Product Routing Apps->

Story behind the app

Product routing describes the journey of a product from its supplier to customer via logistics hub in a typical pharmaceutical network. Product routing determines the physical and financial flow of a product for a given combination of source, destination and product. It acts as a building block for automating the logistics and financial transaction within SAP. These transactions are performed as a part of standard drop ship, transshipment and XDock processes executed by these logistic hubs.

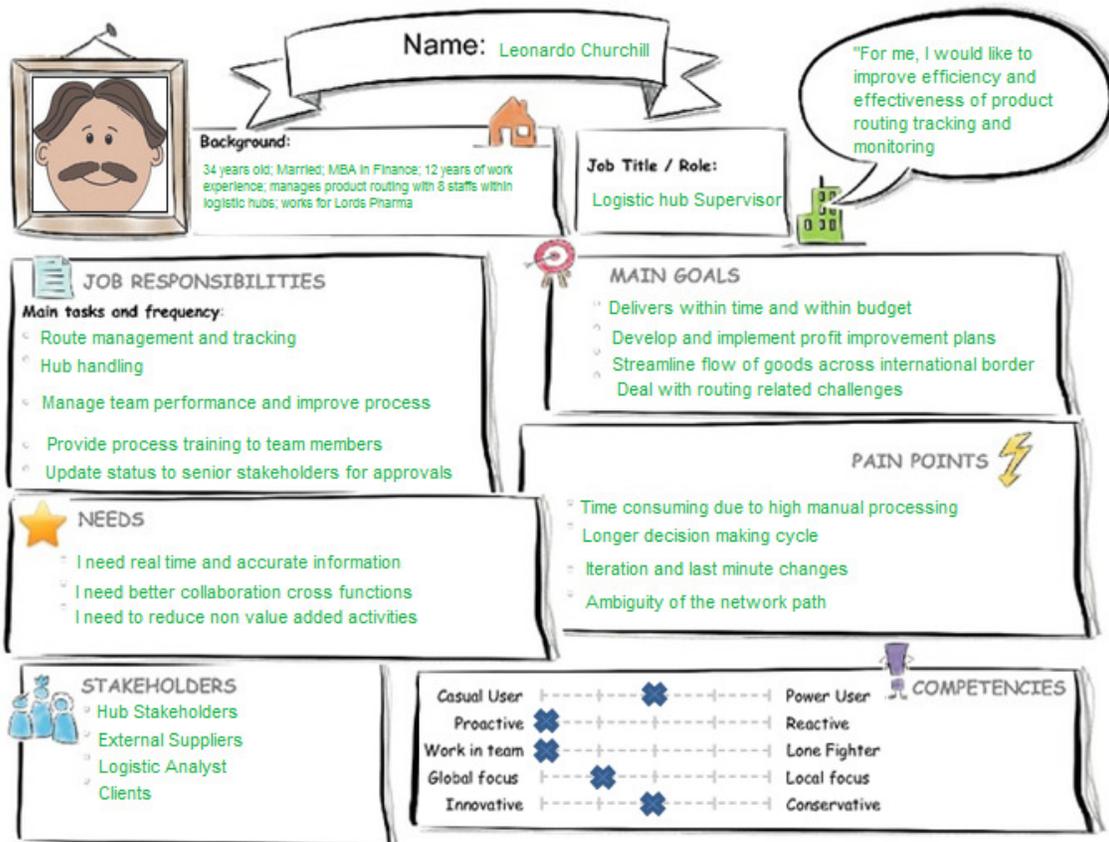**Business Process of Product Routing in a Pharmaceutical Industry:**

Logistic Hubs are managed by Hub Supervisor. He is mainly focused on managing a team for Routing Planning, determine the Network Path, Create Routing, Track and Monitor the routing status and report to the hub manager/ senior stakeholders for the final approval before the routing is released.

Supervisor plays an important role in monitoring the overall routing status in a weekly manner and reports to the upper management for approval or rejection.

