# What engages people in innovation?

*An action research investigation into the individual factors that lead to cognitive and emotional engagement*

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# Abstract
(English version)

In today's world of globalization, empowered customers and dynamic markets, companies are struggling every day to stay current. The only way to survive this turmoil seems to be by innovating and, thus, being able to follow the rapid pace of changes in the present environment. However, to be able to be **innovative**, companies should leverage on the most important asset that they have: **people**. They are the ones that can make innovation happen. But to be innovative, individuals should be **engaged**. This topic is also gaining importance in the academic community, but still little is known about what makes people engaged in innovation.

This dissertation represents a first attempt to address the concept of engagement by separating it into its cognitive and emotional components and exploring the individual factors that lead to each one. First, a conceptual framework based on the existing literature was developed. It classifies the factors under four types of individual antecedents: Personal affect, Meaningfulness, Core Self Evaluation and Personal Resources. Then, an action research investigation with a global company took place and, with the help of its employees, the authors collected data to find out what engages individuals' minds and emotions in innovation. As a result and through the use of coding techniques, 13 individual factors leading to cognitive engagement and 11 leading to emotional engagement were identified and discussed in relation to the conceptual framework developed.
With this research, the authors seek to contribute to the ongoing investigation of the building blocks that form the path to innovation with a focus on engagement and its most important variable: people, by understanding what makes people engaged in innovation.

# Abstract

(Italian version)

Il XXI secolo si presenta come un'epoca di continue sfide dettate da un mondo sempre più globale e dinamico in cui le aziende concorrono liberamente e la cui sopravvivenza dipende dalla loro capacità di cambiamento e dal loro modo di adattarsi a situazioni sempre più mutevoli. La principale e più importante risorsa di un'impresa è l'**innovazione**, in grado di fare la differenza tra il successo o il fallimento dell'impresa stessa. La primaria fonte di innovazione di un'azienda è il capitale sociale che vi lavora, in poche parole, le **persone**. Per una maggiore innovazione in un mercato sempre più complesso dove le persone convivono, questa tesi consente agli autori di scrivere su un fenomeno ancora non troppo discusso, ma che permette nuovi e interessanti stimoli di ricerca.

Affrontando il concetto di "***engagement***" e separandolo nelle sue componenti, cognitiva ed emotiva, è stato sviluppato un modello concettuale, classificando i fattori in quattro tipi di singoli antecedenti: *Personal affect*, *Meaningfulness*, *Core Self-Evaluation* and *Personal Resources*. Nella seconda parte della ricerca ha avuto luogo un'indagine di "*action research*" con una multinazionale, che ha permesso agli autori la raccolta dati principalmente per scoprire le emozioni e i sentimenti che favoriscono il coinvolgimento degli individui in progetti di innovazione. Attraverso l'utilizzo di tecniche di codifica, sono poi stati identificati e relazionati al modello di partenza, 13 fattori che portano all'"engagement" cognitivo e 11 che portano "engagement" emotivo.
Lo scopo della tesi è, quindi, di contribuire al filone di ricerca sul processo di innovazione cercando di comprendere ciò che rende le persone davvero coinvolte nel discusso e difficile processo di innovazione.

# TABLE OF CONTENTS

# LIST OF FIGURES

# LIST OF TABLES

# Executive summary

RESEARCH PURPOSE

In the complex reality in which we live nowadays, the way to achieve a business advantage changes so often that the only unquestionable priority for managers has become innovation. However, becoming an innovative company is not an easy task. Increase the capacity given by workers is not enough, innovation is no a mechanical task anymore. So how companies can be innovative in this dynamic context? In today world innovation is driven by **people**: companies should be able to engage their employees creating a corporate culture focused on innovation. To be innovative all the employees should be **cognitively vigilant**, **emotionally connected** amongst them and **physically active** to succeed. The problem here? There are still no right recipes to engage employees toward innovation. Many researchers have discussed the topic but there is no overarching definition of how to do it. In this light, the researchers saw an opportunity to contribute to the community of practitioners and researchers by diving into employee engagement discovering how it can drives innovation. Specifically, this research tries to go deeper in the analysis of the factors, and in particular of the individual ones, that mostly impact on employee engagement. In order to do that a qualitative analysis was performed to discover the personal motivations and feelings that engage individuals towards innovative behaviours.

LITERATURE REVIEW

By collecting information from different academic journals and related books, the literature review go through the state of the art in the research of engagement starting from the individual and organizational characteristics able to positively impact on the level of engagement of an individual, and then moving on to how people behave when they

are engaged and why this enhances their creativity to eventually carry them to become innovators.

Literature review is designed based on the three main topics that will addresses: **employee engagement**, **antecedents of employee engagement** and **engagement as a trigger for innovation**.

### Employee engagement

First, although no widely accepted definition of **employee engagement** is currently in use, since many studies are still exploring the topic, the academic community mainly agree in defining it as "*an individual employee's cognitive, emotional and behavioural state directed toward desired organizational outcomes*" (Shuck & Wollard, 2010, p. 103). Thereby, engagement reflect a positive psychological state of motivation with behavioural manifestation with a positive impact on organizational outcomes (Shuck, 2011).

During the last past years many researchers explored the topic of employee engagement proposing different definitions of the concept. The first who addressed the topic was Kahn in 1990 defining personal engagement as "*the simultaneous employment and expression of a person's 'preferred self' in task behaviours*" (p. 700). In his study, Kahn (1990) suggested that an employee to be considered engaged, should be "***physically*** *involved*", "***cognitively*** *vigilant*" and "***empathically*** *connected to others*" (p. 700). Then, he went further and searched for the psychological conditions coming from rational or unconscious components of the work environment that create a situation in which people engage or disengage: those antecedents and drivers of engagement. According to Kahn (1990) engagement is mainly affected by three psychological domains: **meaningfulness**, **safety**, and **availability**.

After Kahn, the concept of employee engagement began to spread amongst researchers. The problem is that the community has not collaborated much or developed many connections in the literature. As

a result, we now have various perspectives on the concept. More than fifty different definitions of engagement co-exist in the existing literature (MacLeod & Clarke, 2009).

In order to have a clearer overview on the different perspectives on the concepts and on the differences between them this thesis classified these different definitions in five main categories:

1. Engagement as a three components perspective (Kahn, 1990)
2. Engagement as a positive feeling perspective (Maslach et al., 2001)
3. Engagement-satisfaction perspective (Harter et al., 2002)
4. Multidimensional Engagement perspective (Saks, 2006)
5. Management practice perspective (MacLeod & Clarke, 2009)

In the tables below all the different categories of perspective have been summarised. In particular the first figure (**Fig. 2.1**) aims to help the reader to understand how these perspectives evolved through the years representing them on a time line. On the other hand, the table (**Tab. 2.1**) wants to highlight the main differences between the different perspectives considered.
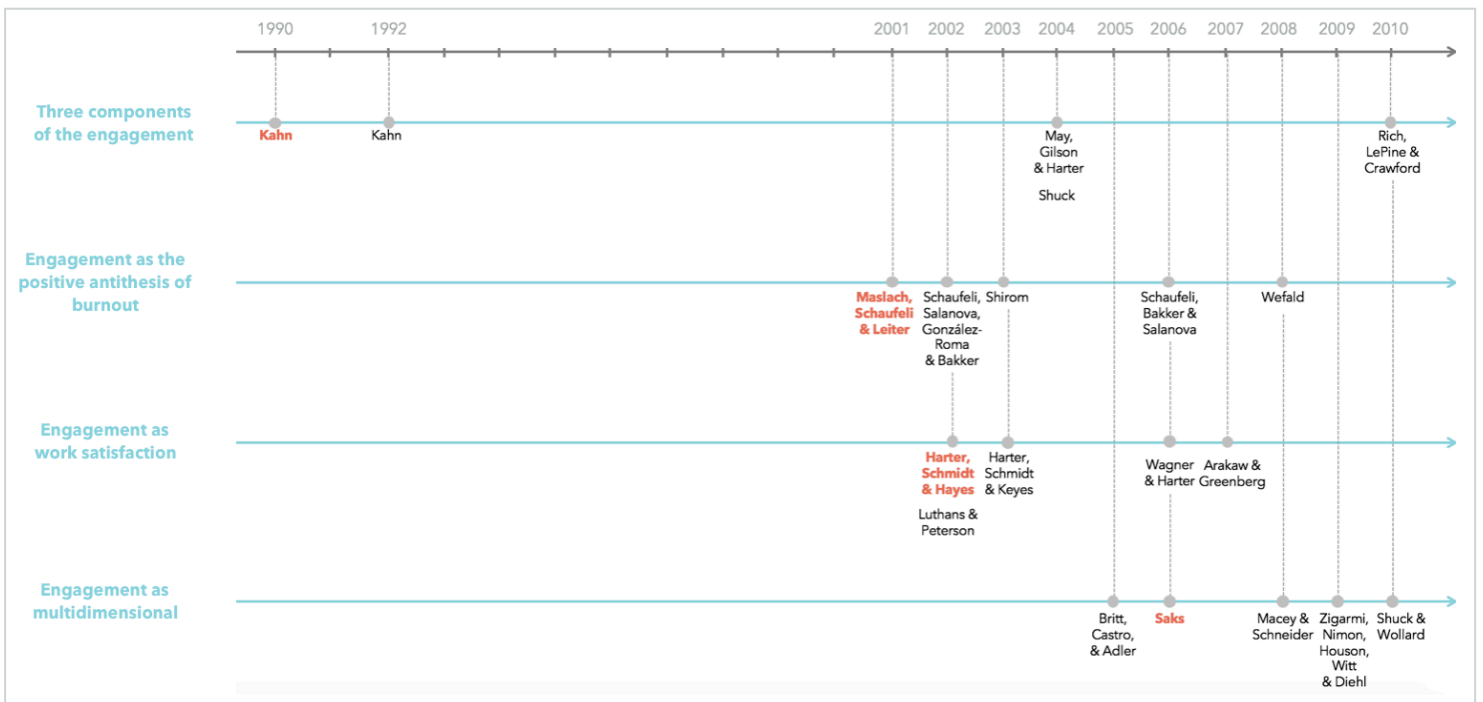
**Fig. 2.1**
Engagement definitions through the years

| PERSPECTIVE | DESCRIPTION | AUTHORS |
|---|---|---|
| Three components of engagement | Explore the psychological aspect of engagement that consist ok three components: physical engagement, cognitive engagement, emotional engagement. | *Kahn (1990)* <br> *Kahn (1992)* <br> *Mey et al. (2004)* <br> *Ritch et al. (2010)* <br> *Shuck (2010)* |
| Engagemnet as a positive feeling | Engagement is considered as a positive state of mind, characterized by energy, involvement and efficacy which are considered as the opposites of the burnout dimensions (exhaustion, cynicism and lack of professional efficacy). | *Maslach and Leiter (1997)* <br> *Maslach et al. (2001)* <br> *Schaufeli et al.(2001)* <br> *Schaufeli et al. (2002)* <br> *Shirom (2003)* <br> *Wefald (2008)* <br> *Slåtten T. et al. (2011)* <br> *Swanberg et al. (2011)* <br> *Bailey et al (2017)* |
| Engagemnet as a work satisfaction | Most profitable employees are those who do what their are good in, with people they like and with a strong sense of psychological ownership. | *Harter et al. (2002)* <br> *Luthans et al. (2002)* <br> *Sacks (2006)* <br> *Arakawa et al. (2007)* <br> *Macey et al. (2008)* <br> *Shuck (2011)* |
| Engagemnet as a multidimension | Engagement absorb individuals' personal resources into the work they peroform. It can be considered in three components: emotional, cognitive and behavioural. | *Britt et al. (2005)* <br> *Sacks (2006)* <br> *Macey et al. (2008)* <br> *Zigarmi et al. (2009)* <br> *Shuck (2010)* |
| Engagemnet as a management practice | Engagement is considered a strategy, that organizations use to manage their workforce, more than a psychological state that individual workers go through. | *MacLeod et al. (2009)* <br> *Truss et al. (2014)* <br> *Valentin (2014)* <br> *Bailey et al. (2017)* |

**Tab. 2.1**
Employee engagement perspectives

Once analysed all the different definitions and hypotheses that have come up in the literature review, it became immediately clear that all of the approaches unanimously agree on the importance of the development of employee engagement inside companies and organizations and on its high potential to impact important outcomes. (Arakawa & Greenberg, 2007; Christian et al., 2011; Harter et al., 2002; Luthans & Peterson, 2002; Macey & Schneider, 2008; Maslach et al., 2001; Saks, 2006; Schaufeli et al., 2002).

To the aim of the research, the investigation conducted have been mainly based two engagement perspectives:

- on the strong definition of engagement proposed by Kahn in 1990 when analysing "*the behaviour by which people bring in or leave out their personal selves during work role performances*" (p. 719).

- on the "engagement as a positive feeling perspective" firstly developed by Maslach et al. (2001) and proposing engagement as "*a persistent positive affective state […] characterized by high levels of activation and pleasure*" (p. 417).

**Antecedents of engagement**

Since the objective of the present research is to understand how to engage people in innovation, it immediately became fundamental to understand those factors, in particular individual factors, that most influence the level of engagement of an individual. In the literature, these appear as an "antecedent" which is defined as a "*term referred to a specific condition or factor that influenced or predicted a particular behaviour that will emerge in practice*" (Saks, 2006, p. 604).

Also in this case different theories emerged through the years. Different researchers proposed different antecedents according to the context in which the research was conducted. As well as for the engagement definitions, there is not a clear classifications of all the antecedents that appeared in the academic context. Due to that, this study wants to propose a systematic classification of them, starting from the two most important theories to the aims of the present research: Kahn's (1990) theory and Maslach et al. (2001) theory.

Starting from the foundational theory of Kahn (1990), as already explained, he proposed three antecedents of engagement:

1. **Psychological meaningfulness**, seen as a feeling that one is receiving, a return on investments of one's self in a currency of physical cognitive or emotional energy.
2. **Psychological safety**, experienced as feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career.

3. **Psychological availability,** represents the sense of having the physical, emotional or psychological resources to personally engage at a particular moment .

After Kahn many other studies enriched the antecedents proposed by his research, reinterpreting, reclassifying and merging them, coming up with new ones. In the graphic below (**Fig. 2.3**) are presented all the contributions made to the antecedents of the theory proposed by Kahn.
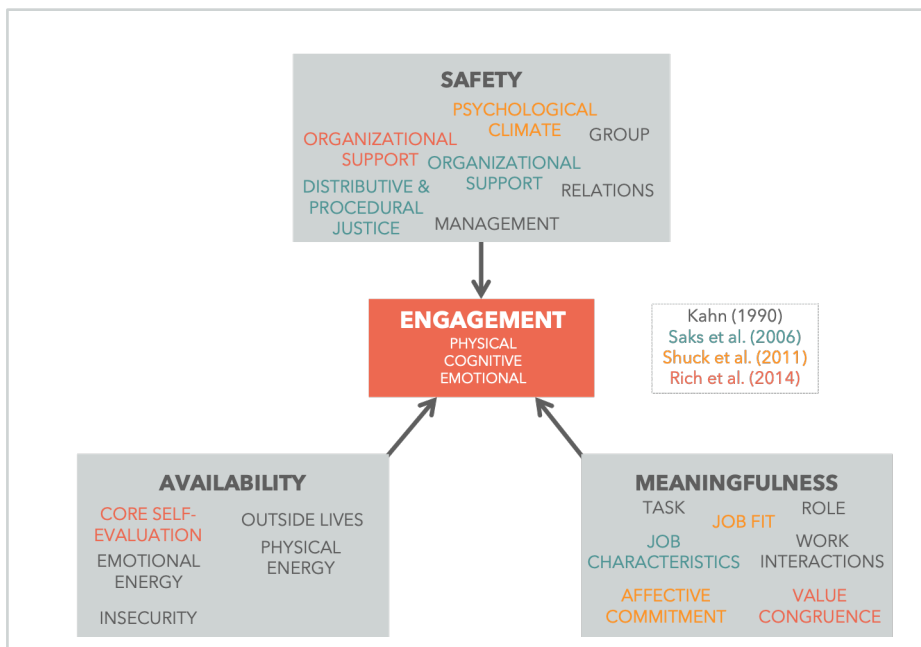
Another important theory on which many researchers build on is the one of Maslach et al. (2001) that considered engagement as a positive feeling. The six main antecedents identified by Maslach are reported in the figure placed below (**Fig. 2.4**):
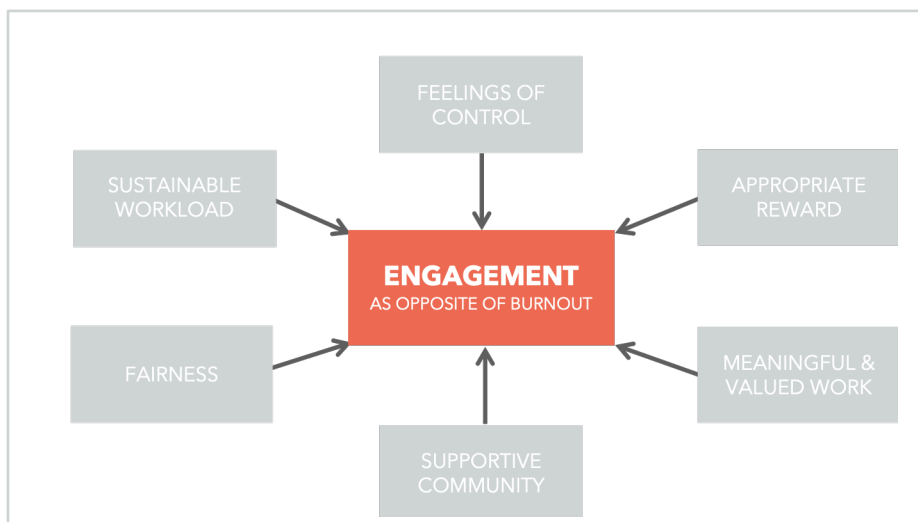
Besides these two main perspectives and group of antecedents, Bailey et al. in 2017 performed a systematic review of all the antecedents mentioned in the literature before 2017 independently to the theory of reference, creating five categories that are presented in a visual form in the graph below (**Fig. 2.5**).

In the case of the present research, in order to better reach the purpose of the study, the antecedents will be classified in two main categories: individual factors and organizational factors.

## Engagement as a trigger for innovation

Lastly, the impact of engagement on innovation will be discussed in order to define the **engagement as trigger for innovation**. In this section researchers will try to understand if it is possible to consider engaged employees more inclined to innovative behaviours. By some researchers engagement has been considered as "*a positive state of mind*" (Schaufeli et al., 2002, p. 74), and has been related to positive emotions. Also in this case, the first who addressed the problem was Kahn, that in 1990 explained that engagement of individuals can impact on their creativity: it encourages them to create new ideas, think outside of the box and share their thoughts with the other team members. After Kahn, as showed in the engagement definitions analysis, a new perspective arise and a group of studies started to look at the engagement as a positive feelings, at times as antithesis to burnout. Going further, some of them explicitly suggested the relation between engagement and creativity stating that engagement, as a positive state of mind, is able foster creativity, openness and out box thinking (Amabile 1988; Kahn, 1990; Gilson & Shalley, 2004; Krueger and Killham, 2007; Slåtten, 2009; Bakker et al., 2010; to mention just a few).
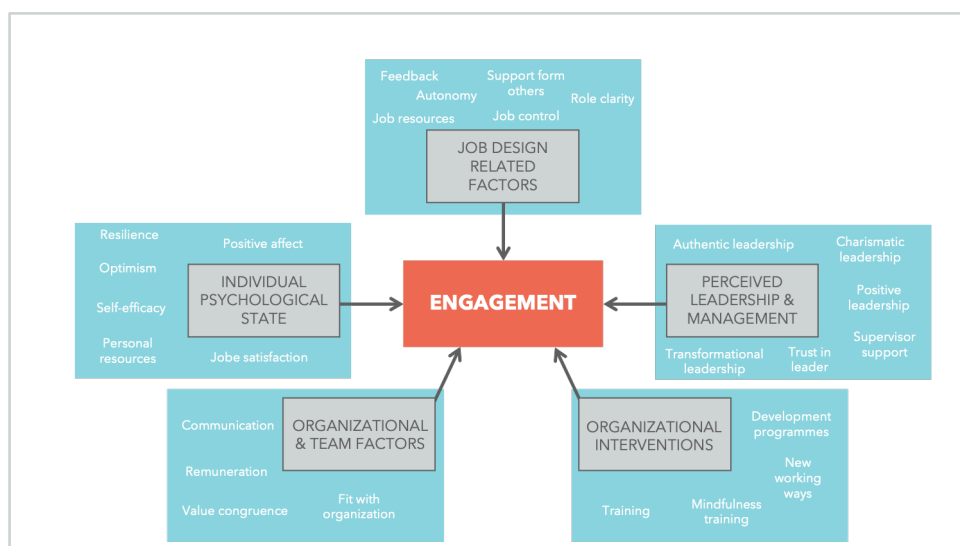
Finally, more recently, Martinez (2015) discovered that *"the more intensively and persistently engagement energies are applied, the higher the creativity of contributions"* (p. 1420). This means that fully engaged employees are able to deliver more creative solutions.

This assumption made the connection between engagement and innovation legitimate and absolutely reasonable. In fact, it is not difficult to discover that the link between creativity and innovation is something on which most of the researchers have already investigated and on which they currently agree. According to the literature creativity can be considered as the foundation of innovation (Van de Ven), as the first fundamental ingredient to start an innovation process (Amabile, 1988; Gilson & Shalley, 2004; Slåtten, 2009; Martinez, 2015; Gomes et al., 2015).

CONCEPTUAL FRAMEWORK AND RESEARCH GAP

Once analysed the theories and the belief already developed on the topic of engagement and innovation, the conceptual framework was developed and the literature gaps identified, in order to formulate the research question.

## Conceptual framework

Despite the large number of papers on the topic of employee engagement and about the correlation between engagement and innovation, there is not a clear framework that deeply examines this connection. Similarly, even though many researchers investigated on the antecedents of employee engagement, it is difficult to find a clear classification of them. In this complicated and less defined context the conceptual framework developed became of an impressive importance.

Thanks to the literature review made and thanks to the experience of the researchers, it was possible to develop the following conceptual framework (Fig. 3.1).

To the purpose of the present research, an important role is covered by the left side of the framework: the antecedents part. As already explained, the antecedents have been classified in two main categories: individual factors and organizational factors and then, four sub-categories have been identified for each of them.

In particular, maintaining the focus on individual factors, within this category appeared:

1. **Positive affect**, that refers to the fact that having and feeling positive emotions about the task that is being performed, would bring a person to be more engaged in that.

2. **Core self-evaluation**, related to the emotion of feeling confident about yourself, your knowledge, your skills and your emotions

3. **Meaningfulness**, that refers to the importance for you or for others of what you are doing

4. **Personal resources**, that are all those psychological aspects of oneself that stimulate growth, learning, and development

### Research gap

As explained in the introduction to this study, the main question to dig through in this research has been defined, first, looking at the literature and defining a main area of interest where the exploration is still open and there is an opportunity to contribute with further investigations. Once defined the area, it was fundamental to spot those literature gaps which still result unexplored. In doing so the conceptual framework was a key element, that allows to have a better overview on the existing research in the area of interest.
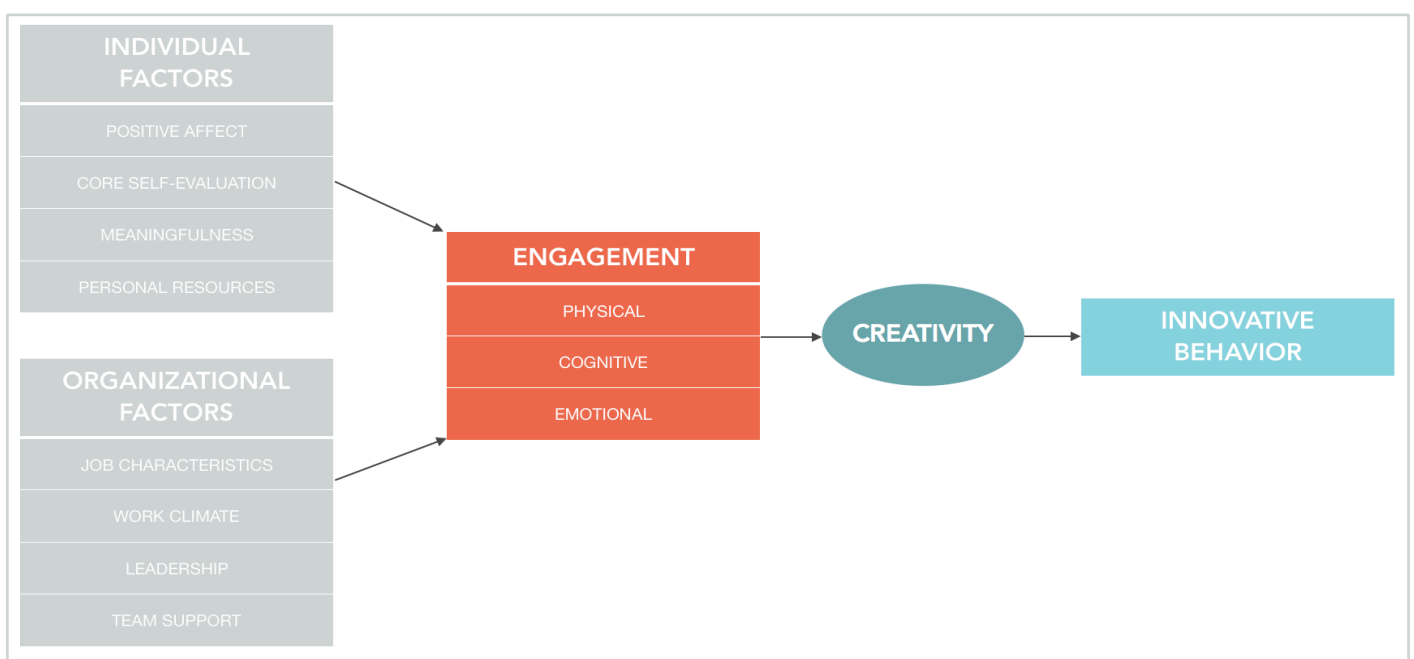


Fig. 3.1
Conceptual framework

By looking at the conceptual framework the majority of the research focused on the right part of the framework: in the exploration of the concept of innovation and in particular on the connection between engagement and innovation. By looking at the left part of the framework two main research gaps, corresponding to two areas still unexplored, arise:

- the **relation between antecedents** and the different **types of engagement**
- the **group of antecedents** related to **individual characteristics**

These literature gaps were merged in the definition of the main research question of this dissertation:

> *Which are the cognitive and emotional factors that drive individuals towards engagement in innovation?*

METHODOLOGY

To find an answer to the developed research question a qualitative methodology was used. In particular the research will go through two main phases: the data collection phase, based on the method of the action research; and the data analysis phase, performed following the coding approach.

**Action research**

With the aim of finding an answer to the research question, the opportunity arose to exploit the existing partnership between the University, Politecnico di Milano, and an important multinational in the food sector that, from now on, will be referred to as *The Company*.

To collect the results the action research methodology was chosen, as it represents an approach based on the collaboration between researchers and organizations to contribute simultaneously to both practice and knowledge (Coghlan and Coughlan, 2010).

In order to conduct the data collection phase respecting the action research method, was decided to follow the framework of Coghlan and Shani (2014), that allows to evaluate the quality of the research conducted. It frames the research by analysing six key areas that will be evaluated with the light of: their rigorousness, reflectiveness and relevance.

1. **Context**

   The Company is a global company leader in the food sector. They has invested a lot, in recent years, to create and diffuse an organizational culture focused on innovation. Two pillars of this strategy are the **Design Thinking Awareness Session** and the **Design Thinking Coach Certification Program**. Exactly these Design Thinking Awareness Sessions acted as a background for this research activity.

   > Rigor: due to the complex context addressed, it was important to collect data in a systematic and holistic way.
   >
   > Reflectiveness: the situation of the company reflects the ideal context of application for this study, given the importance the company confers to spreading an organizational culture of innovation among their employees.
   >
   > Relevance: the action research approach took into consideration several different aspects that help to systematically frame the

2. **Purpose and rationale for action and inquiry**

   In this phase was important to try to combine the aims both of The Company and of the researchers. Two main purposes of research emerged:

   1. *Having a better understanding of people's emotions and feelings in innovation would support in understanding how to sustain and nurture an ecosystem towards an innovation culture*

2. *Trace the evolution of personal traits during the Design Thinking Awareness session to evaluate their impact on engaging people in innovation*

**Rigor**: there is a clear match between the organizations needs and the scholarly purpose of the research.

**Reflectiveness**: the first objective of the action research identified, definitely reflects the gap that was found during the literature review.

**Relevance**: Using the methodology of action research results very

3. **Methodology and method of inquiry**

To address the purpose identify, it was decided to design the experience as an A3-form able to push people to externalize their inner feelings and emotions related to innovation. To do that two main questions were developed: *"what motivates you to solve business problems"* and *"how do you feel when you solve a business problem"* the first one aimed at externalising the drivers of cognitive engagement and the second one the drivers of emotional engagement. Two different types of experience were designed: one Form was to be filled with the support of **images** (**Fig. 4.2**) and the other was to be filled only with **words** (**Fig. 4.1**) in the answer. The decision to use images is related to the fact that self-motivation, emotions and feelings are difficult to be expressed, especially just through written words. Due to that it was interesting to try to understand the power of the images compared to words.



**Fig. 4.1**
Words Form



**Fig. 4.2**
Images Form

In order to better respond to the second purpose, it was also chosen to introduce one last question that changed according to the distinct moment when the activity was run, to better understand the evolution of the innovator identity.

> **Rigor**: during the whole action research the contracting, the methods and the tools were always discussed together with the company in a collaborative way.
>
> **Reflectiveness**: as in all the classical action research, also this case was characterized by cycles of action and research.
>
> **Relevance**: The action research process described shows a joint effort in adopting methods that meet both the organizational criteria and academic criteria.

4. **Design**

   Before to start with the data collection a testing session was performed. Thanks to the feedbacks collected both through observation and through a survey proposed to participants the experience was improved.

> **Rigor**: data collection and analysis have been performed collaboratively with the managers.
>
> **Reflectiveness**: A big effort was also implemented in the creation of a good relationship, based on trust, between the research team and the managers.
>
> **Relevance**: also the design of the action research was aimed to

5. **Narrative and outcomes**

   The activity was run both in the first day of the Awareness Session and in the last day, in order to evaluate also the evolution of the individuals. Words Forms and images Forms have been alternate between the different sessions performed. The activity was also performed in different countries with people of different nationalities in order to have an differentiated sample as much as possible.

> **Rigor**: the story is told with an appropriate level of detail, distinguishing facts, and values.
> **Reflectiveness**: the story reflects the collaboratively inquiry that was done.
> **Relevance**: the story aims at capturing what actually happened during

6. **Reflection on the narrative in the light of the experience and the theory**
   This point will be explored in the next sections of the study and in particular in the discussion chapter.

## Coding

Once the stage of data collection was finished, the data analysis came next. In this case the reference methodology was the coding one. Coding is used in qualitative research, and particularly in this case, with the aim of "fracture" the data and classify them (Strauss, 1987).

Also in this case the traditional steps of the methodology were followed:

1. **Digitalisation**
   The first step was to digitalize all the information obtained with the Forms and translate them into a uniform language: English. Within this phase four databases were created:
   - **Words Forms Before** (the Awareness Session)
   - **Words Forms After** (the Awareness Session)
   - **Images Forms Before** (the Awareness Session)
   - **Images Forms After** (the Awareness Session)

2. **Content analysis**
   It is characterized by two main level of analysis:
   - **Codes**: they are labels assigned to single concepts appearing in the answers.

– **Categories**: they group different contents and must be mutually exclusive. For example, the categories inside individual antecedents could be personal resources, motivation, etc.

3. **Interpreting the findings**
   The interpretation will be discussed more deeply in the next chapters.

RESULTS

Now the findings that came from the data collection will be presented. Specifically, the answers to the Forms that were handed out to participants during the Design Thinking Awareness Session of The Company. This data analysis made through the coding methodology will focus on the two main questions of the Forms: the first one about the drivers (motivations) to cognitive engagement and the second one about the drivers (feelings) of emotional engagement.

**Coding process**

As already explained the first step consisted in the creation of four different databases according to the different Forms presented. But, in order to better perform the data analysis was necessary to made one extra step: divide the motivations answers and the feeling ones, coming up with eight different databases:

1. **Motivations** from the Words Form Before
2. **Motivations** from the Words Form After
3. **Motivations** from the Images Form Before
4. **Motivations** from the Images Form After

5. **Feelings** coming the Words Form Before
6. **Feelings** coming the Words Form After
7. **Feelings** coming the Images Form Before
8. **Feelings** coming the Images Form After

Once databases were created the researchers started with the content analysis of each database.

1. **Codes**: for each answer a code was identified. It consists of one word or short phrase that captures the essence of what was obtained from the relative answer.

   **MOTIVATIONS**
   **Answer**: *"Pleasure to be together and have process together"*
   **Code**: TEAM WORK

   **FEELINGS**
   **Answer**: *"Wild open to everything"*
   **Code**: OPENESS

2. **Categories**: they group common or similar codes expressing the same concepts.

   **MOTIVATIONS**
   **Answer**: *"Pleasure to be together and have process together"*
   **Code**: team work
   **Category**: TEAM WORK

   **FEELINGS**
   **Answer**: *"Wild open to everything"*
   **Code**: openness
   **Category**: OPENNESS

3. **Final categories**: different categories coming from different databases were compared in order to homogenise them.

   **MOTIVATIONS**
   **Answer**: *"Pleasure to be together and have process together"*
   **Code**: team work
   **Category**: team work
   **Final category**: TEAM WORK AND SHARING

   **FEELINGS**
   **Answer**: *"Wild open to everything"*
   **Code**: openness
   **Category**: openness
   **Final category**: CREATIVE

## Presentation of the results

Motivations

For each database two type of analysis were made:

- First the **codes** and the **categories** were identified
- A **frequency analysis** was conducted
- The **final categories** were created, homogenising the categories between different databases

After those three steps researchers came out with thirteen categories. The table below (**Tab. 5.4**) allows to have an overview on the different categories created according to their total frequency and the frequency in each database.

The category which was most used considering all the databases is **Improving others' lives**, (total number of frequency 51), while the less appeared is **Self-reflection**.

Feelings

Also in this case the three steps of analysis were performed and researchers came out with eleven categories.

In this case, looking at the table (**Tab. 5.9**) the most used category is **Positive emotions** (total number of frequency 48), while the less appeared is **Reflective**.

| CATEGORIES | QUOTES | WORDS | | IMAGES | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | Before | After | Before | After | Tot. |
| Improving other's lives | «make life better for others» | 9 | 14 | 12 | 16 | 51 |
| Curiousity | «curiosity to see and understand» | 9 | 9 | 10 | 12 | 40 |
| Value congruence | «do the right thing» | 3 | 6 | 21 | 8 | 38 |
| Team work and sharing | «pleasure to be together and have process together» | 0 | 5 | 14 | 14 | 33 |
| Possibility of success | «be proud of yourself» | 7 | 3 | 9 | 3 | 22 |
| Quest for a solution | «to find the right solution» | 0 | 6 | 9 | 6 | 21 |
| Explore new perspectives | «Undertand the world through different eyes» | 0 | 0 | 7 | 8 | 15 |
| Challenge | «I like challenges, routine makes me bored» | 7 | 2 | 0 | 3 | 12 |
| Experience | «learning by doing, experience is the best teacher» | 0 | 2 | 0 | 6 | 8 |
| Business motivations | «provide the best support to the business» | 7 | 4 | 0 | 0 | 7 |
| Gratitude | «recognition from receivers» | 2 | 2 | 0 | 0 | 4 |
| Active participation | «I like doing something with my hands» | 0 | 0 | 0 | 4 | 4 |
| Self-reflection | «reflect, silence, me time» | 0 | 0 | 3 | 0 | 3 |

**Tab. 5.4**
Motivations final categories

| CATEGORIES | QUOTES | WORDS | | IMAGES | | |
|---|---|---|---|---|---|---|
| | | Before | After | Before | After | Tot. |
| Positive emotions | «excited and empowered» | 13 | 11 | 14 | 10 | 48 |
| Instrinsically motivated | «work hard to make our dreams come true» | 17 | 17 | 10 | 4 | 48 |
| Sense of belonging | «be part of groups» | 0 | 4 | 16 | 7 | 27 |
| Creative | «wild open to everything» | 2 | 9 | 0 | 9 | 20 |
| Self-confident | «self confient, I must be sure we can solve the issue» | 5 | 2 | 2 | 6 | 15 |
| Concentrated | «I feel focused» | 0 | 1 | 7 | 7 | 15 |
| Negative emotions | «I feel as I were fighting to everybody. I feel alone and need to build a team» | 9 | 5 | 0 | 0 | 14 |
| Peacefulness | «pace full and delighted» | 0 | 0 | 7 | 5 | 12 |
| Helpful | «help others to discover reality differently» | 2 | 7 | 0 | 0 | 9 |
| Challenged | «excited about the chance to win the game» | 3 | 2 | 3 | 0 | 8 |
| Reflective | «how many things I learnt from me & from people surrounding me» | 2 | 1 | 0 | 4 | 7 |

**Tab. 5.9**
Feelings final categories

## DISCUSSION

This discussion will go over the new information obtained in the results and describe how it relates with the existing literature and the conceptual framework. In addition, the contributions to managers will be listed as well as going over observations on the tools used in this research: the forms and the context of the design sessions.

### Antecedent Validation

Firstly, the results will be used to answer the research question: *Which are the cognitive and emotional factors that drive individuals towards engagement in innovation?* The categories were first classified under a suitable antecedent type and distinguished between those that affect emotional and cognitive engagement.

### Motivations question - cognitive engagement

All the categories found in the motivation question to impact cognitive engagement were classified between the two types of antecedents even if the focus will be then put in the individual ones, following the line of this thesis. On the one hand, individual antecedents include

categories relating to personal characteristics, inherent values of the individual, how they respond to what happens in their environment or how they see themselves. Suitable categories were then classified, as visible in the table (**Tab. 6.2**), among the four types of individual antecedents.

On the other hand, organizational antecedents include those associated with factors extrinsic to the individual that depend on how the environment in which they are working is and what it is offered to them. Accordingly, the organizational factors were:

- **Team Work and Sharing**
- **Business Motivations**

### Feelings question – emotional engagement

The same procedure was then performed with the categories that appeared to impact emotional engagement. In the following table (**Tab. 6.4**), the individual categories are classified once again among the different classes.

On the other hand, the organizational antecedents found to impact emotional engagement were:

- **Sense of Belonging**
- **Peacefulness**

| ANTECEDENT | CATEGORIES | FREQUENCY |
|---|---|---|
| INDIVIDUAL - **MEANINGFULNESS** | Improving others' lives | 101 |
| | Value congruence | |
| | Challenge | |
| INDIVIDUAL – **POSITIVE AFFECT** | Curiosity | 65 |
| | Quest for solution | |
| | Active partecipation | |
| ORGANIZATIONAL | Team work and sharing | 40 |
| | Business motivations | |
| INDIVIDUAL – **CORE SELF-EVALUATION** | Possibility of success | 29 |
| | Gratitude | |
| | Self-reflection | |
| INDIVIDUAL – **PERSONAL RESOURCES** | Exploring new perspective | 23 |
| | Experience | |

Tab. 6.2
Motivations conceptual framework antecedents and

This time, though, one more category appeared that was not suitable for any antecedent present in the model. This was Negative Emotions and it was interpreted to be related with disengagement. It is a call for the scholar community to consider studying possible antecedents for disengagement.

| ANTECEDENTS | CATEGORIES | FREQUENCY |
|---|---|---|
| INDIVIDUAL – **POSITIVE AFFECT** | Positive emotions | 68 |
| | Creative | |
| INDIVIDUAL – **MEANINGFULNESS** | Intrinsically motivated | 56 |
| | Challenged | |
| ORGANIZATIONAL | Sense of belonging | 39 |
| | Peacefulness | |
| INDIVIDUAL – **CORE SELF-EVALUATION** | Slef-confident | 31 |
| | Helpful | |
| | Reflective | |
| INDIVIDUAL – **PERSONAL RESOURCES** | Concentrated | 15 |

**Tab. 6.4**
Feelings conceptual framework antecedents and final

## General overview of antecedents of cognitive and emotional engagement

Following the classification, the authors made an analysis of category similarity. The codes and meanings of the categories of cognitive and emotional antecedents were checked to see if any of them referred to the same concept. Five different concepts were found to be similar and, therefore, were classified as having a blurry effect on cognitive and emotional engagement. The resulting classification is showed in the table (**Tab. 6.5**).

| INDIVIDUAL ANTECEDENTS | COGNITIVE ENGAGEMENT | EMOTIONAL ENGAGEMENT | BLURRY EFFECT (Cognitive ~ Emotional) |
|---|---|---|---|
| **POSITIVE AFFECT** | Curiosity | Positive emotions | Quest for solution ~ Creative |
| | Active participation | | |
| **MEANINGFULNESS** | Improving others' lives | | Value congruence ~ Intrinsically motivated |
| | | | Challenge ~ Challenged |
| **CORE SELF-EVALUATION** | Gratitude | Helpful | Possibility to success ~ Self-confidence |
| | | | Sel-reflection ~ Reflective |
| **PERSONAL RESOURCES** | Exploring new perspectives | Concentrated | |
| | Experience | | |

**Tab. 6.5**
Individual antecedents and final categories

**Authors' interpretations**

The time has come for a potential explanation of why the results turned out this way by diving into cognitive and emotional engagement and expand on the characteristics that drive a person towards them.

The Categories in Cognitive Engagement

The reason why some categories only affect cognitive engagement will be explained going over the behaviours of cognitively engaged individuals and showing how they are coherent with the categories. Cognitive engagement has to do with setting the mind to work. The link between the mind and the categories will now be explained:

- **Exploring New Perspectives, Experience**: moments in which the mind produces new knowledge, ideas, when it is focused. It represents individuals being connected with work (Kahn, 1992).
- **Gratitude, Improving Others' Lives**: moments in which the mind is attentive and sensitive (Rich et al., 2017) taking into consideration all the suitable stakeholders to be able to reach the objectives.
- **Curiosity, Active Participation**: moments in which the mind is responsive to what is happening in the team. It represents cognitively engaged individuals which open their mind to others (Kahn, 1992).

**The Categories in emotional engagement**

The same will be done with the categories that only affected emotional engagement going over the generic behaviour that represents it and the coherence with the categories. Emotional engagement has to do with connecting one's behaviour with the "heart's" feelings or affective appraisals (Fugate et al., 2011). The link between the feelings and the categories will now be explained:

- **Helpful**: moments in which behaviour responds to empathic feelings. It represents emotionally engaged individuals being connected to their colleagues (Kahn, 1992).

- **Concentrated**: moments in which behaviour is coherent with what people feel allowing them to be emotionally available to concentrate. It represents emotionally engaged individuals' basic activity: feeling (Rich et al., 2010).
- **Positive emotions**: direct consequence of individuals' coherence between how they feel and how they act. It represents emotionally engaged individuals feeling, connecting and therefore, integrated (Rich et al., 2010).

