



## **MASTER IN MANAGEMENT**

The Cost of Ineffective Meetings in Belgium

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## Abstract

In this consultancy report, we examine the meeting culture, effectiveness and costs in Belgium. The most important reason for this study is the lack of contemporary Belgian meeting literature. Using a quantitative survey research, we formulate answers to three research questions: What does the meeting culture look like in Belgium? How (in)effective are meetings in Belgian organizations? What is the financial cost of ineffective meetings in Belgium? In order to answer these research questions, the answers of the 229 respondents are combined with market research findings. We find evidence of a meeting culture in Belgium, since 5.9 million meetings are daily organized and employees spend one third of their career in meetings. Although, results show that only 7 percent of Belgian meetings are ineffective, they still induce considerable financial costs. The total cost of ineffective meetings in Belgium is 10.93 billion euro per year. This study can be considered as the first chapter of the Belgian meeting literature, since it can be a starting point for further research. In addition, these numbers make Belgian organizations question their own meeting culture and meeting effectiveness. The high price tag of (in)effective meetings urges organizations to take actions. Meeting trainers and coaches can respond to this by offering their services.

In dit consultancy rapport wordt onderzoek gedaan naar de meeting cultuur, de meeting effectiviteit en de meeting kosten in België. De belangrijkste drijfveer voor deze studie is het huidige gebrek aan Belgische meeting literatuur. Er wordt gebruik gemaakt van een kwantitatief vragenlijstonderzoek om antwoorden te formuleren op drie onderzoeksvragen: Hoe ziet de meeting cultuur er in België uit? Hoe (in)effectief zijn meetings in Belgische organisaties? Wat is de financiële kost van ineffectieve meetings in België? Om deze onderzoeksvragen te beantwoorden worden de antwoorden van de 229 respondenten gecombineerd met bevindingen uit marktonderzoek. We besluiten dat er sprake is van een meeting cultuur in België, gezien er dagelijks 5.9 miljoen meetings worden georganiseerd en Belgische werknemers een derde van hun carrière in meetings spenderen. Hoewel uit deze studie blijkt dat slechts 7 procent van de Belgische meetings ineffectief is, brengen deze toch grote financiële kosten met zich mee. De totale kost van ineffectieve meetings in België bedraagt 10.93 miljard euro per jaar. Dit onderzoek kan beschouwd worden als het eerste hoofdstuk van de Belgische meeting literatuur, aangezien het een eerste aanzet voor verder onderzoek kan zijn. Daarnaast doen deze cijfers Belgische organisaties stilstaan bij hun eigen meeting cultuur en meeting effectiviteit. Het hoge prijskaartje van (in)effectieve meetings zal een alarmbel doen rinkelen, die organisaties aanzet om acties te ondernemen. Hierop kunnen meeting trainers en coaches inspelen om hun services te promoten.



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# 1 Introduction

“33% of the meetings in the US are considered ineffective, which results in an annual cost of 37 billion dollar.”

Every time we consulted a business or academic article about meetings, meeting effectiveness and meeting costs, we were bombarded with these two numbers (Atlassian, 2019; Baer & De Luce, 2019; Baer & Goudreau, 2015; Bailey, 2013; Devaney, 2016; Jarrett, 2013; Keith, 2015; MeetingKing, 2013; Pidgeon, 2014; ReadyTalk, 2019). It seems like these numbers are the common ground in meeting literature. Everyone is using them and no one ever seems to wonder where these numbers come from, except from Romano and Nunamaker (2001). They are referring to an old study of Sheridan (1989), which now appears to be untraceable. The origin of these numbers is thus a mystery. Since we do not know who conducted the research, when the research was undertaken and how the meeting costs and effectiveness were measured, we are reluctant to use the numbers above.

Several meeting gurus created cost calculators that organizations can use to get an idea of how much money they spend on meetings. We submitted multiple tools to the test and found that they usually only include the following elements into their cost calculations: gross wage, meeting duration and the number of attendees. Whilst this is a ‘quick and easy’ way to calculate the meeting cost, it significantly underestimates this financial investment. It leaves out costs like transport, catering, external guests and recovery time. Furthermore, we were not able to find details about the cost formulas behind the tools.

If you thought that finding information on meetings in the US was already a difficult task, try to google meetings in Belgium then. We did not find any information about the Belgian meeting culture, effectiveness and costs. Nevertheless, this information is of great interest for Belgian companies, since *“group meetings are a significant financial investment for organizations”* (Rogelberg, Shanock & Scott, 2012, p. 237).

Madeleine de Hauke, founder and CEO of Business4Good, a Brussels-based professional development company shares this view. Therefore, she wants to find a reliable way of identifying how much meetings are costing in Belgium and whether a methodology can be developed to put a price tag on the money wasted on ineffective meetings. The aim of the organization is to raise awareness of the culture, effectiveness and cost of meetings in Belgium.

In order to reach this goal, answers to the following three research questions need to be found:

1. What does the meeting culture look like in Belgium?
2. How (in)effective are meetings in Belgian organizations?
3. What is the financial cost of ineffective meetings in Belgium?

In this consultancy report, we explain how we managed to answer these research questions. First, we compile a framework based on academic literature and pragmatic knowledge of Business4Good. In this section, definitions of a meeting, meeting effectiveness and meeting costs are formulated. Second, the methodology gives more insights in how we undertook our quantitative research by means of a questionnaire. This section also contains more information on the data collection, the operationalization of the research variables, the statistical analyses and the cost calculation formulas. Subsequently, we present you the results of our research, which will be the foundation for the answers to our research questions. Afterwards, we interpret these findings and formulate relevant recommendations which can be applied in the marketing strategy of Business4Good. We conclude our report by answering the three research questions.

## 2 Framework

The main research question of our study “the cost of ineffective meetings in Belgium” requires the conceptualization of three meeting terms. Definitions of a meeting, meeting effectiveness and meeting costs are formulated in order to answer this question. These definitions are based on academic literature and pragmatic knowledge of the founder of Business4Good. In this section of the paper, we explain how the combination of scientific knowledge and practical expertise has resulted in our research framework.

