



UX208 – UI Adaptation of SAP Fiori Apps: An Overview



Speakers

Las Vegas, Sept 19 - 23

Vanessa Micelli-Schmidt

Tim Back

Bangalore, October 5 - 7

Babu Ganesh V

Barcelona, Nov 8 - 10

Stefan Beck



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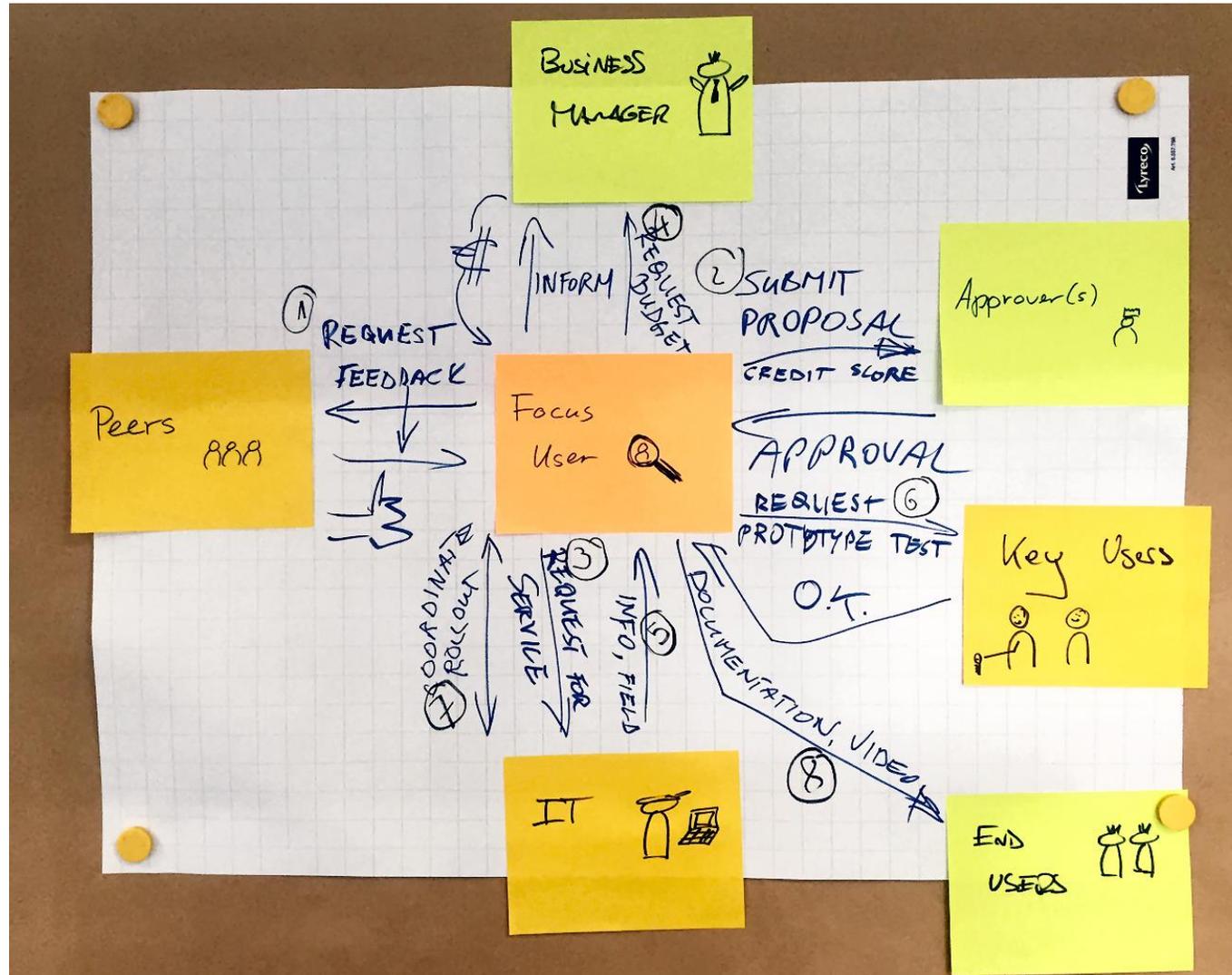
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Motivation



Reality check



Perspective key user



Developer

“I develop new or modify existing apps for my company“



Key user

“I adapt apps for my team“



End user

“I personalize apps for myself“

Demo

UI adaptation at runtime

UI adaptation at runtime

Features & prerequisites

■ Enabled controls

- Smart form 
- Object page 
- Simple form 

■ Actions

- Drag & drop UI elements
- Cut & paste UI elements
- Rename UI elements
- Add/hide fields
- Access in-app extensibility tools (SAP S4HANA)
- Combine/split fields
- Add/delete field groups, sections
- Undo, redo, discard changes
- Keyboard support

- NW UI Add-on 2.0 / SAP_UI 7.50 SP00 (RTC) or higher
- Released for HCP with SAPUI5 1.40
- Desktop/laptop with Google Chrome or IE11+
- Apps with stable control & view IDs!
- SAP Fiori launchpad (page FioriLaunchpad.html, ICF services /sap/bc/ui2/flp)
- Key user authorization role (SAP_UI_FLEX_KEY_USER)
- No support of XML fragments, yet; only support for controls created inside of XML views

