



ASUG Webcast

SAPUI5 Road Map

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PUBLIC



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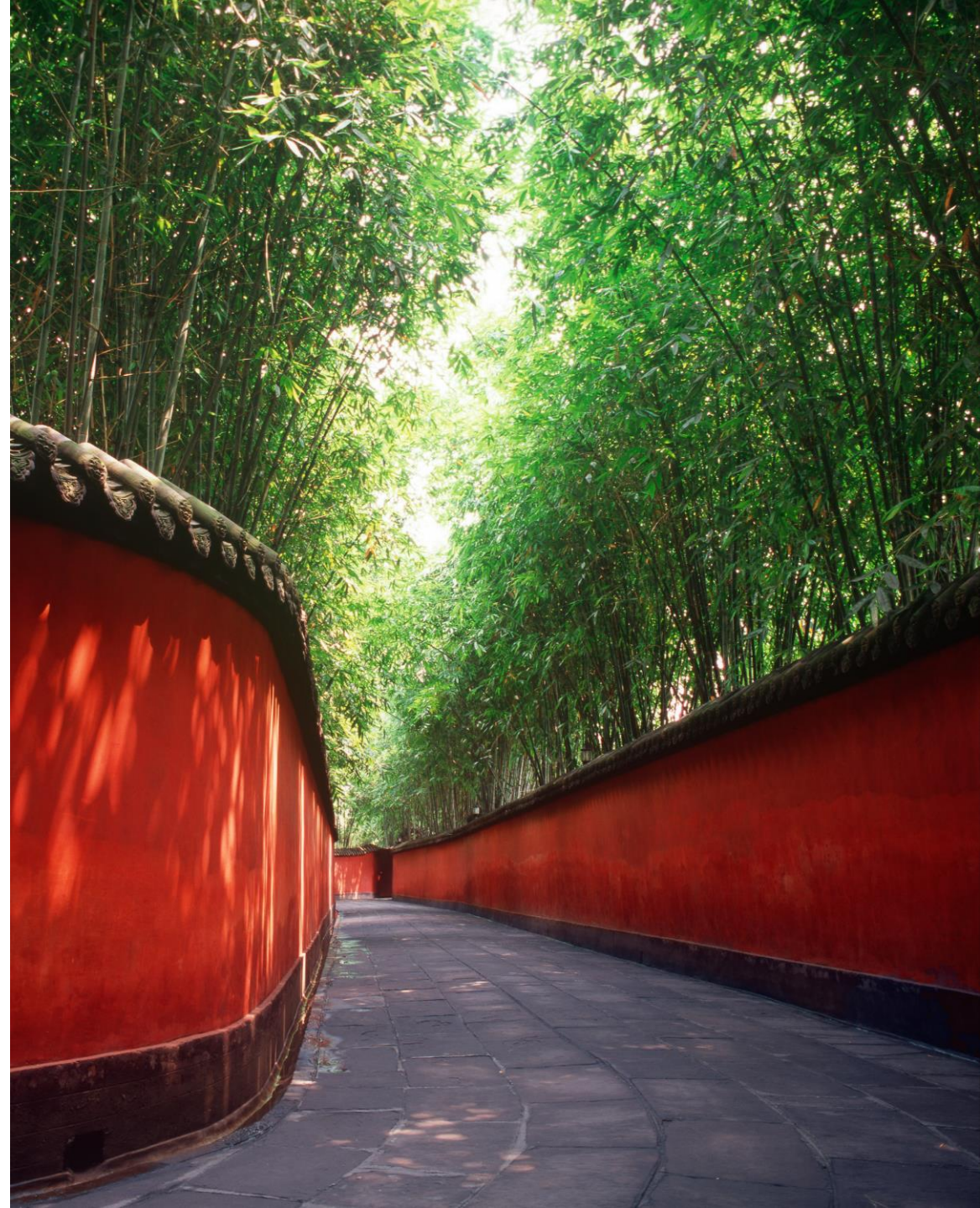
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Agenda – SAPUI5 Road Map

- SAP Fiori
- SAPUI5
- SAPUI5 Flexibility
- UI5 Web Components & Integration Cards
- Smart Controls
- Openness and Community
- SAP Business Application Studio



SAP Fiori



SAP Fiori – in a nutshell

SAP Fiori is our user experience for the intelligent enterprise, enabling users to get their job done in an easy and delightful way. It is the target user experience for each and every product developed at SAP. SAP Fiori can be implemented on various UI technologies and platforms.

SAP Fiori design system

- Design principles, design languages, guidelines & artefacts

SAP Fiori user experience provided by SAP products

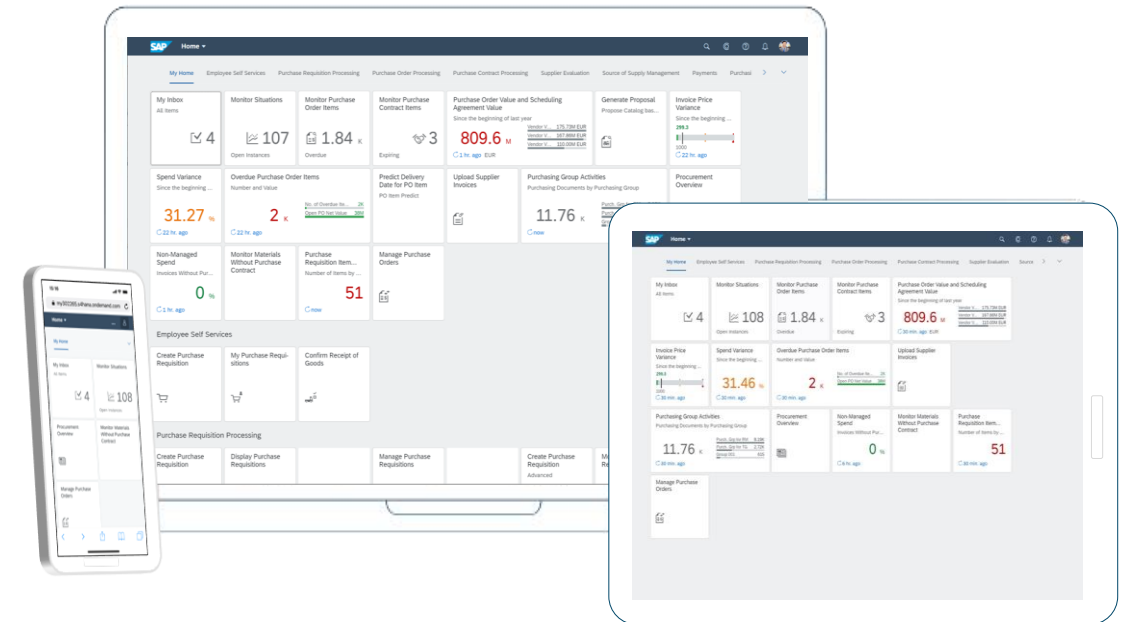
- Responsive apps and native ones
- Helping users get their job done easily and intuitively

SAP Fiori development tools

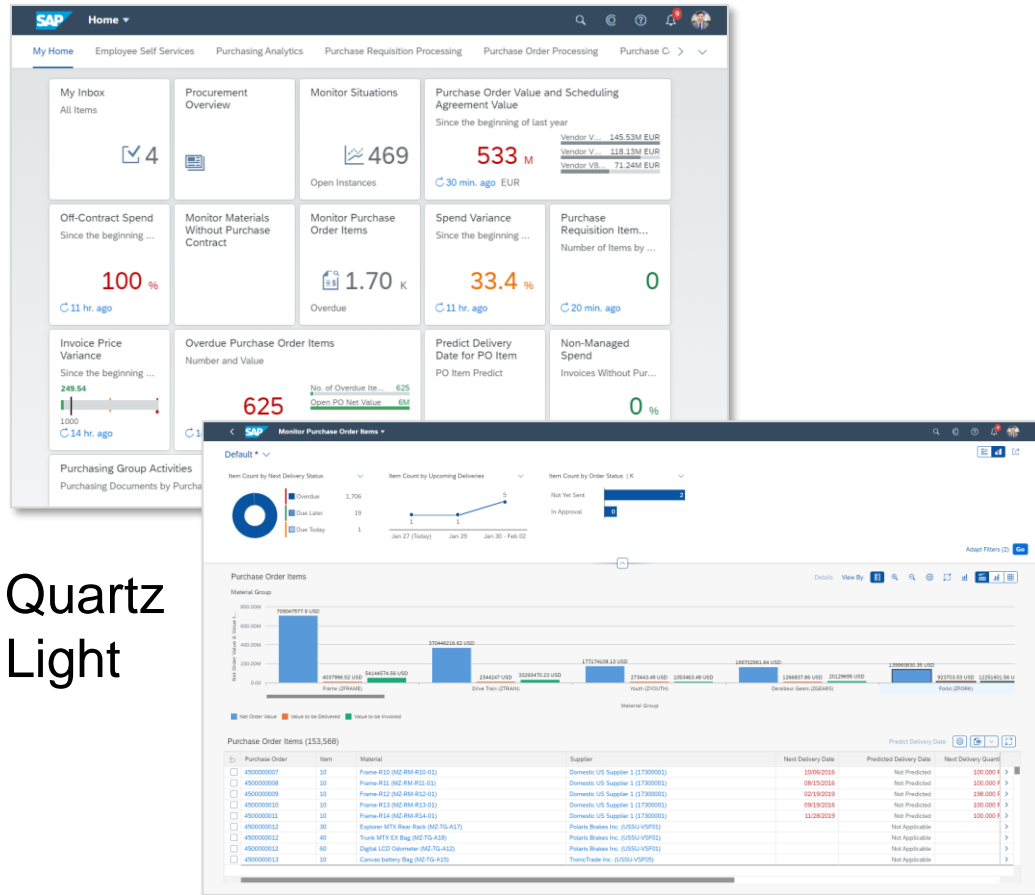
- Such as SAP Fiori tools, SAP Fiori for mobile SDKs, SAP Business Application Studio / SAP Web IDE