### 2.1 What is a meeting?

To our knowledge, there is no straightforward or unequivocal definition of ‘a meeting’ in the academic literature. Nevertheless, previous research describes a meeting by means of different features. In order to define what a meeting exactly is, we need to answer the following questions: who attends a meeting, why do we meet, how do we meet, when do we meet and where does a meeting take place. These five questions serve as a guidance for getting insight in literature on meeting components. The latter enables us to conceptualize a meeting ourselves in accordance with the perception of Business4Good.

#### 2.1.1 Who attends a meeting?

Some academics utilize the number of attendees to decide whether an organizational interaction can be perceived as a meeting or not. However, there is no consensus on this matter. We can distinguish two positions in the meeting literature. On the one hand, scholars consider a meeting as a work-related gathering between two or more individuals (Olien, Rogelberg, Lehmann-Willenbrock & Allen, 2015; Rogelberg, Leach, Warr & Burnfield, 2006; Yankelovich et al., 2004). On the other hand, Monge, McSween and Wyer (1989) exclude one-on-one meetings in their conceptualization. They make a distinction between dialogues and meetings, whereby the latter are larger scale gatherings. Fellow colleagues endorse this assumption by claiming that a meeting comprises three or more people conducting business related to the organizational operations (Romney, Smith & Okhuysen, 2019; Schwartzman, 1989). Following the opinion of the majority of meeting researchers (Olien et al., 2015; Rogelberg et al., 2006; Yankelovich et al., 2004) and in accordance with the owner of Business4Good, we formulate the first part of our meeting definition in terms of the number of attendees.

*A meeting is the moment when two or more people meet in a professional context.*

### 2.1.2 Why do we meet?

Scholars dedicate the majority of meeting research to the reasons why employees and employers meet on a regular basis. These reasons can be subdivided into five broad categories of meeting goals: communicating, decision making, initiating change, socializing and sense-making. First, a significant group of researchers describes a meeting as a moment when people exchange expertise, discuss about problems, generate ideas and brainstorm about possible solutions and improvements (Kauffeld & Lehmann-Willenbrock, 2012; Leach, Rogelberg, Warr & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Romano & Nunamaker, 2001). Second, these scientists also claim that meetings are organizational gatherings in which decisions are made. Decision making, reaching consensus and problem solving are therefore often included in meeting conceptualizations.

Third, Kauffeld and Lehmann-Willenbrock (2012) and Romano and Nunamaker (2001) add 'initiating change' to their definition, since meetings can be used as a moment to discuss about potential change initiatives, to overcome change resistance and to compile an action plan for the future. Furthermore, meetings can be seen as a process of socializing. Academics emphasize this goal by describing meetings as moments when people come together to celebrate successes, build relationships, improve team dynamics and/or evoke trust (Leach et al., 2009; Lehmann-Willenbrock, Allen & Belyeu, 2016). Lastly, Lehmann-Willenbrock et al. (2017) state that sense-making and managing ambiguity are crucial motives for organizing meetings. Meetings form an appropriate momentum to highlight the values and the mission of the organization (Olien et al., 2015). Other scholars prefer to combine the above-mentioned goals into a general objective. They define meetings as interactions to improve organizational and group functioning (Monge et al., 1989; Nixon & Littlepage, 1992; Rogelberg et al., 2006; Romney et al., 2019). Based on academic literature and the vision of the founder of Business4Good on meeting goals, we can further define a meeting by adding the reasons why we meet. According to our definition, meetings are organized in order to answer questions of the attendees that they cannot answer individually. This meeting aim covers the five above-mentioned goal categories, which were subtracted from literature: communicating, decision making, initiating change, socializing and sense-making.

*A meeting is the moment when two or more people meet in a professional context in order to answer questions they cannot answer individually.*

### **2.1.3 How do we meet?**

Besides the attendees and the goals, previous researchers also mention different communication forms and channels that can be used during the meeting. Schwartzman (1989) and Hildreth (1990) emphasize the importance of communication by defining a meeting as a communication event or encounter between individuals, regardless of the used communication form. Also other academic researchers do not seem to specify these. Yankelovich et al. (2004) provide an explanation on this matter by assuming that meetings make use of any form of communication (e.g. a phone call, a group meeting, an instant message etc.). Rogelberg et al. (2006) indicate that meetings can occur by means of face-to-face conversations, digital platforms or a combination of both.

In addition, the communication direction can be used to identify the communication format of a meeting more in-depth. The meeting direction determines whether a meeting equals one-way communication (conferences, symposia and announcements) and/or should imply two-way communication (information sharing and discussing ideas). By combining academic and practical insights on meeting communication, we are able to further develop our meeting definition.

*A meeting is the moment when two or more people meet face to face or digitally in a professional context in order to interact in two-way communication and answer questions they cannot answer individually. Conferences and Symposia are not considered meetings in the context of this study.*

### **2.1.4 When do we meet?**

Scholars, who examine research on the timing of meetings, on the one hand focus on the different activities related to the meeting timeline and on the other hand consider whether a meeting should include a forewarning or not. Lehmann-Willenbrock et al. (2017) make a distinction between the activities occurring before, during and after the meeting. The first phase in a meeting is called 'input', which comprises pre-meeting activities such as preparation and set-up. Documentation and group dynamics are factors that appear during the meeting as a part of the 'meeting process', which is the second phase. Third, the output phase symbolizes the meeting outcomes or goals (see Why do we meet?). The question is whether the meeting scope encompasses all activities concerning the meeting (input, process and output) or only the activities during the meeting itself. Yankelovich et al. (2004) conceptualize a meeting by means of the activities occurring before and during the meeting, while Lehmann-Willenbrock et al. (2017) comprise all meeting phases. Since academic literature is not conclusive, we rely on the vision of Business4Good in order to formulate the timing aspect of our definition. In the context of this study, we take the three meeting phases into account.

Besides the timeline of meeting activities, scholars also do not seem to agree on the concept of forewarning. Once again, we can distinguish two positions in meeting literature on this matter. On the one hand, academics only perceive planned, prearranged or scheduled gatherings as meetings (Monge et al., 1989; Rogelberg et al., 2006; Schwartzman, 1989; Stray, Sjøberg & Dybå, 2016). The concept of forewarning is therefore a key element within their conceptualization of a meeting. On the other hand, we can find advocates of an and-and vision, which means that a meeting can be scheduled and/or organized ad hoc (Romano & Nunamaker, 2001; Yankelovich et al., 2004). Consistent with the operational activities of Business4Good, the meeting definition of this study will include both spontaneous and planned meetings.

