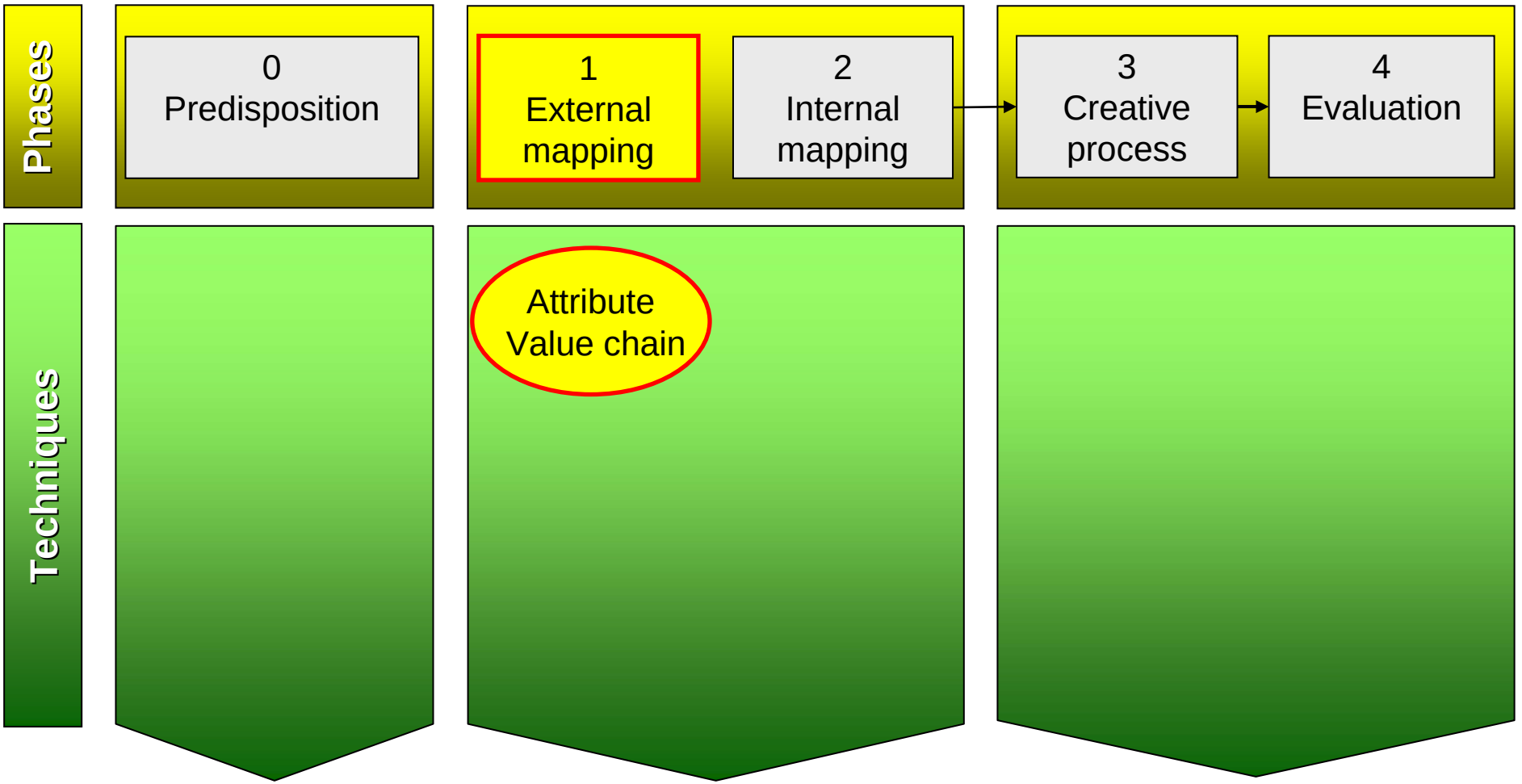
ATTRIBUTE-VALUE CHAIN

A STATISTICAL TECHNIQUE FOR EXTERNAL MAPPING


Phases
0
Predisposition
1
External
mapping
2
Internal
mapping
3
Creative
process
4
Evaluation
Techniques
Attribute
Value chain
EDUCATION
QUESTIONAIRE SESSION
GROUP SESSIONS

