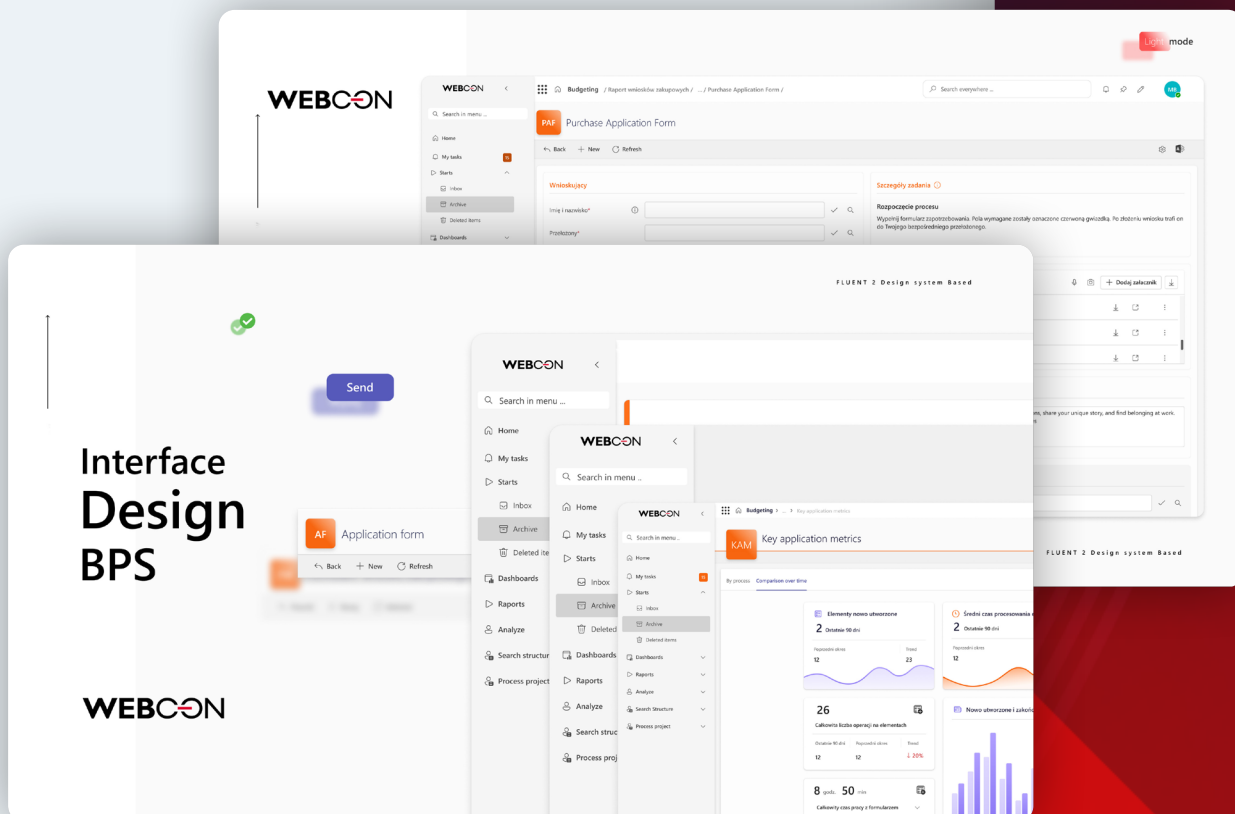# WEBCON

WEBCON BPS
2024

An exceptional new version
**with exceptional new
capabilities!**

WEBCON BPS 2024 - a New Standard for UX

Once again, we are pleased to present the 2024 version of the WEBCON BPS platform, the industry's best way to digitalize and automate business processes. This year's release targets the end user experience, and the majority of enhancements reflect this focus.

You'll see improvements to both the visual and user experience layers, but that doesn't mean we weren't able to add a variety of other extensive technological updates that enhance security, work continuity, and overall platform functionality.

Planning for the 2024 version incorporated market trends, suggestions from clients and partners, and consultation with subject matter experts. You have a standing invitation to contribute suggestions of your own via the Feedback link on our Community Page https://community.webcon.com

We thank you for your trust this and every year. This document summarizes the most significant changes we've brought to our 2024 version.