Perspective developer



Developer

“I develop new or modify existing apps for my company“



Key user

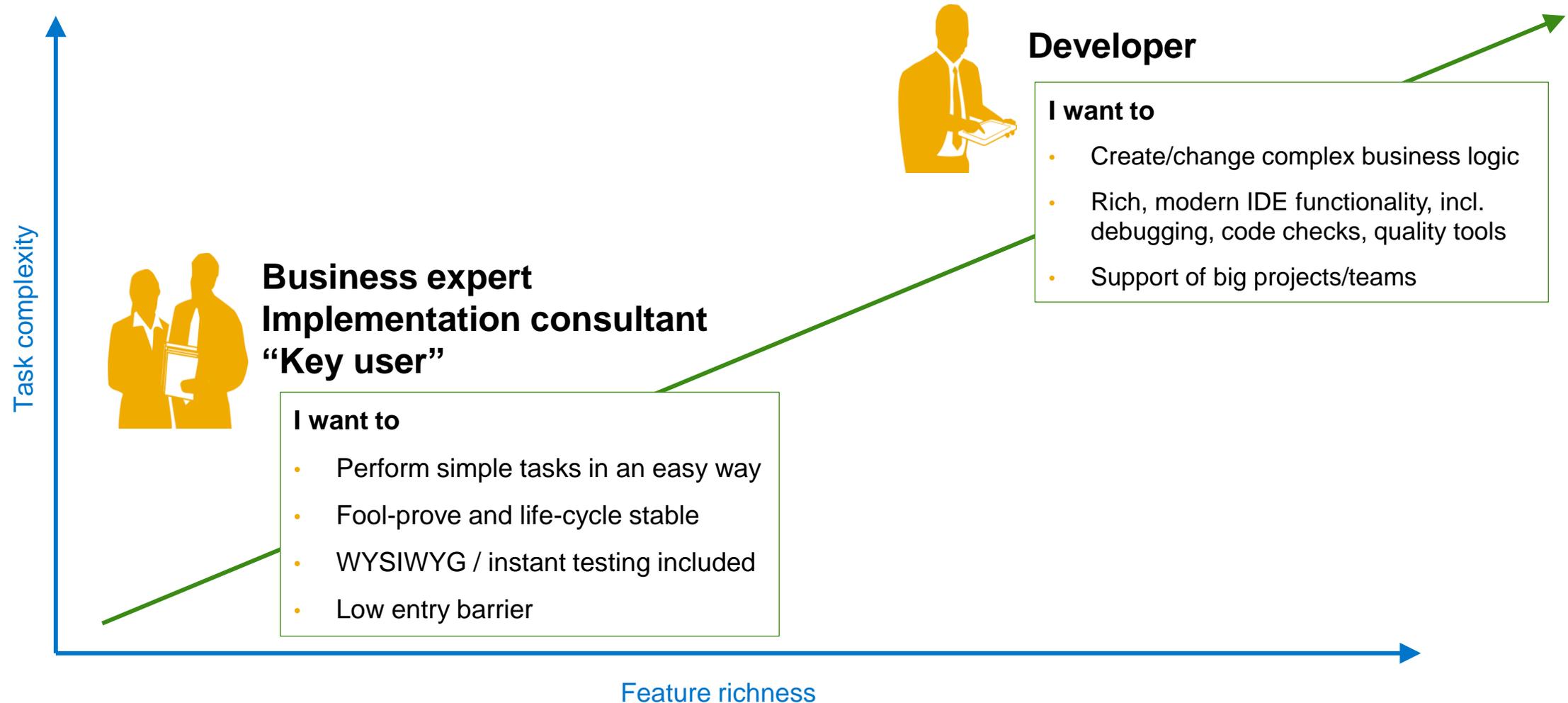
“I adapt apps for my team“



End user

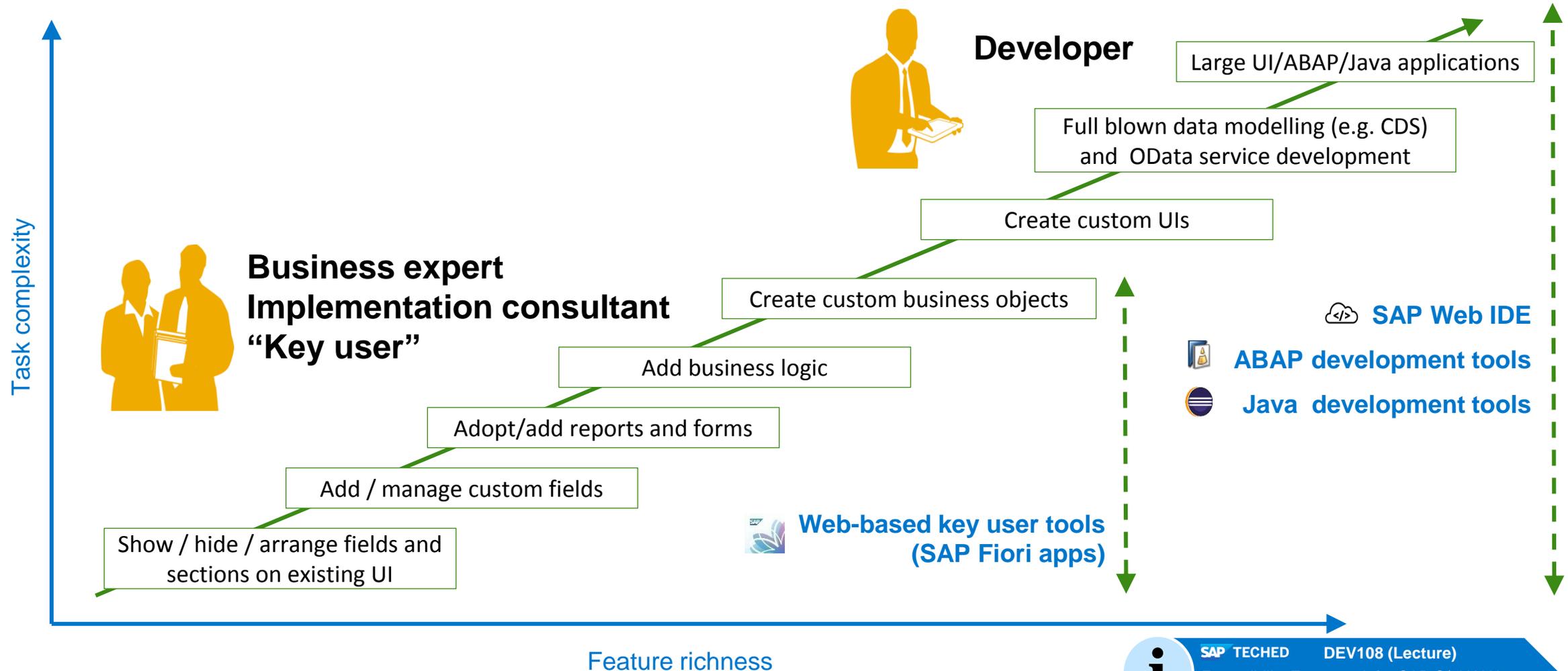
“I personalize apps for myself“

Key user tools – developer tools

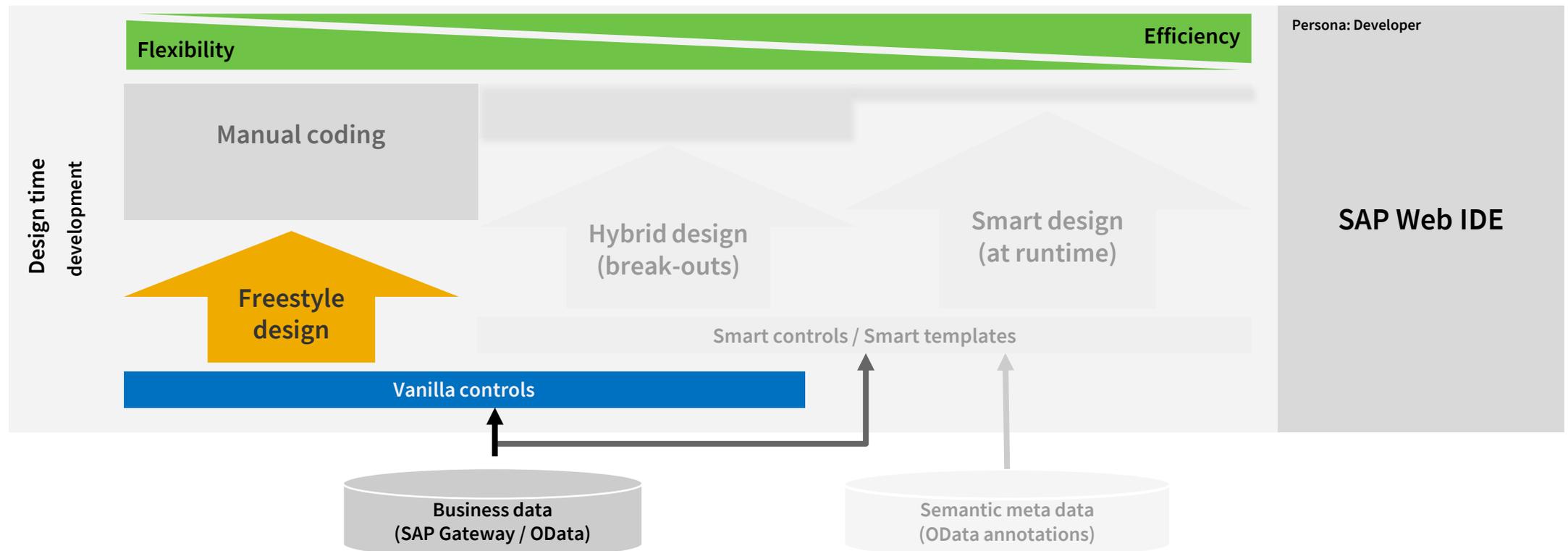


Key user tools – developer tools

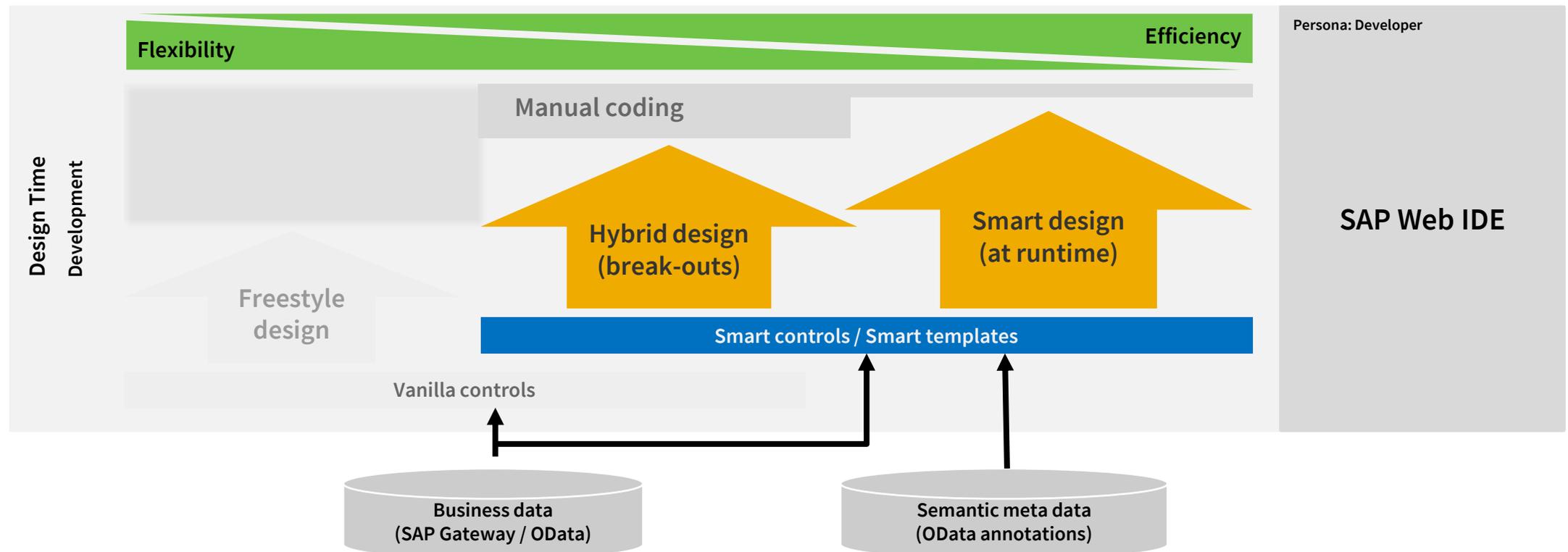
SAP S/4HANA extensibility



