Improve the UX with Personas and Fiori - Norfolk Southern’s Journey
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Norfolk Southern Corp.
SESSION CODE: UX316
OBJECTIVES

- Review why we did this project and how we chose what to do
- Show what we did and where we are now
- Share lessons learned over the course of the project
WHY WE DID IT

- Negative perception of the overall SAP product user interface
  - SAP GUI transactions are clunky and not intuitive
  - SAP GUI transactions are hard to access
    - Many of our SAP GUI users access transactions through a Citrix desktop as they do not have the fat client installed on their PC
  - Simple transactions require too many steps
  - Task approvals are a pain
    - Working on the railroad means many approvers in the field are rarely in their office, but approving a simple workflow task requires the user to be at a PC
PROJECT OBJECTIVES

Improve the User Experience and User Interface

- Simplify existing SAP GUI screens
  - Remove unnecessary tabs, buttons and fields
  - Make the screens intuitive and easy to use
  - Remove extraneous process steps

- Allow easier access to SAP GUI transactions
  - Reduce the number of transactions requiring access through Citrix by adding them to our Employee Resource Center portal

- Add mobile capabilities
  - Allow approvers and other personnel to perform simple, straightforward processes on-the-go
HOW WE CHOSE PRODUCTS

How did we pick the products?

- We performed a Proof of Concept in our sandbox with SAP Fiori, SAP Personas and some competing products to ensure the products would be able to meet our requirements.

- SAP Fiori and SAP Personas were chosen based on pricing, product capabilities, and the ability to meet all requirements (and they weren’t free at the time). This also allowed us to further leverage our existing investment in SAP.
WHO WE PARTNERED WITH

We engaged SAP to help us with the project

- Determine which transactions and processes would most benefit from SAP Fiori and SAP Personas
- Perform detailed requirements gathering via interviews with employees
- Assist with installation of new a NetWeaver Gateway and Fiori apps
- Assist with installation of Personas and develop the Personas flavors
HOW WE CHOSE APPS

- Fiori
  - Analyzed all approval tasks from the UWL logs to determine which tasks were approved most often by the most users
  - Examined the list of 150 Fiori apps that were available or that would be released in the next wave, and determined which ones we could install in our environment based on system prerequisites
  - Provided this information to SAP, and SAP made recommendations of apps we should install
  - SAP held workshops with the business and Synergy users to gather more information about the processes around the chosen apps
HOW WE CHOSE T-CODES

- Personas
  - Extracted SAP GUI transaction code usage for a two month period and analyzed this data to determine which t-codes were used the most often by the most users
  - Provided the top 40 t-codes to SAP for analysis, and SAP made recommendations of flavors to create
  - SAP held workshops with the business and Synergy users to gather more information about the processes around the chosen t-codes
HOW WE GATHERED REQUIREMENTS

- Held over 35 interviews with 32 functional experts and business users to document current processes and determine where Fiori or Personas could be leveraged

- SAP held design sessions and reviews with end users to ensure what they were building is what we wanted
WHAT WE IMPLEMENTED

- Personas Scope - 12 Flavors
  - MI04 – Enter Inventory Counts
  - MI22 – Print/Display Count Sheets
  - MI20 – Manage Count Differences
  - MI07 – Process Count Differences
  - MI31 – Create Count Sheets
  - MK03 – Display Vendor
  - ME32K – Change Contract
  - ME33K – Display Contract
  - MM02 – Change Material
  - MM03 – Display Material
  - ME22N – Change Purchase Order
  - ME23N – Display Purchase Order
WHAT WE IMPLEMENTED

- Fiori Scope - 10 Apps
  - Approve Purchase Contracts
  - Approve Purchase Orders
  - Track Purchase Orders (OOB)
  - Approve Shopping Carts
  - Approve Travel Requests
  - My Travel Requests
  - Approve Leave Requests
  - My Leave Requests (OOB)
  - Customer Invoices
  - My Timesheet (OOB)