Table of Contents

New-User Interface

It's not just about looking nice; it's about user adoption and satisfaction. It matters. We focused on a modern look, enhanced readability, and making it easier to assimilate information quickly.
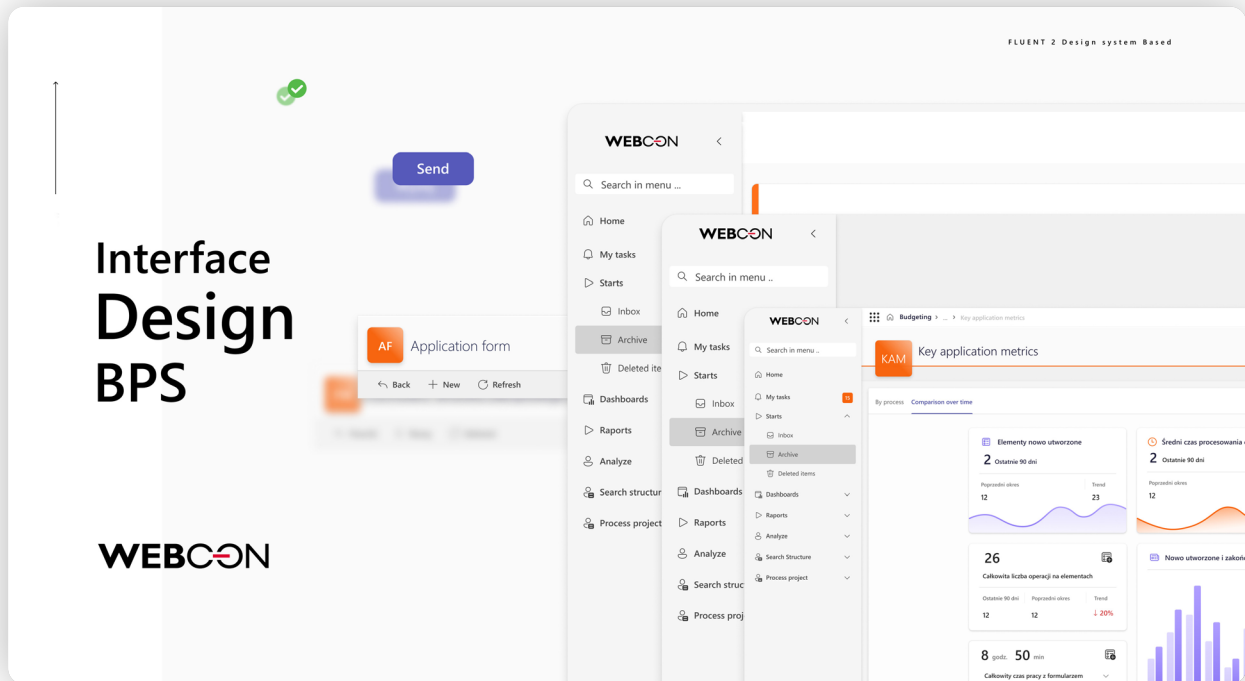
We applied four guiding principles to the 2024 user interface.:

- **Glassmorphism** – e.g., adding multidimensionality, transparency, vibrant colors, and borders to elements,
- **Material design** – e.g., larger elements and fonts, more space between elements,
- **Skeuomorphism** – e.g., giving elements a sense of depth,
- **Nielsen's 10 heuristics** – e.g., contextual grouping of related elements.
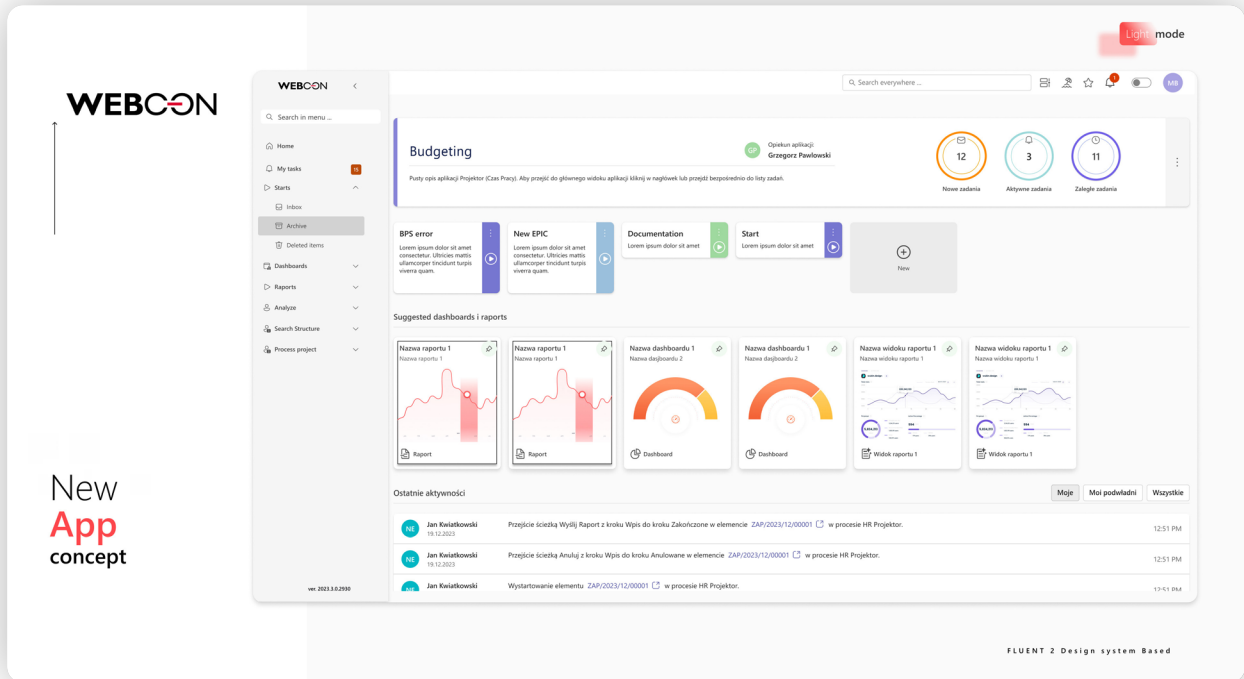
New
**App**
concept

