

# **OpenUI5** Road Map

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**PUBLIC** 



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# **About SAP road maps**

Companies today are planning their digital journeys – transforming business models, reengineering business processes, and reimagining work.

SAP road maps highlight innovations that may help you plan and implement your digital journey. They span products relevant to lines of business in your industry and explain how our innovations may add value to your business.

In our road maps, you can learn about our innovations along four different timelines:

- Recent innovations for our products that have been launched in the past weeks or months and can already be purchased
- 2. Planned innovations for our products that are intended to be launched in the short term or midterm
- 3. Product direction, providing a long-term perspective on high-level development plans for innovations for our solutions inspired by your requirements
- 4. Product vision, providing a high-level and long-term business perspective on innovations for our products

# **Table of contents**

# Product overview

- Product description
- Product portfolio

# Vision and direction

- Key trends, customer needs, and customer needs
- Product areas of future investment
- Major updates on maintenance strategy
- Upcoming short-term and midterm innovations

# Product innovations

Detailed innovations

# **OpenUI5**

# **Product description**

OpenUI5 is an open source HTML5 framework designed to build cross-platform, responsive, enterprise-grade 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 SAP product standards
- Released under the Apache 2.0 license

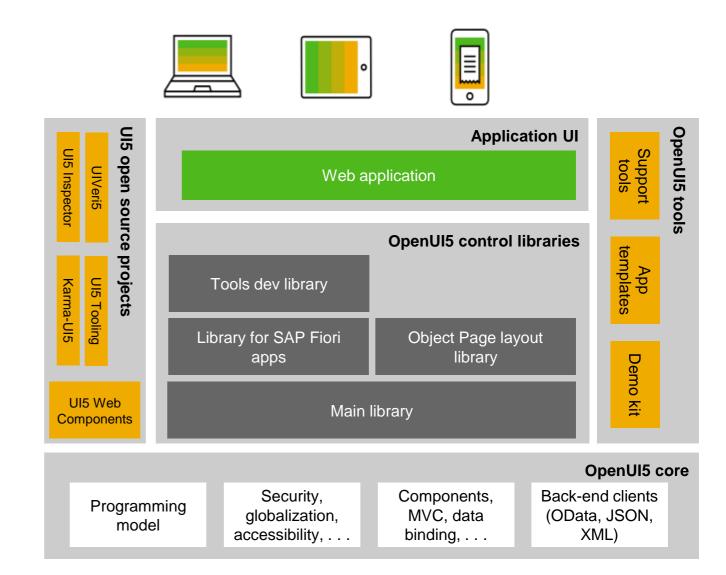


# **OpenUI5**



# **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.

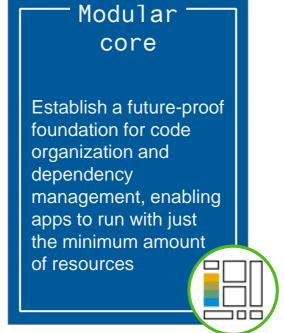


# **OpenUI5**

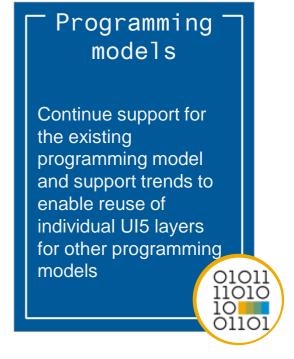
Upcoming short-term and midterm innovations

The UI5 Evolution project solves today's problems with being monolithic and the need for advanced framework, controls, and tooling by splitting the core, the rendering and controls, and the programming model into individual layers and enabling individual consumption.









This is the current state of planning and may be changed by SAP at any time.

