

## **OpenUI5** Road Map

September 2020

**PUBLIC** 



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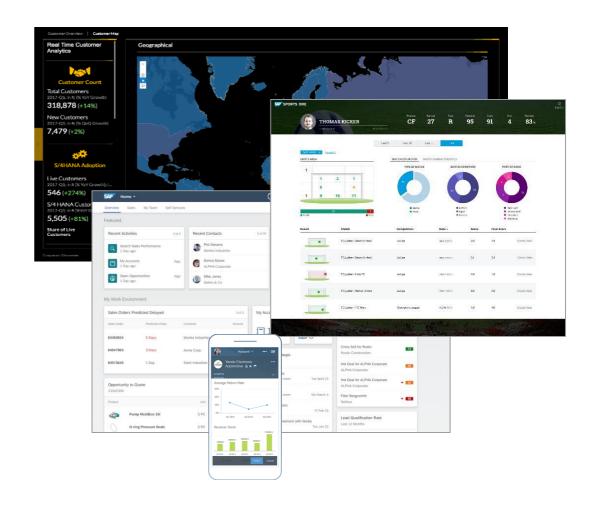
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## **OpenUI5**

## **Product description**

OpenUI5 is an open source HTML5 framework designed to build cross-platform, responsive, enterprise-grade web applications. It is the leading UI technology of SAP's user experience strategy.

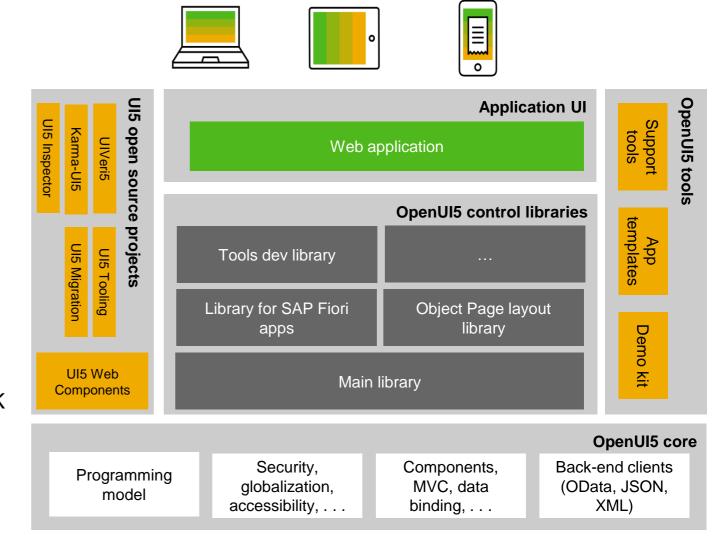
- Rich set of extensible and theme-able UI controls ensuring a consistent user experience across solutions
- Facilitation of efficient development for designing Web applications
- Built-in support for product standards
- Released under the Apache 2.0 license



## **OpenUI5**

## Key capabilities

- The core serves as the foundation and simplifies Web development.
- OpenUI5 offers ready-to-use UI controls ranging from basic elements to complex UI patterns. Apps benefit from a consistent design language and coherent UX patterns known as SAP Fiori.
- Various tools complement the framework. They assist in building and testing apps as well as diagnosing and resolving issues.
- Besides the tools integrated into the OpenUI5 SDK there are other UI5 open source projects to support the efficient development of web applications.



## **OpenUI5** core

## Product road map overview – Key innovations

#### **Recent innovations**

- Consume SAP Icon Font in non-UI5 environment
- New icons in SAP Fiori Tools Icon Font
- Support special URLS in app descriptor
- Upgrade handlebars.js library to 4.7.6
- Upgrade jQuery to 3.5.1

#### **OData V2 model**

- Improved message handling
  - Add server messages with multiple targets
  - Assign server message to controls with composite binding when visible/editable

#### **OData V4 model**

- Improved message handling
  - Assign server message to controls with composite binding when visible/editable
- Request/data sharing for read-only list bindings, e.g. for value helps
- Re-read of specific data

Planned Q4/2020<sup>1</sup>

#### **Programming model**

- Additional APIs for enabling asynchronous loading behavior
- Asynchronous loading of XML content in fragments
- Support routing targets derived from dynamic model data

#### Modular core

- Reduce dependencies to DOM/jQuery
- Minimal core in lightweight scenarios

#### OData V4 model

- Improved message handling
  - Messages with multiple targets
  - Access to HTTP status codes of failed request messages
- Enable apps to keep data between lists and details synchronized
- Support visual grouping of aggregated data (expand/collapse)

**Planned Q1/2021**<sup>1</sup>

#### Modular core

#### **Programming model**

- Easier consumption of controller extensions
- Allow asynchronous custom fragment types
- Allow activation/deactivation of components (suspend/resume)