WEBCON BPS' new UI is based on Microsoft's Fluent 2 design; the significant number of WEBCON customers who also use Microsoft 365 should find the consistency something to appreciate.

We also structured the new UI around a modular architecture that promotes the consistent and frequent reuse of design elements throughout the system.
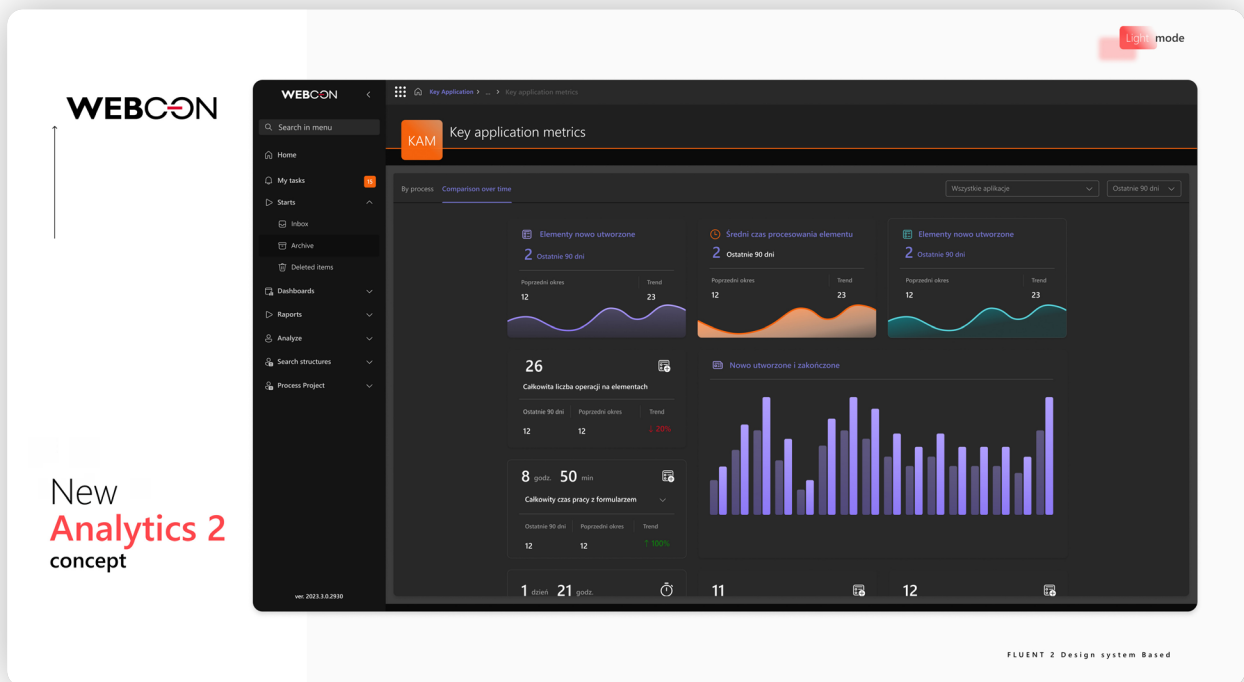
New
Analytics 2
concept

