



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學

KMIRC 知識管理及創新研究中心
Knowledge Management and Innovation Research Centre

Knowledge Audit Methodology for Unstructured Business Processes -Design Based Research Cases in Hong Kong Enterprises

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Problem Definition & Objectives

Performing knowledge audit
at the beginning KM journeys in unstructured processes?

**Knowledge
Elicitation**



How to elicit Implicit
knowledge?
(Experienced Workers
in suburb area)

**Knowledge
Representation**

Everyones' work is
unique and dynamic.
How the dynamicity
could be represented?
(Sales Dept.)

| Date | Name | Department | Age | Salary | Experience |
|----------|----------|------------|-----|---------|------------|
| 10-20-04 | Smith | Finance | 35 | 42,000 | 10 |
| 10-20-04 | Jones | Finance | 30 | 37,500 | 5 |
| 4/9/00 | Siggen | Finance | 20 | 22,500 | 5 |
| 2/20/00 | Smith | Finance | 47 | 57,000 | 15 |
| 5/30/05 | Siggen | Finance | 68 | 2,200 | 5 |
| 6/10/00 | Hallard | Finance | 80 | 0.00 | 0 |
| 1/5/00 | Jones | Finance | 89 | 0.00 | 497 |
| 10/13/00 | Smith | Mouse Pad | 61 | 140,000 | 7,000 |
| 4/1/00 | Hallard | Mouse Pad | 13 | 6.00 | 72 |
| 2/20/00 | Jones | Mouse Pad | 21 | 140,000 | 2,800 |
| 2/26/00 | Siggen | Mouse Pad | 39 | 10.07 | 392 |
| 3/6/00 | Jones | Mouse Pad | 43 | 20.00 | 392 |
| 9/13/00 | Siggen | Mouse Pad | 63 | 6.00 | 296 |
| 2/20/00 | Hallard | Mouse Pad | 63 | 10.07 | 433 |
| 7/12/00 | Siggen | Mouse Pad | 73 | 10.07 | 736 |
| 9/10/00 | Smith | Mouse Pad | 74 | 20.00 | 1,666 |
| 3/15/00 | Smith | Mouse Pad | 80 | 16.80 | 1,344 |
| 7/20/00 | Thompson | Support | 20 | 2.25 | 60 |
| 6/16/00 | Hallard | Support | 83 | 6.50 | 463 |
| 8/10/00 | Jones | Support | 87 | 0.00 | 463 |

Mental Models

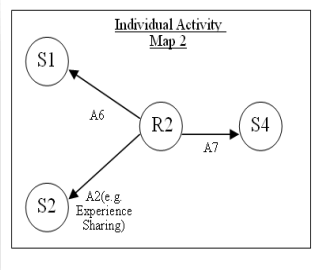
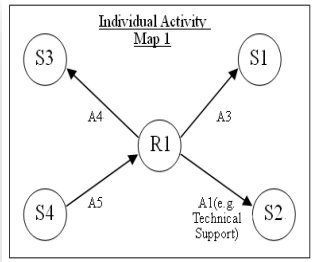


The team
(not the auditor)
know the best!
(Govt.
emergency unit)