*A meeting is the moment when two or more people meet face to face or digitally in a professional context in order to interact in two-way communication and answer questions they cannot answer individually. It may be spontaneously or planned. Conferences and Symposia are not considered meetings in the context of this study.*

#### **2.1.5 Where do we meet?**

The last question gauges the meeting location, which is the last feature we need to define what a meeting is. Contrary to the other features, scientists endorse a common understanding of where meetings can take place. This scientific consensus entails that work-related gatherings can be organized on or off site (Rogelberg et al., 2006; Stray et al., 2016). Individuals come together at different places and locations for meeting purposes (Romano & Nunamaker, 2001; Yankelovich et al., 2004). By consequence, organizations do not need to own a meeting room in order to hold a meeting. This finding about the meeting location is added to our definition.

Since meetings should not necessarily take place inside the organization, we wonder whether only internal stakeholders (e.g. employees) or whether internal and external stakeholders can participate in meetings. Although scholars do not discuss this feature, we decided to include it in our meeting definition to make the scope of this research more clear and comprehensive for the readers. In consultation with the founder of Business4Good, we conclude that meetings comprise internal and/or external stakeholders.

#### **2.1.6 Meeting definition**

The compilation of the meeting features, which we subtracted from literature by means of the five meeting questions and confronted with the practical expertise of the owner of Business4Good, results in the following conceptualization of a meeting.

*A **meeting** is the moment when two or more people meet face to face or digitally in a professional context in order to interact in two-way communication and answer questions they cannot answer individually. It may be spontaneously or planned with internal and/or external stakeholders inside or outside the organization. Conferences and Symposia are not considered meetings in the context of this study.*

## **2.2 Meeting effectiveness**

After establishing what is perceived as a meeting, we need to conceptualize meeting (in)effectiveness. This is not to be confused with efficiency, which implies a process-based approach to performing tasks. Efficiency is about doing something at the best possible manner and with the least waste of time, effort and expenses (Goh, 2013; Jasuja, Sehgal & Haashi, 2013; Oxford Dictionaries, 2019; Van Dale Online, 2019). Effectiveness, on the contrary, implies a goal-based approach, since it measures to what extent desired, intended and/or expected results are achieved and to what extent a task and/or an activity is useful.

In academic meeting literature, these terms are frequently used as synonyms. However, an efficient meeting may not be necessarily effective, whereas an effective meeting is usually efficient, according to the owner of Business4Good. The founder claims that the subtle distinction between the two terms is found in the outcome of the meeting. For example, in an efficient meeting, every attendee can seemingly agree on the decisions that have been made for fear of 'rocking the boat' or disagreeing with a colleague, but may afterwards ignore or even dismiss his/her responsibilities. In an effective meeting, on the contrary, attendees had the opportunity to participate in the discussion and felt comfortable voicing concerns or suggesting alternatives. They are therefore more likely to commit to the goals and decisions they have agreed on. Effective meetings deliver measurable results. This is not necessarily the case with efficient meetings, in which the participants get primarily through the agenda on time.

In the academic literature, researchers mainly mention meeting effectiveness, which includes elements relating to efficiency and effectiveness. In this study, we therefore focus on meeting effectiveness, since it comprises both concepts and corresponds with the vision of scientific research and the business of Business4Good. But how is meeting effectiveness defined in the academic meeting literature? To our knowledge, there is no clear or unequivocal conceptualization of the term. Scholars describe it by means of certain factors that have an impact on or that exhibit a positive or negative correlation with meeting effectiveness (Allen, Landowski & Lehmann-Willenbrock, 2014;

Kauffeld & Lehmann-Willenbrock, 2012; Leach et al., 2009; Lehmann-Willenbrock et al., 2017; Lukes, 2011; Nixon & Littlepage, 1992; Romano & Nunamaker, 2001; Yankelovich et al., 2004). In this section, we use the Input-Process-Output-model (IOP-model) as a classification tool (Gouran, 1973). We divide the influencing factors in three categories: meeting input, processes and output. This division will help us gain insight in the scientific literature and eventually enable us to define meeting effectiveness ourselves.

### **2.2.1 Input**

The majority of the research on meeting effectiveness focuses on the impact of meeting characteristics that are set up or occur prior to the meeting such as meeting size, composition, topics to be addressed, agenda, policies and environmental conditions. The academic findings about these six characteristics are discussed below.

#### **2.2.1.1 Meeting size and composition**

Since there is no such thing as a typical meeting, academics do not define what the most appropriate meeting size and composition in general is. It depends on the purpose and content of the meeting (Lehmann-Willenbrock et al., 2017; Romano & Nunamaker, 2001; Yankelovich et al., 2004). However, scholars claim that the meeting size should be kept as small as possible. They agree that only relevant and necessary participants should attend the meeting (Lehmann-Willenbrock et al., 2017; Romano & Nunamaker, 2001). Only attendees whose interest, expertise and/or skills align with the meeting content should be invited to the meeting. Spectators should be avoided. In addition, research shows that the presence of an external facilitator or attendees who received trainings about meeting effectiveness beforehand positively correlate with the meeting effectiveness (Lehmann-Willenbrock et al., 2017; Yankelovich et al., 2004). Conform the literature, we decide not to benchmark the meeting size and focus on the relevance of the attendees in our definition.

#### **2.2.1.2 Meeting topics**

The background of the meeting attendees should match the meeting content. But which topics should be covered in meetings? According to Lukes (2011) and Romano and Nunamaker (2001), the content should meet the needs of the attendees and the organization. For the company owner of Business4Good this means that a relevant meeting is able to answer questions that the attendees cannot answer without the organizational gathering. Therefore we add content relevance to our conceptualization of meeting effectiveness.