SAP Fiori technology

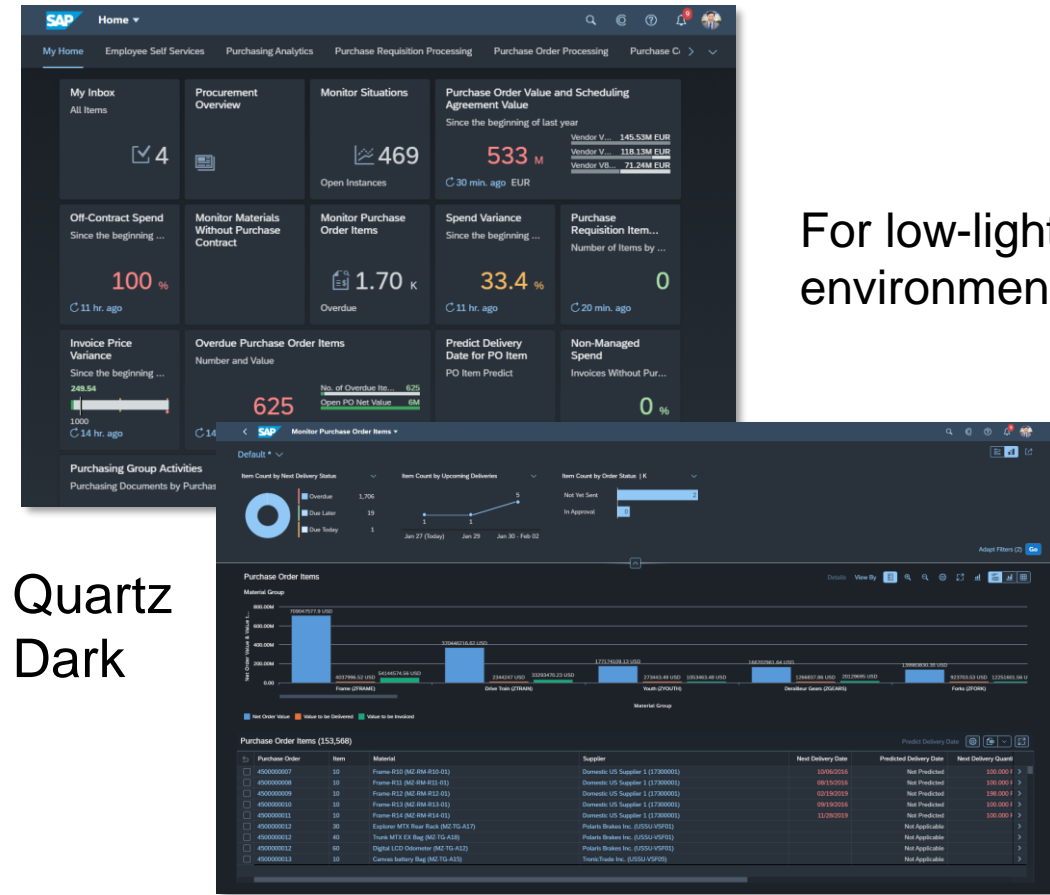
- Such as the SAP Fiori launchpad, SAP Fiori elements, SAPUI5



SAP Fiori 3 visual design: themes



Quartz
Light



Quartz
Dark

For low-light
environments

Starting with SAP S/4HANA Cloud 2002

Also available for accessibility: high contrast light and dark themes

Consistency

Previous shell designs

SAP Ariba



SAP Fieldglass



SAP S/4HANA



Digital Supply Chain
& Manufacturing



SAP Analytics Cloud



SAP Concur



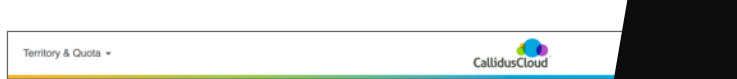
SAP SuccessFactors



SAP Customer
Experience (Sales)



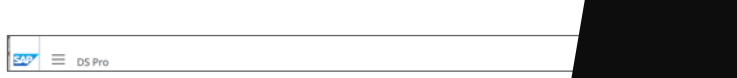
SAP Customer
Experience (Sales)



SAP Customer
Experience (Sales)



SAP Customer
Experience (Sales)



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

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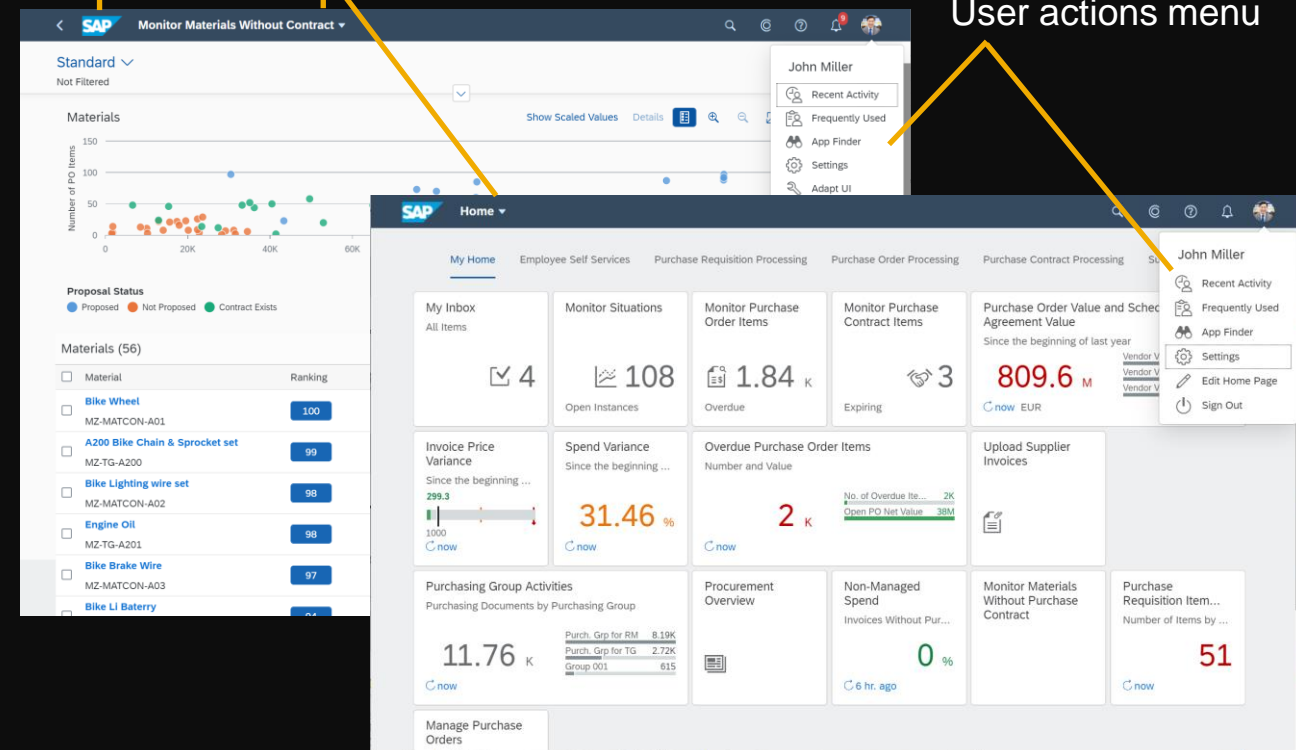
SAP Fiori 3

Logo replaces
Home button

Navigation

Product specific actions

User actions menu



SAP Fiori design system applies design principles independent of technology



Role-based

Designed for you, your needs, and how you work



Adaptive

Works across multiple devices and scenarios



Simple

Provides users only what they need



Coherent

Delivers one fluid, intuitive experience



Delightful

Makes an emotional connection



SAPUI5



iOS



Android



Other Technologies

SAPUI5



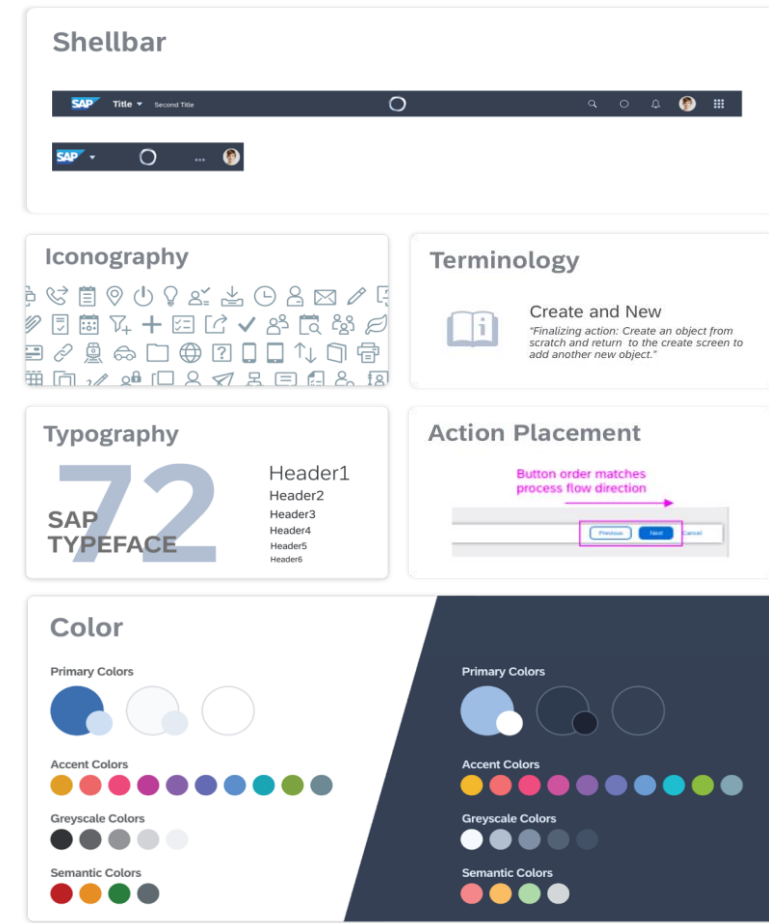
Good UX for hundreds of apps requires more than good app design

For hundreds of apps, users want:

- Consistency – visual and interaction
- Easy access to relevant apps
- Easy navigation between apps, business objects, etc.
- Common functions provided everywhere

Plus: IT requirements

- How to develop efficiently?
- How to extend efficiently?
- How to run efficiently?