*OOB = Out of Box – App being used as delivered
WHAT WE IMPLEMENTED

Fiori Apps Extensions

- My Travel Requests
  - Add Airline, Lodging, Meals, Rental Car and Other input fields for Estimated Costs breakdown, disable Estimate Costs field and have it automatically calculate the total from the new input fields, add Trip Number, change four field labels

- Approve Travel Requests
  - Add Estimated Cost breakdown fields from My Travel Requests, add Trip Number

- Approve Purchase Contracts
  - Add Header Text, Unit Price, Line Number, Material Number, and a status indicator showing if the contract is new or modified.

- Approve Purchase Orders
  - Add Header Text, Unit Price, Line Number, Storage Location Number, Storage Location Description

- Approve Shopping Carts
  - Add Header Text and Approval Note from SRM Shopping Cart, complete account assignment, WBS Element Number, Multiple WBS Element indicator, and Product Long Text

- Track Shopping Carts
  - Add Approval Date, RFX number, Purchase Order Number, Backend Document Number, Product Long Description
WHERE WE STARTED

- Original project timeline was 9 weeks from installation to go live
  - Fiori (Ramp Up)
    - Install NetWeaver Gateway in 6 environments (Sandbox, Dev, QA, Dev N+1, QA N+1, Prod)
    - Install 3 out of box Fiori apps
    - Customize 7 Fiori apps
  - Personas 2.0 SP02 (Ramp Up)
    - Install Personas in 6 environments
    - Create 12 Personas flavors
WHERE WE ARE NOW

We finished the project in 43 weeks

- **Fiori**
  - 9 Fiori apps are implemented in production for 5500 employees
  - 1 remaining Fiori app, Approve Shopping Carts, was pulled from scope and is still being tested
  - 101 identified and closed Fiori defects

- **Personas**
  - 12 Personas flavors are implemented in production for 2300 employees
    - Yearly inventory for 2014 was accomplished using only the Personas flavors. SAP GUI was used very minimally.
  - 116 identified and closed Personas defects

- **Other info**
  - 119 closed OSS messages for both Fiori and Personas
  - One change order was processed to add functionality to an inventory Personas screen that was missed during requirements gathering due to not having a department represented
FIORE LAUNCHPAD
MY LEAVE REQUESTS

Using the Portal

Using Fiori

5 Steps

3 Steps

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### Approve Leave Requests

**Joe Employee**

- **Employee ID**: 1 Days
- **Vacation**: 2 days ago
- **Available Balance**: 140 hours
- **Requested**: 1 days
- **Leave Type**: Vacation
- **4 Overlaps**: John Doe, Jane Doe, Mickey, Minnie

**Joe Employee**

- **Vacation**: 2 days ago

**Joe Employee**

- **Vacation**: 2 days ago

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APPROVE LEAVE REQUESTS

Using the Portal
6 Steps + 6 Steps for each additional approval

Using Fiori
3 Steps + 2 Steps for each additional approval
MY TRAVEL REQUESTS

Using the Portal

Using Fiori

7 Steps

4 Steps

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APPROVE TRAVEL REQUESTS

Using the Portal

4 Steps + 4 Steps for each additional approval

Using Fiori

3 Steps + 2 Steps for each additional approval

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PERSONAS - CREATE COUNT SHEET

Before
After
### PERSONAS – ENTER COUNT

After

![Image of inventory count screen]

**Enter Inventory Count**

- **Inventory Document:** 100081940
- **Plant:** MECH - MECH - Mechanical Store
- **Storage Location:** L232 - BEL LOCO DIST
- **WBS Element:** 19

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- **Entries:** 1 of 19
- **SAVE**
PERSONAS – MANAGE DIFFERENCES

