Towards a Model of Topic Relevance during Requirements Elicitation

Preliminary Results
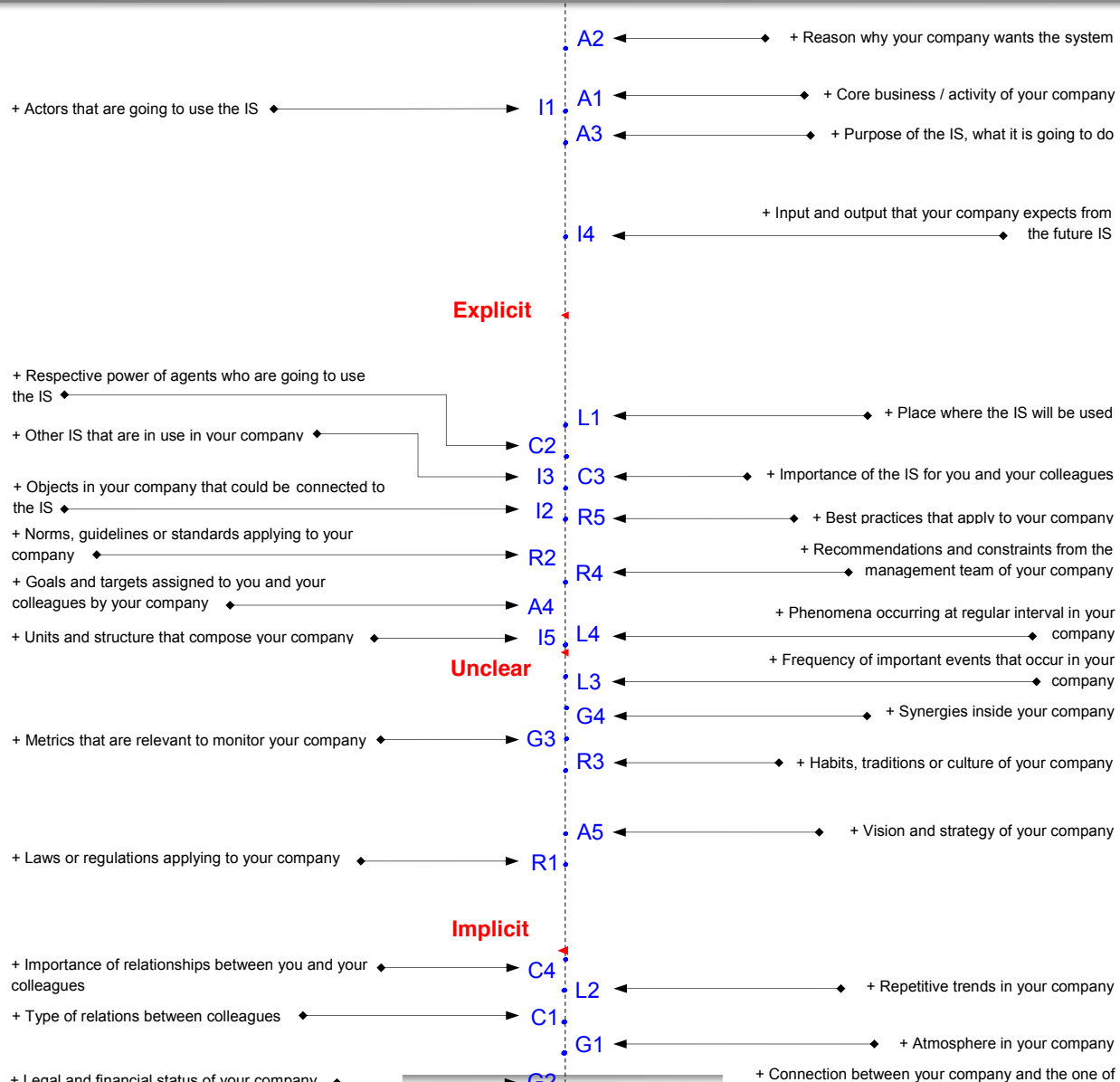
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fnrs
FREEDOM TO RESEARCH