- Routing Planning
- Determine Network Path
- Create routing & assign product
- Route tracking & monitoring
- Approve and release routing

Introducing Leonardo Churchill

Name: Leonardo Churchill

"For me, I would like to improve efficiency and effectiveness of product routing tracking and monitoring

Background:
34 years old; Married; MBA in Finance; 12 years of work experience; manages product routing with 8 staffs within logistic hubs; works for Lords Pharma

Job Title / Role:
Logistic hub Supervisor

JOB RESPONSIBILITIES
Main tasks and frequency:
- Route management and tracking
- Hub handling
- Manage team performance and improve process
- Provide process training to team members
- Update status to senior stakeholders for approvals

MAIN GOALS
- Delivers within time and within budget
- Develop and implement profit improvement plans
- Streamline flow of goods across international border
- Deal with routing related challenges

PAIN POINTS
- Time consuming due to high manual processing
- Longer decision making cycle
- Iteration and last minute changes
- Ambiguity of the network path

NEEDS
- I need real time and accurate information
- I need better collaboration cross functions
- I need to reduce non value added activities

STAKEHOLDERS
- Hub Stakeholders
- External Suppliers
- Logistic Analyst
- Clients

COMPETENCIES

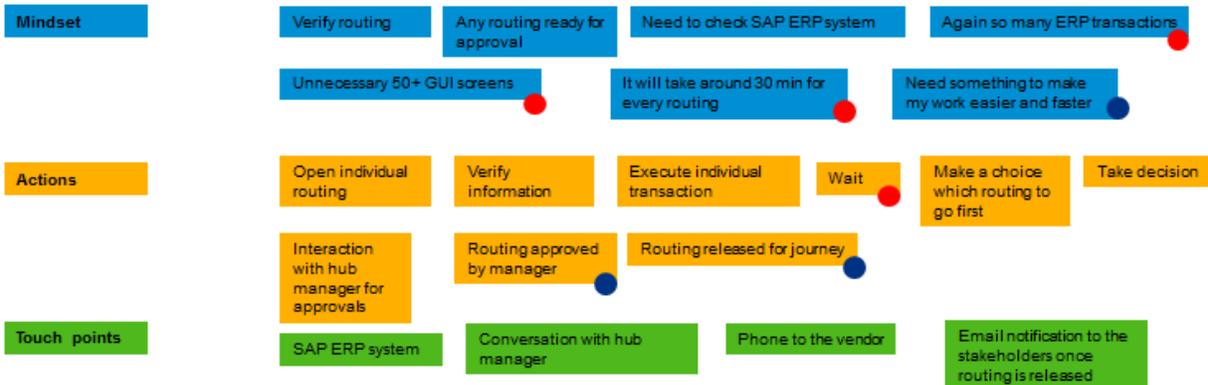| Casual User | Power User |
Proactive	Reactive
Work in team	Lone Fighter
Global focus	Local focus
Innovative	Conservative

Leonardo Churchill is a hub supervisor working for Lords Pharma for almost 4 years now. He is associated with the EMEA logistic hub within Lords Pharma network. One of his responsibilities is to monitor the product routing statuses on weekly basis and reports to his senior manager when the routing is ready for approval.
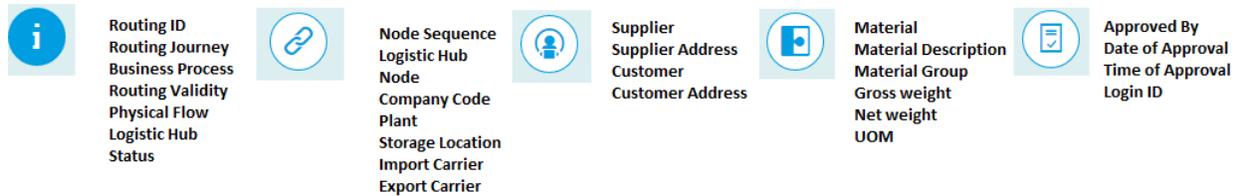
In order to do so, he has to go through several SAP ERP transactions, 50+ SAP GUI screens and his entire journey will be roughly 30 minutes for each routing.