These efforts should result in the quick and accurate replication of each client's corporate visual identity simply and faithfully. Look for us to invest more in this direction in the future.
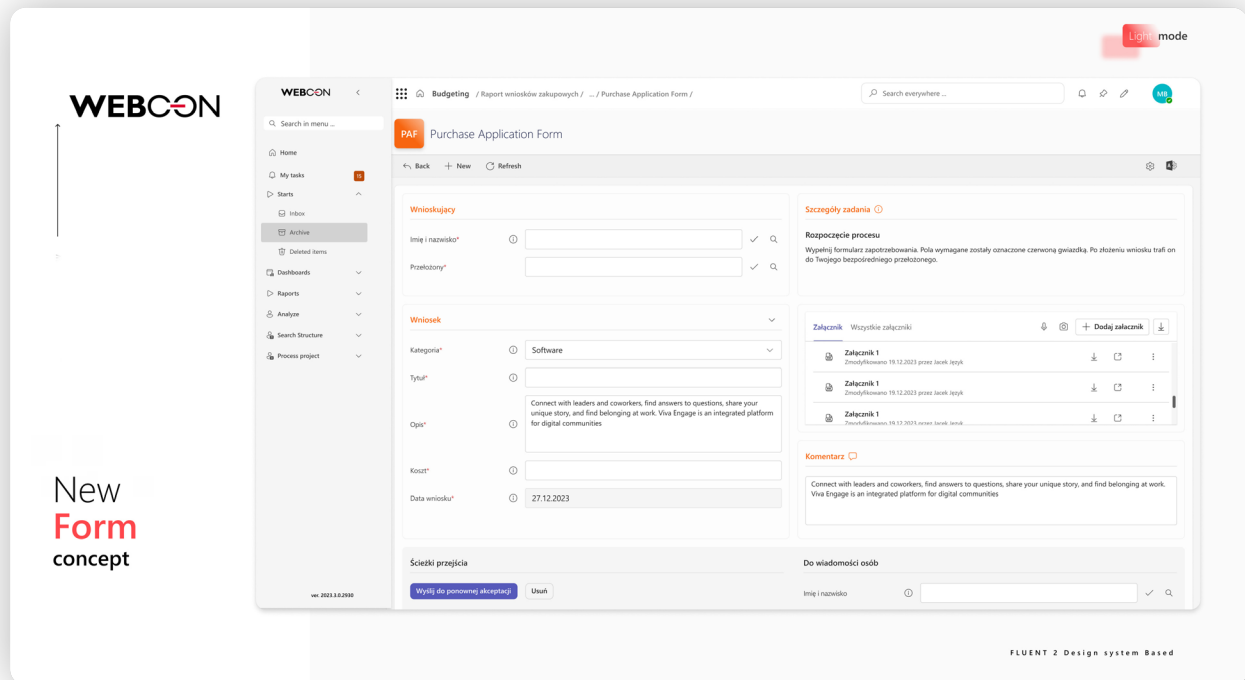
As is true of every new WEBCON BPS version, we've ensured conceptual consistency with previous versions; it's essential to providing a painless path to continuous improvement.

> That said, we know that a sizeable percentage of our existing customer base upgrades immediately in order to get performance and security benefits. But we also know that a UI change can make many an IT department want to pause and assess impacts and make plans to adapt to them. Because we don't want that immediate upgrade for performance/security to be delayed, we've decided to hold off on delivering the new UI until version 2024's Release 2. So upgrade without concern to Release 1.

Widgets – An Attractive Way to Present Data on Forms

A widget is a new kind of form field that presents contextual data in an appealing, graphical way. For example, a numeric data can be displayed as a gauge, a progress bar, a large numeric value, etc.

The intent is to present information to users to help make assessments when completing form tasks, but they can also be used to prepare various types of reports and presentations later.

Numeric data for the widget to display can be entered directly or retrieved using business rules, SQL queries, or constants. They can also be presented relative to expected, minimum, or maximum values.

Widget color schemes are fully customizable, including having the color change depending on the value range into which it falls.
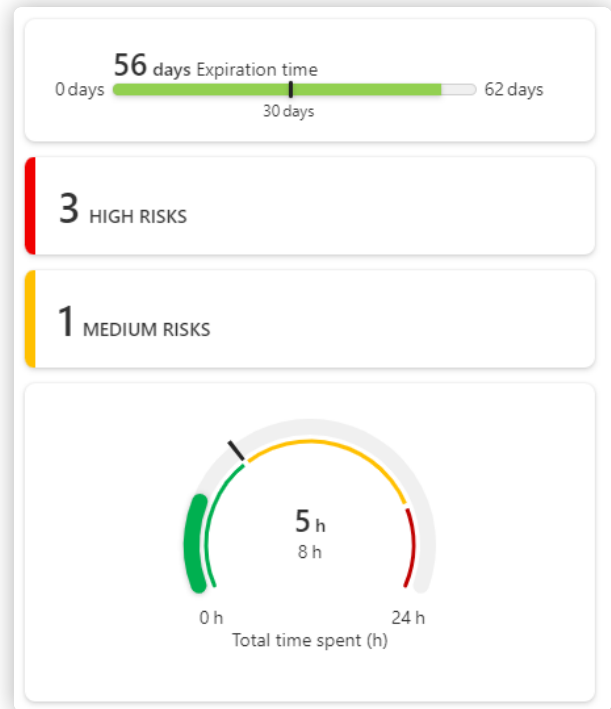
More Flexibility in Form Design

WEBCON BPS forms are based on a structured layout. It ensures consistency from application to application, radically reducing the training a user needs to learn new applications, and the time it takes a form designer to create forms. That said, designers and users alike have been very clear about wanting more options for form designs, and WEBCON is responding with the 2024 version. Designers will have more options for individual application forms without losing the benefit of there being an overall consistency across multiple applications.