RESEARCH BACKGROUND

- Former research on:
    1. Elicitation incompleteness
    2. Implicit information
    3. Topics' relevance in elicition

- Resulted in:
    1. Elicitation Topic Map (ETM)
    2. Empirical measurement of topic relevance to stakeholders
   3. Elicitation guidelines

+ Actors that are going to use the IS → I1

A2 ◆ + Reason why your company wants the system

A1 ◆ + Core business / activity of your company

A3 ◆ + Purpose of the IS, what it is going to do

I4 ◆ + Input and output that your company expects from the future IS

Explicit

+ Respective power of agents who are going to use the IS

+ Other IS that are in use in your company → C2

+ Objects in your company that could be connected to the IS → I3

+ Norms, guidelines or standards applying to your company → I2

+ Goals and targets assigned to you and your colleagues by your company → R2

+ Units and structure that compose your company → A4

I5

L1 ◆ + Place where the IS will be used

C3 ◆ + Importance of the IS for you and your colleagues

R5 ◆ + Best practices that apply to your company

R4 ◆ + Recommendations and constraints from the management team of your company

L4 ◆ + Phenomena occurring at regular interval in your company

Unclear

+ Metrics that are relevant to monitor your company → G3

L3 ◆ + Frequency of important events that occur in your company

G4 ◆ + Synergies inside your company

R3 ◆ + Habits, traditions or culture of your company

+ Laws or regulations applying to your company → R1

A5 ◆ + Vision and strategy of your company

Implicit

+ Importance of relationships between you and your colleagues → C4

+ Type of relations between colleagues → C1

L2 ◆ + Repetitive trends in your company

G1 ◆ + Atmosphere in your company

+ Legal and financial status of your company → G2

+ Connection between your company and the one of

RESEARCH QUESTION

"How to account, during elicitation interviews, for the relevance of some elicitation topics to both stakeholders and engineers, in a simultaneous way?"
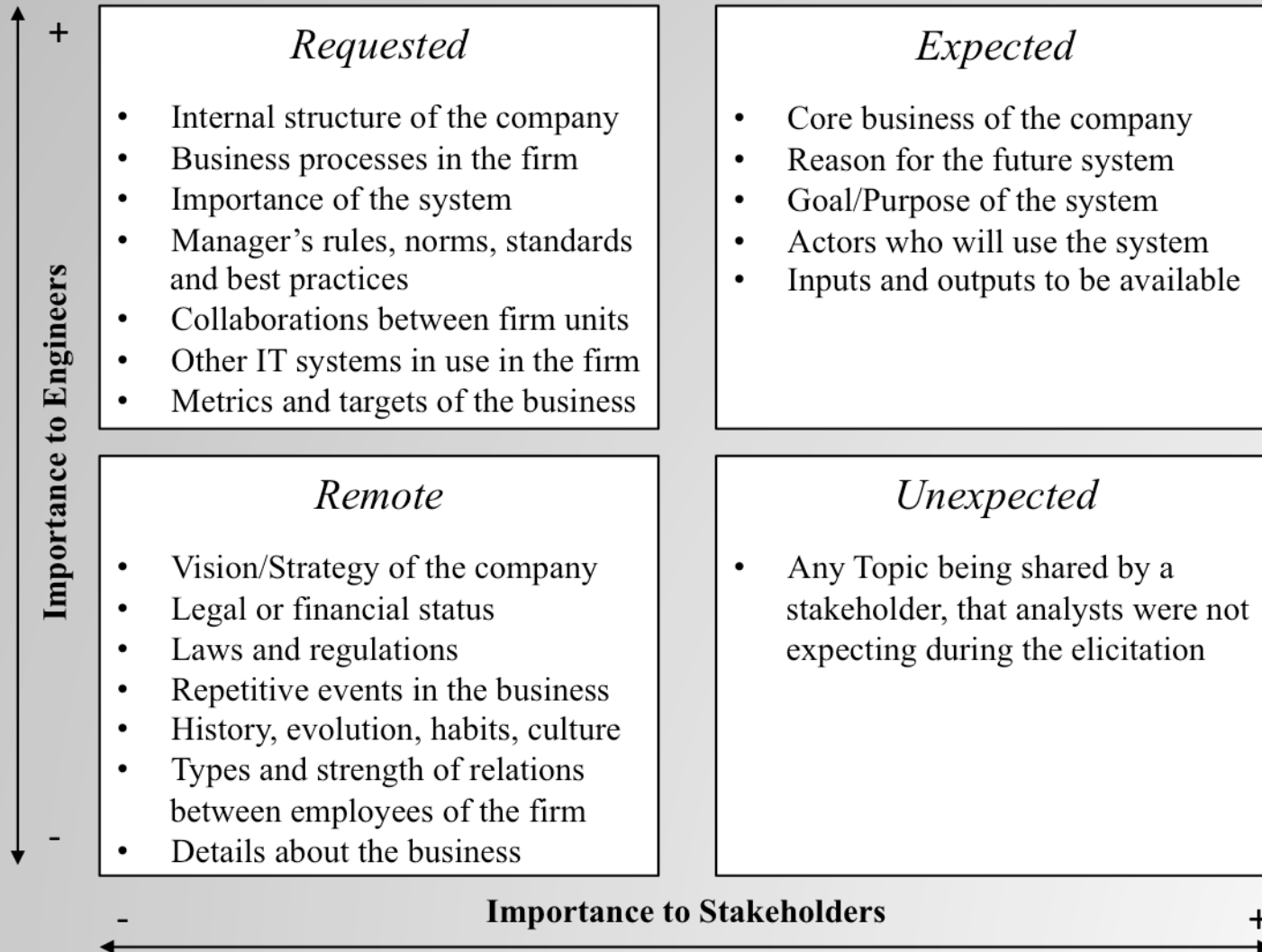
EMPIRICAL STUDY- SUBJECTS