# **OpenUI5** core

# Product road map overview – Key innovations

#### **Recent innovations**

#### Modular core

 Further modularize, refactor, and modernize the core code base

# **Programming model**

Improve OData V2 message handling

#### OData V4 model

- Create multiple entities without refresh
- Improve data access in controller code (part 1)

### **Planned Q3/2019<sup>1</sup>**

#### Modular core

 Additional complementary asynchronous APIs

# **Programming model**

- Initial support for shortcuts (commands)
- Enhance info propagation to reuse components
- Managed object model (public)

#### OData V4 model

- Improve data access in controller code (part 2)
- Case-insensitive filtering
- Deferred delete
- Error messages in changesets

# **Planned Q4/2019<sup>1</sup>**

#### Modular core

- Consistent and powerful feature configuration
- Startup bundling for self-contained apps

#### OData V4 model

- CRUD (create-read-update-delete) for collections in transient entities
- Support for analytical table:
  - Visual grouping
  - Filtering before aggregation
- Server-driven paging

# Product direction<sup>1</sup>

#### Modular core

- Advanced bundling through code splitting
- Extended universal core w/o dependencies to DOM/jQuery

# **Programming model**

Enable use of XML templating with routing

#### OData V4 model

- Masking of sensitive data
- Tree support
- Start adopting OData V4.01
- Support for analytical table:
  - Multiunit handling
  - Automatic type detection for aggregates
  - "Others" section for chart

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

# Product road map overview – Key innovations (1/6)

#### **Recent innovations**

### General UI control aspects

- CSP: Avoid dynamic JS code
- New color palette for industry-specific colors
- Accessibility: Jaws 2018 + Chrome support

#### SAP Fiori 3

- SAP Fiori 3 default theme round-offs
- CSS grid:
  - Support drag and drop (basic functionality)
  - IE compliance (round-offs)
- Grid container: Suitable for home pages
- Cards
  - Integration cards covering the basic card types
  - sap.f.Card control
- Shell bar
  - Released for public usage
  - Enable search capability
  - Enable custom text for logo image title
- Tab container: Support icon and text (experimental)

### **Planned Q3/2019<sup>1</sup>**

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

Provide semantic rendering for UI5 basic controls

#### **SAP Fiori 3**

- Adjust controls for SAP Fiori 3 design
- CSS grid:
  - Support drag-and-drop enhancements
  - Accessibility enhancements
- Grid list: Selection mode
- Cards:
  - Support resizing of cards
  - Analytical card enhancements
- Busy indicator: Redesign
- Dialogs: Design enhancements
- Avatar/Image controls enhancements

### **Planned Q4/2019**<sup>1</sup>

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

 Provide semantic rendering for UI5 complex controls

#### **SAP Fiori 3**

- Cards
  - Interactive cards
- Support resize of cards
- New card types based on feedback
- Avatar group control
- Layout paddings enhancements depending on screen size
- Notification list: SAP Fiori 3 redesign
- Accessibility themes for SAP Fiori 3
  - High Contrast Black
  - High Contrast White

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

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

Provide semantic rendering for UI5 controls

#### SAP Fiori 3

- SAP Fiori 3 dark theme
- Adjust controls for SAP Fiori 3 dark theme usage
- Cards to support progressive disclosure
- New card types based on feedback
- Avatar group control enhancements

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

# Product road map overview – Key innovations (2/6)

#### **Recent innovations**

# Layouts, floorplans, frameworks Layouts

- Dynamic page:
  - Improve UX for expanding/collapsing header
  - Enable sticky header content so tabs navigation is always visible
- Page (sap.m): Enable drop event

## **Floorplans**

- Object page:
  - Performance optimization through use of async views
  - Alignment with dynamic page: Snap header without scroll
  - Enhanced header design
- Comparison pattern:
  - New pattern to compare objects is added as sample in demo kit
- Wizard:
  - Enable drop event

#### Planned Q3/2019<sup>1</sup>

# Layouts, floorplans, frameworks Layouts

Dynamic page: Embed tabs in header content

# **Floorplans**

- Object page:
  - Merge section/subsection with title and toolbar in case of only one type of content
  - Optimize subsection toolbar behavior
- Wizard:
  - Visual indication for validated steps
- Comparison pattern: Enhancements based on stakeholders' feedback