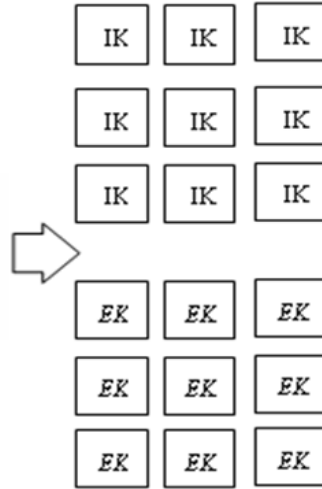
New Knowledge Audit Tool

1. Knowledge Elicitation

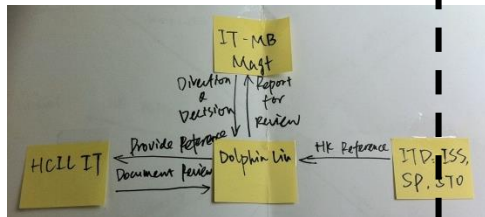
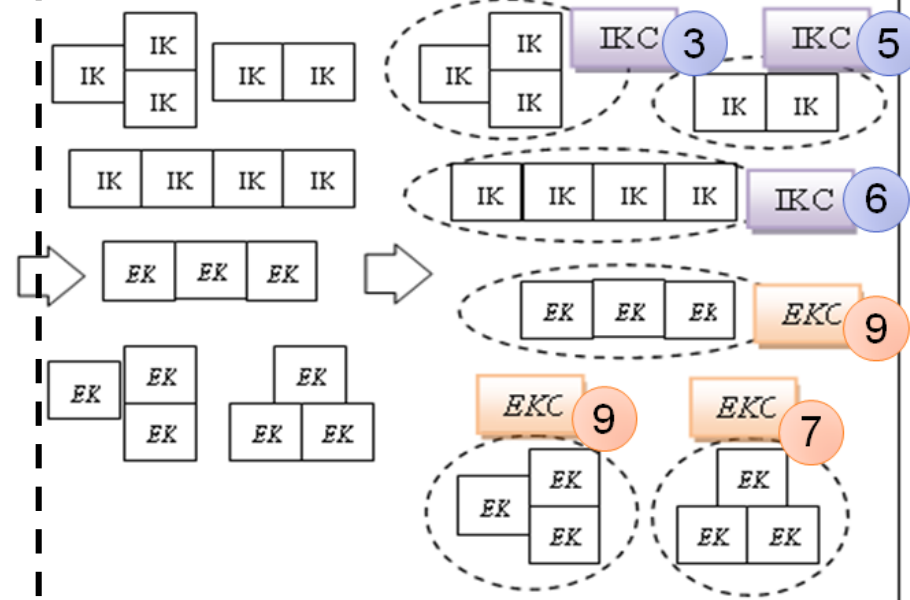
Individual Activity Map