### **2.2.1.3 Meeting agenda & policies**

Effective meetings are preceded by a solid agenda which is distributed beforehand (Leach et al., 2009; Lehmann-Willenbrock et al., 2017; Lukes, 2011; Nixon & Littlepage, 1992; Romano & Nunamaker, 2001). This allows attendees to get insights in the purpose and content of the meeting and gives them the opportunity to properly prepare for it. Besides the presence of a structured agenda, an organization can also improve its meeting effectiveness by using certain policies and guidelines (Lehmann-Willenbrock et al., 2017). In our definition we translate these features into the importance of clearly defined and agreed on content and goals.

### **2.2.1.4 Environmental meeting conditions**

The academic literature devotes a substantial amount of research to environmental meeting conditions (Leach et al., 2009; Lehmann-Willenbrock et al., 2017; Nixon & Littlepage, 1992; Romano & Nunamaker, 2001; Yankelovich et al., 2004). The extent to which a room and its facilities suits the meeting (size) cannot be determined objectively, but depends on the subjective perception of the attendees. However, scholars write about the need of appropriate facilities such as temperature, lighting, noise and seating. According to Leach et al. (2009), appropriate conditions would benefit the comfort of the attendees and the functioning of the meeting, which in its turn would improve the meeting effectiveness. According to our definition, meeting effectiveness can only be obtained by an appropriate work environment equipped with the needed facilities.

## **2.2.2 Process**

Besides the impact of the input factors, academics also discuss the effect of process characteristics within the meeting as predictors of overall meeting effectiveness (Allen et al., 2014). In this section, we categorize these predictors into interactive and procedural processes.

### **2.2.2.1 Interactive processes**

The meeting effectiveness is influenced by the way the attendees interact and communicate with each other. According to Kauffeld and Lehmann-Willenbrock (2012), effective meetings require functional interactions between the attendees. They should value and respect each other's contributions and every attendee should have the opportunity of full participation (Lehmann-Willenbrock et al., 2017; Nixon & Littlepage, 1992). Open communication and leader impartiality are key in offering a platform in which every opinion is heard and every attendee has the possibility to actively participate in the meeting. In psychological literature, this phenomenon is called 'psychological safety' (Edmondson, 1999). It is not only important that the attendees share their own

ideas and listen to the others, scholars also emphasize the importance of building further on each other's ideas, secure a positive group mood and explore the possible learning possibilities in order to increase meeting effectiveness (Lehmann-Willenbrock et al., 2017). They argue that the interaction between the participants can be facilitated by pre-meeting small talks and socializing. This results in building relationships and getting comfortable working and talking with each other. We emphasize the importance of strong interactive processes by incorporating psychological safety and active participation in our definition.

### **2.2.2.2 Procedural processes**

When it comes to an appropriate duration of a meeting, academics assume that there is a correlation between meeting effectiveness and the so called temporal integrity or punctuality (Leach et al., 2009; Lehmann-Willenbrock et al., 2017; Nixon & Littlepage, 1992). This implies that the meeting starts and ends on time, that the attendees arrived on time and that the prearranged time slot was respected. In addition, meeting effectiveness can be increased through a task-focused approach. The agenda should be followed during the meeting. The attendees must focus on the proposed meeting objectives, explore different (solution) ideas and consider their decision consequences (Lehmann-Willenbrock et al., 2017; Nixon & Littlepage, 1992; Rogelberg, Scott & Kello, 2007). We do not explicitly mention the procedural processes in our definition, because we assume that clearly defined agreements and active participation imply these. We predispose that the agreements are mainly about time slots and the structure of the meeting agenda, and that attendees who actively participate in meetings are focused and engaged.

### **2.2.3 Output**

Besides describing meeting effectiveness by means of the meeting input and processes, the academic literature also discusses the output or outcomes (Allen et al., 2014; Lehmann-Willenbrock et al., 2017; Nixon & Littlepage, 1992). Academics emphasize goal reaching as an important outcome of an effective meeting. In addition, meetings should result in a consensus between the attendees and in a concrete action plan towards the implementation of the decisions after the meeting. An action plan is an essential part in our conceptualization of meeting effectiveness, since it clarifies the (future) responsibilities of the attendees and the expectations of the organization regarding the tasks and deadlines of the former. Therefore, it provides a useful tool to implement ideas and to divide different tasks.

### 2.2.3.1 Definition meeting effectiveness

After gaining insights in the concept of meeting effectiveness by analyzing the different input, process and output factors, we are able to define the concept ourselves in dialogue with the owner of Business4Good:

*“Meeting effectiveness emerges when the meeting **content and goals** are clearly defined and agreed on. The meeting should be **relevant** for the organization and the attendees and vice versa. The latter should experience **psychological safety** in order to actively **participate** in the meeting, which should be held in an appropriate work environment equipped with the needed **facilities**. Above all, the meeting should result in an **action plan** which clarifies the (future) responsibilities of the attendees and the expectations of the company regarding the tasks and deadlines of the former.”*

## 2.3 Meeting costs

Based on academic research, three types of meeting costs can be identified: psychological, social and financial costs. In this section, we describe these costs. We focus in particular on the financial costs of (ineffective) meetings, since the purpose of our research is to put a price tag on the ineffective meetings of Belgian organizations.

### 2.3.1 Psychological costs

The effectiveness of meetings has an impact on the psychological and affective state of the attendees. Bad or ineffective meetings evoke feelings of frustration, fatigue and stress. This type of meeting might even result in decreased work engagement, employee morale and psychological well-being (Allen, Rogelberg & Scott, 2008; Geimer, Leach, De Simone, Rogelberg & Warr, 2015; Kauffeld & Lehmann-Willenbrock, 2012; Lehmann-Willenbrock et al., 2017; Rogelberg, 2019). According to Lehmann-Willenbrock et al. (2017) ineffective meetings can in the worst case even lead to burnouts. Besides the individual psychological costs, ineffective meetings can also cause psychological group costs. This type of meetings is likely to result in negative group mood, to interfere with team processes and to decrease trust among employees (Lehmann-Willenbrock et al., 2017; Rogelberg, 2019).