**The categories in blurry effect**

In this case, categories might be a mixture of both, involving behaviours in which people need to use their minds and be coherent with their feelings at the same time. An example is explained for the sake of clarity.

- **Reflecting**: the activity could be used to organize one's own ideas, come up with solutions (cognitive) but at the same time it offers some time alone and an intimate contact with one's feelings (emotional).

**What do these findings mean for a manager and their organization?**

From managers perspective, differentiating between cognitive and emotional engagement and the categories related to them could help them in having a clearer understanding on the factors that drives cognitive and emotional engagement. This allows managers to better support their employees. Could be useful for roles within the company that could benefit from more "emotional engagement", for example.

A manager from The Company will have further advantages by profiting from a curated database of the specific categories that their own employees have inspired. The quantitative analysis becomes relevant and pushing the managers to focus in the most recalled categories to design engagement- enhancing policies.

### Other Findings

Finally, the researchers observed the differences between the different types of forms. Results showed that the images form performed better than the words one. It managed to favour the exteriorization of the individuals. When comparing words vs images, the images form got more interesting answers since it always pulled out more quantity of relevant categories than the words form. The same happened when comparing the forms from before the design sessions and those that were done after. In every case, the before forms got less quantity of relevant categories than the after ones. The company's design sessions were successful in contributing to the participants self-discovery and to the extension of their answers.

### CONCLUSIONS

This final chapter wants to finalise the reasoning about how to engage people in innovation, exposing the value of the overall findings discussed and mentioning the contributions that this research will bring, both to the academic and managerial communities as well as to The Company.

### Theoretical Contributions

The first contribution is that of classifying the existing antecedents by dividing them into individual (positive affect, core self-evaluation, meaningfulness, personal resources) and organizational antecedents. These classes were validated by linking them to the categories that came out from the participants and answer to the request of the community to research the topic (Bailey et al., 2017) .

Another contribution was improving the descriptions of the antecedents with the categories and also making a first attempt to differentiate between the categories that have an impact on cognitive and emotional engagement, following Kahn's (1990) ideas of engagement with three components.

### Managerial Implications

Firstly, relevant factors found at the individual level can help managers have an enhancing impact on people's engagement by pushing on management practices focused in transforming and enhancing these individual factors. Special interventions can be designed to tackle what is most needed in the company or in specific teams, be that cognitive or emotional engagement. IT also contributes to the idea that it is important that organizations focus on how the work gets done and not just how much to become sustainable innovators.

### Implications for The Company

This study can aid both employees and managers. On the employees side, they became more conscious of themselves which can have a positive effect on teamwork, they have also become more aware of their strengths and abilities. This can bring along self-confidence. On the managers side, they can now focus on the most recalled categories of cognitive engagement (meaningfulness) and emotional engagement (meaningfulness, positive affect) to have more chances of having positive results from engagement- enhancing interventions.

### Limitations

The main limitations that were experienced in this study were the limited context analysed (one company), the small sample (60 interviewees), the impossibility of analysing the physical component of engagement due to the context of the design sessions and not including disengagement antecedents.

### Opportunities

The different paths that could be followed in the future to continue investigating engagement and its relation with innovation are divided in three areas. The first would be investigating other predictors of engagement such as the organizational ones, the ones related to negative emotions and the predictors of disengagement. The second

would be the usability of the concept, performing more studies on the responses of individuals to interventions designed based on antecedents. The third would be replicating this study in more companies and with bigger samples and trying to tackle the physical component of engagement as well.

Besides all the opportunities opened by this research, the most important message that researches want to spread is that to be innovative in a dynamic world, as the one in which we live today, companies should leverage on the most important asset that they have: People. They should remember that ideas are created and implemented by people, that innovation starts form them. However, to be innovative people should be emotionally and cognitively engaged. They should be happy, confident about themselves and their ability, connected with the purpose of the company and motivated by it, and they should be stimulated by what they do, being able to grow and learn through it.

Consequently organizations, that want to survive being innovative, should work on these drivers becoming able to foster employee engagement.

# RESEARCH PURPOSE

**The aim of this chapter is to contextualize readers on the motivations that the authors have found to carry out this investigation. To do this, this thesis' initial chapter will go over the current state of things on the topics dealt with: Innovation and Engagement. Innovation will be discussed first and, subsequently, Engagement, both of them will be considered within the context of organizations.**

## 1.1
# Problem definition

Over the years, the drivers of growth of companies have changed drastically and, with them, the problems that the companies had to face. Many decades ago, the main driver of growth of a company was its capacity to organize the production to go faster, since all the possible output could be placed in the market. Every unit that was produced was sold, the only concern of the top management was deciding how to perform the tasks in one best way and pass it on to any worker who would do it (Taylor, 1911). These top priorities have changed completely over time: from finding the best way to do a mechanical task and increase production (Taylor, 1911); to Ford lowering the cost of the product with specialization and lines of assembly, to a focus on making more profits (Friedman, 1970) ; to differentiating their product to beat the competition (Porter, 1980), which went from local to national to global etc. Today, however, the way to achieve an advantage in the business world changes so often that the only unquestionable priority for managers has become innovation, which entails creating new products, new processes, new solutions, new ways of thinking to stay relevant and thrive  (Schumpeter, 1934).

However, becoming an innovative company is not an easy task. Even if most managers claim it is their priority, most of them are disappointed in their ability to stimulate innovation and to deal with the complexity that comes with it (McKinsey, 2007)..
As abovementioned, decades ago, the driver of growth was capacity given by workers. Managers had to make sure workers were on time to perform predominantly mechanical tasks. But these are the 2000's,

innovation is no a mechanical task, it is not enough for employees to arrive on time or for the top management to say that it is a priority to become an innovative company. It is a difficult activity that needs everyone's full engagement, all the team members should be **cognitively vigilant**, **emotionally connected** amongst them and **physically active** to succeed (Kahn, 1990; Slatten, 2009). Actually, it gets more tricky, until today there are no best-practice solutions to seed and cultivate innovation. Managers around the globe struggle to find a way to succeed in this task. The only thing that most practitioners, managers and researchers agree on is that **people** and **corporate culture** are the most important drivers of innovation (Slatten, 2009; Chen, 2018)..

To be able to grow, perform and survive in this worldly context companies need to innovate. To do this, managers should be able to impose an innovative corporate culture that engages people into bringing themselves to work to bring about successful innovation.

Employee engagement is the key topic here, because innovation relies highly on putting the mind to work, which is guaranteed when individuals are engaged in what they are doing (Kahn,1990). The key to innovation is getting everyone on board so that, in this way, people will be prone to come up with innovative ideas and be resilient and smart so as to implement them. But once again, there are no right recipes to engage employees yet. Many researchers have discussed the topic but there is no overarching definition of how to do it (Bailey et al., 2017).

In this light, the researchers saw an opportunity to contribute to the community of practitioners and researchers by diving into employee engagement to discover its intricacies on the way towards a better understanding of how innovation works in companies. The researchers, as well as the vast majority of the actors in the innovation ecosystem, understand that employee engagement is at the front and centre of the

discussion and is the key to disentangle the way to bring about a sustainable innovative company culture.

In this complex context, this thesis tries to give a contribution analysing in which way individual engagement interacts with innovative behaviour and most importantly, which are the drivers behind people's engagement. This is the great challenge of this thesis: understand what is behind individual engagement. Much has been written about how the organizational antecedents that help to bring engagement about, but these models always fall short in the practice. This is because they do not have their main focus on individuals and their own personal motivations, feelings and attitudes in relation to engagement. Researchers all over the world have pledged to fellow researchers once and again to work on this topic of the individual antecedents that drive people to be engaged as it is under researched, there is very little consensus about results and it is of the utmost importance (Vance, 2006; Macey & Schneider, 2008; Saks, 2006)..

In the following paragraphs, Innovation will be discussed first, since it is the original topic that motivated the making of this thesis. The innovation ecosystem and the state of things will be described and explained to, then, move the focus to the actor in the ecosystem that will be the main protagonist of this thesis as it has already been singled out, employee engagement. Shedding some light on the complex net of relationships that exist within employee engagement, it is hoped to bring some certainty to the practitioners and researchers.

## 1.2
# Relevance of
# the problem

INNOVATION

As it was described in the problem definition, the original motivation behind this thesis' making is to create new knowledge on the activity of innovation. It then took the researchers to focus on employee engagement.

First of all, what is innovation? Many definitions coexist that bring different perspectives on innovation. It was decided to include three to portray a general idea of what innovation is typically referring to.

The first to describe it was Schumpeter (1934) who defined "*innovation*", or "*development*", as "*new combinations*" of new or existing knowledge, resources, etc. He clearly separated it from the definition of invention.

Then came Peter Drucker (1985) who defined it as a specific tool that entrepreneurs have. He said that it is a tool that allows them to exploit change as an opportunity for a different business endeavour, or a different service to be offered.

The third is Caloghirou et al. (2004, p. 30) who defined innovation as:

"*a process in which the organisation creates and defines problems and then actively develops new knowledge to solve them*"

With these definitions, the authors hope the reader can get a general picture of what innovation means is tried to be achieved. The reader

must bear in mind, though, that the definitions found in the literature amount to dozens.

The authors are not the first ones to be motivated to study innovation. Most researchers agree on the importance of going deep into the studies of innovation. This is because there is a widespread belief that a better understanding of innovation, its process, drivers and the actors involved, will bring about tools to increase the benefits it brings at the micro and macro-economic level. In fact, it is said that innovation is a key driver of economic development and plays a crucial role in competition at both the national and firm levels (Cefis & Marsili, 2006; Tellis, Prabhu, & Chandy, 2009).

Now, with a general idea of the innovation definition, it is safe to move along and describe the implications of innovation on a firm's outcomes. Prior literature proposes a positive link between innovation and a range of desired performance outcomes (e.g., Garcia-Morales et al., 2011; Han et al., 1998). For instance, when reviewing the literature, various studies came up including different dimensions that show how innovation may affect these performances. These dimensions deal with: the newness and novelty in products or processes (Atuahene-Gima, 1996); the speed to introduce new products to the market (Cohen et al., 1996) or the speed to adopt new technologies available (Rogers, 1983); the consistency in continuously innovating over time (Subramanian & Nilakanta, 1996); and the strategy and capability to introduce new products to a new market (Banbury & Mitchell, 1995).
By mastering these dimensions of innovativeness, firms should be able to achieve their objective: making profits. In fact, Schumpeter (1934) argued that anyone seeking profits must innovate.

In this way, innovation became the key to secure a company with outstanding KPI's. But it must not be forgotten that, in today's world,

innovation is much more than that. It is necessary for the company to be alive.

Today's context is described by Stalk (1993) by stating that we live in a time where the lifecycle of products is getting shorter and companies have to replace these frequently with improved versions and also with the pressure of doing so before their competitors do. This competition is derived from deregulation, empowered customers, new market entrants, emerging technology, ecommerce, dynamic and complex markets, uncertain economic circumstances and rapid product development. In addition, all of this takes place in an ever more globalised race where the one who arrives late might not make it.

So, because of this context, if firms do not continuously change their offers and the way in which they create and deliver those offerings to the world, they risk not surviving or not having growth prospects (Bessant et al., 2005). Most studies claim this is because only those firms that are able to successfully innovate are able to establish and maintain a competitive advantage in the market (Bruderl et al., 1992; Wagner, 1999). Other studies extended the idea stating that innovation drives growth and opportunity in new markets and breathes life into mature industries (American Management Association, 2006). As a matter of fact, today, innovation represents the core renewal process of any organization (Bessant et al., 2005).

The challenge to survive by innovating, though, is not equally difficult for all firms but differs depending on their size and age. The innovation processes in young, disruptive firms is "*fluid and dynamic, with ongoing market expansion and redefinition resulting in frequent competitive improvements to the firm's offerings and routines*" (Utterback & Abernathy, 1975, p. 127). Although this does not last forever. Firms eventually grow and become long established firms usually experiencing substantial bureaucratization that hinders their innovative activities (Knight and Cavusgil, 2004). Thus, this topic is of particular interest to these larger firms as well as to younger firms that are

expecting to grow in the future. That is to say, to the majority of existing firms.

It seems that to be able to survive, innovation has to be a recurring practice in companies and this is not the case for the majority of them. To make innovation fitting into traditional companies, a change initiative to review the procedures they follow must take place. The company culture has to be changed. But the brutal fact is that 70% of all change initiatives fail because managers flounder in an alphabet soup of change methods, drowning in conflicting advice (Beer & Nohria, 2000). It is not enough to "want to" adapt, change and innovate.

Beer and Nohria (2000) explain that there are two basic theories that paint the picture on how to perform change in a successful manner. The first one is regarded as Theory E which "*emphasizes economic results through hard-nosed actions such as layoffs and restructuring*" (p. 62). It is of no use in our predicament, since it does not bring about sustainable growth capabilities. On the contrary, Theory O could be used to introduce innovation into a company. It is regarded as a "softer" approach and focuses on developing corporate culture and human capability, patiently building engagement to the company to be able to thrive when tackling innovative projects. This study will move within the framework set by Theory O, exploring its ties with innovation, engagement and their main constituent: **individuals**.

### INNOVATIVE ORGANIZATIONAL CULTURE

As it has just been explained, through Theory O, a change in the organizational culture can be achieved with the aim of sparkling innovation. This section will go further in briefly explaining the concept of organizational culture.

Currently, there is a continuously rising importance given to the spread of an Innovative Culture inside the whole company and not just in the functional area where innovation has traditionally been supposed to take place, like the R&D departments.

As we have said, an innovative culture can influence employee behaviour. It may lead them to accept innovation as a fundamental value of the organization and to feel more involved in the business (Hartmann, 2006).

But what is it that this "culture" refers to? Many definitions of organizational culture co-exist; however, it generally refers to the organizational values communicated through norms and artefacts which are then observed in behavioural patterns (Homburg & Pflesser, 2000; Schein, 1992). Other studies mention it provides norms of expected behaviours that employees might follow (Schein, 1992). To portray its relevance, Schein (1992) considered organizational culture as a social force that is largely invisible yet very powerful. Most importantly, it has also been speculated to be the key to fostering processes that support innovation (Khazanchi et al., 2007).

Nonetheless, despite the much-focused attention on the topic of organizational culture, extant literature does not sufficiently document the characteristics of an organizational culture that supports innovation (Hogan & Coote, 2013).

A culture of the sort would set company values and norms which may lead to desired behaviours such as engagement and innovation. This study will be performed within the context of a company where some artefacts can be observed (e.g., organizational rituals, language and stories, and physical configurations). These artefacts represent the most visible layer of organizational culture. In the forthcoming chapters, some of the artefacts of the company that was involved in this research will be explained.

Overall, it can be said that innovation, when it is integrated within the company's culture, helps organizations adapt and compete in challenging business settings because it gives them a solid foundation to enhance their competitiveness, increase profits, improve productivity (O'Regan & Ghobadian, 2005) and advance new product development outcomes (Brockman & Morgan, 2003).

Up to this point, the authors of this thesis have gone over: the importance of innovation for a firm's outcomes, the urgency that today's context brings and the need to embed innovation into a company's culture. But the authors do not stand alone when sending this message. Luckily, the importance of innovation for organizational success and effectiveness is widely accepted today and has been increasingly noted in the literature of organizational sciences. There has also been a steady increase in the number of papers dealing with the topic in the last two decades.

However, this concern for innovation goes far beyond the academic sphere. Over the past years, innovation has become one of the top priorities for organizations that want to remain competitive in today's knowledge and creative economy. Various studies report the importance given by executives to the implementation of innovation management initiatives (Andrew et al., 2009; Capgemini, 2008; IBM, 2006). Executives at all levels have a responsibility to lead and stimulate innovative thinking across the entire enterprise which is no easy task (AMA, 2006).

To cope with this growing pressure exerted towards companies that is pushing them to innovate, it is not enough for them to just increase the investments in R&D. Stockholders, employees and customers demand executives to create a healthy, innovative work environment and culture.

In response to these demands, both scientists and managers want to understand how to do it, how to create an innovation culture, diffuse it and sustain it inside the company. Unfortunately, the available theories are still not thorough enough to explain how to make companies engage in successful innovation practices.

# Research objective

In this section, the approach of the authors towards the topic will be discussed by mentioning in which way they will be joining the discussion on innovation.

Firstly, it must be highlighted that although innovation is featured prominently in case studies discussing the evolution of different industries, systematic analysis of the issue have typically failed to account for the complexity of the innovation process. In particular, there are studies that do not account for the fact that while some innovations succeed, most fail.

The present research seeks to aid all those organizations that are struggling to master such a critical aspect of their business strategy. It aims to explore the topic of innovation by understanding how to create an **Innovation Culture** and, in particular, by identifying the enablers and drivers that can foster it.

It all started from a basic question: "What drives successful innovations?" and by trying to come up with some immediate answers. Some possible answers did come up at first: "Desire of growth", "Demand for increased profitability" or "People". Then, the literature has been appealed to.

When searching the literature, it shows that the idea of there being different factors that, singly or in combination, can drive innovation (successful innovation in particular) has just begun to be discussed. In a preliminary literature review round, many newly found drivers of innovation were identified: the enterprise, the economic climate, the

physical environment, the processes, knowledge management, customer demands, technology and increased competition, just to name a few. But there was a particular group of drivers that invited attention. It was found that some recent studies started to take into consideration other kinds of enablers more narrowly related to the single **individual**. In particular, they are starting to look at individual personal characteristics and at employees' level of engagement.

This is because, as Gomes, Curral and Caetano (2015) explained, individual innovation within the workplace has been considered as the foundation for any high-performance organization (Carmeli et al., 2006; Janssen et al., 2004). Moreover, this is due to the fact that the source of all innovation is creative ideas (Scott & Bruce, 1994) and individuals, single ones or in groups, are exactly those who develop, promote, discuss, modify, and ultimately implement ideas (Van de Ven, 1986). Thus, the study of the individual factors that lead employees towards innovative behaviours continues to be critical.

After this preliminary literature review, being fascinated by this relatively new and undiscovered topic, the researchers decided to go in depth with the individual sphere to try and understand how to **engage** individuals in innovation to spread an "innovative organizational culture".

Besides the researchers' personal preferences, the topic also represents a valuable opportunity both from an academic perspective and from a business perspective.

From an academic point of view, looking at the previous resources, it was soon understood why the objective of this study could be of value. On the one hand, taking part in the topic considering the growing importance that researchers are giving to the understanding of what drives individuals toward innovation and how to engage them.

On top of that, it was soon discovered that the area which was decided to be explored was rich of research gaps still to be investigated. Just from this preliminary analysis, the topic chosen seemed quite promising.

Considering the organizational perspective, because this investigation is based on something intrinsic to the company, it has many possible applications in day-to-day managerial activity. Not just from a recruitment point of view, but also once talent is hired. This research represents an opportunity for organizations, allowing them to make the most of their talents and foster innovation through employee engagement.

At the same time, employee engagement shares an important relationship with organizational and performance outcome variables such as discretionary effort and intention to turnover (Shuck, 2010), as well as overall performance (Rich et al., 2010).

As a result, many organizations share the belief that in an evolving international free-agent talent market where knowledge is becoming an organizational commodity (Kroth & Keeler, 2009; Pink, 2001), employee engagement is an undeniable dominant source of competitive advantage at all levels (Schwartz, 2011). This belief takes on even more relevance given the fact that current research studies have suggested that less than 30% of the global workforce is engaged (Gebauer & Lowman, 2008). These are more than valid reasons to explain why there is interest in the study and application of employee engagement and why it is experiencing unprecedented popularity in the Human Resource Development (HRD) field (Chalofsky, 2010; Chalofsky & Krishna, 2009; Czarnowsky, 2008; Ketter, 2008; Macey & Schneider, 2008; Zigarmi et al., 2009).

Moreover, as it will be explained in the literature review, work engagement is highly related to the ability to innovate of an individual. In particular, this study focuses its attention on understanding all those factors that impact on the process of engaging employees toward innovation. According to the literature, it is possible to identify different antecedents that positively impact on employee engagement. This research will go deeper into those depending on individual characteristics, trying to understand the intermediate psychological processes that would explain how and why different individuals are characterised by different levels of engagement and, due to that, display different innovative behaviours.

The following chapters will explore how work engagement affects innovation and go deep into the reasons and traits of individuals that explain when and in what way employees become engaged with their jobs.

## 1.4
# Research structure

To conduct the present qualitative study, the researchers decided to design it based on the model proposed by Maxwell (2008). Due to that, all the five sections defined by Maxwell (goals, conceptual framework, research questions, methods and validity) can be easily identified.

Firstly, the goals of the present study are deeply exposed in the present chapter: **Research purpose**. As previously stated, the goals of this thesis are to dive into the innovation ecosystem to uncover new knowledge on its main element: engagement. The goals aim at the individual characteristics or antecedents that drive people towards engagement on the way towards innovative behaviour.

Secondly, the analysis of the previous theories and beliefs is conducted in the **Literature review**. It will go through the state of the art in the research of employee engagement by passing through the organizational and individual antecedents that lead people to it. Followed by the literature that reinforces and supports the researchers' idea that engagement leads to innovative behaviour and that this connection is mediated by creativity. In other words, the review will start from the characteristics of the managers, team, corporate climate, individual personality, values, resources that make a person more prone towards engagement. Then, moving on to how people behave when they are engaged and why this enhances their creativity to eventually carry them to become innovators.

Thirdly, the conceptual framework created by the researchers by putting together all the previous literature will be explained in the **Conceptual framework and Research gap chapter.** The framework will show a model that starts with a classification of the individual and organizational antecedents of engagement in subcategories and shows the progression until landing on innovation. At the end of the chapter, the research gap is identified to show what is yet to be uncovered in the model. These gaps broadly involve the antecedents' revalidation to support dispersed literature on the topic, the distinction between emotional, cognitive and physical engagement and the relationship between particular antecedents and each type of engagement. The section culminates with the condensation of the research gaps into one research question: "*Which are the cognitive and emotional factors that drive individuals towards engagement and innovation?*"

In the next section, **Methodology**, the methods used to collect and analyse the data are explained. It will go over how we co-created an action research plan alongside a prominent company that is actively pursuing the path to build an innovative company culture. With them, the researchers designed different types of surveys to be answered by the employees in the hope that the research question could be clarified and insights could be facilitated to The Company about the motivations and feelings that employees encountered when participating in innovative projects. Later and through the coding methodology, these answers have been decoded to figure out the different sentiments that came out of the participants and be able to move on to the conclusions. It will be shown how most of the antecedents that were singled out in this thesis come up in the answers of the surveys and how some antecedents have a greater affinity towards emotional engagement and others towards cognitive engagement.

Finally, the validity of the **Results** and the **Conclusions** are displayed in the last part of the research where the thesis will close this study by discussing how the results related to what was found in the literature. Furthermore, it will include conclusions on what can be drawn for managers, practitioners and the research community as well as promising areas of research to continue uncovering the concept of employee engagement in relation to innovation.

# LITERATURE REVIEW

As explained in the research design chapter, within this section, the aim is to explore the existing theories on engagement as an enabler for innovative behaviour and the researchers behind them. As previously explained, the scope of the present research is to understand which are the factors that positively impact on engaging employees in innovative behaviours.

To this end, it was decided to divide this chapter in three main sections:

1. **Employee engagement**. In this section the aim is to go deeper in the definition of the concept by analysing how the past literature referred to it and how the concept definition evolves throughout the years, in order to develop a classification of the different definitions.

2. **Antecedents of employee engagement**. Since the objective of the thesis is the understanding of the factors that most influence the level of engagement of an individual, it becomes important to check out the analysis of these factors, in particular of those related to individual characteristics.

3. **Engagement as a trigger for innovation**. How does engagement impact on innovation? Under which circumstances can engaged employees be considered more inclined to innovative behaviour? This part of the literature aims at answering to these kinds of questions.

The literature review will lead to the development of the conceptual framework that will be discussed in the next dedicated chapter. In order to better understand how the research framework was developed, and in order to have a clearer understanding of the complex literature overview given in the present chapter, it was decided to end each section of this chapter with the presentation of the relative section of the conceptual framework. This allows the reader to easily understand the variables involved and the relations between them in order to arrive more prepared to the next chapter.

# Employee engagement

In the last decades, several think tank centres were put together in the practitioner community with the end of studying employee engagement in Europe and the United States. They have given rise to a bottom-up request for growth of research on the topic pushing the scholarly community to study engagement. As a response, the academic approach has been focused on better understanding the antecedent variables that develop employee engagement. This is a recent, emerging phenomenon (Rich et al, 2010; Saks, 2006; Wefald & Downey, 2009).

Although many studies are still exploring the topic, the literature agrees on the definition of Shuck and Wollard (2010), who defined employee engagement as "*an individual employee's cognitive, emotional and behavioural state directed toward desired organizational outcomes*" (p. 103). Engagement, thereby, reflects an energetic drive in addition to the simple use of cognition while completing work tasks (May et al., 2004).

DEVELOPMENT OF EMPLOYEE ENGAGEMENT DEFINITION THROUGH THE YEARS

**The three components of the engagement**

The first who introduced the term engagement in the work context was Kahn in 1990, using the term to describe the worker's involvement in various tasks. He defined personal engagement as "*the simultaneous employment and expression of a person's 'preferred self' in task behaviours that promote connections to work and to others, personal presence, and active full role performances*" (Kahn, 1990, p. 700). In particular, Kahn, in his paper "Psychological conditions of personal

engagement and disengagement" (1990), in which he performed qualitative studies in two different work contexts: a summer-camp and an architecture firm, compared the personal engagement and the personal disengagement. They refer to "*the behaviour by which people bring in or leave out their personal selves during work role performances*" (Kahn, 1990, p. 719). Kahn went on to establish the starting premises for his research on "**self-in-role**" processes: that people can use "*varying degrees of their selves, physically, cognitively and emotionally, in work-role performances*" (p. 694) and that they can either engage (employ and express themselves) or disengage (withdraw and defend).

This first approach towards the concept is still used as a base for its studies nowadays.

Kahn was inspired by different theories that existed before. He mentioned that his "*starting point was the work of Goffman (1961)*" (p. 694) who explained that people live acting out momentary attachments and detachments in their "role performances". Goffman defined role embracement as the lack of separation between the real person and the role they played. Kahn drew from this to start talking about personal engagement as people "*bringing in their personal selves during work role performances*" (p. 692) transferring the initial theory to the workplace environment.

Kahn had also read from psychologists (Freud,1922), sociologists (Goffman, 1961) and group theorists (Bion, 1961; Slater, 1961) that when people are members of groups for a period of time they tend to pull themselves out and push themselves into the group alternatively "*to protect themselves from isolation or engulfment*" (p. 694). Engagement was following-up on these thoughts by acknowledging this alternation and focusing on the periods when people are pushing themselves into the working group.

He was also influenced by Alderfer's (1972) and Maslow's (1954) ideas that claimed people needed to bring themselves to the workplace in the forms of self-expression and self- employment.

Finally, other influences that gave Kahn directions when he started with his research were Hackman and Oldham (1980) and Alderfer (1985). In particular Hackman and Oldham (1980), stated that the "*psychological experience of work drives people's attitudes and behaviours*" (p. 694) and that "*individual, group and organizational factors simultaneously influence these experiences*" (p. 695).

In his study, Kahn (1990) suggested that an employee could be physically engaged, emotionally engaged, and cognitively engaged (Rich et al., 2010). He explained that when people are engaged in their work they become "*physically involved in tasks, whether alone or with others, cognitively vigilant and empathically connected to others in the service of the work they are doing in ways that display what they think and feel, their creativity, their beliefs and values, and their personal connections to others*" (p. 700). This means that to consider an individual engaged in what is doing it is important not just to consider engagement as a general concept but to go deeper in it, looking for all the three component: **physical engagement**, **cognitive engagement** and **emotional engagement**. According to Kahn, is important that those three states happen simultaneously to make feel an individual completely engaged. In order to better understand those three state of being, Kahn made some examples on the basis of the qualitative studies that he made in a summer camp and in an architecture firm. In one example about a scuba-diving instructor of the summer camp, he explained that the instructor experienced moments of pure personal engagement: employing his self physically (darting about checking gear and leading the dive); cognitively (in his vigilant awareness of divers, weather and marine life); and emotionally (in empathising with fear and excitement of the young divers.

To better understand the concept of personal engagement is also important to consider its contrary: **personal disengagement**. Always according to Kahn, an individual who is personal disengaged become physically uninvolved in tasks, cognitively unvigilant and emotionally disconnected from others in ways that hide what he/she think and feel, his/her creativity, his/her beliefs and values, and his/her personal connection to others. In particular an individual who experiences the state of personal disengagement become

- **Cognitive disengaged**: adopting an automatic, perfunctory approach marked by not questioning on others' decisions, parameters and assumptions.
- **Emotional disengaged**: not empathising with confused draftspersons and an upset client, displaying little of what you thought and felt within the conduct of the role.
- **Physical disengaged**: removing personal and internal energies from physical labours and by farming out non-management tasks to others.

This state of personal disengagement bring people to act more as a custodians rather than as innovators.

In previous studies, this type of self-employment and self-expression was behind many of the other researchers' studies on involvement (Lawler & Hall, 1970), flow (Csikszentmihalyi, 1982), mindfulness (Langer, 1989), intrinsic motivation (Deci, 1975), creativity (Perkins, 1981), authenticity (Baxter, 1981) and emotional expression (Rafaeli & Sutton, 1987). However, most of them did not link their pieces to the workplace environment as Kahn did when proposing personal role engagement. He is widely credited with the first application and use of engagement theory to the workplace (Harter et al., 2002; Rich et al., 2010).

In addition to that, Kahn, also if in an implicit way, outlined the relationships between engagement and job performance. According to Kahn (1990, 1992):

- Investment of **physical energy** into work roles contributes to organizational goals because it facilitates the accomplishment of organizationally valued behaviours, at increased levels of effort, over extended periods of time.
- Investment of **cognitive energy** into work roles contributes to organizational goals because it promotes behaviour that is more vigilant, attentive and focused.
- Investment of **emotional energy** into work roles contribute to organizational goals in a number of related ways. They also help individuals meet the emotional demands of their roles in a way that results in more complete and authentic performance.

Kahn went further and searched for the psychological conditions coming from rational or unconscious components of the work environment that create a situation in which people engage or disengage which we will discuss further along when dealing with antecedents and drivers of engagement. According to Kahn, these three states of being are significantly affected by three psychological domains: **meaningfulness**, **safety**, and **availability**. These three psychological conditions shape how people inhabit their roles. Kahn (1990) suggested that the level of engagement of an employee depends on the unconsciously answers that he/she gives to three questions in each situation:

1. How meaningful is it for me to bring myself into this performance?
2. How safe is it to do so?
3. How available am I to do so?

This means that people vary their personal engagements according to their perceptions of the benefits (meaningfulness), to the guarantees (safety) they perceive in situations and to the resources they perceive themselves to have (their availability).

Specifically, psychological meaningfulness is associated with work elements that created incentives or disincentives to personally engage. Psychological safety was associated with elements of social systems that created fairly predictable, non-threatening and consistent social situations in which to engage. Psychological availability was associated with individual distractions that preoccupied people to various degrees and left them with more or fewer resources with which to engage in role performances.

After Kahn, the concept of employee engagement began to spread amongst researchers.

The problem is that the community has not collaborated much or developed many connections in the literature. As a result, we now have various perspectives on the concept. More than fifty different definitions of engagement co-exist in the existing literature (MacLeod & Clarke, 2009). Now, the different definitions that have arisen from the literature will be exposed.

### Engagement as the positive antithesis of burnout

After Kahn, in 2001, a second perspective on the concept was developed. Maslach et. Al (2001) defined engagement as "*a persistent positive affective state […] characterized by high levels of activation and pleasure*" (p. 417). They said that engagement could be seen as the positive antithesis of burnout.

In particular, engagement is characterized as the opposite of the three burnout dimensions:

- **exhaustion**: "*being overextended and depleted of one's emotional and physical resources*" (Maslach et al., 2001, p. 399)

- **cynicism**: "*a negative, callous, or an excessively detached response to various aspects of the job*" (Maslach et al., 2001, p. 399)
- **ineffectiveness**: direct result of exhaustion and cynicism. It was defined as feelings of incompetence and lack of achievement and productivity at work (Maslach et al., 2001)

This framework was then validated in 2002 by Schaufeli et al.

## Engagement as work satisfaction

A third perspective was then developed by Harter et al. in 2002. They defined engagement as an "*individual's involvement and satisfaction with as well as enthusiasm for work*" (p. 269). Later, Luthans and Peterson (2002) extended this research by examining the relationship between managerial self-efficacy, the perception of effective management practices and employee engagement.

## Engagement as multidimensional

In 2006 another approach to employee engagement emerged. Saks (2006) was the first academic researcher to suggest separate states of engagement: job engagement and organizational engagement and hypothesised that employee engagement is developed through a social exchange model. In particular, he defined engagement as "*a distinct and unique construct consisting of cognitive, emotional, and behavioural components […] associated with individual role performance*" (p. 602). This study shows signs of including the concepts of the previous literature explained in this chapter, suggesting that employee engagement was developed from cognitive (Kahn, 1990; Maslach et al., 2001; Maslow, 1970), emotional (Harter et al., 2002; Kahn, 1990), and behavioural elements (Harter et al., 2002; Kahn, developing a three-component model.

Similarly to Schaufeli, Salanova et al. (2002), Saks viewed the development of engagement as an absorption of a person's resources into the work they performed.

Moreover, Saks (2006) was the first to examine antecedents and consequences to employee engagement in the academic literature.

The following figure (**Fig. 2.1**) want to give to the reader a more clearer overview about how the mentioned engagement definitions evolved through the years.
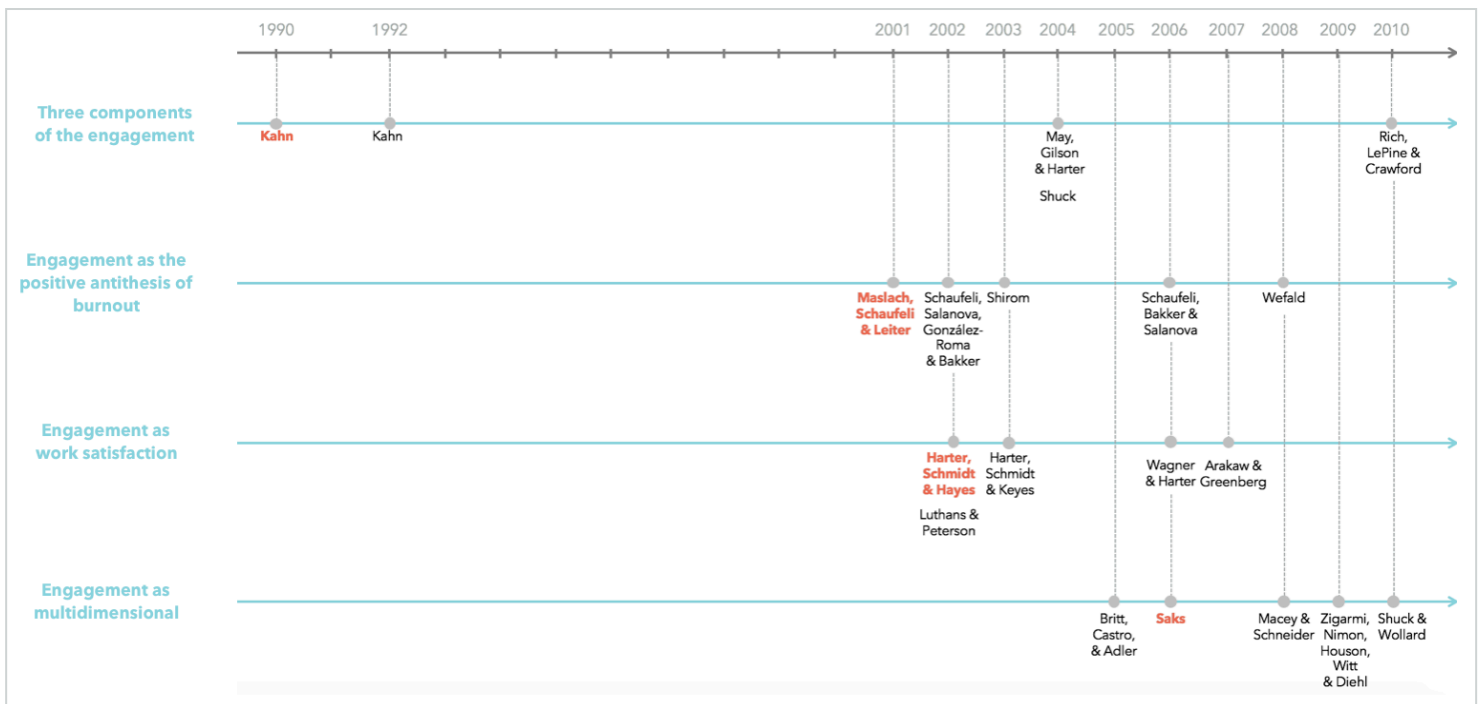


**Fig. 2. 1:** Engagement definitions through the years

After exposing how the concept of employee engagement evolved in the literature of the last past years, this research tries to classify all these different definitions of employee engagement, by referring also to Shuck (2011).

It is possible to distinguish five major perspectives:

1. Engagement as a three components perspective (Kahn, 1990)
2. Engagement as a positive feeling perspective (Maslach et al., 2001)
3. Engagement-satisfaction perspective (Harter et al., 2002)
4. Multidimensional Engagement perspective (Saks, 2006)
5. Management practice perspective (MacLeod & Clarke, 2009)

### Engagement as a three components perspective

In the previous section, Kahn's perspective of employee engagement has already been explained. After his studies in 1990 and 1992, many other researchers start to follow his theory and attempted to go deeper into it.

In particular, in 2004, May et al. published an empirical research testing Kahn's (1990) conceptualization of employee engagement.

Later, Rich et al. (2010), re-examined Kahn's original domains of engagement through a survey of 245 firefighters employed across four municipalities. It was the first study to examine the role of engagement as a mechanism that links employee characteristics and organizational factors to employee job performance. They expanded the research of Kahn by going deeper into the analysis of the possibility that individuals can choose to invest their affective, cognitive and physical energies simultaneously into role performances. He explained that "*engaged individuals are described as being psychologically present, fully there, attentive, feeling, connected, integrated, and focused in their role performances*" (Rich et al., 2010, p. 619). Also he emphasised the concept that although individuals can be involved in their work roles

physically, cognitively, or emotionally, but engagement is maintaining these involvements simultaneously in a connected rather than fragmented manner.

Rich et al., started from the previously researches, trying to identify the relation between job performance and employee self, considering:

- The **cognitive energy** that can be allocated in various works according to the individual identities (Ashforth, Harrison, & Corley, 2008). They posed this concept in relation to job involvement, that refers to the degree to which employees relate to their jobs as comprising their lives in total. This means, that an employee who exhibits high job involvement identifies strongly with his or her job and thinks about the job even when outside of work . Job involvement is influenced by organizational characteristics, supervisory behaviours and individual differences (Brown & Leigh, 1996).

- The **emotional reactions** that are associated with the human desire to fulfil subjective psychological needs or values. In this case, Rich et al., related the concept to job satisfaction. It refers to " a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience" (Locke, 1976, p. 1300). Job satisfaction is mainly influenced by differences in individual personality.

- The **physical energies** employed on specific task activities, resulting from the need to feel competent and maintain autonomy and control over courses of action. This concept is particularly related to intrinsic motivation, that is defined as the desire to exert effort on a task in the absence of external constraints or contingencies (Deci, 1975; Deci & Ryan, 1985). Intrinsic motivation is promoted by both work contexts and individual differences that foster feelings of competence, autonomy and relatedness.

This means that each of the three concept empathised (job involvement, job satisfaction and intrinsic motivation), focuses on a different aspect of the self-in explaining why individuals choose to engage themselves into their work roles:

- **Job involvement,** focuses on the cognitive energy individuals invest to maintain identities related to work.
- **Job satisfaction**, focuses on affective reactions and the need to maintain happiness.
- **Intrinsic motivation**, focuses on individuals' effort and persistence dedicated to maintaining autonomy and control.

Lastly, in 2010 Shuck developed the first empirical research to suggest engagement as a predictor variable for the intention to turnover construct. While, always in the same year, Rich et al. created a measurement scale based on the model proposed by Kahn to measure engagement. When developing the scale, they incorporated the three ways in which employees express their engagement: cognitively, emotionally, and physically.

### Engagement as a positive feeling perspective

Considering the burnout-antithesis perspective, even before Maslach et al. (2001), in 1997, Maslach and Leiter started to explore the concept of engagement as the opposite of burnout. They assumed that engagement is characterized by energy, involvement and efficacy which are considered the direct opposites of the three burnout dimensions: exhaustion, cynicism and lack of professional efficacy, respectively. According to this perspective, engaged employees have a sense of energetic and effective connection with their work activities and they see themselves as able to deal completely with the demands of their job.

After Maslach et al. (2001), as already explained, Schaufeli et al. (2002) redefined engagement as work engagement and as a "*positive,*

*fulfilling, work-related state of mind characterized by vigor, dedication, and absorption*" (p. 74). In their research, they were able to test Maslach's et al. (2001) burnout model by measurements of employee engagement, demonstrating a negative relationship between levels of burnout and employee engagement. In particular, based on a theoretical analysis (Schaufeli & Bakker, 2001), they were able to identify two underlying dimensions of work-related well-being:

- **Activation**: ranging from exhaustion to vigour;
- **Identification**: ranging from cynicism to dedication

Burnout is characterized by a combination of exhaustion (low activation) and cynicism (low identification), whereas engagement is characterized by vigour (high activation) and dedication (high identification). Furthermore, burnout includes reduced professional efficacy, and engagement includes absorption.

Similarly, Slåtten T. and Mehmetoglu M. (2011), noticed that engaged employees have high levels of energy and are enthusiastic about their work. They started to go deeper into the definition and expression of engagement analysing that, in general, the various characteristics of a person's engagement (i.e. vigour, dedication and absorption) implicitly signal a positive state of mind of this person.

The following year, though, critiques of this model arose claiming that the approach was missing the cognitive engagement component that Kahn had mentioned (Johnson, 2003). On top of that, Shirom (2003) also suggested that previous research had conceptualized engagement on a continuum instead of a separate state. Nevertheless, Bailey et al (2017) regarded this definition as the predominant one in engagement literature claiming that it had been adopted by 86% of the studies on this subject.

In 2006, Schaufeli et al. used the Utrecht Work Engagement Scale, characterising engagement as a positive work-related state of being

inclusive of vigour, dedication, and absorption building on the earlier Shaufeli et al. (2002) model.

Later, Wefald (2008), critically examined the concept of employee engagement and provided an empirical evidence regarding its validity as a work-related construct.

Furthermore, the definition was later adopted by Swanberg et al. (2011) who operationalized it by measuring cognitive and emotional engagement as well as behavioural engagement. In this way, they extended the boundaries to form an integration between attitudinal and behavioural parameters to define the construct.

## Engagement-satisfaction perspective

Regarding the engagement-satisfaction perspective, after Harter et al. (2002), Luthans and Peterson (2002) expanded on the model adding new antecedents regarding managerial practices and concluded that the most profitable work units of companies have people doing what they do best, with people they like, and a strong sense of psychological ownership.