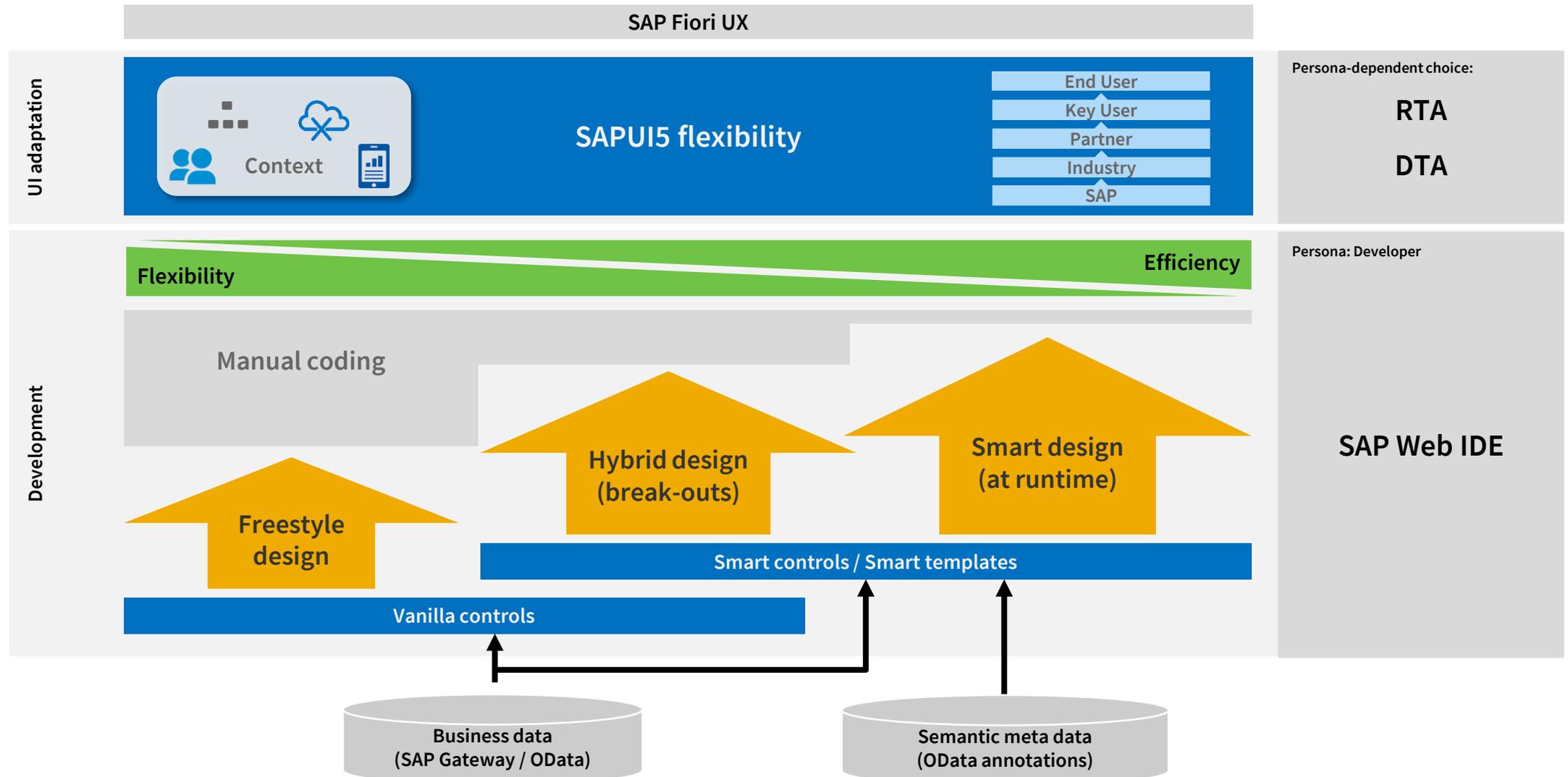
Efficient development with freestyle templates



Efficient development with smart templates



SAPUI5 flexibility services



Demo



UI adaptation at design time

SAPUI5 flexibility change application

HT-1256



GENERAL INFORMATION

General Information

Product:

HT-1256

Product Class:

Smartphones

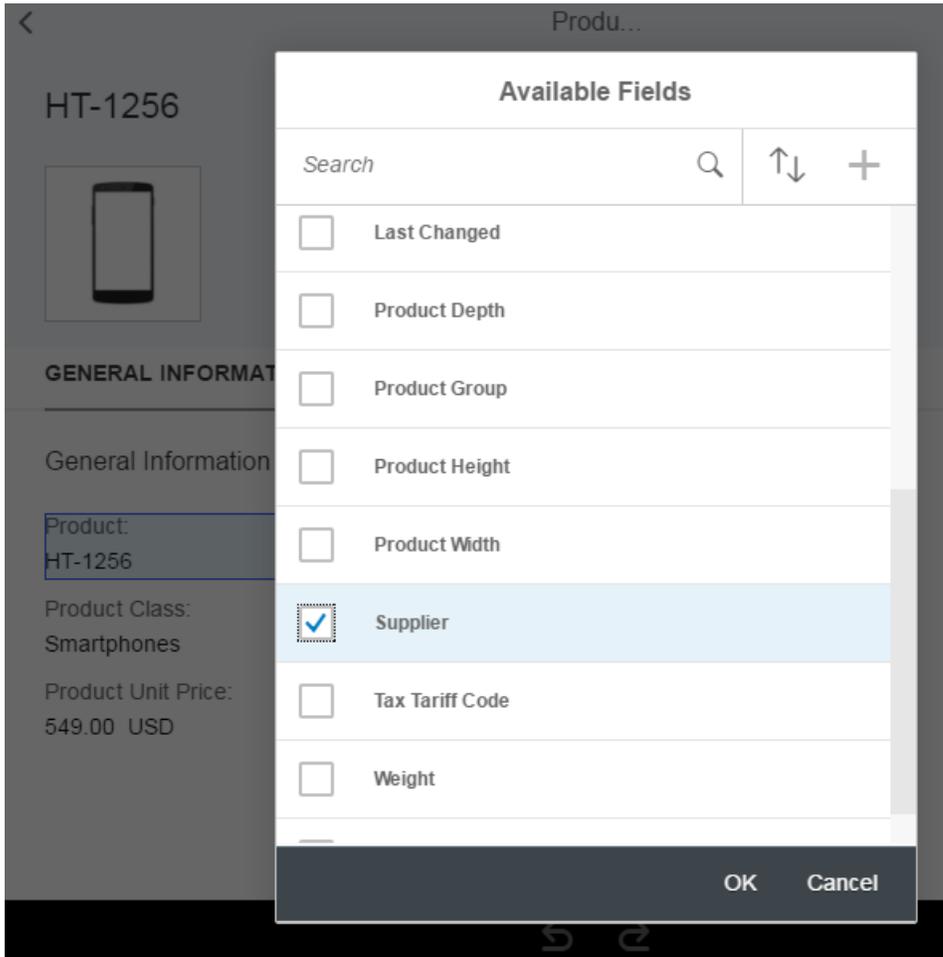
Product Unit Price:

549.00 USD

```
<smartForm:SmartForm id="ProductForm">
  <smartForm:Group id="ProductFormGenInfo" label="General Information">
    <smartForm:GroupElement>
      <smartField:SmartField value="{Product}" />
    </smartForm:GroupElement>
    <smartForm:GroupElement>
      <smartField:SmartField value="{ProductCategory}" />
    </smartForm:GroupElement>
    <smartForm:GroupElement>
      <smartField:SmartField value="{Price}" />
    </smartForm:GroupElement>
  </smartForm:Group>
</smartForm:SmartForm>
```

[View with a form](#)