- Target high quality profiles (BA/RE)
- Two rounds of data collection
- 50 participants

| Age	Round 1	Round 2
25 or less	4	5
From 26 to 34	10	14
From 35 to 54	8	8
55 and over	1	0

| Experience	Round 1	Round 2
Never	2	11
1 to 3	8	8
4 to 10	6	6
More than 10	7	2

EMPIRICAL STUDY- DESIGN

- Pre-study

- Online Survey in two stages:
  1. Context & Assignment
  2. Topics' relevance measurement

- Answer on a two-level scale:
  1. Relevant (I do you ask about it)
  2. Not Relevant (I don't ask about it)

- Data treatment on Hit Rates (1/1+2)
  1. From stakeholders (ETM)
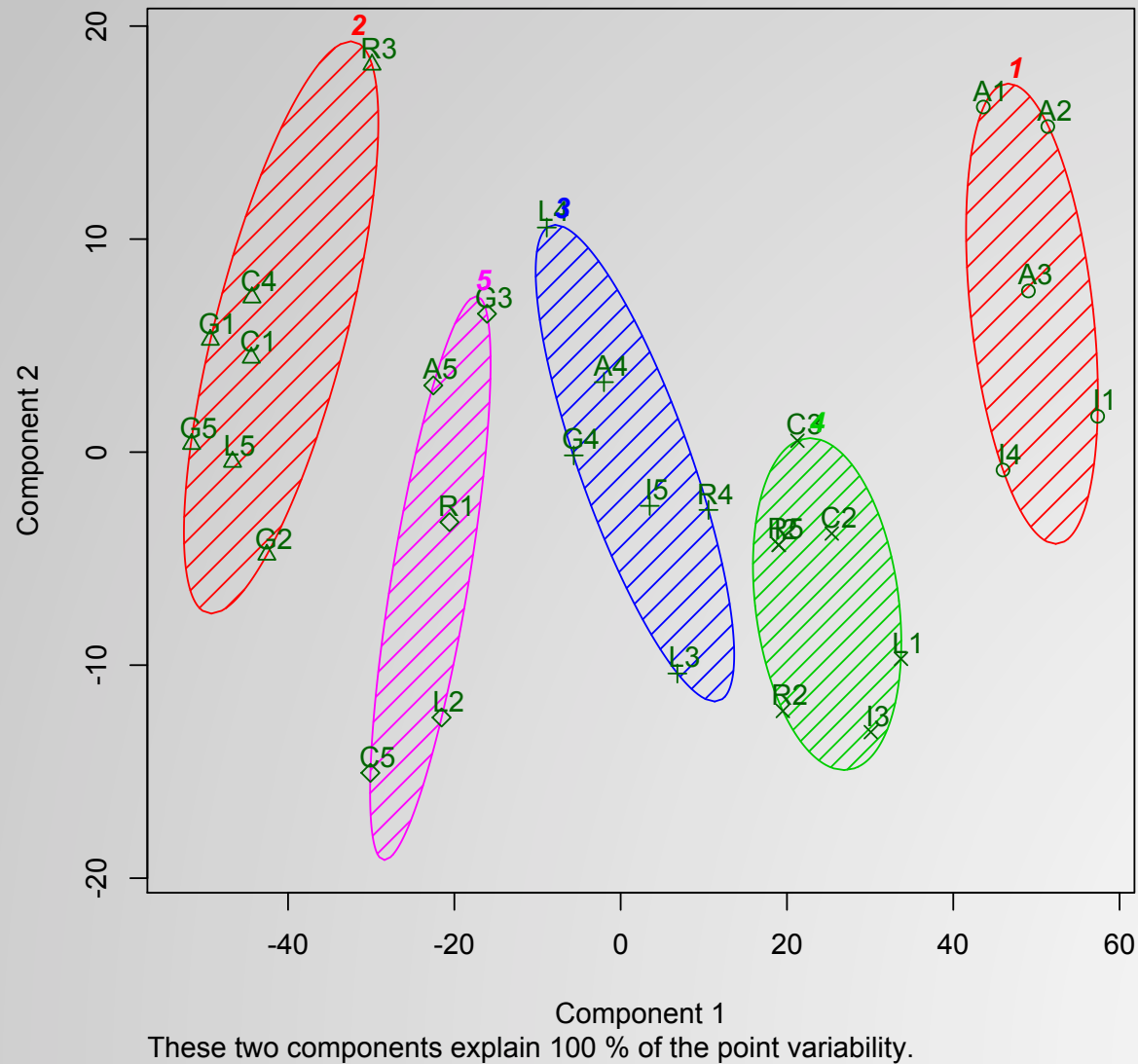 2. From analysts (this paper)
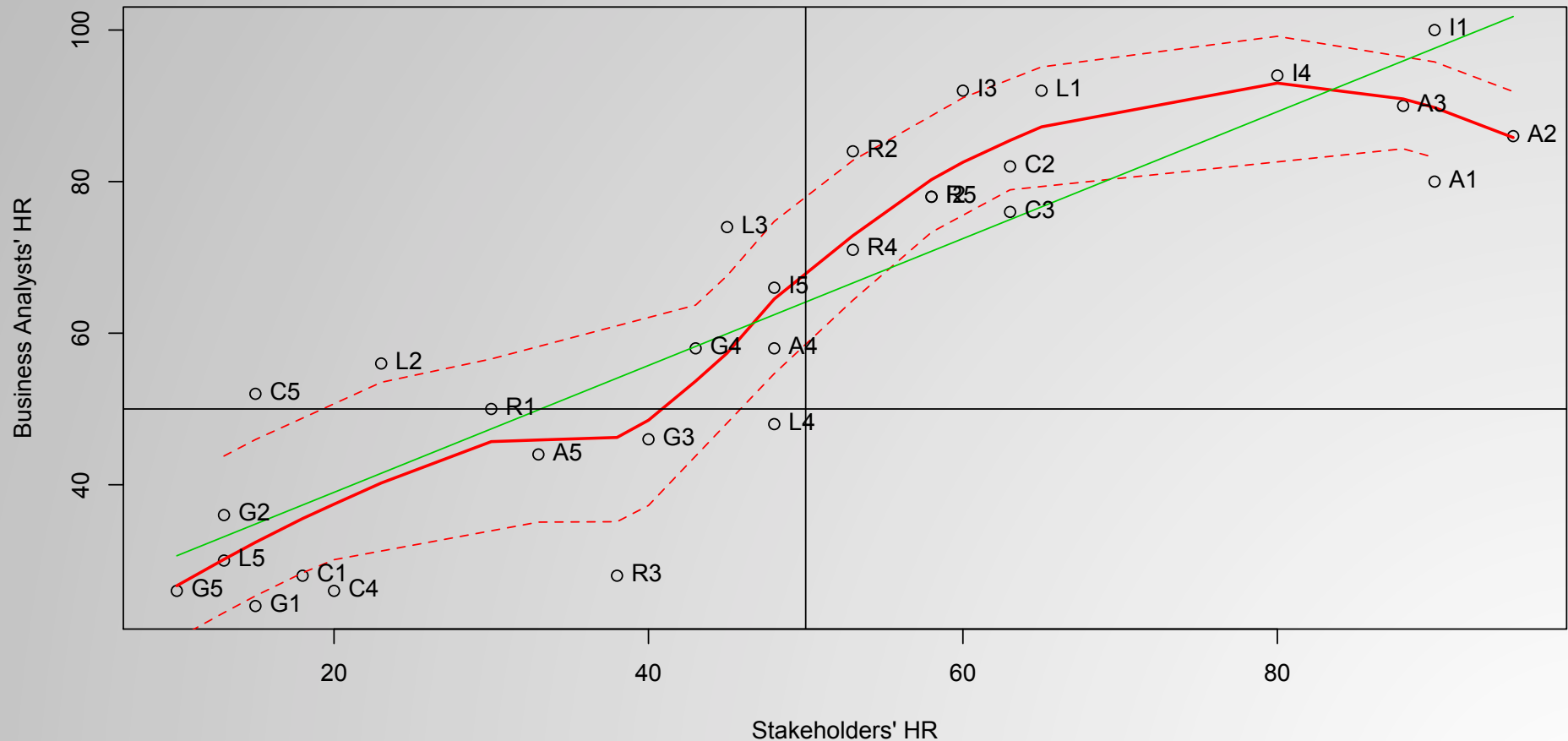
EMPIRICAL STUDY- RESULT
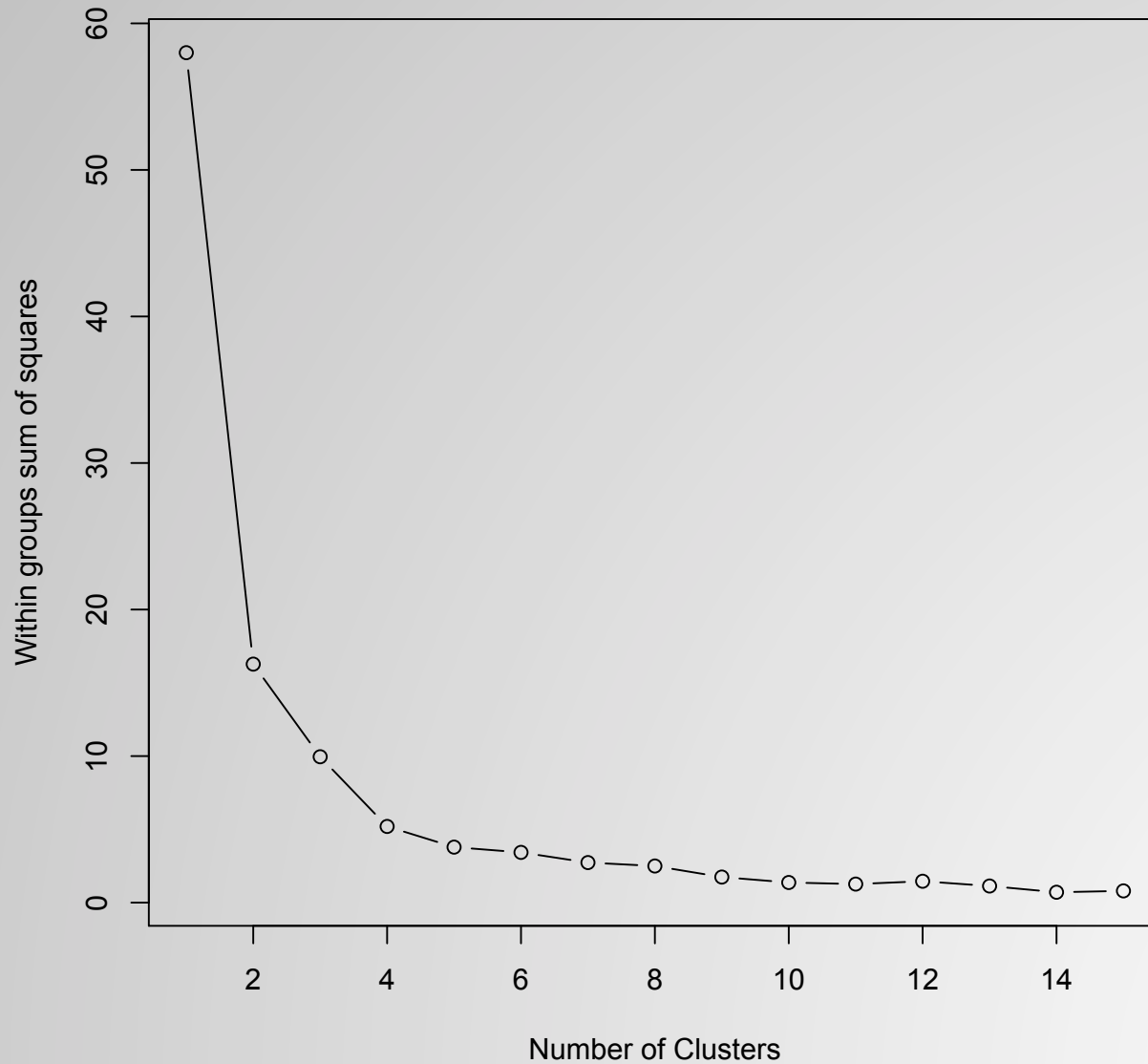
EMPIRICAL STUDY- RESULT