Lehmann-Willenbrock et al. (2017) find that the psychological consequences of ineffective meetings have a negative impact on organizational productivity and performance. Besides above-mentioned reasons, two other explanations for the loss of productivity due to an ineffective meeting are

described in the academic literature: Meeting Interruption Cost and Meeting Recovery Syndrome (Lehmann-Willenbrock et al., 2017; Rogelberg, 2019; Rogelberg et al., 2012; Romano & Nunamaker, 2001). A meeting (regardless of the extent of effectiveness) can be perceived as a cognitive interruption of the daily tasks. The attendees have to process new information and switch between tasks, even if the primary task is not yet completed (Leach et al., 2009; Stray et al., 2016). After a meeting, it takes time to refill their cognitive resources and get their focus back (cognitive recovery). This is referred to as the Meeting Interruption Cost, which results in a waste of time and productivity.

Besides the cognitive recovery (Meeting Interruption Cost), employees also need time to recover emotionally. In academic literature, this phenomenon is called Meeting Recovery Syndrome (Lehmann-Willenbrock et al., 2017; Rogelberg, 2019; Rogelberg et al., 2012; Romano & Nunamaker, 2001). The Meeting Recovery Syndrome is defined as: *“the time spent cooling off due to frustration and collective complaining after an unsatisfying meeting has ended”* (Lehmann-Willenbrock et al., 2017, p. 35). The expression of frustrations might not only result in productivity loss of the complainer himself/herself, but might also affect the productivity of his/her colleagues because they have to listen and provide support (Rogelberg, 2019).

### **2.3.2 Social costs**

Besides psychological costs, meetings also have an impact on the social life of employees within and outside the organization. Depending on the degree of effectiveness, meetings result in a social cost or social benefit. Good or effective meetings encourage trust between colleagues and optimize the general group mood (Lehmann-Willenbrock et al., 2017). This might occur as a consequence of the fact that employees tend to socialize and chat before and after a good meeting. Ineffective meetings on the contrary hinder team processes and therefore prevent the development of a positive group atmosphere. As already mentioned above, ineffective meetings require recovery time. During this period of time, attendees might express their frustration towards fellow colleagues and by consequence impede the productivity and performance of their direct work environment (Perlow, Hadley & Eun, 2017). Due to concentration difficulties and moments of interruption, resulting from meetings and the needed recovery process (of others), employees tend to work early, late or even during the weekends in order to compensate and properly concentrate. This can put a strain on their work-life balance.

### **2.3.3 Financial costs**

Meetings represent a substantial business investment, that is why it is astonishing that companies do not enhance their return on this ‘meeting investment’ (Rogelberg et al., 2012; Romano &

Nunamaker, 2001). By optimising the degree of meeting effectiveness, the Return On Investment, abbreviated as ROI, can be increased (Lehmann-Willenbrock et al., 2017). The financial and time investment in an effective and an ineffective meeting is similar, but an effective meeting results in a higher ROI since postulated goals are achieved, attendees are committed and an action plan is created. Ineffective meetings on the contrary result in a waste of time, which in its turn comes with a cost (Rogelberg et al., 2012; Romano & Nunamaker, 2001). The financial cost of (ineffective) meetings can be subdivided in two components, namely direct and indirect costs.

First, direct financial costs are easy to measure and exhibit a direct causal relationship between meetings and their financial consequence. Within this cost component, we can make a distinction between direct costs related to the presence of the attendees and direct costs related to the needed facilities to organize a meeting (Romano & Nunamaker, 2001). The former is the most comprehensive cost component: when an employee participates in an ineffective meeting with a duration of for example two hours, the organization loses a budget equal to two hourly wages (Rogelberg et al., 2012). If the meeting is not held in-house, then an additional travel cost, regardless of the transportation mode, needs to be taken into account (Allen et al., 2008). As we mentioned above, organizations also need to invest in appropriate meeting facilities. This investment includes the costs of used material, amenities, catering, external speakers or facilitators and so on. Romano and Nunamaker (2001) also incorporate the cost of lodging in their meeting cost calculation. Since our research scope only implies intra-Belgian meetings (meetings taking place within Belgium), we do not consider this component. We assume that attendees go home if the meeting was the only reason for their relocation and that attendees only spend the night elsewhere if the meeting was not the only reason for their relocation (e.g. organization visits, presentations, network events, out-house organization project etc.).

Second, indirect financial costs do not always exhibit an apparent and clear link to the meeting. Nevertheless, the indirect cost drivers can have a profound impact on the productivity of employees and on the financial loss due to ineffective meetings. A frequently mentioned concept on this matter is the opportunity cost (Lehmann-Willenbrock et al., 2017). This is the time that employees lose due to meetings and that could have been used for other and more productive endeavors (Allen et al., 2008; Geimer et al., 2015; Rogelberg et al., 2012). According to Bruno De Borger, professor in microeconomics of the University of Antwerp, the wage of an employee reflects his/her contribution to the organizational productivity. Therefore, the hourly wage composes a good estimation of the hourly opportunity cost. This means that the opportunity cost equals the most comprehensive direct cost component (see above).

Previously, we discussed a variety of psychological costs which might occur as a consequence of ineffective meetings. These costs, more specifically the Meeting Recovery Cost and the Interruption Cost, also contain a financial dimension. The periods of time that employees need to recover from a meeting or that employees are interrupted due to the beginning or ending of a meeting equals wasted time, since employees are not able to get their work done. The financial cost of these psychological phenomena is the result of organizations paying their employees for unproductive hours. In short, these seemingly personal psychological costs have a profound impact on the financial loss of ineffective meetings.

### **3 Methodology**

The methodology of our research consists of four main parts: data collection, operationalization, cost calculation methods and analysis. In the first part, we explain why we choose the research format of a questionnaire, how we reached potential respondents and how we came to our final sample of 229 respondents. In the operationalization section, we clarify the composition of our questionnaire and the measurement of the research variables subdivided in demographics, meeting effectiveness and meeting costs. Third, we present four road maps in order to calculate the total meeting cost on employee, organizational and country level. Lastly, we give more information on the used analysis methods.

#### **3.1 Data collection**

Based on academic literature and practical knowledge acquired by the company owner of Business4Good, we defined concepts such as meeting and meeting effectiveness on the one hand and determined direct and indirect financial costs of meetings on the other hand (see Framework). Defining these concepts was necessary to establish the scope of the three research questions on meetings, their effectiveness and their costs in Belgian organizations.

