OpenUI5 Road Map

June 2020

PUBLIC

THE BEST RUN SAP

Legal disclaimer

The information in this presentation is confidential and proprietary to SAP and may not be disclosed without the permission of SAP. This presentation is not subject to your license agreement or any other service or subscription agreement with SAP. SAP has no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP's strategy and possible future developments, products, and platforms, directions, and functionality are all subject to change and may be changed by SAP at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement. This document is for informational purposes and may not be incorporated into a contract. SAP assumes no responsibility for errors or omissions in this document, except if such damages were caused by SAP's willful misconduct or gross negligence.

All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.

For all recent and planned innovations, potential data protection and privacy features include simplified deletion of personal data, reporting of personal data to an identified data subject, restricted access to personal data, masking of personal data, read access logging to special categories of personal data, change logging of personal data, and consent management mechanisms.

© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC

This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

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

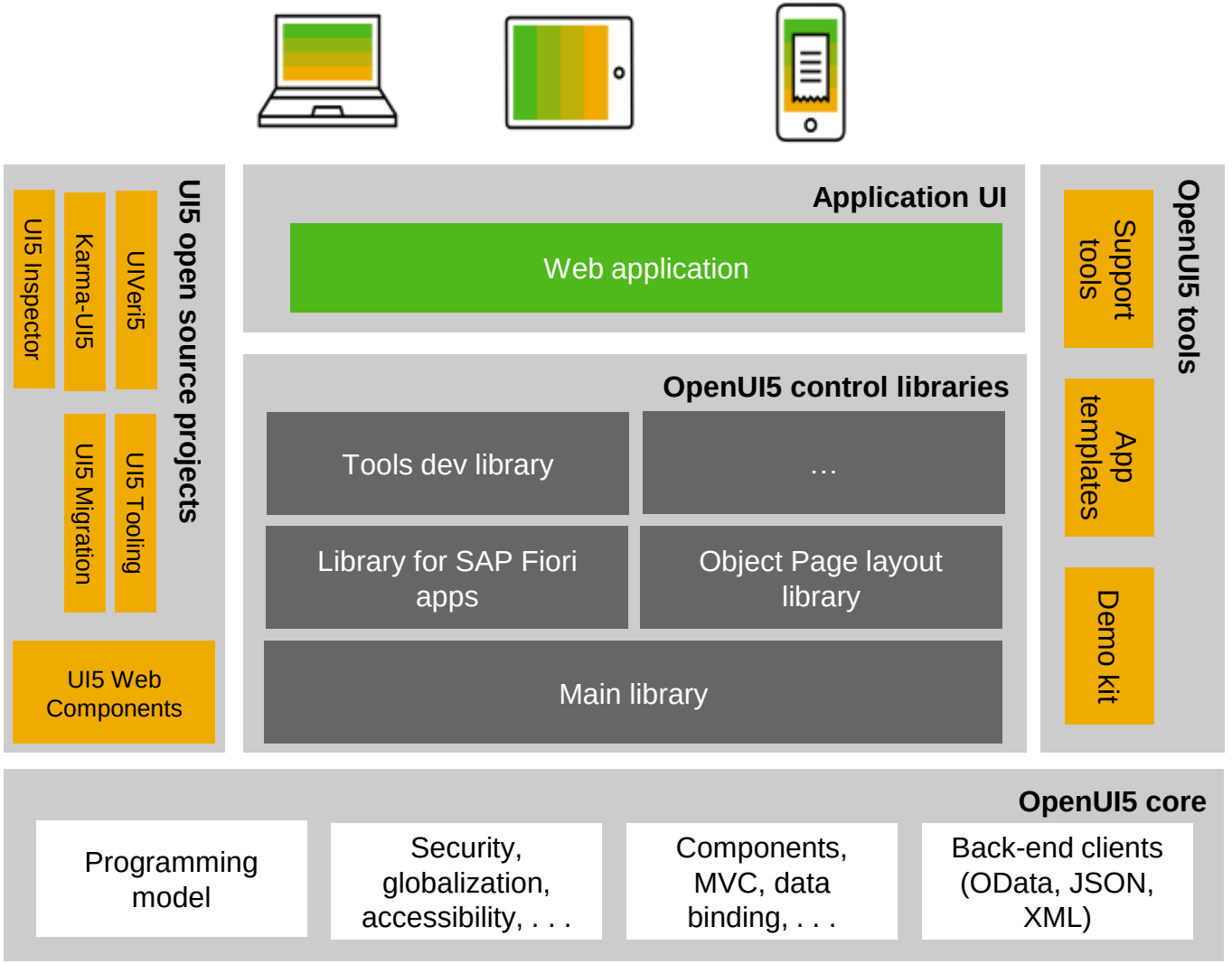
© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC

This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

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.



© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

OpenUI5 core

Product road map overview – Key innovations

Recent innovations

Programming model

- Configuration of supported locals and fallback
- Configuration of terminologies

Modular core

- Consolidated feature configuration

OData V2 model

- Messages with multiple targets
- Messages without target
- Security token can be requested earlier
- MetadataLoaded promise to fail with failed initial metadata request

OData V4 model

- Performance optimization of auto-$expand/$select and resume
- Coexistence of $$aggregation and auto-$expand/$select

Planned Q3/2020[1]

Modular core

- Extended universal core with reduced dependencies to DOM/jQuery

OData V4 model

- Request/data sharing for read-only list bindings, e.g. for value helps
- Support for analytical table: Visual grouping (part I)

Planned Q4/2020[1]

Modular core

- Minimal core in lightweight scenarios

Programming model

- Additional async APIs

OData V2 model

- Tree: Insert nodes at sibling positions

OData V4 model

- Support for analytical table:
  - Visual grouping (part II)
  - Support editing of single records
  - Multiunit handling
- Improved OData V4 messages
- Deletion via context binding
- Actions in separate change sets
- Messages with multiple targets

Product direction[1]

Modular core

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

Programming model

- Enable XML templating with routing
- Managed object model
- Support of TypeScript / ES6 language features for improved development efficiency, security, and standardization

OData V4 model

- Deferred delete
- CRUD for collections (transient entities)
- Tree support
- Masking of sensitive data
- Start adopting OData V4.01
- Support for analytical table
  - Automatic type detection for aggregates
  - “Others” section for chart
- Event bubbling for patchSent and patchCompleted

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

© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

OpenUI5 rendering

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

Recent innovations

General UI control aspects

- Enable semantic rendering with complex controls
- Accessibility
  - Invisible messaging service for assistive technologies
  - ARIA 1.1 role application adjustments and extended attributes support

SAP Fiori 3

- Enable HCB/HCW for Quartz themes
- UI integration cards
  - Loading placeholder for List Card
  - Action hooks for host environment
  - Destination support
  - Extended support MS Adaptive Cards
  - View switch and filtering features for card content area
  - Extension JS module for data retrieval, formatting and custom action

Planned Q3/2020[1]

General UI control aspects

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

SAP Fiori 3

- Quartz theme round-offs
- UI integration cards:
  - Loading placeholder for all card types
  - Basic design-time support
  - Support for micro charts in list card
  - Actions on List Card items
  - Support badge concept
  - MS Adaptive Cards finalization
  - Dynamic filtering enhancements

Planned Q4/2020[1]

General UI control aspects

- Generic control wrappers for UI5 Web Components
- Accessibility
  - ARIA 1.1 adoption (finalization)
  - Verification for HTML output validity

SAP Fiori 3

- UI integration cards
  - Extended design-time support
  - Calendar card
  - Card caching (initial scope)

Product direction[1]

General UI control aspects

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

SAP Fiori 3

- UI integration cards: Card caching (finalization)

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

© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

OpenUI5 rendering

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

Recent innovations

Layouts, floorplans, frameworks

Layouts

- Object page
  - API for subSection title visibility
  - Allow reusable fragments as content blocks
- Grid List / Grid Container: basic keyboard navigation

Basic UI elements

Action

- Button: New button type ‘Attention’ indicating a critical situation

Container

- Panel: Enlarge active area to include complete header area for expand/collapse
- Icon tab bar: Drag-and-drop support
- Tab container: enhancements for mobile usage

Planned Q3/2020[1]

Layouts, floorplans, frameworks

Layouts

- Grid List / Grid Container: extended keyboard navigation

Basic UI elements

Action

- Button:
  - Badge concept
  - Keyboard shortcuts; visualization in composite controls
- File upload: Support PUT requests

Container

- Icon tab bar
  - Badge concept
  - Enhanced drag-and-drop support

Product direction[1]

