

SAP Fiori 2.0 Administration and Developer Guide

SAP Fiori 2.0

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TABLE OF CONTENTS

1	OVERVIEW	3
2	WHAT'S NEW IN SAP UI TECHNOLOGY FOR SAP FIORI 2.0	3
3	SAP FIORI 2.0 INNOVATIONS TYPICALLY RELEVANT FOR ADMINISTRATORS	4
3.1	Support of New SAP Fiori 2.0 Design in SAPUI5	4
3.2	SAP Fiori Launchpad	4
3.2.1	Launchpad Areas	4
3.2.2	Me Area.....	5
3.2.3	Enabling Notifications and Notification Area	5
3.2.4	SAP Fiori Launchpad Shell Header.....	6
3.2.5	App Finder.....	6
3.2.6	Integrating a Large Number of Web Dynpro and SAP GUI Applications.....	6
3.2.7	Displaying User Profile Photos in the SAP Fiori Launchpad	6
3.3	UI Theme Designer	6
4	CHANGES IN SAP FIORI APPLICATIONS TYPICALLY RELEVANT FOR DEVELOPERS	7
4.1	SAP Fiori 2.0 Header	7
4.1.1	Enabling the Automatic SAP Fiori 2.0 Header Adaptation in the Descriptor	7
4.1.2	Writing New SAP Fiori 2.0 Compliant Applications	7
4.2	Developing SAP Fiori Apps with SAP Fiori Elements	7
4.2.1	List Report View	8
4.2.2	Object Page View	8
4.2.3	Overview Pages	9
5	INNOVATIONS FOR CLASSIC APPLICATIONS TYPICALLY RELEVANT FOR ADMINS	10
5.1	SAP Fiori Visual Theme for Classic Applications	10
5.2	Restrictions	11
5.2.1	How to use a previous visual theme.....	11
6	CUSTOM DEVELOPMENT FOR CLASSIC APPLICATIONS	12
6.1	Custom Development for SAP GUI for HTML	12
6.2	Custom Development with Belize Theme for Web Dynpro ABAP	12
7	GETTING SAP FIORI 2.0 IN YOUR SYSTEM LANDSCAPE	13
7.1	SAP Fiori 2.0 Implementation for SAP S/4HANA	Error! Bookmark not defined.
7.1.1	SAP Fiori Front-end Server 3.0.....	Error! Bookmark not defined.
7.2	SAP Fiori 2.0 Implementation for SAP Simple Finance, on-premise edition 1503 or SAP S/4HANA Finance 1605	14
7.3	SAP Fiori 2.0 Implementation for SAP Business Suite and multi backend scenarios	13
7.4	Fiori 2.0 available on SAP Hana Cloud Platform	14

1 OVERVIEW

SAP Fiori 2.0 is the next generation of user experience at SAP for SAP S/4HANA and other solutions with a new design concept and a corresponding visual theme, called **Belize**.

If you have created your own custom theme based on the Blue Crystal theme, or have developed your own SAP Fiori apps or SAPUI5 controls, you might need to make some adjustments. It is important to verify that custom objects run smoothly after upgrade to SAP Fiori 2.0 in order to offer the best user experience.

2 WHAT'S NEW IN SAP UI TECHNOLOGY FOR SAP FIORI 2.0

The following sections contain a brief overview of what's new in SAP Fiori 2.0 Design from a technical point of view and what needs to be considered when introducing SAP Fiori 2.0. These aspects come together with the overall evolved design concept.

- The SAP Fiori 2.0 design now supports the corresponding Belize theme. The SAP Fiori 2.0 “Belize” theme replaces the “Blue Crystal” theme in SAP Fiori and classic applications.
- In SAP Fiori launchpad, the new design is a panoramic user interface using the viewport concept, with “Home Page”, “Me Area” and “Notification Area”.
- In SAP Fiori launchpad the SAP Fiori 2.0 design concept foresees changes in SAP Fiori applications with a header. SAP Fiori custom applications with a header can be merged into the standardized SAP Fiori 2.0 header.
- The new “Notification Channel” provides real-time user information for the SAP Fiori launchpad Notifications area.
- List reports, object page templates (formerly called smart templates) and overview pages will now be collectively known as SAP Fiori elements.
- The Belize theme also supports classic applications from SAP S/4HANA 1610 and above. Classic applications include SAP GUI for HTML, SAP Web Dynpro ABAP and SAP GUI for Windows (planned for the future).
- The SAP Fiori 2.0 design is shipped with the SAP component “User Interface Technology” in NetWeaver AS ABAP 7.51 or SAP Fiori Front-end Server 3.0.

