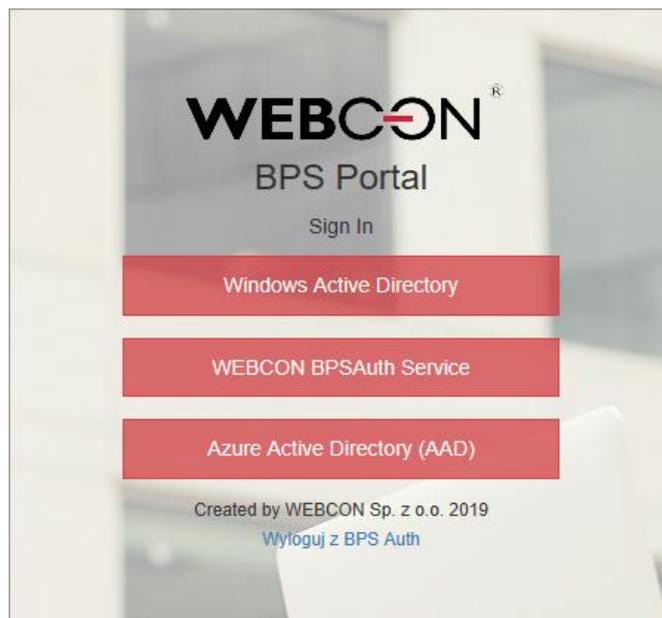
3.3. WEBCON BPS Designer Studio – logging in

The way in which users log-in to WEBCON BPS Designer Studio has been altered. In WEBCON BPS 2019, the log-in mechanism takes into account the authentication provider configured for WEBCON BPS Portal (3.1.14). Because of that, at the first launch it is needed to provide WEBCON BPS Portal address in order to authorize and work in WEBCON BPS Studio (Please consult the *installation guide* for more info).

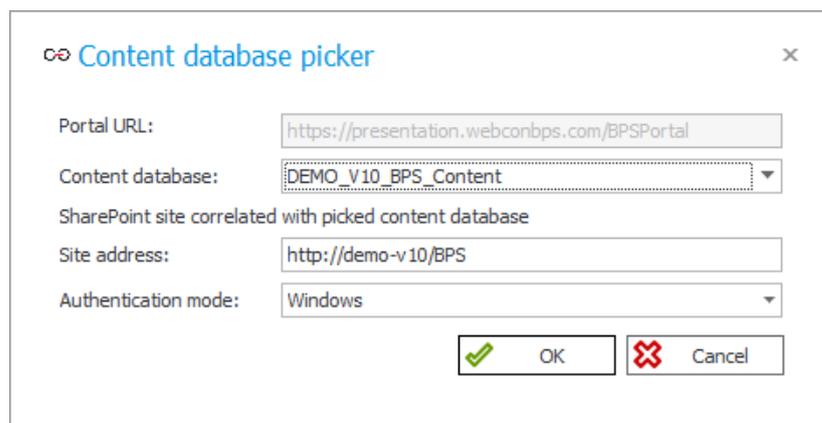


The default authentication provider is Windows Active Directory, and if in WEBCON BPS Portal there are no other active configured authentication providers, the user launching WEBCON BPS Studio will log in automatically.

If WEBCON BPS Portal has other authentication providers configured, the user can choose their preferred log in method.



In an environment in which there are multiple process content databases, it is needed to specify in the context of which content database WEBCON BPS Studio will be launched. Additionally, in case of installation for SharePoint environments, providing the SharePoint website connected to a chosen process content database is also required. Connection to SharePoint website by default is done in the context of the user signing in to WEBCON BPS Designer Studio. Default authentication method can be changed to „Windows User + Password” allowing to provide user in whose context WEBCON BPS Studio will connect to SharePoint website.



At WEBCON BPS Designer Studio first launch after the system update, it is required to provide the correct address of WEBCON BPS Portal. Then provide the database in the context of which WEBCON BPS Designer Studio will be launched, and the SharePoint website connected to the specified database.

3.4. WEBCON BPS Studio – privileges at launch

Privileges mechanism for users working with WEBCON BPS Designer Studio has been altered.

Depending on user's privileges, WEBCON BPS Designer Studio can be launched in two modes: administrator and Lite.

Administrator mode provides full access to all WEBCON BPS Designer Studio functionalities. It is launched if the user has WEBCON BPS “System administrator” privileges.

Lite mode limits configuration possibilities only to applications to which user has privileges to. This mode is launched if user doesn't have WEBCON BPS “System administrator” privileges but is an “Application administrator” in at least one of the existing applications.

Access limitations to content database

During authorization, privileges to process content databases (configured in the system) are verified as well. Based on the result of this verification, a list of available process content databases within which the user can work is displayed to them.

A user can choose a content database if they have WEBCON BPS “System administrator” privileges or “Application administrator” privileges to at least one application within the databases.