SUMMARY

1. INTRODUCTION TO THE METHODOLOGY
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   - Product attributes
   - Consumer's personal values
2. METHODOLOGY
   - Aim of the analysis
   - Results of the analysis
3. PHASES OF ANALYSIS
   - DERBI case study
   - Explanation of each phase
   - Building of the cognitive map (Attribute-Value Chain)

1. INTRODUCTION TO THE METHODOLOGY

PRODUCT'S KNOWLEDGE

Consumers perceive products as a combination of:

- **ATTRIBUTES** (or features)
- **PERSONAL VALUES** that consumers try to satisfy by using or buying the product

PRODUCT'S ATTRIBUTES

- Attributes are inside every product

- Attributes correspond to features through which every product could be described
  - For example: colour, shape etc.

PRODUCT'S ATTRIBUTES

ATTRIBUTES belong to different types :

- **ABSTRACT ATTRIBUTES**: they represent the subjective, intangible features of a product

  For example: comfort of a scooter

- **CONCRETE ATTRIBUTES**: they represent the physical, tangible features of a product

  For example: colour of a scooter

EXAMPLE: PRODUCT ATTRIBUTES

BRAKE
(abstract attribute)

COLOUR
(concrete attribute)

ROAD HOLDING
(abstract attribute)

PERSONAL VALUES

Values are mental representations of **important personal objectives or needs** that customers want to satisfy by using or purchasing the product

For example : what do you want from life?

PERSONAL VALUES

- Values are **stable**, because they are long-life objectives
- To **emotional level**, values drive consumers to choose in a specific way

2. METHODOLOGY

AIM OF THE ANALYSIS

The aim of the analysis is to:

- link each product attribute with one or more consumer's personal values
- represent in a cognitive map attributes, values and links between them