3 SAP FIORI 2.0 INNOVATIONS TYPICALLY RELEVANT FOR ADMINISTRATORS

3.1 Support of New SAP Fiori 2.0 Design in SAPUI5

The Belize theme (sap_belize) replaces Blue Crystal (sap_bluecrystal) as the default theme. Blue Crystal is de-supported as of SAPUI5 version 1.40 and higher.

Restrictions:

Belize does not support the same set of theme parameters as Blue Crystal. If you use custom themes or custom controls, check whether all parameters used are still supported.

If you have developed your own SAPUI5 controls or custom applications, you will need to test them with the new Belize theme, and if necessary adjust the controls or applications to work optimally with the new theme.

The Belize theme does not support deprecated libraries such as sap.ui.commons, sap.ui.ux3 or sap.makit. Custom themes based on Blue Crystal are no longer supported and have to be migrated. For a full list of deprecated control libraries, see: [Deprecated Themes and Libraries](#) and SAP note [2329884](#).

Custom themes cannot be transferred into Belize automatically, manual adaption is required (see section “UI Theme Designer”).

For more information, see documentation “[What’s new in SAPUI5](#)”. You can find general SAPUI5 information in the [SAP Help Portal](#) or in the [SAPUI5 development toolkit](#).

3.2 SAP Fiori Launchpad

The new SAP Belize theme is also the new default theme for SAP Fiori launchpad.

3.2.1 *Launchpad Areas*

Until now the SAP Fiori launchpad was a simple home page to launch business applications by clicking on tiles or links. The newly designed launchpad in SAP Fiori 2.0 is a panoramic user interface using the viewport concept. Users can focus on their daily work and still keep track of what's going on in other areas. The flexible display consists of the following areas:

- **Home page** - the main area where the user works.
- **Me area** - area on the left with user-specific information and personalization options.
- **Notifications area** - area on the right where users receive notifications in real time.

3.2.2 Me Area

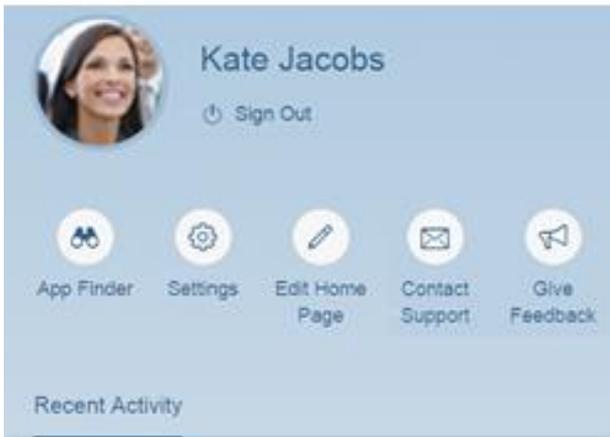


Figure: Me Area in SAP Fiori launchpad

The new Me Area slides into view from the left of the home page. From here, users have access to various types of user-related information including personalization, user profile, settings, and interaction history. The Me Area replaces the former User menu (located on the top right corner).

Some options are only available after they are enabled by the administrator, such as *Contact Support* and *Give Feedback*. For more information, see [The Me Area](#) and [Launchpad Configuration Parameters](#).

The options bar, as well as the settings, can be extended with custom items. For more information, see [Extending the Launchpad](#).

3.2.3 Enabling Notifications and Notification Area

Notifications in enterprise applications are a powerful means to make users aware of situations that require timely action or other kinds of user attention. Tangible examples of notifications are workflow items such as the assignment of new purchase order approvals.