Layouts, floorplans, frameworks

- Enhancements based on customer feedback

Basic UI elements

- Enhancements based on customer feedback

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

© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

OpenUI5 rendering

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

Recent innovations

Display

- Avatar: Interactive badge support

User input

- Align behavior of input controls
  - Input focus handling UX update
  - Link in value state support for machine learning
  - Truncate single long token
- Color palette:
  - Show selected color
  - API to select a color
- (Multi) Input: Input sticky column headers for tabular suggestions

Planned Q3/2020[1]

Display

- Text: Full text visualization for truncated text
- Message strip: Support dynamic creation (Accessibility)

User input

- Aligned behavior for input controls
  - Use Tokenizer as standalone control
  - Keyboard handling updates
- Step input: Minimum sensible width

Date-time input

- Single/planning calendar
  - Alignment of appointment details and sizes of appointments
  - Allow time intervals less than 30 min

Table

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

Planned Q4/2020[1]

User input

- Aligned behavior for input controls: Common API for tokens text management
- Keyboard shortcuts visualization for composite controls
- Adopt invisible messaging service in Input suggestions
- Multi combo box: Support list range selection

Date-time input

- Date Time Controls
  - Date time field: Support strict parsing option
- Planning Calendar: Grouping of appointment

Table

- Support OData V4 analytical capabilities in tables

Product direction[1]

User input

- Aligned behavior for all input controls

Table

- Tables: Optimized column width, column width automatism

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

© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

OpenUI5 tools and documentation

Product road map overview – Key innovations

Recent innovations

Demo kit

- Localization functionality of documentation page and content
- Theme-ability enablement
- Multi language enablement
- Samples: Deprecated marker
- Demo app:
  - Enable SAP Fiori 3 theme
  - Team Calendar (new app)
- Documentation: ‘Since’ info added to enum values

Planned Q3/2020[1]

Demo kit

- Dynamic search suggestions
- Explanatory links for API access & visibility modifiers
- Multi language support: Extended coverage
- SEO improvements for site map and developer guide

Planned Q4/2020[1]

Demo kit

- Central instance for all releases
- Samples:
  - Provide edit capabilities in source code
  - Info fields for examples

Product direction[1]

Demo kit

- Enhancements based on customer feedback

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

© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

OpenUI5 – Complementary open source projects

Product road map overview – Key innovations

Recent innovations

UI5 Inspector

- Additional control data: Events and aggregations
- Boolean property toggle button

UI5 Tooling

- Availability of SAPUI5 distribution layer as npm packages
- New release (2.x)
  - Consumption of SAPUI5 via npm
  - Support for Node.js v10 or higher

UIVeri5

- Multiple spec files support in UIVeri5

UI5 Web Components

- UI theme designer integration
- Tab container: Create custom tab
- New components: Date Time Picker, Duration Picker and Upload Collection

Planned Q3/2020[1]

UI5 Inspector

- Visualize all loaded UI5 elements in addition to the control tree

UI5 Tooling

- Creation and maintenance of UI5 projects

UIVeri5

- Support for browser restart and cleanup of login session

UI5 Web Components

- New elements: Tree, Date Range Selection, Notification List Item/Group
- Support for all SAP Fiori 3 themes

Planned Q4/2020[1]

UI5 Inspector

- OData payload visualization & tracing functionality
- Enhance debugging capabilities

UI5 Tooling

- Improved extensibility to adopt to project-specific environments

UIVeri5

- Execution of UIVeri5 tests in SAP Business Application Studio
- Yeoman-based wizards for UIVeri5 tests in SAP Business Application Studio

UI5 Web Components

- Integrate with SAP Business Application Studio
- Integration into SAPUI5/OpenUI5 rendering layer

Product direction[1]

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
- Expand set of components

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

© 2020 SAP SE or an SAP affiliate company. All rights reserved. I PUBLIC
This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, or noninfringement.

Thank you.

THE BEST RUN SAP

Follow us

www.sap.com/contactsap

55743enUS (20/03)

© 2020 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

The information contained herein may be changed without prior notice. Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platforms, directions, and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, and they should not be relied upon in making purchasing decisions.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. All other product and service names mentioned are the trademarks of their respective companies.

See www.sap.com/copyright for additional trademark information and notices.

THE BEST RUN SAP