## **Tool purposes**

Block layout: Enhance data binding

#### Planned Q4/2019<sup>1</sup>

# Layouts, floorplans, frameworks Layouts

- Dynamic page:
  - Animations enhancements
  - Header enhancements

# **Floorplans**

- Object page:
  - Semantic object page
  - Subsection toolbar enhancements
  - Header enhancements
- Wizard: Enhance animations
- Comparison pattern: Enhancements based on stakeholder's feedback

### **Tool purposes**

Responsive splitter: Paginator capability

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

# Product road map overview – Key innovations (3/6)

#### **Recent innovations**

# Basic UI elements Rasic I

#### Container

- Generic tile:
  - Improve flexibility
  - Increase amount of lines in content
- Panel: Enable drag-and-drop events
- Page: Enable drop event
- Vertical layout:
- Scroll container: Enable drop event

#### Data visualization

- Text area: Enable drop event
- Object status: Inverted object status option
- Avatar: Option to change fallback icon
- Avatar: Drag-and-drop enablement
- Image: Drag-and-drop enablement

#### **Basic UI elements**

#### Container

Grid: Performance optimization

Planned Q3/20191

Enhancements based on feedback

#### Data visualization

Enhancements based on feedback

# Display

- Enhancements based on feedback
- Object status: Accessibility enhancements

Planned Q4/2019<sup>1</sup>

# **Basic UI elements**

#### Container

Enhancements based on feedback

#### Data visualization

Enhancements based on feedback

## **Display**

- Access truncated text for label, text, and title controls
- Enhancements based on feedback

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# Product road map overview – Key innovations (4/6)

#### **Recent innovations**

#### Messaging

Message strip: Enable drag event

#### Toolbar

Overflow toolbar: Separators can go into overflow menu

#### User input

- Align behavior of input controls (round-offs):
  - Value state multiline
  - Suggestion highlighting
  - Provide property for min idwth
  - Suggestion popover unification
- Multi-input and multicombo box:
  - Enable drop event
  - Enhance accessibility
- Combo box and multicombo box: Suggestion list performance optimization
- Select:
  - Introduce value state enhancement
  - Enable drop event
- Radio button:
  - Enable drag event
  - Use SVG for rendering

# Planned Q3/2019<sup>1</sup>

#### Messaging

Message box: SAP Fiori 3 adjustments

#### Toolbar

Responsiveness enhancement when spacer is used in the toolbar

#### **User input**

- Align behavior of input controls (round-offs)
  - Search field: Adjustment in suggestions and value state
  - Mobile full-screen dialogs alignment
- (Multi) combo box: Multiline support for value state in dropdown
- Search field: Handling and semantic color
- Select dialog and table select dialog:
- Remember selection option
- Drag and resize option
- Combo box and multicombo box: Value state multiline support
- Popover: UX enhancements
- Dialogs UX enhancements: Full screen on mobile

### Planned Q4/2019<sup>1</sup>

### User input

- Align behavior of input controls
  - Autocompletion: Provide remove option for second column of suggestion
- Suggestion usability enhancements
- Autocomplete enhancements
- Value state text of inputs:
  - Emphasize text
  - Insert link
- Slider: Vertical alignment
- Quick view: Handling long texts

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

Product road map overview – Key innovations (5/6)

### **Recent innovations**

# **Planned Q3/2019<sup>1</sup>**

### **Planned Q4/2019**<sup>1</sup>

#### Lists and tables

#### **Table**

Responsive table, tree: Enable scrolling with keyboard

# Spreadsheet export

 Automatic/user-driven support for big decimal numbers

#### Lists and tables

#### Table

List/Tables: Highlighting of a single row

# Spreadsheet export

- Optional enabling of text wrapping
- Escape formulas

#### Lists and tables

#### **Table**

Analytical table: Support OData V4

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# Product road map overview – Key innovations (6/6)

#### **Recent innovations**

# **Date-time input**

- Single planning calendar:
  - Working hours visualization
  - Long titles/subtitles in appointments
  - Support of special days
  - Month view
  - Drag-and-drop support (create and resize appointment)
  - Creating appointments with keyboard (through interactive grid)
  - Visual improvement arrow indication for appointment longer and continues outside the visible area
  - Support of long text in appointments
  - Custom view support
  - Integration with planning calendar legend
  - Indication of special days in planning calendar legend
  - Content aggregation for PCRowHeader (experimental)