K-Mean Clusters (k=5)

Component 1

These two components explain 100 % of the point variability.

- METRE suggests elicitation sequence:
  - Some classes are easier to discuss
  - Some classes require other classes
  - Some classes trigger new topics
  - …

- METRE suggests new ways of selecting elicitation techniques:
  - Some classes seem interactive
  - Some classes require observation
  - …

LIMITATIONS

- METRE is still preliminary:
    - It builds on limited sample
    - It is biased toward RE (no Unexpected topics)
    - It uses only binary scales (due to ETM)
    - It is highly generic

- Future works could go on the:
    - Validation of METRE with larger samples
    - Extension of METRE to include new topics
    - Replication of METRE in more specific domains

Requested	**Expected**
• Internal structure of the company • Business processes in the firm • Importance of the system • Manager's rules, norms, standards and best practices • Collaborations between firm units • Other IT systems in use in the firm • Metrics and targets of the business	• Core business of the company • Reason for the future system • Goal/Purpose of the system • Actors who will use the system • Inputs and outputs to be available
Remote	**Unexpected**
• Vision/Strategy of the company • Legal or financial status • Laws and regulations • Repetitive events in the business • History, evolution, habits, culture • Types and strength of relations between employees of the firm • Details about the business	• Any Topic being shared by a stakeholder, that analysts were not expecting during the elicitation

Importance to Engineers (+ / -)

Importance to Stakeholders (- / +)