Time: 10.45am	
Location: SIS MR4-1	
Attended By: Siong Min, Hui Shia, Janice	
Absent with Apologies: Nil	

No	Agenda:	Action By:
1	Hui Shia started with the summary from our Sponsor's Meeting - What Kar Way wants (FCL & LCL)	
2	Janice's presentation (Yantian – Long Beach): - Segment the Volume with the Carriers, breakdown of percentage - Summaries the portion of volume, carrier and utilization rate - Kam: What is the volume is based on what? (Quartile) Carrier is one that has the most percentage of shipment. While Utilization Rate is which carrier is utilized the most - What you have to do – you need to combine the carrier name distribution and the next graph (Utilization Rate graph) together. So that you can do a comparison - When you say Utilization Rate from the summary table – we are using the median not mean. (GOOD) :D - Janice: what we want to find out is the carrier contributing by higher utilization rate - Kam: the presentation of the graph is wrong – should standardize both graph and put both as bar graph and show the median (Immediately you will draw the conclusion) - Need to highlight the variations on utilization rate vs carrier graph. Show the difference in box plot diagram. Lloyd has very high variations, should bring about that point - ==Sequence should change: summary statistics > box plot > bar graph== - ==Total > together with median (box plot) > distribution diagram== - Pay attention to 0.78 – 28.8 (those with smaller volumes have higher variations) PROBLEM WITH PACKINGGGGGGGGG! Smaller volumes → lower utilization rate. In general for other volumes they are usually in the > 50 percentile - Small volume gives the most problem → should tackle these volumes and giving strategies for this. Must know what are the characteristics of the customers that are using FCL and LCL. Is it that FCL has smaller volume? Highlight the clear differences here and show the clear variations. - Jan wanted to see the differences between Llyod and CMA using tukey method – Kam: you are comparing the means, seeing whether one carrier is different from the other one. When p is small, that is where you reject your hypothesis, which means that the two carriers are not the same. Its simply about testing	

- Need to isolate the volumes then do the analysis eg: separate the 0.78 – 28.8m^3. Actually cannot use quartile, have to use the shipping statistics one what is a small volume and so on. Standardize with KARWAY.

- End of day you need to see who is not statically significant (means those with the higher p value, reject) – can say that it is similar. Assumption of this is that the data is normally distributed. Robust method doesn't need the assumption that it has to be normally distributed. Not true to have it normally distributed only for Anova or Tukey.

- Kam will send us an article and we have to memorize it so that we can be able to tell the sponsors or clients. (About normal distribution) – Remind him

3	Siong's Part (Shanghai – Los Angelos)

- Kam: one thing to take note: what is difference between the volume for each of the individual trade lanes. Over the last 5 years there are increase in volume for direct trade routes.
- Need to justify why we use the top 3 or top 4. Do assumptions and state clearly
- Siong: scope down to top 4. Kam says should include CMA CGM also because it is significant. So should be top 5.
- Sort graph!!!!
- Should standardize with everyone else (Reorganize)
- For 55.84 – 63.59, Llyod is not faring well while for the others it is faring well. Hyundai is the lowest utilization rate but is doing well for one of the portion of the volume. Problem lies with the smaller volume, focus more on lower tier. Should separate the 63.59 – 1189.1.
- Is there a seasonal trend that causes such a distribution for utilization rate? This might be a cause that they have wide variations rates.
- Hyundai and yangming in 55.84 - 63.59 should be further analyzed. Very interesting – maybe they are not effective. If they are effective we should see more variations, they are not utilizing stuff accurately. (At the bottom of the median – these two carriers for this range of volume is having problems) Should separate it out and analyze! Might need to combine 48.67 – 55.84 with 55.84 – 63.59 as there might be small shipments in that category.
- Make clear that you are analyzing the 95% of the TEU values
- Change the scale to ordinal scale (Utilization Rate VS 20 graph) then it will automatically change to the scale that we want.
- Kam: you are looking at the container size as the new variable. One way to look at it is that. Use Utilization as response variable and regress with 20 FT container, 40 FT container, 40 HC and month (Build model – put in multi variant environment). Month has to be ordinal scale or categorical.
- If you want to use a chart, use a heatmap method. (Summary of the 20, 40, 40HC) – know the container size.
- Don't need to create dummy variable for JMP if using categorical data.

4	Hui Shia's Part (Shanghai – Long Beach):	
	- HS: 62.3 – 1060.9 – Hanjin has the most number of shipments (54%) but then the utilization rate is low. It is not utilizing enough.	
	- 0.43 -27.7 – the lower 25% is quite big	
	- Kam: volume itself wont tell us everything so using the multivariate regression, we hope to find out what is causing the patterns (e.g. containers)	
	- HS: did Actual TEU based on the carrier. Used 95 percentile, TEU value of 6.2	
	- HS: Compared the UR graph and actual TEU graph. Kam: why not use the box plot? HS: will be hard to see. She wants to see how many are using 4 TEU. TEU represents the no. of container	
	- Kam: a classification method would be quite useful later on to find out what are the factors affecting the utilization rate	
	- HS: should we structure based on LCL and FCL? Kam: no, **work independently**. Make the model first and then with the characteristics that affect the UR, then map it.	
	- ** FIND OUT THE CHARACTERISTICS AFFECTING THE UR	
	- FIND OUT FROM KAR WAY THE CHARACTERISTICS AFFECTING FCL LCL	

Prepared by: Hui Shia and Janice Koh