Simplify Development of SAP Fiori Apps with OData V4

Christian Kolbowski, Marcel Waechter, Nicolas Lunet, Tobias Queck, SAP UX Engineering
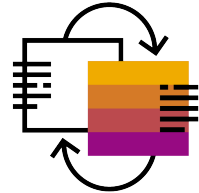TechEd 2020 Session 1229

THE BEST RUN **SAP**

SAP Fiori elements boosts SAP Fiori development efficiency

Developer Productivity

- Focus on **business logic** and back-end services
- Write **less UI code**
- **Reduce** development and maintenance **costs**

UX Consistency

- Comply with the **latest SAP Fiori design** specification
- Deliver a **centrally managed** user experience
- Include **uniform** layout, navigation, search, filtering, and more

Enterprise Readiness

- Deliver **high quality** SAPUI5 applications to end-users
- Ensure **stable**, **optimize** UI code out of the box
- Include **standard enterprise features** (accessibility, mobile, translation support, …)

Standard page types increase developer productivity

Most use cases in the enterprise space involve providing an **overview**, **lists** of business objects and management of these business **objects**.

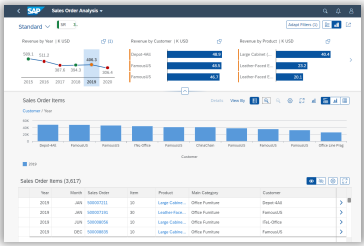Provide **overview** on business relevant data

Overview page
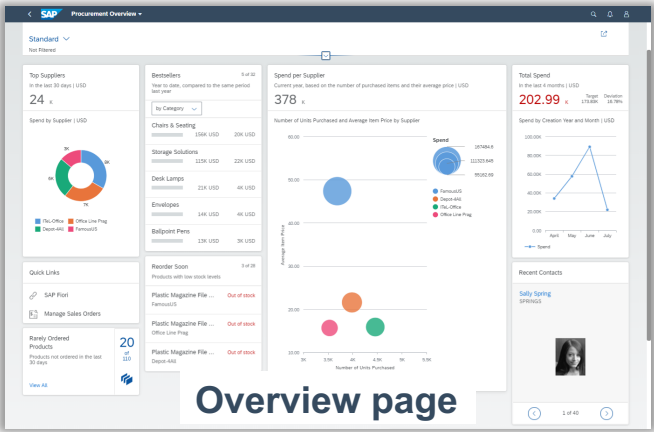
Work on a **list** of business objects

List report page

Manage individual business **objects**

Object page

Analytical list page

Worklist page

SAP Fiori elements provides enterprise-ready apps out of the box

Variant Mgmt

Search

Data Lists

Filtering

Actions

Sorting

Personalization

Export to Excel

Editing (incl. draft mgmt.)

Navigation

Object Details

Additional enterprise readiness features included are:

- Accessibility
- Internationalization
- Mobile compatibility
- Responsiveness
- Performance optimizations
- Integration
- Security checks
- Lifecycle stability
- Test automation support
- …and more

OData annotations fine-tune how the app looks and behaves

Behavior

"This entity can be edited"

Consumption hints

Which fields allow a human to identify the entity?

Which fields are clickable?

Semantics

"This is the currency for the amount"

Semantics

"These fields shall be displayed together in a form"

Semantics

"This is an email address"

SAP Fiori elements now also supports OData V4

OData V4 (Open Data Protocol) is an **ISO/IEC** approved **OASIS** standard, which makes it the **technology of choice for enterprise applications**

SAP Fiori elements floorplans are **OData protocol agnostic,** keeping the look & feel consistent

We plan to **deliver** support for OData V4 in a **phased approach**

- List report / object page
- Initial support for the existing overview page
- Ability to inject custom code (pages, sections, actions, columns) into SAP Fiori elements apps as extensions

TODAY

- Worklist
- Analytical list page
- SAP Fiori elements building blocks** that can be used in extensions to ensure UX compatibility and lifecycle stability
- Leverage more and more OData V4 advantages such as $apply for aggregation, deep expand, $filter functions and many more

PLANNED*

*This is the current state of planning and may be changed by SAP at any time without notice.
**'wrapper' around UI5 Controls binding it to an OData entity leveraging annotations.

SAP Fiori elements application architecture provides flexibility
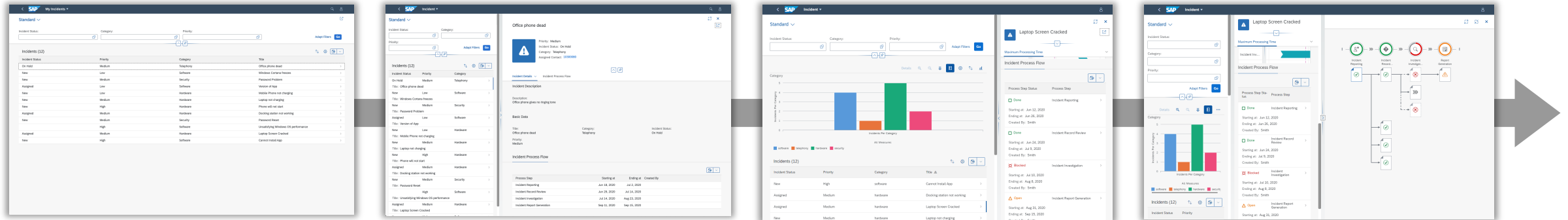
Start with the generated app based on a standard page type