Following this holistic approach, Harter et al. (2003) discussed the role of employee as a function of well-being as well. This was one of the first publications to suggest health benefits as a function of being engaged.

Following the same perspective, there is also a study conducted by Arakawa and Greenberg in 2007, where they explored the role of managers in the development of employee engagement.

Another study provides evidence that management style could affect the level of engagement, optimism, and performance of a team (Shuck, 2011).

Lastly, following the study of Sacks (2006), Britt et al. examined the role of psychological, emotional and cognitive resources on combat

soldiers. The findings stated that team members experience less stress and fatigue when they were engaged in their work (Shuck, 2011).

The study of Sacks was also extended by Macey and Schneider (2008) when they suggested that each state of engagement (cognitive-emotional-behavioural) builds on the next until it reaches the full engagement when all three elements are present. They presented various organizational concepts that might feed off the development of employee engagement within organizations.

## Multidimensional perspective

In this conceptualization, the hypothesis is that employee engagement developed through a social exchange model and he suggested two separate states of engagement: job engagement and organizational engagement.

The definition proposed by Saks (2006) was that engagement is "*a distinct and unique construct consisting of cognitive, emotional and behavioural components […] associated with individual role performance*" (p. 602). The research this time went further and suggested that engagement could be experienced emotionally and cognitively and manifested behaviourally. Also, when engagement occurred it would absorb individual personal resources into the work they performed. This study shows signs of including the concepts of the previous literature explained in this chapter. Each framework agreed that for absorption to occur, employees must have the physical, emotional and psychological resources ready to complete their work and the cognitive, emotional and behavioural components can be traced and linked to the other definitions stated by the previous authors.

The study was extended by Macey and Schneider (2008) suggesting that each state of engagement (cognitive-emotional-behavioural)

builds on the next until it reaches the full engagement when all three elements are present.

Also, Britt et al. in 2005 examined the topic, analysing the role of psychological, emotional and cognitive resources on combat soldiers. They discovered that engaged individuals, whether soldiers or team members, experience less stress and fatigued when engaged in what they were performing.

More recently, in 2009, Zigarmi et al., were the first to introduce the concept of employee work passion as an emergent construct, unique from employee engagement. While, in 2010, Shuck and Wollard, conducted an integrated literature review of employee engagement concept, arriving to define engagement as "*an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes*" (p. 103).

## Management practice perspective

In the past years, some scholars within the area of human resource management have challenged the other definitions and begun to regard engagement as a management practice. They started considering "*doing engagement*" in contrast to "*being engaged*" (Truss et al. 2014). They argue that it is important to focus on existing problems in the company instead of generally addressing employees' mindset since the performance issues are usually solved by dealing with goal-setting, job design, technology, training and staff selection and not by tackling the general attitude of workers.

From this angle, engagement is a strategy that organizations use to manage their workforce and not so much a psychological state that individual workers go through. One of the definitions used was: engagement is "*a workplace approach designed to ensure that employees are committed to their organization's goals and values,*

*motivated to contribute to organisational success, and are able at the same time to enhance their own sense of well-being*" (MacLeod & Clarke, 2009, p.13).

However, there is no "*overarching definition or conceptualization of engagement*" (Bailey et al., 2017, p. 35) under the heading of management practices in the literature that considers this perspective. It must be highlighted, though, that employers can always work towards engaging employees but, at the same time, it falls on the individual worker's hands to decide how much discretionary effort they will give to the organization.

As Valentin (2014) stated, this approach of employee engagement seeks to manufacture a worker "*who loves her job and contributes discretionary effort*" (p.19) but is sometimes met with scepticism from the employees.

All the different perspectives presented are summarised in the following table (**Tab. 2.1**) in order to highlight the main differences between them.

| PERSPECTIVE | DESCRIPTION | AUTHORS |
|---|---|---|
| Three components of engagement | Explore the psychological aspect of engagement that consist ok three components: physical engagement, cognitive engagement, emotional engagement. | *Kahn (1990)* *Kahn (1992)* *Mey et al. (2004)* *Ritch et al. (2010)* *Shuck (2010)* |
| Engagemnet as a positive feeling | Engagement is considered as a positive state of mind, characterized by energy, involvement and efficacy which are considered as the opposites of the burnout dimensions (exhaustion, cynicism and lack of professional efficacy). | *Maslach and Leiter (1997)* *Maslach et al. (2001)* *Schaufeli et al.(2001)* *Schaufeli et al. (2002)* *Shirom (2003)* *Wefald (2008)* *Slåtten T. et al. (2011)* *Swanberg et al. (2011)* *Bailey et al (2017)* |
| Engagemnet as a work satisfaction | Most profitable employees are those who do what their are good in, with people they like and with a strong sense of psychological ownership. | *Harter et al. (2002)* *Luthans et al. (2002)* *Sacks (2006)* *Arakawa et al. (2007)* *Macey et al. (2008)* *Shuck (2011)* |
| Engagemnet as a multidimension | Engagement absorb individuals' personal resources into the work they peroform. It can be considered in three components: emotional, cognitive and behavioural. | *Britt et al. (2005)* *Sacks (2006)* *Macey et al. (2008)* *Zigarmi et al. (2009)* *Shuck (2010)* |
| Engagemnet as a management practice | Engagement is considered a strategy, that organizations use to manage their workforce, more than a psychological state that individual workers go through. | *MacLeod et al. (2009)* *Truss et al. (2014)* *Valentin (2014)* *Bailey et al. (2017)* |

**Tab. 2. 1:** Employee engagement perspectives

Following the presentation of the different definitions and hypotheses that have come up in the literature review, it became evident that all of the approaches unanimously agree on the fact that the development of employee engagement inside companies and organizations has a high potential to impact important outcomes. (Arakawa & Greenberg, 2007; Christian et al., 2011; Harter et al., 2002; Luthans & Peterson, 2002; Macey & Schneider, 2008; Maslach et al., 2001; Saks, 2006; Schaufeli et al., 2002).

Having analysed all the different perspectives of engagement and all the differences that there are between them, for this thesis, it was chosen to base the investigation primarily on two kind of perspectives. These were found to be more meaningful given the scope of the research and they are: the Kahn's perspective, as the foundation of the concept, and the engagement as a positive feeling perspective.

## ENGAGEMENT VS. INVOLVEMENT AND COMMITMENT

In order to go deeper into the concept of engagement it becomes necessary to take into account all those feelings that might be, in appearance, considered similar to engagement. In particular, engagement can be sometimes associated with the concept of involvement or commitment. Although engagement shares some elements with these constructs, it definitely differs from them (May et al., 1994; Saks, 2006).

Halberg and Schaufeli analysed this concept more in depth in 2006. According to them, on one side, job involvement is unaffected by role perceptions and does not appear to be related to mental or physical ill-health. On the other side, organizational commitment refers to the emotional attachment that employees form with their organization depending more on the organizational circumstance than on individual factors and is associated with absence of health complaints. Differently from job involvement and organizational commitment, work

engagement stresses the assumption of "optimal functioning" at work in terms of well-being characterised by the presence of energy and content. All the three refer to a positive attachment to work and they also contain reciprocal theoretical references to each other. Therefore, it was assumed that they would share some variance, but not overlap to the extent where it turns redundant. At the end, these three concepts represent three empirically distinct constructs. From the research of Halberg and Schaufeli (2006), job engagement results to be consistently associated with health complaints and this consideration allows the separations with the concept of job involvement and organization commitment.

As already explained, to the aim of the present research, the investigation that will be presented in the next chapter, will be mainly based on the strong definition of engagement proposed by Kahn in 1990 and then developed by many others researchers through the years. According to this perspective it is possible to consider employee engagement as three separated components: **physical engagement**, **cognitive engagement** and **emotional engagement**.

The variables that mostly impact on these components will be analysed through the literature in the next paragraphs, and then practically tested in the second part of the thesis.
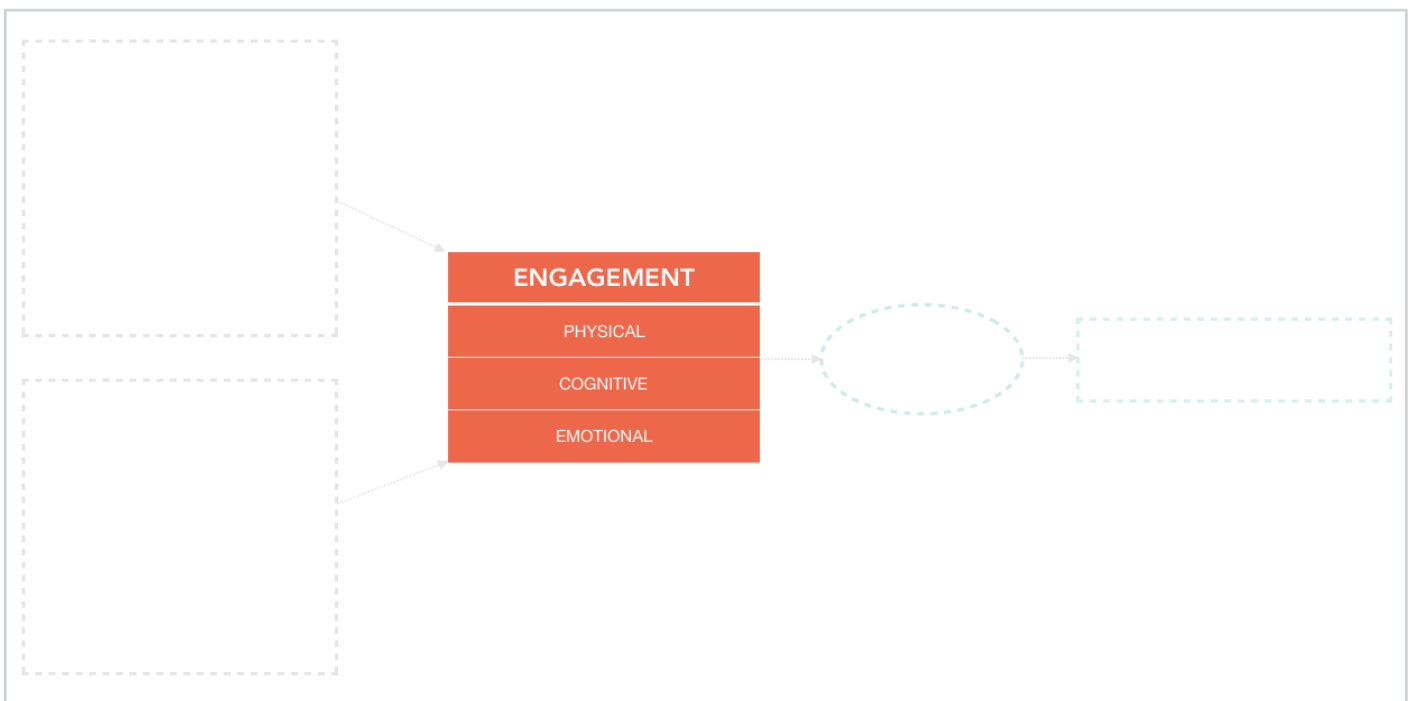
**Fig. 2. 2:** Three components of engagement

## 2.2
# Antecedents of
# employee engagement

After a first round of literature review focused on the definition of engagement, the research starts to go deeper into the analysis of all those factors that positively impact on employee engagement. In the literature, these appear as an "antecedent" which is defined as a *"term referred to a specific condition or factor that influenced or predicted a particular behaviour that will emerge in practice"* (Saks, 2006, p. 604). Since the aim of this thesis is to understand how to create and spread an innovation culture inside organizations through the engagement of people in innovation, a question immediately appears: **how to engage people?**

Looking at the previous research, the analysis of the factors that encourage engagement is a recurring theme. On the one hand, it was possible to find a great number of papers about the topic but, on the other hand, there is no a clear classification of all the antecedents of engagement. Different authors propose different antecedents according to the context in which the research was conducted.

This research will present a brief introduction explaining the antecedents that were mentioned in the foundational theory of Kahn. It will then proceed to enrich this explanation with other prominent authors that adhered to Kahn's theory and added valuable contributions or interpretations. After this, the antecedents based on the theory of burnout will be examined. It will be followed by a general view of other antecedents found by Bailey et al. in their narrative synthesis of 2017 when they collected antecedents covering most of the existing theories. To make sure a thorough job was done in the

collection of antecedents, other authors that have offered contributions to the antecedent theory will be included in the last part. Finally, the most relevant antecedents of employee engagement will be classified distinguishing them between individual factors and organizational factors to be able to proceed with the research with a clear idea of what the state of the art is on the antecedents of employee engagement.

MAIN ANTECEDENTS THEORIES

## Kahn's antecedents: three components of engagement theory

As it was done for the analysis of the definitions of employee engagement, also in this case the starting point is represented by Kahn. Kahn (1990) theorized that people can personally engage in moments of task behaviours if three psychological conditions are met: meaningfulness, safety and availability. Seems that people decide to engage their selves or not depending on the answer that they implicitly give to three questions:

- How **meaningful** is it for me to bring myself into this performance?
- How **safe** is it to do so?
- How **available** am I to do so?

It reflects the logic of actual contracts: people agree to contracts containing clear and desired benefits and proactive guarantees when they believe themselves to possess the resources necessary to fulfil the obligation generates.

People vary their personal engagement according to their perception on the benefits (meaningfulness), on the guarantees (safety) and on the resources that they believe to have (availability).

### Psychological Meaningfulness

It was associated by Kahn with work elements that created incentives or disincentives to personally engage. Psychological Meaningfulness can be seen as a feeling that one is receiving, a return on investments of one's self in a currency of physical cognitive, or emotional energy.

People experienced such meaningfulness when they felt worthwhile, useful and valuable. They felt able to give to others and to the work itself in their roles and also able to receive. Lack of meaningfulness was connected to people's feeling that little was asked or expected of their selves and that there was little room for them to give or receive in work role performance.

Statistics indicated that personal engagement is connected to higher levels of psychological meaningfulness: people are personally engaged in situations characterized by more psychological meaningfulness that those in which they were disengaging.

According to the research made by Kahn, three factors generally influence psychological meaningfulness:

1. **Task characteristics**: in challenging, clearly delineated, varied, creative and somewhat autonomous works, is more likely to experience psychological meaningfulness
2. **Role characteristics**: roles carried identities that organization members were implicitly required to assume. Organization members could like or dislike those identities and the stances toward others they required. Roles also carried status or influence, when people were able to wield influence, occupy valuable positions in their systems, and gain desirable status, they experienced a sense of meaningfulness.
3. **Work interactions**: people also experienced psychological meaningfulness when their task performances included rewarding interpersonal interactions with co-workers and clients. Meaningful interactions promoted dignity, self-appreciation and a sense of worthwhileness.

**Psychological Safety**

It was associated, by Kahn, with elements of social systems that created more or less nonthreatening, predictable and consistent social situations in which to engage.

Psychological Safety is experienced as feeling able to show and employ one's self without fear of negative consequences to self-image, status, or career. People felt safe in situations in which they trusted that they would not suffer for their personal engagement. They feel safe in taking the risk of self- expression and engaging the processes of change. In the studies situations promoting trust were predictable, consistent, clear, and nonthreatening; when situations were unclear, inconsistent, unpredictable or threatening, personal engagement was deemed too risky or unsafe.

Statistics indicated that personal engagement was connected to higher levels of psychological safety.

According to the research made by Kahn, four factors most directly influence psychological safety:

1. **Interpersonal relationships**: they promoted psychological safety when they were supportive and trusting. Such relationships had a flexibility that allowed people to try and perhaps to fail without fearing consequences: sharing ideas without feeling that it was dangerous to do so, feel that any criticism would be constructive rather than destructive. People did not feel such safety when they felt disconnected from others.

2. **Group and intergroup dynamics**: the various unacknowledged characters, or unconscious roles, that individuals assumed also influenced psychological safety. People play informal characters in the group: women felt unsafe for them to personally engage in some situation because of what they experienced as men's undermining their role performances. Similar dynamics can rise between organizational subgroups: new members of the company can be felt unsafe by old members.

3. **Management style and process**: supportive, resilient, and clarifying management heightened psychological safety. Supportive managerial environments allowed people to try and to fail without fear of the consequences. People also felt safer

when they had some control over their work. Unpredictable inconsistent or hypocritical managers generate higher fear.
4. **Organizational norms**: people that stayed within generally appropriate ways of working and behaving felt safety than those who strayed outside those protective boundaries.

**Psychological Availability**

According to Kahn, it is associated with individual distractions the preoccupied people to various degrees and left them more or fewer resources with which to engage in tole performances. Psychological availability is the sense of having the physical, emotional or psychological resources to personally engage at a particular moment. It measures how ready people are to engage, given the distractions they experience as members of social systems.

Statistics indicated that personal engagement was connected to higher levels of psychological availability. People were personally engaging in situations for which they were more psychologically available.

According to the research made by Kahn, four types of distractions influence psychological availability:
1. **Depletion of physical energy**: personal engagement demanded levels of physical energy, strength and readiness.
2. **Depletion of emotional energy**: emotional ability to personally engage also influenced psychological availability (e.g. frustration). People need emotional resources to meet the demands of personal engagement.
3. **Individual insecurity**: psychological availability also corresponded to how secure people felt about their work and their status. Individuals must feel relatively secure about those selves to express their selves in social systems. Insecurity generate anxiety that occupied energies the would have otherwise been translated into personal engagements.

Dimensions of insecurity was lack of self-confidence, self-consciousness (afraid of others' judgment) and people's ambivalence about their fit with their organization and its purposes.

4. **Outside lives**: people's outside lives have the potential to take them psychologically away from their role performances.

Finally, Kahn explained that Individual differences influence how people personally engage or disengage, given their experiences of psychological meaningfulness, safety, and availability in specific situations.

But how do these conditions work? They basically represent some antecedents of engagement. If the individual recognises these conditions in the job that they are performing, they will be more likely to be engaged in the work.

Now that the foundational antecedents have been explained, the research will move on to explain three other authors that enriched Kahn's antecedents by reinterpreting them, reclassifying them, merging them with other theories to come up with new ones, etc.

### Rich's antecedents

Firstly, Rich et al. in their paper of 2014 made several links between Kahn's antecedents and other factors. Specifically, they state that the primary influences on psychological meaningfulness are the perceptions of organizational factors and work factors related to tasks and roles; about the primary influences on psychological safety they say that they are the perceptions of social systems related to support and relationships; and, lastly, they say that self-perceptions of confidence and self-consciousness are the primary influences on psychological availability. Rich et al. redefine Kahn's antecedents by trying to single out their alleged original driver: value congruence (meaningfulness),

perceived organizational support (safety) and core self-evaluation (availability). A description of each one follows:

- **Value congruence**: Rich et al. said that meaningfulness comes from the congruence between the behaviours expected by an organization, and the behaviours that individual employees value as a part of their own self-images. That is, when individuals find that their roles call for behaviours that are congruent with their preferred self-images, they are more likely to find their roles inviting, valuable, and worthwhile and more willing to fully engage themselves. On the contrary, when individuals find that their role expectations pull for behaviours that they feel are inappropriate for their preferred self-images, they feel devalued, taken advantage of, and less willing to give themselves to their work roles. This means that, when individuals believe that their personal values are congruent with those of the organization for which they work, they should find more meaningfulness in their work and, in turn, exhibit higher engagement. Defined this concept Rich at al. called for more researches on the topic claiming that "*no research has examined the relationship between perceived value congruence and Kahn's conceptualization of engagement*" (p. 621).

- **Perceived organizational support**: it was defined by Rich et al. as the experience of psychological safety defined by Kahn (1990). According to that definition "*individual feel safe in organizational contexts perceived to be trustworthy, secure, predictable and clear in terms of behavioural consequences*" (Rich et al., 2010, p. 621). When an individual has a trusting interpersonal relationships in a supportive organizational environment, he/she will be more encouraged to take risks and expose his/her self without fear. In particular, individual feel safer when they have some control over their work. Due to that,

supportive management and interpersonal relationships foster feelings of psychological safety that, as a consequence, increase willingness to engage fully in work roles. In line with this reasoning, as Rich et al. said, there are different researchers showing positive relationship between perceptions of various forms of support in an organization and conceptualizations of job engagement (e.g. Bakker et al. 2005; Nembhard & Edmondson, 2006; Saks, 2006) and in the next paragraphs, the present research will,  more specifically, go through some of them.

- **Core self-evaluation**: it correspond to the psychological availability theorised by Kahn (1990). Individuals who are psychologically available perceive themselves to be ready to prepare to put their physical, cognitive and emotional energies into role performance, and thus, they tend to exhibit higher engagement in role performance contexts. One of the key influences on availability is individuals having a general level of confidence in themselves (Kahn, 1990). According to Rich et al., to a large degree, the confidence that Kahn discussed is reflected in the concept of core self-evaluation, a construct defined as individuals' appraisals of their own worthiness, effectiveness, and capability as people (Judge et al., 1997). People with high core self-evaluations are well adjusted, positive, self-confident, and efficacious (since they have more resources available to invest in the performance of their work roles). Given that individuals with higher core self-evaluations tend to feel more capable of dealing with work demands, they should also perceive a higher level of availability to invest themselves into their roles, and, thus, core self-evaluations should be positively related to job engagement.

Rich explained all of these antecedents with a solid link to Kahn's theory and trying to go beyond the surface to find those antecedents that preceded those of Kahn. They were not the only ones to work following the same set of ideas. In the following section, Saks' reinterpretation of Kahn's antecedents will be discussed as another milestone study that added valuable knowledge on the original theory.

## Saks' antecedents

In the second place, there is Saks who, in 2006, went along with Kahn's theory and put together a list of antecedents of his own that came from merging together Kahn's theory with other theories as well. The paper finds three antecedents that significantly correlate with engagement:

- **Job characteristics**: Saks (2006) links it with Kahn's meaningfulness. In fact, the paper describes that psychological meaningfulness involves a sense of return on investments of the self-in-role performances (Kahn, 1992). According to Kahn and Saks this can be achieved from task characteristics. This is why Saks names the antecedent "job characteristics". According to Saks (2006) jobs that are high on the core job characteristics provide individuals with the incentive to bring more of themselves into their work and to be more engaged. This idea is based on Hackman and Oldham's (1980) job characteristics model and in particular, on the five core job characteristics (i.e. skill variety, task identity, task significance, autonomy, and feedback). Jobs that are high on the core job characteristics provide individuals incentive to be more engaged (Kahn, 1992). Saks explains how other authors had validated "job characteristics" as an antecedent as well. For instance, May et al. (2004) found that job enrichment was positively related to meaningfulness. In addition, Saks deals with the Social Exchange Theory (SET) that states humans feel the need to reciprocate behaviours that favour them to the other party. From

a SET perspective, one can argue that employees who are provided with enriched and challenging jobs will feel obliged to respond with higher levels of engagement to the company. Then, there is the Maslach et al. (2001) burnout model which also suggests the importance of job characteristics for engagement. The burnout model's antecedents will be discussed in detail in the following section.

- **Perceived organizational support**: Saks (2006) linked it to Kahn's "psychological safety" by saying that a supportive environment perception is the key driver to Safety. It added that also Schaufeli and Bakker (2004) found that a measure of job resources that includes support from colleagues, predicted engagement. According to Saks, an important aspect of safety stems from the amount of care and support that employees' perceive to be provided by their organization, as well as their direct supervisor. Effectively, Kahn (1990) discovered that supportive and trusting interpersonal relationships, as well as supportive management prompted psychological safety. Employees feel safe in work environments allow members to experiment and to try new things and even fail without fear of the consequences. Same happens in the case of social support: a lack of social support has also consistently been found to be related to burnout. In particular, employees who have higher perceived organizational support might become more engaged to their job and organization. Moreover, perceived organizational support is narrowly linked to SET. If we consider SET, then perceived organizational support creates an obligation on the part of employees to care about the organization's welfare and to help the organization reach its objectives (Rhoades et al., 2001) through employee engagement (Saks, 2006).

- **Distributive and procedural justice**: Saks (2006) also connected it with "safety" by stating that this safety dimension must involve social situations that are predictable and consistent. : according to Saks (2006), for organizations, it is especially important to be predictable and consistent in terms of the distribution of rewards as well as the procedures used to allocate them. Distributive justice, in particular, refers to one's perception of the fairness of decision outcomes, while procedural justice, refers to the perceived fairness of the means and processes used to determine the amount and distribution of resources. For instance, in organizations, the means and procedures to allocate rewards and resources have the power of influencing the employee engagement. Based on SET, when employees have high perceptions of justice in their organization, they are more likely to feel obliged to also be fair in how they perform their roles by giving more of themselves through greater levels of engagement. This idea is also backed up by Maslach et al. (2001) who states that a lack of fairness can exacerbate burnout.

In this study, Saks extends the original explanation of antecedents by extending it and viewing it from different perspectives. This specific paper has been cited numerous times in the community and it introduces new perspectives like the SET in this master's thesis.

In the next paragraph, Shuck's interpretation on the theory of Kahn will be briefly presented and this will be the last of the authors to be dealing with ideas so close to Kahn's to, then, move on to antecedents coming from other theories.

### Shuck's antecedents

Shuck continues to go down the same path the previous authors took by, in general terms, adhering to the antecedents set by Kahn. Shuck

proposed three antecedents: job fit, affective commitment and psychological climate. They are explained below.

- **Job fit**: related to Kahn's meaningfulness, it consists in doing an evaluation of the level of match between the personal-self and their work roles. It is defined as "*the degree to which a person feels their personality and values fit with their current job*" (Shuck, 2010, p. 5). In particular, good job fit has been shown to promote a sense of belonging resulting in professional alignment with interests and values and is shown to significantly affect the development of employee engagement.

- **Affective commitment**: it emphasizes the emotional connection employees have with their work, it can be related to the conditions of meaningfulness and safety (Kahn, 1990). It is defined as "*a sense of belonging and emotional connection with one's job, organization, or both*" (Shuck, 2010, p. 6). This emotional connection is thought to be a prior condition for the development of employee engagement.

- **Psychological climate**: it is the lens employees use to understand their environment and "*captures the meaningful psychological representations made by individuals relative to structures, processes, and events that occur in organizations*" (O'Neil & Arendt, 2008, p. 355). It is defined as the perception of an organizational environment in relation to an employee's perception of well-being. Also, different researches suggested that workplace climate is an important dynamic in the development of employee engagement. Psychological climate has been operationalized as including the following: autonomy in work (James & Jones, 1974), supportive management, rewards and recognition and self-expression (Brown & Leigh,

1996). This factor draws characteristics from all of Kahn's antecedents.

These three specific variables examined unique aspects of how an employee experiences and interprets his/her work and an employee's interpretation of his/her work is thought to be related to the development of employee engagement.

In the figure below (**Fig. 2.3**), all the contributions made to the antecedents of the self-role performance theory started by Kahn are showed to clarify what has been explained.

All of the major contributions done to Kahn's antecedents have just been explained. The study will proceed by focusing on the antecedents that are related to another prominent model found in the literature: the burnout model.
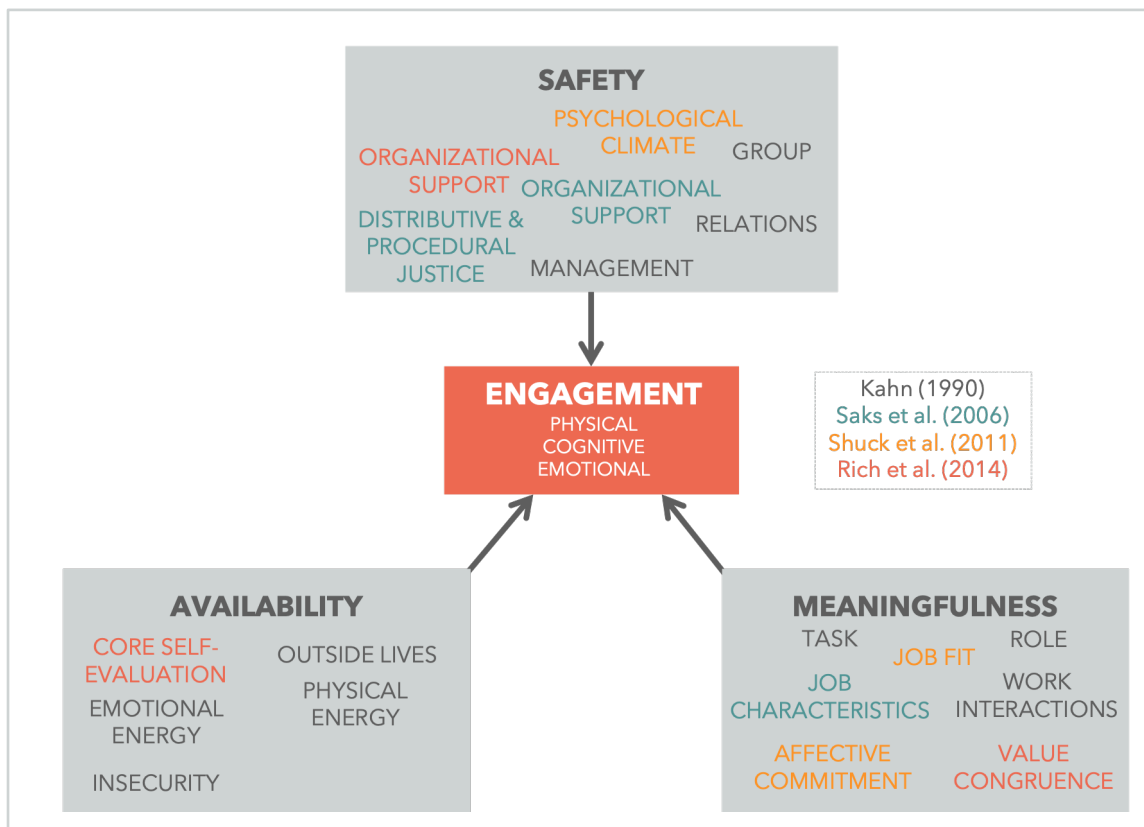


**Fig. 2. 3:** Three components of engagement theory antecedents

### Maslach's antecedents: engagement as a positive feeling theory

In the burnout-antithesis perspective, Maslach describes the characteristics that should be evaluated as drivers of burnout and, oppositely, of engagement as well. Maslach and Leiter (1997) formulated a model that focuses on the degree of match, or mismatch, between the person and six domains of his or her job environment. The greater the gap, or mismatch, between the person and the job, the greater the likelihood of burnout; conversely, the greater the match (or fit), the greater the likelihood of engagement with work. These are the six antecedent areas:

- **Workload**: it is related to the exhaustion aspect of burnout. For example, when there is a mismatch of workload it might involve excessive workload, the wrong kind of work assigned to a person because of a lack of the skills needed, too much emotional work expected (displaying emotions during work that are inconsistent with a person's feelings), etc.
- **Control**: it regards the inefficacy or reduced personal accomplishments aspect of burnout. When there's a mismatch of control, it may involve the inability to control the resources needed to perform the work or an overwhelming level of responsibility for the person.
- **Reward**: it is related with feelings of inefficacy. A mismatch may be observed when there are insufficient financial rewards, insufficient social rewards (work is ignored or unappreciated) or a lack of intrinsic rewards (pride, sense of accomplishment).
- **Community**: it has to do with losing the sense of positive connection with others in the workplace. People function best and don't feel burnout when they share the experience with others. This is because social support reaffirms a person's membership in a group through a shared sense of values. Conflict and hostility, in turn, can lead to frustration and burnout.

- **Fairness**: perceived fairness at the workplace. It may lead to burnout, for instance, if there is inequality in pay or workload, when there is cheating or when promotions are not handled properly.
- **Values**: it regards the relationship between personal and organizational values. There may be a mismatch if people feel constrained to do things that are unethical and not in accord with their own values.

This six-areas can predict engagement when there is a matching of the six areas and a job-person fit exists. Such a "matched" profile should include, for example, a sustainable workload, feelings of choice and control, appropriate recognition and reward, a supportive work community, fairness and justice, and meaningful and valued work.

Having gone over the most important pieces of work related to the antecedents of engagement, this thesis will now go over one of the most cited narrative synthesis that was done in the community. They did a thorough research to collect all the antecedents of employee engagement that had been mentioned in the literature before 2017.

On the figure placed below (**Fig. 2.4**), are summarised all the antecedents regarded in the burnout Model.
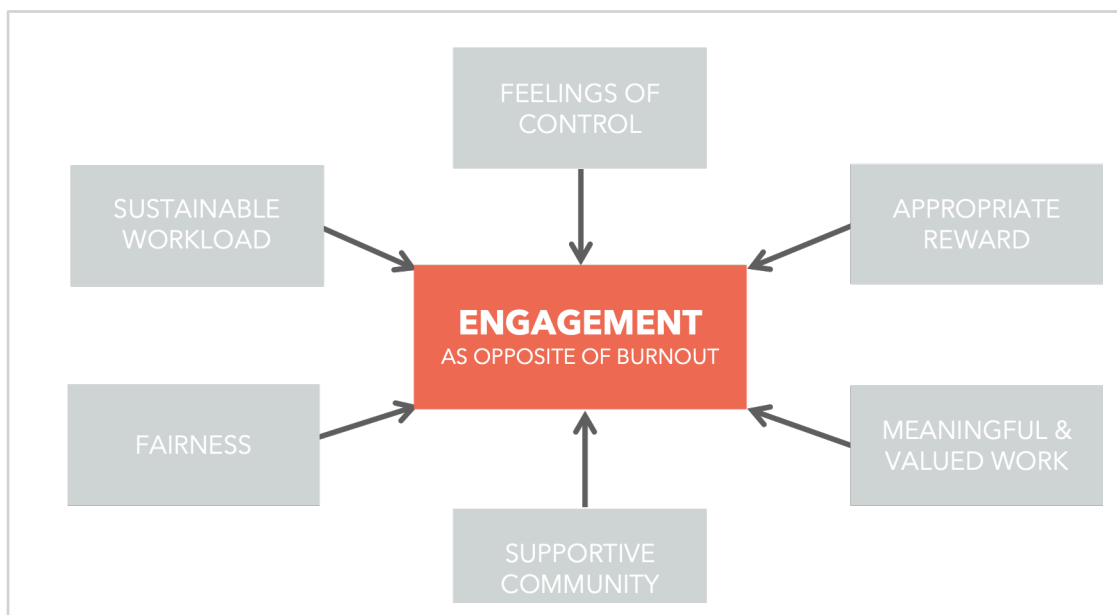


**Fig. 2. 4:** Burnout engagement theory antecedents

This section will deal with an interesting study that goes a long way in helping to put together antecedents of engagement dealt with in the literature. Bailey et al. (2017) performed a systematic review of the antecedents and classified them into five different categories. This added value to this research because they have provided antecedents that are associated to all the different conceptualizations of engagement and not circumscribed to Kahn's or Maslach's ideas.

The paper describes the following five categories of antecedents: individual psychological states, experienced job design related factors, perceived leadership and management, individual perceptions of organizational and team factors and organizational interventions or activities.

Firstly, it mentions the **individual psychological states**. Under this category, the cluster of attributes that received the most attention in the papers they reviewed was: self-efficacy, resilience and personal resources, in other words, the positive perceptions that individuals hold of their personal strength and ability (e.g. Del Libano et al. 2012; Heuven et al. 2006). Following in order of received attention, studies also determined as antecedents positive affect and optimism (e.g. Balducci et al. 2011), psychological empowerment (e.g. Mendes & Stander 2011), job satisfaction (e.g. Anaza & Rutherford 2012). Lastly, other significant antecedents found to have a lower frequency among papers and not mentioned so far were enjoyment of work, proactive personality, situational motivation, moral identity centrality, work centrality, emotion recognition, achievement striving, extraversion, authentic functioning.

Secondly, it deals with **experienced job-design-related factors**. In this category, the association between aspects of job design and engagement were examined. Once again, in order of received attention in the literature, the antecedents that came first were job

resources (e.g. Bakker et al., 2007) which included supervisory and colleague support, feedback and autonomy. The ones that followed were job control (e.g. Swanberg et al., 2011) and structural empowerment (e.g. Laschinger, 2010). At last, the ones with less frequency were: opportunities for development, job enrichment, role clarity, job quality, work intensity, schedule satisfaction, feelings of doing the job well, the joy of working and active coping.

In the third place, it brings up **perceived leadership and management**. In this category, those antecedents that correspond to aspects of leadership or management behaviour were included. Generally, these studies concluded that positive forms of leadership act as a driver. Under this category, other recurring antecedents were supervisory support (e.g. Karatepe, 2012), transformational leadership (e.g. Tims et al., 2011), trust in manager/leader (e.g. Rees et al., 2013) and authentic leadership (e.g. Wang & Hsieh, 2013). Single studies found the following antecedents: charismatic leadership, ethical leadership, and supervisory coaching.

Next, it goes along with the fourth category which is **individual perceptions of organizational and team factors**. This category covered a range of areas at the organizational level. The following were found as antecedents: organizational identification (e.g. He et al., 2013), person–organization fit, value congruence, communication, remuneration, organizational trust and voice. These factors could all be classified as forms of positive organizational behaviour.

Lastly, Bailey et al. allude to **organizational interventions or activities**. That is to say, antecedents regarding individual responses to organizational interventions, such as training and development programmes. Some interventions that came out as antecedents of engagement were new ways of working, forum theatre training and mindfulness training (e.g. Brummelhuis et al., 2012; Carter et al., 2010).

Bailey et al. put an end on the antecedent listing with all these categories and singular antecedents but, for the sake of completeness of this literature review to be able to reach the state of the art in the topic, this thesis has gone further along and managed to find other authors that have made contributions to the antecedent literature. These will be discussed in the final section of the antecedents' part of this thesis, up next.

On the graph placed below (**Fig. 2.5**), a visual aid is added to recognize the antecedents described in this holistic view.
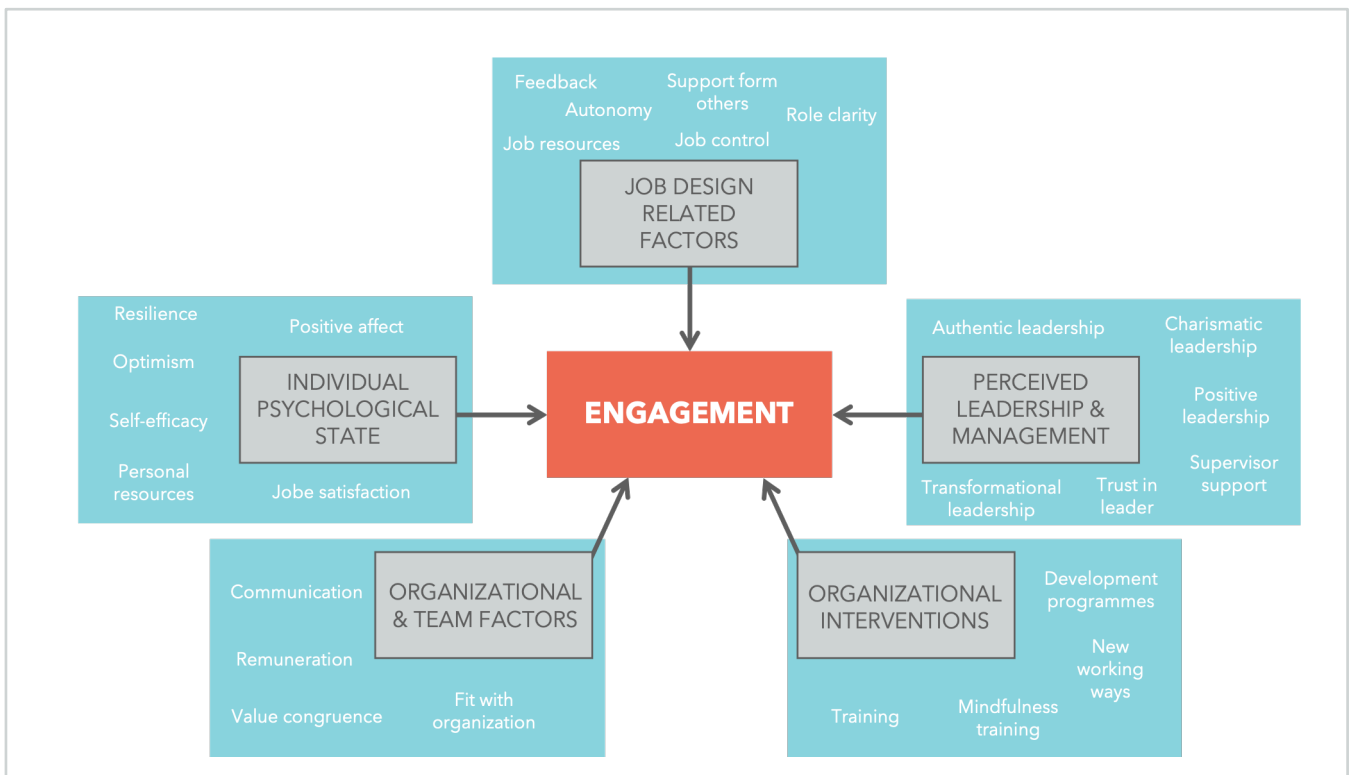
The former authors were not the only ones that tried to go deeper in the study of the engagement by analysing its antecedents and what influences them.

### Team

Firstly, Gilson L.L., Shalley C.E. (2004), investigated the theme of antecedents to engagement defining five factors as the mainly influential ones: task interdependence, attitudes toward team activities, problem solving, team climate, team characteristics and interaction and communication. As a matter of fact, Kwon (2018) too agreed on the importance of interpersonal relationships at the team-level and Bhatnagar (2012) as well, when they mentioned the satisfaction with co-workers as a factor that correlated to engagement.

### Job Resources

In second place, according to Martinez, M. (2015), the level of engagement is influenced by the characteristics of the single job and changes according to the situations. In particular, the task should be challenging, clearly delineated, yet varied, creative and somewhat autonomous.

Actually, when dealing with the characteristics of the job as an antecedent, we could extend this notion to also include a number of studies in the literature that can be grouped under the umbrella of "job resources". These resources stimulate personal growth, learning and development and positive state of work engagement.
For example, Bakker et al. (2010) found that autonomy, social support, performance feedback and organizational climate are predictors of employee engagement.

In addition, Hakanen (2008) explained that job resources also englobed organization-based self-esteem (Mauno et. al, 2007), task

resources (time and method control) (Schaufeli, 2007), craftsmanship, pride in the profession and direct and long-term results of the job.

## Personal resources

Thirdly, various authors focused on intrinsic or personal characteristics as antecedents. One of the authors describes them as Psychological capital or personal resources. Bakker et al. (2010) mentions aspects that describe those who are more prone to engage in work: self-efficacy, resilience, optimism and hope, organizational self-esteem.

This personal resources' path was followed by other authors as well. For instance, in "The Quality of Working Life", Worrall and Cooper (2012) claim that intrinsic factors are more critical than extrinsic ones when analysing the impact on employee engagement. They go on to list the most relevant antecedents by mentioning sense of achievement, sense of feeling part of a team, relationship with manager and prospects for career enhancement.

In 2012, Kumar and Kumar Sia, added content to the description of intrinsic antecedents by presenting the following personal factors: competence, coping strategies and repeating the previously mentioned feelings of personal accomplishment.

After that, Gomes, in 2014 found a new personal antecedent he called self-leadership. It involves a set of behavioural, cognitive and emotional self-regulatory strategies that are effective in many environments and have a positive correlation with engagement.

