Appway

Appway 7.0

Release Announcements

May 31, 2017

Appway

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Introduction

This document provides an overview of the main new features that are delivered with Appway 7, designed to bring the following benefits:

- Better collaboration when creating solutions
- Accelerated time to market thanks to a more efficient development process
- An even better customer experience for end-users interacting with the solutions built in Appway

More details on new features are available with the release in the:

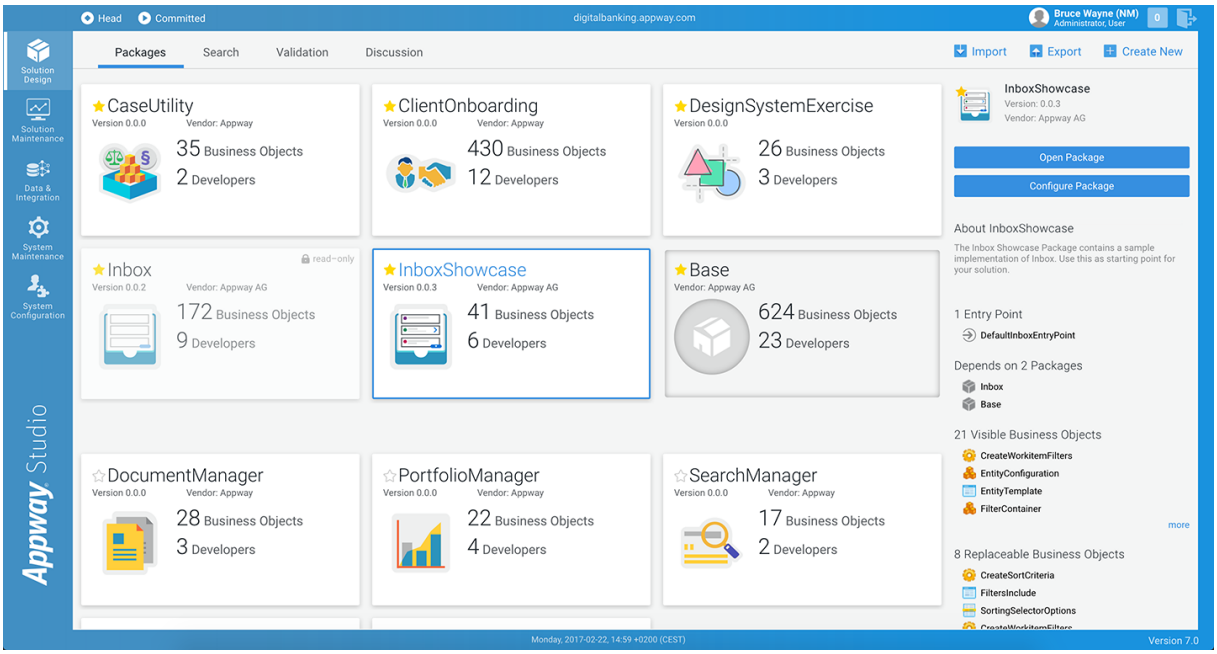
- Appway 7.0 Release Notes
- Knowledge Base on community.appway.com

Packages

Appway 7 introduces Packages, a new and powerful concept in the Appway Studio. Packages drastically simplify the management of large and complex solutions, foster reuse across different solutions, and boost agile and parallel development for teams.

A Package serves as a container for Business Objects, bundling Business Objects which belong together. More importantly, a Package clearly defines *which* of its Business Objects, and *how* its Business Objects may be used by other Packages.

Developers think of Packages as the high-level building blocks of an Appway solution. This is reflected in the Appway Studio's new Package Overview.



Package Overview in Appway Studio (preview)

The concept of Packages allows developers to build solutions with a flexible and modular architecture, embracing the design principles of *encapsulation* and *separation of concerns*. This facilitates parallel development, continuous deployment of improvements, and a managed approach to evolving a solution over time. Ultimately, Packages allow you to easily and quickly adapt to the rapidly changing needs of markets and your end-users.

The essential features of Packages are:

- Visible Business Objects
  Decide which Business Objects are internal to a Package and which ones are visible to and reusable by other Packages.
- Replaceable Business Objects
  Define Replaceable Business Objects to make it easy to customize a Package for the specific requirements of the solution. A typical scenario is the replacement of a main template Screen to adapt to a company's brand, or to replace Integration Links with those needed to interact with other 3rd party systems.