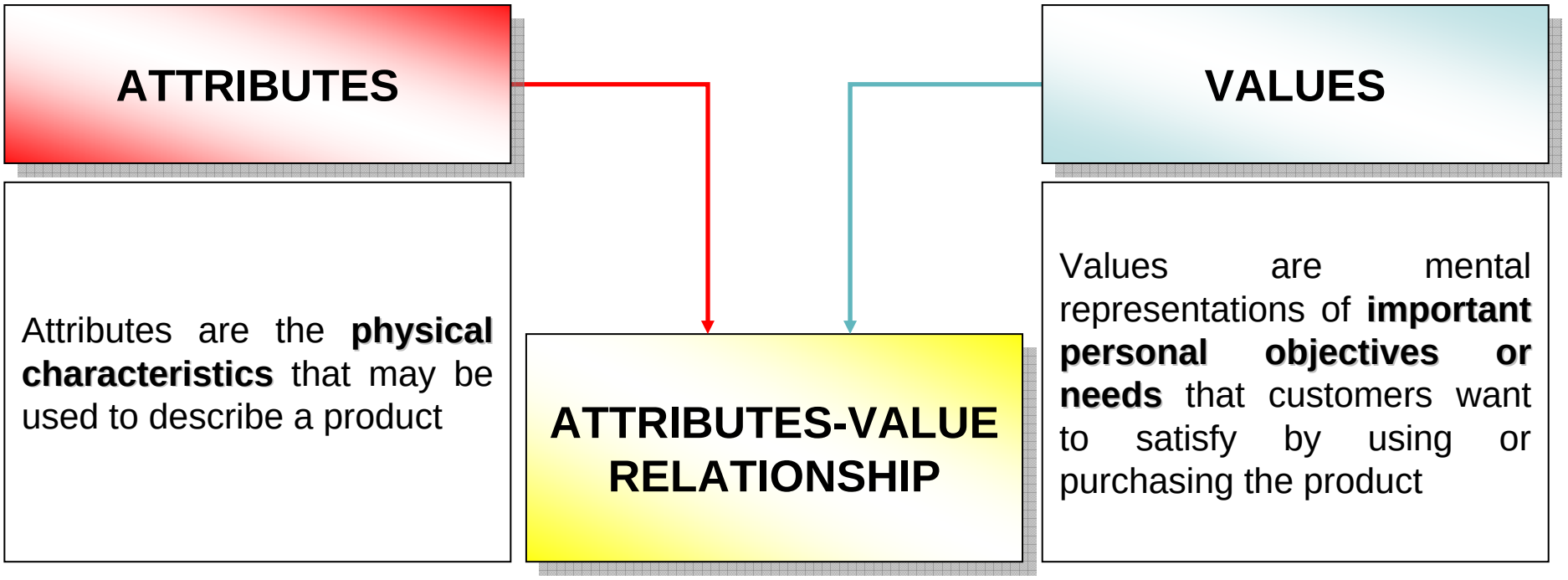
EXAMPLE: “HIGH PRICE” ATTRIBUTE

I SPENT TOO MUCH → LESS MONEY FOR OTHER THINGS → LOOSING MONEY → LESS SELF ESTEEM

HIGH PRICE

GOOD QUALITY → HIGH LASTING TIME → HIGH VALUE → MORE SELF ESTEEM

ATTRIBUTES-VALUE CHAIN: WHAT IS IT?



ATTRIBUTES-VALUE CHAIN: METHODOLOGY

Is based on a questionnaire and needs **4 steps**:

1. Definition of the target sample
2. Compilation of the questionnaire
3. Data statistical analysis
4. Building of the cognitive map (Attribute-Value Chain)

QUESTIONNAIRE SESSION

The questionnaire is compiled by Derbi's possible end-users. It is structured in **four sections**:

1. Identifying information
2. Selection of a macro-category of product's attributes (performances, look/design, service or comfort)
3. Evaluation of the selected attributes' macro-category
4. Evaluation of several personal values (independently of the product)

Section 1: IDENTIFYING INFORMATION

Answer to the following questions:

- Age [……..]
- Sex [M] [F]
- Job [……..]

Section 2: SELECTION OF AN ATTRIBUTES' MACRO-CATEGORY

Here are indicated four categories for the product. Order these categories by assigning them a score from 1 to 4 in ground of your consideration.

(4 = max. score).

- **PERFORMANCE** ___
- **LOOK/DESIGN** ___
- **SERVICE** ___
- **COMFORT** ___

Section 3: EVALUATION OF THE SELECTED ATTRIBUTES' MACRO-CATEGORY

If you gave maximum score to PERFORMANCE category, then answer to the following questions, marking the box that shows the desired score

The scores indicate respectively:

0 → no interest
1 → low interest
2 → medium-low interest
3 → medium-high interest
4 → high interest
5 → maximum interest

EXAMPLE: SCOOTER cat. PERFORMANCE

- How much do you care for ***operating-range***? [0] [1] [2] [3] [4] [5]
  Operating-range: km covered without refuelling

- How much do you care for ***road-holding***? [0] [1] [2] [3] [4] [5]
  Road-holding: capacity of remaining adherent to the ground

- How much do you care for ***reliability***? [0] [1] [2] [3] [4] [5]

  Reliability: component life-time; preservation of declared performance

Section 4: EVALUATION OF THE PERSONAL VALUES

- We have chosen **20 personal values** which could be considered as common values of human being
- The potential end-user evaluate each one of this values giving them a **score** (from 0 to 5)
- These values are independent from the product

Section 1: EXAMPLE

- How much do you care for ***ambition***? [0] [1] [2] [3] [4] [5]
- How much do you care for ***calm and relax***? [0] [1] [2] [3] [4] [5]
- How much do you care for ***imagination***? [0] [1] [2] [3] [4] [5]
- How much do you care for ***fun***? [0] [1] [2] [3] [4] [5]

DATA STATISTICAL ANALYSIS

Statistical analysis needs two steps:

1. Identification of the most meaningful attributes and values, with relative weight

2. Identification of the relations between the elements previously selected

1st STEP: IDENTIFICATION OF ATTRBUTES AND VALUES

- Using canonical correlation analysis it is possible to identify the values more correlated with product attributes

- On the contrary, all attributes are taken into consideration

1st STEP: IDENTIFICATION OF ATTRBUTES AND VALUES

The sum of the scores in each questionnaire gives the relative weight of each value and attribute.