Leonardo's User Experience Journey

Duration of the Journey: 30 min

Mindset
- Verify routing
- Any routing ready for approval
- Need to check SAP ERP system
- Again so many ERP transactions
- Unnecessary 50+ GUI screens
- It will take around 30 min for every routing
- Need something to make my work easier and faster

Actions
- Open individual routing
- Verify information
- Execute individual transaction
- Wait
- Make a choice which routing to go first
- Take decision
- Interaction with hub manager for approvals
- Routing approved by manager
- Routing released for journey

Touch points
- SAP ERP system
- Conversation with hub manager
- Phone to the vendor
- Email notification to the stakeholders once routing is released

I have designed an app which will breakdown the information in the routing and will help Leonardo to verify and complete his work much faster. He will be able to take decision within minutes which in turn help his manager to complete the approval process.

| Routing ID	Node Sequence	Supplier	Material	Approved By
Routing Journey	Logistic Hub	Supplier Address	Material Description	Date of Approval
Business Process	Node	Customer	Material Group	Time of Approval
Routing Validity	Company Code	Customer Address	Gross weight	Login ID
Physical Flow	Plant		Net weight	
Logistic Hub	Storage Location		UOM	
Status	Import Carrier			
	Export Carrier			

Mockup:

Basic Master Detail template format has been used for this prototype. It contains the routing list on the left hand side of the screen and the routing details on the right. Custom tabs have been included for various routing details.

1. Icon Explorer part of UI development toolkit has been used to identify various icons used for the tabs.
2. SAP UI5 Explored part of UI development toolkit has been used for UI elements used on the screen like simple form.
3. Built in PowerPoint prototyping kit has been used to design the basic layout.
a. **Custom Tabs** for the routing detail information.
b. **Simple Form** has been used for displaying data.
c. **Table** has been created for line item details.

4. EDMX file Routing_edmx.edmx has been created and kept in the schema folder. Data has been manually entered with "edit mock data" on metadata.xml.
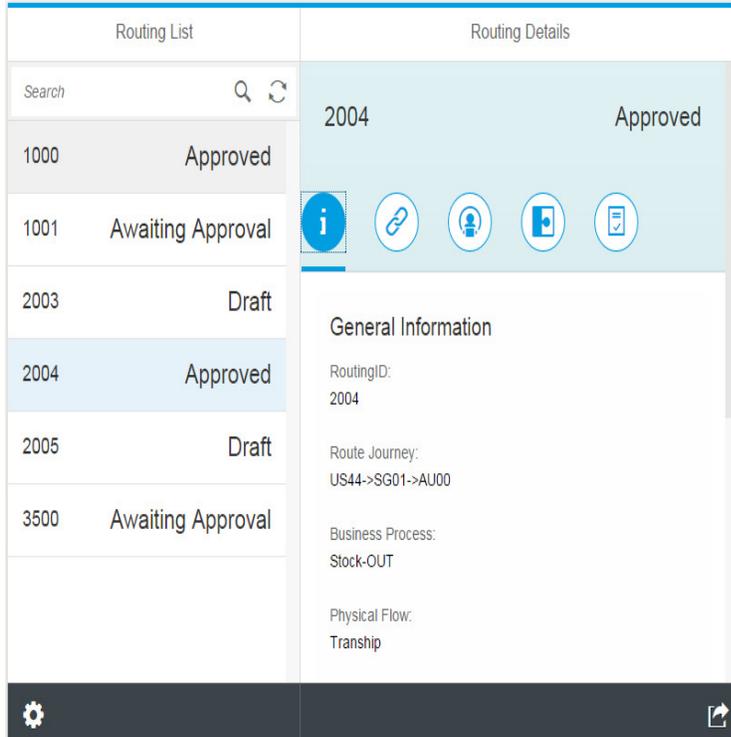
SAP Web IDE App – Build