- Entry Points
  Offer an easy and explicit way of invoking Business Objects from a Package by providing Entry Points. Entry Points translate into callable Urls where each Url has its own configurable access control rules.
- Governance
  Implement effective team management by controlling which developers are allowed to modify the Business Objects of a Package.
- Package Versioning
  Create versions of Packages and easily import and export them across different systems or reuse them in other solutions.

Migration

You can migrate existing solutions to Packages in a seamless fashion. After upgrading to Appway 7, existing solutions reside in the default 'Base' Package and are fully functional, without requiring any modifications.

Refactoring existing solutions to use multiple Packages requires additional effort, but is supported by tools allowing you to safely move Business Objects from one Package to another. Existing artifacts like Lists and Business Object naming conventions can be leveraged by Appway 7 to accelerate the migration process.

Appway Design System

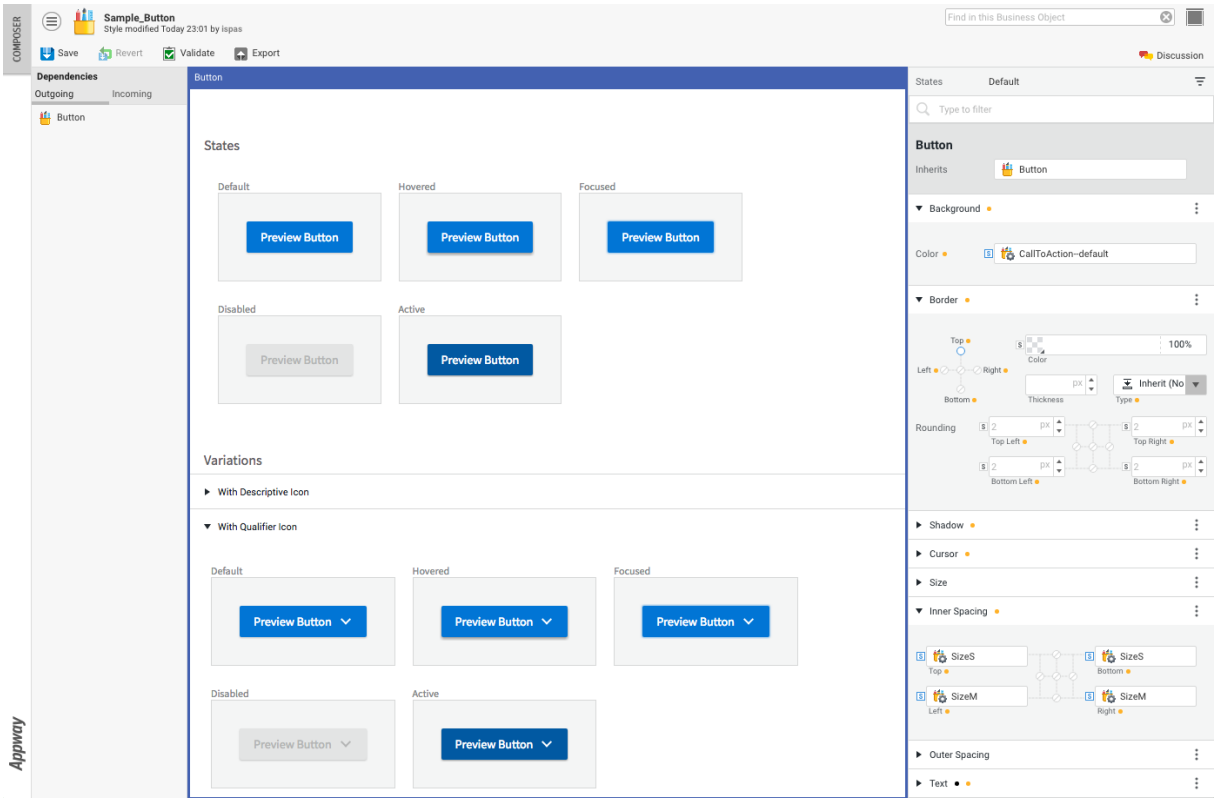
The Appway Design System supports you in handling the complexity of constantly evolving applications in a consistent manner and ensures your solutions are of the highest possible quality. The Design System is composed of two main elements:

- Workspace capabilities (styling, layouting, events/actions framework)
- Reusable design elements and guidelines for assembling them to create an exceptional user experience (configurable components, screen templates, design patterns)

For Appway 7, the Design System now provides more guidance on user experience and offers enhanced capabilities in the Workspace which enable you to achieve the necessary customizations as part of the Appway Model instead of having to use custom CSS and JavaScript, which is difficult to maintain. In addition, there was a focus on improving performance, by enhancing Screen rendering and a changed approach to layouting.