AMBIZIONE	CALM / RELAX	IMAGINATION	FUN	STATUS	SENSE OF BELONGING	TRUST	FREEDOM'	INTEREST FOR OTHER PEOPLE	CURIOSITY	HAPPYNESS	RESPONSABILITY
2	2	0	0	0	0	0	0	1	0	2	2
2	1	3	3	2	3	3	4	3	1	2	3
3	4	5	5	5	4	4	5	5	4	5	5
124	127	126	176	132	144	167	166	126	136	168	157

Score in a questionnaire

Sum of the scores (**RELATIVE WEIGHT**)

2nd STEP: IDENTIFICATION OF THE RELATIONS

Looking the statistical matrix that comes from canonical correlation:

For example:

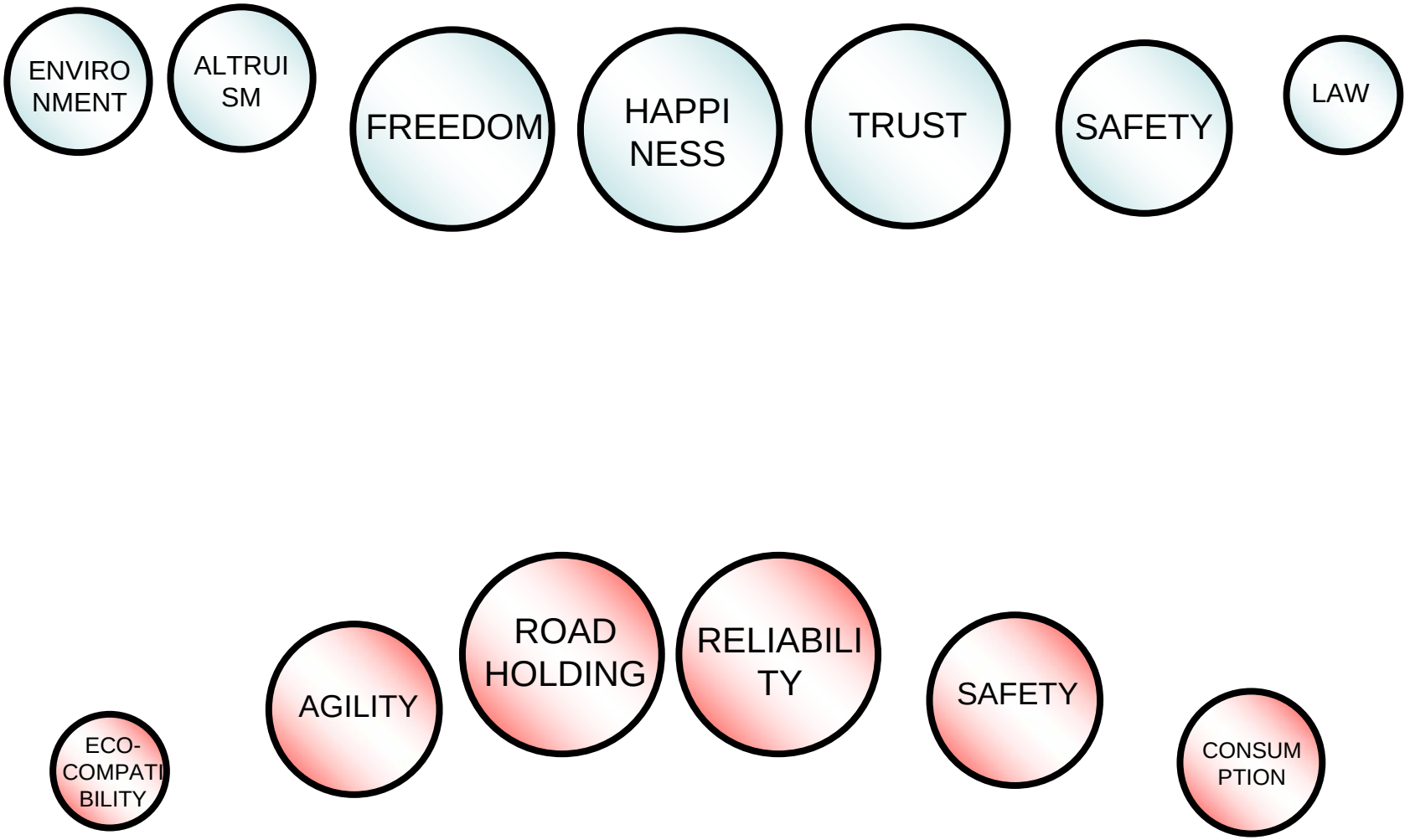
	IMMAGINAZIONE	DIVERTIMENTO	STATUS	FIDUCIA	FELICITA' SODDISFAZIONE	SICUREZZA
LINEA	0,4	0,3	0,2	0,3	0,3	0,2
IMMAGINE	0,4	0,3	0,4	0,2	0,5	0,2
MARCA	0,1	0,0	0,0	0,1	0,2	0,1
DECORAZIONI	0,0	0,3	0,0	0,1	0,1	0,1
DIMENSIONI	0,3	0,3	0,3	0,3	0,4	0,1
COLORE	0,1	0,1	0,1	0,1	0,3	0,1

