SAP’s UI Strategy & Solutions: How SAP can help you to define your User Interface!

Frank Tycner
1. Get insight into SAP’s UI Solution Map
2. Dive into SAP’s recommended strategy for User-Interface
3. Get to know something about Web Dynpro and SAP Screen Personas
Agenda

- Problem Statement
- SAP UI Solution Map
- SAP UI Strategy
- Summary
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  - Summary
- How effective is software without a proper user-interface?
- What is the ratio between software capabilities and user-experience?
- Are we scared by looking at overcrowded screens with radio-buttons, selections bars, etc.?
- What’s the impact on our daily work when working with software? Do we work more effective when using products with UI’s we like?
- Why are Apple products considered to be “famous“ in terms of UI? And where is the difference to other products?
Today, many customers are looking for options to improve their existing environment and make user interfaces easier to consume by their end-users.

Looking at the topic for the first time might provide the impression that enhancing user interfaces of SAP is relatively difficult or even impossible.

Fact is: in many cases the available options provided by SAP are not fully known.

Knowing these options and mapping them to the customer's current situation already provides a high value.
Goal:
1. Get insight into SAP’s UI Solution Map
2. Dive into SAP’s recommended strategy for User-Interface
3. Get to know something about Web Dynpro and SAP Screen Personas
# SAP UI Solution Map

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**Adopt latest UI enhancements** > **Extend or tweak your user interfaces** > **Develop your own user interfaces**

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Desktop-based UI clients are developed natively for one or more specific operating systems such as Microsoft Windows. Some of these UI Clients (e.g. SAP NW Business Client) do also provide a browser based equivalent to reach out for other operating systems that are not natively supported.

- SAP NetWeaver Business Client for Windows
- SAP GUI for Windows
- SAP GUI for Java
- SAP Business One Client
- SAP Crystal Dashboard Design
- SAP Business Explorer Analyzer (Bex)
- SAP BusinessObjects Analysis, edition for Microsoft Office
The interesting aspect of **browser-based UI clients** is the option to run these clients on different operating systems and even on different devices (including mobile devices). Although browser-based UI clients can easily be made available for users, there is an important aspect to consider: the individual browser support.

```
SAP NetWeaver Portal Client
SAP NetWeaver Business Client for HTML
SAP GUI for HTML
SAP Business ByDesign Client
SAP CRM Web UI Client
SAP BusinessObjects BI Launch Pad
SAP Business Explorer Web Analyzer (Bex Web Analyzer)
SAP BusinessObjects Web Intelligence
SAP BusinessObjects Explorer
SAP BusinessObjects Analysis, edition for OLAP
```
Mobile UI Clients are often developed for a specific business purpose rather than being developed for a generic usage. This implies that the number of individual mobile UI clients (you could also say mobile apps) is much larger than in the areas of desktop and browser.

Looking at SAP mobile applications from a technical perspective you can say that these applications are developed:

- Natively, using individual UI elements provided by the mobile operating system
- Natively, based on the Sybase Unwired Platform (SUP)
- Browser based, using HTML5 (SAPUI5), based on the Sybase Unwired Platform (SUP)
- Browser based, using HTML5 (SAPUI5), based on the SAP NW Gateway
- Browser based, using the SAP ITS Mobile capability
Focus for today!
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- Problem Statement
- SAP UI Solution Map
- **SAP UI Strategy**
  1. Adopt - Adopt latest UI Enhancements
  2. Adapt - Extend the User-Interface
  3. Develop - Develop own User-Interface
- Summary
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3-step approach

1. ADOPT
   - Adopt latest UI enhancements

2. ADAPT
   - Extend or tweak your user interfaces

3. DEVELOP
   - Develop your own user interfaces
According to the Solution Map for SAP User Interfaces the following UI Technologies & UI Clients are available for the SAP Business Suite:

- Technology: Dynpro (classical SAP GUI) / Web Dynpro ABAP
- Client: SAP NetWeaver Business Client / SAP NetWeaver Portal

For the SAP Business Suite a lot of pre-defined content is already available.
Many of the core applications inside the SAP Business Suite have a long history, technology-wise dominated by Dynpro ABAP ("SAP GUI World"). These applications are still part of today’s shipment and in use by customers.

