

**Department of Industrial** 

& Systems Engineering

# Improvement of Billing Process in United Parcel Service, Inc.

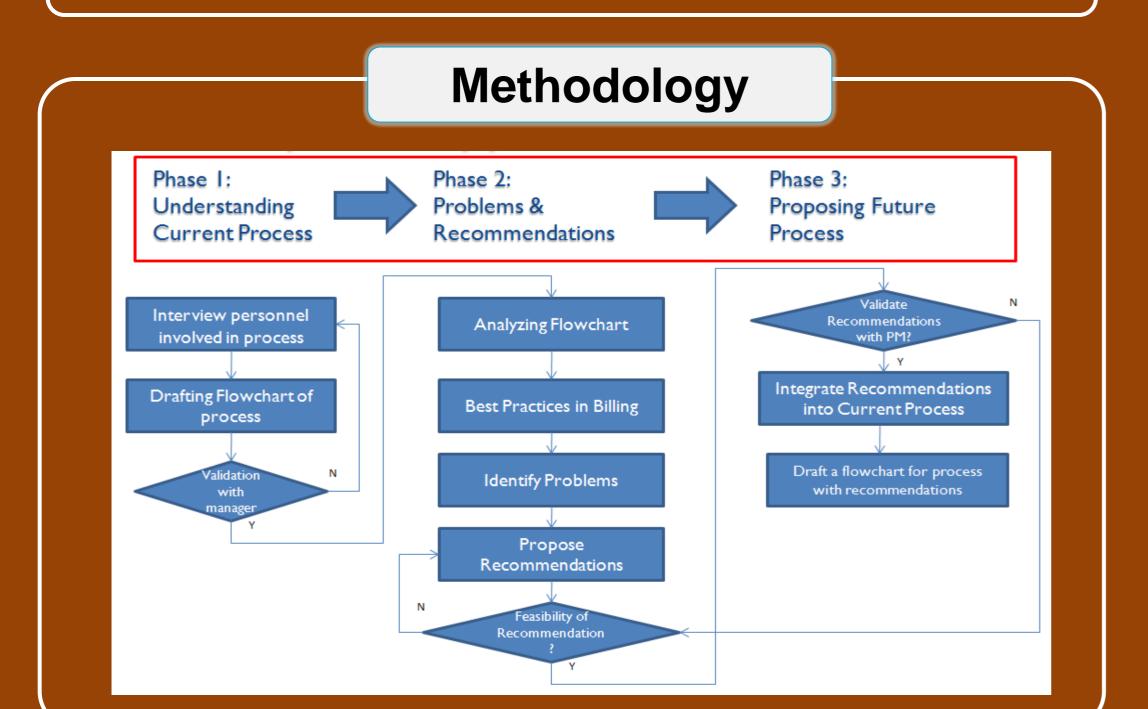
By: Chen Zhifa, Kolli Sagar, Li Wen, Yu Qin

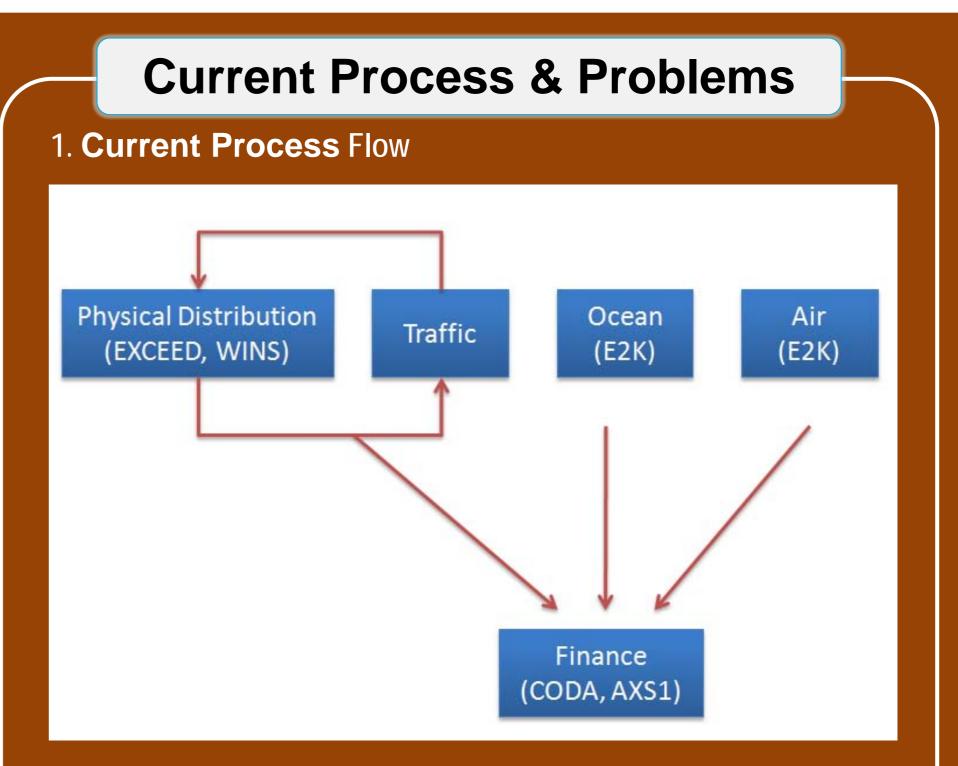
Supervisors: A/P Chew Ek Peng, A/P Tan Kay Chuan