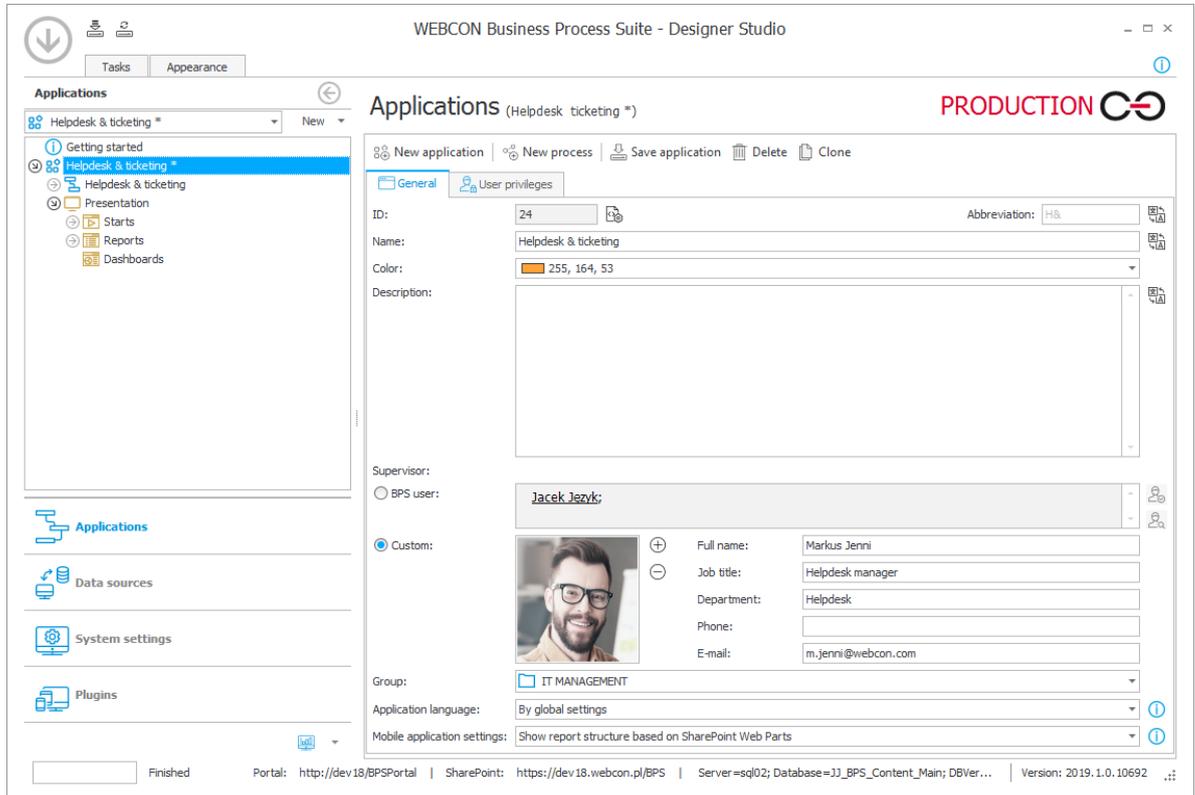
Connection to a database is done via a *connection string* defined in WEBCON BPS Portal configuration. The list of available databases is limited also with privileges being a result of this configuration – which means that user in whose context a connection to a database is made, must have both read and saving privileges to the configuration database, and content databases.

The user who is updating the system will be given WEBCON BPS System administrator privileges. This user can launch WEBCON BPS Designer Studio in administrator mode, and if it's necessary, provide System administrator privileges to other users.

In an emergency, there is a way to provide System administrator privileges by using `WebCon.WorkFlow.Studio.Configuration.exe` tool, available in catalog where WEBCON BPS Studio is installed.

3.5. Defining applications

The introduction of applications caused growth of the process configuration tree by another node for defining applications, individual processes and the presentation layer are now nodes within the application.



A new application can only be created by a user with „System administrator” privileges. Adding a new application to the system is possible by choosing “New application” option from context menu of application tree, application toolbar or “New” in the application’s search box.

The user can then choose the application's name, color motive in which it will be presented in WEBCON BPS Portal, presentation language, and privileges for other users.

Application privileges

Application configuration includes a tab for defining independent privileges. The user group which can modify the application definition can also modify all its processes. Application privileges also define application visibility for end users.

The Application *User privileges* tab has the following privilege levels:

- **Application administrator**
 These privileges give full access to application both in its visibility and in modification possibilities. On the level of WEBCON BPS Designer Studio, a user with this privilege level can alter all application settings, modify parent and related processes, create and modify presentation elements. On WEBCON BPS Portal level, a user can use edit mode, add new and modify existing presentation elements (starts, dashboards, reports). Can download the embed code of any presentation element. User also has access to the anomaly view. Privileges of this level do not provide access to process data. In order to define data visibility (i.e. on reports) set specific privileges at process level.

- **Portal designer**
 These privileges provide full access to applications on WEBCON BPS Portal level, both visibility and ability to modify. These privileges do not allow to create and edit applications via WEBCON BPS Designer Studio. On the level of WEBCON BPS Portal, the user can enter edit mode – add new and modify already existing presentation elements (starts, dashboards, reports). Can download the embed code of any presentation element. Privileges of this level do not provide access to process data.

- **Metadata access**
 These privileges provide access to metadata (form field structure) of application processes on the level of WEBCON BPS Word Add-Inn allowing, to define document templates.
 These privileges do not provide access to process data nor to the application itself from the level of WEBCON BPS Portal

- **Read-only**
 These privileges provide access on WEBCON BPS Portal level to find application and browse its content. However they do not provide access to process data. In order to define data visibility (i.e. on reports) it is required to provide specific privileges at process level.

Creating new processes in the application

An application may consist of any number of process definitions. Adding a new process requires choosing „Add a new process” option from the context menu of the application tree or choosing „New process” from application or process toolbar.

Creation of a new application is available to users with „System administrator” privileges. To modify application configuration (including creating processes) “System administrator” or “Application administrator” privileges are required.

Related processes

Related processes are those whose definition originates from another application. Configuration of process related with the application allows to use the same process in many applications at the same time. It also provides option to refer to process definition while creating application presentation elements.

Relating an existing process to the application is possible by choosing “Create relation” from context menu of the application tree.

User can add related processes only from applications to which he has at least “Application administrator” privileges.

Related process can be edited both from the level of application of origin and application with which it was related.

Related process cannot be deleted on the level of application with which it was related, however it is possible to delete relation by choosing “Delete relation” from the context menu of the application tree.

Presentations

Within the application, you can define presentation elements: start buttons, dashboards and reports. Adding a new element requires choosing option “New start”, “New report” or “New dashboard” from the context menu of the application tree. Newly defined presentation element will be visible in the WEBCON BPS Portal application right after it was saved.

The configuration of starts and reports allows you to define the process to which the given presentation element will be linked i.e. the process for which an instance will be launched, and the process whose data will be shown on a report.