Style Business Objects

The motivation for introducing Style Business Objects in Appway 7 is to provide more stability and governance to solutions by removing the need to use custom CSS for comprehensively styling components and solutions. Using Style BOs, the styling of a component can be performed using an intuitive editor, specifically adapted to the component and providing an instant preview for all states and variations:



Style BO editor for Buttons in Appway Studio

Style BOs support general concepts such as:

- Reuse – Create the style you need once and then apply it to multiple components of the same type. Reuse makes consistent styling of solutions in accordance with company branding swift and easy to implement.
- Inheritance – Style BOs can be built on other Style BOs, making it easy to create variations of existing styles.
- Composition – More complex components aggregate sub-components that have their own styling properties, taking advantage of components you have already customized.

Using Style BOs for styling can be enabled in "batch" for all components using a specifically designed tool. If a gradual transition to Style BOs is preferred, you can enable Style BOs on a component-by-component basis.

Events/Actions

Appway 7 provides an enhanced Event/Action framework allowing the implementation of richer interactions and more flexible solutions. In addition to listening to their "own" Events, components can now listen to Events performed on other components and trigger defined Actions based on these Events. Components can also listen to Screen Events, e.g. to the resizing of a Screen, and react with a defined Action.

Layout Container

The new Layout Container screen component brings with it a maximum of flexibility and stability, allowing you to build exactly the layout you need. For example, you can define the orientation of the layout (horizontal or vertical) and nest Layout Containers in different combinations to achieve more complex structures. Intuitive configuration and predictable layouting structures make the creation process straightforward.

As with all Appway components, Layout Containers can be reused to speed up the development process and ensure a consistent appearance within and across solutions.

The Layout Container component and layouts built by combining several of them are fully responsive and efficiently scale your solution from phones to tablets to desktops.

Design.appway.com

A new platform, design.appway.com, is available with Appway 7 providing interactive material which illustrates and describes design recommendations. In detail, the platform offers:

- Newly developed design patterns for the Workspace, which leverage the new capabilities described above and take into account the experience and feedback gathered from assorted projects.
- A large number of powerful templates and pre-built components that can be used on projects to achieve speed and quality.