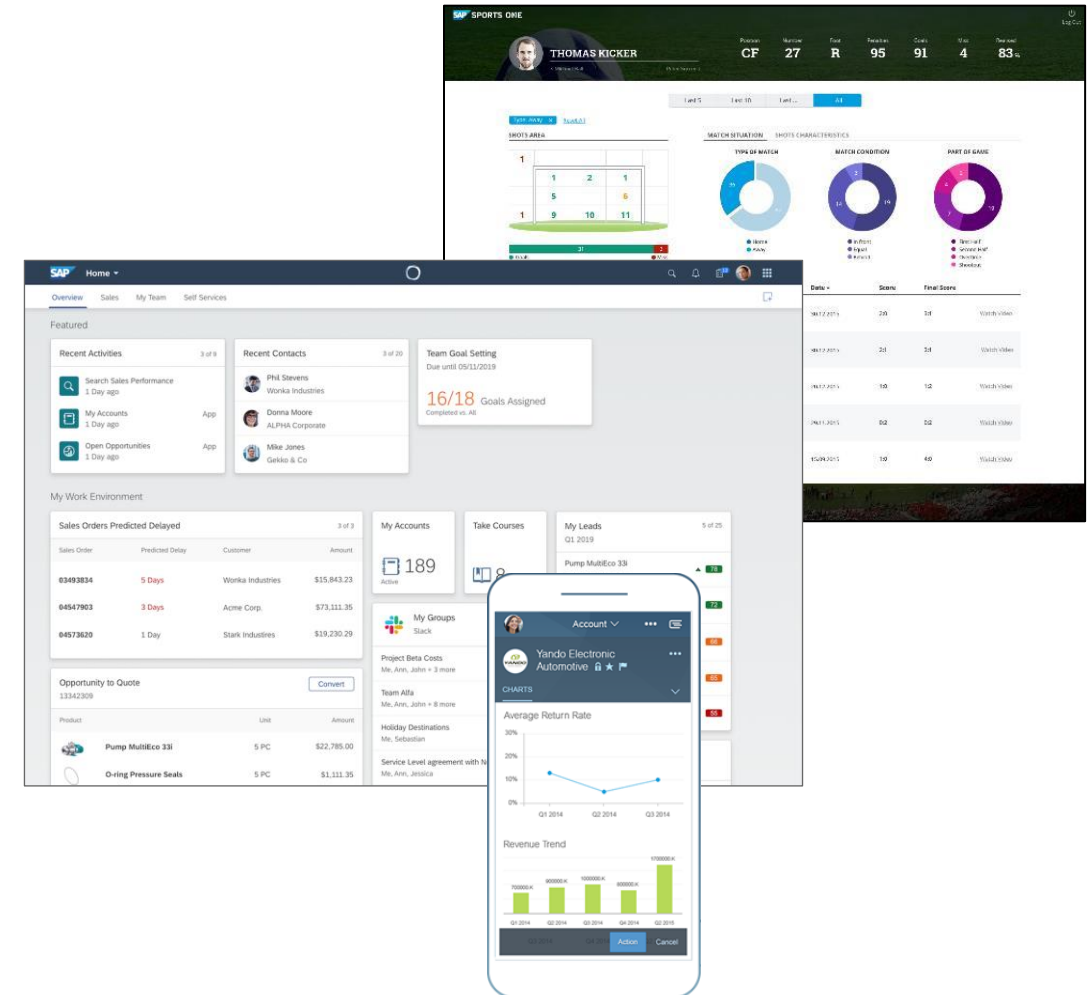
Visual Consistency

Building Modern Web Applications with SAPUI5

SAPUI5 is an HTML5 framework for creating cross-platform, enterprise-grade applications

As the reference UI technology for the SAP Fiori user experience, SAPUI5 provides:

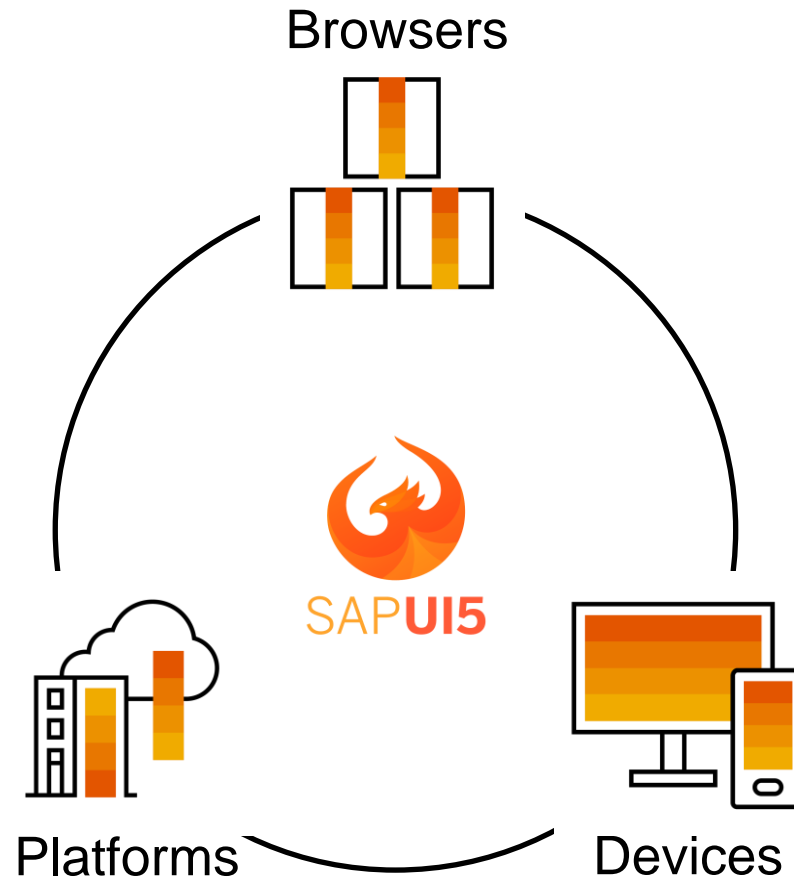
- A consistent SAP Fiori user experience across SAP solutions (and beyond)
- Efficient development for Web applications
- Easy integration into SAP's single point of entry
- Enterprise qualities like accessibility
- Generic adaptation capabilities that provide UI flexibility