The SAP Fiori launchpad consumes the notifications from the SAP Gateway Notification Channel. SAP Gateway Notification Channel is a framework for applications to deliver notifications to end users through various channels. It is part of software component SAP_GWFND.

Notifications are presented to the user in several UI modules, such as notification preview, the notification area, a badge in the header bar, and a banner within an app.

By default notifications are switched off in the SAP Fiori launchpad, meaning that the notification preview is not visible, and the notification button is not displayed in the header bar.

To use notifications you have to enable a number of different components in the configuration. The [Notification Channel](#), the SAP Fiori launchpad configuration, and optionally [HCPms](#) or [SMP](#) for supporting native mobile push notifications. For more information, see SAP note [2363449](#).

3.2.4 SAP Fiori Launchpad Shell Header

With SAP Fiori 2.0 the SAP Fiori launchpad header has been extended with additional features, such as the app title of the launched app, a history of the recent navigation steps and a list of apps and objects related to the current app. For more information, see [Navigating Between Apps](#).

The shell header can be extended by customers. For more information, see [Extending the SAP Fiori launchpad](#).

3.2.5 App Finder

In the [App Finder](#), the information displayed on a tile representing a SAP GUI or Web Dynpro application in the SAP Menu or User Menu has been enhanced. If the application has a corresponding app descriptor, a title, and a subtitle, icons and parameters are displayed. For more information, see [Integrating Applications from SAP Easy Access Menu](#).

3.2.6 Integrating a Large Number of Web Dynpro and SAP GUI Applications

You can now integrate a whole set of Web Dynpro and SAP GUI applications in the SAP Fiori launchpad using the mass maintenance tool. For more information, see [Integrating Web Dynpro and SAP GUI Applications Using Mass Maintenance](#).

3.2.7 Displaying User Profile Photos in the SAP Fiori Launchpad

Administrators can enable the display of users' photos or avatars instead of the generic person-placeholder icon in relevant controls in the SAP Fiori launchpad, such as the shell header and Me Area. As a prerequisite SAP Jam integration has to be set up. See also [Enabling the Display of User Profile Photos](#).

3.3 UI Theme Designer

The Belize theme can now be used to create custom themes for SAPUI5 and Unified Rendering. A custom theme based on Belize will look different than a custom theme based on Blue Crystal. SAP note [2329884](#) describes the manual migration process and describes which parameters can be mapped.

Automated migration from Blue Crystal theme to Belize theme is not possible. For a list of restrictions, please refer to SAP Note [2337350](#).

Not all Unified Rendering based UI technologies support custom themes. SAP GUI for HTML supports only older standard themes. For more information, see SAP note [314568](#).

Quick theming in the UI Theme Designer now offers comprehensive theming options that work for both SAPUI5 and Unified Rendering (see also [Changing the Main Parameters Using Quick Theming](#)).

For more information, see [What's New in UI Theme Designer](#) and the UI Theme Designer main SAP note [1852400](#).

4 CHANGES IN SAP FIORI APPLICATIONS TYPICALLY RELEVANT FOR DEVELOPERS

If you have developed your own custom SAPUI5/Fiori applications, please consider next the testing and qualification with the new Belize theme, as well as the following aspects and changes.

4.1 SAP Fiori 2.0 Header

The SAP Fiori 2.0 design concept foresees changes with regards to the headers of applications and the SAP Fiori launchpad (FLP). If your application has a header, it can be merged into the standardized SAP Fiori 2.0 header. SAPUI5 offers an adapter mechanism to let existing apps automatically adjust their header layout according to the SAP Fiori 2.0 guidelines.

4.1.1 *Enabling the Automatic SAP Fiori 2.0 Header Adaptation in the Descriptor*

Application headers based on older SAP Fiori design guidelines, can now be easily adapted to the new SAP Fiori 2.0 look-and-feel by using the automatic adaptation mechanism in the app descriptor.

You can override the default adapter behavior for a single application by adding an entry in the app descriptor in the “sap.ui5/config” section. Setting “sapFiori2Adaptation: true” enables the full functionality of the SAP Fiori 2.0 adapter.