We decided to tackle our research questions by means of an online questionnaire. The survey consisted of three sections. In the first part, we probed for insights in the demographics of our sample and the meeting culture in Belgium. Second, the survey gauged the meeting effectiveness of the most recent meeting of the respondents. In order to calculate the financial cost of ineffective meetings, we included questions concerning the direct and indirect cost components in our questionnaire (see Appendix 1).

There is a variety of reasons to justify the decision to use a questionnaire. First and foremost, surveys have a large reach resulting in the ability to generalize the results to the population of Belgian organizations. Moreover, this format is the most time and cost efficient way to target a profound number of participants. Questionnaires provide results quickly and allow us to process the data in a quantitative manner. Since we question sensitive topics such as gross pay and meeting productivity, it is desirable to use this anonymous and confidential channel.

After deciding which method was the most suitable for the purpose of our research, we compiled a list of companies, professional associations and diverse networks. The latter implied three respondent groups. First, we distributed our survey among the alumni networks of our former universities and Antwerp Management School. Second, associations in which we, our friends and

family are currently active in received an email including the questionnaire. Third, we shared the survey link via our social media such as LinkedIn (groups) and Facebook in order to reach additional respondents. The list of companies included contact details of an employed correspondent we knew directly or indirectly. These correspondents formed important intermediaries to distribute our questionnaire among a collection of people occupied in different companies. They could in their turn distribute the survey further among their friends, family and acquaintances, and so on. In short, we made use of snowball sampling in order to reach as much employers and employees as possible.

Participants had two weeks to fill out the questionnaire (from the 13th until the 27th of May). A total of 237 respondents completed the survey within this time frame. Two responses did not comply with our scope (intra-Belgian meetings) and were therefore excluded from the data collection. Moreover, six other respondents were eliminated due to their irrational answers (meeting duration equalled zero minutes and zero participants attended the meeting) or systematic response patterns (failed control variable). By consequence, all the analyses were conducted on the remaining 229 responses ( $N = 229$ ).

## **3.2 Operationalization**

The items of the questionnaire were created in a deductive way, which means that the surveyed elements were based on previous studies on relationships and correlations between these elements and meeting effectiveness or meeting costs. By using similar variables and correlations between them, we can contribute to the existing meeting literature and further extend it within the Belgian context.

### **3.2.1 Demographics**

In order to describe the sample, respondents provided information on their organization, job function and personal details. First, we asked the respondents about their work environment such as the sector and region in which they are employed. Subsequently, data on the job function such as the employment statute, job position and department were collected. Lastly, we identified the personal profile of our respondents by interrogating them about their gender, age, nationality and highest educational degree.

Our aim was to comprehend the meeting culture in Belgium to be able to answer our first research question. The meeting frequency per week was determined based on the number of meetings the respondents had during their past work week. In order to describe a typical meeting in Belgian organizations, we asked the respondents to imagine their most recent meeting while answering



questions about the following factors: meeting size, duration, composition, used transportation mode, present catering facilities, received trainings or attendance of a facilitator and time needed to recover from the meeting.

### **3.2.2 Meeting effectiveness**

In the academic literature, meeting effectiveness is usually measured by means of a five- or seven-point scale. The downside of this method is that the rating is completely based on the subjective interpretation of meeting effectiveness. Therefore, we developed a model to measure meeting effectiveness in a more objective manner. We created a questionnaire consisting of 26 statements, which were based on previous research on meeting effectiveness and its interrelated factors. Two statements (“The meeting was a waste of time” and “The attendees multitasked during the meeting”) were recoded before the data analysis, since they gauged meeting ineffectiveness instead of effectiveness. In Appendix 2 (Table 1), we add an overview of the questioned statements and the link with the scientific literature. Since we were not sure that the model based on the 26 statements would be a valid method to measure meeting effectiveness, we also included a seven-point scale on which respondents rated their meeting effectiveness directly.

### **3.2.3 Meeting costs**

The cost variables were not explicitly interrogated in the questionnaire, with the exception of the gross pay. These variables were constructed based on meeting demographics and market research. Underneath, we explain the composition of the financial cost variables.

#### **3.2.3.1 Meeting duration cost**

The most comprehensive cost component, meeting duration cost, is calculated by multiplying the hours spend in the meeting by the hourly gross wage of the attendee. Since gross pay is sensitive and personal information, we assumed that some respondents would be reluctant to share this information. Therefore, this question was formulated at the end of the survey and was not mandatory. If respondents decided not to fill out their wage (32 respondents), we relied on Salariskompas. This tool uses different demographics (sector, work experience, employment statute, job department, job position and educational degree) to make an estimation of the gross pay.

### 3.2.3.2 Travel cost

Given that we only take intra-Belgian meetings into account, we included a limited amount of transport modes such as transportation by car, by public transport, by bike or on foot in our survey. In this study, the transport cost of travelling by car is twofold, namely the travel duration cost (hours spend travelling x hourly gross wage) and travel distance cost (gasoline cost x amount of kilometers). In order to determine the financial consequences of travelling by car, we undertook market research to put a price tag on the average gasoline cost, namely € 0,097 per kilometer. We only consider the travel duration cost (hours spend travelling x hourly gross wage) if respondents travelled with other transport modes. Obviously, there is no transport cost for meetings held in-house.

### 3.2.3.3 Catering cost

We asked the respondents which catering facilities were provided during their most recent meeting. In a list of eleven options, respondents could indicate which options were present. We conducted a market research to capture the average cost of each catering option. The latter is based on circa 30 price offers of different caterers and/or restaurants. In Table 2, we give an overview of the catering facility options in the questionnaire and their costs per attendee.