Using Web IDE, a project named RoutingList has been created with Fiori Master Detail Template. EDMX file has been created and uploaded in the schema folder. This file is having the header detail relationship. Now mock data has been created by editing the metadata.xml file which in return created header ROUTEH.JSON and detail ROUTED.JSON files.
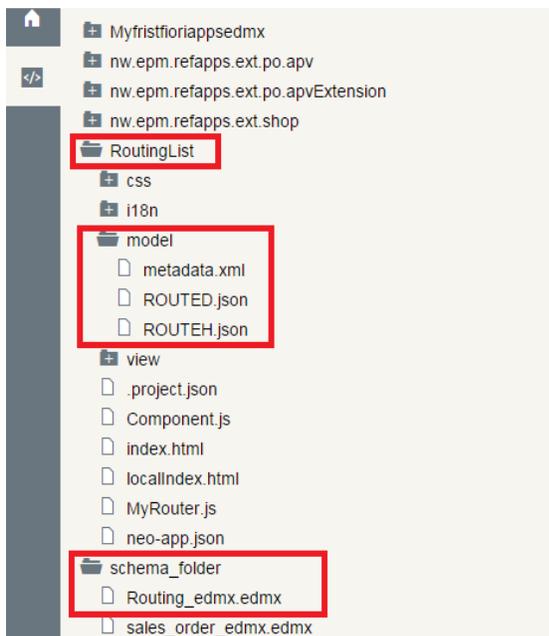
Detail view has been opened in the layout editor in order to include the custom tabs. Desired icon selected from icon explorer has been used.

Below screen shot shows how icon tab filter has been dragged to create a new tab and the chain link icon has been used to replace a standard icon. This icon tab filter shows the routing node level details. In the similar way all the tab filters has been created and icon has been replaced.
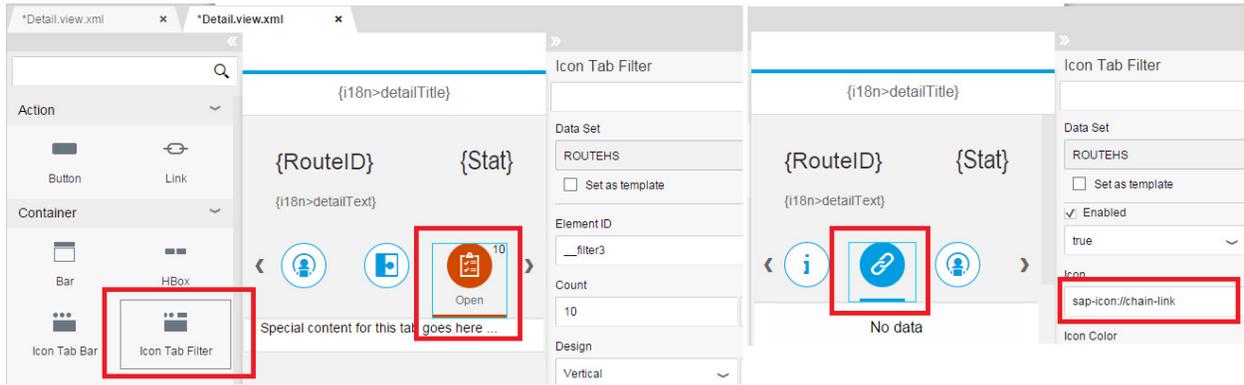
Simple form has been created under icon tab filter sap-icon://hint to displaying the routing general information as shown on the right side.
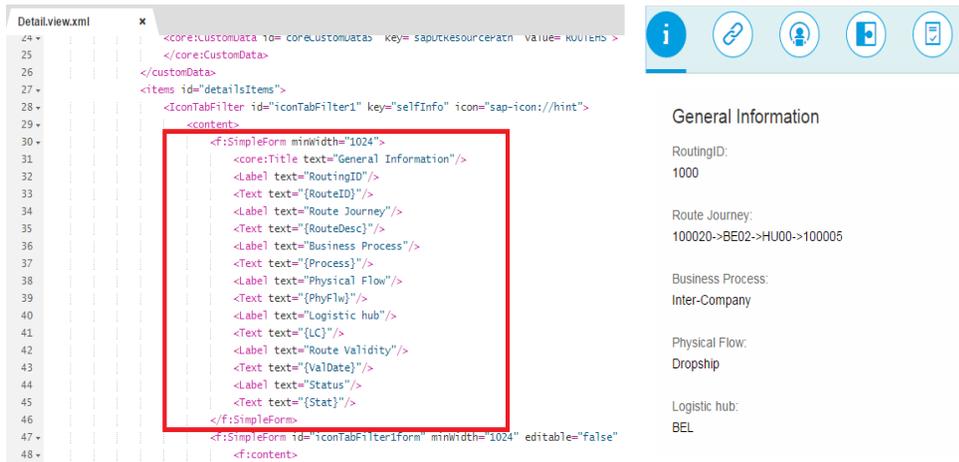
Now a code for the table is done under icon tab filter sap-icon://chain-link to show the routing node level details.

```xml
74                    </f:content>
75                </f:SimpleForm>
76            </content>
77        </IconTabFilter>
78        <IconTabFilter id="iconTabFilter2" key="" icon="sap-icon://chain-link">
79            <content>
80            <Table id="idItemsTable" itemPress="" items="{path: 'ROUTEDS'}">
81            <columns>
82            <Column minScreenWidth="Tablet" demandPopin="true">
83            <Text text="Seq"/>
84            </Column>
85            <Column minScreenWidth="Tablet" demandPopin="true">
86            <Text text="LC"/>
87            </Column>
88            <Column minScreenWidth="Tablet" demandPopin="true">
89            <Text text="Nd"/>
90            </Column>
91            <Column minScreenWidth="Tablet" demandPopin="true">
92            <Text text="Ccd"/>
93            </Column>
94            <Column minScreenWidth="Tablet" demandPopin="true">
95            <Text text="Pln"/>
96            </Column>
97            <Column minScreenWidth="Tablet" demandPopin="true">
98            <Text text="SLoc"/>
99            </Column>
```
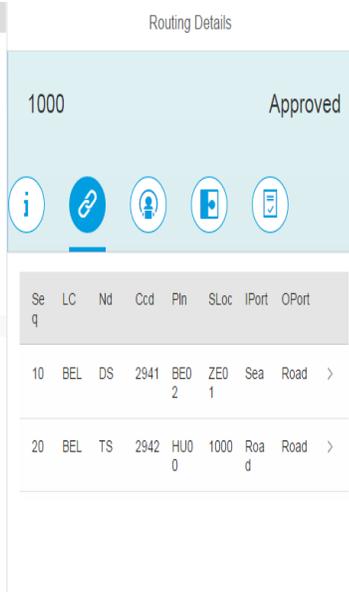
```xml
100            <Column minScreenWidth="Tablet" demandPopin="true">
101            <Text text="IPort"/>
102            </Column>
103            <Column minScreenWidth="Tablet" demandPopin="true">
104            <Text text="OPort"/>
105            </Column>
106            </columns>
107            <items>
108            <ColumnListItem type="Navigation">
109            <cells>
110            <Text text="{Sequence}"/>
111            <Text text="{LC}"/>
112            <Text text="{Node}"/>
113            <Text text="{Ccode}"/>
114            <Text text="{Plant}"/>
115            <Text text="{SLoc}"/>
116            <Text text="{IPort}"/>
117            <Text text="{OPort}"/>
118            </cells>
119            </ColumnListItem>
120            </items>
121            </Table>
122        </content>
```