WEBCON BPS forms consist of a header section, a footer section, and a central area divided horizontally into to equal-sized sections (a 50/50 ratio). Starting with the 2024 version, designers can make the two central area sections sized at a 30/70 or a 70/30 ration as well.
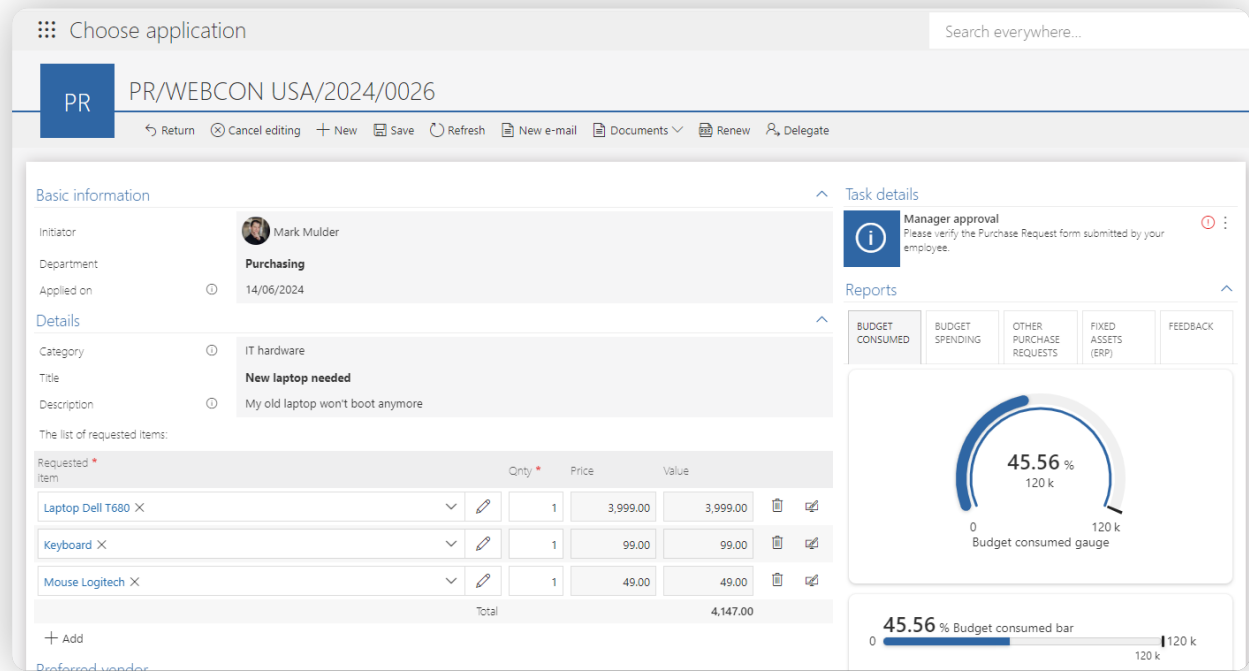
Indeed, it is even possible in the 2024 version to have the form render as single column taking up the full width of the display area.

Form layout options can be adjusted at each workflow step, so you can make the layout dynamically adjust to the user's task at hand.

These layout options are available in both Designer Studio and Designer Desk.

Customizable ALERT and CONFIRM Function Windows

The ALERT and CONFIRM functions available to form rules, validation actions, etc. display alerts and/or confirmation dialogs to users. In the past, any message displayed was in plain text. Starting with the 2024 version, text passed to the ALERT and CONFIRM functions can be formatted with HTML tags.

The updated CONFIRM function allows additional actions to be executed based on the option the user selects (i.e., "OK" or "Cancel").
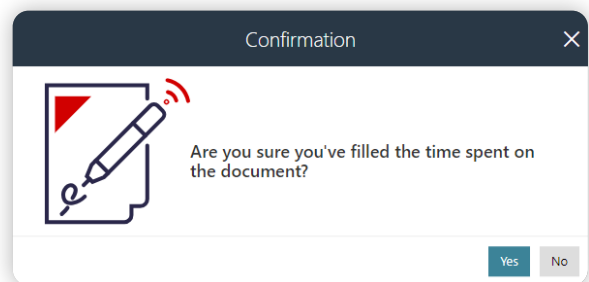
Mobile UI Enhancements

One of the main announcements for the 2024 version was the expansion of mobile application functionality. Many of these enhancements debuted early during release updates to the 2023 version of WEBCON BPS.

