Date:	08 January 2016
Time:	01.34pm to 02.30pm
Venue:	SMU School of Information Systems Level 4 Project Room 4.1
Attendees:	Prof Kam Tin Seong – Associate Professor Leong Junkang, Gabriel – Team Skulptors Member Tan Siying – Team Skulptors Member Zhou Xuanyi – Team Skulptors Member
Absentees:	NIL
Agenda:	1. Discussion of team's project scope and feasibility 2. Project proposal clarification

Discussion:

1. Concern on sponsor's interest to create an application.
    a. Creation of an application is within the scope if it is to help in the analysis of the data. However, if it does not (e.g. file upload), do any analysis of data, it will not be in the scope of analytics practicum.

2. Usage of tableau as a platform
    a. Should not be used if it is just to display graphical visualization of the data as there is no form of analysis present.
    b. Team has to be sure of the type of analysis that they will be conducting for the sponsors. This will allow sponsors to extract valuable analysis and information from the graph representation in tableau.

3. Prof advise to team:
    a. To check out past methods that people use for product control graph, and research on it to see if the team is able to use a similar method to represent these data.
    b. Possible analysis
        i. Identify the inflow and outflow base on daily / monthly / weekly. Which is the best method based on the fact that the data provided does not exactly have an explicit timeline?
        ii. Consider looking at analysis based on the day of the week.
            1. Which day is more active and which day is not.

iii. Preparation of data should be done in a way that it can be sorted / segmented easily based on a particular variable (e.g. product code / doc number).
iv. Consideration of location.
    1. How sensitive is the location for a particular SKU? Do the company need certain variables such as product code and location short name to be placed together?
v. Consider and explore the possibility of grouping the product code in a certain manner. For instance, in liquid form, semi-liquid form, etc. Will it be possible to simply just use the product code to map out these characteristic?

c. Analysis follow up
    i. Company's operation and analytics team has to validate the team's project and results. Team has to implement the application by coming out with the ABC segments and present to sponsors, who will in turn, verify if the results and analysis are useful for them.

4. Scope of project
    a. Appropriate for the project as it will keep the team busy, based on the number of analysis required on such a big data set.
    b. Good exercise to work on.

5. NDA
    a. To sign SMU's NDA instead of the company's NDA. This would be a better option as it has been crafted by SMU's legal department for students.
    b. A single NDA will suffice.
    c. Company name can be replaced to "a local logistics company", to protect the privacy of the company.

6. Presentation of works to sponsors
    a. Sponsors are invited for both midterm and final presentation.
    b. However, sponsors will not be able to have a say in the grading of the team.

7. Meetings with Prof.
    a. Meeting timing are refreshed weekly on the google document.
    b. Check the google document at the end of each week to get the timeslots the team wants.

8. Sponsor meeting with Prof
    a. Not really needed unless really required.
    b. Can be done via internet.

9. Wiki
    a. Prof. would not want the wiki to be locked as it's for everyone to see the students' projects.

10. To clarify with sponsors
    a. If sponsors are fine with the team uploading a small segment of its data. If sponsors are concerned about their privacy, the data format and naming can be changed to ensure that the company's data description is masked.
    b. To check if company has stock cart data. This is to allow the team to know the movement and balance quantity of a particular SKU.
        i. A typical data should be: Date | Doc No | Inbound | Outbound
        ii. Refer to table below

Date	Doc No	Inbound	outbound
x1	0001	100	0
x2	0001	0	2
x3	0001	0	68
x4	0002	100	50

        iii. As we can see, before the old stock was even cleared out, the new inbound came in. Balance of the SKU quantity has been "lost". This is often a classical example of how warehouses work as employees do not update the data accurately.
        iv. Team to look up on control chart method for the flows.

11. Time series graph
    a. Only one variable.
    b. Team to explore the possibility of analyzing by product and group them accordingly. To identify 1 peak per week. Use time series pattern to group data. This is called time series data mining. The software to use it would be SAS enterprise miner.
    c. One off result (meaning cannot be reused).

12. Control chart
    a. Team to explore the possibility of using a control chart by JMP for visualization and analysis purposes.
    b. Based on each individual product.
    c. Allows the possibility for reuse. Hence, allows sustainability to be attained.
    d. Team has to explore how control chart works.
    e. To look up D3.JS.

13. DOE
    a. Design of experiment.
    b. 6 Sigma.
    c. Uses historical data to design the data and subsequently, work with the company's analytics team to compare the results.

d. Very interesting software and is the best way to gain insights.
e. Prof stresses the need to work very closely with company's analytics team in order for the DOE to gain best insights on the data.

14. To pick 1 or 2 out of the 3 recommended analysis (Time series, Control chart, DOE)

15. Team to meet up with Prof next week again.

Action Items:

No.	Task	In-charge	Due date
1	Sending of final proposal with Prof's feedback to sponsors for checking.	Team Skulptors	08 January 2016
2	Submission of final proposal on elearn.	Gabriel Leong	10 January 2016
4	Scheduling of warehouse visit with sponsor.	Gabriel Leong	10 January 2016
5	Obtaining of data from sponsor company.	Team Skulptors	13 January 2016
6	Preparation of presentation slides for meeting with sponsors.	Team Skulptors	13 January 2016

The meeting was adjourned at 02.35pm. This minute will be circulated and adopted if there are no amendments reported in the next three days.

Prepared by,
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Leong Junkang, Gabriel

Vetted and edited by,

Tan Siying