#### OData V4 model

- Deferred delete
- CRUD for collections (transient entities)

#### Product direction<sup>1</sup>

#### Modular core

- Startup bundling of self-contained apps
- Advanced bundling by code splitting

#### **Programming model**

 Support of TypeScript / ES6 language features for improved development efficiency, security, and standardization

#### **OData V2 model**

Tree: Insert nodes at sibling positions

#### **OData V4 model**

- Tree support
- Masking of sensitive data
- Start adopting OData V4.01
- Support for analytical table
- Event bubbling for patchSent and patchCompleted
- Deletion via context binding
- Actions in separate change sets

<sup>1.</sup> This is the current state of planning and may be changed by SAP at any time without notice.

## **OpenUI5 rendering**

## Product road map overview – Key innovations (1/3)

#### **Recent innovations**

#### **General UI control aspects**

- Enable semantic rendering
- Accessibility
  - Adopt extended attributes of ARIA 1.1
  - Support for app-level shortcuts
  - Invisible messaging service for specific scenarios (value state changes, tokens creation/deletion; dynamically added message strip; badges)

#### SAP Fiori 3

- Quartz theme round-offs
- UI integration cards
  - Loading placeholder for all card types
  - Specify content type of data request
  - Configure visibility of columns in table card
  - Configure visibility of groups in object card
  - Basic design-time support
  - Support badge indicator
  - Enable micro charts in list cards (experimental)
  - Enable dynamic filtering (experimental)
  - Adaptive cards (productive)

#### **General UI control aspects**

Planned Q4/20201

- Accessibility
  - ARIA 1.1 adoption (finalization)

#### SAP Fiori 3

- New control to visualize moments
- Ul integration cards:
  - Calendar (productive)
  - Calendar card with dynamic loading
  - Fetch data to populate filters (experimental)
  - Action to be triggered from component card/extension (experimental)
  - Enable configuration of minimal height of analytical cards
  - Allow custom colors for avatar/icon background
  - Extended design-time support

#### **General UI control aspects**

**Planned Q1/2021** 

- Leverage UI5 Web Components for control implementation (initial setup)
- Keyboard shortcuts visualization for composite controls
- "Empty field" behavior for base controls
- Accessibility: Verification for HTML output validity

#### **SAP Fiori 3**

- UI integration cards
  - Actions on list card items
  - Multiple attributes for list cards
  - Global filtering
  - Context awareness
  - Intent-based navigation

#### Product direction<sup>1</sup>

#### **General UI control aspects**

- Unified approach for focus handling
- Full text visualization for truncated texts

#### SAP Fiori 3

- Ul integration cards:
  - Card caching

<sup>1.</sup> This is the current state of planning and may be changed by SAP at any time without notice.

## **OpenUI5 rendering**

## Product road map overview – Key innovations (2/3)

#### **Recent innovations**

#### Layouts, floorplans, frameworks

#### **Basic UI elements**

#### **Action**

- Button:
  - Support badge indicator
  - Visualization of keyboard shortcuts
- File Uploader: Support HTTP PUT request method

#### Container

- Grid Container
  - Enhanced drag and drop capabilities
  - Improved focus visualization and handling
- Icon tab bar: Drop tab to nested tab
- Message view: Grouping functionality
- Navigate list item: Improved SEO capabilities

#### Planned Q4/2020<sup>1</sup>

#### Layouts, floorplans, frameworks

#### Layouts

- Grid List / Grid Container:
  - incremental keyboard navigation functionality
  - Incremental drag-and-drop functionality
- Wizard
  - Rendering mode configuration
  - Page mode to allow displaying steps as separate page (experimental)

#### **Basic UI elements**

#### Container

- Grid Container
  - Drag and drop into empty container
  - 2D keyboard navigation between grids
- Icon tab bar
  - Support badge indicator
  - Incremental drag-and-drop functionality
  - incremental keyboard navigation functionality

#### Product direction<sup>1</sup>

#### Layouts, floorplans, frameworks

Enhancements based on customer feedback

#### **Basic UI elements**

Enhancements based on customer feedback

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## **OpenUI5 rendering**

## Product road map overview – Key innovations (3/3)

#### **Recent innovations**

#### **Display**

New control: Badge Enabler

#### **User input**

 File upload: Enable file upload with HTTP POST/PUT request

#### **Date-time input**

- Calendar: Optimization of special dates
- Date/time picker: Align full-screen dialog in mobile
- Calendar: Set date as non-working date
- Planning calendar: Alignment of appointment details and lengths of appointments