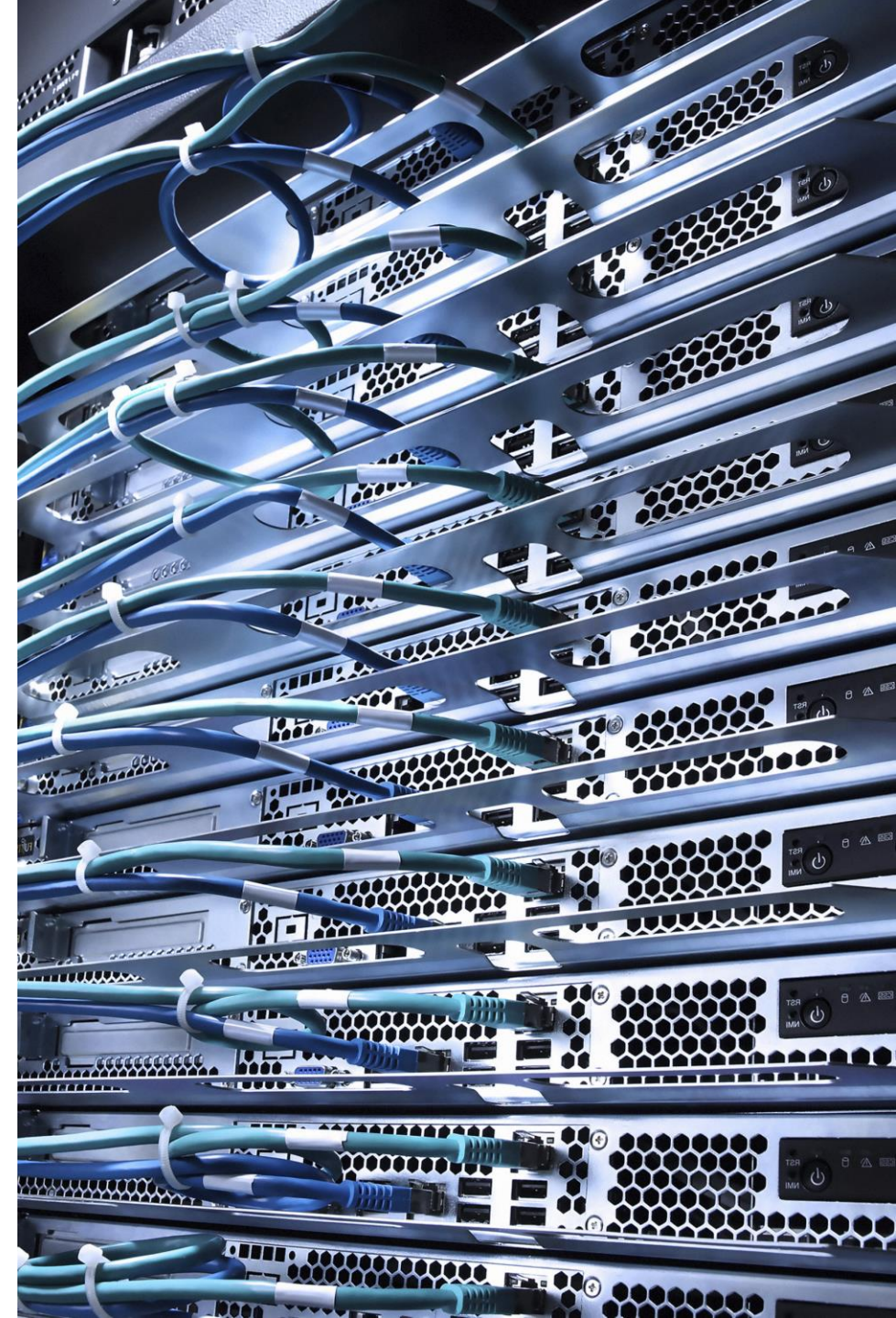
SAPUI5 applications

A single app implementation for all

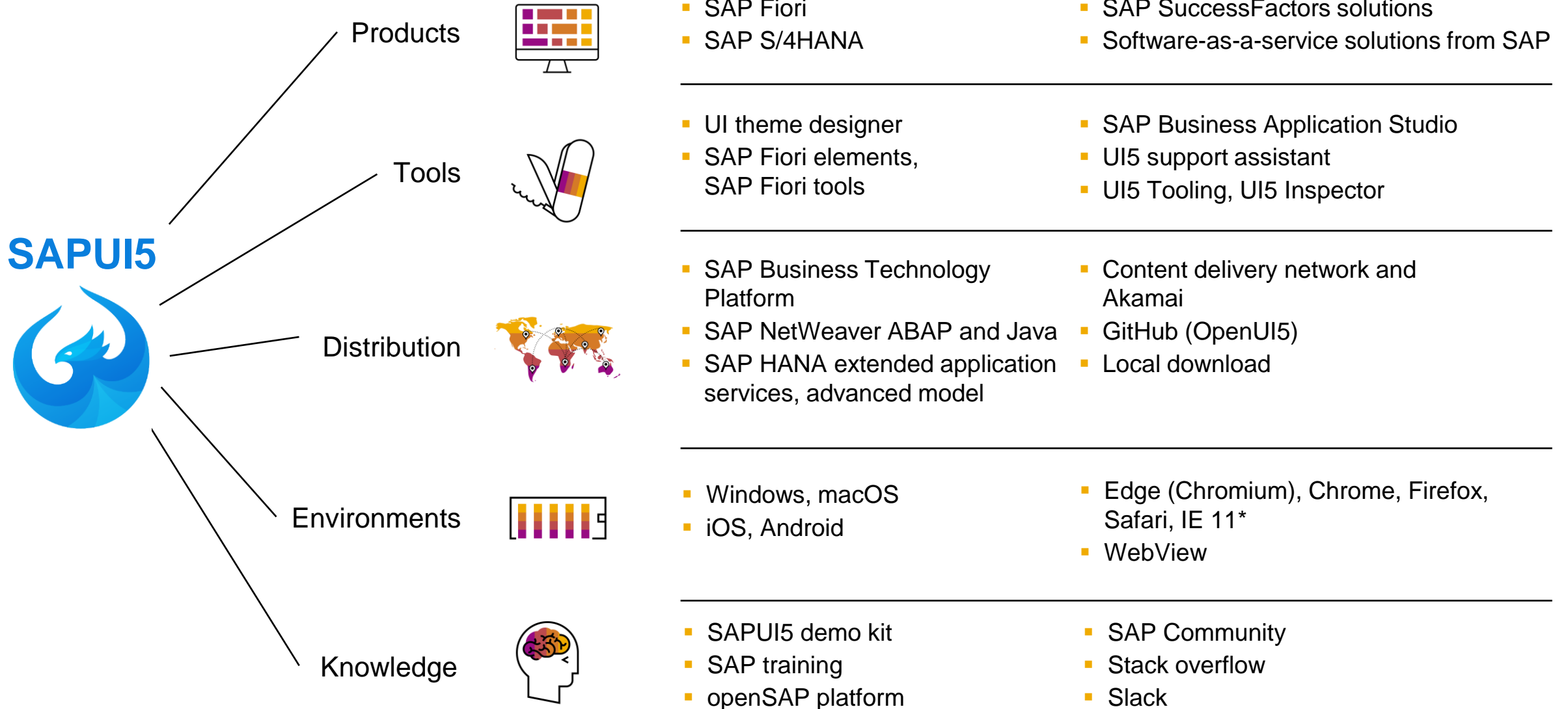
- Browsers
- Platforms
- Devices



[SAPUI5 Browser and Platform Support](#)



SAPUI5 is a broad ecosystem to scale Web app development



4 Simple Reasons why SAPUI5 is the Right Choice



Modern and Consistent SAP Fiori Experience for the Intelligent Enterprise

Development Experience



Stateful UI5 stack

SAP Business Application Studio

Open source tools

User Experience



SAP Fiori consistency

SAPUI5 flexibility

Accessibility

Adoption Experience



UI5 Web Components

UI Integration Cards

Common CSS



UI5 Technology Innovation

UI5 Evolution

Performance

Web Standards

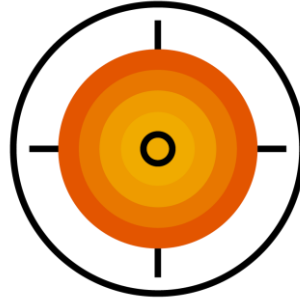
SAPUI5 Flexibility



SAPUI5 flexibility

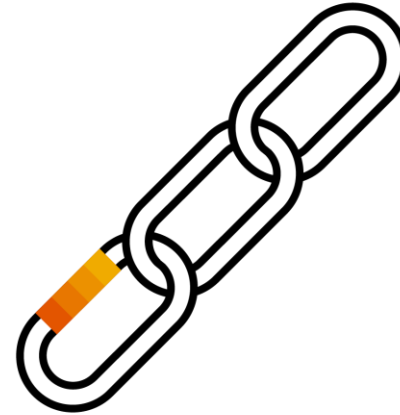
SAPUI5 flexibility provides an easy and cost-effective way to extend apps

Facilitates a **cost-efficient UI change process** for extending apps



Provides **intuitive low-code/no-code tooling** tailored to the needs of target personas

Ensures **lifecycle-stable and modification-free** UI changes based on deltas



Generic framework capability allows **massive scales** automatically to all UI5 apps

Value propositions

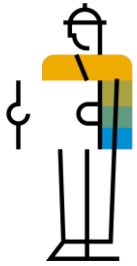
- Extend to adopt – more efficient way in contrast to building custom UIs from scratch
- Intuitive low-code/no-code process – even suitable for business users without programming skills
- Upgrade stable – further application and system upgrades without loss of extensions

SAPUI5 flexibility – Personas and their needs

Try it yourself! <https://ui5.sap.com/>

- Demo apps
- SAPUI5 flexibility demo apps

Developer



I want to

- Add and change complex business logic
- Add new business objects and apps
- Decouple software lifecycle of standard and extensions

“I develop new or change existing apps for everybody.”

Key user

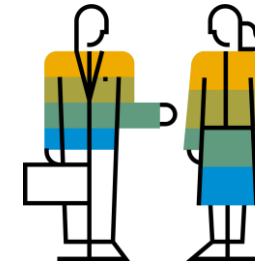


I want to

- Add custom fields
- Change field descriptions
- Change order of fields
- Add and manage views

“As a business expert, I adapt apps for my line of business.”