Anecdote Circle

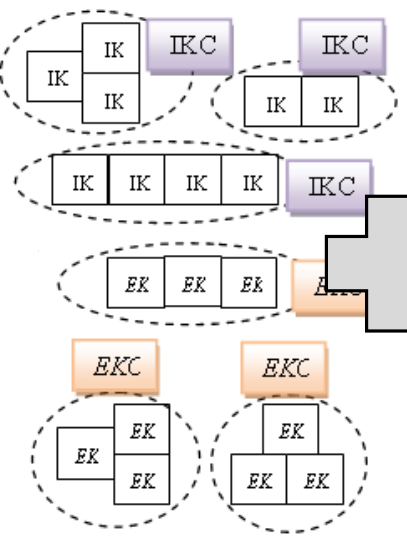


Sense making

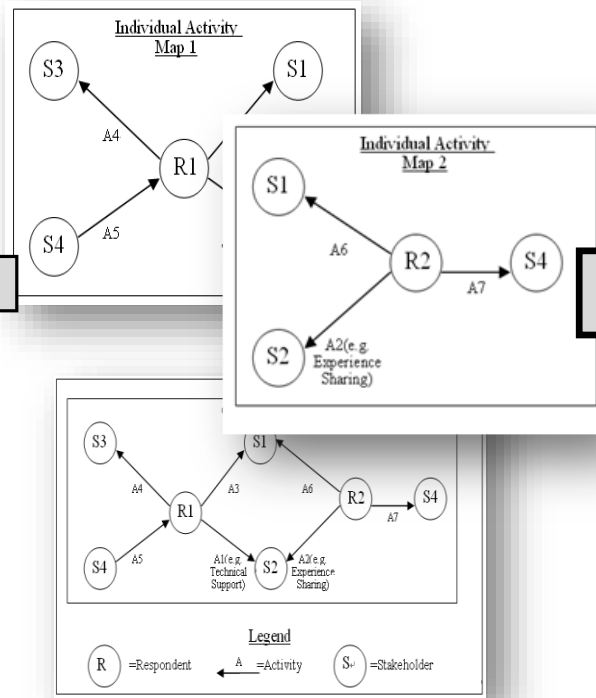


2. Knowledge Representation

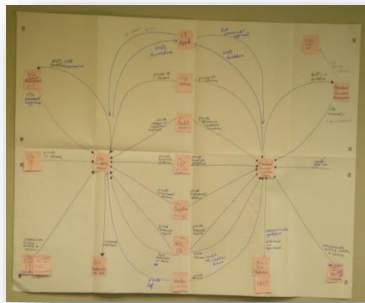
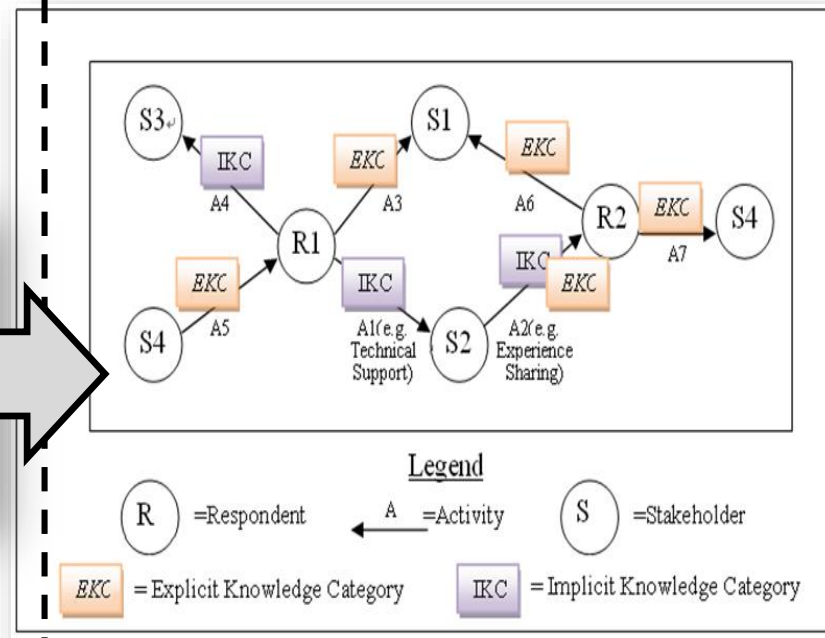
Knowledge Category
(from Knowledge Elicitation Workshop)



Individual Activity Maps
(from Knowledge Elicitation Workshop)