Similarly to these other studies, Yi and Uddin (2019) affirmed that engaged employees are required to be challenge takers, intrinsically motivated and have a proactive (Liu and Shi, 2014), extroverted behaviour (Kim and Hon, 2010).

## Management Practices

In fourth place, following those who claimed engagement is a management practise, there are studies that found perceived human resource management (HRM) practices and perceived line manager behaviour as positive drivers of engagement (Alfes, 2013).

On the one hand, high-performance HRM practices are focused on employee skills, including selective recruitment; motivation, including practices as performance-based rewards; and empowerment, including participation mechanisms (Snape & Redman, 2010).

While, on the other hand, perceived line manager behaviour is associated with an effective interpersonal relationship with the manager that should involve open communication, support provision, feedback and the sharing of information (Settoon et al., 1996).

Other authors dealing with practices were Bhatnagar (2012) and Kwon (2018). The first claimed that certain workplace behavioural health practices could improve the levels of engagement and listed some examples: supervisory communication, resource support and working conditions. The latter, in turn, proposed other Human resources practices that acted as stimuli for employee engagement. These were: empowerment, competence development, information sharing, recognition, fair reward (Maden, 2015); selective staffing, job security, and career opportunities (Karatepe & Olugbade, 2016).

## Leadership

Then, the literature review came across Yi and Uddin (2019) who essentially mentioned transformational leadership in the organizational sphere as an antecedent. They explain this antecedent by saying it included leadership morale, the offering of supervisory support (Zhang & Bartol, 2010) as well as displaying a shared vision and personalized behaviour towards each employee (Uddin & Rahman, 2017). In this way, it exhibits faith in employees' abilities allowing them to engage.

This was not the only referral towards leadership in the literature. Actually, Kwon (2018) affirmed that leadership styles that bring trust towards supervisors such as inclusive or charismatic styles of leadership also lead to engagement.

From this large set of antecedent examples, it became clear just how wide the topic and the range of antecedents is to this day. It also became evident that there is a huge number of factors that can cover this role of driving engagement included in the literature and they are significantly variety found among them.

To clarify the literature review and to create the possibility to clearly analyse and identify them, it become necessary to classify of all the antecedents found in the literature. In particular, the main important classification that result necessary to made, according to the purpose of this research, is the division between organizational factors and individual factors. In order to develop the conceptual framework, the systematic categorization of all the antecedents will be conducted in the next chapter.
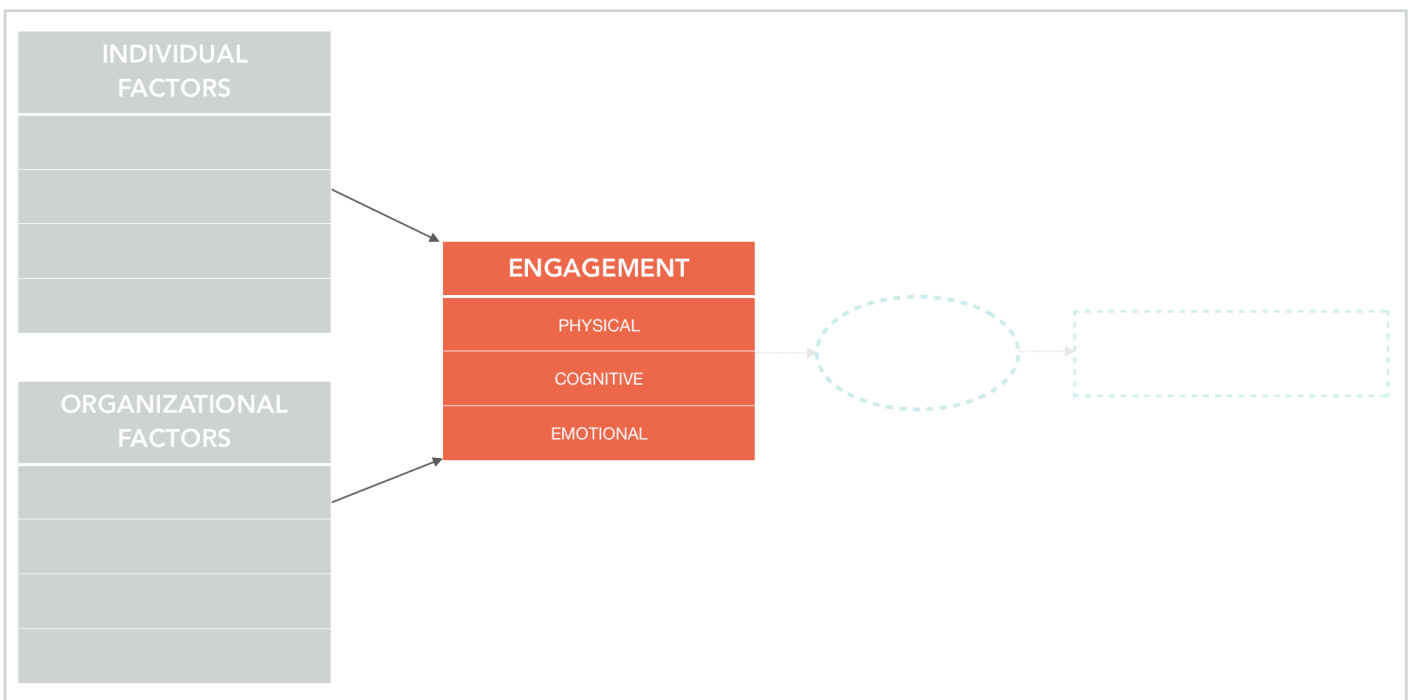


**Fig. 2. 5:** Antecedents of engagement

# Engagement as a trigger for innovation

As previously explained, engagement could be considered as *"the behaviours by which people bring in their personal selves during work role performance"* (Khan, 1990, p. 694). According to Khan (1990), when people are engaged, they employ and express themselves physically, cognitively and emotionally during role performances. Personal engagement represents the expression of the "preferred self" of a person in task behaviours. This allows the person to connect to work, to connect with others and, consequently, enhance people's motivation and sense of meaning during their workday.

In this section, the thesis will move on to describe what happens after individuals are engaged, what is the outcome of this engagement that has already been described. It will be explained how engagement has a positive effect on the innovative behaviour on individuals and, therefore, on innovation in companies. Further, in this section, the reader will come to discover that creativity acts as a mediator between Engagement and Innovation. The chain will move from Engagement to its effect on creativity, which will ultimately lead to Innovation.

Firstly, engagement's general impact on Innovation will be explained referring to different author that have found this correlation to be true. In these studies there are signs of creativity being a middleman between the two concepts. This is why, consequently, creativity will be defined with the purpose of contextualizing the reader with the concept. Later, its relationship with Engagement as well as with Innovation will be explored.

In this initial part of the section, this thesis will go over some of the studies that have posed a relationship directly between engagement and innovation. In this way, the thesis and the focus on engagement becomes relevant by showing its later effect on innovation which is the main struggle of practitioners today and the original motivation behind this entire study.

In the successive parts, the thesis will also go over the compelling evidence that states that creativity acts as a middleman in this relationship. In fact, parts of the literature to be described in this section have also made an allusion to creativity in their models. However, for the sake of clarity, in the beginning the general effect of Engagement on Innovation will be explained and then there will be place for the particulars.

As a starting point, Hakanen et al. (2008) can be mentioned. They claimed that work engagement has a positive impact on personal initiative which, at the same time, leads to work innovativeness. Personal initiative is described as an active and initiative-taking behaviour that goes beyond the formal requirements at work. This offers striking similarities with some of the descriptions of engagement already described in this thesis. In fact, that is why Schaufeli and his colleagues (2001) found engaged employees to be especially prone to take personal initiative in work endeavours. The study then recalls that personal initiative has been positively associated with individual innovative behaviour (Miron et al., 2004; Ohly et al., 2006), and innovative organizational culture (Miron et al., 2004) making the final link to get from engagement to innovation.

In the same study, creativity is tangentially mentioned by claiming that it works along-side personal initiative to reach novel solutions but does not include it in the model as a major factor. They also referred to positive emotions, which are felt by employees when they are engaged,

saying that it may help in creative problem solving (Isen, et al., 1987) and lead to personal initiative with time.

Moving further along this section, Bakker et al. (2010) can be brought up. They studied how thriving at work was related to work engagement and innovation. Thriving is considered to be a feeling of moving forward or improving in one's self-development and people who thrive usually experience high levels of vigour similarly to engaged employees. They referred to thriving as being a positive antecedent of extra role job performance (Porath et al., 2008) as well as to innovative behaviour (Carmeli & Spreitzer, 2008).

Another study mentions this relationship by saying employees need to be able to lead themselves to innovate so that innovation takes place (Carmeli et al., 2006; Curral and Marques-Quinteiro, 2009) and this is done through self-leadership. At the same time, self-leadership has long been associated with engagement. In addition, Aryee et al. (2012) also found that work engagement was positively related to individual innovation.

Similarly, Slåtten (2009) showed in the findings of the paper that employee engagement is closely linked to employees' innovative behaviour. They also added that managers must be aware of engagement being the main driver of innovation. He argued that when individuals experience high levels of intrinsic motivation and, therefore, are excited about a work activity and engage in it for the sake of the activity itself, they are likely to be more creative and, thus, innovative. "*Our research has empirically demonstrated the effect of employee engagement on innovative behaviour*" (Slåtten & Mehmetoglu, 2011, p. 64).

Finally, in Kwon et al. (2019), their model also includes employee engagement as a clear source of innovative behaviour in the

They claim that engaged employees are more likely to behave innovatively because they are in possession and are able to use coping strategies to be able to tackle the problems that arise throughout the process. Further, due to the synergy of cognitive, emotional, and physical energies, employee engagement is expected to fuel innovative behaviour (Hakanen et al., 2008).

To open a road towards the next paragraphs, a new concept can be brought up that was developed recently which is creative engagement and was associated to innovative outcomes. This is to pose just how closely related the concepts explained in this section are. Yi et al. (2019) united engagement and creativity into one concept and coined the term "*creative process engagement*". They affirm that in creative process engagement, employees engage, expose, and express themselves cognitively, emotionally, physically, and behaviourally in their workplace, similarly to what happens in engagement. They claim that this state can accelerate creative efforts and they went on to pursue this study to try and associate it with sustainable innovative work behaviour because they had seen that the literature gave hints of this relationship, as well as saying that this creative process engagement was the primary input to innovative outcomes.

To complement this last opening on creativity, engagement and innovation. It is important to distinguish creativity from innovation. Creativity refers to the development of novel, potentially useful ideas. Although employees might share these ideas with others, only when these ideas are successfully implemented at the organization or unit level will they be considered innovation (Amabile, 1996; Mumford & Gustafson, 1988). Therefore, creativity might best be conceptualized as a first step that is necessary for subsequent innovation (West & Farr, 1990).

Now that the general idea has been exposed, it is safe to move on to the particulars. By the particulars, it is meant to make referral to the intermediator that acts, according to various authors, in between Engagement and Innovation. With this purpose, this thesis will now explain Engagement's effect on creativity and the latter's effect on Innovation to go full circle in the understanding of Engagement and Innovation.

In a first moment, the creativity definition will be offered to familiarize with the new actor involved since it has not yet been discussed in this literature review. Then, the discussion will focus on the effect of Engagement on creativity and finally, the relationship with Innovation (this thesis' main motivation).

### CREATIVITY DEFINITION

Before analysing the connections, it is important to clearly understand the concept of creativity.

Creativity can be defined as the "*production of novel and useful ideas by all individual or small group of individuals working together*" (Amabile, 1988, p. 126). Later, Csikszentmihalyi (2002), argued that a solution is regarded as creative if it goes beyond the previously existing solutions in the domain. Creativity can also be positively influenced by different factors. According to Slåtten (2009), creativity is a function of the employee's personal characteristics, the characteristics of the context in which they work and also the interactions among these characteristics. The argument that personal and contextual characteristics interact with one another essentially asserts that certain contexts "match" individuals' personal characteristics and that this match results in higher levels of employee creativity. This framework is derived from earlier theory on creativity that has emphasized the importance of person-context interactions (e.g., Amabile, 1996; Woodman et al., 1993), and from the broader

literature on person-environment fit (e.g., Kristof, 1996; Schneider, 1987).

Finally, in recent years, creativity was defined by Martinez (2015) as *"the production of new and useful ideas"* (Amabile, 1996; Oldham, 2002) (p. 1420).

Analysing the literature over the last few years, many researchers were found to theorize about the positive influence of employees' engagement on individual creativity.

Once again in this case, Kahn was one of the first who addressed the topic. According to Kahn (1990), when people are engaged in what they are doing they become able to display themselves. They can show what they think, their feelings, values, personal connection to others and their creativity.

This means that engagement of individuals can impact on their creativity: it encourages them to create new ideas, think outside of the box and share their thoughts with the other team members.

Kahn was one of the first to assert this connection between engagement and creativity. Already in 1988, Amabile had started to look at the topic after an analysis on how individual creativity is able to influence innovation in organizations. In her papers, she argued that the individuals who would most probably produce creative work were those who were qualified, personally curious about the task and challenged by it. Not, instead, those who were also qualified but not so motivated.

Nowadays, the topic seems to keep growing in relevance every day.

In 2004 Gilson and Shalley suggested that creativity emerges when individuals are engaged in what they are doing. Moreover, creativity is enhanced in an environment which is comfortable, psychologically unthreatening, where there is a high demand for creativity and high

task interdependence. These factors are like those found in the engagement antecedents.

Furthermore, according to Slåtten (2009) openness to experience, which is a feeling usually favoured by engagement (Kahn 1990), is positively related to creativity across a variety of domains.
In 2012, Oldham and Baer affirmed that creativity is enhanced when workers are fully engaged. Then, Bakker et al. (2010) showed there was a positive relationship between work engagement and performance outcomes, such as creativity.

More recently, Martinez (2015) discovered that *"the more intensively and persistently engagement energies are applied, the higher the creativity of contributions"* (p. 1420). This means that fully engaged employees will deliver more creative solutions. Furthermore, Martinez (2015) states engagement is a concept that reflects human agency (Rich et al., 2010). As such, it is adequate to concentrate on outcomes that are largely under an individual's volitional control, such as innovativeness and creativity. In this context, creativity is often assumed to emerge when individuals feel motivated to carry out their tasks (Gilson & Shalley, 2004). Results of the Martinez (2015) study revealed that emotional and cognitive engagement were positively related to creativity. The greater the contestants' psychological involvement when performing competition tasks, the higher the creativity of their solutions. This means that employees that are more emotionally connected with the competition, pay more attention to the task involved and are more creative.
Lastly, a study showed how engagement affects creativity at the workplace. In Krueger and Killham (2007), 66% of engaged workers agreed with stating that their job brought out their most creative ideas while only 3% of actively disengaged employees did.

**But how can engagement foster creativity?**

There is another group of researchers who have explained the connection between engagement and creativity starting from the definition of engagement as a positive feeling. As previously explained, some research focuses on engagement as a positive state of mind (at times as antithesis to burnout).

On this, Cropanzano and Wright (2001) said researchers and practitioners used to defend the happy productive worker theory claiming happy employees exhibit higher levels of job performance behaviours than unhappy employees do. This means engaged people display a positive state of mind that impacts their job performance. They also said happy people had more stock of a valuable resource. So, at work, they could afford to take risks that might increase their supply of happiness. For this reason, happy people are more outgoing, helpful, optimistic, confident and sensitive to opportunities that come up at work.

Further into the topic, Schaufeli et al. (2002) researched on engagement and its characteristic feelings. These were sense of energy, effective connection with work and perception of being able to deal with the job's demands. They also defined engagement "*as a positive […] state of mind […]*" (p.74).

Schaufeli made a comparison analysis based on: Activation and Identification. On the one hand, burnout is characterized by low activation (exhaustion) and low identification (cynicism), whereas engagement is characterized by high activation (vigour) and high identification (dedication). Hence, "*engagement is defined as a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication and absorption*" Schaufeli et al. (2002, p. 74).

Also, Slåtten and Mehmetoglu (2011) linked engagement with positive emotions. They noticed engaged employees have high levels of energy and are enthusiastic about work and developed a new idea. They

claimed positive emotional states in engagement stimulate innovative behaviour and associated positive emotions with creativity.

Related to that, Wright (2006), explained *"the positive feelings associated with "joy" create the urge to play, to think outside the box, to be creative"* (p. 33). Positive feelings expand thoughts and actions that come to mind. So, engaged employees' characteristic positive state of mind(Maslach et al., 2001; Schaufeli et al., 2002) brings creativity. Similarly, Hennessey and Amabile in 2010 explained that positive affect is more conducive to creativity than negative affect is.

## CREATIVITY AND INNOVATION

Once the link to creativity becomes clear, the research now explains the connection between creativity and innovation. This reflects the primary scope of the thesis which is to understand how to foster employees' innovative behaviour through engagement, in order to create an innovative ecosystem inside organizations.

The connection between engagement and creativity as well as innovation were studied following separate paths. De Hong and Den Hartog (2010) explained some studies included generation and implementation of ideas as measures of individuals' innovative behaviour (e.g., Van de Ven, 1986; Scott & Bruce, 1994). Going back, Van de Ven (1986) argued that the *"foundation of innovation ideas is creativity"* (p. 591).

Later, Amabile (1988), defined organizational innovation as *"the successful implementation of creative ideas within an organization"* (p. 126). Amabile explored how individual creativity, which is the *"production of novel and useful ideas by all individual or small group of individuals working together" (p.126)*, impacts on organizational innovation. She stated *"individual creativity is the most crucial element of organizational innovation but is not by itself sufficient"* (p.126).

In the early 2000's, different researchers went deeper into the topic. Gilson, Shalley (2004) claimed creative processes could enhance the

potential for creative and innovative outcomes. On the same line of thinking, Slåtten (2009) explained that employee creativity can substantially contribute to organizational innovation, effectiveness and survival (Amabile, 1996; Nonaka, 1991). They also claimed that when employees exhibit creativity at work, they produce novel, potentially useful ideas about organizational products, practices, services or procedures.

Later, in 2010, De Hong and Den Hartog distinguished creativity from innovation defining the first as the process of "*explore and generate ideas*" and the second one as the "*championing and implementation of ideas*". At the same time, they also argued that individuals need both creativity and innovation as a prerequisite to display an innovative work behaviour. They also said innovative work behaviour is the "*individuals' behaviour that aims to achieve the initiation and intentional introduction of new and useful ideas, processes, products or procedures*" (p.5). Innovative work behaviour enhances organizations' innovative abilities and results.

Also, according to Martinez (2015) creativity represents the starting point of innovation.

Finally, Gomes et al. (2015) claimed innovation can be defined as the intentional introduction and application within one's role, of new and useful ideas. These ideas would have to promote the effective development of significant products or procedures that are relevant and designed to considerably benefit the individual, group, organisation or the wider society (Farr & Ford, 1990). In practice, individual innovation begins with the recognition of a problem and the generation of solutions or ideas (Scott & Bruce, 1994). Creativity occurs when ideation does, that is when individuals are required to develop ideas and in implementation, when it's time to apply them. Subsequently, the innovation is adapted to the organisational circumstances and stabilised. When this happens, there is less need for

creativity (West et al., 2006). They also defined creativity as a key component of the innovation process and argued firms need creative employees to initiate organizational innovation.

Also in this case, the relations explained in this last paragraph are presented through a figure to be better understood by the reader (**Fig. 2.6**).

Thanks to this last connection it is possible to almost complete the conceptual framework of the research. In the next chapter the research will go deeper in the explanation of the research framework analysing all its components.
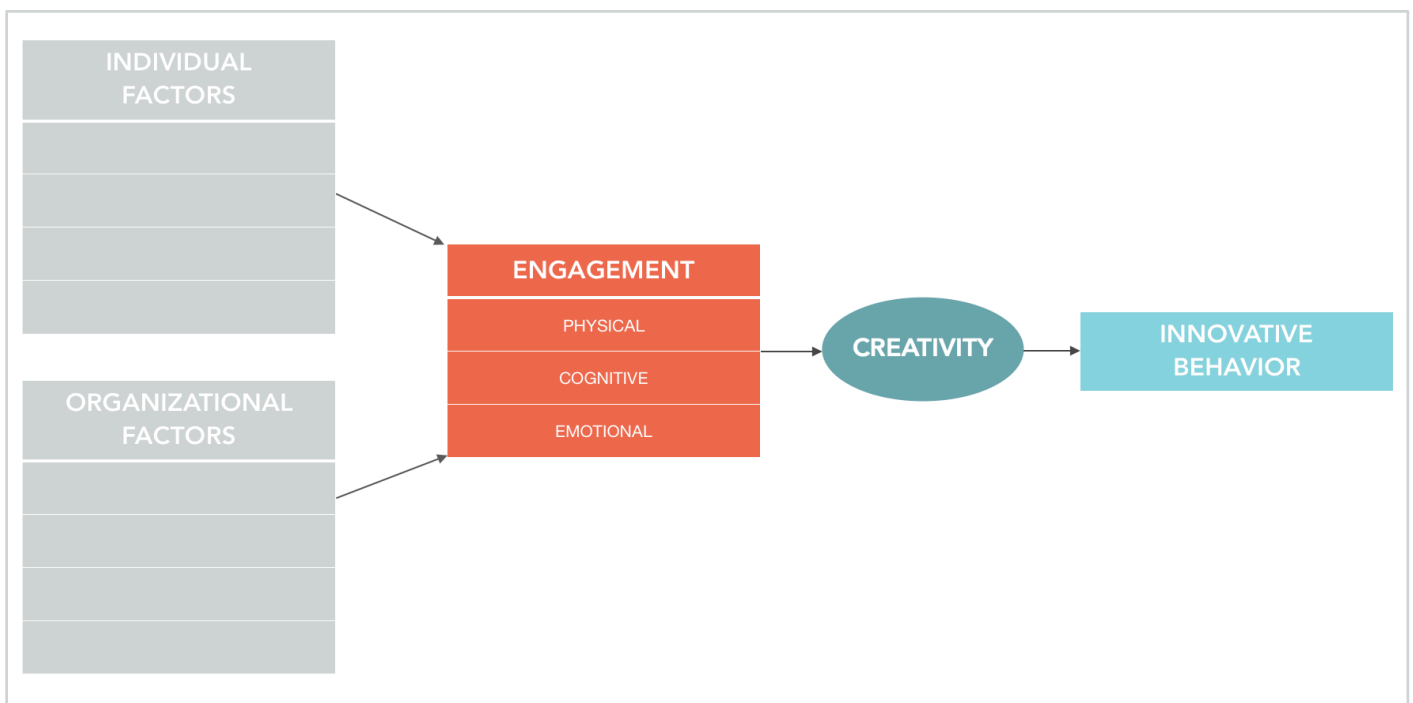


**Fig. 2. 6:** From antecedents to innovative behaviour

# CONCEPTUAL FRAMEWORK AND RESEARCH GAP

**This section of the thesis aims to define the conceptual framework of the research, starting from the theories and the beliefs analysed during the literature review. After that, this chapter will tackle the research gap and the related research question. The next steps of the thesis will focus on the validation of the built conceptual framework and, through that, on the research of an answer for the research question.**

# 3.1
# Conceptual framework

According to Maxwell (2008) *"the conceptual framework of your study is the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs your research"* (p. 222). In this sense, the conceptual framework represents what is going on with the studied phenomena in a simplified way. It is important for helping researchers in assessing the scope of the research and develop and select realistic and relevant research questions (Maxwell, 2008). Particularly in the present case, the conceptual framework became something with an impressive importance. This because, despite the large number of papers on the topic of employee engagement and about the correlation between engagement and innovation, there is not a clear framework that deeply examines this connection. Similarly, even though many researchers investigated on the antecedents of employee engagement, it is difficult to find a clear classification of them, while, usually, each author takes into account just those in which they are interested in or those which act in the observed context.

Thanks to the literature review made in the last chapter and thanks to the experience of the researchers, it was possible to develop the following conceptual framework (**Fig. 3.1**).



**Fig. 3. 1:** Conceptual Framework

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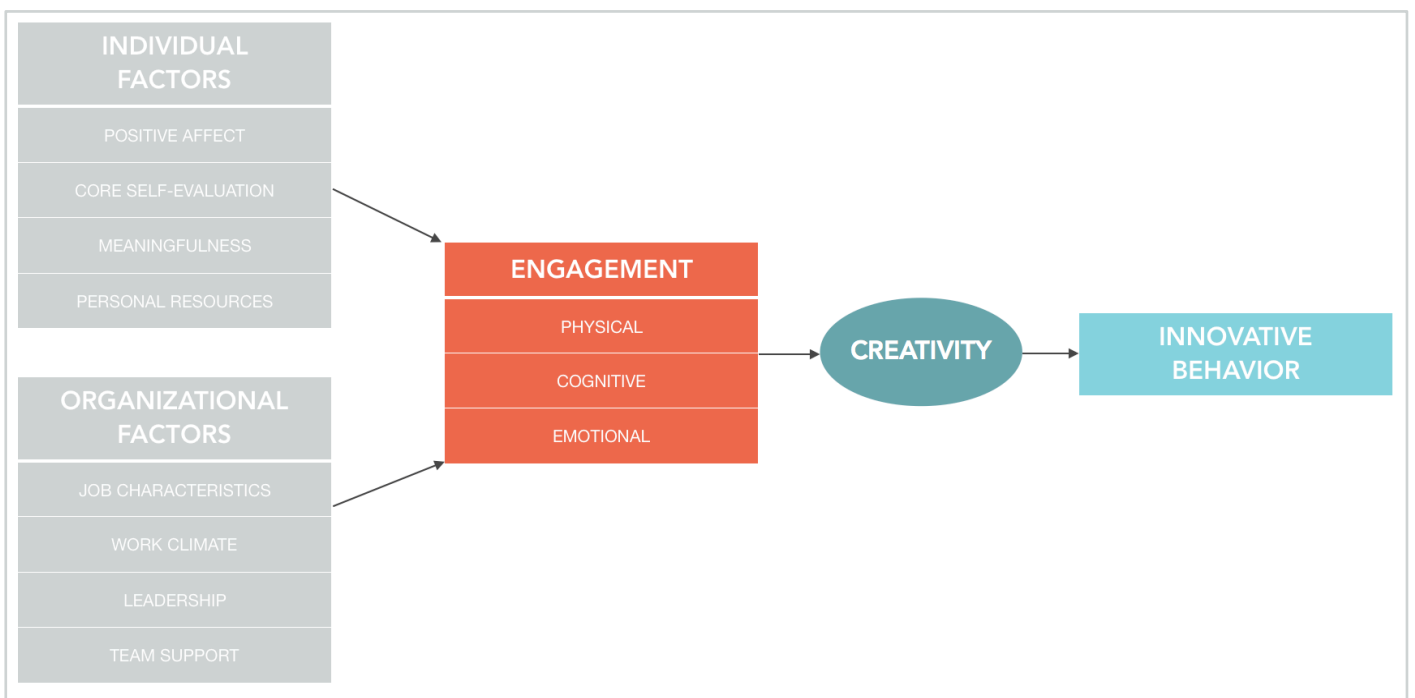
The framework is composed by four main section:

1. **Antecedents of engagement**
2. **Types of engagement**
3. **Engagement as a trigger of creativity**
4. **From creativity to innovative behaviour**

Each section of the framework refers to the main building blocks of the overall process leading individuals to innovative behaviours.

As it can be seen in figure (**Fig. 3.1**) the starting point of the framework are the antecedents. They impact on the level of engagement of an individual. In particular, if there are some specific characteristics of the individual or/and of the work that they are performing, individuals become more inclined to be engaged. Once engaged, an individual becomes more inclined to be creative. Engagement it-self, defined as a positive state of mind, fosters individuals to be more open minded, to think out of the box, to be more sensible to new opportunities and therefore to be more creative. In spite of this, creativity is not exactly a synonym of innovation. As many studies have demonstrated, it is for sure a fundamental part of the innovative process and takes place at least as a first step in the process. Due to that, it is possible to conclude that engaged people are more likely to experience innovative behaviours.

All those three sections of the conceptual framework, have been already analysed and explained in the literature review chapter, going through all the past research and studies on the topics but now they will be considered separately focusing also on the connection between them.

This first part of the framework (**Fig. 3.2**) reflects one of the main scopes of this research: trying to understand how to engage people in innovation. In order to do that, it was decided to focus on all those factors that bring individuals to feel engaged in what they are doing. To this end, the section aims to go deeper in the identification and analysis of all those factors that we called engagement antecedents.

As we saw in the literature review, many researchers tried to explore the topic regarding the antecedents of engagement. Despite the wide number of studies on the issue, it was difficult to find a clear classification of all those factors that act as enablers of engagement.

Due to that, after the analysis made in the previous chapter, as anticipated, it was decided to classify all the engagement's antecedents in order to have a clearer and global overview of them. This will help in the identification of those factors on which it is important to focus and to act when trying to engage people.



**Fig. 3. 2:** Conceptual Framework: antecedents of engagement

First of all, all the antecedents discovered during the literature analysis were classified in two main categories: individual factors and organizational factors.

- In the category of **individual factors**, it is possible to classify all those antecedents related to the single individual and to their personal characteristics. All these factors are not exogenous, they are not something external to individuals, but deal with the personality of individuals, how they respond or answer to what happens in their environment, how they see themselves.

- In the category of **organizational factors**, it is possible to classify all those antecedents related to the organization. They usually depend on extrinsic factors, that the individual cannot control, related to the environment in which people are performing their job. All these factors are external and do not refer to the single individual's characteristics.

After that, the study went deeper in the topic looking for some sub-categories. In particular, it was possible to identify four different sub-categories for each group of antecedents (individual and organizational). Therefore, individual factors were further divided into:

1. **Positive affect**
2. **Core-self evaluation**
3. **Meaningfulness**
4. **Personal resources**

The category of **positive affect** is strongly related to all those theories describing engagement as a positive feeling. In particular, they refer to the fact that having and feeling positive emotions about the task that is being performed, would bring a person to be more engaged in that.

ANTECEDENTS OF ENGAGEMENT

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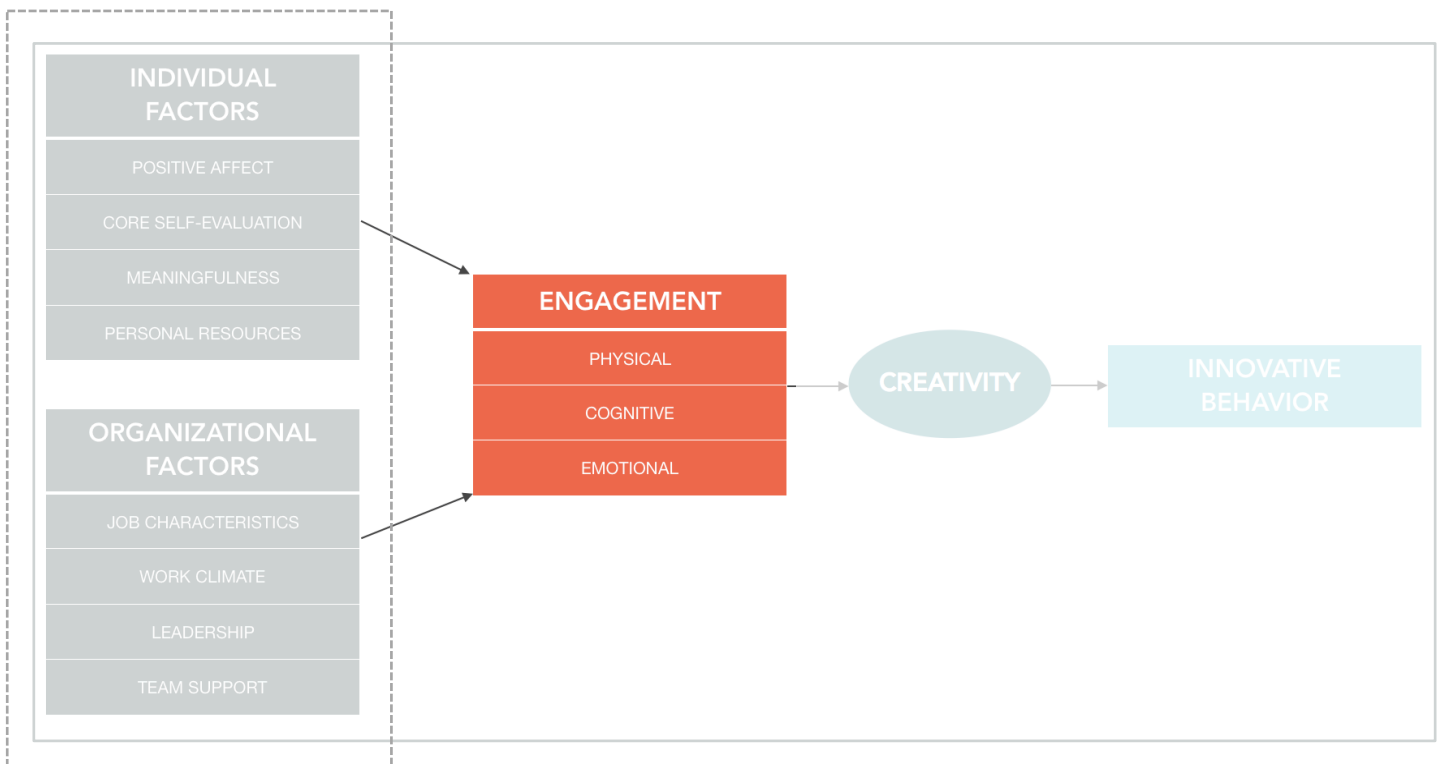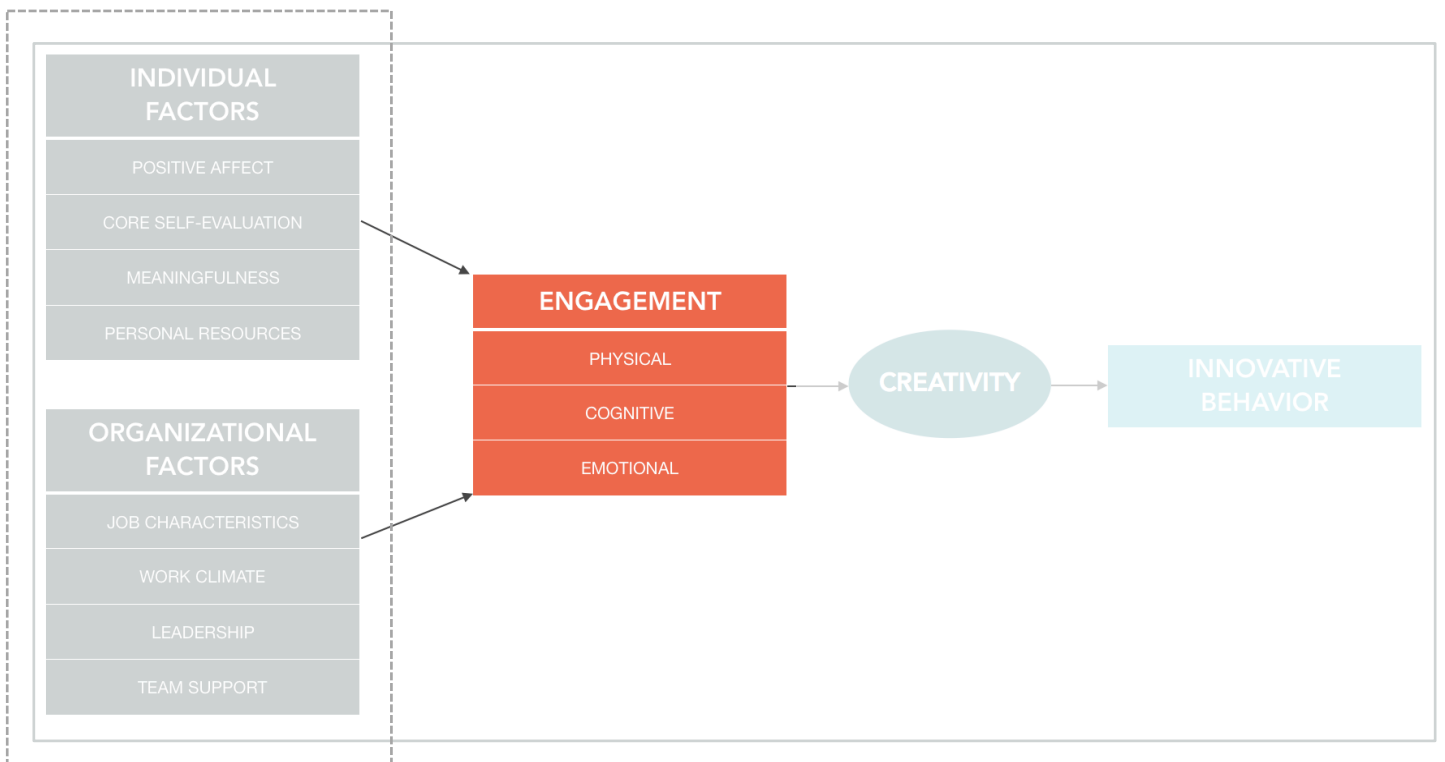


**Fig. 3. 2:** Conceptual Framework: antecedents of engagement

Under this category, there fall all those positive emotions such as joy, energy, enjoyment, enthusiasm, but also curiosity, optimism, etc.

The factors grouped under **core self-evaluation** are related to the emotion of feeling confident about yourself, your knowledge, your skills and your emotions. They regard the sentiment of feeling good in what you are doing. This is because, usually, when you feel that you are good in the task that you are performing you will feel more engaged in it. Factors of this category are also related to the sentiment of feeling confident to take risks and to experiment without fear. This aspect of not being scared about new things and new experiences, appeared to be essential to become engaged in the performed task. Falling under this category there are sentiments such as pride, self-esteem, emotional intelligence, self-awareness, etc.

**Meaningfulness** refers to the importance for you or for others of what you are doing. In order to be engaged, it is important to perceive that you have a purpose and to feel motivated by it, independently if it regards you or others. In this category it is possible to find factors such as feeling challenged, feel motivated, personal accomplishment, etc.

Finally, **personal resources** are all those psychological aspects of oneself that stimulate growth, learning, and development. Examples of that are: extraversion, responsibility, vigour, etc.

| POSITIVE AFFECT | CORE SELF-EVALUATION | MEANINGFULNESS | PERSONAL RESOURCES |
|---|---|---|---|
| Hope | Self confident | Meaningfulness in task, role and work | Extraversion |
| Job satisfaction | Self efficacious | Values | Moral identity centrality |
| Proactive behaviour | Organizational self esteem | Meaningful and Valuable work | Work centrality |
| Extroverted behaviour | Organization based self esteem | Person-organization fit | Active coping |
| Positive attitudes toward team activities | Self perceptions of confidence and self-consciousness | Value congruence | Individual psychological states |
| Joy of working | Self leadership | Situational motivation | Resilience |
| Positive | Coping strategies | Task significance | Competence |
| Optimism | Self efficacy | Achievement striving | Psychological empowerment |
| Enjoyment of work | Emotion recognition | Challenging jobs | Affective commitment |
| Proactive personality | Availability (psychological availability, personal factors, security) | Authentic functioning | |
| Sense of achievement | Self confident | Self expression | |
| Energy | Self efficacious | Problem solving personality | |
| | | Direct and long term results of the j | |
| | | Challenge taking personality | |
| | | Intrinsically motivated | |
| | | Job Fi | |
| | | Challenging jobs | |

**Tab. 3. 1:** Sub-categories of individual factors

In the table above (Tab. 3.1) antecedents are classified, according to these four sub-categories. It includes all the antecedents found in the literature that can be considered as individual factors.

On the other hand, organizational factors have been divided into:

- **Job characteristics**
- **Work climate**
- **Leadership**
- **Team support**

In the first category, **job characteristics**, it is possible to find all those factors related to the kind of job that is being performed. Depending on the characteristics of the task an individual could be more or less engaged. In particular, employees who have a value congruence with their job tasks are more apt to invest energies and personal resources in what they are doing. Job characteristics that positively influence employee engagement are: autonomy, task variety, feedback, reward, etc.

All those aspects regarding the **work climate** fall under the second category. The atmosphere that characterises the context in which individuals have to work can directly influence their level of engagement. In particular, if you feel that the situation is trustworthy, secure, predictable, and clear, you are more willing to invest yourself in what you are doing (concept of safety in Kahn's studies). In order to be considered "safe", a work environment should be characterized by: fairness, transparency, affective commitment, etc.

Another important aspect that could impact on the level of engagement experienced by an individual is the **leadership** that they experienced when performing the job. In order to guarantee a potential high level of engagement in their employees, leaders should

connect with them and gain their trust through clear communication, fairness and coaching. In order to do that, leadership should be clear, fair, empower, transformational, empathic, etc.

Finally, an essential factor for engagement is the **team support**. The team is important, employees should feel comfortable with their co-workers and establish positive relations with them. In order to make employees engaged in their work the team should be characterised by: positive relations, support, collaboration, etc.

In the table below (**Tab. 3.2**) the antecedents found in the literature are classified.

| JOB CHARACTERISTICS | WORK CLIMATE | LEATERSHIP | TEAM SUPPORT |
| --- | --- | --- | --- |
| Task time and method control | Organizational identification | Relationship with manager | Team |
| Work characteristics and conditions (task, role and work) | Psychological climate | Supervisory communication | Colleague support |
| Skill variety | Equality | Perceived line manager behaviour | Supportive work community |
| Autonomy | Organizational trust | Positive forms of leadership | Social support |
| Feedback | Positive organizational behaviour | Supervisory support | Shared sense of values with team |
| Job enrichment | Organizational interventions or activities | Sharing information | Support from colleagues |
| Sustainable Workload | Fairness and justice | Effective interpersonal relationship with manager | Team climate |
| Feelings of choice and Control over the work situation | Development programmes | Supervisory support | Team characteristics |
| -Experienced job design related factors | New ways of working | Supportive management | Interaction |
| Task interdependence | Forum theatre training | Perceived leadership and management | Communication |
| Job control | Mindfulness training | Transformational leadership | Interpersonal relationships |
| Schedule satisfaction | Opportunities for development | Trust in manager/ leader | Satisfaction with coworkers |
| Role clarity | Procedural Justice | Authentic leadership | Social support |
| Job quality | Means and procedures to allocate rewards and resources | Charismatic leadership | Sense of feeling part of a team. |
| Work intensity | Perceived organizational support | Ethical leadership | Team |
| Experienced job design related factors | Safety (environmental dynamics, relationships, organizational norms) | Supervisory coaching | Colleague support |

**Tab. 3. 2:** Sub-categories of organizational factors

This section of the framework mainly refers to the theory of self-role performances (Khan). As seen in the literature review, according to Kahn (1990) employee engagement can be expressed in three different ways: physically, cognitively and emotionally.

This means that when people become engaged in the work that they are performing, they become "*physically involved in tasks, whether alone or with others, cognitively vigilant and empathically connected to others*" (Kahn, 1990, p. 700).

As many other previous studies, also this research completely agrees with this employee engagement definition of Kahn. This conceptual framework and, in particular, its red central section, is the clear representation of that.

During the next chapters of this thesis, employee engagement will be considered separated into its three components. Differently from other research, in this study, the different expressions of employee engagement will be considered and analysed separately. Specifically, the following chapters will mainly focus on cognitive engagement and emotional engagement. This is due to different reasons. Firstly, according to the literature review, and then, to the tests made, it would seem reliable to assume that individual antecedents of employee engagement, mainly impact on cognitive and emotional engagement.