The mobile application has undergone a series of aesthetic and ergonomic enhancements, including a highly requested dark mode that is beneficial for working in dimly lit environments.
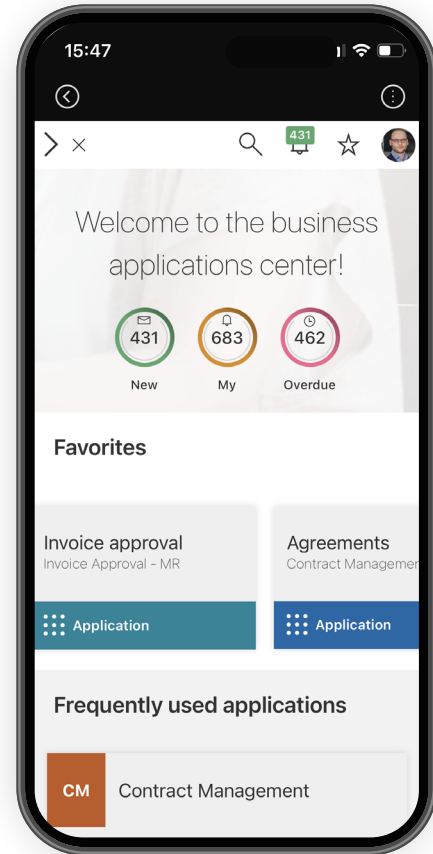
PUSH Notifications

In the new version of the mobile application, we have introduced the ability to notify users of their assigned tasks via PUSH notifications. Administrators can specify which applications will send notifications.

PUSH Operation Authorization (2FA)

The PUSH notification mechanism can also be used for two-factor authentication (2FA) purposes, enabling some actions to require confirmation in the WEBCON BPS mobile app.

Of particular interest is path transitions between steps. Paths can be configured to, when a user clicks that path button on a form, send a PUSH notification to their mobile device requesting a confirmation of their identity and an authorization of the operation.

PIN and Biometrics

We have expanded the mobile application to allow logging in with a PIN code and/or the mobile operating system's biometric security (fingerprint ID, FaceID, etc.).

QR Code Support

The new application allows scanning and generating QR codes. These can be used to initiate new workflow items, perform global information searches, and share information with other platform users. Some examples of where this can be useful include:

- Initiating a machine servicing process by scanning a QR code affixed to the machine
- Equipment inventory management
- Searching for information about an item in the warehouse based on a QR code

Recording Voice Notes and Cropping Photos

The new mobile application can record voice notes and take/crop photos while filling out forms. Such photos and recorded notes are then automatically attached to the current form.

We envision this being especially useful in scenarios like construction audits, incident documentation, and photographic proof of steps being carried out.

WEBCON mobile applications also expose native Android and iOS functionality when available; for example, speech-to-text can be used for creating written notes based on voice input.

Geolocation

The mobile application can now also record the current geographical location of the person taking action on a workflow form. This can be added to an item's metadata history and/or inserted into a form field. We see the former being particular helpful for audit scenarios, adding where an action was taken to who did it and when.

Additional User Experience **Enhancements**

Detailed Tracking of Case Status – Last Comment in the Report

Version 2024 includes a new system column that can be used in reports to display the latest comment entered for a workflow item; it can optionally include information about the comment's author and entry date.

It's also possible to specify how the comment will be displayed in report views, such as limiting the displayed content to the first 100 characters, or perhaps disabling the default text wrapping behavior.

The last comment can also be displayed in the task panel in a compact view, as well as in calendar-type reports.

The last comment functionality in reports can be used, for example, for detailed tracking of activities and the status of ongoing cases. It is particularly useful in situations where the status (process step) of a case does not change frequently, but a series of actions are still being carried out. This allows progress to be tracked without opening the case form.

This particular feature was one of those suggested to us through our community portal: https://community.webcon.com

Enhancing the Digital Accessibility of the Portal – WCAG 2.2

The WEBCON BPS platform is used by over 100,000 users worldwide, and not all of them use it the exact same way. The 2024 version complies with WCAG 2.2 (Web Content Accessibility Guidelines), which sets criteria for creating websites and mobile applications to ensure their content is accessible to the widest possible audience, including people with disabilities.

We optimized many key elements of the Portal to ensure their structure, content presentation, and interface elements are as universal as possible, meeting WCAG 2.2 guidelines.

Such changes included:

- optimizing Portal navigation and operation using the keyboard and other interface interaction tools,

- adjusting the contrast ratio on Portal pages to ensure better content readability across all system color themes,

- preparing a dedicated system theme for maximum contrast (WEBCON Contrast Black Yellow) with a separate button for quick switching to contrast mode,