Knowledge Activity Map

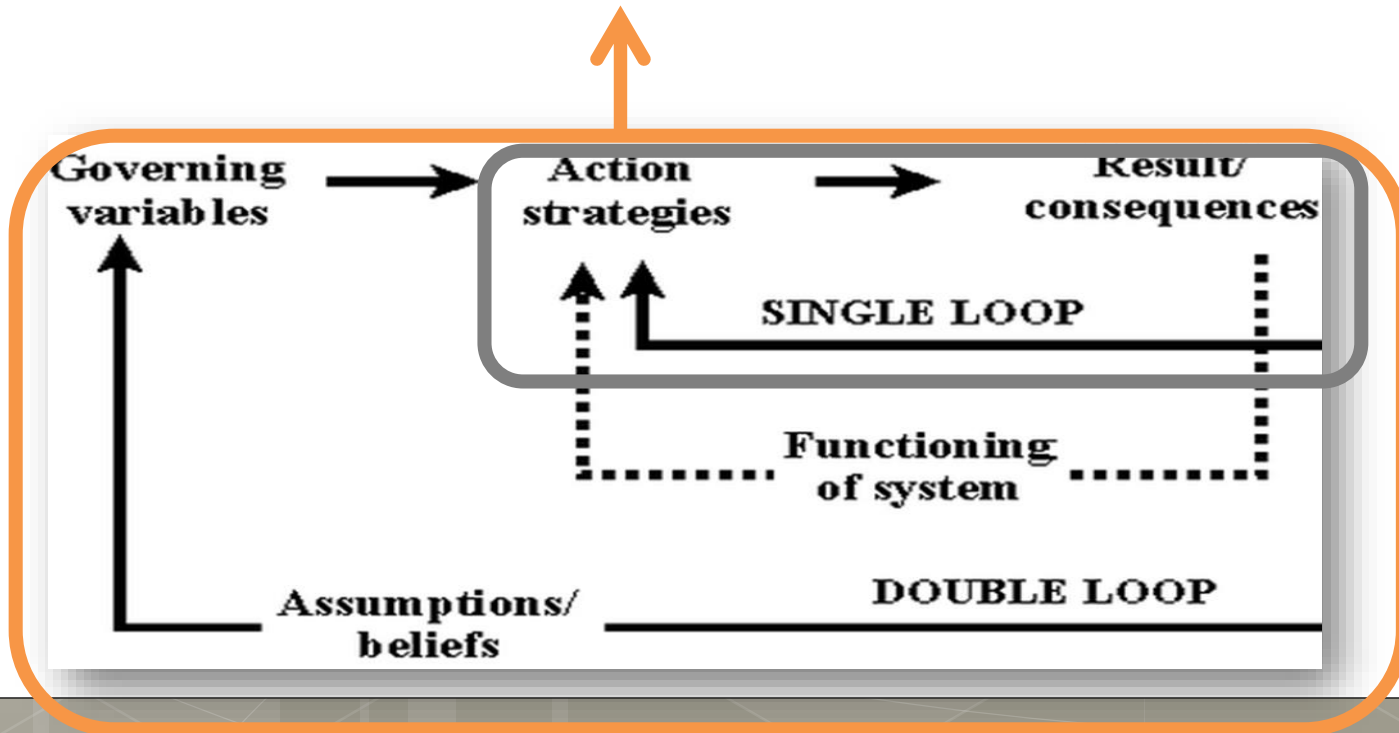


3. Mental Models

Addresses the importance of mental models
(handed to us by culture & personal development etc.)

Paradigm shift from **auditor** to **facilitator**

Connected to Knowledge Activity Map



Results

Traditional

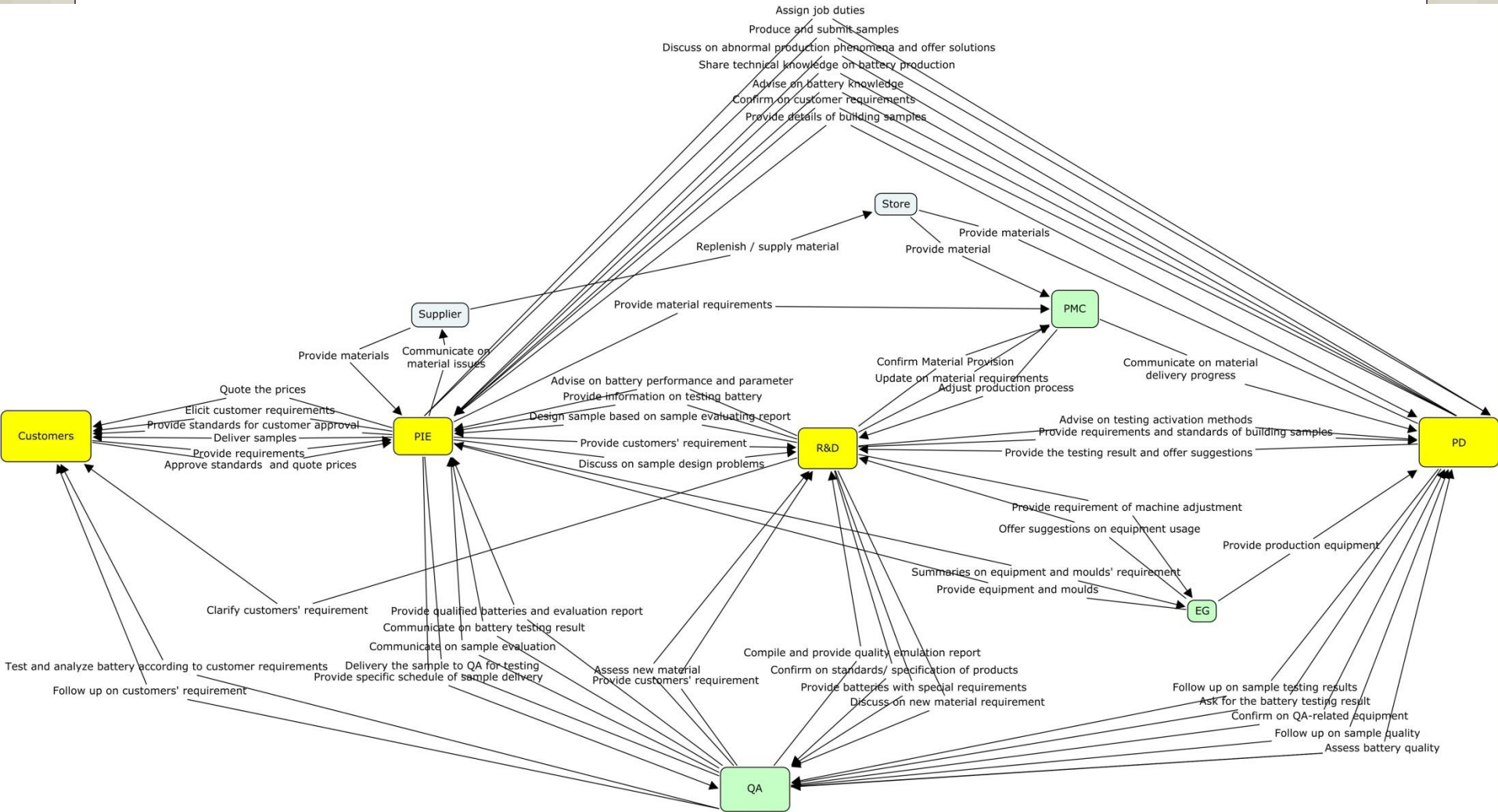
1. Implicit-Explicit Knowledge Category Ratio
2. Critical Implicit Knowledge Categories
3. Critical Explicit Knowledge Categories
4. Knowledge Categories comparison
5. Critical Knowledge Owners
6. Critical Knowledge Customers
7. Desired Implicit and Explicit Knowledge