According to that, since, as explained, the thesis will mainly focus on individual antecedents, it became necessary to go deeper in the analysis of cognitive and emotional engagement rather than of physical engagement.

At the same time, due to the way in which it was decided to perform the tests, it resulted difficult to explore the area of the physical engagement that usually is more related to external factors not directly controlled by individuals.

The decision to focus mainly on individual antecedents has proved to be reasonable also after the literature review and the development of the conceptual framework. According to what was discovered, it seems clear that organizational antecedents were deeply studied during the last past years, while research about individual antecedents needs further developments and explorations.
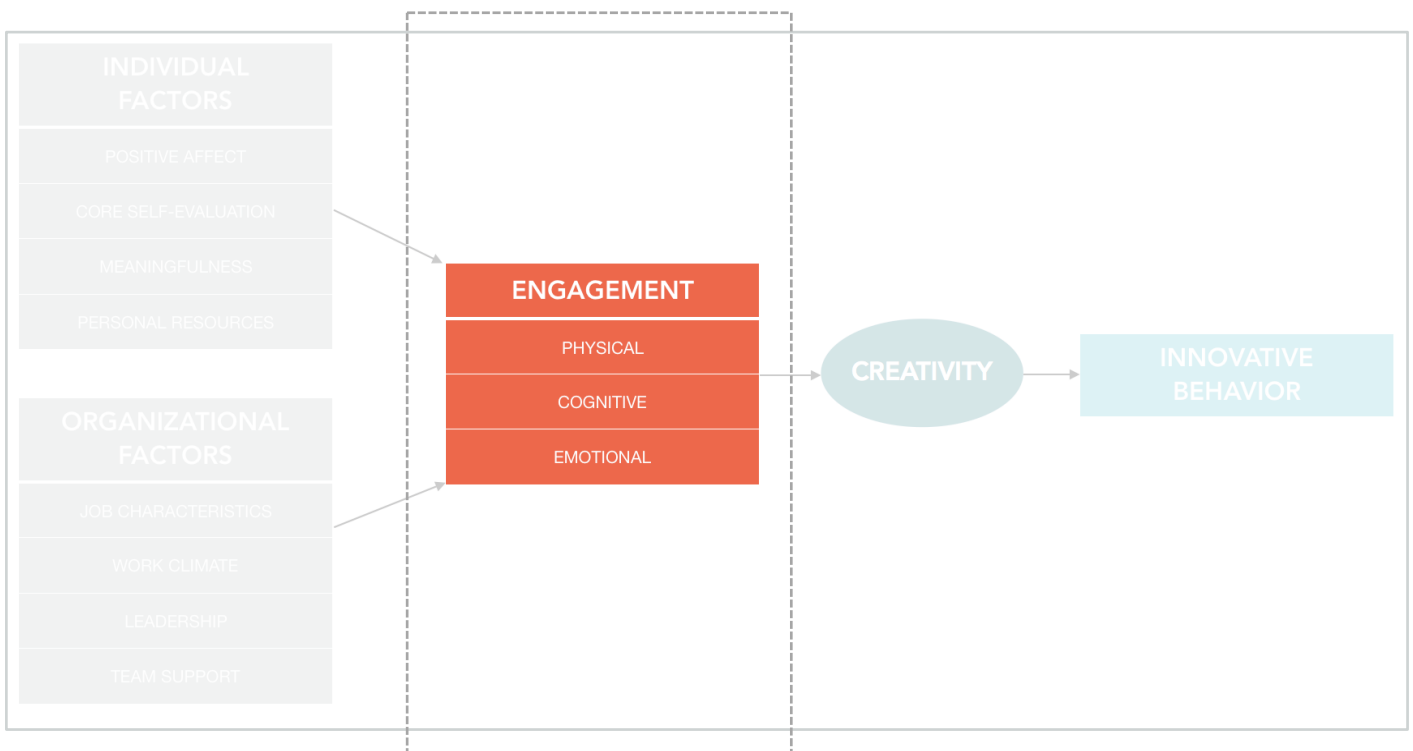


**Fig. 3. 3:** Conceptual Framework: components of engagement

As explained in the previous chapter about literature review, many researchers have already explored the connection between engagement and creativity. In particular, following the previous research analysis it became reasonable to accept that engagement positively impacts creativity.

When engagement was described, many characteristics were mentioned of an "engaged" individual, which, as described by other authors, naturally link the person with creativity. For instance, when a person is cognitively vigilant, devoting their capacity towards the project it means that they are vigilant for ideas, vigilant for opportunities to be applied to the project. In this way, they will manage to make new connections and links from their daily life to the project. This will eventually lead to a greater creative output. Furthermore, when someone is emotionally or empathically connected to others, they feel safer to throw disruptive ideas without the fear of being judged, it also means that these emotional connections make it possible for people to be open to share ideas and build on each other's ideas. This is how the engagement gives way to creativity as a consequence as explained by authors. Lastly, it can also be said that when people are physically involved, they will go through an experience which can give way to new insights about the project that, in turn, may lead to creative ideas.

Overall, this means that people who are engaged in the work that they are performing are more likely to produce new ideas, think out of the box, sense new opportunities, to be more open and original, generally speaking, more creative.

One final clarification is necessary, though, to set straight the decision making behind the construction of the framework. Despite the fact that there are some research which assumed the direct connection of engagement to innovative behaviour, the present study finds it more suitable to include the intermediation of creativity (**Fig. 3.4**)

This is because of the big support and the wider number of studies found dealing with the relationship between engagement and creativity in the theory and bearing in mind that the framework should be as complete as possible. This thesis' framework supports the theory about the positive relation of engagement to creativity and then assumes the connection between creativity and innovative behaviour. This is the most prevalent line of thought that was found in the literature and works towards a better understanding of the entire framework by taking into account the creativity variable.
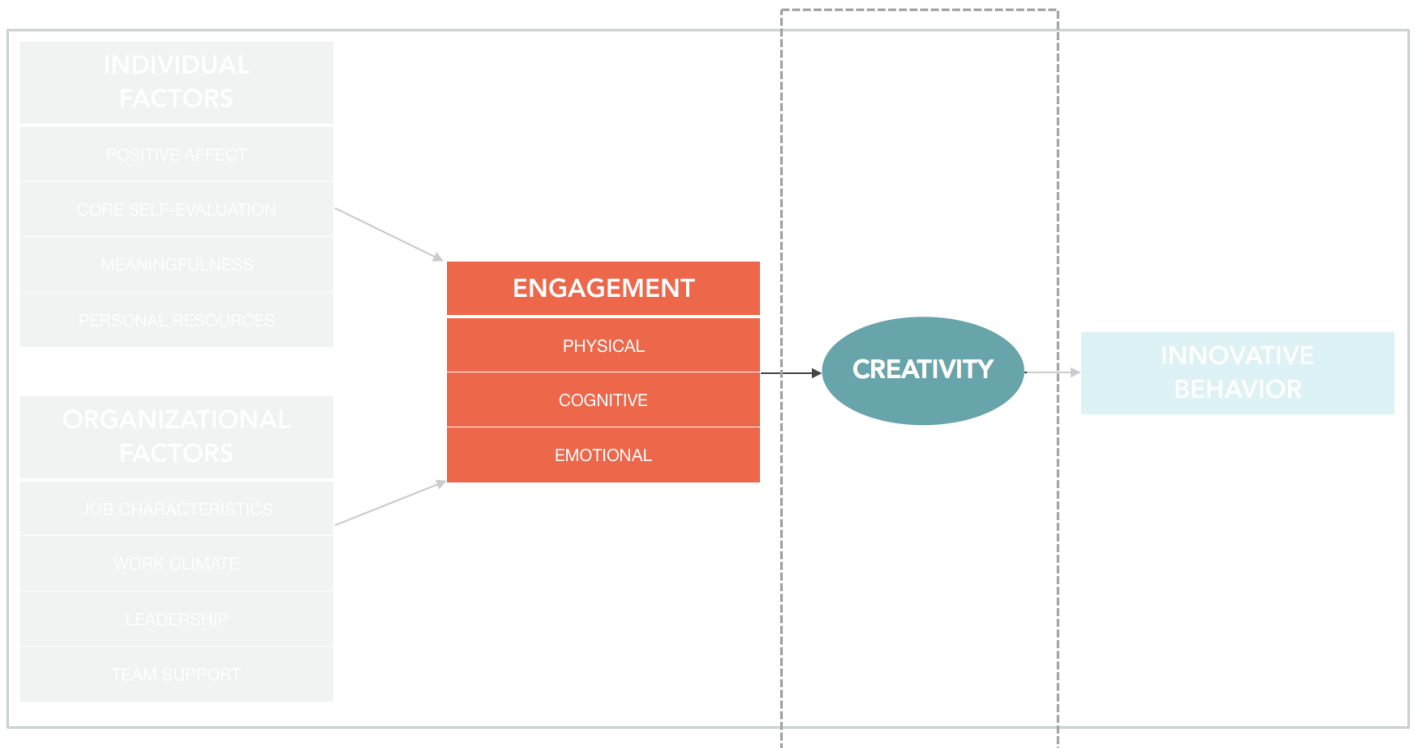


**Fig. 3. 4:** Conceptual Framework: creativity

## FROM CREATIVITY TO INNOVATIVE BEHAVIOUR

As seen in the literature chapter, the relation between creativity and innovation is something on which most of the researchers currently agree. Most of them repeat that innovation could be divided between ideation and implementation and discuss the importance of creativity in both of them.

This allows the researchers to validate the connection and introduce it inside the conceptual framework (**Fig. 3.5**).
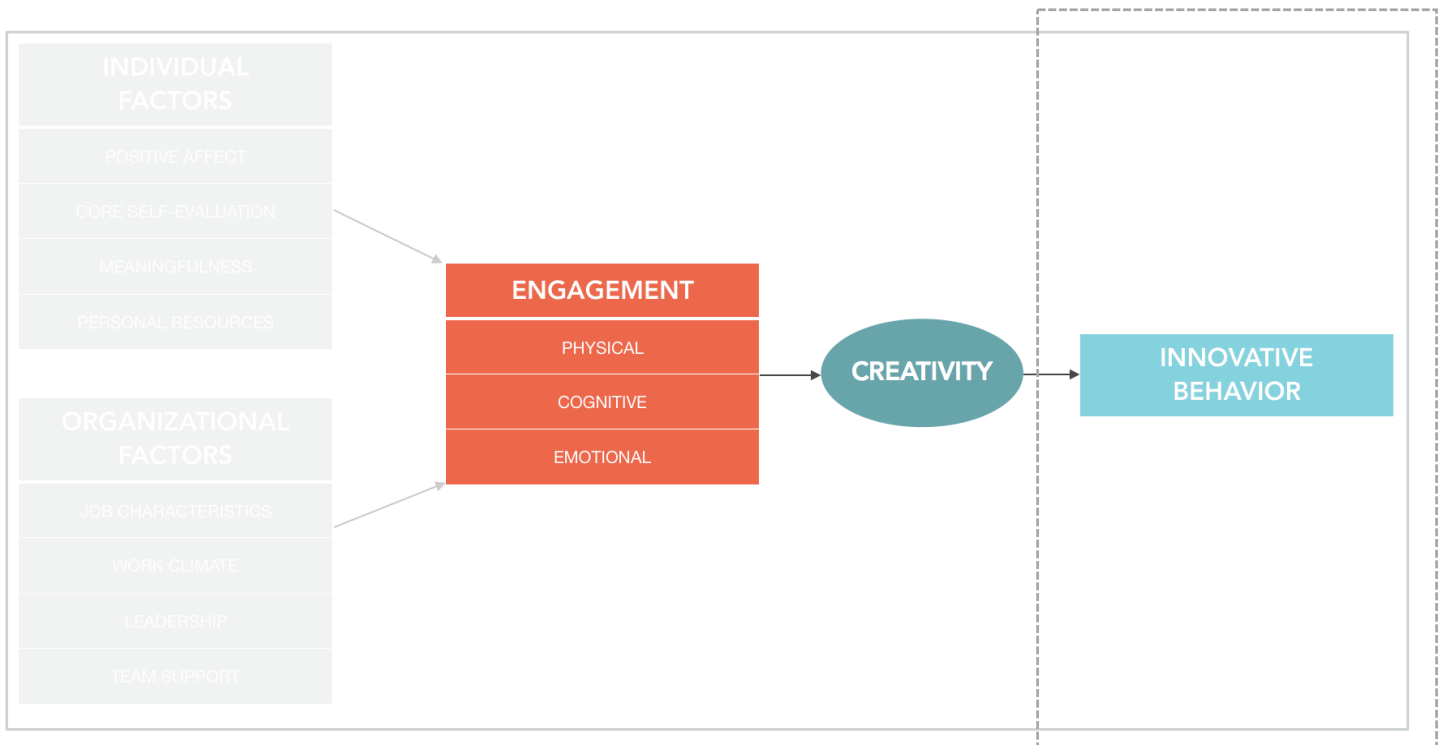


**Fig. 3. 5:** Conceptual Framework: innovative behaviour

In the first, creativity brings about new, innovative ideas with potential to become great innovations. A rise in creativity means there will be more and better ideas, more out of the box thinking that can lead to solutions that competitors have not thought about. In consequence, the probability of there being a potentially successful proposal to choose from, increases. This is the first reason why creativity leads to successful innovative behaviour.

In the second place, when the time of implementation arrives, it is time to bring this potentiality of success to reality. Most projects fail even if they have carefully selected the best idea because implementation is difficult, and many unforeseen events usually come up throughout the process. A good tool to carry on this mission is creativity so that the team can successfully achieve the innovation. This is because the process is typically full of new problems that have never been seen before by those who are working on it and, so, creativity is needed to come up with new ways and solutions to overcome them.

Having said so, creativity once and again is shown in the research as a driver of innovation. Due to that, the link between these two concepts result as something definitely realistic and legitimate.

Due to the fact that this connection is already accepted by the academic community, this research does not want to spend too much time in going deeper into this topic. At the same time, it represents a key and essential theme for the scope of the research. In fact, also thanks to this connection, it is possible to link the enablers factors of engagement to the individuals' innovative behaviour.

## 3.2
# Research gap ⸻

The aim of this paragraph is to clearly present the goals and objectives that guided this research from an academic point of view. As explained in the introduction to this study, the main question to dig through in this research has been defined, first, looking at the literature and defining a main area of interest where the exploration is still open and there is an opportunity to contribute with further investigations.

Once defined the area, it was fundamental to spot those literature gaps which still result unexplored. In doing so the conceptual framework was a key element, that allows to have a better overview on the existing research in the area of interest.

To better identify the literature gaps a research question was formulated which has yet to be answered in existing studies. By looking at the conceptual framework the majority of the research focused on the right part of the framework: in the exploration of the concept of innovation and in particular on the connection between engagement and innovation.

Even if many studies analysed in the literature review were based on Kahn's theory about the existence of different types of engagement, no one, until now, tried to go deeper and separately in the study of them.

In particular, as it can be noticed also in the conceptual framework, no study has explored how the different antecedents impact on different types of engagement.

At the same time the research that explored the broader area of the antecedents were mainly focused on the organizational aspects leaving

in the background those that we called the individual factors. These antecedents which are more related to the individual characteristics of a person, are the ones that mostly impact on the feelings and the emotions of the individuals and, consequently, on their cognitive and emotional engagement.

This reasoning lead to the identification of two main research gaps which respectively define two different areas still unexplored by the previous researches:

- the **relation between antecedents** and the different **types of engagement**

- the **group of antecedents** related to **individual characteristics**

These literature gaps were merged in the identification and definition of the main research question of this dissertation:

> *Which are the cognitive and emotional factors that drive individuals towards engagement in innovation?*

This research question will be used during the dissertation as the common structure to guide the analysis made in the next chapters. The next section will go through the organization and the development of the research in order to collect the necessary information to be able to answer to this question

# METHODOLOGY

**This chapter mainly aims to clarify the methodology and the tools that are used in order to test the previously explained framework and find an answer to the research question. To this aim, a qualitative methodology was used. In particular, this chapter will go through explaining two of the main phases of the research: the data collection phase, based on the method of the action research; and the data analysis phase, that performed following the coding approach.  The following sections will describe the two different methodologies and how they were used in this research.**

## 4.1
# Data collection
# and action research

To find an answer to the research question, the researchers had the opportunity to exploit the existing partnership of the Politecnico di Milano with an important multinational in the food sector, that allows to perform an action research investigation.

*"No action without research; no research without action"*
This was the conclusion of Kurt Lewin in the 1940s, who coined the term "*action research*" in 1944. Lewin, in his paper "Action Research and Minority Problems" (1946), defined action research as "*a comparative research on the conditions and effects of various forms of social action and research leading to social action*".

The main characteristic of all the approaches that came under the name of action research is a collaboration between researchers and organizations to contribute simultaneously to both practice and knowledge (Coghlan and Coughlan, 2010).

After Lewin, many researchers started to analyse the topic and, in 1985, Shani and Pasmore came out with the following definition:

«Action research may be defined as an emergent **inquiry process** in which applied **behavioural science knowledge** is integrated with **existing organizational knowledge** and applied to solve **real organizational problems**. It is simultaneously concerned with bringing about the change in organizations, in developing self-help competencies in organizational members and adding to **scientific**

**knowledge**. It is an evolving process that is undertaken in a spirit of **collaboration and co-inquiry**»

In this definition all the aspects that characterize an action research can be recognized.

First of all, the **emergent inquiry process**. The approach of action research usually rises from an opportunity, the rise of a new challenge for an organization that cannot be solved applying a managerial solution, it does not have a scholarly answer. In this context, the necessity arises to create a collaboration between researchers and CEOs to solve their problems while generating useful, robust and practical knowledge.

Second, it focuses on **real organization problems**, not on issues created just for the purpose of academic research. This generates the necessity to apply behavioural and organizational science knowledge, rather than just scholarly knowledge that does not always have practical utility. Thanks to that, action research is able to generate robust and actionable scientific knowledge.

Lastly, it is based on the **spirit of collaboration and co-inquiry**: research with people, not on them or for them (Coghlan and Shani, 2014).

All these characteristics make this methodology appropriate for studying complex and dynamic organizational contexts and issues.

It is also interesting to highlight the fact that there are relatively few attempts in the literature to apply action research to private organizations (Kocher, Kaudela-Baum, and Wolf 2011). This means that what this dissertation proposes to do could be interesting also from a methodological point of view.

As in every case, the implementation of action research methodology has also got some challenges that need to be managed. One of the main barriers to the positive results of an action research is the misalignment between the researcher and the manager. On the one hand, there are managers that may just desire to fix the organizational problems that they face in an easy and quick way. On the other hand, there are researchers that usually care more about generalizable solutions to widespread issues.

As it has been said previously, in the group of action research methodologies we can distinguish different approaches. The one that fits better with this research is the Collaborative Management Research (CMR).
It presents three fundamental characteristics that are also recognisable in this research.

1. Compared to other action research approaches, it is **not primarily directed to solve a specific, pre-formulated problem**. CMR is a more explorative approach that aims to search for new knowledge, analysing emergent trends and developing a mutual understanding of the knowledge area between the two collaborating parts.
2. It is based on a **true partnership**. This means that the relationship established between the researchers and the organization does not just aim to solve a particular issue but is rather a long-term relationship
3. **Shared responsibility**. Managers and researchers are engaged in a joint undertaking where each part is willing to take responsibility for each other's learning and knowledge.

According to the analysis that was made about the method of action research, it was decided to follow the framework of Coghlan and Shani (2014) to explain how the phase of data collection was carried out in collaboration with an important multinational in the food sector that, from now on, will be referred to as *The Company*.

The model defined by Coghlan and Shani results very useful in order to evaluate the quality of the action research conducted. It frames the research by analysing six key areas:

1. **Purpose and rationale for action and inquiry**
2. **Context**
3. **Methodology and method of inquiry**
4. **Design**
5. **Narrative and outcomes**
6. **Reflection on the narrative in the light of the experience and the theory**

All these six elements should be assessed as rigorous, reflective and relevant. Due to that, it is important to conduct a good action research process and find a balance between the organization's needs and scholarly rigor, reflectiveness and the relevance of the discovery process (Coghlan and Shani, 2014).

By referring to Pasmore et al. (2008), under the umbrella of rigorous requirements, the following variables can be considered: data-drive, multiple methodologies, reliability across settings, co-evaluation, causality, underlying mechanisms and publish ability. Secondly, under reflection: historical impact, referential, co-interpretation, community of practice, collection and repeated application. Finally, under relevance: practical, co-determined, re-applicable, teachable, face-valid, interesting, true significance and specific.

As the action research methodology instructs, in this case all the main characteristics of action research approaches and, in particular, of collaborative management research can be recognized.

First of all, the long-term collaboration with The Company involved in a project that lasted more than one year.

To better analyse all the characteristics of the action research methodology that appear in this research, this research will try to go deeper by describing it according to the six  key areas identified by Coghlan and Shani, analysing them according to the criteria of rigor, reflectiveness and relevance.

## The context
### The company

To find an answer to the research question, the opportunity arose to exploit the existing partnership between the Politecnico di Milano, and The Company.

The Company is a global company who is a leader in the food sector. It counts 447 factories, over 2,000 brands in 150 different countries and 339,000 employees. Their purpose is to enhance the quality of life and contribute to a healthier future. In particular, their mission statement is "*Good Food, Good Life*". They want to support their customers during their whole day, providing different kinds of food and beverages with the best taste and without sacrificing the nutritious contribute.

In recent years, The Company has invested a lot in trying to create an organizational culture focused on innovation and to diffuse a common way of thinking and proceeding when dealing with creative problem solving and innovation. In order to define and scale "Innovation Methodologies", in  2012 The  Company  created,  in  partnership with two  other technology  companies,  a  Design  Community. Today, the community involves more than 130 organizations and about 700 members worldwide. The Design Community is a network of Design

Thinking practitioners and change agents from large organizations, who come together as a community to share best practices, stories, experiences and learnings collected daily as they transform their teams to become design-led professionals.

The Community has four main priorities:

1. **Innovation as a service**: become a trusted innovation partner by facilitating business teams on strategic innovation initiatives.
2. **Innovation academy**: build skills, behaviours, mindsets and culture to enable everyone across the organization to deliver innovation as a service.
3. **Innovation tools**: develop expertise and reputation in innovation methodologies, as well as tools and trends to ensure state-of-the art innovation acceleration across the organization.
4. **Innovation ecosystem**: create the conditions that allow human creativity and curiosity to thrive in diverse communities with internal and external partners.

The Academy program of the Design Community seeks to empower people with the capability to foster a user-centric way of working that will encourage a culture of innovation, inside and outside of the company. The Academy offers a complete catalogue of learning experiences to best support individuals and teams in their transformation and innovation journey. All of the learning experiences practice a model of learning-by-doing.

In addition, The Company, continuously experiments and innovates on what innovation methodology to employ so as to deliver the best learning experience possible. Two pillars of this strategy are the **Design Thinking Awareness Session** and the **Design Thinking Coach Certification Program**. The Awareness Session teaches the basics of

user-centric design. In the session, participants aim to break free from the way things have always been done and employees, are allowed to explore new ways of thinking and acting to solve any kind of challenges. In the program, employees' ability to implement the design thinking mindset and principles is at the core of the Academy's priorities. This complete educational program aims to allow people to successfully drive user-centric innovation in their own department and beyond. Exactly these Design Thinking Awareness Sessions acted as a background for this research activity. This because they are "basic" sessions where participants are not expert about design thinking and innovation culture, this mean that probably they are less "contaminated" by other courses or workshops.

This innovative context that characterises The Company represented the perfect environment in which to perform the action research. At the same time, the research question became sensibly important in this kind of scenario: where can the challenge of understanding how to engage people in innovation be more meaningful than in such context?

**Rigor**: due to the complex and wide context which was being addressed, it was important to collect data in a systematic and holistic way because the study would be dealing with different employees of different nationalities and living in different countries.

**Reflectiveness**: the situation of the company reflects the ideal context of application for this study, given the importance the company confers to spreading an organizational culture of innovation among their employees. At the same time, it represents a complex and varied reality interesting to be studied and related to the topics proposed by this research.

**Relevance**: the action research approach took into consideration several different aspects that help to systematically frame the complexity of the context.

**The company**

The effort promoted by The Company in the last couple of years was impressive: it performed 50 awareness sessions and run more than 50 initiatives in more than 10 different countries worldwide involving a total of more than 2,500 people. Nevertheless, most of the people involved in the Academy's sessions that had learnt and explored new methodologies and approaches to business problems and innovation then went back to their daily routine and left it unchanged. What the Academy was still missing was to find a way to leverage on these people also after the sessions were over. Especially because these people represent a community, spread all over the world, with the power to gradually launch a cultural movement for innovation in the company, potentially creating an ecosystem sensible to innovation and being able to foster it. The necessity emerges for the company to start investigating how to create a self-sustained ecosystem able to nurture the culture of innovation. From this assumption a key question emerges soon:

> *How to engage people to create a culture of innovation inside the organization?*

At the same time, there was also a need to understand the effectiveness of these sessions and their efficacy in engaging people in innovation analysing the impact of the session on their participants.

**The researchers**

On the other hand, researchers were trying to bring an answer to the same question, focusing on understanding which were the drivers that spark motivations to make innovation happen. In particular, thanks to the literature review that was made, an interesting and promising research gap was found in the analysis of the emotions and feelings that drive people toward an innovative purpose. As explained before, this study tried to go deeper into the relation between engagement and

innovation trying to identify the "antecedents" that positively impact on engagement and consequently on innovation. To this end, it was decided to focus the attention on the cognitive and emotional factors arriving to the definition of the research questions. At that point, the purpose was to try to better understand them and in particular their impact on engagement in innovation projects.

> *Which are the cognitive and emotional factors that drive Individuals towards innovation?*

Contemporary there was also the necessity to trace the evolution of these personal traits through time to see how self-perception evolves when innovating and to understand if something changes at the individual level when a person is supposedly more or less involved in innovation.

### The company + researchers

Trying to combine both the aims of the company and the one of the researchers, two main purposes of the research emerged.  First, answering the research question with the aim of going deeper in identifying the drivers of engagement, to understand how individual emotions and feelings impact on the creation of an innovative culture and ecosystem inside the company.

> *Having a better understanding of people's emotions and feelings in innovation would support in understanding how to sustain and nurture an ecosystem towards an innovation culture*

Second, the necessity to evaluate how individual characteristics evolve when innovating thanks to the Academy's sessions, in order to understand their impact on participants.

> *Trace the evolution of personal traits during the Design Thinking Awareness session to evaluate their impact on engaging people in innovation.*

**Rigor**: the rationale for the action research came from the necessity of the company for a more effective spread an innovative culture inside the organization. And this is a topic to which also the academic literature of the past years is very sensible.

**Reflectiveness**: the final objective of the action research identified by the researchers together with the company, definitely reflects the gap that was found during the literature review. There is a clear match between the organizations needs and the scholarly purpose of the research.

**Relevance**: using the methodology of action research results very useful both for the company itself and for the academic purpose, also since, as Kocher, Kaudela-Baum and Wolf (2011) said, in the literature there are relatively few examples of applied action research to private organizations.

### Methodology and methods of action and inquiry

According to the purposes defined, the researchers accordingly designed an experience for the Design Thinking Awareness Sessions participants.

As explained in the part of literature review, it was assumed that the engagement positively impacts on creativity and consequently on innovation and, at the same time, engagement is positively affected by some antecedents: organizational factors and individual factors. The experience that was designed with The Company allowed the researchers to search for an answer to the research question and, in doing so, to focus on the connection between individual factors and engagement in innovation. In particular, the aim is to understand and analyse the cognitive and emotional factors of individuals that impact on their engagement in doing innovation. In order to capture these factors from individuals, it was decided to design the experience as an

A3-form able to push people to externalize their inner feelings and emotions related to innovation during the Design Thinking Awareness Sessions. To do that with the form, the researchers tried to gradually guide people in understanding what better describes themselves, to trigger an inside-out process.

Two different types of experience were designed: one Form was to be filled with the support of **images** (**Fig. 4.2**) and the other was to be filled only with **words** (**Fig. 4.1**) in the answer. The decision to use images is related to the fact that self-motivation, emotions and feelings are difficult to be expressed, especially just through written words, because, as Michael Polanyi (1966) said, "*We can know more than we can tell*". The problem is that what can be expressed in words and numbers, only represents the tip of the iceberg of the entire body of possible knowledge.

According to Nonaka (1994), individuals possess two types of knowledge: **explicit knowledge** (transmittable in formal, systematic language) and **tacit knowledge** (hard to formalize and communicate). The challenge was to find a way to allow participants to externalize their tacit knowledge and convert it into explicit knowledge, hence, something everyone can understand, and that this research would be able to collect. Always referring to Nonaka (1994), one of the most powerful and effective ways to solve this problem and express the tacit knowledge is the use of metaphors. Metaphors play an important role in associating abstract and imaginary concepts, enabling to express one thing in terms of something else.

In the Form, images take on this role. They allow people to make external representations of their mental constructs without using direct words but emphasizing with images contents and whatever else these images communicate to single individuals. It was decided to run both the Forms in different groups in order to also have a deeper understanding of the externalization process that people pass through when translating tacit knowledge into explicit knowledge. The purpose was to test if images were more powerful than simple word descriptions in enabling the externalization of motivations and feelings.

Both the two Forms (images and words) were divided into three main parts:

- **STEP1**: As a first step, participants were invited to start looking at themselves. To facilitate them in doing this, a list of 12 identities called Cosplays (developed in collaboration with the Centre for Creative Leadership) was provided. The purpose of this phase was to help people start to empathize with themselves and to develop a little bit more self-awareness. Indeed, each Cosplay came with a short description and participants had the opportunity to pick those three that they felt as more representative of themselves. The 12 Cosplay model includes the alleged three main intelligences of an innovator. They were created starting from the assumption that an individual needs to possess these three intelligences to be predisposed to innovation.

  Looking at the literature the competences that characterized a more creative and innovative personality can be grouped in three main categories: practical and artistic skills, creativity skills (ability to generate new ideas) and social/leadership skills (Amabile T.M. (1988), Hammond, M.M. (2011), Lubart T.I. (1997), Mumford M.D. (2000), Sternberg R.J. (1985), Sternberg R.J., O'Hara L.A.).

These three competences basically correspond to the three families of Cosplays:

- **Innovation Thinking**: includes traits such as the ability to envision new scenario and build a shared direction to move forward

- **Design Making**: includes capabilities such as empathy, artistic skills and ideas representation.

- **Leadership Being**: includes leadership practices and professionals such as being an implementer who stimulates change, a coordinator or a good team worker able to drive people towards a shared purpose.



**Fig. 4. 3:** Step1: Words Form



**Fig. 4. 4:** Step1: Images Form



| | | | |
|---|---|---|---|
| **Futurist** Future Foused | I **seek** the emergent signals of **technology** to **inspire** innovation opportunities. | **Cognitivist** Conscious Cognition | I use insights on how biases **influence** decisions and behaviors to amplify the **co-creation** of **meaningful** innovation. |
| **Manager** Process and Method Driven | I **organize** teams and use **methods** to accelerate the efficient delivery of innovation. | **Designer** Creates Desires | I **empathize** with users to think holistically in **creating** meaningful situations of innovation impact. I promote creative conflict in teams. |
| **Conductor** Social Orchestrator | I **orchestrate** interactions with key stakeholders to build **shared** meaning. | **Artist** Represent Intentions | I **visually** represent ideas and experiences to **engage** people on the innovation journey using sketching, metaphors and analogies. |
| **Engineer** Tinkers with Tech | I apply **technologies** to stimulate and **invent** new ideas to enable innovation. | **Shaman** Mindful Encouragment | I promote **mindfulness** and maintain resilience throughout the volatility and uncertainty of innovation. |
| **Architect** Builds the Environment | I create **environments** integrated with **experiences** to encourage innovative thinking and action. | **Benevolent** Engages the Community | I **engage** the **community** in meaningful ways to create and embrace **shared** value. |
| **Catalyst** Transforms Situations | I act as a **role-model** to lead innovation and **stimulate** change. I know how to **transform** the ways of working of my team to accelerate their process. | **Cultivator** Sustains an Ecosystem | I establish and **nurture** an **ecosystem** to support and **sustain** the shared value of innovation. |

**Fig. 4. 5:** Cosplay

- **STEP2**: in the second step it was required to participants to go a little bit more inside themselves, and, in particular, to externalize those factors which were being looked for: **cognitive and emotional drivers of innovation engagement**. To this purpose, the following two questions were designed:

  1. *"What motivates you to solve business problems?"* (related to motivation- cognitive engagement)

  2. *"What do you feel when you try to solve business problems?"* (related to feelings- emotional engagement)

They were created with the expectation that they would capture the cognitive factors from the first question and the emotional factors from the second one. So, this time it was asked to participants to reflect more personally on themselves without the identification in specific Cosplays. For this step the two types of Forms were designed differently and due to that they will be analysed separately:

  – **Images**: (**Fig. 4.6**) people were required to answer the two questions trying to get them to externalize their motivations and feelings by looking at a pre-set of images (**Fig. 4.7**) and thinking about what those images meant to them. They were asked to choose 3/4 images for each question and then to explain why they selected those photos and what the items represented in the photos meant to them. In such a way, they have been able to externalize their inner feelings and motivations and to translate them into words leveraging on the power of images. The images were chosen according to the Cosplays. Three key words were placed for each Cosplay and, for each word, the researchers selected

one representative image on Unsplash, a website dedicated to sharing stock photography, that classifies pictures on the basis of key words.

- **Words**: (**Fig. 4.5**) it was determined to substitute the collage of images with a "collage of words". The images were substituted with 12 keywords related to the cosplays and participants had to pick three that represented them and three that did not. After this activity participants were asked to answer to the two open questions about the motivations and the feelings.



**Fig. 4. 6:** Step2: Words Form



**Fig. 4. 7:** Step2: Images Form

**Fig. 4. 8:** Some of the images proposed to the participants

- **STEP3**: In order to better respond to the second purpose that was defined with The Company about the evolution of the personal traits during the Design Thinking Awareness Session, it was chosen to introduce one last step. This step consists of another question that changed according to the distinct moment when the activity was run. Indeed, to better understand the evolution of the innovator identity, it was decided to conduct the activity of the Form both before the session and after the session of Design Thinking Awareness. In this last question, people were asked to reflect on themselves as an innovator in order to investigate if, throughout the Design Thinking Awareness Session, they had perceived a shift in their "identity" as innovators. At the beginning of the Awareness Session, when the experience was run for the first time, participants were asked to reflect on their expectations from the three days they were approaching. Differently, at the end of the design awareness session, participants were asked to reflect on themselves and to think if in some way they had a different self-perception of them and if they could recognize when this shift had happened throughout the journey.



**Fig. 4. 9:** Step3: Words Form Before



**Fig. 4. 10:** Step3: Images Form Before



**Fig. 4. 11:** Step3: Words Form After



**Fig. 4. 12:** Step1: Images Form After

All the experience was created in collaboration with the manager of The Company and this means that the tone of voice used in the Form was coherent with the one used inside the company and, thus, with the one employees were familiar with. An example of that was the use of the term "business problem", in the questions of the second step, instead of "innovation project" that was less familiar for the participants.

**Rigor**: during the whole action research the contracting, the methods and the tools were always discussed together with the company in a collaborative way. As explained, they were really careful in checking the coherence of the communicative language used in the Forms with the internal one.

**Reflectiveness**: as in all the classical action research, also this case was characterized by cycles of action and research. Example of that is the test that we made before to launch the experience with the resulting improvements on the Forms in collaboration with the managers.

**Relevance**: The action research process described shows a joint effort in adopting methods that meet both the organizational criteria (e.g., caring about organizational common language) and academic criteria (e.g. develop the questions after a deep literature research).

**Design of data collection and generation**

First, the experience was tested. To do that, the two different Forms were tested during a Coaching Certification Program on Design Thinking. This context was chosen for two main reasons. First, participants were people asked to do activities similar to those presented during a Design Thinking Awareness Session. Second, they were more experienced than people who are usually participating in the sessions. Hence, the expectation was to receive more insightful

feedback to improve the experience itself. The testing experience acted as an enabler to improve both versions of the experience. In particular, the testing experience was started with the words Form in the morning of the first day of the session and then the experience was ended with the images Form at the end of the last day of the journey.

At the end of the experience participants were asked to provide some feedback about the activity, completing an online survey. Thanks to the survey was possible to have the point of view of the participants, to which were asked questions both operative (e.g. "*Do you think that the time we provided you was enough?*") but also related to the contents (e.g. "*How much easy did you find to respond the questions*") and to the effectiveness of the activity (e.g. "*How effective was this test in guiding you when reflecting upon your innovator identity?*"). The feedbacks were generally positive: all the questions results to be quite clear, and easy to answer and the activity was recognised effective by the 50% of the respondents. The main concern was related to the time dedicated to the activity that was considered not enough by many respondents. Once all the feedback from participants was collected, the time to evaluate how to proceed occurred. Feedbacks were discussed within the research team. All the different reflections that were made by the team during the experience by the directly observation of the activity were also taken into account. In closing the discussion, opinions were also shared with the managers and final adjustments to the Form were decided.

At the end of the testing phase, questions of all the steps were rephrased to become more understandable in the context of reference, and some of the words to be selected in the words Form were changed in order to respect and reflect the tone of voice usually used inside the company. At the same time, to solve the issue about the time, was decided to dedicate some more time to the activity, giving more minutes to the participants to complete the Forms.

After this step of testing, the real data-gathering session started. The experience was run in 4 different Design Thinking Awareness Session: 2 activities using the experience with images and 2 activities using the experience with words. The people involved in the session were from different nationalities: usually, the Awareness Sessions include people from all around the world. Moreover, the research also considered different contexts: from Vevey to Frankfurt and Barcelona. This enabled the research to have a random selection of the people involved in the experience.

**Rigor**: data collection and analysis have been performed collaboratively with the managers, always following the criteria of the action research methodology.

**Reflectiveness**: all the steps were designed collaboratively with the company since the beginning. A big effort was also implemented in the creation of a good relationship, based on trust, between the research team and the managers.

**Relevance:** As for the methods, also the design of the action research was aimed to both meeting organizational criteria (e.g., organizing the experience during the Academy's session in order to not interfere with the run of the sessions' activities) and academic criteria (e.g. replicating the experience as many times as necessary to collect

**Narrative of the events**
As it had been done for the testing session, during the Design Thinking Awareness Session the first experience was run with the first Form (both in the case of images or in the case of words). This was performed on the first day of the session, and then the second Form was run at the

end of the journey. The approach was fundamental to have a complete and realistic overview of the evolution that the participants made.

To better understand the process of data collection the figure below (**Fig. 4.12**) was created and attached to represent on a timeline all the sessions in which the activity was run. In particular, in the first session the researchers were able to actively participate and directly manage the experience. For the other experiences they were helped by the responsible of the Awareness Sessions who performed the activity in their name.



**Fig. 4. 13:** Data collection sessions time line

Going deeper in the single experience, all the experiences were started by dividing participants in small groups that would remain the same for the whole journey. At this point the activity started to be guided (independently from the kind of Form) separately for each team, asking participants to complete the form individually in 10/15 minutes. Once each of them completed the Form individually, the team activity started to take place, in which they used a couple of minutes to share their Form with the other team members. This second moment was important to relate the activity of the Form with the wall experience of the Awareness session, proposing the Form also as a way to present themselves to the other group members.

In general, this kind of activity was important for the purpose of the Design Awareness Session: firstly, it helped participants to better understand themselves, reflecting on their individual personality; secondly, it was a way to break the ice inside the group and start getting to know the other people inside the team.

The same approach was used at the end of the journey for the second From. After an individual phase in which the participants were required to fill the Form they had a team moment in which to share their evolution after the Awareness Session and discuss the individual changes that they were able to reach. Also in this case, this moment of self-reflection and then of sharing, was also important for the purpose of the Design Awareness Session.

Once the data collection phase was completed and it was possible to gather all the Forms coming from the different Sessions, they were converted into a digital form. To do that, PowerPoint was used to replicate the completed form for each participant of each session. From there, then it was able to create the databases on excel.

Four databases came out of the process:
1. **First Forms with images**
2. **First Forms with words**
3. **Second Forms with images**
4. **Second Forms with words.**

At the end, considering all the sessions, were involved 60 people (30 for the images Forms and 30 for the words Forms).

**Rigor**: the story is told with an appropriate level of detail, distinguishing facts, and values.

**Reflectiveness**: the story reflects the collaboratively inquiry that was done.

**Relevance**: the story aims at capturing what actually happened during the action research process.

# Data analysis and coding

*"Analysis is the search for patterns in data and for ideas that help explain why those patterns are there in the first place.''* Bernard (2011)

Once the stage of data collection was finished, the data analysis came next. On the one hand, the action research methodology was appealed to organize and give validity to the research and data collection while switching to coding methodology for a qualitative analysis of the data collected.

The case study methodology is used to explain *"an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when the boundaries between phenomenon and context are not clearly evident"* (Yin, 1984). Within the "case study" theory, it was possible to find a tool to analyse the answers from the surveys: **coding**.

Charmaz (2001) describes coding as the "critical link" between data collection and the explanation of its meaning. In general, data coming from qualitative studies can be analysed with strategies that can be classified as: **categorizing strategies** (coding, thematic analysis), **connecting strategies** (narrative analysis, individual case studies) and **memos and displays** (Coffey & Atkinson, 1996; Dey, 1993; Maxwell, 2005). Of all these, the main categorizing strategy used is coding.

Coding can be used as a tool in qualitative or quantitative research although both approaches differ substantially. When it is being used in quantitative research, it consists of *"applying a pre-established set of categories to the data according to unambiguous rules with the goal of doing frequency counts of the items in the categories"* (Maxwell, 2008). On the other hand, in qualitative research, and particularly in this case,

the goal of coding is to "fracture" the data and classify them (Strauss, 1987). In this way, it was able to compare and contrast the different messages that came out of the surveys. It was concluded that coding was the best analytic process to analyse the data from the possibilities that qualitative research offered.

It must be clarified that numerous software exist today that analyse qualitative data (Weitzman, 2000) but their advantage is mostly seen in large projects where lots of data must be coded. Given that in this case there is a limited number of data to analyse, it was set that the coding would be analysed without a software.

## CODING

Before starting the data analysis, directions were set through questions. Firstly: is the data found in the surveys coherent with the framework that was put together? Are there new concepts mentioned by the interviewees? Does the data offer hints of new links or relationships between individual antecedents and engagement? As stated before, and in this last question, the focus is on individuals and its antecedents in particular. In addition, the interpretation of the data was done keeping the research question as a compass to guide the coding.

The objective of the data analysis was to compare the theory with the information that was gathered and interpret it to be able to improve the theory (Eisenhardt, 1989).

The tool is based on the use of "**codes**". These are words or short phrases that capture the essence of what was obtained from the responses. These codes can be either "in vivo" (in the words of the informant) or "constructed" (chosen by the researcher) (Glaser & Strauss, 1967).

The unit of analysis in this case is the person, each of the individuals that were interviewed were taken into account separately. All of them share the context they were in. All the samples come from different people that share one context, one company.

