Open Close Door Pte Ltd

Assignment 2

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Overview

1. Business scenario
2. Our implementation
   - Business process
     I. Request for Quotation for customized doors
     II. Web Sales Process
   - Enterprise services
   - Business Rules
   - Data context used
   - Limitations
   - Screen designed using Visual Composer
3. Further explorations
4. Learning outcomes
Business Scenario

China

Grilling Company
(Grill Manufacturer)

VDoor Manufacturer
(Door Manufacturer)

Singapore

OpenCloseDoor Pte Ltd
(Singapore (Our Company))

Koh Brothers
(Customer 1)

Brunei

AsiaBuilders
(Customer 2)

Enterprise Business Solutions (Team 5)
Introduction of Customized Service

Total Sales

Overloaded! Refused 100 Customized Services
Customers: Long Backlog
Product Development: Overworked
Business Scenario: Re-Analysis

Opportunities for Just-In-Time Practices:

• Vendors located closer
• Shift to smaller factories
• Better contracts for resupply

→ Need a faster reordering system!
Business Scenario

- **Quotation for customized doors**
  - Rising demand for customized doors
  - Increase efficiency in meeting customers’ needs
  - Reduce manual tasks in processes

- **Web Sales Process**
  - Automate sales order for customers with sufficient credit
  - Company keeping low stock count to reduce holding inventory cost and space
  - Automate re-ordering of stocks
Purchasing

Create Purchase Requisition → Create Purchase Order → Create Goods Receipt for Purchase Order → Create Invoice Receipt from Vendor → Post Payment to Vendor → Display Vendor Line Items
Our Implementation

1. Order Inquiry
2. Quotation

Create Sales Order

Create Delivery Note for Sales Order

Pick Materials on Delivery Note

Post Goods Issue

Create Billing Document for Customer

Post Receipt for Customer Payment

Purchasing Flow

Create Purchase Request

Create Purchase Order

Create Goods Receipt for Purchase Order

Create Invoice Receipt from Vendor

Post Payment to Vendor

Display Vendor Line Items
Business Process

- Request Quotation

**Administrator**
- Enter Order
- View Final Quotation

**Sales**
- DO_QuoteType
- Create Quotation

**ERP**
- Get Material Number
- Get Material Price

Pricing decision table

<table>
<thead>
<tr>
<th>Pricing/MaterialNo</th>
<th>Pricing/Isolation</th>
<th>Pricing/Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>EK-0001-01</td>
<td>120</td>
<td>2.0</td>
</tr>
<tr>
<td>EK-0002-01</td>
<td>100</td>
<td>2.0</td>
</tr>
<tr>
<td>EK-0003-01</td>
<td>70</td>
<td>1.5</td>
</tr>
<tr>
<td>EK-0004-01</td>
<td>90</td>
<td>1.5</td>
</tr>
<tr>
<td>EK-0005-01</td>
<td>45</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Enterprise Business Solutions (Team 5)
## Business Process

### Web Sales

<table>
<thead>
<tr>
<th>Customer</th>
<th>Manager</th>
<th>EC</th>
<th>ERP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
Enterprise Business Solutions (Team 5)

Customer
- Enter purchase order

Manager
- Evaluates Order
  - Approved
  - Rejected
- Warehouse confirms receipt
- View notification

EC
- Get prices
- Get customer credit
  - Insufficient Credit
  - Sufficient Credit
- Check inventory level
  - Insufficient Stock
  - Sufficient Stock

ERP
- Check inventory business rules
- Create Purchase Order
- Create Sales Order
- Pricing decision table
- Credit limit table
- Lot-Sizing-Rule table
- DO_ContextType
- Insufficient Credit
- Sufficient Credit
- InventoryByLocationAndMaterialQueryResponse_In
- Transactions
- WS
- SalesOrderERPCreateRequestConfirmation_In_V1
- PurchaseOrderCreateRequestConfirmation_In