Note: Depending on the structure of the application and other reasons, the automatic adaptation of the header area may not work. If this happens, the headers will still appear in the old design, but the apps will continue to be usable. For more information, see [Enabling the Automatic SAP Fiori 2.0 Header Adaptation in the Descriptor](#).

4.1.2 *Writing New SAP Fiori 2.0 Compliant Applications*

When writing new apps a minimum version of 1.40 SAPUI5 or higher is required in the app descriptor. You need to make sure the new full screen apps work fine with the browser’s “Back” functionality. The button should always lead back to the previous page. The usage of the FLP `ShellUIService` in the application descriptor should be declared optional if you want the application to run standalone as well.

4.2 Developing SAP Fiori Apps with SAP Fiori Elements

SAP Fiori elements provide designs for UI patterns and predefined templates for commonly used application patterns. App developers can use Fiori elements to create Fiori applications based on OData services and annotations requiring no JavaScript UI coding. The resulting app uses predefined views and controllers that are provided centrally, so no application-specific view instances are required.

The predefined views and controllers ensure UI design consistency across similar apps. Also the metadata-driven development model significantly reduces the amount of front-end code for each app, so that the developer can focus on the business logic. For more information, see [Developing Apps with SAP Fiori elements](#).

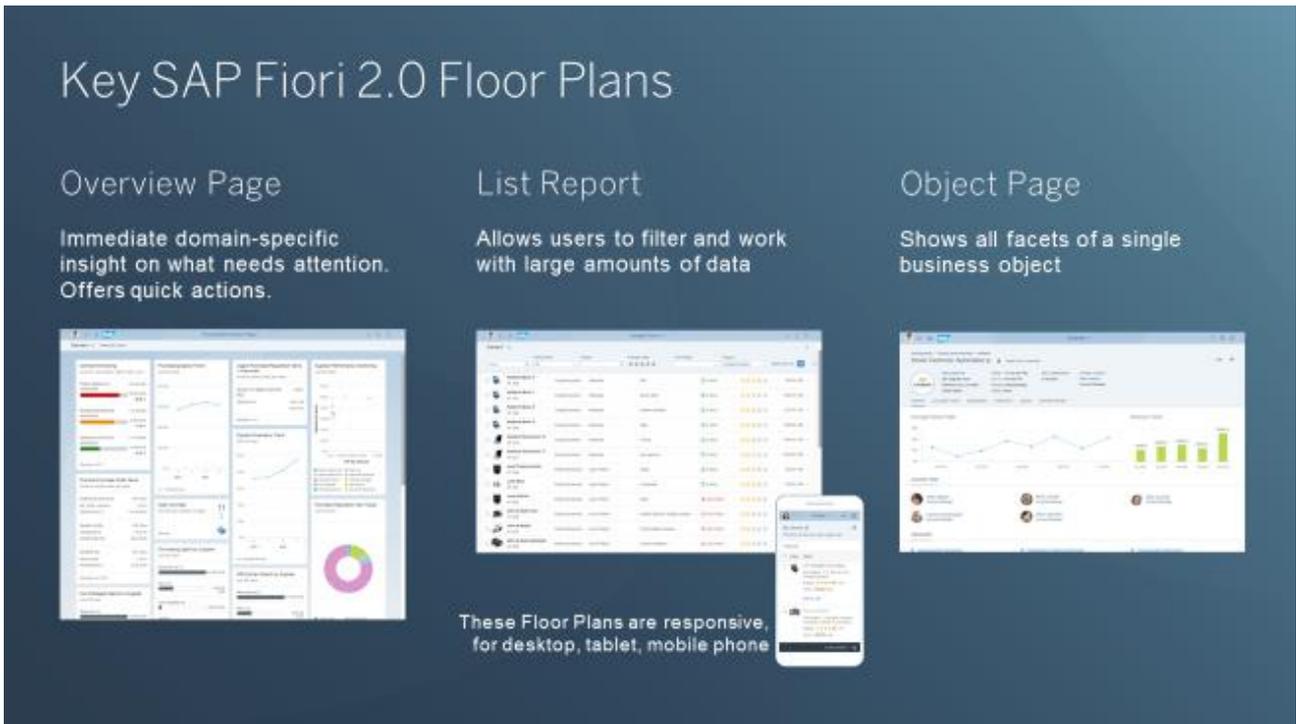


Figure: SAP Fiori 2.0 Floor Plans with Fiori Elements

4.2.1 List Report View

The list report allows the user to work with a large list of items. It combines powerful functions for filtering large lists with different ways of displaying the resulting item list.