The steps that were followed include coding for the raw content analysis and is followed by the identification of patterns, relations and theory:

1.  **Digitalisation**: First of all, the information that was obtained from the Form had to be transcribed into an excel format and translated, when necessary, into a uniform language: English. The digitization was done separating the answers obtained depending on the Form type (images or words) and from the moment in which it was performed (before the Design Awareness Session, or after it). At the end, as it has been said, four excels came out of the digitization:
    – **Words Forms Before** (the Awareness Session)
    – **Words Forms After** (the Awareness Session)
    – **Images Forms Before** (the Awareness Session)
    – **Images Forms After** (the Awareness Session)

2.  **Content Analysis**: it is characterized by two main level of analysis:
    – **Codes**: they are labels assigned to single concepts appearing in the answers.
    – **Categories**: they group different contents and must be mutually exclusive. For example, the categories inside individual antecedents could be personal resources, motivation, etc.

    Before starting this phase, for each excel that was made, two different sheets were created: one with the answers to the question about the motivations ("what motivates you to solve business problems?") and one with the answers to the question about the feelings ("what do you feel when you try to solve business problems?"). Basically, only the answers which were the most interesting to our research were taken into account.

The first activity that was done was the "codes" generation. All the answers to each question (motivations and feelings) were examined line by line, searching for significant events, experiences, feelings or motivation. Once found, they were written down as "concepts" (Strauss & Corbin, 1998). At first, it was done in parallel by both researchers to get different perspectives on what was found to be significant under each other's eyes. A discussion followed to reach consensus and decide what the codes should be. All the important information contained in the answers was labelled or coded with a concept. After that, the different codes were begun to be aggregated in categories. As stated by Saldana (2013), codes *"when they are clustered together according to similarity and regularity (a pattern), they actively facilitate the development of categories and, thus, the analysis of their connections"*. This means going over codes, searching for patterns that allow them to be joined together into categories and then the categories into themes. The aim is to match them considering similarity, difference, frequency, sequence, correspondence or causation (Hatch, 2002). Also in this case, the activity was performed first individually and then both researchers together. Overall, this path portrays the movement from particular thoughts carried by the single codes to general ideas.

Coding can be used either with a deductive or inductive approach depending on how the categories are set ("deductive": theoretically defined or "inductive": identified during coding). In this case, since there was solid theoretical background that already confirmed several antecedents of engagement of this model, the categories were firstly created with an inductive procedure and then harmonized through the support of the literature review that had been done.

The systematically description of how the coding phase was performed in the specific case of this research will be conducted in the next chapter.

3. **Interpreting the findings**: the interpretation will be discussed in more depth in the next chapter, but, generally speaking, in this stage, it is especially important to go back and forth to the theory to check single patterns and relationships and integrate or rebuild the existing theories. It could also include the relabelling of categories or codes, Saldana (2013) encourages this by saying that it is very hard to get coding right in a first attempt.

Chapter 5

# RESULTS

**This chapter aims to present the findings that came from the data collection. Specifically, the answers to the Forms that were handed out to participants during the Design Thinking Awareness Sessions of The Company. This analysis of the data obtained was done following the methodology of coding, as explained in the previous section.**

This section has a protagonist role in the dissertation, given that it is the starting point for the development of an improved or validated version of the existing theory on the topic to give back to the academic community as well as practitioners.

As previously explained, the data analysis will be focused on the two questions of the Forms that were originally aimed at obtaining insights on individuals and how they go through engagement. They were separated in order to be able to single out cognitive and emotional engagement. The questions involved are:

- *"What motivates you to solve business problems?"* (related to motivation- cognitive engagement)

- *"What do you feel when you try to solve business problems?"* (related to feelings- emotional engagement)

To better accomplish the scope of this research, the results will be discussed separating both questions. The results will be separated also depending on the type of form and when the tests were performed.
In order to clearly present the results, the first part of this chapter will be dedicated to present the general process the researchers went through to get the results. After that, the last two sections will be dedicated to the presentation of the results coming from each question (motivations and feelings).

## 5.1
# Coding process

As already explained in the Methodology chapter, one of the first steps that was done after the data collection was the creation of four different databases:

- Words Forms Before (the Awareness Session)
- Words Forms After (the Awareness Session)
- Images Forms Before (the Awareness Session)
- Images Forms After (the Awareness Session)

In order to perform a data analysis according to the aim of this research (exploring the particulars of emotional /cognitive engagement), it was necessary to implement another separation inside each database between the motivations question and the feelings one. According to this reasoning, the final count of databases amounted to eight: one for each of the types just listed and each one divided into two databases that take into account the different questions:

1. **Motivations** from the Words Form Before
2. **Motivations** from the Words Form After
3. **Motivations** from the Images Form Before
4. **Motivations** from the Images Form After

5. **Feelings** coming the Words Form Before
6. **Feelings** coming the Words Form After
7. **Feelings** coming the Images Form Before
8. **Feelings** coming the Images Form After

Once databases were created, the researchers started with the content analysis of each database.

## Codes

The first step of the content analysis was the definition of the codes starting from the answers given by participants. This step started with a phase done in parallel by the two researchers. In this phase each researcher started off from the raw data and performed the coding activity separately. This was done to reduce the subjective view of creating codes only from the perspective of one of them. Then, a discussion followed between the researchers to agree on the codes that best portrayed what was answered by the interviewees and arrive to the common codes. Each code consists of a word or short phrase that captures the essence of what was obtained from the answer of each participant. Each single response was associated to one or a couple (in the case in which one answer was expressing more concepts) of specific codes agreed by both researchers.

Some examples are proposed to better understand how the development of the coding took place.

**MOTIVATIONS**

**Answer**: *"Help other person to look for a solution and the possibility of applying my knowledge and skills"*

**Code1**: HELP OTHERS

**Code2**: APPLY MY KNOWLEDGE AND SKILLS

**Answer**: *"Pleasure to be together and have process together"*

**Code**: TEAM WORK

**Answer**: *"I feel good trying to solve problems. I like to discover if I am able to solve it."*

**Code1**: FEEL GOOD

**Code2**: FEEL CHALLENGED

**Answer**: *"Wild open to everything"*

**Code**: OPENESS

### Categories of codes

Once the codes were defined, it was proceeded to the categories' creation. Also in this case, the researchers started in parallel, to then share the different opinions and create the definitive categories agreed on by both.

To create the categories, similar codes were grouped together creating different clusters. In order to do that, the first step was to group the "common codes". This was the case of recurrent codes or different codes expressing the same concept.

After this phase, a second step followed in which researchers tried to group also different codes expressing similar concepts in order to create the actual categories.

Both these steps were done separately by the two researchers. After that, a discussion followed and the definitive homogeneous categories were created.

To better understand how the categories were created some examples are proposed starting from the examples of codes identified in the code section.

---

**MOTIVATIONS**

**Answer**: *"Help other person to look for a solution and the possibility of applying my knowledge and skills"*

**Code1**: help others

**Category1**: IMPROVING OTHERS' LIFE

**Code2**: apply my knowledge and skills

**Category2**: CHALLENGE

**Answer**: *"Pleasure to be together and have process together"*

**Code**: team work

**Category**: TEAM WORK

---

**FEELINGS**

**Answer**: *"I feel good trying to solve problems. I like to discover if I am able to solve it."*

**Code1**: feel good

**Category1**: POSITIVE FEELINGS

**Code2**: feel challenged

**Category2**: CHALLENGED

**Answer**: *"Wild open to everything"*

**Code**: openness

**Category**: OPENNESS

### Final categories

Once the categories for each database were defined, in order to better perform the analysis of the data collected, different categories coming from different databases were compared in order to homogenise them. This was due to the fact that, at the end of the categories' creation phase, the researchers noticed that categories coming from different databases but clustering a common sentiment or message, sometimes had different names arise from the coding process. Therefore, for a better understanding and comparison, these were changed to a common name.

Also in this case some examples are provided.

---

**MOTIVATIONS**

**Answer**: *"Help other person to look for a solution and the possibility of applying my knowledge and skills"*

**Code1**: help others

**Category1**: improving others' life

**Final category1**: IMPROVE OTHERS' LIFE

**Code2**: apply my knowledge and skills

**Category2**: challenge

**Final category2**: CHALLENGE

**Answer**: *"Pleasure to be together and have process together"*

**Code**: team work

**Category**: team work

**Final category**: TEAM WORK AND SHARING

---

**FEELINGS**

**Answer**: *"I feel good trying to solve problems. I like to discover if I am able to solve it."*

**Code1**: feel good

**Category1**: positive feelings

**Final category1**: POSITIVE EMOTIONS

**Code2**: feel challenged

**Category2**: challenged

**Final category2**: CHALLENGED

**Answer**: *"Wild open to everything"*

**Code**: openness

**Category**: openness

**Final category**: CREATIVE

## 5.2
# Presentation
# of the results

MOTIVATIONS

The first answers analysed were the ones responding to the questions "W*hat motivates you to solve business problems*?". In this question individuals were required to describe the motivations which drive them in solving business problems.

In order to clearly explain the analysis conducted this paragraph will go through the content analysis made for each database presenting, for each of them:

- **The categories and codes table**, in which the reader will find the categories that were created when clustering together the codes of the considered database and, for each category, the list of codes that were either created by the researchers or cited directly in the answers of participants.
- **The frequency analysis**, in which through a doughnut chart, the percentages of frequency are reported for each category on the bases of the numbers of codes of each category and their frequency

At the end of the paragraph, the final categories will be presented, which were defined homogenising all the different categories found in all the four databases presented in the motivation question section.

## Words Forms

Database1: Motivations - Words Form - Before the Awareness Session

This first database contains all the answers about the motivations coming from the completion of the Words Forms completed before the Awareness Sessions.

### Codes and categories

| CATEGORIES | CODES | FREQUENCY | CATEGORIES | CODES | FREQUENCY |
|---|---|---|---|---|---|
| IMPROVING OTHERS'LIFE | Help others | 1 | POSSIBILITY TO SUCCESS | Results | 3 |
| | Making life easier | 1 | | Real life application | 1 |
| | Improving life for others | 1 | | Satisfaction | 1 |
| | Impact on people | 1 | | Reward | 1 |
| | Solve others' needs | 1 | | Gain benefits | 1 |
| | User friendly | 1 | | | |
| | Customer satisfaction | 1 | CURIOSITY | Curiosity | 1 |
| | People problems | 1 | | New knowledge | 1 |
| | Help perople | 1 | | Willingness to learn | 1 |
| BUSINESS MOTIVATIONS | Support the business | 1 | | Big picture | 1 |
| | Efficiency | 1 | | Expand my knowledge | 1 |
| | Business problems | 1 | | Understand | 2 |
| | Support brand grow | 1 | MEANINGFULNESS | Meaninfulness | 1 |
| | Make work simple | 1 | | Purpose | 1 |
| | Make thing easier | 1 | | Make it my own | 1 |
| | Improve processes | 1 | GRATITUDE | Recognition | 1 |
| CHALLENGE MYSELF | Challenge | 3 | | Reaction of the receivers | 1 |
| | Find a solution | 1 | | | |
| | Discover sth better | 1 | | | |
| | Feel challenged | 1 | | | |
| | Apply my knowledge and skills | 1 | | | |

Tab. 5. 2: Categories and codes from motivations-words-before

### Frequency analysis

Looking at the chart, it is possible to easily identify the categories that were most frequently mentioned in the answers: **Improving others' lives**, **Business motivations** and **Challenge myself**. Thus, before the Awareness Session took place, the interviewees saw these three as the main motivations that they recalled when having to solve a business problem. After those, **Curiosity** and **Possibility of success** were the categories that followed in number of frequency.

FREQUENCY CHART



Gratitude 5%
Meaningfulness 7%
Curiosity 16%
Possibility to success 16%
Improving others' life 20%
Business motivations 20%
Challenge my self 20%

MOTIVATIONS
WORDS - BEFORE

In this second database, the motivations of the participants should be influenced by the fact that the Awareness Session has already taken place. The differences between these two first databases are one of the focus points. The aim is to see if the workshop brought changes in the motivations and in that case in which terms.

## Codes and categories

| CATEGORIES | CODES | FREQUENCY | CATEGORIES | CODES | FREQUENCY |
|---|---|---|---|---|---|
| | User satisfaction | 1 | QUEST FOR SOLUTION | Find innovative efficient solutions | 1 |
| | Help | 1 | | | 1 |
| | Improve consumers' work | 1 | | Finding efficient solutions | 1 |
| | Provide support to others | 1 | | | |
| | Make life better for others | 1 | | Make thing better | 1 |
| | Facilitate the life of the users | 1 | | Generate solutions | 1 |
| IMPROVE OTHERS' LIFE | Help people | 1 | | Find relevant solutions | 1 |
| | Impact on people | 1 | | | |
| | Positive impact on others | 1 | BUSINESS MOTIVATIONS | Support progress | 1 |
| | Solving somebodys problems | 1 | | Solve company problem | 1 |
| | Provide users solutions | 1 | | Need to improve | 1 |
| | Usefulness | 1 | | Improve processes | 1 |
| | Provide satisfy solutions | 1 | | | |
| | Benefit the customer | 1 | POSSIBILITY TO SUCCESS | Reward | 1 |
| | | | | Make the best | 1 |
| | Learning | 3 | | Happiness of seeing results | 1 |
| PERSONAL MOTIVATIONS | Grow | 2 | | | |
| | Understanding | 1 | GRATITUDE | Recognition | 1 |
| | Different ways of thinking | 1 | | Recive feedbacks | 1 |
| | | | | | |
| | Meaning | 1 | THE EXPERIENCE | The process | 1 |
| | Crete value | 1 | | Process | 1 |
| MEANINGFULNESS | Make a difference | 1 | | | |
| | Feel involve in the change | 1 | THE CHALLENGE | Fun challenge | 1 |
| | Generate impact | 1 | | Challenge | 1 |
| | Need to do | 1 | | | |
| TEAM WORK AND SHARING | Union | 1 | | | |
| | Cross functional | 1 | | | |
| | Collaboration | 1 | | | |
| | Group team | 1 | | | |
| | Coordination | 1 | | | |

**Tab. 5. 2:** Categories and codes from motivations-words-after

**Frequency analysis**

This time, as the chart shows, they were much more spread in terms of frequency. But the main category was always **Improving others' lives**. And then, it was fairly distributed out between: **Personal motivations** (instead of business motivations as it was before), **Meaningfulness** (that almost doubled, passing from 7% to 12%). It is interesting to also mention the fact that a new important category appeared only after the Awareness Session: **Teamwork and sharing**.

FREQUENCY CHART

The experience — 4%
Gratitude — 4%
Possibility to success — 6%
Business motivations — 8%
Quest for solution — 10%
Team work and sharing — 10%

4% — The challenge
28% — Improve others' life

**MOTIVATIONS**
WORDS - AFTER

14% — Personal motivations
12% — Meaningfulness
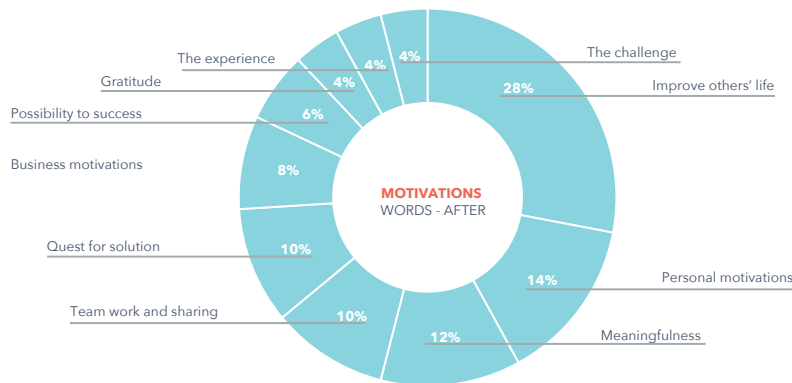
**Images Forms**

This next section will continue exploring the results regarding the motivations question but this time with those Forms that offered images as an aid and a response method for the interviewees to start their answer. The aim of the subsequent analysis of the results presented in this paragraph is to see if this method was effective in bringing out more information from the workers.

The third database is composed by the answers about the motivations that came from the images Form filled out before the Awareness The With these results it is possible to start to see the effect of the images on the answers of the Forms. New categories that had not been mentioned before in the words Form, arose with the Images.

## Codes and categories

| CATEGORIES | CODES | FREQUENCY | CATEGORIES | CODES | FREQUENCY |
|---|---|---|---|---|---|
| **MEANINGFULNESS** | Sth important for me | 1 | **CURIOSITY FOR THE UNKNOWN** | Think out of the box | 1 |
| | Doing the right thing | 1 | | Creativity | 1 |
| | Challenge | 2 | | No limits | 2 |
| | Inspiration | 1 | | New possibilities | 1 |
| | Shared value | 1 | | Curiosity | 1 |
| | Solve problems | 3 | | Exploration | 1 |
| | Purpose | 1 | | Expand limits | 1 |
| | Goal | 1 | | Free mind | 1 |
| | Values | 1 | | Opportunity to go wild | 1 |
| | Inspire | 3 | | | |
| | Pride | 2 | **BUILDING NEW SOLUTIONS** | New solutions | 4 |
| | Learning | 1 | | Create sth new | 1 |
| | Prove yourself | 1 | | Get hands dirty | 1 |
| | Adventure | 1 | | Build sth | 1 |
| | Make sense of things | 1 | | Create ideas | 1 |
| | | | | Implement solutions | 1 |
| **TEAM WORK AND SHARING** | Collaboratie work | 1 | | | |
| | Learn from others | 1 | **WITNESSING CHANGE** | Results | 3 |
| | Exchange ideas | 1 | | Tranformation | 1 |
| | Importance of teams | 1 | | Turn chaos into calm | 1 |
| | Shared value | 1 | | Disruption | 1 |
| | Team importance | 1 | | Take advantage of tech | 1 |
| | Team work | 2 | | Experiencing process | 1 |
| | Sharing processes | 1 | | Light in tunnel | 1 |
| | Create with others | 1 | | | |
| | Share | 2 | **EXPLORE NEW PERSPECTIVE** | Users' view | 1 |
| | Guiding each other | 1 | | Explore new prespective | 1 |
| | Team support | 1 | | Customer oriented | 1 |
| | | | | Understang others | 1 |
| **IMPROVE OTHERS' LIFE** | Change people's lifes | 1 | | Framing new opportunities | 1 |
| | Improve people's life | 1 | | See things diferently | 1 |
| | Help others | 1 | | Understand customer needs | 1 |
| | Help | 2 | | | |
| | Improve people's life | 1 | **SELF-REFLECTION** | Do thins my self | 1 |
| | Enabling people | 2 | | Self-reflection | 1 |
| | Making contribution | 1 | | Me time | 1 |
| | Solving problems for people | 1 | | | |
| | Satisfy others needs | 1 | | | |

**Tab. 5. 3:** Categories and codes from motivations-images-before

**Frequency analysis**

In this case, as visible in the chart, the categories that were mentioned the most were the following: **Meaningfulness** (respectively at the sixth and third places in the words-before and words-after), which was far from **Teamwork and Sharing** (that started to gain importance passing to the second place with 17%), **Improving others' lives** (that decreased its percentage to 14%, while in the words databases it had always appeared as first), **Curiosity** for the unknown and **Building new solutions**. All of them had already appeared either in the database 1 or database 2 as the most mentioned. There is a cohesion between the different Forms of the survey in the categories that bring out the main motivations from the participants.

FREQUENCY CHART
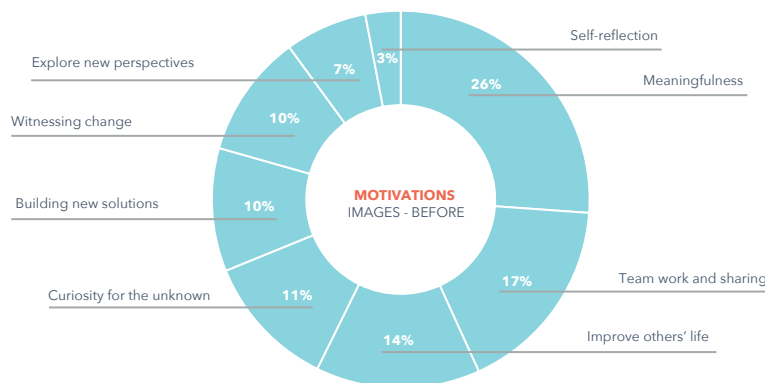


Database4: Motivations - Images Form - After the Awareness Session

This is the last database to deal with cognitive engagement, which was done through the motivation question.

## Codes and categories

| CATEGORIES | CODES | FREQUENCY | | CATEGORIES | CODES | FREQUENCY |
|---|---|---|---|---|---|---|
| **IMPROVING OTHERS' LIFE** | Better future | 1 | | **CHANGE PERSPECTIVE** | Changing perspective | 1 |
| | Improving solutions | 1 | | | See thing differently | 1 |
| | Help people | 1 | | | Opne eyes | 1 |
| | Nurture future | 1 | | | Different perspectives | 2 |
| | Help | 1 | | | Big picture | 1 |
| | Support | 1 | | | Global view | 1 |
| | Feel helpful | 1 | | | Bigger purpose | 1 |
| | Helping others | 1 | | | | |
| | Guiding others | 1 | | **MEANINGFULNESS** | Step out of confort zone | 2 |
| | Users needs | 3 | | | Learning | 1 |
| | Give hope to others | 1 | | | Meaninfulness | 1 |
| | Improve people's life | 1 | | | Search for meaning | 1 |
| | Solve customers' needs | 1 | | | Pleasure | 1 |
| | Take care and help | 1 | | | Purpose | 2 |
| | | | | | | |
| **CURIOSITY** | Open mind | 1 | | **iDEATING NEW SOLUTIONS** | Grow ideas | 1 |
| | Expand limits | 1 | | | Creating new ideas | 1 |
| | Trigger others | 1 | | | Ideating solutions | 1 |
| | Curiosity | 2 | | | Close the gap | 1 |
| | Crazy ideas | 1 | | | Challenge | 1 |
| | Creativity | 1 | | | Uncertainty in results | 1 |
| | No limits | 3 | | | | |
| | Step out of confort Zone | 1 | | **TRUST THE PROCESS** | Continous learning | 1 |
| | Explore | 1 | | | Step by step | 1 |
| | | | | | From single to complex | 1 |
| **TEAM WORK AND SHARING** | Working together | 1 | | | Structure | 1 |
| | Build together | 1 | | | Acheive dyn. balance | 1 |
| | Team new perspecives | 1 | | | Clear view | 1 |
| | Collaborate | 1 | | | | |
| | Together | 1 | | **WITNESSING THE PROCESS** | Evolution | 2 |
| | Synergies | 1 | | | Different solutions | 1 |
| | Bring together ideas | 1 | | | | |
| | Team work | 1 | | **ACTIVE PARTICIPATION** | Working with hands | 2 |
| | Everyone contributes | 1 | | | Doing sth with my hands | 1 |
| | Part of a team | 1 | | | Be a doer | 1 |
| | Team work | 1 | | | | |
| | Bring others onboard | 1 | | | | |
| | Team | 1 | | | | |
| | Shared goal | 1 | | | | |

**Tab. 5.4:** Categories and codes from motivations-images-after

### Frequency analysis

After the Awareness Session, looking at the chart, the category **Improving others' lives** came back to the first place (as it was in the words' databases), followed by **Teamwork and Sharing**, **Curiosity** and **Change perspectives**. It is fairly similar to the ones obtained before the Awareness Session (database 3), except for an increase in the mentioning of categories that have to deal with the process like **Change perspectives**, **Trust** the process and **Active participation**.

### FREQUENCY CHART



MOTIVATIONS
IMAGES - AFTER

Active participation — 4%
Improving others' life — 20%
Ideating new solutions — 8%
Trust the process — 5%
Meaningfulness — 8%
Change perspective — 12%
Team work and sharing — 17%
Curiosity — 17%
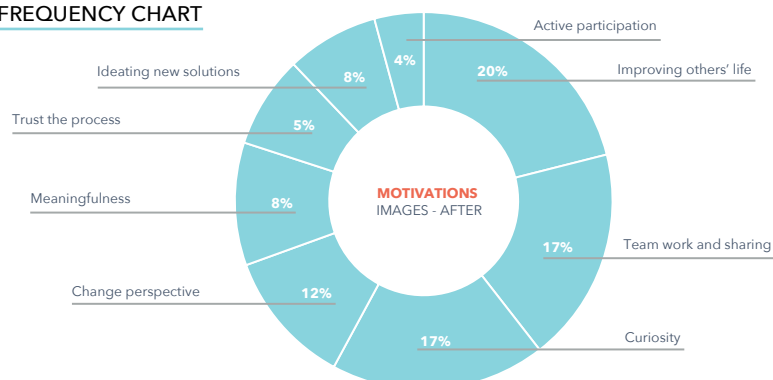
### Final categories

Once all the categories for each database were identified, it became necessary to homogenise them in order to be able to conduct analysis comparing different databases. After this last step, researchers came out with thirteen categories of motivations.

In the following table (**Tab. 5.5**) all these categories are reported and for each of them it is reported:

- **one characteristic quote** coming from the answers of the participants to the Awareness Sessions to the question: *"what motivates you to solve business problems?"*

- **the frequency of appearance** for each kind of database

- **the total number of codes** referring to the category, found in the participants' answers considering all the databases

| CATEGORIES | QUOTES | WORDS | | IMAGES | | |
| --- | --- | --- | --- | --- | --- | --- |
| | | Before | After | Before | After | Tot. |
| Improving other's lives | «make life better for others» | 9 | 14 | 12 | 16 | 51 |
| Curiousity | «curiosity to see and understand» | 9 | 9 | 10 | 12 | 40 |
| Value congruence | «do the right thing» | 3 | 6 | 21 | 8 | 38 |
| Team work and sharing | «pleasure to be together and have process together» | 0 | 5 | 14 | 14 | 33 |
| Possibility of success | «be proud of yourself» | 7 | 3 | 9 | 3 | 22 |
| Quest for a solution | «to find the right solution» | 0 | 6 | 9 | 6 | 21 |
| Explore new perspectives | «Undertand the world through different eyes» | 0 | 0 | 7 | 8 | 15 |
| Challenge | «I like challenges, routine makes me bored» | 7 | 2 | 0 | 3 | 12 |
| Experience | «learning by doing, experience is the best teacher» | 0 | 2 | 0 | 6 | 8 |
| Business motivations | «provide the best support to the business» | 7 | 4 | 0 | 0 | 7 |
| Gratitude | «recognition from receivers» | 2 | 2 | 0 | 0 | 4 |
| Active participation | «I like doing something with my hands» | 0 | 0 | 0 | 4 | 4 |
| Self-reflection | «reflect, silence, me time» | 0 | 0 | 3 | 0 | 3 |

**Tab. 5. 5:** Motivations final categories

Thanks to the data reported in the table, it is possible to go through a general analysis of all the identified categories of motivations, comparing also their frequencies according to the different kinds of Forms the participants were subject to.

The category which was most used considering all the databases is **Improving others' lives**. Some answers that can be reconducted to this category were "make life better for others" or "find solutions that helps people". This group of motivations focuses on the aspect of doing something good for others: finding new solutions for the customers' needs or helping others to improve their lives. Codes within this category are one of the most recurrent in all the databases.

Another frequently used category of motivation is **Creativity**. In this category, it is possible to find all those motivations related to the concept of creativity, thinking out of the box, ideating new solutions, etc. Also, this category appeared in all the different databases always with a similar frequency.

In third place we found **Value congruence**. This category is related to the concept of meaningfulness and it refers to the fact that individuals feel that the purpose of the innovation challenge is congruent with their personal values and represent something important for them.

**Teamwork and sharing** is another frequently used category. It is related to the importance of the team, of feeling supported by it, and of sharing the experience with others. It is interesting to notice that this category does not appear in the first words Form.

**Possibility to success** is another important category of motivations that appeared in all the databases. It has to deal with the results and rewards, not only material rewards, but mostly intrinsic rewards such as:

"others' recognition", "happiness of seeing results" (from the answers) or feel proud.

In the last three databases another category was quite recurrent: **Quest for a solution**. It is related to the desire to "create something new", "solve problems", "ideating solutions" and "make things better".

**Challenge**: another quite frequent group of motivations are related to the challenge that the problem offers, seen as a possibility to "prove yourself".

Interesting to notice that the category **Experience** arose just in the Forms completed after the Awareness Session. It comprises all those motivations related to experience and getting through the process until it is done.

Lastly, there are some categories that just appeared in some databases, according to the type of Form tested: words vs images.
In particular, **Explore new perspective**, **Active participation** and **Self-reflection** just appear in the images databases; while **Business motivations** and **Gratitude** were present just in the words databases.
- **Explore new perspectives** refers to the ability to see things in a different way, being able to discover new opportunities and develop innovative solutions.
- **Active participation** includes all those feelings of being actively involved in the experience, getting hands dirty and building something on your own.
- **Self-reflection**, refers to all those moments of taking a step back and reflecting on the process and on what is being done.
- **Business motivations** includes all those motivations related to the health of the company. The idea behind is to implement innovative solutions in order to "solve business problems",

"support business growth", reach more "efficiency", or "improve processes".

- **Gratitude**, refers to the feeling expressed by the receivers of the solutions. Individuals could be motivated by the idea of seeing their work appreciated by others.

To conclude, the majority of the categories were common between more than two databases, this means that they are quite equally spread among the databases.

FEELINGS

The second answers analysed were the ones responding to the questions "*What do you feel when you try to solve business problems*?". With this question, the researchers are aiming to pull out information about the factors that mostly impact on the emotional engagement.

Also in this case, in order to clearly explain the analysis conducted, this section will go through the content analysis made for each database presenting, for each of them:

- **The categories and codes table**, in which the reader will find the categories that were created when clustering together the codes of the considered database and, for each category, the list of codes that were either created by the researchers or cited directly in the answers of participants.
- **The frequency analysis**, in which through a doughnut chart, the percentages of frequency are reported for each category on the bases of the numbers of codes of each category and their frequency

At the end of the paragraph, the final categories will be presented, which were defined homogenising all the different categories found in all the four databases presented in the motivation question section.

## Words Forms

Database1: Feelings - Words Form - Before the Awareness Session

This first database contains all the answers about the feelings, coming from the completion of the Words Forms completed before the Awareness Sessions.

### Codes and categories

| CATEGORIES | CODES | FREQUENCY | | CATEGORIES | CODES | FREQUENCY |
|---|---|---|---|---|---|---|
| MOTIVATED | Curious | 2 | | SELF-CONFIDENT | Proud | 1 |
| | Involved | 4 | | | Self-confident | 1 |
| | Motivated | 6 | | | Empowered | 1 |
| | Inspired | 2 | | | Satisfied | 2 |
| | Making a change | 1 | | | | |
| | Curious | 2 | | CHALLENGED | Challenged | 3 |
| POSITIVE EMOTIONS | Feel good | 1 | | CREATIVE | Creating | 1 |
| | Enjoy | 1 | | | Creative | 1 |
| | Happy | 1 | | | | |
| | Enthusiastic | 1 | | HELPFUL | Contributing to the process | 1 |
| | Passionate | 1 | | | Helpful | 1 |
| | Excited | 3 | | | | |
| | Energised | 3 | | REFLECTIVE | Thoughtful | 1 |
| | Positive | 1 | | | Reflective | 1 |
| | Bubbly | 1 | | | | |
| NEGATIVE EMOTIONS | Confused | 1 | | | | |
| | Not aligned | 1 | | | | |
| | Worried | 1 | | | | |
| | Frustrated | 1 | | | | |
| | Anxiety | 1 | | | | |
| | Underpressure | 1 | | | | |
| | Fighting against everybody | 1 | | | | |
| | Missunderstud | 1 | | | | |
| | Confused | 1 | | | | |

Tab. 5. 6: Categories and codes from feelings-words-before

### Frequency analysis

Looking at the chart, it is possible to notice that , after having performed the coding, the most frequent categories were: **Motivated**, **Positive Emotions** and **Negative Emotions**.

FREQUENCY CHART



165
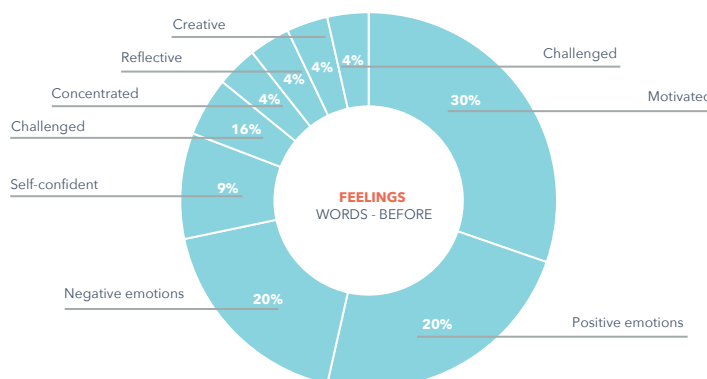
After the Awareness Session, another form was given out to the participants to see if there had been any changes in the feelings they recalled from when they were solving business problems.

**Codes and categories**

| CATEGORIES | CODES | FREQUENCY | | CATEGORIES | CODES | FREQUENCY |
|---|---|---|---|---|---|---|
| MOTIVATED | Motivated | 3 | | CHALLENGED | Challenge | 1 |
| | Engaged | 5 | | | Educated | 1 |
| | Commited | 4 | | | | |
| | Purposeful | 1 | | NEGATIVE EMOTIONS | Confused | 2 |
| | Driven to solve problems | 1 | | | Doubtful | 1 |
| | Own the problem | 1 | | | Frustrated | 1 |
| | Involvedr | 2 | | | Exhausted | 1 |
| POSITIVE EMOTIONS | Happy | 4 | | SENSE OF BELONGING | Part of a group | 1 |
| | Energized | 2 | | | Part of sth | 1 |
| | Good | 1 | | | Part of a team | 1 |
| | Pleasure | 1 | | | Part of the project | 1 |
| | Empowered | 1 | | | | |
| | Great | 2 | | SELF-CONFIDENT | Proud | 1 |
| | | | | | Satisfied | 1 |
| CREATIVE | Creative | 4 | | | | |
| | Resourceful | 2 | | REFLECTIVE | Reflective | 1 |
| | Ideaful | 1 | | | | |
| | Open | 1 | | FOCUSED | Focused | 1 |
| | Innovative | 1 | | | | |
| HELPFUL | Useful | 3 | | | | |
| | Collaborative | 1 | | | | |
| | Available | 1 | | | | |
| | Contributing | 1 | | | | |
| | Bringing value | 1 | | | | |

**Tab. 5. 7:** Categories and codes from feelings-words-after

**Frequency analysis**

It is interesting to start by noting that, according to the chart, the two categories that had the most codes related to them were: **Motivated** and **Positive emotions**, the same that appeared in the previous database. In terms of percentage they decreased a little bit: **Motivated** went from 30% to 28%, while **Positive emotions** from 20% to 17%. This reduction could also be due to the new category that appeared: **Sense of belonging**. Another interesting category is **Negative emotions**,

FREQUENCY CHART
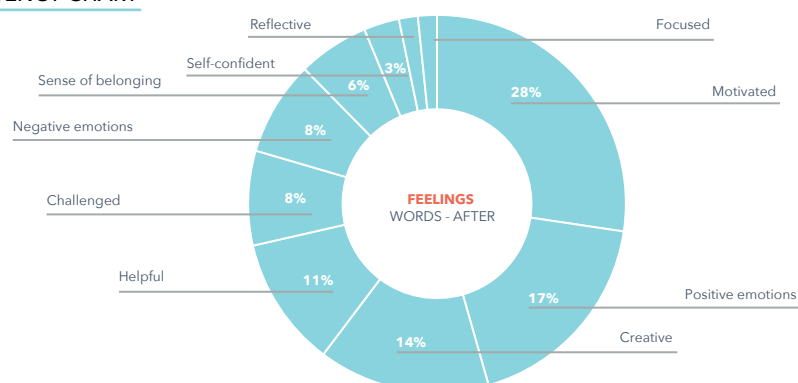
which has almost halved passing from 20% to 9% and moving to the 6<sup>th</sup> place from the 3<sup>rd</sup> gained in the previous database.

## Images Forms

Database3: Feelings - Images Form - Before the Awareness Session

It is now time to move on to the forms that offered images to evoke the answers of the participants. In this seventh database the forms were answered before the workshop.

### Codes and categories

| CATEGORIES | CODES | FREQUENCY |
|---|---|---|
| POSITIVE EMOTIONS | Happiness | 5 |
| | Freedom | 1 |
| | Energized | 4 |
| | Exciment | 1 |
| | Fun | 1 |
| | Satisfaction | 1 |
| | Pleasure | 1 |
| | Delighted | |
| SENSE OF BELONGING | Emphaty | 1 |
| | Be part of a group | 1 |
| | Coordination | 1 |
| | Be part of sth | 1 |
| | Work together | 1 |
| | Others | 1 |
| | Team spirit | 1 |
| | Common goals | 1 |
| | Acheiving together | 1 |
| | Part of a group | 1 |
| | Build together | 1 |
| | Contribution | 1 |
| | Joint success | 1 |
| | Team work | 1 |
| | Collaboration | 1 |
| | Share | 1 |
| INTRINSIC MOTIVATED | Accomplishment | 1 |
| | Understanding | 1 |
| | Learn | 1 |
| | Put ideas to practice | 1 |
| | Results | 1 |
| | Reflect | 1 |
| | Make dreams come true | 1 |
| | Helpful | 1 |
| | Challenged | 1 |
| | See things differently | 1 |

| CATEGORIES | CODES | FREQUENCY |
|---|---|---|
| PEACEFULNESS | Harmony | 1 |
| | Peaceful | 1 |
| | Controlled chaos | 1 |
| | Clear route | 1 |
| | Peace of mind | 1 |
| | Write ideas | 1 |
| | Balace (dynimic) | 1 |
| CONGNITIVELY PRESENT | Attention to details | 1 |
| | Involved | 1 |
| | Attentive to all participants | 1 |
| | Focus | 1 |
| | Point out bottleneck | 1 |
| INTERNALLY CHALLENGED | Mess in my head | 1 |
| | Mind blowing | 1 |
| | Chaos | 1 |
| SELF-CONFIDENCE | Strong | 1 |
| | Confident | 1 |

Tab. 5. 8: Categories and codes from feelings-images-before

**Frequency analysis**

As highlighted by the chart, in the images Forms, the most frequency in codes was achieved by far by the categories **Positive emotions** (as in the previous databases, but increasing its percentage from 20% and 27% to 28%) and **Sense of belonging** (a category that had only appeared in the database 2).

Following these, others that had a solid frequency number of codes were **Intrinsic motivation** (17%) and **Peacefulness** (12%), both new compared to the words databases.

FREQUENCY CHART



| | |
|---|---|
| Internally challenged | 5% |
| | 3% |
| | Self-confident |
| Cognitively present | 8% |
| 28% | Positive emotions |
| Peacefulness | 12% |
| | **FEELINGS**<br>IMAGES - BEFORE |
| Intrinsic motivated | 17% |
| | 27% |
| | Sense of belonging |
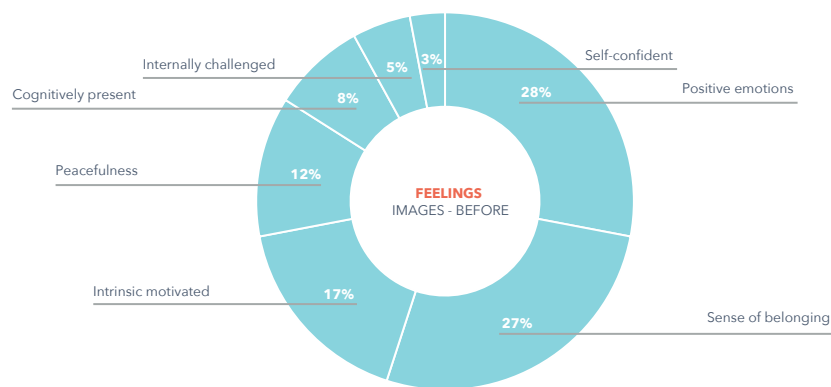
Database4: Feelings - Images Form – After the Awareness Session

This last database section contains the results of the coding of the answers that the participants gave aided by images after the Awareness Session.

## Codes and categories

| CATEGORIES | CODES | FREQUENCY |
|---|---|---|
| **POSITIVE FEELINGS** | Be positive | 3 |
| | Energy | 1 |
| | Happy | 1 |
| | Happiness | 1 |
| | Strong | 1 |
| | Hopeful | 1 |
| | Joy | 1 |
| **OPENESS** | Think out of the box | 1 |
| | Experimenting | 1 |
| | Wide open | 1 |
| | Explore | 1 |
| | Different thoughts | 1 |
| | Mess | 1 |
| | Frame the concept | 1 |
| | Idea in brain | 1 |
| | Lost | 1 |
| **COGNITIVELY PRESENT** | Focus | 1 |
| | Active | 1 |
| | Participant | 2 |
| | Attentive | 1 |
| | Attention | 1 |
| | Careful | 1 |
| **FEELING OF BELONGING** | Create together | 1 |
| | Acheiving together | 1 |
| | Facilitator | 1 |
| | Team | 1 |
| | Create together | 1 |
| | Lear from others | 1 |
| | Share | 1 |

| CATEGORIES | CODES | FREQUENCY |
|---|---|---|
| **FEELING OF ACCOMPLISHMENT** | Evolution | 3 |
| | Transformation | 1 |
| | Progresses | 1 |
| | Beauty of reward | 1 |
| **PEACEFULNESS** | Harmony | 1 |
| | Organized | 1 |
| | Confident in the process | 1 |
| | Balance | 1 |
| | Ordered | 1 |
| **REFLECTIVE** | Step back | 2 |
| | Reflection | 1 |
| | Learn from my self | 1 |
| **INSPIRED** | Do sth meaningful | 1 |
| | Values | 1 |
| | Proud | 1 |
| | Meaningful | 1 |

**Tab. 5. 9:** Categories and codes from feelings-images-after

## Frequency analysis

Also after the Awareness Session, as expressed in the chart, the most frequent category was **Positive emotions**, that passed from 28% to 18%. This could also be due to the increase of the number of categories that passed from 7 to 9. There was also a rise of new categories: **Openness**, **Feeling of accomplishment** and **Inspired**, that had not appeared in any other database until now; while **Self-confidence** disappeared. In general the codes were fairly spread out among all these categories.

It is Interesting also to notice that in both of the images databases the categories **Negative Emotions** never appeared.

### FREQUENCY CHART



FEELINGS
IMAGES - AFTER

Inspired 7%
Peacefulness 9%
Reflective 9%
Feeling of accomplishment 13%
Feeling of belonging 13%
Cognitively present 14%
Openness 16%
Positive emotions 18%
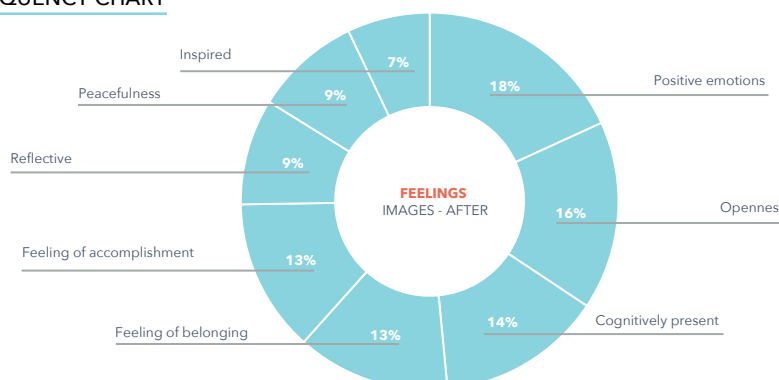
### Final categories

Also in this case, once identified all the categories for each database, they were homogenised in order to be able to conduct an analysis comparing the different databases. After this last step, the researchers came out with eleven categories of motivations.