Relation value between attribute and value (1=maximum correlation)

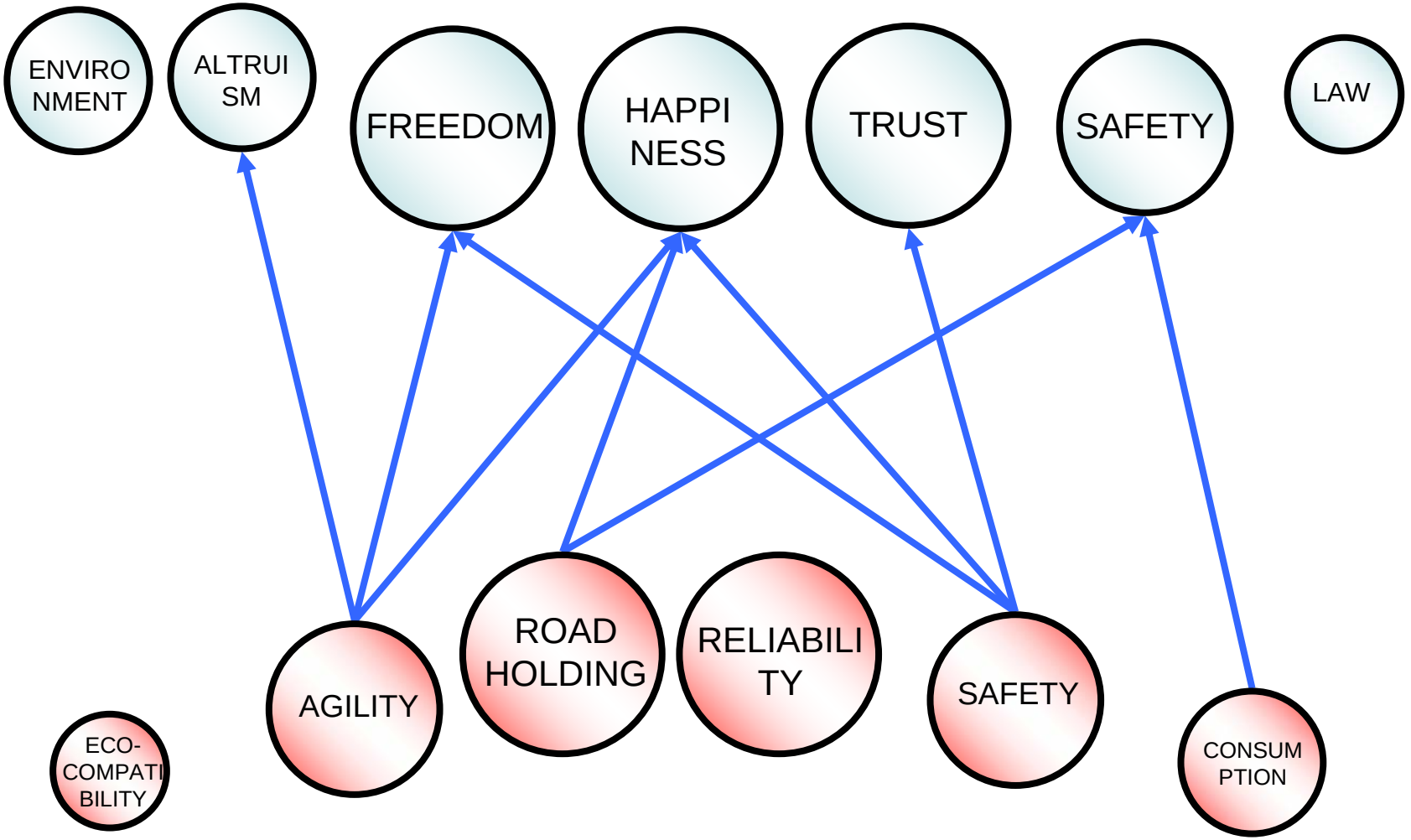
BUILDING OF THE COGNITIVE MAP