This research

8. Comparison of Individual Activity Maps
9. Comparison of Knowledge Activity Maps

**10. Mental Model Identification,
Reframing & Intervention**

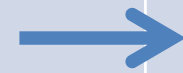
A manufacturing company in Tungkun (東莞)



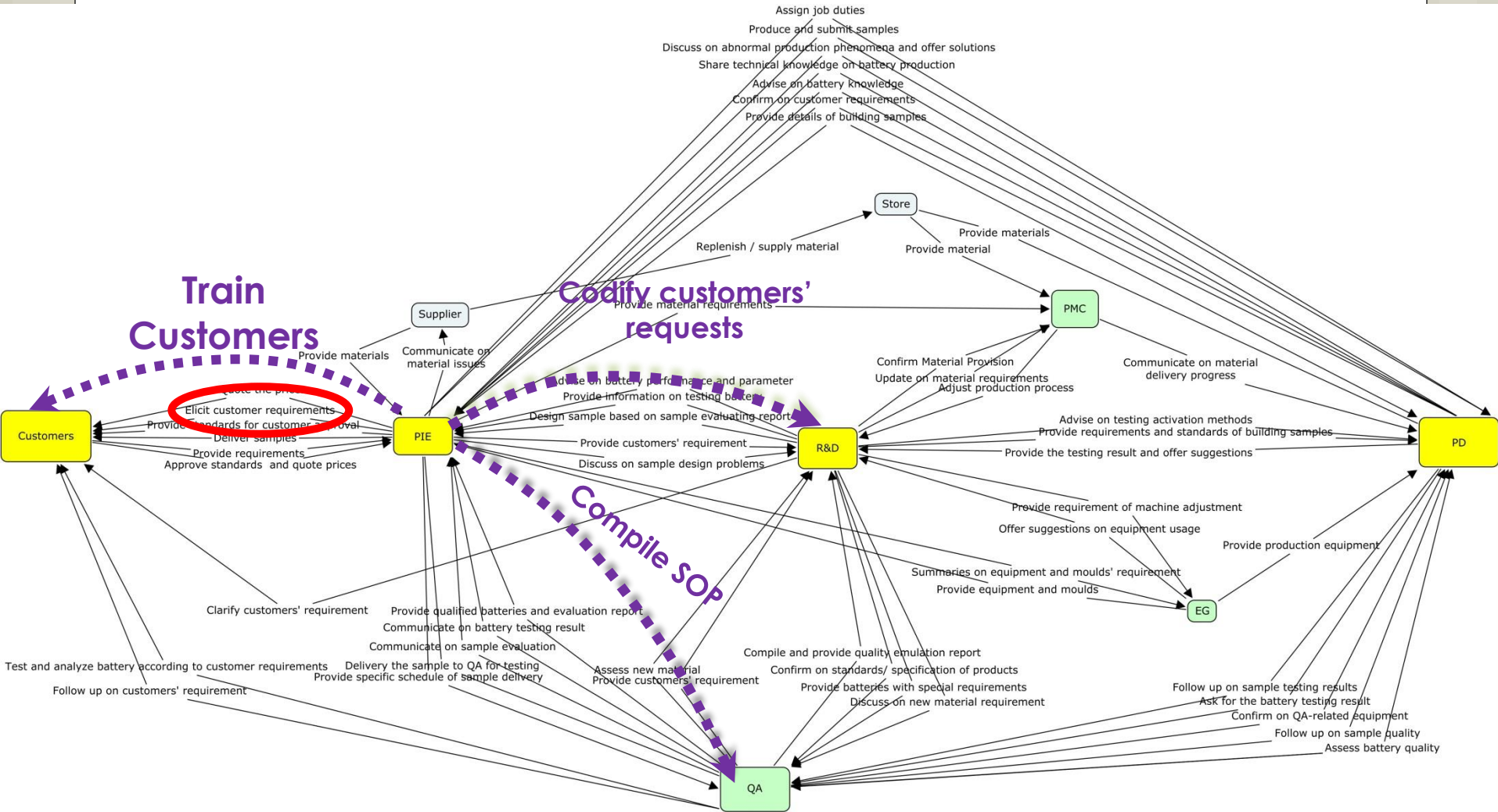


A manufacturing company in Tungkun (東莞)

| Consequences | Actions/ Activity | Mental Model |
|---|--|--|
| <ul style="list-style-type: none"> Departments are confused with their respective interpretation on customer requirements. This deters the sample production progress. Customers complain on it. | <ul style="list-style-type: none"> Customers ----->PIE (Elicit Customer requirement) | <ul style="list-style-type: none"> Customers do not have specified requirements Employees do not understand their duties. So, they tends to ignore the responsibility not stated in their job specification. |
| <p>Validation? Intervention?</p> | <ul style="list-style-type: none"> PIE ----- > Customers (customer training) PIE ----- > QA (Codify customers' requests) PD as internal documents) R&D QA ----- > PIE (SOP Compilation) PD R&D | <ul style="list-style-type: none"> Customers has the capability to formulate battery specification and production criteria |



A manufacturing company in Tungkun (東莞)



Research Significance

Embarking the KM journey with a knowledge audit tools developed for unstructured business processes

Knowledge Elicitation



Implicit Knowledge Elicitation using **story** (anecdote) circle

Knowledge Representation

| Date | Employee | Item | Units | Unit Cost | Total |