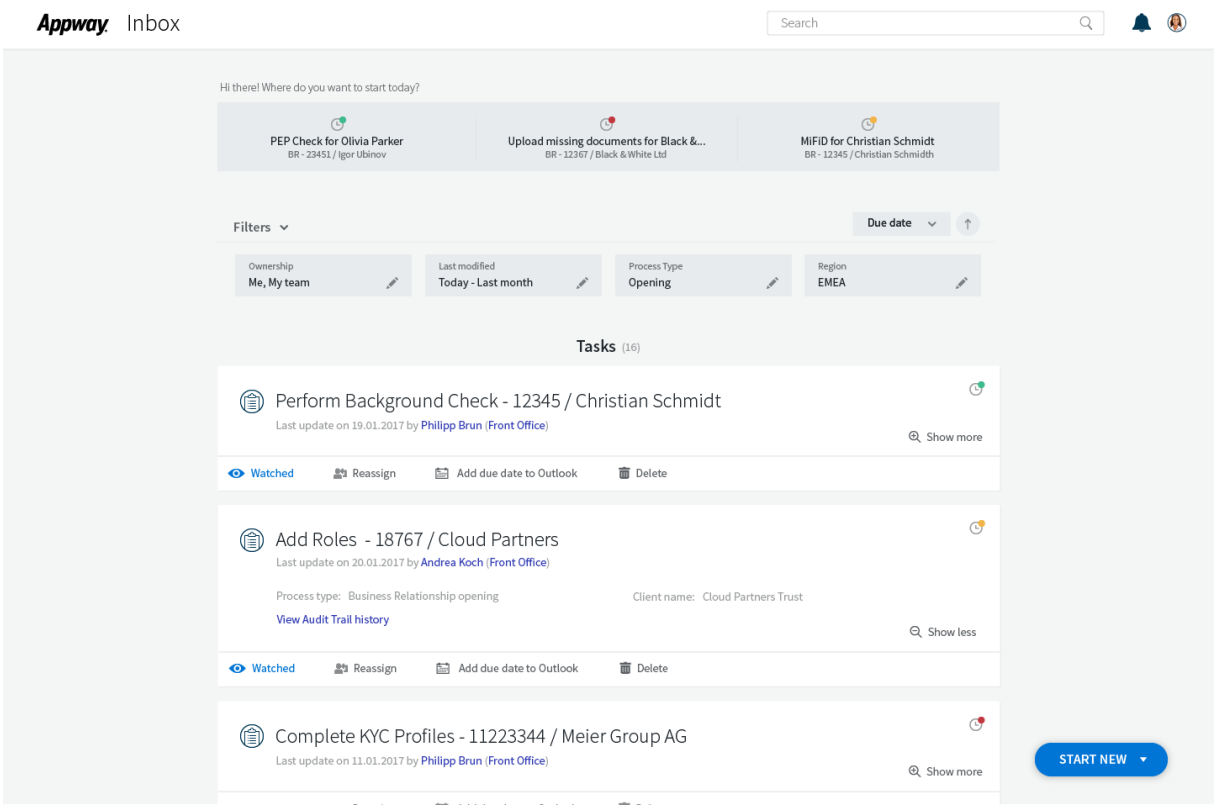
Migration

The updated Design System requires no extra effort when upgrading to Appway 7. Your Screens and solutions will continue to work as before. However, there is no automatic migration path to the new capabilities, making use of them requires manual effort.

Inbox

New in Appway 7, Inbox represents the latest and most powerful evolution of the user portal concept within Appway. Designed with a focus on Work Automation and User Experience, significant emphasis was placed on improved usability and customizability. Inbox serves as a personal hub for end-users working with business applications developed with Appway and is designed to boost the efficiency of their interaction with these systems. When using Inbox, end-users benefit from the following characteristics:

- Their work is organized in an intuitive list, making it easy to gain an overview.
- Seamless navigation between the overview and further details without needing to leave the application. Inbox provides on-demand access to details without interrupting the user's flow.
- Inbox helps end-users focus on completing important issues first, avoid time-consuming multitasking.
- Inbox aggregates data relevant to specific work tasks and provides easy access to it, significantly reducing time spent searching information.
- Actions can be initiated directly out of Inbox, removing the need to navigate between different screens and applications.



Inbox – Inbox home with Task entities

The enhanced information layout of Inbox is based on entities, which group related information regarding a common business context, such as a Tasks, Processes, or Cases. Each entity is displayed as an individual tile providing relevant information at a glance and allowing end-users to quickly access more details as needed.

Inbox is delivered as a Package which contains the pre-configured Appway components (templates, Screen Components, Data Classes etc.) out of which Inbox is built. This modular approach makes Inbox straightforward to customize, allowing you to extend the default solution and adapt it to your specific requirements directly in the Appway Studio. Typical types of customization include:

- Adapting the information displayed within individual entities to meet the specific needs of end-users when working with the overview.
- Advanced searching, sorting, and filtering capabilities, to help users reduce the amount of data that is displayed according to what they are looking for.
- Catering to different user roles (manager, front office etc.) by providing them with the information they require to fulfill their respective work duties. E.g., managers are interested in monitoring overall business performance, whereas front office employees complete their workload on a task-by-task basis.

Migration

To leverage the new functionality of Inbox, effort on the project is required to configure Inbox to the business logic of your solution. Older portal solutions like the Portal Worklist or Offline Worklist will continue to function correctly in Appway 7.

Case Management

Case Management is a new paradigm for dealing with complex and emerging tasks in a business context. In contrast to Process Management – a complementary paradigm already addressed in Appway – Case Management does not entail enforcing a strict, pre-defined sequence of actions to reach a particular goal. Rather, the case-based approach introduced in Appway 7 requires defining the boundaries within which a user is free to choose from the available options to reach a goal. Cases provide guidance and recommendations, but always leave the final decision on the next step to take up to the expertise of the end-user.

It is important to note that cases and process are not mutually exclusive, but can be combined, a notion referred to as the "Process Spectrum". Most practical business applications have case-like aspects as well as process-oriented structures which can be implemented in parallel and complement each other.