Before

List of Inventory Differences
- Database Selection
  - Material
  - Plant
  - Storage Location
  - Batch
  - Physical Inventory Document
  - Physical Inventory Number
- Status Sel. for
  - Phys. Inventory Documents
  - Phys. Inventory Items
- List Scope
  - Special Stock
  - Fiscal Year
  - Count Date
  - Planned Count Date
  - Phys. Inventory Ref.
  - Reason for Inventory Diff.
  - Threshold Value
- Display Options
  - Layout
- List Display
  - Single List
  - Group by Plant and Storage Location
  - Group by Physical Inventory Document

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PERSONAS – MANAGE DIFFERENCES

After
DISPLAY/CHANGE PO PROCESS - BEFORE

Search for PO# → Main Screen → Vendor Contact → MK03

Confirm with Vendor → Workflow

30 screens
44 tabs
DISPLAY/CHANGE PO PROCESS - AFTER

Search for PO# ➔ Main Screen ➔ Vendor Contact ➔ MK03

17 screens
10 tabs

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LESIONS LEARNED

- When interviewing users about the process they want simplified, make them walk you through every single step of the process, and interview as many resources in different departments as you can, as there will be a nuance to each one that will require adjustments to the final design. Interview everyone, including business experts, functional experts, and end users in every department that are involved in the process.

- Give the business a lot of lead time prior to the project starting. This is very important as you need dedicated business resources for requirement gathering and testing purposes. The testing may appear simple, but there are a lot of little things that must be checked, and this will take a significant amount of time.

- Need to have dedicated COE functional resources during requirements gathering and testing. It will not take all of their time, but if it isn’t allocated up front, it will be difficult to for them to carve out 20 hours a week to test and work on issues with the developers.
LESSONS LEARNED

- Make sure your project is nowhere close to time to implement SAP support packs or enhancement packs unless you plan to wait until those are completed to implement. In our case, the project went much longer than expected and this put us into support pack and HR support pack implementation time. We had to do dual development during both times.

- Involve all business areas up front of the new technology to improve the UX, and make sure they are all part of the process to choose which apps to implement or flavors to create. You will need to be politically correct as departments not getting improved UX will get anxious when other departments receive it.

- Relay to business users that these solutions are not designed to work perfectly for everyone; they are designed to work for the majority in a simple fashion. Sometimes, making something work for everyone over complicates it for the majority of the users that use it. – In short, don’t always say “yes” to every request for change.
LESSONS LEARNED

- Iterate to the business that the solution that is written down in the requirement may require tweaking in order to actually work. The tools still have limitations, and those limitations are not always apparent until work begins.

- Plan a lot of time for project management if you are implementing a lot of apps or flavors at once. It is helpful to have a project manager to handle the project plan, to deal with contractors or developers, and to make decisions, and another resource to run meetings, keep track of defects, and to liaison between the developers and the testers.

- Assume that you will need to open a few OSS incidents for each Fiori app or Personas flavor you implement. In total, we opened 119 OSS incidents for both Fiori and Personas.

- Plan error handling into all Personas screens. Scripts break easily when screens are submitted and the data isn’t all there or it wasn’t populated properly. Plan for this to take some time to perfect.
LESSONS LEARNED

- For Fiori apps, make sure you demo the out of the box app to the business, even if it is just in a demo system. Be very up front when advising that what you see is what you get. This is important as a small things, such as a missing rejection reason, or a note that should be required but isn’t on an approval app, can become showstoppers later as most of these items are not configurable.

- Make sure you are provided the full requirements for the app. Basic requirements are listed in the app description on the SAP site, but not everything is listed. We did not have TREX implemented in SRM, and even though our current system worked perfectly without it, Fiori would not. We dropped two SRM Fiori apps from our phase one scope because of the complexity and amount of time it would take to add TREX.

- Fiori works with very basic, as delivered, SAP workflows. We had our own fairly basic workflows, but most of the apps had to be modified to work with our workflows, or we had to modify our workflows to work with the apps. If you have a complex workflow, assume that you will need to modify the app to work with it.
QUESTIONS?
THANK YOU FOR PARTICIPATING

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