End user



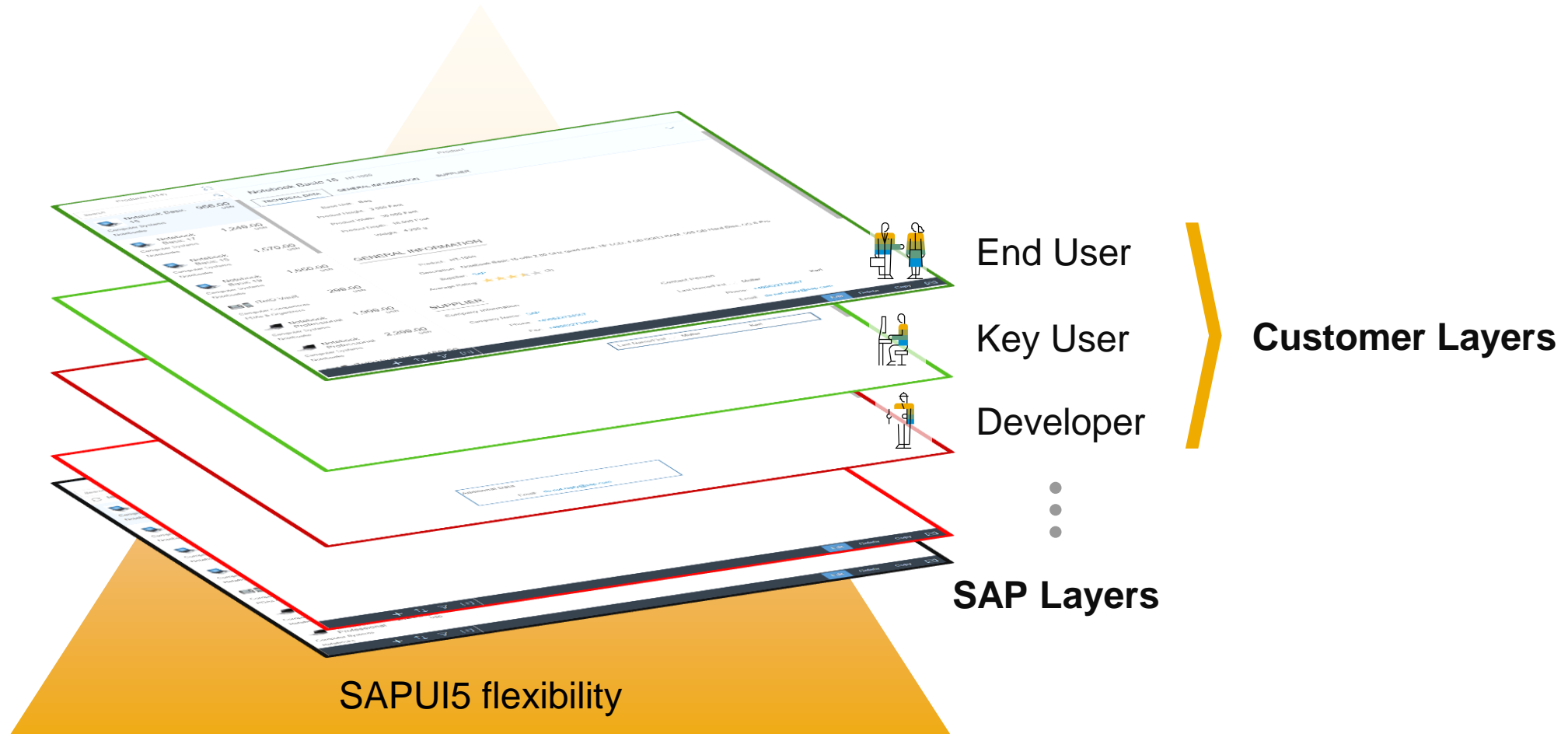
I want to

- Change order of columns in a table
- Hide sections and tabs
- Hide few apps on SAP Fiori launchpad

“I personalize apps for myself.”

SAPUI5 flexibility

Layering of changes



SAPUI5 flexibility for key users

Scenario & Value

UI5 flexibility for key users on SAP BTP, Cloud Foundry environment (CF)

Scenario

- Any SAPUI5 / SAP Fiori app on SAP BTP CF
- Customers who develop 'standard' apps and let their key users adapt these apps for individual LoBs / teams.
- Partners who want to develop and sell standard apps and let their customer's key users adapt these apps.

Value

- **End users** get tailored Fiori apps
- **Customers & partners:** Develop a single 'standard' app only -> efficiency, upgrade stability, cost saving

Available via CPEA, SAP Store, Partner TD&D, PE Build



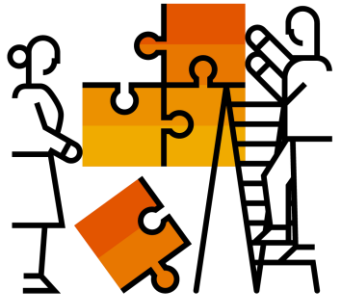
UI5 flexibility for key users

- [What is SAPUI5 Flexibility?](#)
- [Documentation: SAPUI5 Flexibility: Adapting UIs Made Easy](#)
- [Blog: Always at your service](#)
- [Video: SAPUI5 Flexibility – Key User Adaptation](#)
- [Service Documentation for app developer](#)
- [SAP Discovery Center - Service Catalog](#)
- [Understanding the nuts and bolts of SAP Fiori Development in the Cloud Foundry Environment](#)



SAPUI5 flexibility: Adaptation projects vs extension projects

Adaptation projects allow a developer to create variants of existing applications. What makes adaptation projects different from extension projects?



Adaptation project







- Supports SAP Fiori elements based applications and SAPUI5 freestyle
- Create app variants
- Generic framework feature
- No extension points needed
- Increased options
- Supports multiple layers

Extension project

- Does NOT support SAP Fiori elements based applications
- Extension via manifest configurations
- Some extension depend on applications
- Extend only in extension points
- Limited options (e.g. no extend of lifecycle methods)
- Only one layer

SAPUI5 flexibility

Availability on different platforms

		
 ABAP platform, SAP NetWeaver platform		
 SAP S/4HANA Cloud & SAP BTP, ABAP environment		
 SAP BTP, Cloud Foundry environment		
At runtime in SAP Fiori launchpad	 <ul style="list-style-type: none"> ✓ End user personalization ✓ Key user adaptation 	<ul style="list-style-type: none"> ✓ End user personalization ✓ Key user adaptation
At design time in SAP Business App Studio adaptation project	 <ul style="list-style-type: none"> ✓ Developer adaptation 	<ul style="list-style-type: none"> ✗ Developer adaptation (planning in progress) ✓ Developer adaptation

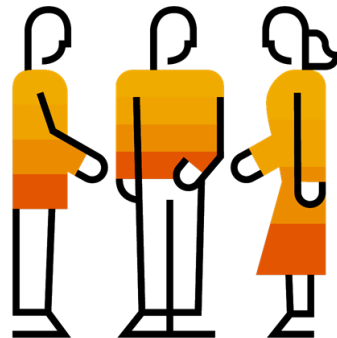
SAPUI5 Flexibility - Summary

Use SAPUI5 flexibility to deliver a tailored experience to your users

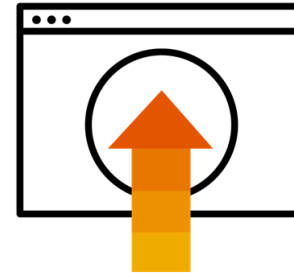
Adapt standard applications for
own use cases in a
cost-efficient way



Explore **intuitive tooling**
tailored for different personas



Benefit from upgrades of standard
applications while still keeping
your extensions functional thanks to
a modification-free approach



Gain more flexibility to **extend**
wherever needed compared to
classical “extension points”



UI5 Web Components



UI5 Web Components

Delivering SAP's user experience out-of-the-box

UI5 Web Components deliver SAP Fiori 3 design, enterprise-grade stability, accessibility, internationalization, and theming:

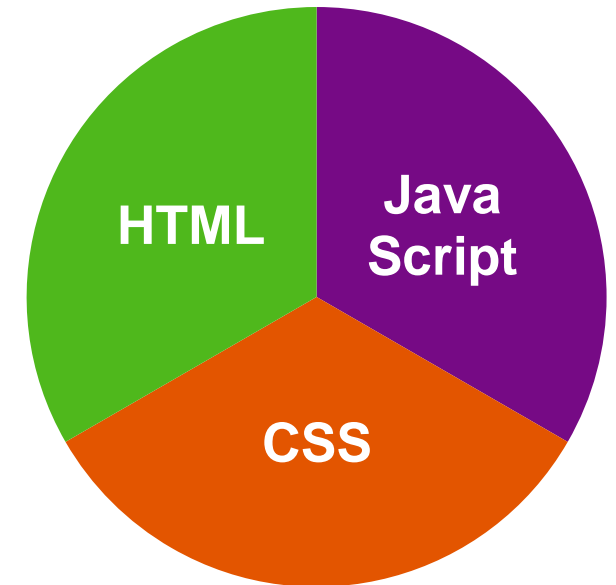
- Share fundamental UI5 qualities
- Provide easy consumption of UI5 elements
- Consume with a small footprint
- Enable Web developers

UI5 Web Components are reusable [Web Components](#) with:

- **HTML** structure and content
- **CSS** for the current theme and internationalization
- **JavaScript** to handle user interaction (behavior)

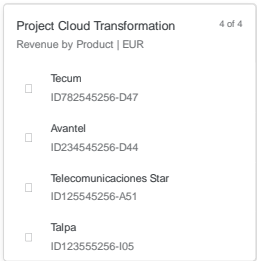
Applications implement UI5 Web Components via ubiquitous HTML:

```
<ui5-button id="myButton"> Click here! </ui5-button>
```



UI5 Web Components provide reusable controls without full SAPUI5 framework

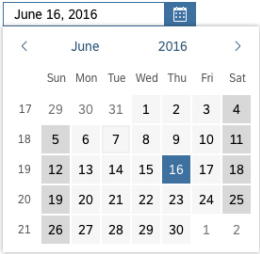
UI5 Web Components



Project Cloud Transformation
Revenue by Product | EUR

- ☐ Tecum
ID782545256-D47
- ☐ Avantel
ID234545256-D44
- ☐ Telecomunicaciones Star
ID125545256-A51
- ☐ Talpa
ID123555256-I05

ui5-card

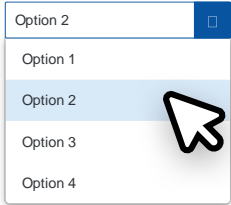


June 16, 2016

< June 2016 >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
17	29	30	31	1	2	3
18	5	6	7	8	9	10
19	12	13	14	15	16	17
20	19	20	21	22	23	24
21	26	27	28	29	30	1

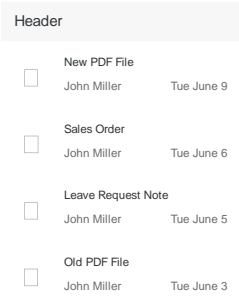
ui5-datepicker



Option 2

- Option 1
- Option 2
- Option 3
- Option 4

ui5-combobox



Header

- ☐ New PDF File
John Miller Tue June 9
- ☐ Sales Order
John Miller Tue June 6
- ☐ Leave Request Note
John Miller Tue June 5
- ☐ Old PDF File
John Miller Tue June 3

ui5-list



Programming Models



React



Angular



VueJS

UI5 Web Components are not a successor of SAPUI5, they are complementary

UI5 Web Components [home page](#)

SAPUI5

Integration cards expose application content in a consistent and unified way

UI integration with cards allows users to:

- Embed cards in different host environments, such as applications, dashboards, or HTML pages
- Use a variety of available card types
- Configure cards with a simple JSON configuration – No need to write code
- Create cards according to their needs, regardless of coding ability

[Card explorer](#): Learn, explore, and integrate cards

The screenshot displays the SAPUI5 Card Explorer web application. The main heading is "UI Integration with Cards", followed by the text: "The new way for developers, key users, and end users to create and share business content in an easy, declarative, and consistent way." Below this is a blue button labeled "Open Card Explorer".