### **Planned Q3/2019**<sup>1</sup>

## **Date-time input**

- Month/year picker
- Date picker: UX alignment with month/year picker concept
- Planning calendar:
  - Grouping
  - Enable interval headers in all views
- Single planning calendar:
  - Desktop month view
  - Mobile month view
  - Support for working hours

#### Planned Q4/2019<sup>1</sup>

## **Date-time input**

- Planning calendar:
  - Pin rows
  - Header alignment according to oneperson calendar UX definition
  - Enable interval headers in all views
  - Expose row header control as public API
  - Enable custom colors for special dates
- Unified calendar:
  - Multiple months
  - Navigation by the month
- Date picker:
  - Handling of year 0

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# **OpenUI5 tools and documentation**

# Product road map overview – Key innovations

#### **Recent innovations**

## Support assistant

Rule set expansion

#### Demo kit

- Enhance object page samples
- Enhance single planning calendar samples for easier consumption by app developers
- Cards explorer included in tools section
- Create client search

### **Planned Q3/2019<sup>1</sup>**

### Support assistant

 Consumption support and rule set expansion

#### Demo kit

- Search engine optimization
- SAP Fiori 3 redesign
- Enhance overflow toolbar samples

#### **Documentation**

- Improve documentation based on feedback
- New semantic colors samples for input controls
- SAP Fiori 3 documentation

# **Planned Q4/2019**

### Support assistant

 Consumption support and rule set expansion

#### Demo kit

- Improve user experience based on feedback
- Provide edit capabilities in code samples

#### **Documentation**

- Improve documentation based on feedback
- Update documentation on control lifecycle
- Update documentation on laying out

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

## Support assistant

- Recording of app data
- Consumption support and rule set expansion

#### Demo kit

- Improve user experience based on feedback
- Provide edit capabilities in code samples

#### Documentation

 Improve documentation based on feedback

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

# **OpenUI5 – Complementary open source projects**

# Product road map overview – Key innovations

### **Recent innovations**

## **UI5 Web components**

- Extend components set
- Improve table component
- Provide styling capabilities (import, theming, CSS custom properties)
- Reduce technical debt
- Provide custom renderer
- Reduce bundle size

## **UI5** tooling

- Migration tools to adapt code bases
- Concise app testing setup (Karma)
- JSDoc generation
- Additional tooling types (such as component)

### **UIVeri5**

Istanbul code coverage generator

# Planned Q3/2019<sup>1</sup>

### **UI5 Web components**

- Enable authoring
- Documentation and tutorials
- Enhance the playground
- SAP Fiori 3 sample app
- Extend components set (busy indicator, batch, and others)
- Enhancements based on feedback

# **UI5** tooling

- Proxy support
- Enhance extensibility and flexibility
- Integration of initial features into SAP Web IDE

#### **UIVeri5**

Test snippet generation

# **Planned Q4/2019**

## **UI5 Web components**

- Enhancements based on feedback
- Extent component set based on feedback
- Screen reader support enhancements
- Enable extensibility
- Documentation, tutorials, and best practice apps

## **UI5** tooling

- Integration of more advanced features into SAP Web IDE
- Mock server for OData V4 model

#### **UIVeri5**

Usability improvements

# Product direction<sup>1</sup>

## **UI5 Web components**

- Integration with OpenUI5
- Enhancements based on feedback
- Extent component set based on feedback
- Integration with Web IDE

## **UI5 tooling**

- Integration of more advanced features into SAP Web IDE
- Mock server for OData V4 model

### **UIVeri5**

Usability improvements

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

# Related road maps

# OpenUI5 has intersections with the following solutions.

Related product road maps available on <a href="maps:sap.com/roadmaps">sap.com/roadmaps</a>:

- SAPUI5
- SAP Fiori
- SAP Web IDE
- SAP Cloud Platform
- SAP Gateway



# Thank you.



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