The list report view includes the following main elements:

- Application header
- Smart filter bar with variant management and the generic Share menu
- Smart table
- Footer toolbar, which can include optional actions

For more information, see [List Report View](#).

4.2.2 Object Page View

The object page allows you to display, edit and create objects, and save drafts. It is suitable for both simple objects and more complex, multi-faceted objects. The object page view offers optimal support for multiple devices.

The object page is made up of the following elements:

- Page title set to the object type, for example, product
- Object header including the following:
 - Anchor navigation area, which allows users to navigate to the individual content area sections
 - Content area, in which data is organized into sections that can contain field groups or a table

- Footer bar, in which actions and the Show Messages button are available (if applicable)

For more information, see [Object Page View](#).

4.2.3 Overview Pages

Overview pages provide quick access to vital business information at a glance, in the form of visual, actionable cards.

With an overview page, a business user can focus on the most important tasks, enabling faster decision making as well as immediate action. Overview pages are built and enhanced by developers using SAPUI5 technology, OData services and annotations.

Developers can build overview pages using a dedicated plugin in SAP Web IDE.

For more information, see [Overview Pages](#).

5 INNOVATIONS FOR CLASSIC APPLICATIONS TYPICALLY RELEVANT FOR ADMINISTRATORS

5.1 SAP Fiori Visual Theme for Classic Applications

In SAP S/4HANA 1610 (and higher) the look of the classic SAP GUI for HTML, SAP GUI for Windows (planned, see also SAP note [2365556](#)) and Web Dynpro ABAP applications has been harmonized and aligned with the look of SAP Fiori apps, giving users a unified and consistent experience across SAP S/4HANA. The default theme for SAP S/4HANA 1610 and higher with SAP Application Server ABAP 7.51 (Kernel 7.49) and higher is *Belize*.

Classic applications appear in an evolved look that is aligned with the look of SAP Fiori apps. The classic applications now use the merged SAP Fiori header or the footer toolbar.