**Table 2: Market research: catering cost per attendee**

Catering facility options	Catering costs per attendee (market research)
Nothing was provided	€0
Water, coffee and tea	€3.57
Soft drinks	€4.68
Breakfast	€13.30
Lunch (sandwiches and salads)	€8.74
Lunch (warm meal)	€14.82
Lunch (at a restaurant or bistro)	€32.88
Snacks (e.g. fruit, cookies, cake etc.)	€3.48
Dinner (sandwiches and salads)	€8.74
Dinner (warm meal)	€14.82
Dinner (at a restaurant or bistro)	€41.32

### 3.2.3.4 External party cost

External parties can be invited to moderate, facilitate or speak during the meeting. Respondents were asked to indicate whether such an external party was present during their most recent meeting. We undertook a market research and did mystery shopping to estimate the average cost of their presence. We requested approximately ten price offers per type of external party. The findings of this research are presented in Table 3. To calculate the individual external party cost for each respondent, we divided the average cost by the total number of meeting attendees, present during the most recent meeting of the respondent.

**Table 3: Market research: external party cost per meeting**

<b>External party</b>	<b>External party costs per meeting (market research)</b>
Moderator/facilitator	€1050
Paid guest speaker	€3500
<b>Average external party cost</b>	<b>€2275</b>

### 3.2.3.5 Recovery cost

Lastly, respondents had to give an estimation of the time they needed to recover from their most recent meeting. We asked this question to measure the financial consequences of the Meeting Recovery Syndrome (wasted productive work hours x hourly gross wage). The cognitive interruption cost was not measured separately, since the cost of interruption before the meeting is factored in the cost related to the meeting duration and the meeting recovery cost contains the cost of interruption after the meeting.

## 3.3 Cost calculation methods

After discussing the different cost components, we present four road maps in order to calculate the total meeting cost on employee, organizational and country level. First, we give an overview of the four roadmaps in Figure 1. Second, each roadmap is discussed more in detail. We will apply these roadmaps in the result section.

Figure 1: Overview cost calculation roadmaps

**Roadmap 1**

Average meeting cost per attendee

**Step 1:** Meeting cost per attendee

= Meeting duration cost  
 + Travel cost  
 + Catering cost  
 + External party cost  
 + Recovery cost

**Step 2:** Average meeting cost per attendee

**Roadmap 2**

Average meeting cost for one Belgian organization per year

**Step 1:** Meeting cost per attendee

*Roadmap 1, step 1*

**Step 2:** Average meeting cost per job position per meeting

**Step 3:** Standard meeting composition in Belgium

**Step 4:** Total meeting cost per standard meeting in Belgium

= Outcome step 2 x outcome step 3

**Step 5:** Average meeting cost for one Belgian organization per year

= Outcome step 4  
 x Average number of meetings per week  
 x Average number of work weeks per year

**Roadmap 3**

Total meeting cost in Belgium per year

**Step 1:** Average meeting cost per attendee

*Roadmap 1, step 2*

**Step 2:** Belgian working population

**Step 3:** Total meeting cost in Belgium per year

= Outcome step 1  
 x Belgian working population (step 2)  
 x Average number of meetings per week  
 x Average number of work weeks per year

**Roadmap 4**

Total cost of ineffective meetings in Belgium per year

**Step 1:** Total meeting cost in Belgium per year

*Outcome roadmap 3*

**Step 2:** Percentage of ineffective meetings in Belgium

**Step 3:** Total cost of ineffective meetings in Belgium per year

= Outcome roadmap 3  
 x Outcome step 2

### **3.3.1 Roadmap 1: Average meeting cost per attendee**

#### Step 1: Meeting cost per attendee

In order to calculate the meeting cost per attendee for one meeting, we accumulate the above-mentioned cost components for each respondent. Underneath, the cost formula is presented.

Meeting cost per attendee

= Meeting duration cost + Travel cost + Catering cost + External party cost + Recovery cost

#### Step 2: Average meeting cost per attendee

In order to calculate the average meeting cost per attendee for one meeting, we take the average of the 229 unique meeting costs (calculated in step 1).

### **3.3.2 Roadmap 2: Average meeting cost for one Belgian organization per year**

#### Step 1: Meeting cost per attendee (roadmap 1- step 1)

#### Step 2: Average meeting cost per job position per meeting

In this step, we compute the average cost for each job position. Therefore, we run separate analyses per job position. This results in five unique average meeting costs for an administrative employee, operational employee, professional employee, middle manager and top manager.

#### Step 3: Standard meeting composition in Belgium

We determine the average number of attendees per job function present during one standard meeting in Belgium.

#### Step 4: Total meeting cost per standard meeting in Belgium

Using the average meeting cost per job position (step 2) and the standard meeting composition (step 3), an estimation of the total meeting cost of one standard meeting in Belgium can be made.

#### Step 5: Average meeting cost for one Belgian organization per year

In order to calculate the average meeting cost for one Belgian organization per year, the outcome of step 4 is multiplied by the average number of meetings per week and the average amount of work weeks per year. The calculation of the average amount of yearly work weeks in Belgium can be found in Table 4. Underneath, we also include the cost formula.

Average meeting cost for one Belgian organization per year

= Average meeting cost of per standard meeting in Belgium (step 4) x the average number of meetings per week (demographics) x average number of work weeks per year

**Table 4: Calculation of the average amount of work weeks per year in Belgium**

	<b>Number of days</b>
Days in a year	365
- Weekend days	- 104
- Average vacation days in Belgium	- 23
- Public holidays in Belgium (2019)	- 10
<b>Average work days per year in Belgium (2019)</b>	<b>228</b>
<b>Average work weeks per year in Belgium (2019)</b>	<b>45.60</b>

### 3.3.3 Roadmap 3: Total meeting cost in Belgium per year

Step 1: Average meeting cost per attendee (roadmap 1 - step 2)

Step 2: Belgian working population

We contacted Statbel, a Belgian statistical office specialized in numbers concerning the Belgian economy, society and territory. They provided us with an extensive research report on the Belgian working population. According to their study in 2018, 4 635 546<sup>1</sup> people were employed in Belgium (Statbel, 2018). We decide to use this number in our calculations, because STATBEL is the most reliable source we could access during our research.

Step 3: Total meeting cost in Belgium per year

By multiplying the outcomes of the first and second step, the cost for the complete working population per meeting can be computed. In order to calculate the total meeting cost per year in Belgium, we have to multiply this result with the average number of meetings on a yearly basis (= average number of meetings per week x 45.60 work weeks). This results in an estimation of the total meeting cost in Belgium. Underneath, the total cost formula is presented.