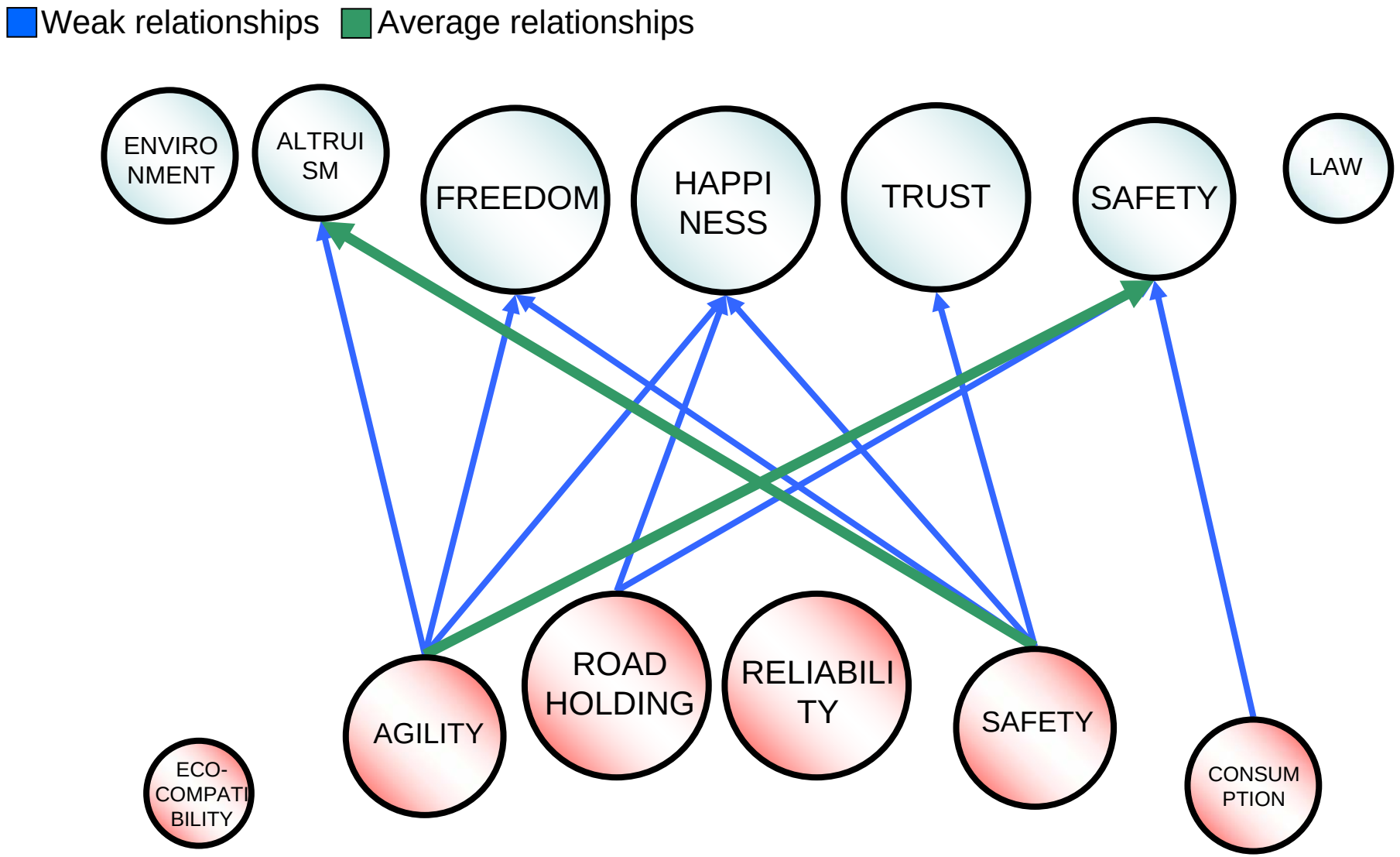
For example, we propose the cognitive map
for 'Performance' category of a Derbi scooter