Since the release of SAP Business Suite 7, SAP develops new applications using WebDynpro ABAP. Compared to Dynpro ABAP it enables a separation of the User interface and its underlying business logic and makes a structured Development process possible which reduces implementation effort.

Moreover, it is the foundation for new tools that easily allow the modification free user interface adaptation such as Floor Plan Manager or WebDynpro ABAP Page Builder.
1. Adopt: Web Dynpro ABAP

- Dynpro based UI (SAP GUI)
- Homogenous User Interface
- Personalization Options
- Support for Object Based Navigation (OBN)
- Configuration with Floor Plan Manager (FPM)
- Supports latest visual design

Web Dynpro ABAP
1. Adopt: SAP NW Business Client 4.0

- Role-based **single point of entry** to SAP business applications
- Executes **SAP GUI applications** and **Web Dynpro applications**
- Packed with personalization and productivity enhancing functionalities
- Available in **two flavors**: desktop based (for Desktop) and zero-footprint (for HTML)
- **Role based content** available especially for the SAP Business Suite
1. Adopt: SAP NW Business Client 4.0

Overview pages
- Index page
- New Tab page
- Service map
- Start pages

Panels
- Navigation panel
- Favorites panel

Quick Launch
- Launch applications
- Search for applications or content

Personalized navigation
- Favorites
- Pinned tabs
1. Adopt: SAP NW Business Client 4.0

- **Role-based access** to SAP business applications
  Roles can be loaded from
  - PFCG (Web AS ABAP role repository)
  - PCD (SAP Enterprise Portal role repository)

- **Navigation frame** hosting
  - Dynpro (embedded and reused SAP GUI for Windows)
  - Web Dynpro ABAP
  - HTML-based content

- **Harmonized user experience** through integration of SAP GUI and WebDynpro based applications

- **Browser like navigation** (NWBC 4.0)
  - Index and New Tab page navigation
  - Pinned tabs

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1. Adopt: SAP NW Business Client 4.0

Where to download

- SAP Service Marketplace https://websmp107.sap-ag.de/patches
- Push “A-Z Index” in locator & Tab “Installations And Upgrades”
- Go for letter “N” > “SAP NetWeaver Business Client”
- NWBC Rel. 4.0
Pre-defined content in SAP Business Suite

- Web Dynpro Applications
- POWER Lists
- PFCG Roles
- Business Packages

1. Adopt: Pre-defined content
1. Adopt: Pre-defined content

Example:

**SAP ERP 6.0**
- Enhancement Package 2
  - Sales Order Management
  - Travel Management
- Enhancement Package 3
  - Procurement
  - Quality Management
- Enhancement Package 4
  - Product Development
  - Talent Management

**SAP SCM 7.0**
- Transportation Management
- Supplier Network Collaboration

**SAP SRM 7.0**
- Complete user interface changed to Web Dynpro ABAP using Floor Plan Manager (FPM)

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1. Adopt: Pre-defined content

500+ pre-defined PFCG Roles available in SAP ERP 6.0, displayed in either SAP GUI or Web Dynpro ABAP

Role examples:

- Buyer
- Dispute Manager
- Warehouse Operations Manager
- Production Planner
- ...
1. Adopt: Pre-defined content

- Example: PFCG role “Internal Sales Representative” from SAP ERP 6.0
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  1. **Adopt** - Adopt latest UI Enhancements
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- **Summary**
2. Adapt

... Personalization > Customizing > Configuration
Options to simply **personalize** the UI

1. **Change existing queries** ("Change Query")
   - Each query can be customized via parameters (e.g. users, sales area data, person responsible, etc.)
   - The parameter depend on the selected query