After system update to WEBCON BPS 2019, the following changes will be made for existing processes:

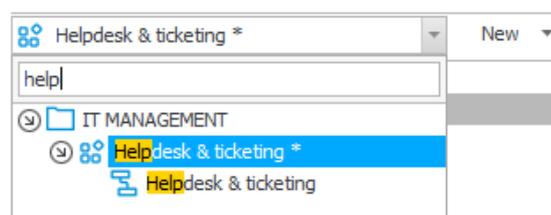
- For each process already existing in the system before the migration, an application with the same name as the original process will be created. The process will then become a part of this application
- Process groups will be converted into application groups
- Application language will be set according to original process language definition. Processes do not have an option to define independent languages
- Settings for mobile application will be set to “Show report structure based on SharePoint Web Parts” allowing for mobile application to work according to the pre-migration configuration
- All users with „Administrator” role on a process based on which the application was made will get „Application administrator” privileges
- The Application supervisor will be given to the user who in the process on which the application was based on was the Process supervisor

3.6. Process choice tree is replaced by application choice tree

Introducing applications changed the behavior of the navigation tree which displays all processes created so far.

Process tree view was replaced with application structure view, with an option to choose one of the available applications. All processes connected with the application are displayed within it. Applications are organized in groups.

Application structure view allows to search for any process or application defined within the database in the context of which WEBCON BPS Designer Studio operates.



3.7. Changes in system privilege structures

New privilege levels are introduced to manage access to applications and the system itself. This change is a result of introducing applications which requires division of privileges allowing for separate configuration (privileges defined for the application) from privileges for preview and data edit (privileges defined for the process).

List of new privileges:

Role in the system	Description	Configuration place in WEBCON BPS Studio
System administrator	<p>Highest privilege level, allows to work in full mode of WEBCON BPS Designer Studio. Has complete modification privileges of all system elements.</p> <p>Sees and can modify all application on the level of WEBCON BPS Portal.</p> <p>Does not have data access.</p>	<p>System settings -> Global privileges -> System administrators</p> <p>In an emergency there is a way to provide System administrator privileges without launching WEBCON BPS Studio by using WebCon.WorkFlow.Studio.Configuration.exe tool, available in catalogue where WEBCON BPS Studio is installed.</p>
Application administrator	<p>Allows to work in WEBCON BPS Designer Studio Lite mode. Has complete modification privileges of all application elements.</p> <p>Sees and can modify his own applications on the level of WEBCON BPS Portal.</p> <p>Does not have data access.</p>	<p>Applications -> <i>Chosen application</i> -> User privileges -> Application administrator</p>
Portal designer	<p>Sees and can modify his own applications on the level of WEBCON BPS Portal.</p> <p>Does not have data access.</p>	<p>Applications -> <i>Chosen application</i> -> Privileges -> Portal designer</p>
Metadata access	<p>Has access to application and process metadata.</p> <p>Does not see WEBCON BPS Portal applications.</p> <p>Does not have data access.</p>	<p>Applications -> <i>Chosen application</i> -> Privileges -> Metadata access</p>
Read-only	<p>Sees his own applications on the level of WEBCON BPS Portal.</p> <p>Does not have data access.</p>	<p>Applications -> <i>Chosen application</i> -> Privileges -> Read-only</p>

Update to WEBCON BPS 2019 results in the broadening of privileges for users with *Process administrator* role by adding *Application administrator* privileges to the application to which this process belongs.

The user performing the update will be given System administrator privileges.

3.8. Name changes in process privileges

Privilege names to process data access was altered. Behavior for specific roles remained the same – system works according to the same rules as before.

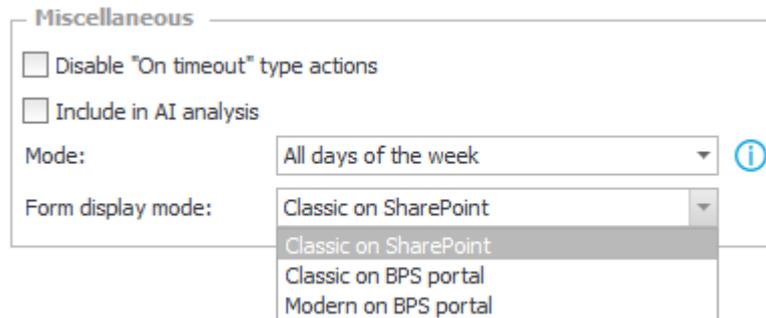
Previous system role name	Current system role name	Configuration place in WEBCON BPS Studio
Administration	System administrator	System settings -> Global privileges
Read-only	Workflow data read-only access	System settings -> Global privileges
Administration	Business administrator	Applications-> Chosen application -> Chosen process -> User privileges and Chosen workflow -> Associated form types -> Form types privileges
Modification (can't delete)	Access and edit all workflow instances	Applications-> Chosen application -> Chosen process -> User privileges and Chosen workflow -> Associated form types -> Form types privileges
Starting new workflow	Access all workflow instances and attachments	Applications-> Chosen application -> Chosen process -> User privileges and Chosen workflow -> Associated form types -> Form types privileges
Read-only	Launch new workflow instances	Applications-> Chosen application -> Chosen process -> User privileges And Chosen workflow -> Associated form types -> Form types privileges
Read-only (can't view attachments)	Access all workflow instances (excluding attachments)	Applications-> Chosen application -> Chosen process -> User privileges And Chosen workflow -> Associated form types -> Form types privileges

List of current permissions in WEBCON BPS:

		WEBCON BPS Studio Configuration							Data access							WEBCON BPS Portal				
System role name		Launching WEBCON BPS Studio	Creating Applications and Application groups	Application modification	Creating / Modification of Data sources	System, Add-Ins and Reports configuration	Creation / Modification of Process (Workflows, Paths, Form Fields, Privileges, Configuration)	Process visibility from other application on list of processes available to link	Access to public data sources	Administrator mode	Read	Attachments preview	Modifications	Deletion	Starting	Access to archived elements	Modification of application presentation elements	Application visibility without data access	Anomaly view visibility (without data access)	Downloading embed codes for system elements
Global privileges	System administrators	X	X	X	X	X	X	X								X	X	X	X	
	Business administrators								X	X	X	X	X	X	X					
	Workflow data read-only access									X	X									
Application privileges	Application administrator	X		X		X	X	X ²	X								X	X	X	X
	Portal designer							X ²								X		X	X	
	Metadata access							X ²												
	Read-only																X			

3.9. MODERN form

WEBCON BPS 2019 allows to display process instances as SharePoint forms (CLASSIC mode) or in WEBCON BPS Portal (MODERN mode). The mode in which forms operate can be defined for each process independently. Specific configuration is available on the level of WEBCON BPS Designer Studio in section: Applications -> Application -> Process -> Settings -> Miscellaneous.