|------------|----------|-----------|-------|-----------|--------------|
| 12/20/05 | Smith | Pencil | 8 | \$ 22.39 | \$ 179.11 |
| 10/30/05 | Jones | Pencil | 9 | \$ 17.91 | \$ 161.10 |
| 4/9/05 | Sigan | Pencil | 20 | \$ 22.39 | \$ 447.78 |
| 2/9/06 | Smith | Pencil | 67 | \$ 17.91 | \$ 1,199.87 |
| 5/30/05 | Sigan | Pencil | 68 | \$ 2.23 | \$ 151.56 |
| 6/8/06 | Ballard | Pencil | 89 | \$ 5.59 | \$ 497.46 |
| 1/6/06 | Jones | Pencil | 89 | \$ 5.59 | \$ 497.46 |
| 10/13/05 | Smith | Mouse Pad | 5 | \$ 140.00 | \$ 700.00 |
| 4/1/06 | Ballard | Mouse Pad | 13 | \$ 5.59 | \$ 72.66 |
| 7/29/06 | Jones | Mouse Pad | 21 | \$ 140.00 | \$ 2,940.00 |
| 2/26/06 | Sigan | Mouse Pad | 39 | \$ 10.07 | \$ 392.68 |
| 3/6/06 | Jones | Mouse Pad | 43 | \$ 22.39 | \$ 962.72 |
| 5/13/06 | Sigan | Mouse Pad | 53 | \$ 5.59 | \$ 296.21 |
| 7/12/06 | Ballard | Mouse Pad | 53 | \$ 10.07 | \$ 533.66 |
| 7/12/06 | Smith | Mouse Pad | 73 | \$ 10.07 | \$ 735.00 |
| 9/9/06 | Smith | Mouse Pad | 74 | \$ 22.39 | \$ 1,656.77 |
| 3/15/06 | Smith | Mouse Pad | 80 | \$ 16.80 | \$ 1,344.00 |
| 7/3/05 | Thompson | Eraser | 25 | \$ 2.23 | \$ 55.72 |
| 6/16/05 | Ballard | Eraser | 83 | \$ 5.59 | \$ 463.07 |
| 8/6/05 | Jones | Eraser | 83 | \$ 5.59 | \$ 463.07 |
| 2/17/05 | Ballard | Eraser | 88 | \$ 2.23 | \$ 196.11 |
| Total cost | | | | | \$ 13,987.11 |

Visualize the dynamic interplay between **knowledge, activity and stakeholders**

Mental Model



Paradigm shift from **auditor to facilitator**

Address the mental model (handed to us by culture, personal development)



The End
Thank you!