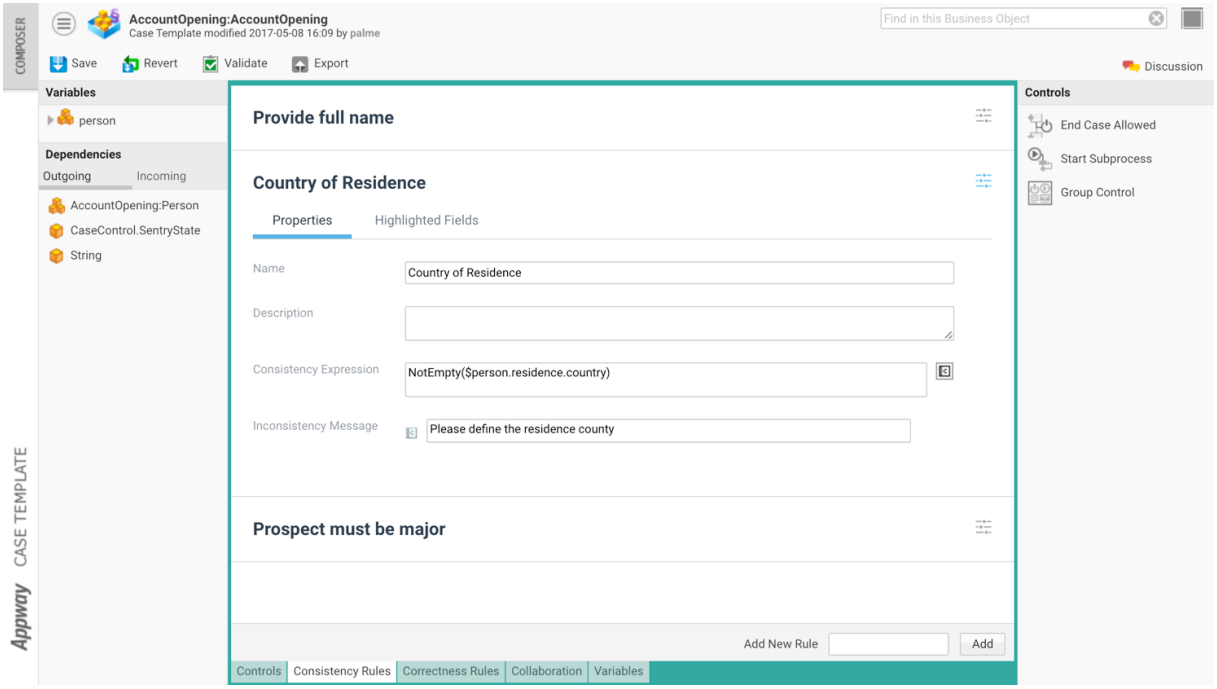
The benefits of the case-based approach are that it:

- Leverages your employees' knowledge by supporting them with a structured environment, but without confining their expertise to a logical "straitjacket" that forces them to adhere to a fixed set of steps defined as a process.
- Adds elasticity to solutions making them more variable and capable of dealing with many different (often unknown) scenarios, removing the necessity to tailor processes to very specific scenarios.
- Enables quicker implementation of solutions, as exceptions and special situations are far easier to accommodate and maintain as cases, reducing development and maintenance costs.

In the current implementation of Case Management, the presentation layer is rendered by the Form Channel, which automates the creation and design of the UI, meaning no development effort is required in these areas.

From a technical point of view, Case Management can be described as data-driven and rule-based. Accordingly, the Appway Case Engine is configured by setting the following elements in a Case Template business object:

- Case context – Outlines the data that needs to be gathered.
- Case plan – Specifies a collection of rules and constraints that define when the case context can be considered consistent, meaning a valid case in the terms of business logic has been achieved.