Available options:

- **Classic on SharePoint**
The form for workflow instances is displayed in classic view (CLASSIC mode) embedded inside SharePoint. All references to workflow instances (e.g. links in e-mails, forwards from Web Parts) open the form in SharePoint view.
- **Classic on BPS Portal**
The form for workflow instances is displayed in classic view (CLASSIC mode) however this form is embedded inside WEBCON BPS Portal. All references to workflow instances open form in CLASSIC view embed in WEBCON BPS Portal.
- **Modern on BPS Portal**
The form for workflow instances is displayed in MODERN (1.1.1) view embedded inside WEBCON BPS Portal. All references to workflow instances open the form in MODERN view.

After updating to WEBCON BPS 2019, configuration of all processes will be set to „Classic on SharePoint“.

3.10. New search engine

Introducing searching based on SOLR engine caused an expansion of configuration of the service responsible for handling SOLR index base.

- Launch of SOLR indexation requires turning on „SOLR indexation” role in service configuration (System settings -> Services configuration -> Services -> Service -> Service roles).
- Additional configuration of the number of processing threads, number of simultaneously processed attachments and instances for SOLR indexation allows to tune service in specific system and database installations (System settings -> Services configuration -> Services -> Configuration -> Database components).
This configuration is optional. For most installations default configuration parameters are sufficient and do not require modification.
- Launching SOLR indexation for existing data allows to create new search index for instances in database. This option is useful in case of installation of WEBCON BPS Search Server component in an already working environment in which instances exist in the WEBCON BPS database.
For new installations, in which database doesn't contain any instances yet, search index is created on-the-go while adding or modifying instances. That's why the option of complete SOLR re-indexation isn't needed.
In order to create SOLR indexes to search and navigate, go to the level of SOLR indexer queue report (Reports -> Basic reports ->SOLR indexer queue) add to the queue appropriate task types by choosing from the toolbar using the “Add” button.

Full reindex of the database – launches task of index creation for all instances already existing in process database. If the index was previously created, it will be deleted and created once again. Values of all instances' form fields, item lists and attachment's content are indexed. Attachments of following formats are indexed: text (TXT, SQL, XML, HTML, XHTML, MHTML, TRF), Word (DOC, DOCX, DOCM, ODT), Excel (XLSX, XLSM, XLS), e-mail (EML, EMLX, MSG, OFT, MBOX, TNEF) and PDF.

Indexation will be launched only for process database to which WEBCON BPS Designer Studio is currently connected to.

Full reindex of all databases – this option is available only to environments which have more than one process content database. It works identically as „Full reindex of database” however the index will be created for every content database.

Reindex of BPS Portal navigation – launches a task of creating navigation index for all navigation elements (application, reports, views, dashboards, starts) saved in the configuration database. If the index was previously created it will be deleted and created once again. Index will be created for all content databases.

Reindex AutoComplete in search panel – launches a task of index creation for suggestions displayed in the search field. Before launching a task of this type, a correct index for instances has to already exist (created with option “Full reindex of database” or “Full reindex of all databases”).

Clear index – launches task of deletion of instances search index and navigation index.

Header data update – launches task of header data update (e.g. Process name or form field name) in existing search indexer.

This task type can be used to refresh index content after configuration changes (e.g. change of process name) without the need to rebuild the whole index from scratch.

SOLR indexation mechanism works in an incremental way which means that adding or modifying an instance creates a task in the queue and automatic update of instance data in the index. This mechanism updates search data and makes them available almost instantaneously after saving them in the system.

In case of working installations, in which SOLR indexing mechanism was not yet installed or launched, the database can have many instances which need to have their SOLR index created. Because of the potential plethora of data that needs to be processed by the indexing mechanism, there is an option to create an index for a selected time period or for selected processes. This configuration is available after manual launch of tasks of “Full reindex of all databases” and “Header data update” tasks.

During system update, WEBCON BPS Search Server component will be installed. In order to create a search index for existing instances, launch these tasks in the following order:

- Full reindex of database (for installation with one process base) or Full reindex of all databases (for installation with many process bases)
- Reindex of navigation in Portal
- Reindex of search suggestion mechanism (if the suggestions are to be displayed)

3.11. AI Analysis

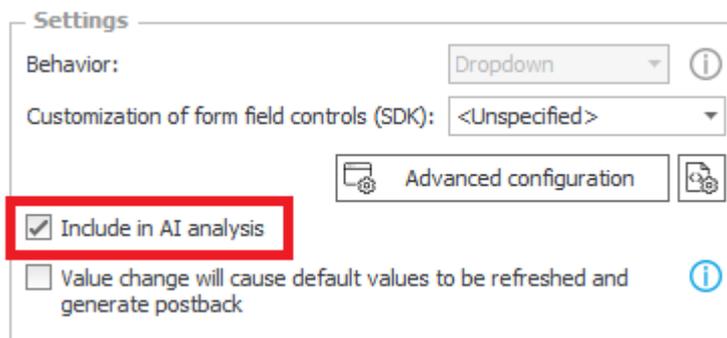
WEBCON BPS 2019 introduces workflow instances analysis for anomalies, which are deviations from typical process operation. Analysis uses neural nets, which help to create rules which verify process elements. Analysis results are displayed in "Insights" view (3.1.4.5) available on WEBCON BPS Portal level.

By default, analysis of process elements is not conducted. Turning analysis on for a specific process requires choosing "Include in AI analysis" in process "Settings" tab.

The screenshot shows the 'Settings' tab of a process configuration. The 'Miscellaneous' section is expanded, and the 'Include in AI analysis' checkbox is checked and highlighted with a red box. Other settings include 'Attachment database', 'Licensing', 'Substitutions', 'Business entities structure', 'Data sources and constants', and 'Archive'.

Within the process, it is possible to choose form fields which should be analyzed.

The option which turns the analysis on for a specific form field is available in the form field configuration tab.



Launching this functionality also requires a correct service configuration (3.12).