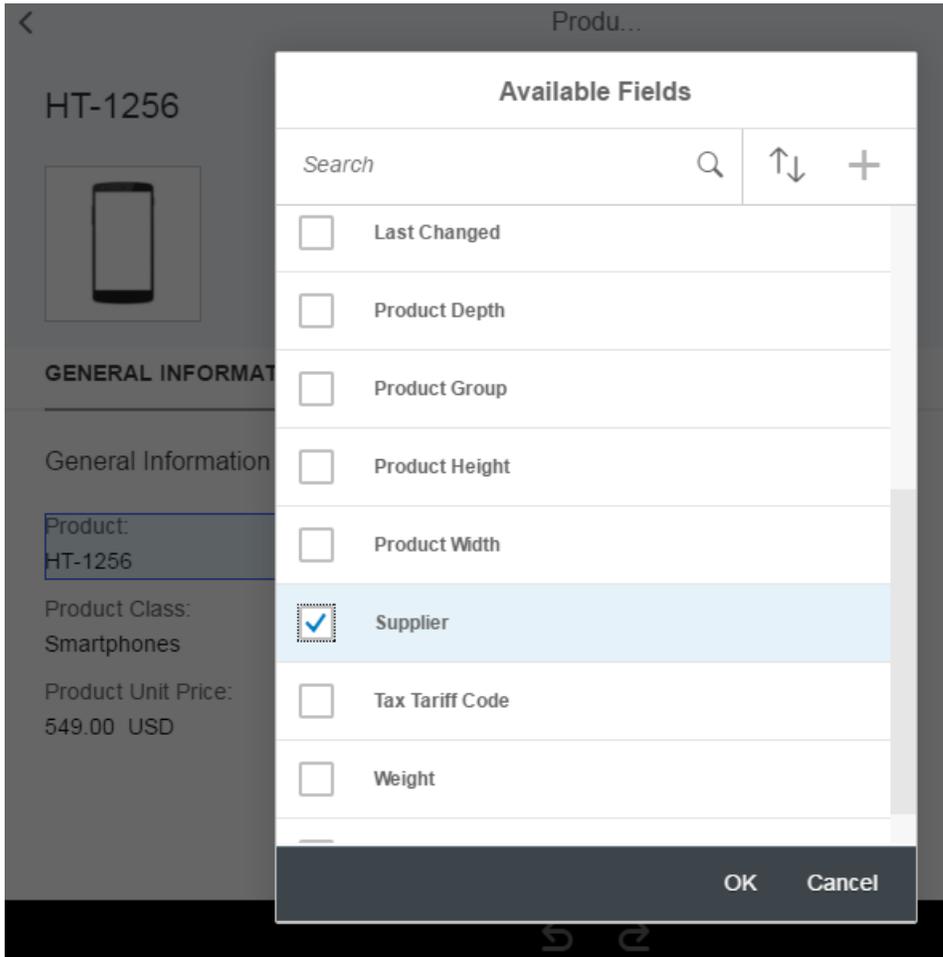
SAPUI5 flexibility change application



A new field is added into the view using UI adaptation at runtime / design time* ...

* Planned for future releases

SAPUI5 flexibility change application



```
{
  "fileName": "id_1470120176605_80_addFields",
  "fileType": "change",
  "changeType": "addFields",
  "reference": "ProductsFromCDS.Component",
  "content": {
    "field": {
      "value": ["Supplier"],
      "valueProperty": ["value"],
      "id": "ProductFormGenInfo_Z_99_ProductsType_Supplier",
      "jsTypes": ["sap.ui.comp.smartfield.SmartField"],
      "index": 1
    }
  },
  "selector": {
    "id": "ProductFormGenInfo",
  },
  "layer": "VENDOR"
}
```

... and creates a SAPUI5 flexibility change

SAPUI5 flexibility change application

HT-1256



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    "field": {
      "value": ["Supplier"],
      "valueProperty": ["value"],
      "id": "ProductFormGenInfo_Z_99_ProductsType_Supplier",
      "jsTypes": ["sap.ui.comp.smartfield.SmartField"],
      "index": 1
    }
  },
  "selector": {
    "id": "ProductFormGenInfo",
  },
  "layer": "VENDOR"
}
```

The change is applied to the view

SAPUI5 flexibility change application



GENERAL INFORMATION

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HT-1256

S:
100000030

Product Class:
Smartphones

Product Unit Price:
549.00 USD

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SAPUI5 flexibility change application

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    </smartForm:GroupElement>  
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    </smartForm:GroupElement>  
    <smartForm:GroupElement>  
      <smartField:SmartField value="{Price}" />  
    </smartForm:GroupElement>  
  </smartForm:Group>  
</smartForm:SmartForm>
```

View with a form A new field is added into the view using UI
The change is applied to the view → UI5 flexibility change

* Planned for future releases

Annotations for smart controls

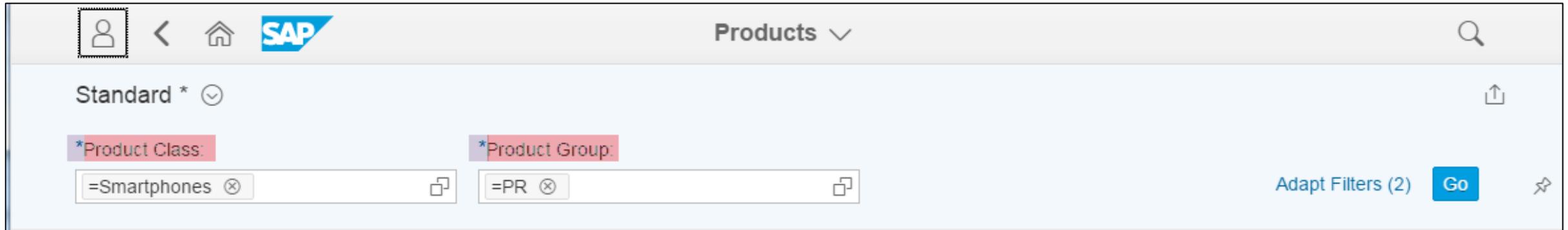
CDS view

```
D [UIA] Z_99_PRODUCTS ☒
- @AbapCatalog.sqlViewName: 'z_99_sql_view'
  @AbapCatalog.compiler.compareFilter: true
  @AccessControl.authorizationCheck: #CHECK
  @EndUserText.label: 'Products'
  @OData.publish:true
  @UI.headerInfo:{ //used for Object Page Header
    typeName: 'Product',
    typeNamePlural: 'Products',
    imageUrl: 'ProductPictureURL',
    title: { value: 'Product' }
  }
  define view Z_99_Products
    as select from SEPMRA_I_ProductWithDraft as Product
  {
    - @UI.identification:{position:10, importance:#HIGH} //Used for Object header
      @UI.lineItem:{position:10, importance:#HIGH} //Used for result list
      key Product.Product,

    - @UI.lineItem:{position:20, importance:#HIGH}
      @UI.selectionField.position: 20
      @Consumption.filter.mandatory: true //this makes the field appear automatically in SmartFilterbar
      @EndUserText.label: 'Product Group'
      Product.ProductType,

    - @UI.identification:{position:30, importance:#HIGH}
      @UI.lineItem:{position:30, importance:#HIGH}
      @UI.selectionField.position: 10
      @Consumption.filter.mandatory: true //this makes the field appear automatically in SmartFilterbar
      @EndUserText.label: 'Product Class'
      Product.ProductCategory,
      Product.CreatedByUser,
```