Interface for defining Consistency Rules

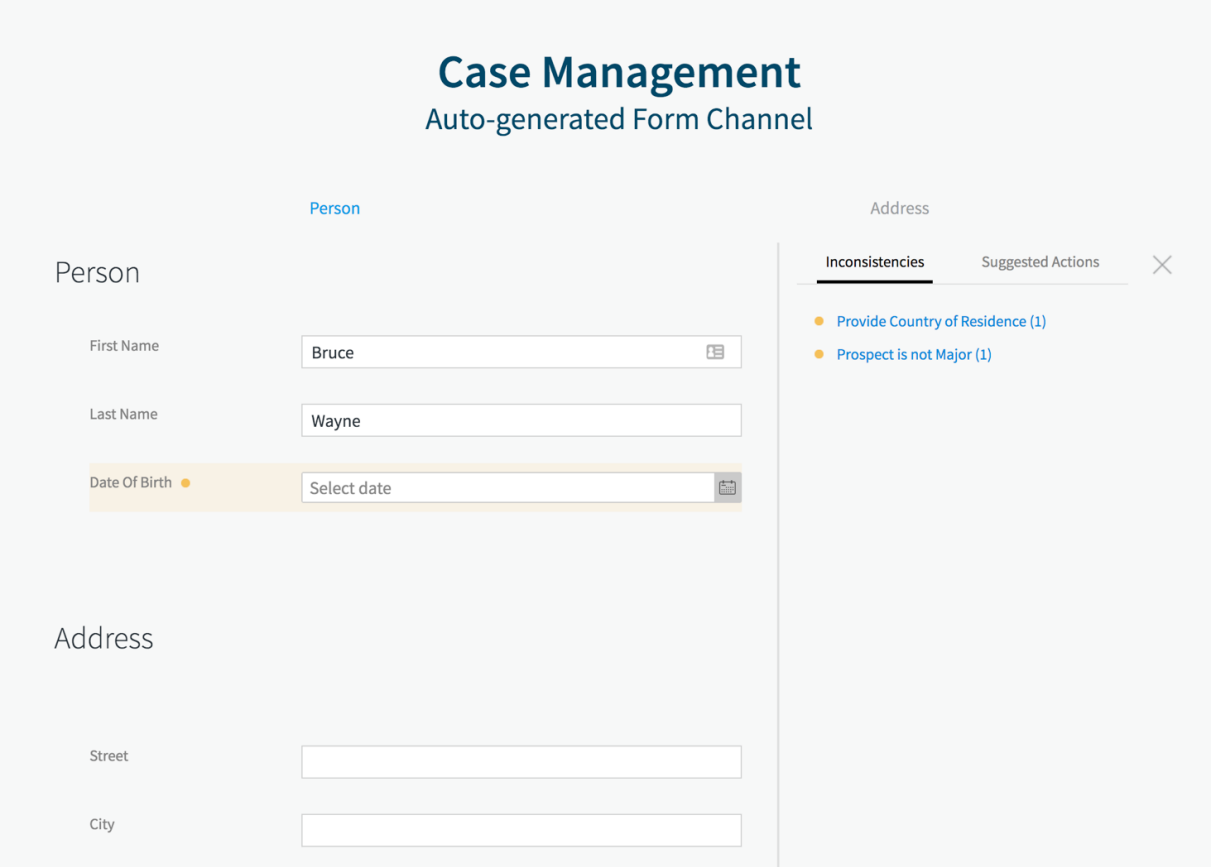
Migration

Case Management works out of the box with Appway 7, no migration or adaptation is required. It is recommended to refactor those parts of solutions that are currently using processes to solve case-related problems, to utilize the advantages of the Appway Case Engine.

Form Channel

The Form Channel is the first implementation of a new concept in Appway: Interaction Channels. An Interaction Channel is a fully automatic presentation layer, which means that it is self-adapting and populated dynamically based on a defined data context. Future Interaction Channels are not restricted to this form-based approach, but can take other forms, e.g. text- or voice-based conversational interfaces.

Currently, the Form Channel is used together with Case Management. In this use case, the exact appearance and order of the form fields is inferred from the underlying Case Template and automatically rendered by the Appway Case Engine.



Example of a Form Channel

The Form Channel brings the following benefits:

- Changes made to the underlying data context are instantaneously reflected, the Form Channel adapts automatically without any manual effort.
- Time to market is accelerated as there is no longer a need for manually designed user interfaces, which often turn into project bottlenecks.
- Clear separation of business logic and presentation layer. You only need to define the business logic and can then profit from the built-in UX of the Form Channel. By default, the Form Channel generates UIs which are 100% compliant with the Appway Design System and are reusable across solutions to guarantee a consistent and reproducible look & feel.

- Using 'Style' Business Objects, the relevant parts of the Form Channel can be customized to ensure compliance with company branding guidelines.