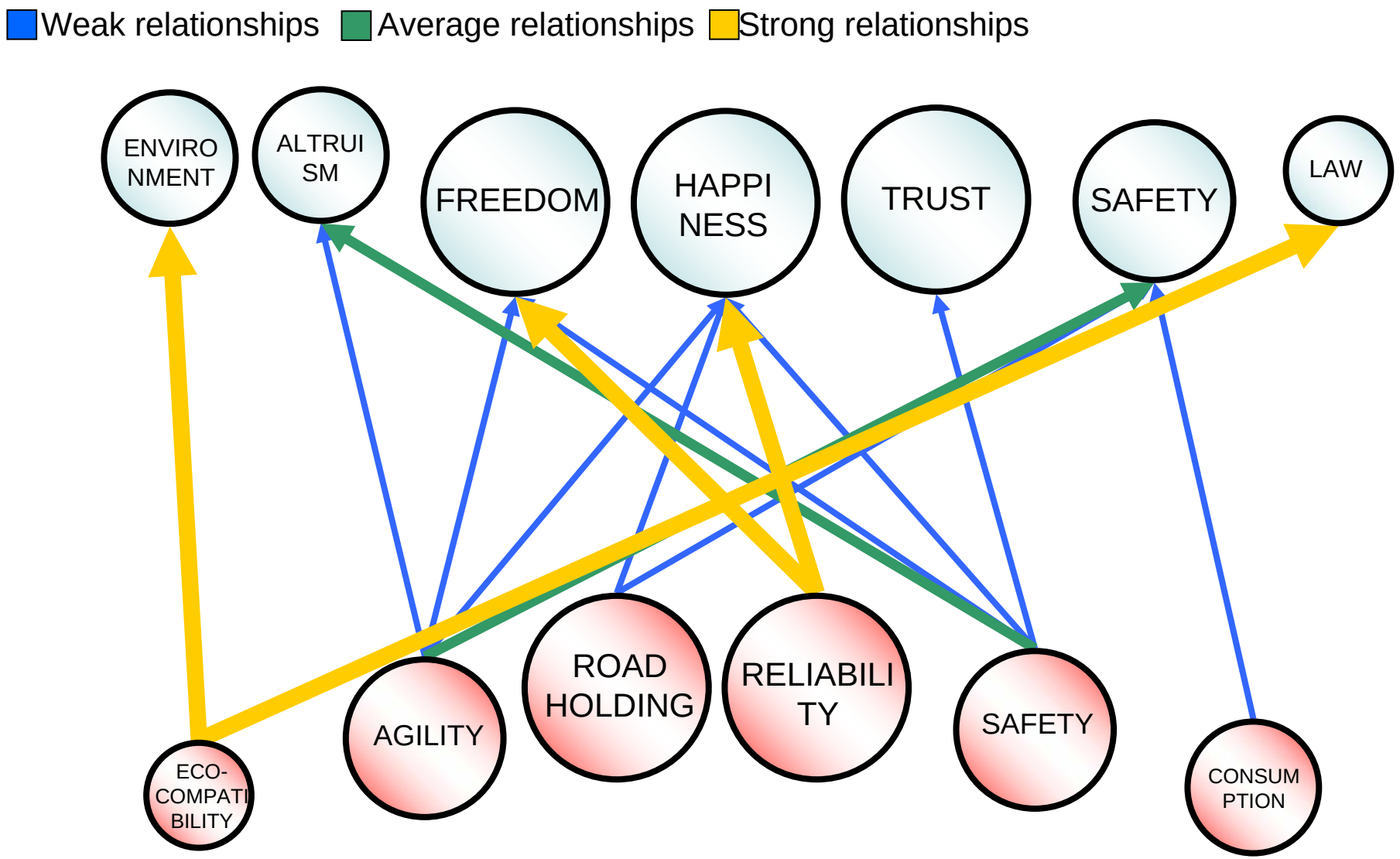
THE COGNITIVE MAP



Weak relationships




Weak relationships
Average relationships
ENVIRO NMENT
ALTRUI SM
FREEDOM
HAPPI NESS
TRUST
SAFETY
LAW
AGILITY
ROAD HOLDING
RELIABILI TY
SAFETY
CONSUM PTION
ECO-COMPATI BILITY