- standardizing the appearance of messages and warnings presented to the user,

- adding alternative text in areas where information is presented visually,

- enhancing page structures by adding ARIA markers and attributes (roles, states, properties) to make their content easily processed by screen readers, thus more accessible to users relying on assistive technologies.
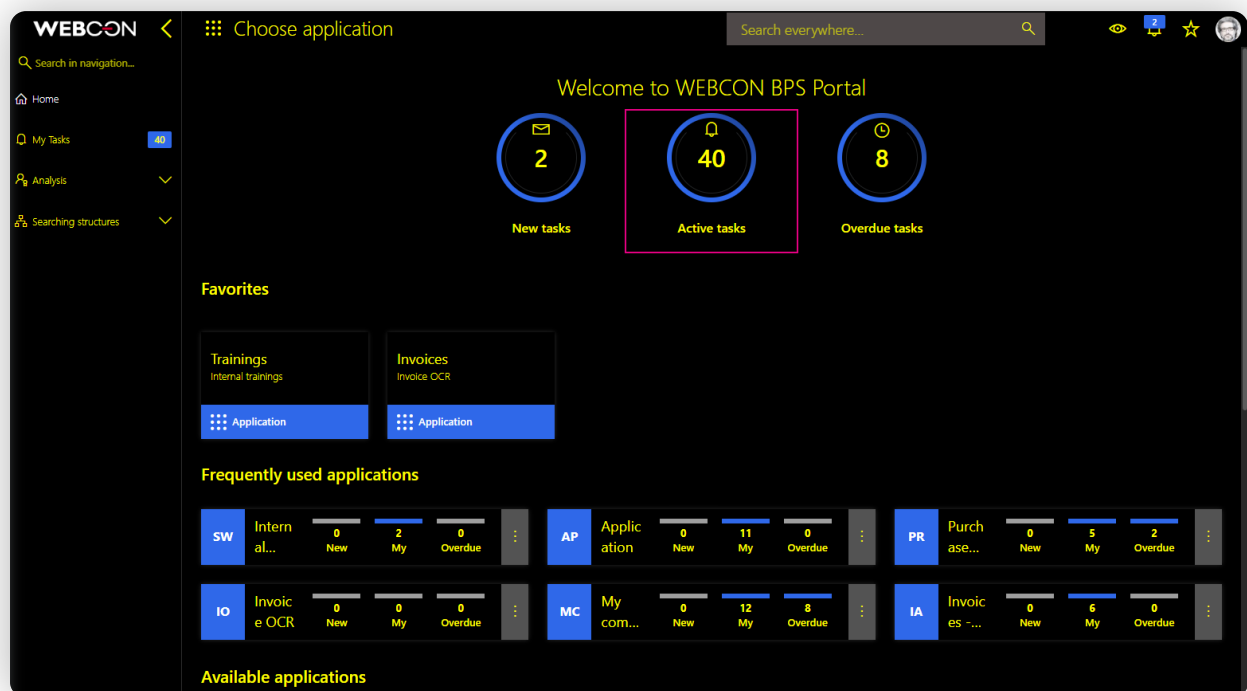
Adapting web content to meet digital accessibility requirements is an ongoing process, requiring systematic periodic evaluation and verification. WEBCON will be taking into account WCAG compliance as part of future system development work.

New Features for **Application Creators and Administrators**

Application Import in DevOps Model Using Public API

The WEBCON BPS platform is equipped with export and import mechanisms to transfer of applications (or updates to applications) from one environment to another (e.g., from development to testing to production). Building/exporting and importing packages is largely automated, but human intervention is required to respond to prompts with answers to questions (whether or not to include dependencies, overwrite previously-stored values, etc.). Exports/imports have been done entirely within Designer Studio.

In DevOps (development operations) scenarios, where many activities such as deployment or configuration updates are done via automated batch operations, requiring real-time user interaction can be problematic. Moreover, the people responsible for deployment might not have access to (or licenses for) Designer Studio.

The 2024 version addresses this by introducing a way to import an application using the WEBCON BPS public API. By using a registered API application and its assigned permissions, along with the new console application, parameters for import can be easily defined and thus application export files can be imported/deployed automatically.

Administrators can perform imports in default or custom mode using an additional .json configuration file created during the application export in Designer Studio. The content of this file is always the same and requires completion according to the intended import scope.

As with the standard import known from previous system versions, the operation's progress is precisely logged, and additional summary information is saved in the import history.

This solution also introduces new endpoints and HTTP methods in OpenAPI (formerly known as Swagger). These allow the integration of the tool with the REST API application (used for automatic import), display interactive documentation, and execute and test queries.

Data Source Reports in Dashboards

Version 2024 includes the ability to define data sources (models) for dashboards, which can then be used by independent reports and objects with aggregated field values (so-called Report Tiles) created within them. This makes report delivery faster and encourages organization of reports into dashboards.

The method of configuring data sources for dashboards is consistent with the configuration of reports created from the application level.