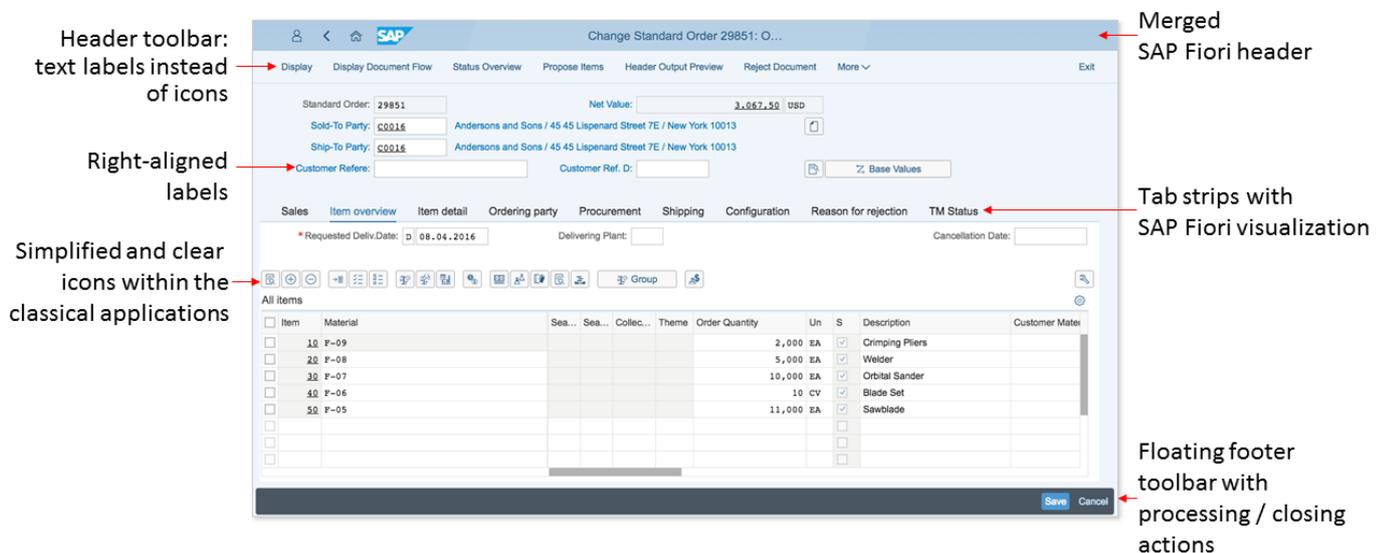


Figure: SAP Fiori visual theme for classic applications

- The merged SAP Fiori header is always visible, whether you are on the SAP Fiori launchpad home page or within an application. From the header, you can navigate back to previous screens or the home page. You can also open the Me Area or the Notifications area via buttons in the header.
- The icons in the header toolbar are replaced by text labels. Inactive buttons are hidden, enabling users to work quickly and efficiently without any confusion or ambiguity.
- All field labels are right-aligned so that it is always clear which field a label refers to.

For more information about the SAP Fiori visual theme for classic applications, see [SAP S/4HANA 1610 Product Assistance](#) > Enterprise Technology > SAP Fiori Visual Theme for Classic Applications.

5.2 Restrictions

Even though the look of the classical applications has been aligned, the underlying technology is still different from the one used by SAP Fiori apps. Therefore, the following restrictions apply:

- The use of touch screens is not supported.
- The use of mobile devices, such as smartphones or tablet devices is not supported.

For a more detailed list of restrictions, see [SAP Note 2348661](#).

The Belize theme is enabled by default for all SAP applications and custom applications.

We highly recommend reviewing custom applications and making adjustments if necessary.

For example, in all classical applications using the new theme, the buttons in the header toolbar have text labels instead of icons. Because this takes up more space, some of the frequently used buttons in the header toolbar may have moved into the "More" dropdown menu. Therefore it might make sense in some cases to change the order of the buttons.

For more information about restrictions and the optimization processes, read the following documentation:

- Web Dynpro ABAP: SAP Note [2379058](#) and [What's New in Web Dynpro ABAP](#).
- Floorplan Manager for Web Dynpro ABAP and [What's New in Floorplan Manager for Web Dynpro ABAP](#).
- SAP GUI for HTML: SAP note [2328600](#) and [SAP Fiori Visual Theme for SAP GUI for HTML](#).

5.2.1 How to use a previous visual theme

The default theme in SAP S/4HANA 1610 and higher is *Belize*. However, it is possible to perform a temporary use of an older theme. To do so, launch the application from outside SAP Fiori launchpad and change the value of the parameter "&sap-theme=" to a value corresponding to a previous theme in the URL. For more information, see SAP note [1656975](#).

SAP GUI for Windows can also be run with previous themes. In the Microsoft Windows start menu choose → *Control Panel* → *SAP GUI Configuration*. In the "Theme" dropdown list box of the SAP GUI configuration screen, choose the target theme. For more information, see the F1-help in your local SAP GUI for Windows installation.

6 CUSTOM DEVELOPMENT FOR CLASSIC APPLICATIONS

The Belize theme for classic applications is supported from SAP S/4HANA 1610 and higher. Older versions and non-S/4HANA systems will continue to run with older themes such as the default theme “Corbu”.

6.1 Custom Development for SAP GUI for HTML

You can adapt applications based on classic Dynpro to the SAP Fiori design and usability paradigms with the help of the SAP GUI for HTML using the Belize theme for SAP GUI for HTML

For example, in Belize theme icons are replaced by text. This can change the layout of the underlying Dynpro and may require changes to the underlying screen layout. For more information, see [What Is Different in the Belize Theme](#) and [Restrictions for using SAP GUI for HTML](#).