Annotations for smart controls



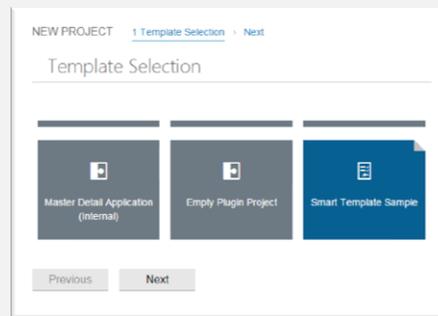
```
Metadata.xml ×
1 <EntityType Name="Z_99_ProductsType" sap:label="Products" sap:content-version="1">
2   ...
3   <Property Name="ProductType" Type="Edm.String" Nullable="false" MaxLength="2"
4     sap:required-in-filter="true" sap:label="Product Group"/>
5   <Property Name="ProductCategory" Type="Edm.String" Nullable="false" MaxLength="40"
6     sap:required-in-filter="true" sap:label="Product Class"/>
7   ...
8 </EntityType>
```

```
*View.xml ×
1 <mvc:View
2   xmlns:mvc="sap.ui.core.mvc"
3   xmlns:smartfilterbar="sap.ui.comp.smartfilterbar">
4   <smartfilterbar:SmartFilterBar
5     id="smartfilterbar"
6     entityType="Z_99_ProductsType"
7     search="onExecuteSearch"
8   />
9 </mvc:View>
```

Smartness of controls and templates

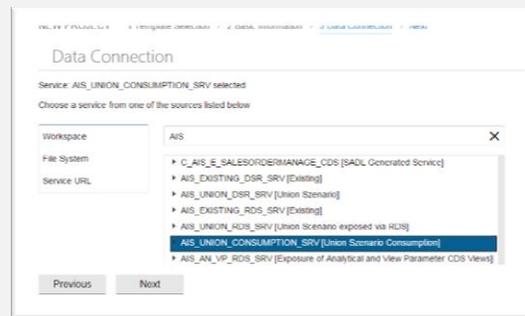
- **Annotations** describe semantics related to data (examples see next slide)
- **Smartness** of controls and templates is based on the understanding of these semantics. Annotations are evaluated in the client-controller-logic.

Development steps



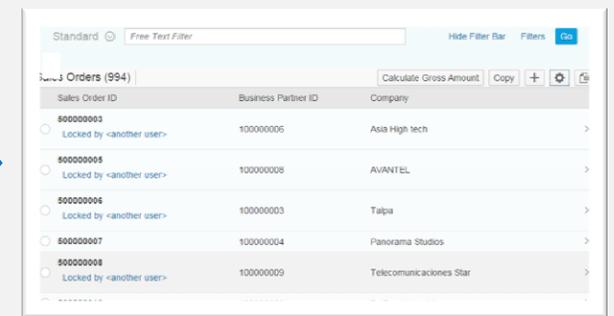
Choose template

Templates incorporate latest SAP Fiori design and UX



Select annotated OData service.

Annotations are derived from CDS for reuse, productivity, and consistency



Run fully functional standard SAP Fiori app

No front end coding required. Extension via additional annotations or own templates

Smart templates – semantic information

The screenshot displays the SAP Fiori 'EyeCatcherDemo' application. The interface includes a search bar at the top with a 'Standard' filter and a 'Go' button. Below the search bar are two input fields labeled 'Category:' and 'Price:'. The main content is a table of products with columns for Product ID, Category, Company, and Price. The table lists various products, including notebooks and PDAs. Annotations with blue callout boxes highlight specific features: 'Label for field' points to the search bar; 'Selection fields' points to the 'Category:' and 'Price:' input fields; 'Link to value list' points to the radio button selection in the first column of the table; 'Amount linked to currency' points to the price value '1,650.00 USD' in the Price column; and 'Line item fields' points to the entire row for 'Notebook Professional 17'.

Product ID	Category	Company	Price
○ Notebook Basic 16 HT-1000	Notebooks	SAP	956.00 USD >
○ Notebook Basic 17 HT-1001	Notebooks	Becker Berlin	1,249.00 USD >
○ Notebook Basic 18 HT-1002	Notebooks	DelBont Industries	1,570.00 USD >
○ Notebook Basic 19 HT-1003	Notebooks	Talpa	1,650.00 USD >
○ ITelO Vault HT-1007	PDAs & Organizers	Panorama Studios	299.00 USD >
○ Notebook Professional 15 HT-1010	Notebooks	TECUM	1,999.00 USD >
○ Notebook Professional 17 HT-1011	Notebooks	Asia High tech	2,299.00 USD >
○ ITelO Vault Net HT-1020	PDAs & Organizers	Laurent	459.00 USD >
○ ITelO Vault SAT HT-1021	PDAs & Organizers	AVANTEL	149.00 USD >
○ Comfort Easy HT-1022	PDAs & Organizers	Telecomunicaciones Star	1,679.00 USD >
○ Comfort Senior HT-1023	PDAs & Organizers	Pear Computing Services	512.00 USD >

