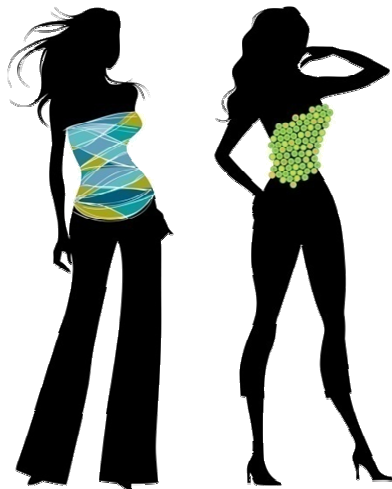


# Topic: AFFINITY DIAGRAM

“Development of a Problem Solving Model  
for the Hong Kong Textiles and Clothing  
Industries” Project

HKRITA Ref. No. : RD/PR/001/07  
ITC Ref. No. : ITP/033/07TP



# Affinity Diagram

- A tool that gathers large amounts of language data (ideas, opinions, issues) and organizes them into groupings based on their natural relationships.
- Group ideas under headers - An idea that captures the essential link among the ideas contained in a group of cards
  - Single card or post-it
  - Phrase or sentence
  - Clear meaning

# Creating an Affinity Diagram

Step 1 - Generate ideas

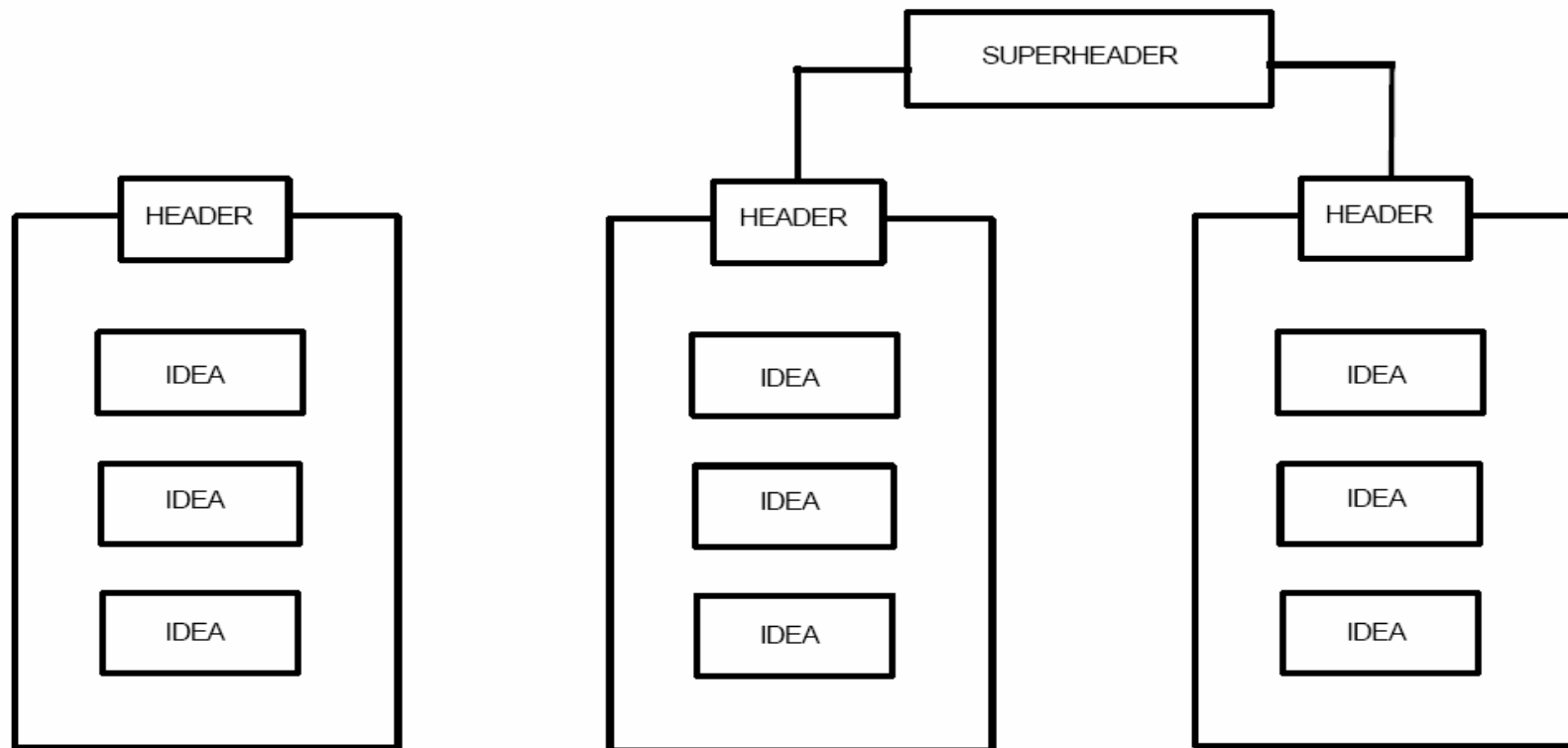
Step 2 - Display ideas

Step 3 - Sort ideas into groups

Step 4 - Create header cards

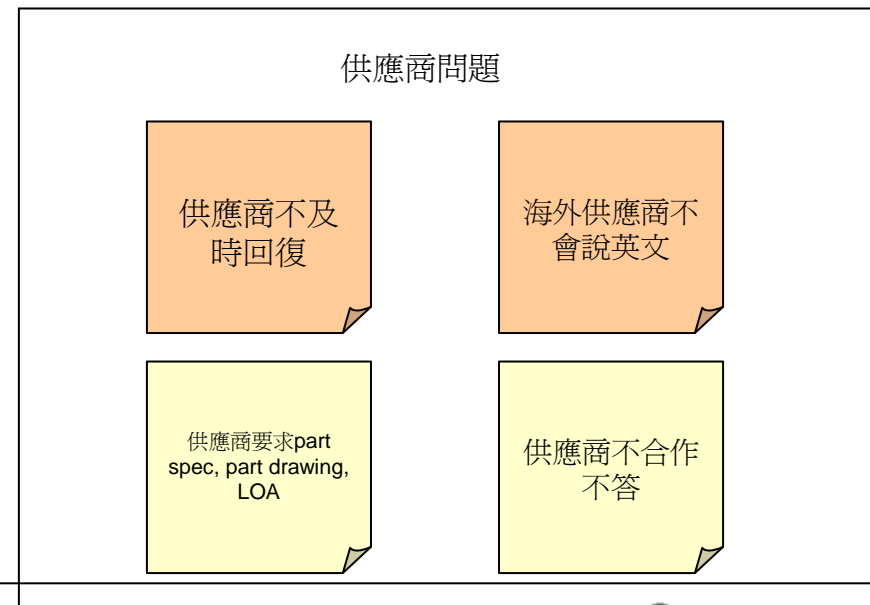
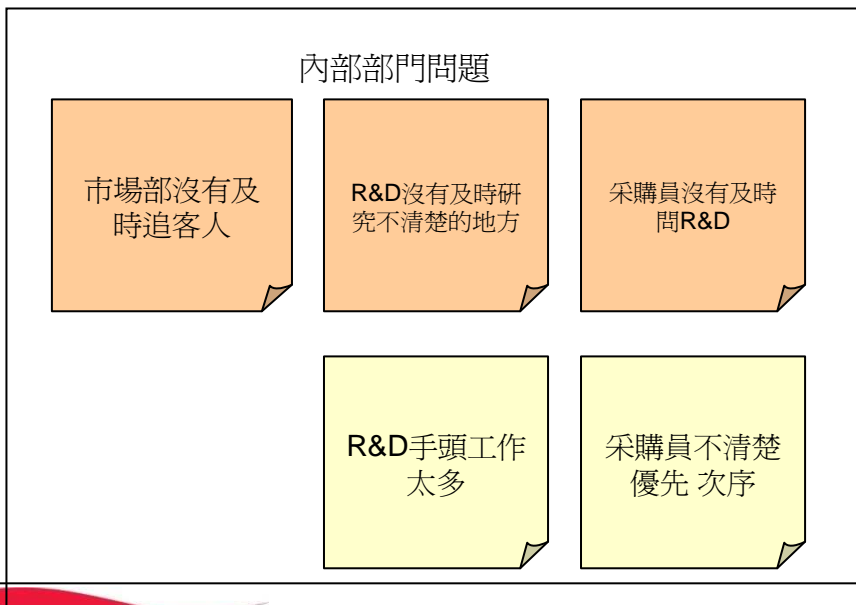
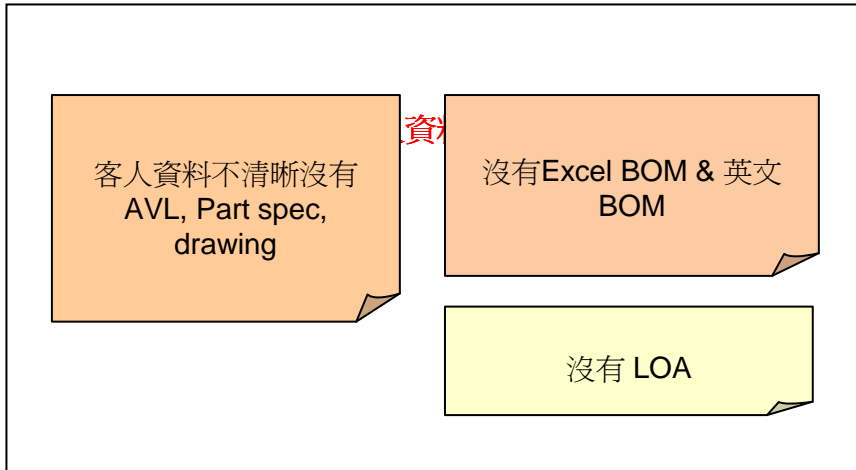
Step 5 - Draw finished diagram