ToDo List – Improved Communication During Application Delivery

Version 2024 introduces the ToDo list functionality, enabling the creation of task lists in WEBCON BPS Designer Studio. The list appears as a table related to objects and application elements that require further configuration or changes. It also serves to verify the correctness of application configuration and to pass suggestions in this regard. Completed configuration tasks can be marked as done and can be decided whether they will still be displayed on the list.
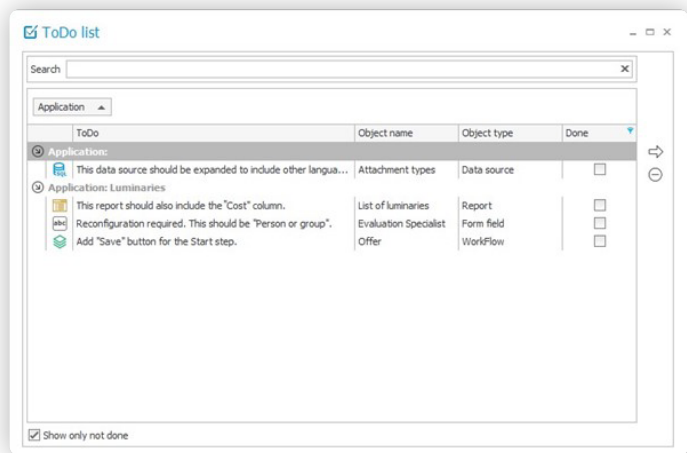
This solution allows efficient collaboration among many power users/administrators involved in creating a single application or multiple applications to be integrated.

Moreover, the ToDo list also supports collaboration between business users (citizen designers) and low-code developers. After creating and publishing a prototype in Designer Desk, the list is automatically created in Designer Studio and can concern elements like paths, actions, form fields, business rules, or data sources. In this scenario, business users describe the desired end result, and low-code developers can complete the tasks described on the list.

Actions Operating on Item Lists

To increase the automation of business scenarios, we have enhanced the handling of item lists by providing related actions. Users now have the ability to quickly add, remove, and replace item list values, as well as update and clear the list. Each of these operations is dedicated to a separate action, making their handling more intuitive and eliminating the need for manual data entry and verification.

Additionally, to increase configuration capabilities, for those actions based on external or internal data sources, we have introduced column mapping and unique value mapping. This way, users can decide whether the list items will duplicate as a result of the update.

Connecting to Azure SQL via Microsoft Entra ID

At the end of last year, Microsoft began recommending that connections to cloud-hosted databases should use a dedicated identity and access management solution, Entra ID. The 2024 version of WEBCON BPS has been adapted accordingly.

Until now, connections to cloud databases were authenticated similarly to those made to an instance of SQL Server, namely native SQL credentials or integrated logons validated by local machine accounts or Windows Active Directory user accounts.

The 2024 version of WEBCON BPS introduces the option to connect to Azure SQL databases via Microsoft Entra ID using authentication methods such as Active Directory Managed Identity or Active Directory Service Principal. These methods allow connection to databases depending on the configuration of the virtual machine and the Azure SQL Managed Instance service.

Technological, Security, and Performance **Improvements**

One of the essential steps to protect against potential cyber threats is the regular updating of applications, systems, and IT solutions. These updates often include patches that address known security vulnerabilities which could be exploited by malicious software.

WEBCON BPS is used by companies in highly regulated industries such as banking, military, pharmaceutical, and others that require high levels of security and reliability. Therefore, it undergoes regular testing and quality checks in these areas. We place great importance on the regular updating of components used by our platform, ensuring that the technologies, libraries, and tools employed continuously guarantee reliability and stability.

The approach of embracing updates also means realizing the benefits of WEBCON's continuous improvement efforts.

Regardless of the new version, we encourage monitoring the security bulletin, where we publish information on identified and addressed security threats:

https://community.webcon.com/others/security/7

Upgrade to SOLR 9

One of the significant changes in WEBCON BPS brought by 2024 is the migration of the SOLR search platform from version 8 to 9. Besides security improvements, this upgrade has brought the following benefits:

Improved SOLR Indexing Performance

We have made significant changes in SOLR indexing handling, making the process more resource-efficient and less burdensome for the system. Consequently, searching for individual objects in the Portal is now more efficient.

The key improvement was enhancing the indexing thread queue management by splitting it into four independently operating collections dedicated to activities, attachments, elements, and threads triggered from Designer Studio (utilities).

To ensure better transparency of the operations carried out, we also improved the reporting of SOLR indexing results and related diagnostic information, enabling more efficient problem detection and resolution.

Multilingual SOLR Search Results

Another noticeable change is the improved display of global search results and related filter values in the WEBCON portal. Where appropriate translations are available, selecting the interface language will display the names of applications, processes, workflows, steps, or form fields in the chosen language version.

Updating SOLR requires reindexing all data stored in the system. To help with this, we included a special mechanism in the installer allowing the creation of a backup of activities from the last 30 days (user activities are generally not subject to reindexing).

Migration to .NET 8

To maintain parity with the ever-evolving .NET framework, the 2024 version of WEBCON BPS is now based.NET 8.0, which, as an LTS version, will be supported by Microsoft for three years. .NET 8.0 leverages the latest standards (including the Transport Layer Security protocol) and libraries, and is continuously checked for compliance with current security standards.

This update has also brought significant performance benefits. For example, the time required to transition between process steps has been reduced by 25%.

> The above summary covers some of the functionalities that will appear in subsequent versions of 2024.