Important

This functionality requires active OCR AI license!

3.12. AI analysis – service configuration

Introducing anomaly search based on AI analysis, caused the service configuration which handles it to be expanded.

- Launching AI analysis requires turning on „AI Analysis” in service configuration (System settings -> Services configuration -> Services -> Service -> Service roles).
Additional configuration of the number of threads carrying out AI analysis allows to tweak service in specific system and database installations (System settings -> Services configuration -> Services -> Configuration ->Database components).
- This configuration is optional. For most of the installations default configuration parameters are correct and do not require changes.
- Launching the analysis for existing data allows to create data validation business rules as well as analyze data for deviations from these rules.

In order to prepare analysis on the level of AI analysis (Reports -> Basic reports -> AI analysis) add to the queue the appropriate task types by choosing “Add” from the toolbar.

Clean AI analysis – launches task of deletion of existing AI analyses.

Build AI model – launches a task of preparing a model of business rules based on which data analysis will be performed. In order to build a correct model, at least 100 workflow instances are required based on which analysis business rules will be created.

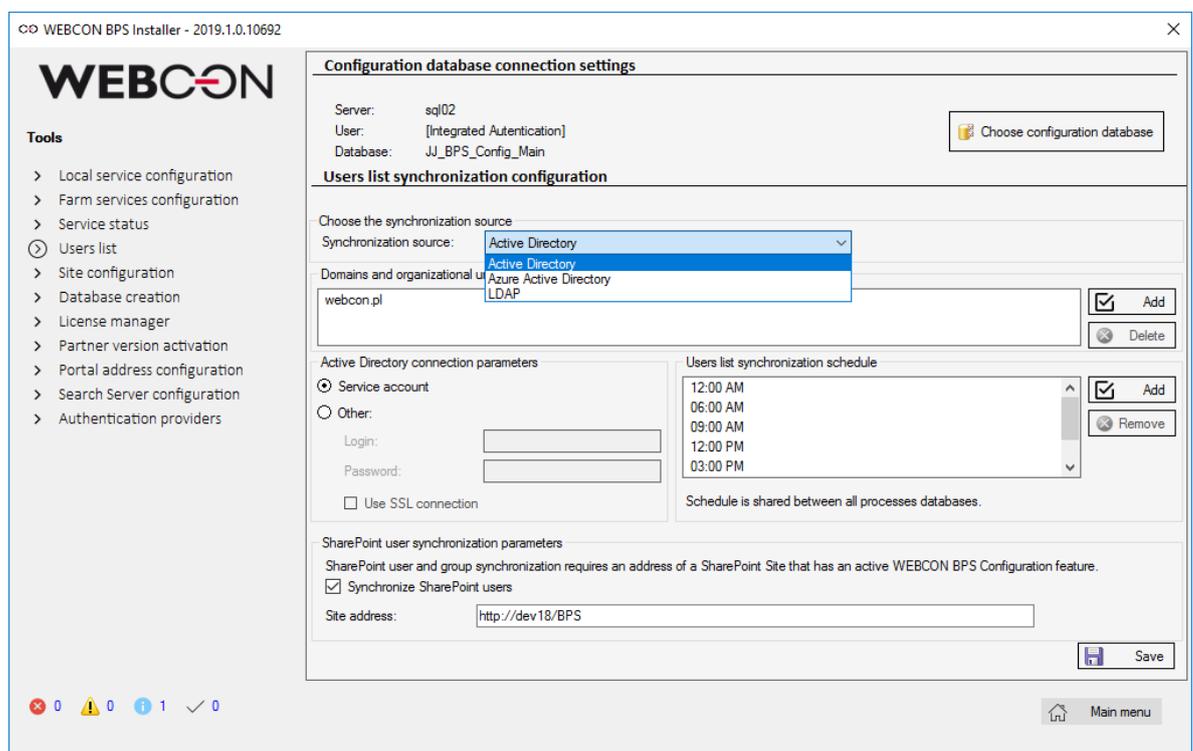
Perform AI analysis – launches task of counting analyses based on prepared rules. While launching this task it is possible to set processes and date range in which workflow instances will be analyzed for anomalies.

3.13. Changes in BPS users list synchronization

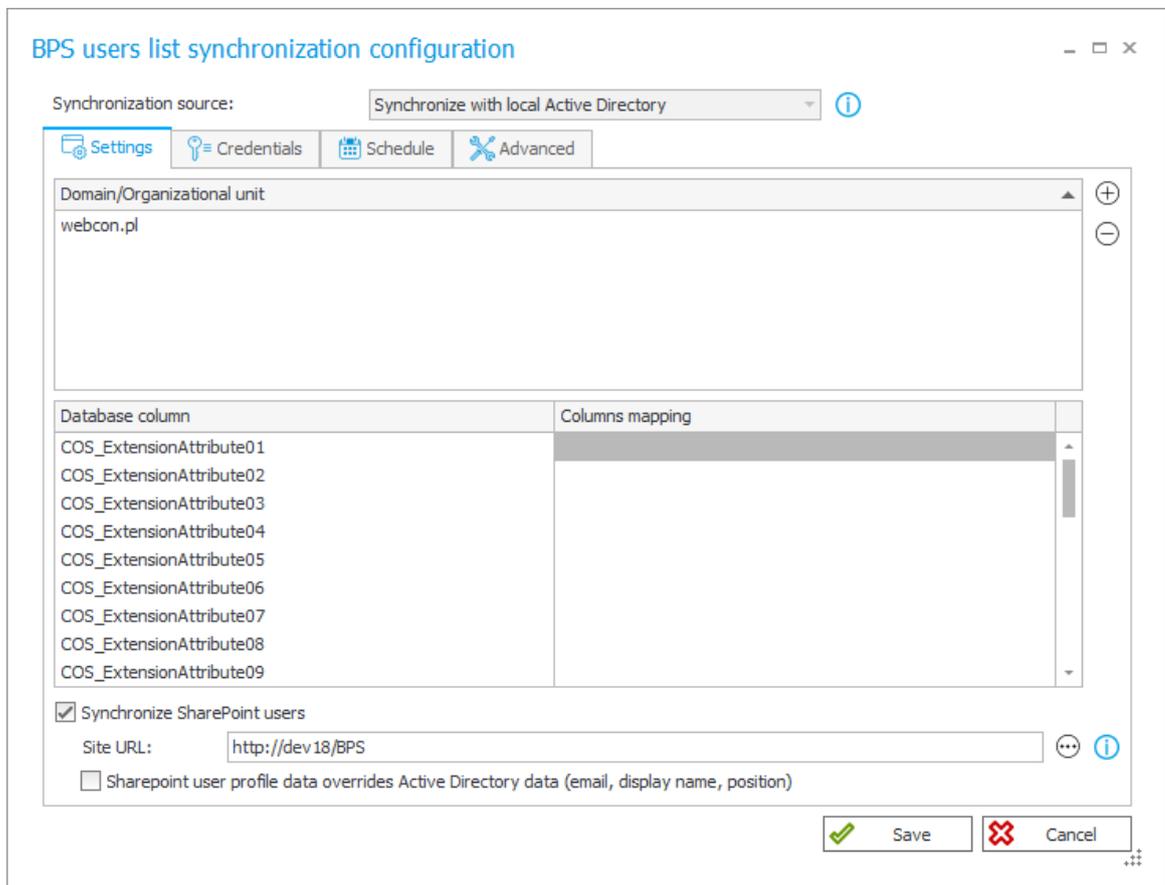
New synchronization sources for BPS users list were introduced. Now, the users list can be synchronized with following sources:

- Active Directory
- SharePoint
- Azure Active Directory
- LDAP

Choosing the synchronization source is possible during system installation. Change of synchronization source can cause deletion of users synchronized so far, that's why this option is available only via WEBCON BPS installer in *System management tools*. Changing the synchronization source should be done with caution.



An option to turn off BPS user list synchronization with SharePoint was added to the program. It is available in synchronization with local Active Directory mode in synchronization configuration (System settings -> BPS users list -> Synchronization configuration).



System update does not change defined synchronization configuration.

3.14. Functions of generating dynamic links to workflow instances

The form in the MODERN configuration mode now has a function of dynamic link creation to both an existing instance and to start a new instance.

OpenElement(WFD_ID, "NAME", "PARAMS")

Generates link to an instance of WFD_ID identifier. Form of the given instance will be opened in the same browser window.

Optional parameters:

NAME – name by which the link on the form is visible. If not provided, „Element WFD_ID” will be displayed

PARAMS – additional parameters included in the link (eg. form field values of the opened form)

Usage variants:

OpenElement(12377)

OpenElement(12377,"Related instance")

OpenElement(12377,"Related instance", "ATTTEXT1=Tom")

OpenElementInNewWindow(WFD_ID, "NAME", "PARAMS")

Generates link to instance with WFD_ID identifier. Form of the given instance will be opened in a new browser window.

Optional parameters:

NAME – name by which the link on the form is visible. If not provided, „Element WFD_ID” will be displayed

PARAMS – additional parameters included in the link (eg. form field values of the opened form)

Usage variants:

OpenElementInNewWindow (12377)

OpenElementInNewWindow (12377,"Related instance")

OpenElementInNewWindow (12377,"Related instance", "ATTTEXT1=Tom")

StartElement(WF_ID, DT_ID, "NAME", "PARAMS")

Generates link to a new instance in workflow with WF_ID identifier, with form type of DT_ID identifier. Form will be opened in the same browser window.

Optional parameters:

NAME – name by which link on the form is visible. If not provided, „StartElement WF_ID/DT_ID” will be displayed

PARAMS – additional parameters included in the link (eg. form field values of the opened form)

Usage variants:

StartElement(WF_ID, DT_ID)

StartElement(WF_ID, DT_ID, "New instance")

StartElement(WF_ID, DT_ID, "New instance", "COM_ID=1")

StartElementInNewWindow(WF_ID, DT_ID, "NAME", "PARAMS")

Generates link to a new instance in workflow with WF_ID identifier, with form type of DT_ID identifier. Form will be opened in a new browser window.

Optional parameters:

NAME – name by which link on the form is visible. If not provided, „StartElementInNewWindow WF_ID/DT_ID” will be displayed

PARAMS – additional parameters included in the link (eg. form field values of the opened form)

Usage variants:

StartElementInNewWindow (WF_ID, DT_ID)

StartElementInNewWindow (WF_ID, DT_ID, "New instance")

StartElementInNewWindow (WF_ID, DT_ID, "New instance", "COM_ID=1")

Important

If the NAME variable has to have quotation marks ("), it should be replaced with a sign of double quotation ("").

The aforementioned functions can be used in following places in the system:

- Data table form field (in the SQL query text edit area for the data source of the form field)
- Data row form field (in the SQL query text edit area for the data source of the form field)
- Single line of text form field (form field value in "Hyperlink type field")
- Hyperlink item list column (default value and value based on SQL query)
- Calculated column on modern SWE reports
- Hyperlink action (URL value)

Apart from newly added functions generating links to any system instance, there is still option to create any hyperlink by using following construction

link:http://www.webcon.com;displayname:WEBCON.

Opening method (opening in current or new browser window) of the links available on the form is determined according to these rules:

- Links referring to addresses from outside of WEBCON BPS system (eg. <https://www.facebook.com/>) are opened in a new browser window
- Links opened in the form which is in edit mode (both links to system instances and addresses from outside the system) are opened in a new browser window
- Links opened on the level of form in read-only mode open accordingly with form field in which link was defined. If in the form field configuration option "Open in new window" is set, then links always open in a new browser window. If it isn't or the form field doesn't have this configuration, then the behavior depends on the function type (OpenElement, StartElement open instance in the same window, OpenElementInNewWindow, StartElementInNewWindow open instance in a new window)
- In hyperlink action (Single line of text field in hyperlink mode), the way the hyperlink opens depends on "Open in new window" setting available in action configuration. If it is checked then links always open in a new browser window. If it isn't, links always open in the same browser window.

Form in CLASSIC mode still has support for syntax of `link:WFDynamic.aspx?WFD_ID=55432;displayname:Element` type which allows to create hyperlinks to already existing, as well as new instances. Forms of this type cannot use open and start instance functions.