# Drawing the Finished Affinity



# 親和圖

## 找出影響RFQ不及時完成原因



# Stem and Leaf Diagram

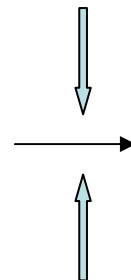
| Data | Separation | Stem and Leaf |
|------|------------|---------------|
| 25.6 | 25   6     | 25 and 6      |

Eg : Measurement of audio intensity (dB)

|      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|
| 29.8 | 27.6 | 28.3 | 28.7 | 27.9 | 29.9 | 30.1 | 28.0 | 28.7 | 27.9 |
| 28.5 | 29.5 | 27.2 | 26.9 | 28.4 | 27.9 | 28.0 | 30.0 | 29.6 | 29.1 |

Stem & Leaf diagram (n=20, Unit of Leaf = 0.10)

Median  
於此小組



| Frequency | Stem | Leaf    |
|-----------|------|---------|
| 1         | 26   | 9       |
| 6         | 27   | 26999   |
| (7)       | 28   | 0034577 |
| 7         | 29   | 15689   |
| 2         | 30   | 01      |

← Min

← Max

Eg : Data were collected for both day and night shift about the performance of a factory.

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 日班 | 84 | 85 | 69 | 75 | 87 | 73 | 92 | 70 | 74 | 79 | 70 | 95 | 79 | 89 | 80 |
| 夜班 | 78 | 82 | 74 | 68 | 79 | 84 | 90 | 59 | 71 | 85 | 66 | 69 | 83 | 89 | 75 |

Stem & Leaf (n=15, Unit of Leaf = 1.0)

| Day Shift | Stem | Night Shift |
|-----------|------|-------------|
|           | 5    | 9           |
| 9         | 6    | 688         |
| 9954300   | 7    | 14589       |
| 97540     | 8    | 23459       |
| 52        | 9    | 0           |

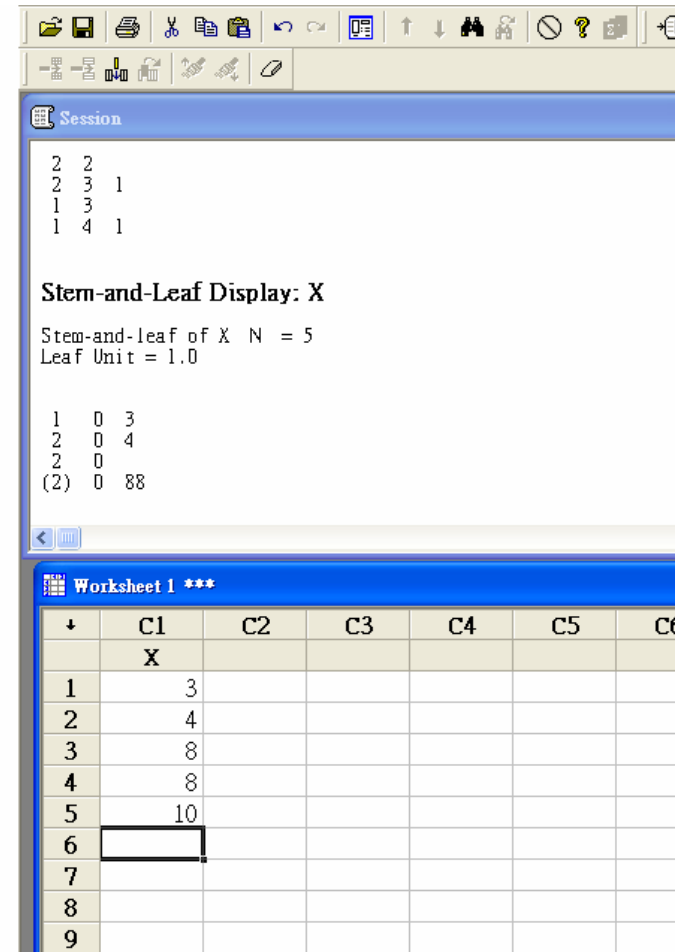
日班产量较多、波动较少

## Example – Using Minitab

Graph > Stem-and-Leaf  
Stat > EDA > Stem-and-Leaf

Use to examine the shape and spread of sample data. Minitab displays a stem-and-leaf plot in the Session window. The plot is similar to a histogram on its side, however, instead of bars, digits from the actual data values indicate the frequency of each bin (row).

Below is a stem-and-leaf plot for a data set with the following five values: 3, 4, 8, 8, and 10.





# The display has three columns:

- **The leaves (right)** - Each value in the leaf column represents a digit from one observation. The "leaf unit" (declared above the plot) specifies which digit is used. In the example, the leaf unit is 1.0. Thus, the leaf value for an observation of 8 is 8 while the leaf value for an observation of 10 is 0.
- **The stem (middle)** - The stem value represents the digit immediately to the left of the leaf digit. In the example, the stem value of 0 indicates that the leaves in that row are from observations with values greater than or equal to zero, but less than 10. The stem value of 1 indicates observations greater than or equal to 10, but less than 20.
- **Counts (left)** - If the median value for the sample is included in a row, the count for that row is enclosed in parentheses. The values for rows above and below the median are cumulative. The count for a row above the median represents the total count for that row and the rows above it. The value for a row below the median represents the total count for that row and the rows below it.
- In the example, the median for the sample is 8, so the count for the fourth row is enclosed in parentheses. The count for the second row represents the total number of observations in the first two rows.

- THE END -