Layering of changes in the layered repository

Pers layer

End user personalization

Customer layer

Key user adaptation

Customer layer

Development

Partner layer

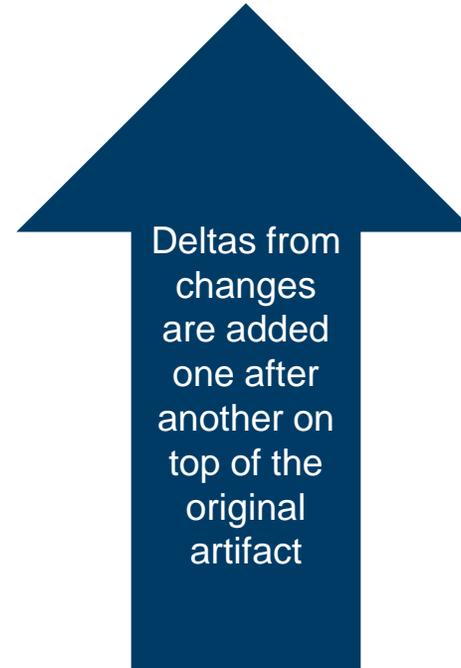
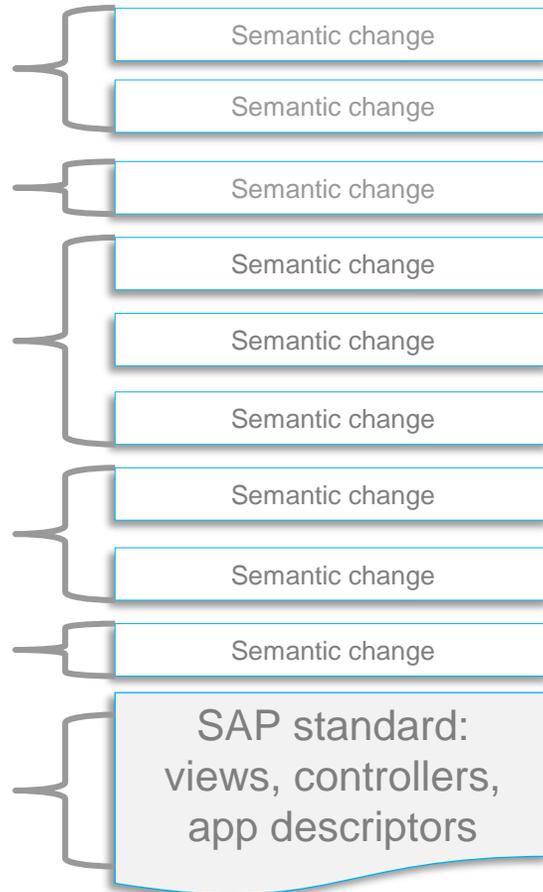
Add-Ons