Weak relationships
Average relationships
Strong relationships
ENVIRO NMENT
ALTRUI SM
FREEDOM
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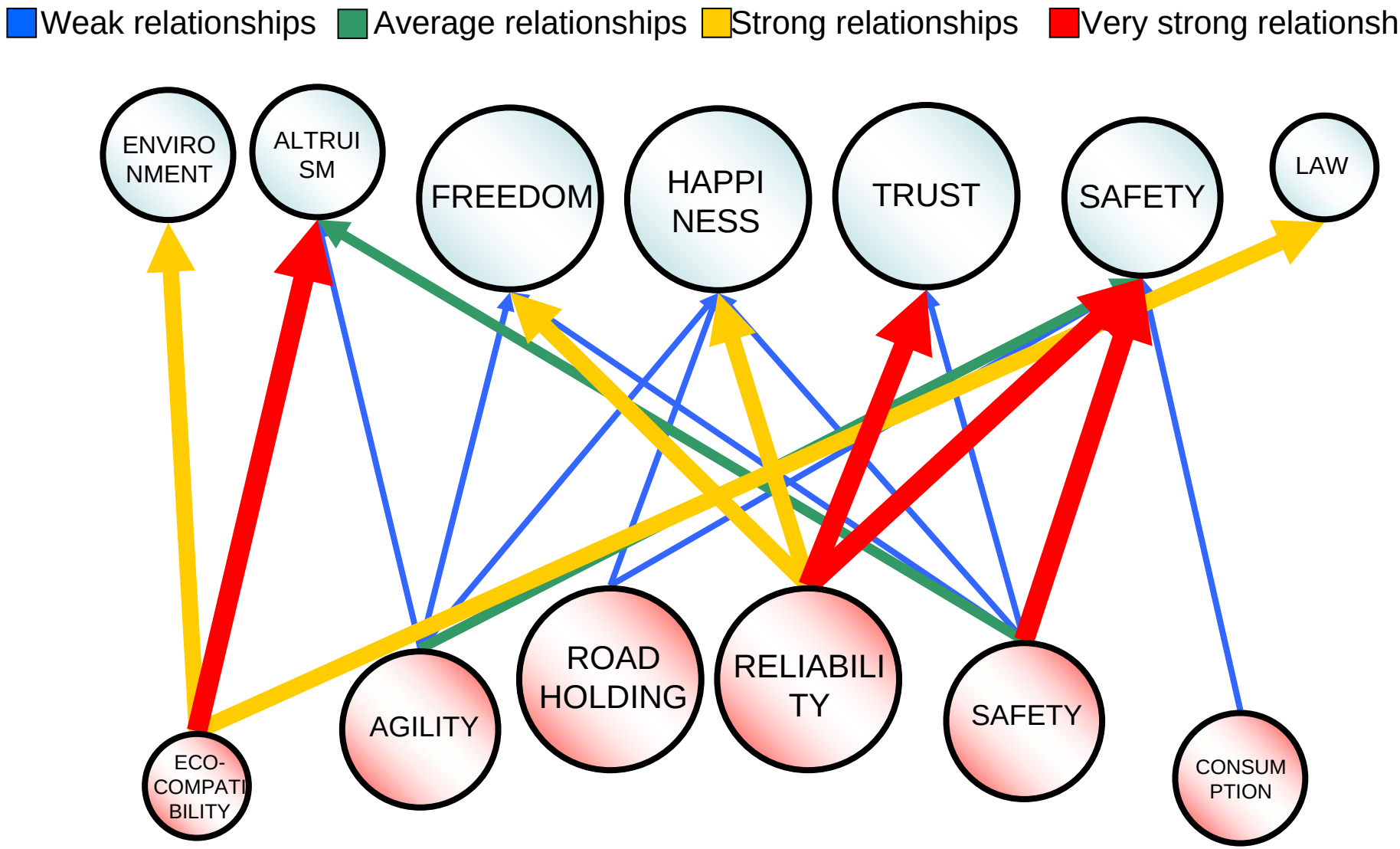
Weak relationships
Average relationships
Strong relationships
Very strong relationships
ENVIRO NMENT
ALTRUI SM
FREEDOM
HAPPI NESS
TRUST
SAFETY
LAW
ECO-COMPATI BILITY
AGILITY
ROAD HOLDING
RELIABILI TY
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CONSUM PTION

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