The interface features several sample cards:

- Travel Budget**: A bar chart showing budget usage for Michael Adams, Donna Moore, and Richard Wilson. The total is 20.2 k, with a target of 50k.
- Projected Monthly Revenue**: A line chart showing revenue trends for July 2018, with a target of 150MM and a deviation of +37.6%.
- Card Adventure Ltd.**: A contact card for Julie Adams, Executive Assistant, including mobile, phone, email, and company details.

At the bottom, three key features are highlighted:

- Declarative**: Based on JSON schema. Design-time and runtime tooling support. Portable to any device and host environment. Rich feature set.
- Consistent**: SAP Fiori design language and customer theming. Accessible. All enterprise product standards included.
- Easy To Consume**: UI5, Custom Element and Web Component support. Included JSON-based data consumption. Configurable styling. Speech.

SAPUI5 Smart Controls



Smart Controls: The Foundation of SAP Fiori elements

Personalization Panels

View Settings

Columns Sort Filter Group

Search

☐ Select all (2/17)

☒ Name

☒ Product Category

☐ Company Name

☐ Currency Code

☐ Date

☐ Description

☐ Dimension Depth

☐ Dimension Height

Cancel Restore

Smart Form

Product ID: 1239102

*Link: Power Projector 4713

Category: PR

Description: A very powerful projector with special features for Internet usability, USB

856.49 EUR

Smart Field

Variant Management

Smart Filterbar

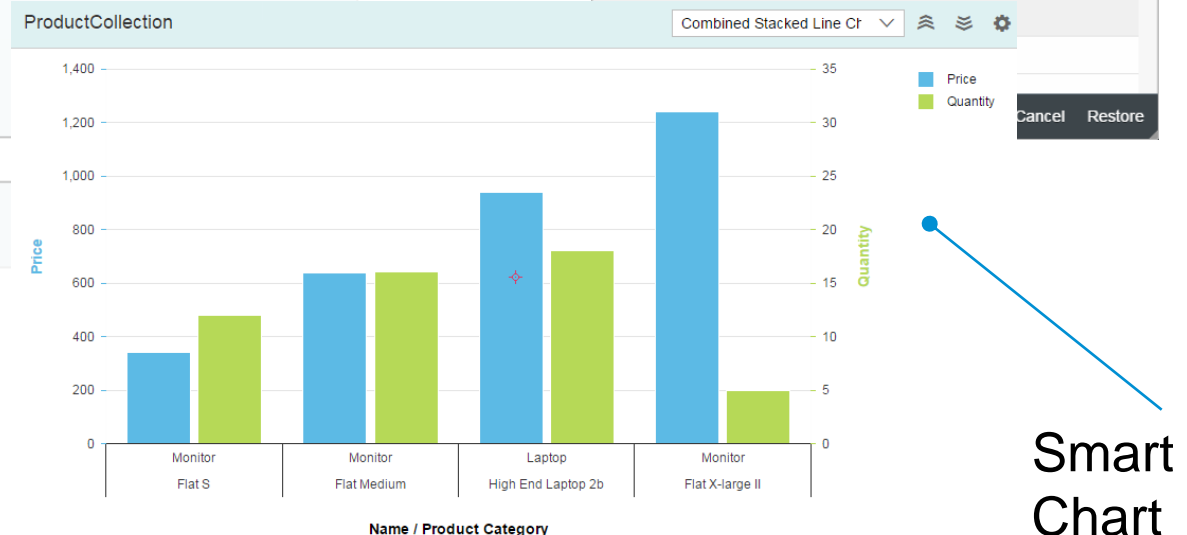
Standard Hide Filter Bar Filters (3) Restore Go

*Company Code: SAP A.G.test (00...)

*Fiscal Year: 2014

Account (113) Standard

my Buks	Line Item	Customer	Amount I...	Currency	Name	Count
<input type="checkbox"/>	0001	2	TORSTEN	485.00	EUR	torsten
<input type="checkbox"/>	0001	1	TORSTEN	230.00	EUR	torsten
<input checked="" type="checkbox"/>	0001	1	WILZBA...	2,530.00	EUR	Wilzbach 1
<input type="checkbox"/>	0001	3	WILZBA...	-50.00	EUR	Wilzbach 1
<input type="checkbox"/>	0001	1	ER_1	23,571.82	EUR	Elena Re...
<input type="checkbox"/>	0001	2	TILL12	-52,000.00	EUR	TILL12
<input type="checkbox"/>	0001	1	TILL12	66,000.00	EUR	TILL12
<input type="checkbox"/>	0001	1	HEIKO	58,709.00	EUR	Heiko
<input type="checkbox"/>	0001	1	HOFFMA...	3,479.00	EUR	Thomas
<input type="checkbox"/>	0001	1	12	13,350.00	EUR	Maier



Smart Table

New Generation of SAPUI5 Smart Controls

Demand

- making UI development fast and easy with reduced TCO
- reusable elements, out-of-the-box functionality, e.g. personalization or [recent values](#)
- Provide consistency and central innovations for end users

Solution: Metadata-driven 'smart' controls like smart table and the smart filter bar

- Powerful SAP Fiori elements floorplans boosting dev efficiency and consistency
SAP's recommended approach for building SAP Fiori apps
- Standalone SAPUI5 smart controls for other scenarios: Writing SAPUI5 freestyle applications leveraging powerful smart controls.

New library of SAPUI5 smart controls (as of now [experimental in OpenUI5/SAPUI5](#))

- OData V4 with new JSON format, filter/query options for reduced payload size
- SAP Fiori elements V4 floorplans evaluate annotations and orchestrate the new smart controls, consuming ABAP RESTful Application Programming Model (RAP), but also Cloud Application Programming Model (CAP)
- Protocol-agnostic architecture to additionally use other REST protocols, for instance JSON-based formats such as GraphQL or [FHIR](#) for exchanging [electronic health records](#) (see [openui5-fhir project](#))
- Usage in SAPUI5 freestyle environments, e.g. for non-Fiori / non-SAP apps

[Smart controls – A journey through history to create a perspective on future innovations](#)

[Flexible programming model for SAP Fiori elements \(OData V4\)](#)

SAPUI5 / OpenUI5

Openness and community



Building Modern Web Applications with SAPUI5

OpenUI5 is the open-source SAPUI5

Since it is the core of SAPUI5, both frameworks can be referred to as “UI5”.

OpenUI5:

- Can be consumed via Content Delivery Network, npm* packages, or GitHub
- Comes with SDK, documentation, tutorials, samples/best practice apps, demos, and online courses
- Is built and maintained by SAP and the open source community, leveraging SAP Community, Slack, and Stack Overflow

OpenUI5: <https://openui5.org/>

*node package manager



UI5 Community



<https://openui5.org/ui5con>

Twitter: @UI5con

[UI5con ON AIR 2021](#)

Recordings on [YouTube playlist](#)

UI5con

learn.explore.connect.

Community Conferences around OpenUI5 / SAPUI5

Past Events

UI5con ON AIR 2021

ON AIR 
UI5con

June 16-17th, 2021

SAPUI5 Knowledge

- <https://ui5.sap.com/> with getting started, tutorials,...
- <https://openui5.org/>
- [UI5 Web Components](#)
- [UI Integration Cards](#)
- [SAPUI5 Community Topic Page](#)
- [SAPUI5 communities](#)
- [SAPUI5 Road Map](#)
- [openSAP: Developing Web Apps with SAPUI5](#)
- [openSAP: Evolved Web Apps with SAPUI5](#)
- [openSAP: Developing and Extending SAP Fiori Elements Apps](#)

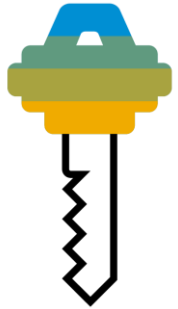


SAP Business Application Studio



SAP Business Application Studio

Value Proposition



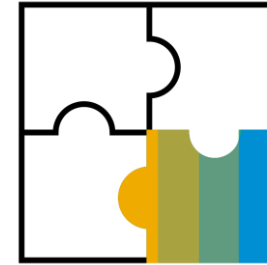
Turn-key Solution

Instantly spin-up pre-packaged environments with tools and runtimes, tailored for developing SAP business applications