Routing Details

1000   **Approved**

Seq	LC	Nd	Ccd	Pln	SLoc	IPort	OPort	
10	BEL	DS	2941	BE02	ZE01	Sea	Road	>
20	BEL	TS	2942	HU00	1000	Road	Road	>

Routing Details

2003   **Draft**

Seq	LC	Nd	Ccd	Pln	SLoc	IPort	OPort	
10	BEL	TS	2941	BE01	ZE03	Rail	Rail	>
20	BEL	DS	2941	IT00	CM01	Rail	Rail	>
30	BEL	XD	2941	HU01	1000	Rail	Rail	>

Remaining tabs contain supplier-customer details, material details and approval details respectively. Simple form coding has been used under respective icon tab filter to achieve it.

Tab details are shown below with mock data.

Seq	LC	Nd	Ccd	Pln	SLoc	IPort	OPort	
10	BEL	DS	2941	BE02	ZE01	Sea	Road	>
20	BEL	TS	2942	HU00	1000	Road	Road	>

Supplier/Customer Information

Supplier:
100020

Supplier Address:
John Moser USA

Customer:
100005

Customer Address:
DMA Italy

Material Details

Material:
00000059

Material Description:
Liq Nitrogen

Material Group:
LN-001

Gross Weight:
860000 GAL

Approval History

Approved By:
John Travolta

Date Of Approval:
8th May,2015

Time Of Approval:
11:30:49

Login ID:
TRAJ02