2. **Definition of new queries** ("Define New Query")
   - Intuitive 3-step approach
   - Templates available
   - No coding

3. **Personalization** ("Personalize")
   - Display of queries via Tab strip or Link Matrix

4. **Settings for result list** ("Settings")
   - # of columns
   - Filter
   - Sort/delete/change, add columns
   - ...
2. Adapt: Changing existing queries

- The parameter settings are responsible to influence the display of ERP documents in the result list.
- List of criteria depend on result list.
- High flexibility due to various input possibilities.
2. Adapt: Definition of new queries

1. Select Object Type
   
   1. Select an Object Type from the list (e.g. Order Tracking, Sales Documents, etc.)

2. Maintain Criteria
   
   2. Type in the criteria you want to apply for your query and maintain quick search criteria

3. Finish
   
   3. Enter the name of the query and „Activate“ the query
2. Adapt: Personalization of queries

- List of available and active queries
- Delete, rename queries, add or remove from active List
- Set default query
- Add, remove, rename category
- Change sequence

Change between Link Matrix to Tab Strip Layout

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2. Adapt: Settings of result list

- **Display Settings**: Defines POWER List table/graphic
- **Filter Settings**: Defines static filter
- **Calculation**: Sets and activates calculations (e.g., total, min, max)
- **Sort**: Defines columns to be sorted
- **Column Selection**: Hides/un-hides specific columns and change sequence
- **Print Version**: Defines settings for printing
Side Panel and SAP GUI integration

- Side Panels show contextual information to a main application to support the user to better fulfill his tasks.
- Side Panel content is available for 900+ SAP Business Suite transactions.
- Content available for Financials, Logistics, Sales etc.
- Single content of a Side Panel is called “CHIP” (Collaborative Human Interface Part).
2. Adapt: Value Suggest / Type ahead

- Can be switched on and used by choice
- Google like search
- Easy and flexible for users
- Optional usage
- Applies for Business Partner ID and Material ID
- Can be extended to Material Description
2. Adapt: SAP Stream Work Integration
2. Adapt: Adjusting role content

Example: Integrate tx “VA01 – Create Sales Order” as additional SAP GUI transaction

- Role: Internal Sales Representative
- Transaction: VA01
- Node Details: Create Sales Order in SAP GUI
Example: Integration of BI content (e.g. SAP Xcelsius Dashboard)
2. Adapt: Adjusting role content

Depending on individual organizational set up the integration of additional transactions might be necessary. SAP ERP’s role definition allows to easily integrate existing pre-defined content also from other roles.
SAP offers a 3-step approach to also define new queries. Use case: Different sales reps work on Incomplete Orders – however, with different customers.
**Adopt**

**First Steps**
Roll out NWBC to users in a small area

- Most of the applications used are based on Dynpro technology
- SAP GUI is the client of choice

**A basic scenario for NWBC**

**Adapt**

**Adding Web Dynpro**
Add Web Dynpro apps including Power lists provided by SAP

- Users focus on SAP GUI screens.
- They also use some Power lists provided by SAP
- Web Dynpro applications are added

**A possible first addition**

**Increasing the Scope**
Create/configure Power lists and add other SAP apps.

- Customers use the Power List Framework to create new Power lists.
- End users also access BSP apps and non-SAP apps via URL.

**Logical next moves**

**Fine-tuning**
Add Business Objects apps e.g. dashboards and analytics apps.

- Users also work with Crystal reports and other Business Objects apps.
- The side panel is used to display extra information.
- Roles are configured for cross-system scenarios.

**Highly-enhanced environments**

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To extend User-Interfaces – or even create a UI from scratch – the Floor Plan Manager (FPM) is the respective tool. The FPM provides a set of tools & templates to create / configure UI’s in alignment with SAP UI and Accessibility guidelines.

Existing design templates accelerates the creation of user interfaces and also ensures that the user interfaces behave the same way in all applications.