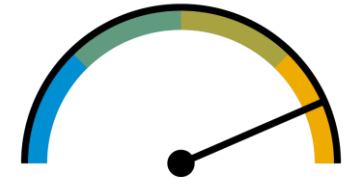
Simplified Development

Enjoy a seamless end-to-end development environment with a desktop like experience in the cloud
- available anywhere, anytime



Integrate SAP Solutions

Build smarter, more intelligent applications integrating SAP services, technologies, and solutions to cater for your business needs

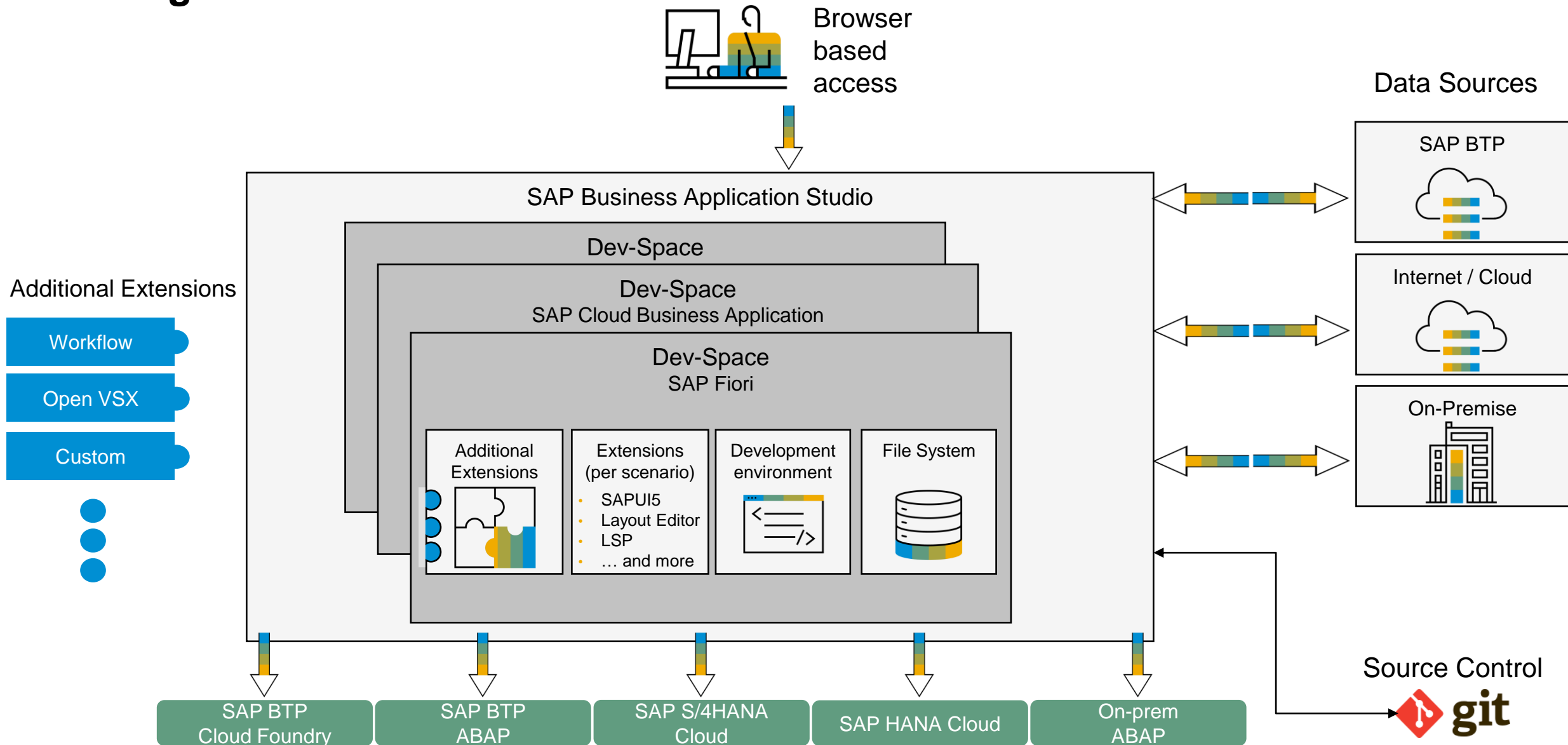


Ultimate Productivity

Accelerate app development using wizards, optimized code & graphical editors, local test run & debug, terminal (CLI) access, quick deployment, and more

SAP Business Application Studio is built on Open Source and leading industry standards

The Big Picture



SAP Business Application Studio vs. SAP Web IDE

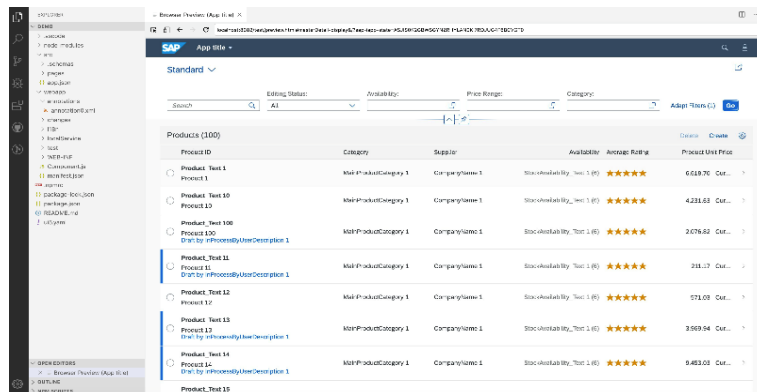
For more information:
see [blog post](#)

	SAP Business Application Studio	SAP Web IDE Full Stack
Available on	SAP BTP, Cloud Foundry environment	SAP BTP, Neo environment
Deployment target	SAP BTP, Cloud Foundry environment, on premise ABAP, SAP HANA Cloud SAP BTP, ABAP environment, SAP S/4HANA Cloud	SAP BTP, Cloud Foundry environment, on-premise ABAP, SAP HANA Cloud SAP BTP Neo environment
Solution	Instantly spin-up pre-packaged isolated environments /Dev-spaces (“virtual machine on the cloud”) with tools and runtimes, tailored per business scenario which provide more control over the environment . Create custom dev space for a team of developers*	Generic workspace that contains many tools. Some tools are not necessarily required for the target business scenario
Experience	Embraces VS Code experience , provides the ability to add custom extensions Desktop like experience in the cloud including local test, run & debug, terminal (CLI) access & superior code editors	SAP proprietary experience Browser based experience
Support for various personas	<ul style="list-style-type: none">• Better support for cloud & full stack developers with improved code editors for Java and Node.js• Web/mobile developers• Additional personas can be supported with a suited experience per persona	<ul style="list-style-type: none">• Cloud and full stack developers – partial• Web/mobile developers• Similar experience for all personas
Open Source & standards	Based on open source & leading industry standards Provides possibility to quickly integrate capabilities and technologies that exist in the market	Uses open sources but majority is proprietary SAP proprietary framework with limited number of extensions

Visual Studio Code and SAP Business Application Studio

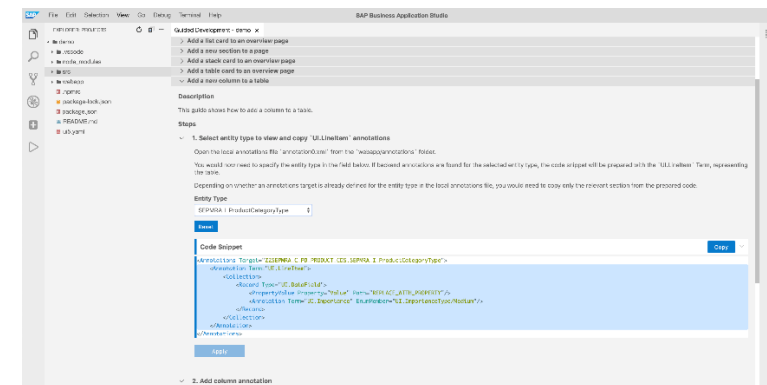
Visual Studio Code

- Provides development flexibility with **offline** capabilities
- Features a **developer-controlled**, highly configurable development environment
- Allows access to thousands of extensions from the Visual Studio Code marketplace
- Is part of a fast growing open source community



SAP Business Application Studio

- Provides a **managed**, preconfigured, **hosted environment**, optimized for SAP application development (including client and server side extensions).
- Can be **centrally administrated** with tools repositories, systems access and company policies
- Integrates with existing SAP solutions, systems & services
- [Easy access to Visual Studio Code-compatible extensions from open source Theia marketplace](#)
- Offers a remote development with VSCode desktop client*