Configure the app, e.g. apply the **flexible column layout**

Enhance the app with annotations, as needed

Extend the app with SAPUI5 code, if necessary

SAP builds over 80% of new apps for SAP S/4HANA using Fiori elements

SAP Fiori elements prioritizes efficiency over flexibility

Freestyle SAPUI5		SAP Fiori elements
Flexibility	**Overall approach**	Efficiency
Freestyle designs	Design requirements	SAP templates
Web Development	Development knowledge	Annotations
Own coding, own UI logic	App ownership / maintenance	Own annotations, SAP's UI logic
Higher	**Total cost of development and maintenance**	Lower

Developers can run SAP Fiori tools either in the cloud or on-premise
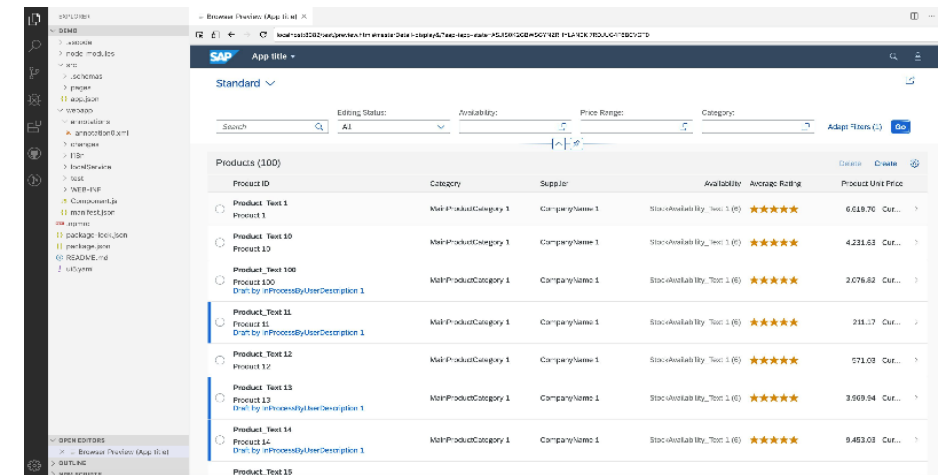
SAP Business Application Studio

Provides a modern, maintenance-free, preconfigured, **hosted environment***, optimized for SAP developers

- 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 **

* Offline development option is planned
** Theia marketplace is planned

Visual Studio Code

- Provides development flexibility with **offline** capabilities

- Features a **user-controlled**, highly configurable development environment

- Allows access to thousands of extensions from the Visual Studio Code marketplace

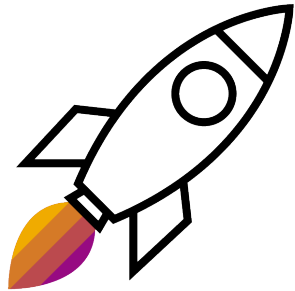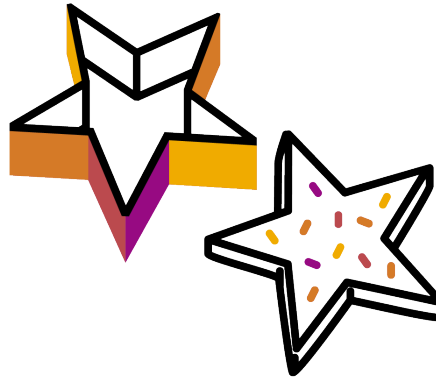- Is part of a fast growing open source community

3 things to remember about SAP Fiori elements & SAP Fiori tools
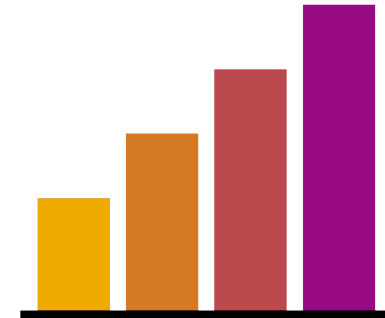
1. SAP Fiori elements & SAP Fiori tools **accelerate** app development

2. SAP Fiori elements enables **UX consistency**

3. SAP Fiori elements covers **80%** of app development scenarios

Learn more

► SAP Fiori elements community topic page
https://community.sap.com/topics/fiori-elements

► SAP Fiori tools product announcement
https://blogs.sap.com/2020/06/22/sap-fiori-tools-is-generally-available.-increase-the-efficiency-of-developing-sap-fiori-elements-apps/

► Sign up for SAP Fiori development newsletter
http://link.personas.help/fenews

► SAP UX Engineering YouTube channel
https://www.youtube.com/channel/UC4FRdP-pm8mwIRbqOQwnPJQ

► openSAP course "SAP Fiori overview"
https://open.sap.com/courses/fiori3/

Exercises

Thank you.

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