For more information about adapting SAP GUI for HTML custom applications to the Belize theme, see [Customization Guidelines](#).

6.2 Custom Development with Belize Theme for Web Dynpro ABAP

If the Web Dynpro ABAP application parameter WDUIGUIDELINE is set to the value FIORI (for example, when applications run inside the SAP Fiori launchpad), the UIs of Web Dynpro ABAP and Floorplan Manager applications are rendered to harmonize with the general SAP Fiori user interface.

For example, in FPM - SAP Fiori Launchpad Integration, navigation inside the SAP Fiori launchpad is only possible with intent-based navigation and the page header is no longer displayed.

For more information, see [Web Dynpro ABAP and Floorplan Manager](#) and the [UI Guideline FIORI – Rendering](#).

7 GETTING SAP FIORI 2.0 IN YOUR SYSTEM LANDSCAPE

SAP Fiori apps with SAP Fiori 2.0 require SAP Fiori Front-end Server 3.0 or higher.

SAP Fiori front-end server runs on AS ABAP and delivers the required UI software components SAP User Interface Technology and SAP Gateway Foundation for AS ABAP required to run SAP Fiori apps.

Note: SAP User Interface Technology and SAP Gateway Foundation (up to NW 7.51) are also part the AS ABAP stack, but with a different stack definition, not suitable for newer SAP Fiori apps.

For more information, see http://help.sap.com/fiori_implementation and [Landscape Deployment Recommendations](#) for SAP Fiori Front-End Server on SAP Enterprise Architecture Explorer.

SAP Fiori Apps for SAP Business Suite or for SAP S/4HANA may have additional requirements for system landscape setup. For more information, see [SAP Fiori Apps reference library](#) and the release specific Notes for the Fiori Apps you want to deploy.

Depending on the SAP Fiori apps, you want to run on SAP Fiori Frontend Server, the following restrictions apply:

- SAP S/4HANA 1511 continues to run on version 2.0 and does not support Fiori 2.0
- SAP S/4HANA 1610 is only supported for SAP Fiori front-end server 3.0 or higher
- SAP Fiori front-end server 3.0, running on AS ABAP 7.5 (and 7.4) are particularly designed and offered for customers using SAP Business Suite

Classic Applications with SAP Fiori Theme Belize are available for SAP S/4HANA 1610 and higher only.

For more information, see the “UI Technology Guide” describing how to set up SAP Fiori Apps for [SAP S/4HANA 1610](#).

7.1 SAP Fiori 2.0 Implementation for SAP Business Suite

SAP Fiori 2.0 is optionally available for SAP Business Suite systems. To leverage this option the SAP Fiori Frontend Server must be upgraded to version 3.0 or higher. After the upgrade SAP Fiori apps and custom Fiori apps will run with the Belize theme. Classic application will continue to run with default theme on SAP Business Suite (typically Corbu). For more information about supported Fiori apps, see SAP Note [2310351 - Release of Fiori Product Versions for SAP Fiori Frontendserver 3.0](#).