SAP Fiori tools makes it easier to build SAP Fiori elements apps

Uses a **wizard-style** approach

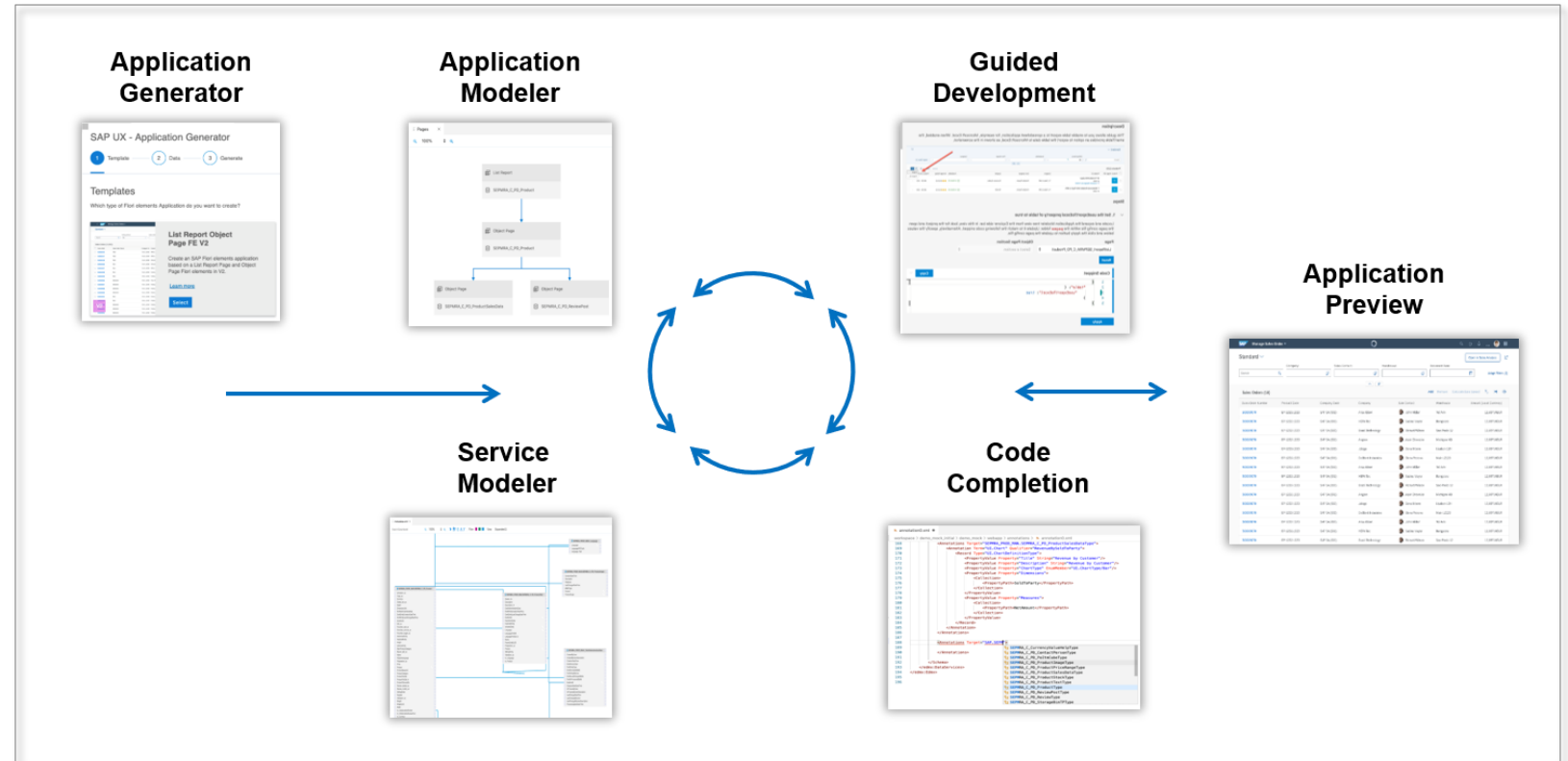
Ensures **consistent** app structure

Provides **step-by-step** development instructions

Reduces effort and skill level required for creating annotations

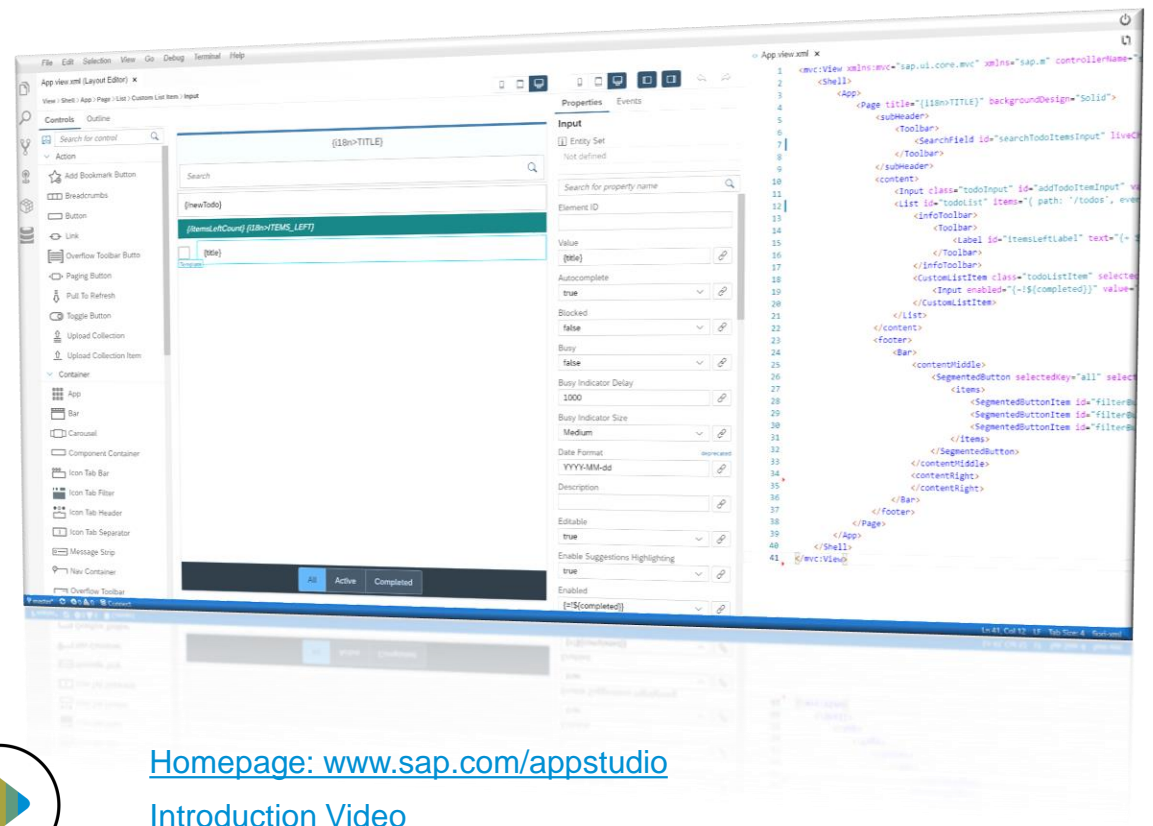
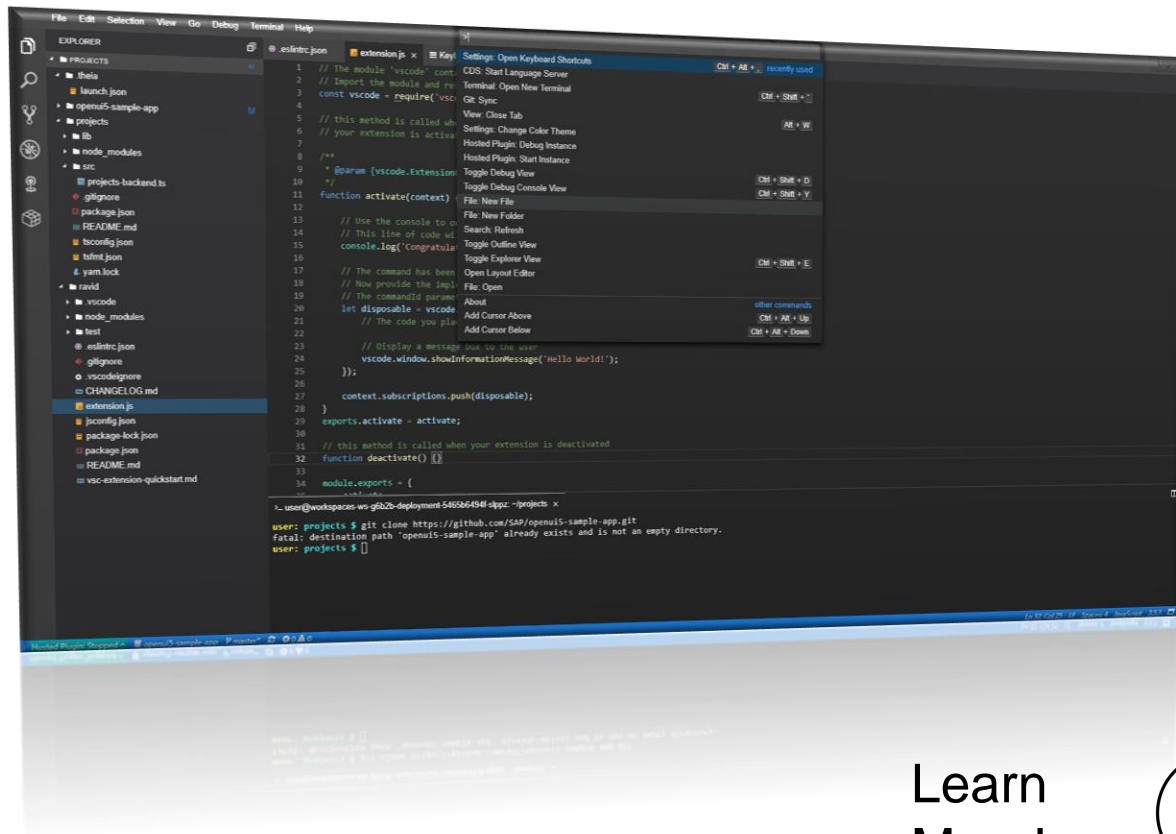
Improves **code consistency**

Simplifies app maintenance



Recommendations for customers

Move to Business Application Studio



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Recommendations

1. Tutorial for SAP Business Application Studio
[Develop an SAP Fiori App Using SAP Business Application Studio](#)
2. Tutorial for SAP Fiori elements / SAP Fiori tools
[Create a List Report Object Page App with SAP Fiori Tools](#)

Thank you.

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