# **Objective**

- Identify problems in current billing system by mapping out processes in different departments.
- Simplify and optimize billing process. This will result in cost savings and improved customer service.





## 2. Problems identified

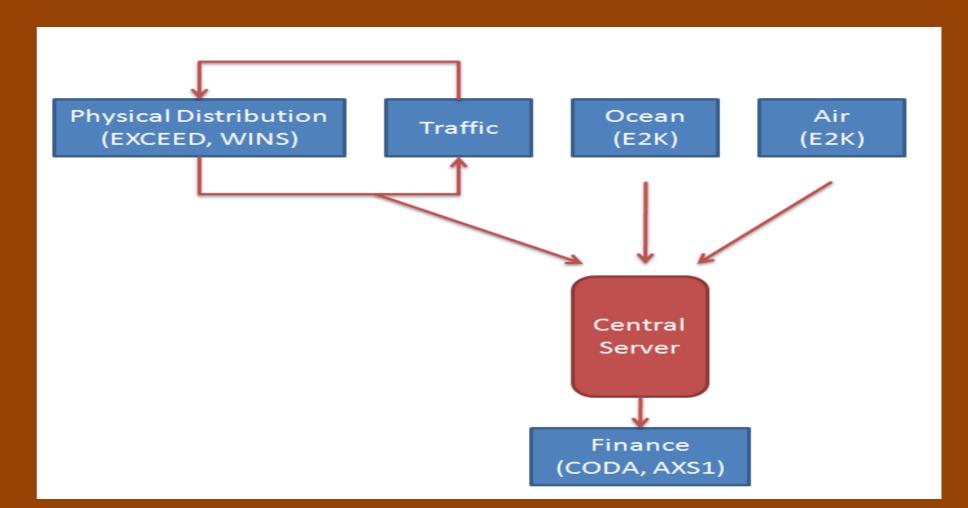
- Billing for Service across different departments are not integrated
- >Late payments due to limited control of billing by finance.
- Finance unable to handle customer disagreement in short time
- Lack of communication between IT systems
- Identical data is entered manually across different IT systems

# **Proposed Process**

1. Matrix Approach

Documentation Data Required	Booking	Booking Confirmation	Pre-alert (may not have all)	Permit	Arrival Notice	Delivery Order	Delivery Instruction	l voice	HBL	Packing List	Shipment Information Report
Destination port		×		×		×	×	×	×		×
Origin port		×		×	×	×	×	×	×		×
Shipper details	×		×	×	×	×	×	×	×	×	×
Consignee details	×		×	×	×	×	×	×	×	×	×
Description of the goods	×	×		×		×		×	×	×	×
Dimensions, weight and classification of goods	×	×	×	×	×	×		×	×	×	×
Total value				×							
Quantity in the shipment	×	×		×		×	×	×	×	×	×
Vessel/Voyage		×	×	×	×		×				
Carrier/Co-loader		×	×		×				×		
Vessel Departure Time		×	×	×			×	×			×
Vessel Arrival Time		×	×	×	×	×	×	×			×
HBL number		×	×	×	×	×	×	×	×		×
MBL number		¥	×	×		¥		×	×		×
Booking reference number		×		×	×	×		×			~
Charges				×	×	~		×			×
Special handling instructions						×					
Container type & number	×	×			×	×					~
Terms of payment								×	×		×
Pickup place		×					×				
Delivery place		×					×				

#### 2. Proposed Process Flow



### 3. Problem Scenario

#### Scenario

If the customer wants to use the UPS warehouse to store goods then Physical Distribution (PD) and Traffic are involved. Traffic picks up the shipment from the

Matrix approach helps us to identify duplication of the same data across different documents generated by different software systems

## customer and PD takes care of warehousing. Later the customer could use air to send the same shipment overseas.

#### Current Process

In the current process the customer would receive three different invoices from the above 3 departments. 3 different invoices could lead to disagreements from the customer as it is difficult to analyze compared to a single integrated invoice. *Proposed Process* 

In the proposed process the customer would receive a single invoice stating all transactions from different departments. This is easier to analyze and facilitates faster billing