In the following table all these categories are reported and for each of them it is reported:

- **one characteristic quote** coming from the answers of the participants to the Awareness Sessions to the question: "*what motivates you to solve business problems?*"
- **the frequency of appearance** for each kind of database

- **the total number of codes** referring to the category, found in the participants' answers considering all the databases

| CATEGORIES | QUOTES | WORDS | | IMAGES | | |
|---|---|---|---|---|---|---|
| | | Before | After | Before | After | Tot. |
| Positive emotions | «excited and empowered» | 13 | 11 | 14 | 10 | 48 |
| Instrinsically motivated | «work hard to make our dreams come true» | 17 | 17 | 10 | 4 | 48 |
| Sense of belonging | «be part of groups» | 0 | 4 | 16 | 7 | 27 |
| Creative | «wild open to everything» | 2 | 9 | 0 | 9 | 20 |
| Self-confident | «self confient, I must be sure we can solve the issue» | 5 | 2 | 2 | 6 | 15 |
| Concentrated | «I feel focused» | 0 | 1 | 7 | 7 | 15 |
| Negative emotions | «I feel as I were fighting to everybody. I feel alone and need to build a team» | 9 | 5 | 0 | 0 | 14 |
| Peacefulness | «pace full and delighted» | 0 | 0 | 7 | 5 | 12 |
| Helpful | «help others to discover reality differently» | 2 | 7 | 0 | 0 | 9 |
| Challenged | «excited about the chance to win the game» | 3 | 2 | 3 | 0 | 8 |
| Reflective | «how many things I learnt from me & from people surrounding me» | 2 | 1 | 0 | 4 | 7 |

**Tab. 5. 10:** Feelings final categories

Thanks to the data reported in the table (Tab. 5.10), it is possible to go through an analysis of all the identified categories of feelings, comparing also their frequencies according to the different kinds of Forms that the participants were subject to.

The two categories that appeared the most, with the same number of frequencies, are **Positive emotions** and **Intrinsically motivated**. The first one refers to all those positive feelings that participants said to feel when doing innovation: *"joy"*, *"happiness"*, *"satisfaction"*, *"empowerment"*, etc. The second category refers to the behaviour driven by internal rewards. Within this category, it is possible to find feelings such as: *"involved"*, *"inspired"*, *"committed"*, *"meaningfulness"*, etc.

In the second place, and quite distant from the previous two, **Sense of belonging**. It includes feelings like *"empathy"*, *"feel part of a group"*, *"share"*, *"create together"*, etc.

**Creative**, appeared as third. Within this category are grouped all those feelings related to the activity of ideating. One answer to "what do you feel?" related to this group of feelings was *"wild open to everything"*.

Another two quite used categories were **Self-confident** and **Concentrated**. The first one refers to the feeling of thinking to be able to accomplish everything you wish, trusting in your ability to achieve goals. The second category includes the feelings of being focused and dedicated to the activity that one is performing, having clear goals and objectives to be achieved.

On the contrary, less used categories were **Challenged** and **Reflective**. The first category refers to the emotion of feeling stimulated and motivated by the nature of the problem that needs to be addressed. Reflective includes those feelings referring to the action of reflecting

after or during the experience, taking a step back and learn from what has been done.

Finally, also in the case of feelings, some categories only appeared in the words or images databases. In particular, **Negative emotions** and **Helpful** only appeared in the words databases while **Peacefulness** just emerged with the images Forms.

- **Negative emotions** is the category at the opposite of Positive emotions and includes all those feelings opposed to the ones mentioned before: *"worried"*, *"anxiety"*, *"confused"*, *"frustrated"*, etc.
- **Helpful** refers to the feeling of contributing to the process and to the creation of the solution.
- **Peacefulness** includes all those feelings such as: "organised", "harmonised", "controlled", "have a clear route", etc.

The next chapter will go through all the detailed considerations about the analysis that were performed, explaining how the results found relate to the conceptual framework and the literature review made, and how they helped researchers to answer to the research question.

# DISCUSSION

**In this discussion, the reader will now go through a more extended review on what was seen in the results. This section will check out how all these new information that was obtained can add to what had already been seen in the literature review and later condensed in the conceptual framework. After that, it will also make some observations on the tools that were used in this research: the forms used and the context of the design sessions.**

In the previous chapter of results, the first step towards achieving the thesis' objectives has been uncovered with the unveiling of the databases of the forms and its analysis. The results have been described in an analytic manner by describing in detail the information obtained from the forms that the participants filled out and now this thesis will move on to see how this can fit into the existing theories that had been discussed previously.

By the final point of the previous chapter, the reader would have been left with exhaustive information regarding the sentiments of the participants. On the one hand, those that were drawn from the motivation question and, on the other hand, those from the feelings question. The different questions originate in the researchers' quest to understand cognitive and emotional engagement, respectively. These sentiments have been grouped into the different categories and these, in turn, have already been explored through the lens of:

- Frequency of codes
- Changes seen in frequency between databases
- Codes contained
- Degree of concentration/predominance of one or few categories
- New or repeated category appearance in each database

All of these results will now be extended in this discussion. The primary objective is to make use of the results to answer to the research question:

*Which are the cognitive and emotional factors that drive individuals towards engagement in innovation?*

This means discussing how the results can help to better explain the antecedents of engagement.

This is the main objective since the antecedents of engagement have been the focus of this dissertation from the moment in which the researchers saw this building block in the conceptual framework had a research gap. It must be highlighted, this was done with the purpose of contributing to the disentangling of all the building blocks in the conceptual framework (**Fig. 6.1**). As the reader might remember, as a whole, it showed the path from the antecedents of engagement towards innovation which is the main objective of the researchers.

For this first objective, the chapter will engage in an extended discussion that links the results with the conceptual framework developed in this thesis. The categories will be classified under a suitable antecedent type and distinguished between those that affect emotional and cognitive engagement. At the same time, when the effect is blurred between emotional and cognitive, the categories will be regarded as affecting engagement as a whole. This objective will be explored in the following section of **antecedents validation**.
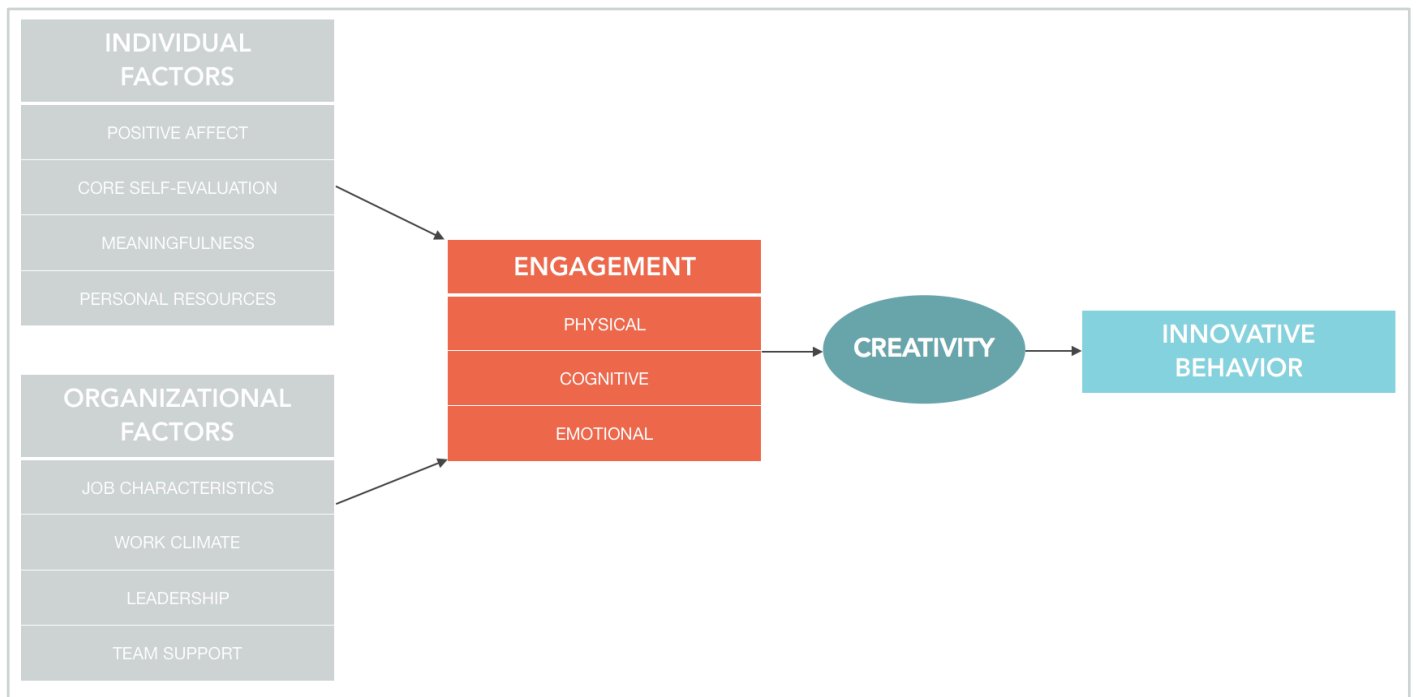


**Fig. 6. 1:** Conceptual Framework

Furthermore, this discussion will also address other objectives that stem from the tools used and the context present in performing this research. At the beginning of the research, when the forms were designed, it was decided to proceed with two types of forms that offered the chance for participants to answer with the aid of images or just with words. Discussing the effect of words/images on the exteriorization of motivations or feelings in the surveys will also be a part of this discussion.

Moreover, in taking on this study hand in hand with the company, there comes the opportunity to be able to discuss how the sessions they performed changed the perspectives of the participants. Discussing how the workshops helped or not in the exteriorization of motivations and feelings will also be a part of the discussion.

These other objectives will be explored in the following sections:
1. Differences observed in the timing of the forms: Before vs After the Design Sessions.
2. Differences observed in the type of forms : Images vs Words
3. Compound effect of Images, Words and the Design Sessions.

## 6.1
# Validation of the antecedents

In this first section, the discussion will start by tackling the core of this thesis: the antecedents of employee engagement. In the following paragraphs, the relationship between the antecedents, identified in the conceptual framework, and the resulting categories will be examined and commented. This will be done in the following order:

1. Categories found in **motivations** question will be linked, when suitable, with one of the different classes of antecedents in the model. This will be done with particular emphasis on the individual antecedents, as it has been done throughout this dissertation.

2. The same will be done with the categories found in the **feelings** question. This time, they will also be checked for similarity with the categories mentioned in the motivations question. This will be done to find those categories that have a blurry effect and that would seem to affect both cognitive and emotional engagement.

3. Considerations will be made about new particularities that were not contemplated in the model, as well as showing the relative relevance of some antecedents over others.

This section will discuss the results related to the motivation question, which was aimed towards the uncovering of the antecedents related to cognitive engagement particularly. As the reader can probably recall, the antecedents in the model that was presented in this thesis were divided into individual and organizational antecedents and four classes (**Fig. 6.2**).

In this section, links will be made between the categories and the conceptual framework. The categories will be appointed to a suitable antecedent (organizational or individual). In the particular case of the individual antecedents, the categories will be located under the sphere of one of the classes that are present under it. However, in the case of those categories that might be linked with organizational antecedents, the discussion will not go further into the classes, following the focus of the thesis on individual ones.
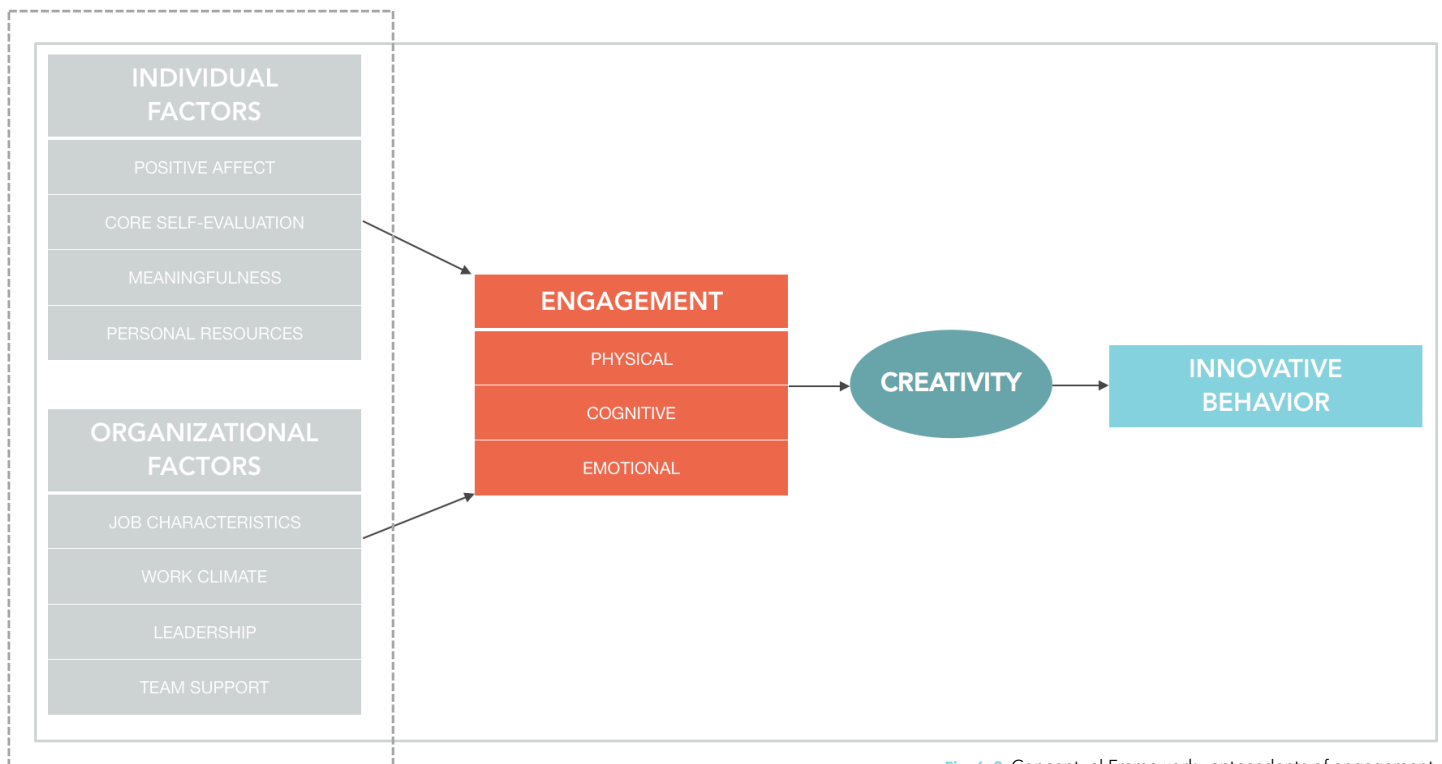
**Fig. 6. 2:** Conceptual Framework:  antecedents of engagement

Complementary, now a list with all the categories that surfaced in the results of the motivation question is presented in order of total frequency of codes (**Tab. 6.1**). These are the categories that would have an effect on cognitive engagement.

According to the definitions of the categories that have been made in the results chapter and the definitions of the antecedents' classes done in the conceptual framework chapter, the thesis will now proceed to the relationships between one and the other.

| CATEGORIES | QUOTES | FREQUENCY |
|---|---|---|
| Improving other's lives | *«make life better for others»* | 51 |
| Curiousity | *«curiosity to see and understand»* | 40 |
| Value congruence | *«do the right thing»* | 38 |
| Team work and sharing | *«pleasure to be together and have process together»* | 33 |
| Possibility of success | *«be proud of yourself»* | 22 |
| Quest for a solution | *«to find the right solution»* | 21 |
| Explore new perspectives | *«Undertand the world through different eyes»* | 15 |
| Challenge | *«I like challenges, routine makes me bored»* | 12 |
| Experience | *«learning by doing, experience is the best teacher»* | 8 |
| Business motivations | *«provide the best support to the business»* | 7 |
| Gratitude | *«recognition from receivers»* | 4 |
| Active participation | *«I like doing something with my hands»* | 4 |
| Self-reflection | *«reflect, silence, me time»* | 3 |

**Tab. 6.1:** Motivations final categories

**Categories related to individual antecedents**

Generally speaking, it could be said that inside the individual antecedents there should be included those categories that relate to individual characteristics. Under this concept, it is possible to include the personal characteristics, inherent values and motivations of the individual, how they respond to what happens in their environment or how they see themselves.

Following the description in the above paragraph, within this individual antecedent class, it would be pertinent to include the following categories that were found in the motivation question:

1. Improving Others' Lives
2. Curiosity
3. Value Congruence
4. Possibility of Success
5. Quest for a solution
6. Explore new perspectives
7. Challenge
8. Experience
9. Gratitude
10. Active Participation
11. Self-Reflection

This categories are spared of the categories related to organizational antecedents. Furthermore, they can be classified into the different classes of individual antecedents developed in the conceptual framework.

Positive affect

Under the class of Positive affect, the categories that should be included are those that match the definition that was asserted in the conceptual framework. It stated that it is an individual characteristic that

has to do with positive feelings. These are people that experience positive emotions such as joy, energy, enthusiasm, curiosity and optimism. Within the sphere of positive affect, there seems to be a fit for **Curiosity**, **Quest for a solution** and **Active participation**.

**Curiosity** because it contained codes that had to do with being enthusiastic about the unknown, with considering that there will be a pleasant experience that comes out of finding out more about something (optimism).

Following the same line of thought, **Quest for a solution** also involved in its codes a joyful exploration for ideas, for different solutions, for new creations. It recalls the enjoyment of the search, even when the path is not that clear yet.

**Active participation** is related to being in an energized state, enthusiastic, it entails a sense of movement and cognitive presence that can be related to the enjoyment of the moment.

In the three cases they offer a match between their characteristics and those described in positive affect.

As it had been seen in the literature review, the theories that support positive affect as an antecedent of engagement are compelling. In one of the main theories of engagement, the burnout model discussed in the literature review (Maslach et al., 2001), for example, the main claim is that engagement is seen as a positive feeling. These ideas were used to build the conceptual framework and they can now be seen in the results. There is a strong correlation of these theories with what was seen in the results of the motivation questions: curiosity was the second most frequent category, thereby, showing the relevance of this class, as it had been predicted by the researchers' model.

It can be said that in this research, the influence of Positive Affect on Cognitive Engagement (Motivation question) has been successfully tested and can be better described now by mentioning the categories Curiosity, Quest for a Solution and Active Participation. Within this antecedent class, there has been a predominant relevance of Curiosity when dealing with the effect on cognitive engagement.

### Core self-evaluation

Secondly, it is time to set links between the categories found and the class of Core self-evaluation following the definition that was offered in the conceptual framework. This class was related to an emotion of feeling confident about yourself, your knowledge, your skills, and your emotions. It is also related to feeling confident in taking risks, to getting to know one's inner-person, being emotionally intelligent. Considering the literature review, when taking into account engagement as a work satisfaction in the definitions of engagement (Maslach et al. 2001), the authors claimed engaged employees are those who do what they are good at. To be able to do this, they have to know what that is by discovering themselves. Under this class, there seems to be a place for the categories of **Possibility of success**, **Gratitude** and **Self-reflection**.

The first, **Possibility of success**, is put under this class since the codes showed an individual foreseeing what it can achieve with its abilities, increasing self-discovery and reassurance. Also, both gratitude and possibility of success are related to the intrinsic rewards that individuals obtain when achieving the results. These were mostly regarding others' recognition or feelings that would lead to pride or boost self-confidence. In gratitude, the codes had to do with positive feedback of the receivers of the solution, with the satisfaction of seeing the work and effort done acknowledged by others.

In the case of **Self-reflection**, this category fits into core self-evaluation because it refers solely to codes related to inner discovery, getting to

know oneself better and increasing emotional intelligence. The codes inside were referred to taking a step back and reflecting with oneself.

In the three cases they are compatible with what was described as core self-evaluation.

Now, in the case of core self-evaluation, it can be said that, even if "Possibility of success" got a fair number of codes (5th in order), it falls behind positive affect in terms of relevance. Nevertheless, when taking into account possibility of success, gratitude and self-reflection, the final amount of codes related to core self-evaluation rises considerably showing that it is still a variable that should be kept in mind.

In this case, the positive influence of Core self-evaluation on cognitive engagement (motivation question) has been successfully tested and it can now be better described with the categories Possibility of success, Gratitude and Self-Reflection. There was a predominant relevance of Possibility of Success regarding the effect on cognitive engagement within this antecedent class.

## Meaningfulness

Thirdly, this section will move on to discuss the class meaningfulness. Within this class, all the categories that agree with its definition will be placed. In the conceptual framework, based on the literature review, meaningfulness was added as a class of the individual antecedents because it depends on the values that each person subjectively assign to things. This importance or value that individuals place on what they are doing, it can be either for them or for others. It has to do with feeling a sense of purpose to be fulfilled, regardless of who it is intended to. It can be a personal purpose that can be related, for instance, to feeling challenged, or, on the other hand, feeling motivated because the task will have positive externalities on others. The categories that the researchers found to be coherent with this description of

meaningfulness were **Improving others' lives**, **Value congruence** and **Challenge**. The common denominator between these categories is that they all stem from an intrinsic meaning that the individual gives to that particular task or business problem solving activity.

The meaning can be more generally linked to the category of **Value congruence** in which individuals feel that the impact that their efforts will bring to themselves or the outside world is something they find valuable.

It can also be specifically intended to impact the world such as the category of **Improving others' lives**.

In a third case, to impact their own life when **Feeling challenged**, finding value in testing themselves to see if they can overcome the hurdles that will come ahead.

It must be highlighted that improving others' lives was mentioned in the highest number of forms. It means it is common for people to find a task important and, thus, become motivated since it would seem that individuals value highly the purpose of positively affecting others. Individuals seem to have agreed that a purpose in which most people align and which most people find valuable is that of making other people's lives better.

Meaningfulness' importance and relevance jumps out of the literature review since it is one of Kahn's antecedents in his self-role performance theory of engagement (Kahn, 1990). Furthermore, meaningfulness was then used and reinterpreted by many other authors when dealing with engagement's antecedents, thus, reinforcing its importance (Saks et al., 2006; Shuck et al., 2011; Rich et al., 2014). The expectations of finding a significant, high number of references to this antecedent were satisfied, if not exceeded, with what was observed in the results.

improving others' lives was the first category in order of frequency and value congruence the third. By adding the frequency of codes coming from challenge as well, the codes linked with meaningfulness would be by far the highest number of codes associated to a class of individual antecedents.

In this case, the positive influence of Meaningfulness on cognitive engagement (motivation question) has been successfully tested and can be better described now with the categories Improving Others' Lives, Value Congruence and Challenge. There was a predominant relevance of Improving Others' Lives on the effect on cognitive engagement within this antecedent class.

Personal resources

As an antecedent, personal resources can be related to those categories that offer motivations that would provide the individual with other forms of self-growth, development, learning and other tools or resources individuals can use to excel in life. Some of the examples that were described in the literature review and used to build the conceptual framework were extraversion, responsibility, resilience. Now, when placing the categories under this class, personal resources, the ones that the researchers found suitable were **Exploring new perspectives** and **Experience**.

The first, **Exploring new perspectives**, has to do with acquiring more empathy, understanding how others' view the problems and solutions, new ways to frame the problems. In this way it is possible to discover new opportunities or innovative solutions which is an acquired personal resource that might come in handy in the person's life.

The latter, **Experience** has to do with the personal resources one can acquire by going through a process, by experiencing it. There are some lessons that can only be learned through the experience method. The

personal resources that can come out of it are various and can only be described at the end of the path. Despite the unknown factor, not knowing what it is you will learn from the experience, it seems it still serves as a motivation for individuals. Both of them go along with the descriptions offered in the conceptual framework on personal resources.

Generally speaking, both categories were found in the middle of the table of frequency of codes. When putting both together, the amount of codes related to the class of personal resources achieve the lowest number among the classes but it is still considered by the researchers to be of relevance because it gives the possibility to channel this motivations that exist in the participants.

In this case, the positive influence of Personal Resources on cognitive engagement (motivation question) has been successfully tested and it can now be better described by the categories Explore New Perspectives and Experience. Both categories had a similar effect on cognitive engagement within this antecedent class.

## Categories related to organizational antecedents
After having gone over the individual antecedents and the different categories that relate to its classes, it is now the turn of the organizational antecedents. Since the forms were done by the employees and aimed to get their point of view, of course the majority of the categories that came out of their answers were related to the individual antecedents. However, there were some other categories that appeared and that could be more suitably placed under the organizational antecedents' category. This comes as no surprise since all of the theories that were explored in the literature review, as well as this thesis' conceptual framework took into account these factors as well. These are the categories that could be associated with factors extrinsic to the individual. Those that do not depend on their intrinsic

characteristics but on how the environment in which they are working is and what it is offered to them. In this case, the categories were two:

1. **Team work and sharing**
2. **Business motivations**

On the one hand, all the codes in **Team work and sharing** dealt with extrinsic motivations that come from sharing the path with others and contributing to achieve the goal together, it is an extrinsic motivation coming from the team they are working with. This has been mentioned repeatedly in the literature review. How the relationships of individuals in the workplace are a key factor that affects their engagement.

Further, **Business motivations** is a clear example of how the work environment and the tasks to be done can change the view of the individuals to make them more engaged. Codes were usually regarding motivations that came from tackling business problems. These are extrinsic motivations that may vary depending on which are the tasks that the organization offers employees for them to work on, if they are able to participate in solving the problems that appear in the company, etc.

With the information at hand, it could be claimed that the conceptual framework was correct in including organizational antecedents as a relevant category but more studies should be done to go deeper into the classes.

### General reflections on cognitive engagement antecedents

After having linked the categories to the antecedents and classes that this dissertation proposed within its conceptual framework, it will now move on to make a general consideration of the relative relevance of each of them.

It must be highlighted that the motivation question aimed to set a link between antecedents and cognitive engagement in particular and employee engagement in general. It will be interesting to look for the differences between these results and the ones obtained from the feelings question to check for possible clues of how these different elements of engagement behave.

Following the order of frequency of codes that has been used so far, the final order of importance of antecedents as portrayed by the analysis is exposed in the following table (**Tab. 6.2**).

| ANTECEDENT | CATEGORIES | FREQUENCY |
|---|---|---|
| INDIVIDUAL - **MEANINGFULNESS** | Improving others' lives | 101 |
| | Value congruence | |
| | Challenge | |
| INDIVIDUAL – **POSITIVE AFFECT** | Curiosity | 65 |
| | Quest for solution | |
| | Active partecipation | |
| ORGANIZATIONAL | Team work and sharing | 40 |
| | Business motivations | |
| INDIVIDUAL – **CORE SELF-EVALUATION** | Possibility of success | 29 |
| | Gratitude | |
| | Self-reflection | |
| INDIVIDUAL – **PERSONAL RESOURCES** | Exploring new perspective | 23 |
| | Experience | |

**Tab. 6.2:** Motivations conceptual framework antecedents and final categories

This section will follow the same approach as the previous one when linking categories to the antecedents and its classes. It will also seek the differences between the motivation question (cognitive engagement) and the feelings question (emotional engagement) to be able to provide clues about the different links between these two types of engagement and its antecedents

Complementary to the antecedents emerging from the literature review, now a list with all the categories that surfaced in the results of the feelings question is presented in order of total frequency of codes (**Tab. 6.3**).

According to the definitions of the categories that have been made in the results chapter and the definitions of the antecedents' classes done in the conceptual framework chapter, the researchers will now proceed to the relationships.

In this particular case, given the appearance of "negative emotions" the categories will be divided between Individual and organizational antecedents and a final reflection will be made about negative emotions which are difficult to fit into the classes of employee engagement prepared in the model.

| CATEGORIES | QUOTES | FREQUENCY |
|---|---|---|
| **Positive emotions** | *«excited and empowered»* | 48 |
| **Instrinsically motivated** | *«work hard to make our dreams come true»* | 48 |
| **Sense of belonging** | *«be part of groups»* | 27 |
| **Creative** | *«wild open to everything»* | 20 |
| **Self-confident** | *«self confient, I must be sure we can solve the issue»* | 15 |
| **Concentrated** | *«I feel focused»* | 15 |
| **Negative emotions** | *«I feel as I were fighting to everybody. I feel alone and need to build a team»* | 14 |
| **Peacefulness** | *«pace full and delighted»* | 12 |
| **Helpful** | *«help others to discover reality differently»* | 9 |
| **Challenged** | *«excited about the chance to win the game»* | 8 |
| **Reflective** | *«how many things I learnt from me & from people surrounding me»* | 7 |

**Tab. 6.3:** Feelings final categories

This section will follow the same approach as the previous one when linking categories to the antecedents and its classes. It will also seek the differences between the motivation question (cognitive engagement) and the feelings question (emotional engagement) to be able to provide clues about the different links between these two types of engagement and its antecedents

Complementary to the antecedents emerging from the literature review, now a list with all the categories that surfaced in the results of the feelings question is presented in order of total frequency of codes (Tab. 6.3).

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In this particular case, given the appearance of "negative emotions" the categories will be divided between Individual and organizational antecedents and a final reflection will be made about negative emotions which are difficult to fit into the classes of employee engagement prepared in the model.

| CATEGORIES | QUOTES | FREQUENCY |
|---|---|---|
| Positive emotions | «excited and empowered» | 48 |
| Instrinsically motivated | «work hard to make our dreams come true» | 48 |
| Sense of belonging | «be part of groups» | 27 |
| Creative | «wild open to everything» | 20 |
| Self-confident | «self confient, I must be sure we can solve the issue» | 15 |
| Concentrated | «I feel focused» | 15 |
| Negative emotions | «I feel as I were fighting to everybody. I feel alone and need to build a team» | 14 |
| Peacefulness | «pace full and delighted» | 12 |
| Helpful | «help others to discover reality differently» | 9 |
| Challenged | «excited about the chance to win the game» | 8 |
| Reflective | «how many things I learnt from me & from people surrounding me» | 7 |

Tab. 6.3: Feelings final categories

### Categories related to individual antecedents

Just as it was done in the previous section, the individual antecedents will be the starting point for the discussion of the feelings question (emotional engagement) as it is the focus of this thesis. As previously explained, individual antecedents includes those categories that relate to individual factors, including personal characteristics, what they think of themselves, how they respond to their environment.

Following the description in the above paragraph, within individual antecedents, it would be pertinent to include the following categories that were found in the feelings question (emotional engagement) :

1. Positive Emotions
2. Intrinsically Motivated
3. Creative
1. Self-Confident
2. Concentrated
3. Helpful
4. Challenged
5. Reflective

Furthermore, if these were to be classified among the classes of individual antecedents, it could be done in the following way.

#### Positive affect

Positive affect was defined in the conceptual framework as an individual characteristic that has to do with positive feelings, such as joy, energy, enthusiasm, curiosity and optimism. Within the sphere of positive affect, there is a fit for **Positive emotions** and **Creative**.

On the one hand, **Positive emotions** basically offered codes, as shown in the results, that were describing almost exactly the theory behind positive affect. In many cases the participants even used the same

words that were used to explain positive affect in the theory such as "joy" or "happiness". There was no category similar to this one in the motivation question.

On the other hand, **Creative** is very similar to the "quest for a solution" category that was found in the motivation question. It is related to the ideation phase of individuals and putting energy and enthusiasm together with curiosity to come up with new solutions and ideas to propose to the team. It involves most of the major feelings that describe people that are high on positive affect. This similarity is also backed up by the codes. Some examples to show both refer to a similar sentiment are included below:

| CREATIVE | QUEST FOR SOLUTION |
|----------|--------------------|
| *«creating»* | *«ideating solution»* |
| *«ideaful»* | *«creating new ideas»* |
| *«idea in brain»* | *«create ideas»* |
| *«explore»* | *«grow ideas»* |
| *«think out of the box»* | |

As it had happened with the motivation question (cognitive engagement), the results of the feelings question (emotional engagement) also showed the importance of positive affect as an antecedent of both types of engagement. It shows a clear correlation between the theory and the results.

In fact, positive emotions was the most frequent category of the feelings question showing the importance of including the positive affect class in the model. Taking into account both positive emotions and creative, the frequency of codes would be virtually the same amount that positive affect got in the motivation question. It would seem that this class of

individual antecedents has a significant impact both on cognitive and emotional engagement.

It can be said that in this research, the influence of Positive Affect on Emotional Engagement (feelings question) has been successfully tested and can now be better described with its categories Positive Emotions and Creative. There has been a predominant relevance of Positive Emotions on the effect on emotional engagement within this antecedent class.

### Core self-evaluation

Secondly, it follows Core self-evaluation. As explained previously, this class was related in the model to an emotion of feeling confident about yourself, your knowledge, your skills, and your emotions. Under this class, it is possible to place the categories of **Self-confident**, **Helpful** and **Reflective**.

In first place, **Self-confident** can be related to the previous section's "possibility of success" category because it involves the feeling of pride and confidence that the person gets once the problem has been solved. This similarity can be backed up by the codes. Some examples to show both refer to a similar sentiment are included below:

| SELF-CONFIDENT | POSSIBILITY OF SUCCESS |
|:---:|:---:|
| *«empowered»* | *«evolution»* |
| *«satisfied»* | *«satisfaction»* |
| *«proud»* | *«happiness of seeing results»* |
| *«confident»* | *«make the best»* |

In the second place, with **Helpful** the participants referred to the feeling of contributing to the process and the creation of a solution. It involves feeling useful and also feeling that what the person is bringing to the

table, their abilities are valuable. In this way, it contributes to increasing the core self-evaluation of the person. There is no similar category to this one in the previous section.

In the third place, in turn, **Reflective** does have a strong point in common with the "Self-reflection" category of the motivation question section. It shows that individuals see this activity as one in which they will be able to have some time to reflect with themselves contributing to the knowledge of their inner person and increasing their core self-evaluation. This similarity can be backed up by the codes. Some examples to show both refer to a similar sentiment are included below:

| REFLECTIVE | SELF-REFLECTION |
|---|---|
| «reflective» | «self-reflection» |
| «learn form myself» | «do things my-self» |
| «step back» | «me time» |
| «thoughtful» | |

The total amount of codes contained in this class when putting together the categories that were placed under it is almost half the codes that were referring to positive affect, but it is still a determinant marker of the relevance of including this section in the model of antecedents.

The relationship with positive affect is practically the same as the one that was seen in the motivation question. Both positive affect and core self-evaluation acted similarly in the two questions. It would seem that emotional and cognitive engagement are both driven in a similar way by positive affect and core self-evaluation. The difference that could be seen, though, was the introduction of helpful as a distinct category in the emotional engagement (feelings question) and gratitude as a distinct category in the cognitive engagement (motivation question).
In this case, the positive influence of Core self-evaluation on emotional engagement (feelings question) has been successfully tested and it can

now be described with its categories Self-confident, Helpful and Reflective. There was a predominant relevance of Self-confident on the emotional engagement within this antecedent class.

Thirdly, this section will discuss meaningfulness. As previously explained, below there will be the categories that relate to the value that individuals place on what they are doing, it can be either for them or for others. It has to do with a sense of purpose to be fulfilled. The categories found to be coherent with this description of meaningfulness were **Intrinsically motivated** and **Challenged**.

In both cases they can relate to a category found previously in the motivation question. For instance, Intrinsically motivated entails that there is a "value congruence" (category from motivation question) between the person and what they are doing that drives them to a final state of intrinsic motivation. This value congruence means that they find meaning in what the activity or in the purpose of the activity.
This similarity can be backed up by the codes. Some examples to show both refer to a similar sentiment are included below:

| INTRINSICALLY MOTIVATED | VALUE CONGRUENCE |
| --- | --- |
| *«making a change»* | *«smake a difference»* |
| *«purposeful»* | *«purpose»* |
| *«make dreams come true»* | *«doing the right thing»* |
| *«inspired»* | *«inspiration»* |

On the other hand, challenged can be associated with "challenge" found before. Both of them express the same sentiment, the fact that individuals find meaning, find a purpose in the effort they do towards testing themselves with a seemingly difficult task. This similarity can be backed up by the codes. Some examples to show both refer to a similar sentiment are included below:

| CHALLENGED | CHALLENGE |
|---|---|
| *«challenged»* | *«schallenge»* |
| *«educated»* | *«apply my knowledge and skills»* |
| | *«feel challenged»* |

It must be highlighted that intrinsically motivated was the second to appear in number of frequency in the feelings question. The two categories found under meaningfulness when they are put together bring along a frequency number that is close to half of the frequency that was obtained by meaningfulness in the motivation question. It remains, however, to be important and relevant also in the feeling question. It would seem that meaningfulness has an enhanced performance as an antecedent of the cognitive engagement (motivation) compared to emotional engagement ( feelings).

In this case, the positive influence of Meaningfulness on emotional engagement (feeling question) has been successfully tested and can now be described with the categories Intrinsically motivated and Challenged. There was a predominant relevance of Intrinsically Motivated on emotional engagement within this antecedent class.

Personal Resources

As previously described, personal resources can be related to those categories that offer motivations that would provide the individual with other forms of self-growth, development, learning and other tools or resources individuals can use to excel in life. Some of the examples that were described in the literature review and used to build the conceptual framework were extraversion, responsibility, resilience. Under this class, personal resources, the category that was found suitable was **Concentrated**. It had to do with a state of focus and dedication to the activity the individual is performing. In this case it

could be regarded as a personal resource that continues to be practiced and enriched by continuing to behave in this manner in different projects. It may lead to responsibility or resilience, other characteristics that were associated with personal resources in the conceptual framework. This time the category, concentrated, does not seem to be related to any of the categories that were proposed within personal resources in the motivation question.

The amount of codes related to the class of personal resources turn out to be, once again, the lowest number (even lower than the last time) but it is still considered by the researchers to be of relevance because, once again, it gives the possibility to channel this feelings that exist in some participants.
In this case, the positive influence of Personal resources on emotional engagement (feelings question) with its category Concentrated has been successfully tested.

### Categories related to organizational antecedents

Now, this thesis turns to the organizational antecedents and the linking of the results. These are the categories that could be associated with factors extrinsic to the individual. Those that do not depend on their intrinsic characteristics but on how the environment in which they are working is and what it is offered to them. In this case, the categories were two:

1. **Sense of Belonging**
2. **Peacefulness**

On the one hand, the codes in **Sense of belonging** dealt with extrinsic antecedents that have to do with the company making you feel like you belong. This could be on the level of the team, with the help of the manager or the general structure of the company. It is a clear organizational antecedent and it could be said that it has some parts in

common with "teamwork and sharing" (the category from the motivation question). Both of them had similar sentiments in the codes that stressed the feeling of being happy with the people with whom they work.

On the other hand, **Peacefulness** is a clear example of how the work environment can change the view of the individuals to make them more engaged. Codes were usually regarding order, clear instructions and objectives and other components of company culture. These are extrinsic antecedents that may vary depending on the top management and the companies' policies, for example.

When taking both categories together, the amount of codes that were related to the organizational antecedents were almost the same weight it had in the previous motivation question. It would seem that the organizational antecedents play a similar role in driving cognitive and emotional engagement.

### Category of Negative emotions

In the feelings question, there was a surprise regarding the fund categories. A category that had not been foreseen appeared. This was **Negative emotions** and it was conceived as the opposite of positive emotions. The codes under that category had to do with feelings of being worried, anxious, frustrated, etc. This appearance rings a bell of similarity with the theories that have been seen in the literature review regarding job resources and job demands. This theory regarded that if the individual does not have enough resources (personal but also offered by the company) to cope with the job demands, it can lead to frustration and disengagement. However, this idea met opposition from other authors claiming that demands can enhance the engagement of individuals who are plentiful of resources.

It is important to find out where the line can be drawn between demands that push engagement and demands that lead to

disengagement and negative feelings that do not inject adrenaline to the individual, but frustration leading to disengagement. The value of figuring this out would be useful to be able to channel the 14 codes that were related to negative emotions (almost the same as those that were related to personal resources) in the hope of including this wild variable into the conceptual framework and the model presented in this thesis. The amount of codes is comparable to the amount of the personal resources category in feelings since it was almost the same amount.

### General reflections on emotional engagement antecedents

After having linked the categories to the antecedents and classes that this dissertation proposed within its conceptual framework, it will now move on to make a general consideration of the relative relevance of each of them.

Following the order of frequency of codes that has been used so far, the final order of importance of antecedents as portrayed by the analysis done for emotional engagement is presented (**Tab. 6.4**).

| ANTECEDENTS | CATEGORIES | FREQUENCY |
|---|---|---|
| INDIVIDUAL – **POSITIVE AFFECT** | Positive emotions | 68 |
| | Creative | |
| INDIVIDUAL – **MEANINGFULNESS** | Intrinsically motivated | 56 |
| | Challenged | |
| ORGANIZATIONAL | Sense of belonging | 39 |
| | Peacefulness | |
| INDIVIDUAL – **CORE SELF-EVALUATION** | Slef-confident | 31 |
| | Helpful | |
| | Reflective | |
| INDIVIDUAL – **PERSONAL RESOURCES** | Concentrated | 15 |

**Tab. 6.4** Feelings conceptual framework antecedents and final categories

## MOTIVATIONS AND FEELINGS

This dissertation will now move on to make a general comparison of the relative relevance of each of the classes within the antecedents. The list below shows the antecedents in order of frequency after putting together all the categories that belonged to that class of antecedent. It is divided between what was obtained regarding cognitive and emotional engagement.

| | COGNITIVE ENGAGEMENT | EMOTIONAL ENGAGEMENT |
|---|---|---|
| ANTECEDENTS | FREQUENCY | FREQUENCY |
| INDIVIDUAL – **MEANINGFULNESS** | 101 | 56 |
| INDIVIDUAL – **POSITIVE AFFECT** | 65 | 68 |
| ORGANIZATIONAL | 40 | 39 |
| INDIVIDUAL – **CORE SELF-EVALUATION** | 29 | 31 |
| INDIVIDUAL – **PERSONAL RESOURCES** | 23 | 15 |

In the big picture, both seem very similar. Perhaps meaningfulness could be associated more strongly with cognitive engagement but in the other cases not only were they similar in the total amount of codes but also in the relative position between the different antecedent classes.

It must be highlighted that the feelings question aimed to set a link between antecedents and emotional engagement in particular and employee engagement in general. Different comparisons with the motivation question have been seen throughout the section between the emotional and cognitive engagement antecedents

It seems that both cognitive and emotional engagement have similar drivers when putting together the categories that resulted from the coding of the surveys since most of the antecedent' classes remained with similar frequency in both cases when joining together the corresponding categories with the literature review-driven classes and classes. The most interesting differences will be summarized below.