Form in MODERN mode should use function generating hyperlinks both for already existing and new instances.

To ensure backward compatibility after manual change of the form from CLASSIC to MODERN mode, syntax of:
link:WFDynamic.aspx?WFD_ID=55432;displayname:Element type is also supported.

3.15. Configuration of content databases supported by service

Configuration of content bases supported by WEBCON WorkFlow Service is altered (System settings -> Services configuration -> Services).

In WEBCON BPS 2019, process content database supported by service should be chosen from list of available ones.

SharePoint website address which is connected to the content database will be replaced by the database name during system update. During the update, the authentication method configuration will be skipped. Service will refer to database in the context of the user on whom the service is active.

3.16. Changes of mail server configuration

Mail server configuration method for e-mail notification sent by WEBCON BPS was altered. It is no longer possible to use SharePoint to send e-mail notifications. Only option to use an external mail server.

Configuration is available on WEBCON BPS Studio level in section: System settings -> Global parameters -> E-mail notifications -> Configuration of sending e-mails.

If in the e-mail notification configuration option „Default mail server (SharePoint)“ was not chosen, during update to 2019 version it will be replaced with the configuration downloaded from outgoing mail settings on SharePoint server.

3.17. Changes in application for mobile devices

For 2019.1.x.x version it is required to install new mobile application „WEBCON BPS 2019“.

Previous application version for mobile devices is not compatible with WEBCON BPS 2019.

„WEBCON BPS 2019“ is not available for mobile devices with Windows Phone operating system.

Introducing „WEBCON BPS 2019“ – application for mobile devices – caused following changes in the way the system operates:

- It is no longer possible to choose option „Profile must be secured with a password“ in securing mobile application as an administrator (WEBCON BPS Studio: System settings -> Global parameters)
- It is no longer possible to mark process as invisible in application for mobile users (WEBCON BPS Studio: Applications -> Process -> User Privileges -> Additional Privileges)
- The method of defining presentation of report structure in mobile application navigation remains in the same place, but has been renamed, and is now used for additional areas where a short, concise listing of the most important information about a processes is needed. (WEBCON BPS Studio: Applications -> Processes -> Compact view)
- It is no longer possible to choose method of mobile application profile authentication. “WEBCON BPS 2019” application uses authentication defined for WEBCON BPS Portal

During migration to WEBCON BPS 2019, processes marked in previous system versions as invisible for mobile application will be available on it.

If „Profile must be secured with a password“ was the required security level of mobile application, then during migration it will be set to “User defined”.

After system update, it is required to install new version of „WEBCON BPS 2019“ mobile application on mobile devices.

3.18. Changes in how WEBCON BPS Word Add-In works

In WEBCON BPS 2019, in the configuration of the WEBCON BPS Word Add-In, it is required to provide address of WEBCON BPS Portal. SharePoint website address was deleted from configuration and will no longer be supported.

WEBCON BPS Word Add-In uses sign-in compatible with configuration set for WEBCON BPS Portal (**Error! Reference source not found.**).

List of available applications for which the user can create document templates is limited to applications in which the user has at least one of the following privileges: Application administrator, Portal designer or Metadata access. User who is an Administrator has access to all applications.

For the Add-In to work correctly, Internet Explorer browser version 11 or higher is required.

After update of WEBCON BPS Word Add-In, it is required to manually configure the correct address to WEBCON BPS Portal.

3.19. Changes in WEBCON BPS Outlook Add-In action

WEBCON BPS 2019 introduces changes in profile configuration of WEBCON BPS Outlook Add-In – from now on it is required to provide WEBCON BPS Portal address. SharePoint website address was removed from the configuration and will no longer be supported.

WEBCON BPS Outlook Add-In uses sign-in compatible with configuration set for WEBCON BPS Portal (**Error! Reference source not found.**).

For the Add-In to work correctly, Internet Explorer browser version 11 or higher is required.

After the update of WEBCON BPS Outlook Add-In it is required to manually configure the correct address to WEBCON BPS Portal.

If Add-In was updated with usage of VSTO solution, it is required to verify entries in following system registers:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Internet Explorer\Main\FeatureControl\FEATURE_BROWSER_EMULATION

HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Microsoft\Internet Explorer\Main\FeatureControl\FEATURE_BROWSER_EMULATION

Value of „OUTLOOK.EXE" key should be 0x2af9 (11001)

3.20. Connections to SharePoint

WEBCON BPS 2019 allows to use three types of connections while referring to SharePoint in WEBCON BPS – SharePoint integration scenarios:

Local – connection refers to SharePoint server installed locally on the same server as WEBCON BPS system.

SharePoint On-Premises – connection refers to SharePoint server installed on any server. Using of this sort of connection requires SharePoint Client Components SDK installation in version compatible with SharePoint server version to which the connection refers.

SharePoint Online – Connection refers to SharePoint Online server.

There are differences in the work of specific WEBCON BPS components, depending on the type of connection and WEBCON BPS installation mode. Those differences can be found specifically in actions found in the „SharePoint – content” group, and data sources of the “SharePoint list” type. Below is a detailed list of differences in how specific modes work:

- Use **Local** connection type with „Current user” authentication method only for working in the context of form in CLASSIC mode.
For form in MODERN mode and application for mobile devices, authentication method “Current user” is not supported. In this case connection needs to be configured with “Service account” authentication method”.
- „Create list” action
When using connection of the **SharePoint On-Premises** type, the list is created without columns and without values defined in the template. In **Local** and **SharePoint Online** connections list is created accordingly with template definition.
- “Create site” action
„Activate WEBCON configuration feature” option can be used only in connections of **Local** type and invoking action in the context of the form in CLASSIC mode. In other cases, despite selecting this option, the feature will not be activated on the website.

- Interpretation of a number type column in SharePoint List data sources. In sources using **Local** connection type to a SharePoint list, with a number type column, this column is interpreted as an integer or a floating point number. This interpretation depends on the configuration of number of decimal places defined for the number column on the SharePoint list. For sources using connections of **SharePoint On-Premises** and **SharePoint Online** type, number column is always interpreted as a floating point number.
- SharePoint-group actions using connections with „Service account“ authentication method are launched in the context of the user on whom the application pool works.