Relevant tools:

- Floor Plan Manager (FPM)
- Flexible User-Interface Designer (FLUID)
- Application Creation Tool (ACT)
3. Develop: FloorPlan Manager

- Standard UI Framework to create User-Interfaces
- FPM is ideal for Development, but also for Customers, Partners, Industries
- Easy adoption of pre-delivered UI’s without modification and by pure configuration
- Set of tools & templates available to create / configure UI’s in alignment with SAP UI and Accessibility guidelines
  - Existing design templates accelerates the creation of user interfaces and also ensures that the user interfaces behave the same way in all applications
- Various UI Floorplans and UI Building Blocks available to serve as generic and reusable composition elements
3. Develop: FloorPlan Manager – Basic Idea
3. Develop: FloorPlan Manager – Basic Idea

FPM applications are:
- Configurable
- Customizable
- Personalizable
- Reusable
- Guideline compliant

FPM Framework
Support of configuration and assembly of all UI parts of an application:
- Header Area
- Forms
- Lists
- Trees
- Searches
- Free-Style UI
- Page Layout
Creating and configuring UI’s gets supported by the following components:

1. **SAP-Defined Floorplans**
   Combinations of **UI patterns** arranged in a specific order in an application, allowing the user to accomplish a certain activity, such as searching for, identifying, and maintaining data for an object.
   The areas of a floorplan such as a message area, navigation area, and content area are automatically implemented by the FPM framework.

2. **Generic UI Building Blocks (GUIBB)**
   SAP UI-compliant **templates for displaying content**. Examples include templates for displaying data in a form or list view.

3. **FLUID—Flexible User Interface Designer (FPM Configuration Editor)**
   Editor allowing you to configure the application composition as a whole as well as the individual floorplan and generic UI building blocks within it.
3. Develop: FPM + Generic UI Building Blocks

- Available GUIBBs:
  - Form
  - List
  - Tree
  - Search
  - Launchpad
  - ___________
- Reuse UIBBs:
  - Attachments
  - Notes
  - POWL UIBB
  - Analytic GUIBBs

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SAP Screen Personas is a tool offered by SAP Custom Development as a repeatable custom solution for customers / customer projects which are looking for UX improvements in their SAP GUI / Dynpro based User Interface area.
SAP Screen Personas ...

- is a browser-based, drag-and-drop tool for streamlining SAP Dynpro screens
- allows a high degree of personalization without programming or knowledge of back end systems
- targeted to IT professionals, key-users, and end-users to simplify business application screens quickly and easily in order to improve the visual appeal, end-user productivity, and performance of SAP
- works on most Dynpro screens
  - does not work for WebDynpro applications or with the SAP CRM WebClient User Interface
- Requires SAP Innovation Kernel, Release 7.21
- Languages: English, German
SAP Screen Personas can become an option if ...

- you are running the Business Suite (especially SAP ERP)
- mainly operates with SAP GUI screens anyway
- accessing SAP applications through any Windows or Mac desktop browser
- there is a business need to improve certain screens
- You want to reduce complexity / increase productivity & user satisfaction
- there is a clear challenge towards the UI – not technology!
3. Develop: NWBC + New Order Screen

Simplified Order Screen

Let's make Money!!

Standard Order
Customer's Name: CMS00000001
Customer's Address: Crocodile Enterprise / 12 Broadway
PO Number: CMS00000001

Net value: 0.00 USD
Order reason:
Reg. deliv. date: 12.02.2013

All Items

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Prior to a User-Interface project ...

- evaluate what SAP already offers in terms of User-Interface
- have a “closer look” to the 3-step approach before thinking about a high-sophisticated project
- try to re-use existing SAP’s Technologies and UI Clients - since they are on-going developments and within SAP’s maintenance
- mostly a re-use of existing content in conjunction with little standard adjustments are already highly effective
- evaluate SAP’s offering before you start an own UI development project

*Please ask your SAP contact for more help if needed!*
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