At the global level:

- **Meaningfulness** with regards to the cognitive engagement almost doubled the frequency of meaningfulness in emotional engagement. It would seem that, even if in both cases it is one of the most relevant antecedents that there is, this is relevance is enhanced a lot in cognitive engagement.

- The appearance of **Negative emotions** as an "antecedent" of emotional engagement (or disengagement) which did not appear in the cognitive engagement question. As it has been discussed this might have to do with the concepts discussed in the literature that deal with job demands as a mediator only of emotional engagement.

- Within **organizational antecedents**, some of them could be associated together between the different types of engagement such as sense of belonging and teamwork and sharing which have a similar meaning. However, when dealing with cognitive engagement, business motivations was placed under it and it only appeared linked to cognitive, while peacefulness only appeared in the organizational antecedents of emotional engagement.

At the class level, within the individual antecedents, this dissertation will now review which were those categories that appeared only in cognitive or emotional engagement and that could not be associated on the terms of similarity to a category of the other type of engagement, as it was done in the previous paragraphs when posing similarities between categories of cognitive and engagement.

In the table below (Tab. 6.5), the antecedents that have been validated for engagement as a general concept, for cognitive and emotional engagement can be appreciated classified in the classes of the model presented in the conceptual framework.

From this table, the contribution of the results to the theory can be seen clearly.

First of all, it allows the community to be able to single out categories that relate only to cognitive or emotional engagement.

Secondly, it shows the categories that influence both cognitive and emotional engagement. At the same time, it continues to add depth to the descriptions of the classes of individual antecedents explained in the model. With the aid of the newly found categories, it is possible to have a better understanding of the individual factors that lie within each of the classes of positive affect, core self-evaluation, meaningfulness and personal resources.

| INDIVIDUAL ANTECEDENTS | COGNITIVE ENGAGEMENT | EMOTIONAL ENGAGEMENT | BLURRY EFFECT (Cognitive ~ Emotional) |
|---|---|---|---|
| POSITIVE AFFECT | Curiosity | Positive emotions | Quest for solution ~ Creative |
| | Active participation | | |
| MEANINGFULNESS | Improving others' lives | | Value congruence ~ Intrinsically motivated |
| | | | Challenge ~ Challenged |
| CORE SELF-EVALUATION | Gratitude | Helpful | Possibility to success ~ Self-confidence |
| | | | Sel-reflection ~ Reflective |
| PERSONAL RESOURCES | Exploring new perspectives | Concentrated | |
| | Experience | | |

Tab. 6.5: Individual antecedents and final categories

# Interpretation
# of the results

Until now, the reader has seen a detailed presentation of the results and how they fit into the conceptual framework that had been proposed. This initial approach was done in a practical manner, focusing on the allocation of the categories that came from the feelings and the motivations question in the different individual antecedents and checking for coherence or surprises that might come from the answers of the participants.

Having done this successfully, the time has come for the authors to offer a potential explanation of why the results might have turned out this way. To dive into the concept of cognitive and emotional engagement and expand on the characteristics that drive a person towards them. As previously explained, some of the categories were shown to impact only on cognitive or only on emotional engagement. In the following paragraphs, the authors will give their interpretation of why the categories impacted on one or the other component of engagement. It will be based on the literature review, the results and its relation with the conceptual framework and in this way the authors want to formalize their contribution to the literature on cognitive and emotional engagement.

This part will consist of three steps. In the first one, the reader will find the reasons behind the appearance of the categories of cognitive engagement. In the second, the same will be done with emotional engagement and finally, some observations will be done on those that impacted both.

This first part will consider those categories that appeared when looking for the antecedents of cognitive engagement and explain the reason of this relationship in the light of the cognitive engagement theory. The categories that appeared were: curiosity, active participation, gratitude, improving others' lives, exploring new perspectives and experience. The reason why each one affects cognitive instead of emotional engagement will be explained by going over the behaviours of cognitively engaged individuals and showing how they are coherent with the categories.

Cognitive engagement has been regarded as the primary function in the engagement process (Joo & Shuck, 2016) because it has to do with setting the mind to work. It can be assumed that it is the basic type of engagement that is expected from an employee. The cognitive engagement stems from employees' rational perspective and experience of their work (Joo & Shuck, 2016).

## Exploring New Perspectives and Experience

Firstly, Cognitive engagement determines how willing and able a person is to take on the tasks at hand (Rotgans & Schmidt, 2011). That is to say, when skilful individuals are cognitively engaged they put effort into what they are doing, persisting to get it right (Rotgans & Schmidt, 2011). This behaviour is coherent with the categories of Exploring new perspectives and Experience, two situations in which people need to overcome obstacles, problems or difficulties involving effort and persistence. Also, both situations involve newness, individuals have to use their cognitive abilities to figure out "new perspectives" or go through a new "experience". There is no set of rules or path to follow to achieve these activities, meaning they cannot be disengaged ,but engaged instead. This responds to the definition of cognitive disengagement which involves following an automatic approach, not

questioning what is supposed to be done and performing roles as if following a script. (Kahn,1990; Van Maanen & Schein, 1979).

These two categories are further consistent with cognitive engagement because they represent situations in which individuals are connected with work (Kahn,1992). They are focused (Rich et al.,2010) on the new perspectives or on solving the problems that arise in an experience. This also allows them, depending on the level of autonomy that they possess (Rotgans & Schmidt, 2011), to display their creativity (Kahn,1990).

The authors' interpreted these two categories as those in which the mind produces new knowledge, ideas, solutions when it is focused. It represents individuals being connected with work (Kahn, 1992).

## Gratitude and Improving Others' Lives

In second place, this part will review the concepts that have been associated with cognitive engagement and that relate with the categories of gratitude and improving others' lives. In this way, the authors pretend to extend an explanation on why these categories appeared to impact cognitive instead of emotional engagement.

Cognitive engagement has been repeatedly associated with a state of mind which is vigilant, attentive and aware (Kahn,1990). Following the same line, in gratitude and improving others' lives, individuals are cognitively vigilant and concerned about achieving the objectives of the project in which they are involved. The authors interpret that the projects in which the participants of the research are usually involved have, among its objectives, the aim of improving in some degree a "final user's" life by solving the problem at hand and leading to gratitude from them. This state of cognitive vigilance involves taking care of all the considerations that are suitable, including the final beneficiaries and all other stakeholders.

The attentive state of mind characteristic of cognitive engagement (Rich et al., 2017) that draws the mind to continuously take into account all the stakeholders is clearly portrayed by Kahn (1990). Kahn recalls a scuba diving coach who was cognitively engaged when diving with her students describing she was vigilantly aware of divers, the weather and marine-life. Here it can be clearly seen how cognitive engagement means to take all the considerations that are pertinent while doing the work, including the aim of improving somebody's life by solving the problem at hand and, consequently receiving the gratitude from them.

The authors' interpreted these two categories as those in which the mind is attentive and sensitive so that it takes all the considerations that are deemed suitable so that the objectives can be reached.

### Curiosity and Active Participation

In the third place, the authors will explain why curiosity and active participation appeared as categories impacting cognitive engagement instead of emotional by explaining the coherence between the categories and the definitions that exist of this component of engagement.

People who are regarded as cognitively engaged display how they think (Kahn,1990), they show themselves to others. This process involves curiosity and active participation. On the one hand, curiosity to spark the thoughts on how the project could be changed with their contribution, with the ideas that they have in mind if they were used. On the other hand, active participation because it involves showing these inner thoughts, expressing the ideas and participating (Rotgans & Schmidt, 2011). These are all behaviours associated with high cognitive engagement.

Moreover, individuals, when they experience cognitive engagement, perform roles based on internal interpretations of what is being done

instead of following someone else's opinion (Van Maanen & Schein, 1979), they are present (Rich et al., 2010) and "actively participant" to share these internal interpretations with others. Kahn(1990), in fact, describes the behaviour of someone cognitively engaged as someone questioning others' ideas and sharing visions about what is being done. Xr, curiosity's link with cognitive engagement could also be explained by the fact that cognitively engaged people think about the job also outside from work, they relate their jobs with their lives which entails a high degree of curiosity about the activities that take place in their daily lives (Brown & Leigh, 1996).

The authors' interpreted these two categories as those in which the mind is present and responsive to what is happening in the team by actively participating and being curious enough to spark ideas on how they could change what is being projected by the team. It represents cognitively engaged individuals which open themselves to others (Kahn, 1992).

## CATEGORIES IN EMOTIONAL ENGAGEMENT

This first part will consider those categories that appeared when looking for the antecedents of emotional engagement and explain the reason of this relationship in the light of the emotional engagement theory. The categories that appeared were: positive emotions, helpful and concentrated. The reason why each one affects emotional instead of cognitive engagement will be explained by going over the behaviours of emotionally engaged individuals and showing how they are coherent with the categories.

Emotional engagement has been regarded as a function in the engagement process that comes after the cognitive engagement (Joo & Shuck, 2016) because it has to do with an extra that is difficult to explicitly request or measure from an employee but is very much appreciated. It has to do with connecting one's behaviour with the

"heart's" feelings. The emotional engagement stems from employees' affective (or emotional) appraisals of their work experience (Fugate, Harrison, & Kinicki, 2011).

## Helpful

The authors will now make their interpretation of why helpful appeared to have an impact on this type of engagement in particular. Emotional engagement has been, as previously explained, related to connecting to one's feelings. In the particular case of helpful, it originates from connecting with what others make one feel, to be empathically connected to others (Kahn,1990). The immediate logical conclusion from this idea is that someone will be helpful if they are emotionally engaged since they are connected with their empathy (Kahn,1990) and rise to the occasion when they feel someone is in need of help.

This is further coherent with Kahn since they regard affective reactions as a main element of emotional engagement. The list of coincidences with Kahn's theory goes on and on. When they describe the behaviour of emotionally engaged people, they describe them as providing criticism or feedback to others in a gentle way and in private, working with other collaborators and exhorting others to bring on their ideas, encouraging creativity from the team members. All of these are situations in which the individual would feel "helpful".

The authors' interpreted this category as one in which the behaviour is responding to the external stimuli that translates into empathy. In fact, taking action and being helpful when the person feels that somebody is having a problem means displaying its emotional engagement. It represents emotionally engaged individuals being connected to their colleagues (Kahn, 1992).

## Concentrated

In the case of concentrated, the relationship with emotional engagement requires more context and is not as evident as with helpful. It still involves a personal connection with feelings but this time, instead of dealing with what others make one feel, it relates to being connected with the feelings coming from within (Zigarmi et al., 2009). This connection with one's own feelings and also with an inherent need to maintain happiness plays the role of meeting the emotional demands of the person for a more complete and authentic performance (Kahn,1990). In this context, concentration arises. All the elements are set for individuals to be able to concentrate on what they are doing, because they can concentrate and work in a natural way that expresses the way they feel and behave according to their emotional needs. In fact, when Kahn describes emotional disengagement they relate to emotional disconnection, displaying little of how you feel and other concepts that recall a state of mind of internal battle and conflict that could never allow the person to focus and concentrate. Following Kahn's antecedents (1990), it would mean the person is unavailable to concentrate, it is devoting its personal resources to resolve other internal crossroads.

The authors' interpreted this category as one in which individuals are opening up to themselves and follow a coherent behaviour with what they feel. In fact, being able to experience concentration towards the process means displaying its emotional engagement, a state of genuine interest and emotional availability. It represents emotionally engaged individuals basic activity: feeling (Rich et al., 2010).

## Positive emotions

With this final category, the explanation should be the most simple one. It represents the result of the previous two categories coming together. When people are open to themselves and what they need and are also able to connect with others, it can be said that they are emotionally

engaged or ,paraphrasing Rich's (2010) words, fully integrated. In fact, Rich continues to describe emotional engagement by saying it has to do with an emotional desire to fulfill subjective psychological needs. This can be related to the psychological need to behave in coherence with what one feels. Consequently, emotional engagement is described as bringing along a satisfaction (Rich et al., 2010) that will lead to positive emotions (Locke, 1976). In other words, positive emotions are a direct consequence of individuals' coherence between how they feel and how they act. This category represents emotionally engaged individuals feeling, connecting and therefore, integrated (Rich et al., 2010).

## CATEGORIES IN BLURRY EFFECT, AFFECTING BOTH EMOTIONAL AND COGNITIVE ENGAGEMENT

Under the column of blurry effect, many categories were found which had appeared in the results as having an effect on both emotional and cognitive engagement.

As Kahn explained in his 1990's paper, the engagement concept is a continuum in which people can use "*varying degrees of their selves, physically, cognitively and emotionally, in work-role performances*" (p. 694).

For the sake of clarity, the authors have explained the two extremes that were found in the results to show what would make one category appear to influence emotional or cognitive engagement. In the case of those that are blurry, what can be said is that they are a mixture of both, probably activities or behaviours in which people need to use their minds and listen to their hearts at the same time. Just to put together a basic example, an observation will be made on the categories reflective and self-reflection. Of course, this will not go to the depths of how much cognitive and how much emotional engagement is related to the category because it is still, as previously explained, blurry. The

interpretation of the authors in the case of these two categories which are related to the activity of reflecting is that it could be coherent with cognitive and emotional engagement. On the one hand, it can be related to the cognitive vigilance that involves producing new ideas and solutions by putting the mind to work. A moment of reflection could be useful to organize one's own ideas, come up with solutions (cognitive) but at the same time it would be related with emotional engagement since it offers some time alone and the possibility of a more intimate contact with one's feelings and latent needs that the person may not have realized yet.

To conclude, it can be said that in these blurry categories, the person might need to express their own authentic self and be in contact with its emotions to be able to succeed in the thinking, cognitive process that is requested from them in the usual order of work.

THEORETICAL RELEVANCE

In this section, the authors will discuss the main ideas that came out of this study and explain how they relate with the main theories of the literature that were analysed. As previously explained, the basis for the thesis work on engagement were Kahn's (1990) theory on the three components of engagement and Maslach's (2001) theory of burnout.

On the one hand, according to the findings of the thesis, the authors agree with Kahn's idea of an engagement which is composed of different elements that can combine in infinite ways and to several degrees in a continuum that goes from disengaged to fully engaged. As it has been shown, when the categories appeared to affect one or the other type of engagement, it was extensively coherent with the descriptions Kahn had brought up regarding how emotional or cognitive engagement were. Consequently, this study is also in accordance with the descriptions and the choice of the different elements that Kahn had selected when defining engagement. At the same time, though, the authors wanted to go further and not only state general antecedents that affect engagement as a whole, as Kahn did, but enter the specifics to see if some categories within each antecedent could be related to cognitive or emotional engagement directly. This has been a major contribution of this study to enrich Kahn's theory and the numerous contributions that were received by this theory in the subsequent years (Rich et al., 2014; Saks, 2006; Shuck, 2010). In addition to this, when taking into account engagement from the perspective of the organization as we have seen in the descriptions of the categories related to cognitive engagement, cognitive

engagement would seem to be the basic type of engagement upon which others can build upon. This theory has been supported by others already (Joo & Shuck, 2016; Macey & Schneider, 2008) and it would be interesting to continue researching down this line to see the different relationships between one type of engagement and the next, to understand if there is an order to follow on the path to become fully engaged.

On the other hand, when considering Maslach (2001) and their theories on disengagement or burnout, the results of this study have found that it is convenient to keep researching on this topic since there was an appearance of concepts tied to disengagement such as negative emotions. The authors agree with Maslach in stating the importance of research regarding disengagement. To this, the authors can contribute by saying that it would be convenient to start by studying the cognitive disengagement which is the one that would prevent workers from developing their most basic roles which is putting their mind to work (in most cases).

## MANAGERIAL RELEVANCE

In this section some observations will be done to explain in which way these results and this study can be applied by a manager, how can it be useful for a manager who reads it. The different ideas that a manager might draw from this thesis have to do with the difference between cognitive and emotional engagement and the categories that relate to one or the other.

Firstly, a manager could find useful the fact that cognitive engagement and emotional engagement have been separated and their categories explicated because it allows a manager to choose which one he/she wants to focus on improving. This could be useful given that specific roles in the company might need more cognitive engagement or emotional engagement. In that way, for example, a manager that is

working with a team of designers who need to be in touch with their empathic view to understand the usability of a product could use the categories under emotional engagement to understand how to foster his/her team to perform better. This could be replicated by making a classification of the different roles that people take on inside a company.

Secondly, following the same line of thought, now a manager can now which are the categories that have a blurry effect on both cognitive and emotional engagement. When it is time to design an intervention or a new company policy to increase the engagement of the employees these categories could be said to have a more extended effect given that they affect both types of engagement.

Still further along this line of thought, the same idea could be applied for disengagement. Now that the manager has a clearer idea of what each type of engagement represents, they are able to tell which is the type of disengagement an employee might be going through. In this way, it is much easier to think of ways to mentor or coach the employee out of disengagement by having a clearer and more narrow idea of what it is that could change that negative attitude.

In the specific case of The Company that the researchers worked with, they now have a curated database that shows extendedly the different ways in which those employees engage cognitively and emotionally. These forms and Design Sessions could also be performed by other companies and use this information to make work teams or project teams that are balanced with people more prone to one or the other type of engagement or this information could also be used to go ahead and design policies that address their employees directly.

# 6.4
# Secondary objectives

## DIFFERENCES OBSERVED IN THE TYPE OF THE FORMS: IMAGES VS WORDS

In this section, the thesis will move further away from the topic of engagement to make some other considerations on the methodology and design of this research. It will start by talking about the other objectives of this thesis. Among these, there was the testing of the effect of the different types of forms (images vs. words) on the output and the results. The effect of the change in forms will be taken into account first with a generalist view and then move on to the particulars of the categories.

Firstly, starting from the numbers, there will be a general comparison of the total amount of codes and categories that were obtained from the participants in the different questions and with the different forms. This will be a measure of how much the participants managed to exteriorize with the forms and how varied the exteriorization was.

On the other hand, the focus will be more particular to discuss the single categories that appeared in one form or the other and explore the reasons why this might have happened. This will be a measure of the different relationships between the words or images and particular categories.

## GENERAL COMPARISON

This part will start from the more general considerations. It will be taking into account the forms that regarded cognitive as well as emotional engagement. The following table shows the total amount of categories

that were found in each type of form to see if there was more variety in the answers using the images form or the words form.

The categories that appear in the table are those with a code frequency over 2 so that relevant categories are taken into account without small variances of 1 or 2 codes that may answer to particularities of just one individual. This is to be able to make an accurate assertion about the power of images.

| | COGNITIVE ENGAGEMENT | | | | EMOTIONAL ENGAGEMENT | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | BEFORE | | AFTER | | BEFORE | | AFTER | |
| | Words | Images | Words | Images | Words | Images | Words | Images |
| NUMBER OF «RELEVANT» CATEGORIES | 6 | 8 | 7 | 10 | 5 | 6 | 6 | 8 |

As it can be seen in every step of the way, the images form managed to pull out more of these significant categories from the participants than the words form. When taking into account the number of categories, this thesis intends to show the variety of new thoughts or ideas that the images could spark in the participants. This is in accordance to what was previously stated in the methodology chapter where the researchers explained the theories that backed up the idea. It would seem that the results agree with the fact that images can be used as metaphors to favour the externalization of tacit knowledge that, even if it exists in people, it is hard for them to communicate.

To continue the discussion, another table shows the total number of codes that were collected from the forms. The table will compare the amount that was collected separating those that come from the images and the words form.

| | COGNITIVE ENGAGEMENT | | EMOTIONAL ENGAGEMENT | |
| --- | --- | --- | --- | --- |
| | Words | Images | Words | Images |
| NUMBER OF CODES | 97 | 165 | 112 | 111 |

In this second table , instead of looking at the variety of the answers, the focus was moved to how many codes and different sentiments were collected from the answers. This can also be associated to aiding the interviewees in formalizing and communicating their inner thoughts. A more lengthy, richer description might show an ease to explain it or describe it in different manners, even if the category remains the same.

A surprising set of results came about with this second comparison. In the question regarding emotional engagement, the number of codes when using both words and images was practically the same. The images do not seem to have a prominent effect when discussing feelings. On the other hand, when dealing with cognitive engagement, the images form pulled out a number of codes which exceeds in approximately 70% the number of codes from the words form.

The question that arises is to understand why this happens. To answer this, the researchers can think of two possible options. The first one is that maybe there is a difference between the images effect depending on the type of question. When images are used as metaphors to ignite the participants in recalling tacit knowledge, the output might be different for motivations and feelings. One valid supposition is that an image is better to interpret a metaphor of a motivation than it is to interpret a metaphor of a feeling. A second option considered by the researchers was that maybe there were more images that offered metaphors of motivations instead of feelings. This could have been a product of the choosing of the images. The images were chosen based on the words appearing in the descriptions of a number of cosplays that defined 12 types of innovators. There might be a possibility that these descriptions focused on the motivations or the actions of these 12 types of innovators rather than the feelings, transferring it to the selection of the images and provoking an imbalance in the images that act as a metaphor of feelings. This might become clearer in the following

paragraphs when dealing with the categories that surfaced in each case.

This part will go into the particulars of the different categories that appeared thanks to the images or to the words in the hope that there might be some relationship between this and the previous general comparison. There will be a table showing the different categories that appeared in the words or in the images forms and not in the other one or very poorly in the other type of form.

Once again, there are some cases in which very small variances were observed but not considered in the table. For example, in one case, one category appeared with a frequency of 3 and 2 in the forms with words and of 3 and 0 in the images forms. It cannot be said that it is predominantly in one or the other taking into account the small size of the sample so they have been spared.

| | COGNITIVE ENGAGEMENT | | EMOTIONAL ENGAGEMENT | |
|---|---|---|---|---|
| | Words | Images | Words | Images |
| **CATEGORIES** | Business motivations | Teamwork and sharing | Negative emotions | Concentrated |
| | | Active partecipation | | |
| | Gratitude | Self-reflection | Helpful | Peacefulness |
| | | Explore new persopectives | | |

In the table, it can be appreciated that the Images were not only more effective in pulling out more information as it had already been stated in the previous section but it also helped to receive responses that dealt with the innovation process and the individual factors which were the basis of the research and upon which the images were scouted. As it has been previously explained, the images were chosen based on the words that described different cosplays of innovators triggering the participants to recall a variety of thoughts in this regard. In the table we can see that images helped the research since the output was

regarding "active participation", "self-reflection", "concentrated", "peacefulness" and other concepts that regard individual factors in innovation or the process of innovation. In the words form, for example, the participants came up with business motivations, in motivations questions, that have to deal with organizational aspects more than individual; or, in feelings questions, negative emotions (anxiety, worry, confusion, etc.) that is a feeling completely at the opposite of the ones that have to deal with engagement that are positive emotions (joy, happiness, empowerment, etc.).

Another point that can be appreciated and had already been described previously is how images were more useful in the recalling of motivations. In this table we can see which were the categories that appeared in that case.

### DIFFERENCES OBSERVED IN THE TIMING OF THE FORMS: BEFORE VS AFTER THE DESIGN SESSIONS

The last observations from the discussion will be regarding the changes that were seen in the categories before and after participating in the design sessions performed by the company.

Firstly, the table shows how many categories were present before and after to display clearly the differences that arose in the results. Once again, with the purpose of being able to focus on the effect of the design sessions, comparing the before and after, the categories with small presences of a frequency of codes of 2 or below have been spared.

| | COGNITIVE ENGAGEMENT | | | | EMOTIONAL ENGAGEMENT | | | |
|---|---|---|---|---|---|---|---|---|
| | BEFORE | | AFTER | | BEFORE | | AFTER | |
| | Words | Images | Words | Images | Words | Images | Words | Images |
| NUMBER OF «RELEVANT» CATEGORIES | 6 | 8 | 7 | 10 | 5 | 6 | 6 | 8 |

In the table, the reader can appreciate how, in every case, the number of categories increased between the before and after. It would seem that the design sessions were successful in helping participants exteriorize what their motivations and feelings were. Throughout the experience of the sessions the participants were probably triggered by some of the discussions that took place and helped them recall new feelings or motivations.

To be able to understand more in depth what it was that the design sessions woke up from within the participants, the table below shows the changes that were seen between the before and after sessions in the different types of forms and questions.

| | COGNITIVE ENGAGEMENT | | EMOTIONAL ENGAGEMENT | |
|---|---|---|---|---|
| | Words | Images | Words | Images |
| **NEW CATEGORIES THAT APPEARED AFTER** | Teamwork and sharing | Challenge | Sense of belonging | Creative |
| | | Experience | | |
| | Quest for solution | Active participation | | Reflective |
| **CATEGORIES THAT WERE LOST AFTER** | Challenge | Self-reflection | | Challenged |

Two observations can be done from this table. The first one is that there seems to be a parallelism between the new categories that appeared after the sessions and the different stages of a generic innovation project. There is a clear relation between the topics that the design sessions discussed and the following triggering of participants' self-discovery and exteriorization. For instance, an innovation project would have a phase that required "creative" attitudes and "active participation" in the "quest for a solution". The design sessions also probably mentioned that the experience involved teamwork, trust and cohesiveness of the people that are working together. All these topics that were probably discussed, show their impact in this table which

shows that they were not present in the participants' forms of "before" but they appeared in the after.

The second observation that can be done is that "reflective", "self-reflection", "challenge" and "challenged" appeared and disappeared depending on the type of form and question. This is an odd behaviour that was not expected but the researchers assume it is related to the discussion and a better understanding of these topics from the side of the participants. It is a fact that these two categories suffer changes in the way they are perceived by the people that take part in the design sessions. This may well be because these are the categories that are discussed or experienced during the sessions. The bottom line of this discussion and experience probably has a different effect on each individual depending on their original thoughts regarding what these concepts mean or how these concepts played a part in the design and innovation process. What we can assure is that there the design sessions bring about change in the perceptions of challenge and reflection from the individuals participating.

## COMPOUND EFFECT OF IMAGES, WORDS AND THE DESIGN SESSIONS

There were some categories in which there was a compound effect that would be interesting to describe as an interesting fact for the reader. At times, some categories did not appear in the images forms or the words forms or before or after. But there were some other times in which categories appeared in some of these but not all and there were four categories that called the attention of the researchers. These were Teamwork and sharing, quest for a solution, value congruence and sense of belonging. In these four categories a similar pattern was observed. In the four of them the pattern was the following:

- They did not come up in the answers of the words form from before the sessions
- They did appear in the Images forms from before and after

This could mean that images aided or triggered the individuals recalling of answers containing these particular categories. But now comes the interesting part. Nevertheless, they did come up in the words forms from after the session. It seems to be that the design sessions managed to counteract the difference that has been previously explained between the exteriorization with images vs words and even in the case of words with the help of the design session, it was possible for the participants to recall these categories in their answers. If these topics take part in the programme of the design sessions, it could be a positive sign that they manage to help in the exteriorization of tacit knowledge of the participants as well.

# CONCLUSIONS

**This final chapter wants to finalise the reasoning about what engages people in innovation, exposing the value of the overall findings and mentioning the contributions that this research will bring, both to the academic and managerial communities. In particular, because of the strong collaboration with The Company in performing this action research investigation, one paragraph will be also dedicated to the specific benefits perceived by them. Finally, the chapter will also go through the limitations of this study and the opportunities for future research.**

In this thesis, the following contributions have been discovered:
- A **classification of the individual antecedents of engagement** has been proposed, then tested and validated.
- Within each class of individual antecedents, a better description was offered by adding **new "categories"** that describe the different classes of individual antecedents.
- The components within the individual antecedents that have an **effect on cognitive engagement or emotional engagement** or a blurry effect on both have been singled out.

In the following sections, there will be a description of how these discoveries can contribute, first, to the literature and the scholar community in getting a clearer idea of the antecedents of engagement. And, then, to the managerial environment discussing how a manager can improve its practices by reading this thesis.

Finally, the benefits of this study will be also highlighted focusing on those recognised by the company that collaborated to the action research investigation.

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# Research value

The following paragraphs will explain how the discoveries of the dissertation that were mentioned above can contribute to the existing studies.

In the literature review, different perspectives coming from many researchers were found regarding the antecedents of engagement (Kahn, 1990; Maslach, 1997; Bailey et al., 2017; among others). Despite the wide number of studies on the issue, it was difficult to find a clear classification of all those factors that act as enablers of engagement. The first contribution is that of classifying the antecedents dividing them into **individual** and **organizational** and, further, setting sub-categories for each of them. In particular for organizational factors four classes have been identified: job characteristics, work climate, leadership and team support. Also, for individual factors four classes were defined: **positive affect**, **core self-evaluation**, **meaningfulness** and **personal resources**. Moreover, the classes of individual factors were also empirically validated with the results obtained when analysing the Forms that were filled out by the interviewees.

But the research went further, it was also possible to observe the relative relevance of different factors arriving to the conclusion that meaningfulness, positive affect and organizational antecedents in general are the three that were the most recalled by individuals.

This classification made, and then validated by the researchers, allows to understand and address the most important antecedents of engagement. Luckily, there is a wide number of studies on the topic already present in the academic world showing the interest on the topic but, at the same time, this brings less clarity and uniformity between the

different theories. On this line, this study brings an important value to the academic community, creating a clear classification and proposing a valuable understanding on the key engagement antecedents and responding to those researchers who explicitly asked for it (Bailey et al., 2017).

In the second place, it can be said that, throughout this research, not only the classes of individual antecedents were validated, but their descriptions have also been improved. Under each class, the researchers positioned the different "categories" obtained in the results to describe the antecedent in a thorough manner. In other words, under the class of personal resources, for example, the categories exploring new perspectives, experience and concentrated were placed. These come with a baggage of codes used by the participants to refer to it and a definition proposed by the authors for each of the categories. The contribution to the literature is that of offering enhanced descriptions and new explanatory "categories" to what existed already for each of the individual antecedents' classes in the hope to expand the available information on the different antecedents and making it easier to tackle the topic of engagement.

In the third place, the main theory upon which most of the scholars base their studies of engagement is the Kahn's theory (1990). In it, Kahn defines engagement as having three types of components: physical, cognitive and emotional engagement. Even if this definition has been widely used, no studies were performed to try and single out the antecedents that each one of these components might have and how they differ amongst each other. This thesis represents a first attempt in assigning, within each class of individual antecedents, the different elements that impact on cognitive engagement, those that do it on emotional engagement and those whose effect is blurry between both. In this way, this thesis contributes to the understanding of how much one individual antecedent can affect one or the other or both. For

example, within personal resources, exploring new perspectives and experience have a predominant effect on cognitive engagement while concentrated has it on emotional engagement. These elements come from the categories obtained in the results. With this information, future scholars will be able to know if personal resources have a larger effect on cognitive or on emotional and which are the elements that it contains within that provoke one or the other relationship. According to the literature review made, it seems that this is the first study to make a distinction between cognitive and emotional engagement in relation to antecedents and to test for the variety of antecedents that exist.

As a final observation, it is suitable to bring up some comments Shuck mentioned in his 2011 study to highlight the relevance the aforementioned contributions have. They said that an important interest of the scholar community was that of defining and validating the concept of engagement with a special concern in the micro level, to better understand the factors that have an effect on the development of engagement. In addition, they described how this was an emerging phenomenon and, therefore, the research had not been organized into conceptual frameworks. The researchers are happy to address Shuck and many other authors (Saks, 2006; Shuck, 2011; Slåtten, 2011; Martinez, 2015; Bailey et al., 2017) concern with these contributions.

## MANAGERIAL IMPLICATIONS

The following paragraph will explain how the discoveries of the dissertation that were mentioned above can contribute to the daily practices of managers and organizations. As it has been stated since the beginning, engagement has been studied considering its importance as a driver of innovation, which is a main concern for most companies. In other words, the ultimate goal is to bring tools for managers to foster innovation. On the way to achieve this, engagement is needed. In fact, organizations could focus on achieving higher levels of engagement as an organizational strategic policy. Now, this thesis

will proceed to discuss in which ways managers can take this study as assistance to engage people in innovation.

This research has suggested a broad range of relevant factors at the individual level that may affect engagement. In particular, it was validated that positive affect, core self-evaluation, meaningfulness and personal resources are associated with higher levels of cognitive and emotional engagement. Their impact on engagement provide an important reason for leaders to push on management practices that can transform and enhance these individual factors in people.

Using the results from the study, they can better understand employee engagement as an individual level "innovation" variable. All the factors that were considered in this study, including the different classes of the individual antecedents and the categories within each class are possible conversation starters for practitioners to think about compelling and effective interventions to improve cognitive or emotional engagement. In this way, they should be able to capitalize on this new knowledge by designing interventions that closely consider the factors that were validated as antecedents. When defining interventions, organizations should consider which of the resulting factors is the best to use as leverage for employee engagement. This will depend on the unique needs of each organization.

The previous observations will now be put in context with a series of examples of possible interventions that organizations could make based on this thesis' findings.

The first example could be that of intervening in the recruiting practices. They could be changed and adapted so that the employees that are selected are those that appear to have high core-self evaluations or whose personal values or goals align with those of the organization (leveraging on meaningfulness). In addition, a follow-up

strategy could also be put in place with mentoring programmes to improve core self-evaluations or communication strategies that show these consistent values in a continuous manner once the individual becomes part of the organization to keep the value coherence that affects meaningfulness alive and well.

A second example could be training managers about the factors that have a relation with engagement so that its development is encouraged. For example, they could learn how to help employees be involved in meaningful work that fits their abilities and interests. Or they could learn how to help them to have the available personal resources, like time for self-reflection, one of the categories found in the personal resources individual antecedents in the results.

In another order of things, it must be added that it is crucial for organizations to understand that it is important that the factors affecting employee engagement are all tackled and always present in each employee's experience of work. This will always be a work in progress because developing high levels of engagement is a long path but changing the mindset of how people think about work and how employees experience work can be the first step in an innovative direction.

The final contribution of this dissertation is to pass on the idea that organizations must focus on how work gets done instead of just looking at how much is done, if they want to keep employees engaged and achieve innovative results.

## IMPLICATIONS FOR THE COMPANY

Since the research conducted was based on the action research methodology in collaboration with The Company, another important aspect to evaluate once the research experience concluded were the implications for The Company. Of course, some of these implications

can be generalised for companies in general, becoming part of the managerial implications that this research has.

In the first phases of this research, as explained in the Methodology chapter, the aim of The Company was to understand how to spread an innovation culture inside the organization. During the first discussions conducted with the researchers, it was concluded that to diffuse an innovation culture between people inside the company it was necessary to start form the single individuals. Researchers and managers understood that, in order to create an innovative ecosystem, the first important step was to understand what engages people in innovation, leveraging on their feelings and emotions when dealing with innovative projects.

With this in mind, researchers tried to go deeper in the creation of the experience to present to The Company's employees, understanding that it was crucial to deliver something meaningful to people, but also concrete and with a strong impact. What came out was an experience that was able to offer a deep understanding of the individual identity of the people involved in the activity. Then, thanks to the testing phase, it was possible to improve the activity giving it a higher level of personalisation.

According to observations made during the performing of the experience, the feedback received and, of course, thanks to the results gained with the research, it can be possible to understand the value that this research experience has to the Company.

First, looking at employees, the experience of the Forms helps them in going deeper in the analysis and reflection of themselves, being able to better understand their innovation identity. This led to two main consequences:

- Being more conscious of themselves helps people to work better and to better interact with others, helping them also in the team working;
- Having awareness of their weaknesses and strengths brings people to be more engaged, being more confident about themselves and their potential.

Both these consequences should be able to foster people to be more innovative in the work contest.

Of course if there is a benefit for the employees, as a consequence, also The Company can perceive the value of the experience. In particular, considering that having employees who are more sensible to innovation was one of the objectives of the action research project. At the same time being in possession of the databases with the information and the subsequent analysis and results of the categories that bring their actual employees to be engaged emotionally or cognitively is a great advantage that could bring about lots of positive consequences.

Following this idea, the researchers would like to set some conclusions that can be made particularly for this company based on the sample of the employees that work with them. This personalized conclusion has a great potential to positively impact The Company and tries to be a return for entering into the action research investigation along with the researchers. On the one hand, when dealing with cognitive engagement, the researchers were able to see that the two main categories of individual antecedents that were recalled by the participants. By far, the first one was meaningfulness. It seems that, for the employees of this company, finding a fit between their own values and the values of the task, activity or the company is a major factor that affects to what degree they engage cognitively. The company could take action to show how the work the employees are doing can improve other people's lives or communicate it in a better way to make them

feel the challenge of finding a solution, basing these advices on the categories that came out under meaningfulness. Following meaningfulness, always in order of frequency of codes, comes positive affect. In this case, focusing on activities that spark the curiosity or that promote active participation of all those involved in the projects could be convenient based on the categories found. In fact, doing this in everyday activities of the employees could be a good way to increase their cognitive engagement. These are the main points upon which the managers of The Company should focus if they would like to try and increase the cognitive engagement of their specific employees.

Similarly, in the case of emotional engagement the top two antecedents that have an impact remain the same but this time the relevance changes. No longer is meaningfulness the most important by far. This time both meaningfulness and positive affect have similar relevance. In this case, though, there are some minor changes in the categories. For meaningfulness, the categories are now only intrinsically motivated and challenged. It would be interesting to improve the policies discussed in the previous paragraph for cognitive engagement by taking into account the intrinsic desires of people and maybe asking them what they are passionate about to see if this can be included somehow in the tasks that they cover. For positive affect, in turn, the policies should focus on trying to trigger joy, enthusiasm and other positive emotions to the employees, maybe by including interesting surprises or special events during the week at the office. These last advice could be useful for managers to increase the degree of emotional engagement of the individuals working with them.

A final observation that could be made would be that in this particular company, it would be convenient to work on Meaningfulness and Positive Affect antecedents to be able to increase the degree of engagement of employees. It must be added that when focusing on meaningfulness, the impact that it will have on the cognitive

engagement should be much larger than that on emotional engagement based on the results.

At the same time there is a direct benefit for the company related to the kind of reasoning proposed. Being a value added activity, the experience could be replicated, inside the Design Thinking Awareness Session and also independently from the research conducted. In particular, the experience of self-reflection could be used to increase collaboration and cooperation inside a team, helping the members of the group to be more aware of themselves but also, sharing the reasoning inside the team, of the other members. This will help the collaboration inside the group increasing the productivity and in particular, according to the study, the production of innovative outcomes. Furthermore, the experience worked also very well in terms of onboarding the teams for the innovation activity. It gives the possibility for each participant to present him/herself and break the ice in a more original and easy way.

All these benefits have also been recognised by the managers of The Company that were able to capture all the value added from the experience with the researchers.

As explained at the beginning of this paragraph all these benefits can be applicable and recognisable by companies with a strong focus on the diffusion of an innovation culture.

# Limitations
# and opportunities

LIMITATIONS

The following paragraph will go through the identification and the explanation of the limitations of the present research. In fact, as all the explorative researches, also the present one, cannot be perfect by definition and it is characterised by some limitations.

The main problem is related to the limited context analysed. This limitation is due mainly to three characteristics of the study.

First, the action research was conducted collaborating just with one company, as all action research projects do (Canterino, et al., 2016). Due to that has to be recognised that it does not seek to create universal knowledge. Reporting on a single case, means that all the people interviewed were employed in the same company. This has some implicit consequences such as being influenced by the same corporate culture. This could, in turn, bring similar ways of thinking even when considering different people coming from different countries and different cultures. Future research should consider extending the research to other companies and other kind of environments. This will allow to explore whether there are differences in employee engagement antecedents depending upon some specific factors or according to the context in which the individuals work.

At the same time, it is also important to recognize that, even if, the action research methodology it is, for definition, based on one single case, it allows researchers to go deeper in the topic analysed. As Coghlan and Shani (2014) explained, *involving the clients or learners in their own learning, not only produces better learning but more valid data about how the system really works*". Furthermore action research

investigation allows to produce "*practical knowledge*" (Coghlan & Shani, 2014), so a kind of knowledge that is not just useful for scholars but that has also a practical component exploitable by managers. As explained by Canterino et al. (2016), an action research project support in "*generating outcomes that are both relevant to practice and scholarly rigorous*".

Secondly, the sample considered was quite small (60 interviewers) and these individuals may have possessed some characteristics (such as the belonging to the same company) that were not representative of the overall population. Due to that some caution is required in generalizing the results to the larger population. On a positive side, it is important to highlight that the sample, despite the small size, was characterised by a quite good level of variety, being composed by people from different nationalities, living in different countries, covering different roles and having different levels of seniority inside the company and also different in terms of age and gender.

Lastly, these constraints and the specific context in which the activity of the Forms was performed, the Design Thinking Awareness Sessions, have made it impossible to evaluate all the components of engagement defined by Kahn (1990). Researchers had to leave out from the study the physical component of engagement focusing just on cognitive and emotional engagement.

Beyond that, one last limitation is related to the focus on engagement, without considering its opposite: disengagement. According to the results of the study it can be said that, as there are some individual factors that positively affect engagement, there should be some others that negatively influence it such as negative emotions. These factors have not been considered inside the present research, but they should be an interesting input for future researches.

In the following paragraphs, this thesis will explore the different paths that could be followed in the future to continue investigating engagement and its relation with innovation.

The results of this study suggest that engagement is a rich construct that is worthy of future research. There are several avenues to consider.

One area would be to investigate other potential predictors of engagement. In this area, the results have offered a partial view of two concepts in which it would be convenient to focus on. The first would be organizational antecedents. These appeared in the results even if questions had been done to address individual antecedents, reinforcing their relevance. It would be interesting to research how these antecedents work from within, how to better describe them and classify them and to figure out in which way they affect the different types of engagement. The second concept was brought about by the appearance of negative emotions in the results that could represent an antecedent to disengagement. Variables that influence a person to become disengaged could be different from those related to the development of engagement. The researchers think it would be convenient to carry on investigating disengagement antecedents and to check out if negative emotions can also be part of engagement at times. Currently, the research on disengagement is based on the burnout model (Maslach, 2001) and has received little attention ever since. It is an interesting gap to tackle in future studies considering that an estimated 70% of the global workforce goes to work every day disengaged (Wagner & Harter, 2006).

A second area to investigate could be focused on the usability of the concept working along with the practitioner community. Researching how the concept can be used to create interventions and studying the responses of the employees in everyday practise could be useful. Such interventions could focus on the antecedent variables that were

examined in this study. The researchers hope that this study will inspire others in which the potential effect of experimental interventions on engagement is investigated. This is a promising area given the rise in interest of organizations to address the gap of engagement that exists among employees worldwide.

A third area to bring up with regard to future studies has to deal with the limitations of this study. It would be convenient to replicate the study but also to do it again taking a bigger sample from within a company, collaborating with more than one company and also trying to tackle the physical engagement as well to come full circle with all the components of engagement.

These were some of the research opportunities that the authors found suitable for continuing with the development of literature on the topic of engagement. Further studies could also include going deep into the other building blocks in the model of the conceptual framework such as the connections between engagement and innovation and the role of creativity.

Besides all the opportunities opened by this research, the most important message that researches want to spread is that to be innovative in a dynamic world, as the one in which we live today, companies should leverage on the most important asset that they have: People. They should remember that ideas are created and implemented by people, that innovation starts form them. However, to be innovative people should be emotionally and cognitively engaged. They should be happy, confident about themselves and their ability, connected with the purpose of the company and motivated by it, and they should be stimulated by what they do, being able to grow and learn through it. Consequently organizations, that want to survive being innovative, should work on these drivers becoming able to foster employee engagement.

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