3.21. SharePoint list privileges

For user on whom WEBCON BPS Portal pool is working, it is required to give permissions to edit SharePoint lists used as data sources of “SharePoint list” type.

Privilege change is required, if in the connection that data source is using, “Service account” authentication method was used and source is used on forms operating in MODERN mode – both on form available for mobile devices, or on forms available in Outlook Add-In.

3.22. Privileges to SharePoint attachment library

Attachments edited by the SharePoint list functionality require providing privileges to edit the attachment library to the user on whom the WEBCON BPS Portal pool works.

The address of a document library used by the edit functionality of SharePoint list is available from the level of WEBCON BPS Designer Studio in the section: System settings -> Global parameters -> SharePoint configuration -> Attachment library site and Attachment library name.

Privilege change is required to launch the functionality on forms in MODERN mode, and forms available in applications for mobile devices and Outlook Add-In.

3.23. Increasing number of available columns of Floating point number type in Item list form field

The number of Floating-point-number type columns that may be used in an Item list has been increased. It is now possible to use up to 30 columns of this type.

3.24. Changes in form field initialization with default values

The method of form field initialization with a *Default value* has been changed for forms viewed in preview mode. Form fields, that have a default value configured, will not be filled with it if the form is opened in preview mode. Filling form fields with default values will happen when a user begins to edit the form.

3.25. Changes in operations of barcode printing action

Option to configure a default barcode label at sub-workflow launch action and at new document registration was deleted. Configuration is no longer available in action: *Start a subworkflow* and *Start a subworkflow (SQL)* (option "Print barcode"), in the form type configuration (option "Print barcode label active action"), and on the form.

Manual workflow modification required. In places where action of printing barcode label was launched previously, create action for printing barcodes which has an execution condition controlled by an adequate business rule.

3.26. New SDK

There are changes in the method of storing and managing SDK plugin versions. From now on, plugin files are stored in WEBCON BPS database as complete packages. At launch, an SDK component is uploaded to the memory in which it stays until application pool restarts.

Introducing a new mechanism to manage SDK plugins required file versioning at the level of their creation.

Plugins created for WEBCON BPS versions lower than 2019 are not compatible with the current version.

3.27. Dedicated SDK for workflow control has been removed

It is no longer possible to create SDK plugins dedicated for use in the Flow control step. If you still need to use SDK to define the logic for this type of step, create a business rule which uses a SQL EXECUTION function.

3.28. Removal of certain variables

In WEBCON BPS 2019, it is no longer possible to use the variable: {MOSS:name}. Variables: {R:name}, {AD:name}, {WSS:name} can no longer be used on MODERN forms, mobile forms, Outlook Add-In forms, and in Workflow Service operations.

3.29. System log tables' name change

The names of tables in the database that store system logs have been changes. Please consult the following table to compare previous and current table names:

Previous table name	Current table name
WebServiceAPILogs	AdminAPILogs
SyncLogs	AdminProjectSyncLogs
ServiceLogs	AdminServiceLogs
FolderLogs	AdminHotFolderLogs
WfEventLogs	AdminWfEventlogs
DataBaseMigrationLogs	AdminDBMigrationLogs
CacheSynchronizationEvents	AdminCacheSyncLogs
CacheUpdateLogs	AdminCacheUpdateLogs
HotMailBoxProcessingInfos	AdminHotMailboxLogs
ServiceActivityInfos	AdminServiceActivityLogs
WFDebug	AdminDebugLogs
WFLogs	WfActionExecutions
AdminWfEventlogs	AdminWfEventLogs
SyncLogs	-Table removed-

3.30. Support for MS Project ended

WEBCON BPS 2019 no longer supports the MS Project Add-In. It is no longer possible to synchronize project files from WEBCON BPS.

3.31. Support for the component: “WEBCON BPS for SharePoint Online” ended

Support for component: “WEBCON BPS for SharePoint Online”, available in the system until version 2017.1.3.x, has been ended.

In WEBCON BPS 2019, it has been replaced by “WEBCON BPS Modern Web Parts for Office 365”, which adds additional features.

3.32. Important information regarding MODERN forms

Manually migrating the form from CLASSIC mode to MODERN (configuration described in chapter 2.8), one must take into account the following differences and limitations of the MODERN form:

- Form fields
 - No attachments column (local or related) in Item lists.
 - No Item list controls SDK
 - No custom controls SDK
 - Limitations to Field customizations SDK (no longer has an effect on the look, only effects logic)
 - Limitations to Item list customizations SDK (no longer has an effect on the look, only effects logic)
 - No Gantt chart form field
 - No vacation chart form field
 - No vacation summary form field
- Attachments section of the form
 - No longer possible to paste attachments from the clipboard directly to the form
- Unavailable actions
 - Teach OCR AI
 - Authorize user
 - Copy to another instance
 - Move to another instance
 - Change form type
 - Start workflow manually
 - Sign attachment (in *User signing mode*)
 - Sign attachment with Cosign (in *User signing mode*)
 - Project actions
- Hyperlink action
 - Can no longer use JavaScript
- No OCR verification view

- No rules of the type: "Form rule to be executed on page load and postback".

MODERN mode no longer has rules of this type.

When migrating manually from CLASSIC to MODERN, the recommended approach is to move the desired form rules to the "Form rules to be executed on page load" section, and also to the "Form rules to be executed on value change" section of form fields which invoke a postback.

3.33. WEBCON BPS Portal limitations in standalone installation mode

Standalone installation mode has certain limitations when compared to SharePoint installations, they include:

- No OCR verification view
- Multiple users cannot edit an attachment simultaneously
- Limited substitution functionality
- Reports
 - No archive view
 - No subordinates view
 - No mass actions
- Limitations derived from the lack of access to a SharePoint server:
 - Cannot use SharePoint lists as a document template repository (for document generating actions).
 - Cannot connect to SharePoint using the "Local" configuration option, which makes it impossible to reference SharePoint lists in the context of the current user.
 - Cannot synchronize the BPS user list with SharePoint – no SharePoint groups.