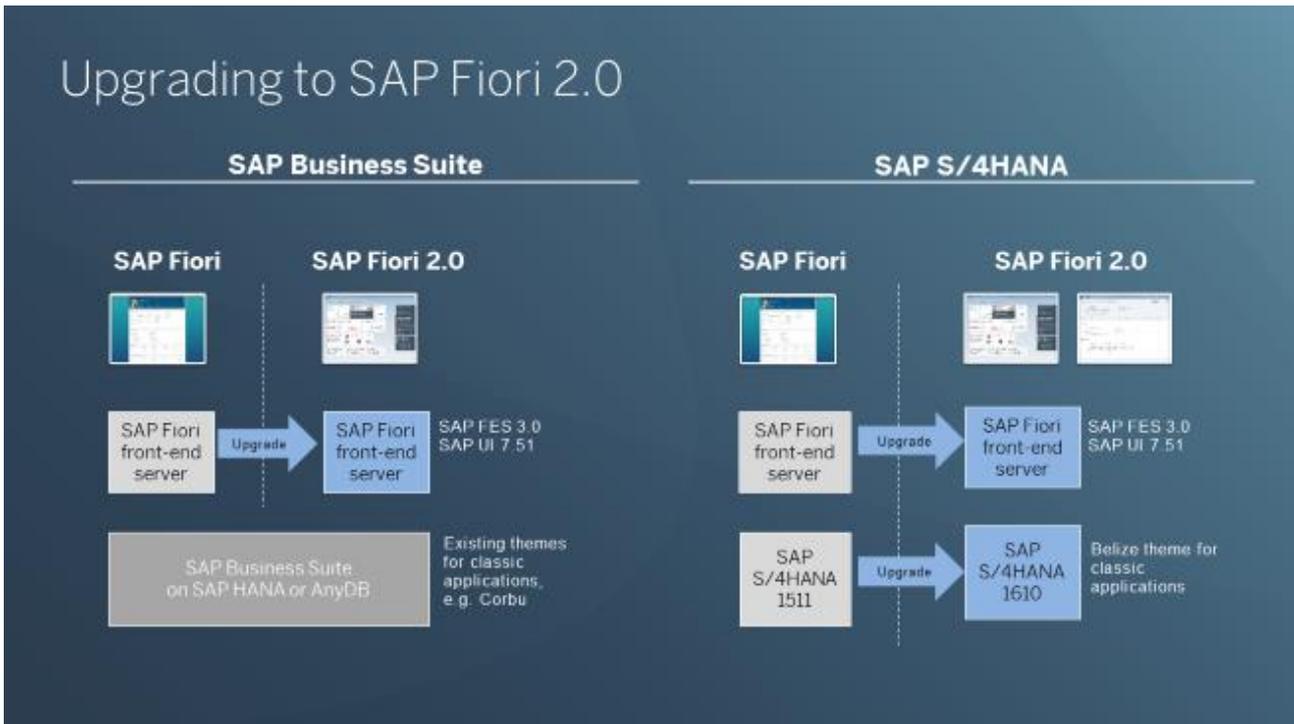


Figure: Comparison of upgrading SAP Business Suite and S/4HANA to SAP Fiori 2.0

7.2 SAP Fiori 2.0 Implementation for SAP Simple Finance, on premise edition 1503 or SAP S/4HANA Finance 1605

SAP Fiori 2.0 is optionally available for SAP S/4HANA Finance 1503 or 1605 systems. To leverage this option the SAP Fiori Frontend Server must be upgraded to version 3.0. After the upgrade SAP Fiori apps and custom Fiori apps will run with the Belize theme, but there are some restrictions, see SAP Note [2371983 - Release of SAP Fiori of S/4HANA Finance 1503 and 1605 for SAP Fiori Frontend Server 3.0](#) for more information. Classic SAP GUI and Web Dynpro applications continue to run with the default theme, typically Corbu. The upgrade options are visualized in the section “Adopting SAP Fiori 2.0” in the presentation [SAP Fiori 2.0 User Experience for SAP S/4HANA](#).

Note that since SAP S/4HANA 1511 does not support SAP Fiori 2.0, if you update “Fiori for SAP Simple Finance, on premise edition 1503” to SAP Fiori 2.0, you cannot upgrade any longer to SAP S/4HANA 1511. You can either go to SAP S/4HANA Finance 1605, or to SAP S/4HANA 1610.

7.3 Fiori 2.0 available on SAP Cloud Platform

SAP Cloud Platform, SAP CP Portal Service and SAP Fiori Cloud for SAP Business Suite and SAP Fiori Cloud for SAP S/4HANA support SAP Fiori 2.0 theme Belize. In the Site Settings editor of the SAP portal service Site Designer, you can select the SAPUI5 version 1.44 or higher for your site and enable the SAP Fiori 2.0 Me Area in Portal Service.

For more information see “enable SAP Fiori 2.0 features for portal service” in the [release notes](#) and [SAP Fiori Cloud](#) documentation.