[Diagram]

[Flowchart]

[Process Diagram]
# Enterprise Services

<table>
<thead>
<tr>
<th>Business Process</th>
<th>Enterprise Services</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Quotation</td>
<td><strong>Find Material by ID and Description</strong> MaterialSimpleByIdAndDescriptionQueryResponse_In</td>
<td>Material description by customer</td>
<td>Material ID corresponding to description</td>
</tr>
<tr>
<td>Web Sales</td>
<td><strong>Find Inventory by Location and Material</strong> InventoryByLocationAndMaterialQueryResponse_In</td>
<td>Material</td>
<td>Quantity</td>
</tr>
<tr>
<td></td>
<td><strong>Create Purchase Order</strong> PurchaseOrderCreateRequestConfirmation_In</td>
<td>Purchase Details</td>
<td>Purchase Order</td>
</tr>
<tr>
<td></td>
<td><strong>Create Sales Order_V1</strong> SalesOrderERPCreateRequestConfirmation_In_V1</td>
<td>Sales Details</td>
<td>Sales Order</td>
</tr>
</tbody>
</table>
Business Rules

- **Pricing Rule**
  - Markup

<table>
<thead>
<tr>
<th>Pricing/materialNo</th>
<th>Pricing/costPrice</th>
<th>Pricing/markUp</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM-0001-A1</td>
<td>120</td>
<td>2</td>
</tr>
<tr>
<td>DM-0002-A1</td>
<td>180</td>
<td>2.5</td>
</tr>
<tr>
<td>DK-0001-B1</td>
<td>70</td>
<td>1.85</td>
</tr>
<tr>
<td>DK-0002-B1</td>
<td>50</td>
<td>1.5</td>
</tr>
<tr>
<td>EH-0001-C1</td>
<td>10</td>
<td>1.6</td>
</tr>
<tr>
<td>EH-0002-C1</td>
<td>15</td>
<td>1.7</td>
</tr>
</tbody>
</table>

- **Customer Credit Limit**
  - Check before creating Sales Order

- **Lot Sizing Rule**
  - Material Purchase Orders in batches of 100
Data Context Used

- Request for Quotation Process
**Data Context Used**

- **Web Sales Process**
Limitation

- Unable to retrieve material price directly from SAP ERP
- Use of rules service to determine final selling price to customer
Screen designed using Visual Composer

- Print screen

Warehouse Goods Receipt: Checking of received goods’ condition & quantity
Further Exploration

1. Rule Flow
2. Web service to trigger process
3. Looping for Activities
Learning Outcomes

- Using composite application with Enterprise Services
- Importance of right data mapping
- Rules service → Define business rules
  - Drive process flow
  - Used as a gateway condition (Control process flow with gateways)
- Iterative Approach
- High Complexity + High Dependency = RFD
- Don’t rely on your email client too much
THE END
Lot Sizing Rule

```java
1 IF
2 // IF there is a remainder
3 (numeric-divide(
4   (numeric-subtract(currentCollectionItem/Quantity, currentCollectionItem/Available))cast as decimal
5 , (Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty) cast as decimal)
6 )
7 >
8 // THEN order one more fixedorderqty
9 numeric-divide(numeric-subtract(currentCollectionItem/Quantity, currentCollectionItem/Available),Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty, Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty) cast as xsd:int
10 numeric-add(
11   numeric-multiply(Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty, Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty),
12   numeric-divide(numeric-subtract(currentCollectionItem/Quantity, currentCollectionItem/Available),Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty, Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty) cast as xsd:int
13 , Response-demo.sap.com-zuhairi-procure-bl-checkinventoryrule-CheckInventoryRuleset-CheckInventoryRuleset/ns1:CheckInventory/fixedorderqty)
14 , currentCollectionItem/Quantity
15 // ELSE order as normal
16 )
```

Enterprise Business Solutions (Team 5)