#### Planned Q4/2020<sup>1</sup>

#### Display

- Bar: Configuration to align titles
- Progress indicator: Truncation support

#### **User input**

- Aligned behavior for input controls
  - Use Tokenizer as standalone control
  - Keyboard handling updates
  - Adopt invisible messaging service
- Combo box: Align behavior with input field
- Color Picker Popover: Introduce liveChange events
- Input: Set custom icon for value help
- Select: Configuration for value help icon

#### **Table**

- Resp. table:
  - Improved column width handling
  - Improved personalization

#### **Planned Q1/2021**

#### **Display**

Text: Flexible visualization of truncated text

#### **User input**

- Multi combo box: Support list range selection
- Multi combo box / Multi Input: Use invisible messaging service to announce token creation / deletion

#### **Date-time input**

- Dynamic Date Range control
- Date Time Controls
  - Date time field: Support strict parsing option
- Single planning calendar: Visualize special dates in Quartz theme
- Planning Calendar: Grouping of appointment

#### **Table**

 Tables: Optimized column width, column width automatism

#### Product direction<sup>1</sup>

#### **User input**

Aligned behavior for all input controls

#### **Table**

Support OData V4 analytical capabilities in tables

<sup>1.</sup> This is the current state of planning and may be changed by SAP at any time without notice.

## **OpenUI5 tools and documentation**

### Product road map overview – Key innovations

#### **Recent innovations**

#### Demo kit

- SEO improvements for site map and developer guide
- Multi language support: Extended coverage
- Samples: New category for pattern

#### Planned Q4/2020<sup>1</sup>

#### **Testing**

- Yeoman-based wizards for OPA tests
- Test recorder: usability enhancements

#### Demo kit

- SEO improvements for site map and developer guide
- Context search suggestions
- FAQ section for API pages
- Card explorer:
  - New troubleshooting page
  - New chapter on sizing and layouts
- Documentation: Update Container Padding documentation
- Samples: Update Object Status samples with latest messages and status icons

#### **Planned Q1/2021**

#### Demo kit

- Explanatory links for API access & visibility modifiers
- Documentation
  - Improve developer guide for controller extensions and leverage coding samples on how to correctly use the controller extension API
  - document 2D navigation & Drag&Drop handling in Grid Container
- Samples:
  - Provide edit capabilities in source code
  - Update used code syntax highlighter
  - Improve Time Picker samples

#### Product direction<sup>1</sup>

#### Demo kit

- Central instance for all releases
- Samples: Info fields for examples
- Enhancements based on customer feedback

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## **OpenUI5 – Complementary open source projects**

## Product road map overview – Key innovations

#### **Recent innovations**

#### **UI5 Tooling**

 More-comprehensive documentation of command-line interface (CLI) commands

#### **UIVeri5**

- Support regex in binding path matcher
- Import/export test params

#### **UI5 Web Components**

- New elements: Tree, Date Range Picker, Flexible Column Layout, Notification List Item/Group, Progress Indicator, Rating indicator, Side Navigation
- Introduce SAP Fiori 3 High contrast themes
- Support dynamic switch of languages and RTL settings
- Support multiple instances
- Improved documentation
- Additional tutorials
- API improvements

#### Planned Q4/20201

#### **UI5 Inspector**

 Visualize all loaded UI5 elements in addition to the control tree

#### **UI5 Tooling**

- Show control locator log in screenshot report
- Adapt project configuration to build only certain dependencies
- Adjust usage description of libraries
- Performance improvements

#### UIVeri5

- Support for browser restart and cleanup of login session
- Yeoman-based wizards

#### **UI5 Web Components**

- New element: Multi Input
- Dialogs: Enble configuration for dragging and resizing
- Set application assets path (e.g. icons, translation files, CLDR data)
- Enhancements for accessibility

#### **Planned Q1/2021**<sup>1</sup>

#### **UI5 Inspector**

OData payload visualization & tracing functionality

#### **UI5 Tooling**

- Improved extensibility to adopt to project-specific environments
  - Allow ResourceBundle to handle dynamically passed content

#### UIVeri5

 Execution of UIVeri5 tests in SAP Business Application Studio

#### **UI5 Web Components**

- New elements: Slider, calendar
- Enhancements for accessibility

#### Product direction<sup>1</sup>

#### **UI5 Inspector**

Quality and stability improvements

#### **UI5 Tooling**

 Establishing UI5 Tooling as an enterprise-grade development and deployment offering (e.g. reporting for Content Security Policy).

#### **UIVeri5**

Quality and stability improvements

#### **UI5 Web Components**

- Quality and stability focus: safety net integration
- Extension of the icon set through new icon families
- Integrate with SAP Business Application Studio
- Expand set of components

<sup>1.</sup> This is the current state of planning and may be changed by SAP at any time without notice.

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