Vendor layer

Industry or globalisation

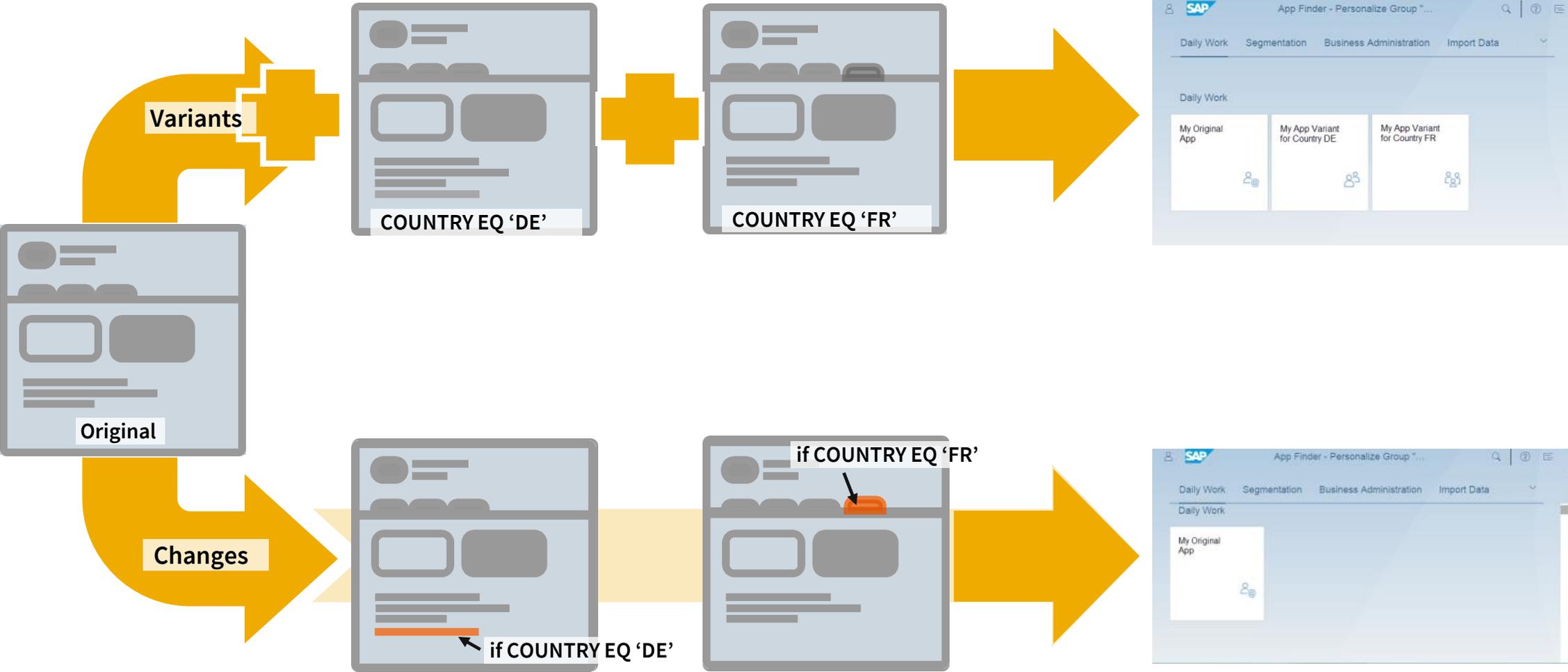
Vendor layer

Base application file



Changes are stable related to upgrades including flexible handling of layers

App variants vs. changes on original app

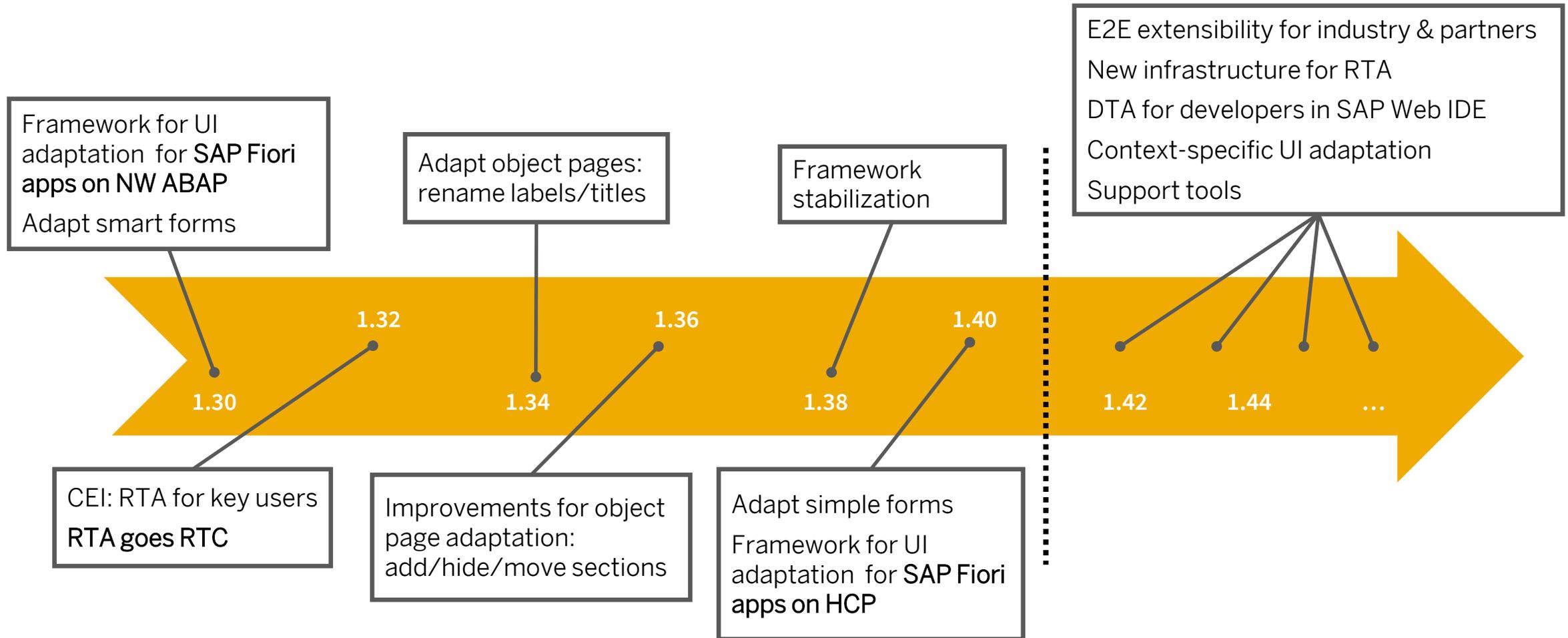


Demo



App variant creation & coding extensibility

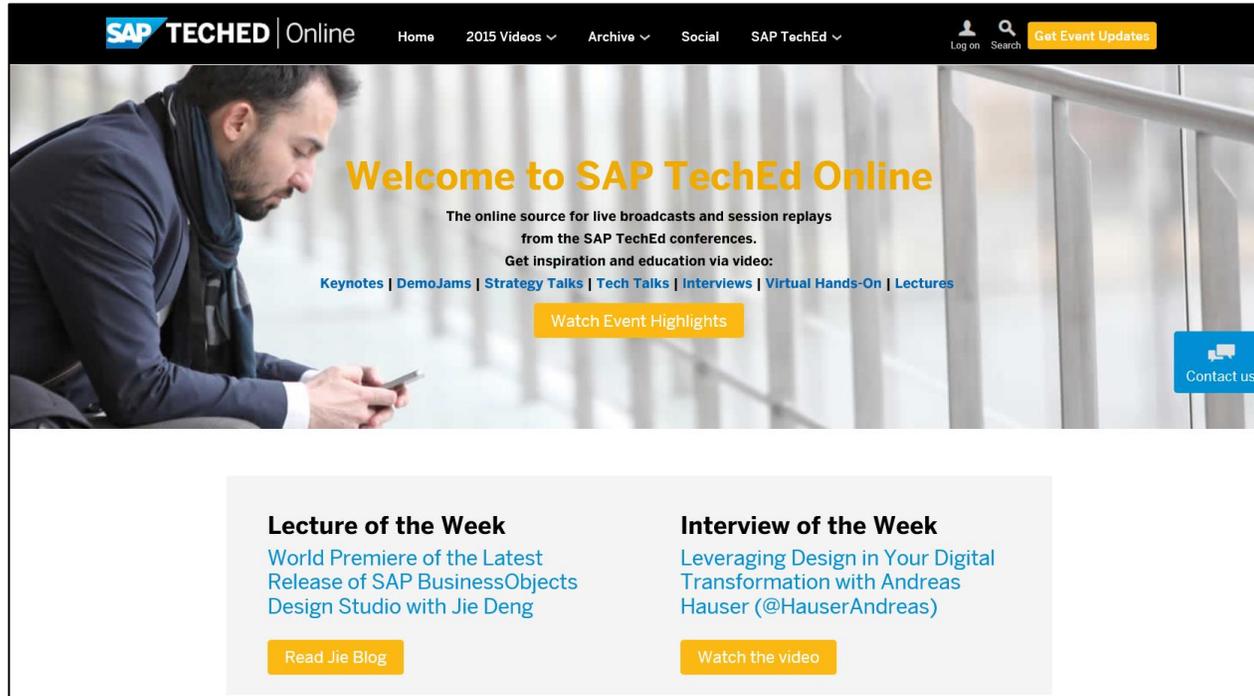
The SAPUI5 flexibility journey



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

SAP TechEd Online

<http://sapteched.com/online>



The screenshot shows the SAP TechEd Online website homepage. The header includes the SAP TechEd Online logo, navigation links for Home, 2015 Videos, Archive, Social, and SAP TechEd, and utility links for Log on, Search, and Get Event Updates. The main content area features a large image of a man looking at his phone, with the text "Welcome to SAP TechEd Online" and a sub-headline "The online source for live broadcasts and session replays from the SAP TechEd conferences." Below this, there are links for "Get inspiration and education via video:" including Keynotes, DemoJams, Strategy Talks, Tech Talks, Interviews, Virtual Hands-On, and Lectures. A "Watch Event Highlights" button is also present. A "Contact us" button is located in the bottom right corner of the main content area. Below the main content area, there are two featured sections: "Lecture of the Week" with the title "World Premiere of the Latest Release of SAP BusinessObjects Design Studio with Jie Deng" and a "Read Jie Blog" button, and "Interview of the Week" with the title "Leveraging Design in Your Digital Transformation with Andreas Hauser (@HauserAndreas)" and a "Watch the video" button.

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- ...

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Related SAP TechEd sessions:

UX301 – New Features of SAPUI5 That You Absolutely Have to Know About

UX262 – The fastest way to adapt Fiori and S/4 apps to your business needs

UX605 – SAPUI5 and Smart Templates: Fast and Flexible SAP Fiori App Development

DEV108 – Extensibility Framework for SAP S/4HANA: End-to-End Scenario

SAP Public Web

SCN: <https://go.sap.corp/RTASCN>

JAM: <https://go.sap.corp/RTAJAM>

Demo App in SAPUI5 Demokit: <https://go.sap.corp/RTA>

Documentation: <https://go.sap.corp/RTADOC>

YouTube: <https://go.sap.corp/obb>

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session evaluation for
UX208

Thanks for attending this session.

Contact information:

Vanessa Micelli-Schmidt
vanessa.micelli-schmidt@sap.com



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