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<sup>1</sup> This number does not include foreign workers, who are occupied in Belgium. Therefore, this is an underestimation of the Belgian working population. This probably implies an underestimation of the total meeting cost in Belgium.

Total meeting cost in Belgium per year

= Average meeting cost of per attendee (step 1) x Belgian working population (step 2) x the average number of meetings per week (demographics) x average number of work weeks per year

### **3.3.4 Roadmap 4: Total cost of ineffective meetings in Belgium per year**

Step 1: Total meeting cost in Belgium per year (outcome roadmap 3)

Step 2: Percentage of ineffective meetings in Belgium

The percentage of ineffective meetings is computed by dividing the total amount of ineffective meetings by the total amount of meetings.

Step 3: Total cost of ineffective meetings in Belgium per year

Using the total meeting cost in Belgium per year (outcome roadmap 3) and the percentage of ineffective meetings in Belgium (step 2), an estimation of the total cost of ineffective meetings in Belgium per year can be made.

## **3.4 Analysis**

All the analyses of the collected data were conducted with the statistical software program SPSS. Relations between two ratio variables were studied with the Pearson's Correlation Test, whereas One-way ANOVAs were used to get insights in the relations between ratio and ordinal variables. If the categories of the ordinal variable included less than 30 respondents, a Non-Parametric Test was executed in order to retest the significance of the ANOVA results. In this research, we consider results to be significant, when  $p$ -value < .05.

## 4 Results

In this section we describe the results of our data analysis. First, we provide insights in the composition of our research sample. Subsequently, we discuss the descriptives and relations related to the Belgian meeting culture. Thereafter, we illustrate the usability of the indirect measurement for meeting effectiveness and examine whether a difference exists between the meeting effectiveness scores measured by the direct and indirect method. The relations between these scores and other variables are further explained. We conclude this result section by computing the total meeting cost on employee, organizational and country level using our four cost calculation roadmaps.

### 4.1 Sample

An extended and detailed overview of the demographics of our sample can be found in Appendix 2 (Table 5), but the most remarkable findings are presented below.

In the context of this research, we analyzed the responses of 229 participants, composed of 46.30 percent women. The most selected age ranges were between 26 and 35 and between 46 and 55. The majority of our sample is Belgian and has obtained an academic master degree, respectively 221 and 125 respondents. The average surveyed employee has a work experience of 15.44 years. The most represented sectors in our sample are healthcare, telecom and education (Table 6).

**Table 6: Number of respondents per sector**

<b>Sector</b>	<b>Number of respondents</b>
Healthcare	69
Telecom, ICT & internet	22
Education & scientific research	18
Other sectors	120
<b>Total</b>	<b>229</b>

The organizations, in which the respondents are occupied, comprise on average 5685 employees and are mainly situated in Antwerp, East Flanders and Brussels (Table 7). The sample mainly consists of white collar workers (203 respondents). Employees who filled out the questionnaire make a gross monthly wage of €4504.30 on average. The respondents are mainly occupied in professional



functions, which means that they have a specific expertise, but no supervising authority in their organization (Table 8).

**Table 7: Number of respondents per region**

<b>Region</b>	<b>Number of respondents</b>
Antwerp	91
East Flanders	45
Brussels	40
Other regions	53
<b>Total</b>	<b>229</b>

**Table 8: Number of respondents per job position**

<b>Job position</b>	<b>Number of respondents</b>
Administrative employee	24
Operational employee	26
Professional employee	88
Middle manager	64
Top manager	27
<b>Total</b>	<b>229</b>

## **4.2 Meeting culture**

### **4.2.1 Meeting culture demographics**

An extended and detailed overview of the demographics of the meeting culture can be found in Appendix 2 (Table 9), but the most remarkable findings are presented below.

On average, Belgian employees attend 6.41 meetings on a weekly basis, which lasts 1 hour and 49 minutes per meeting. A minority of the respondents (39%) received a training on how to participate in or lead an effective meeting. Moreover, they indicated how their meeting was composed in terms of the job functions of the attendees. Based on these responses, we are able to compile a standard

meeting composition (Table 10). As you can see, there are 9.43 attendees present in an average Belgian meeting. In 12 percent of the cases, a facilitator, moderator or guest speaker was also invited to the meeting.

**Table 10: Standard meeting composition**

<b>Job position</b>	<b>Average number of attendees per meeting</b>
Administrative employee	1.03
Operational employee	1.53
Professional employee	3.90
Middle manager	1.96
Top manager	1.01
<b>Total</b>	<b>9.43</b>

Furthermore, we asked our respondents which catering facilities were provided during their most recent meeting. Only 58 percent of the respondents got offered something to drink and/or eat. Most meetings were organized in-house. Therefore, attendees did not have to travel to the meeting location. If the meeting was organized elsewhere, respondents travelled on average 16.86 minutes by a variety of transport modes (Table 11). Lastly, respondents stated that they on average need 27.63 minutes to recover from a meeting.

**Table 11: Number of respondents per transport mode**

<b>Transport mode</b>	<b>Number of respondents</b>
No transportation required (in-house meeting)	152
Car	55
On foot	11
Public transport	6
Bike	5
<b>Total</b>	<b>229</b>

## 4.2.2 Meeting culture relations

### 4.2.2.1 Number of meetings

Table 12 in Appendix 2 represent the correlations between the sample and meeting culture variables, including their means, standard deviations, correlation scores and significance levels more in detail. The most remarkable findings are presented below.

The number of meetings exhibit a positive correlation with organization size. This means that the more employees are occupied in an organization, the more meetings are organized. Another positive correlation is found between the number of meetings and the gross monthly wage: the more an employee earns on a monthly basis, the more meetings he/she attends. On the contrary, the recovery time and the meeting duration negatively correlate with the number of meetings. The more meetings respondents participate in, the less time they need to recover and the shorter the meeting duration is. Respondents have the tendency to spend more time travelling to their meeting if the latter has a longer duration. Meeting and travel duration in turn both positively correlate with the time attendees need to recover. They need more recovery time when their meeting lasts longer and when they travel for a longer time to their meeting.

Across the complete sample, respondents on average attend 6.41 meetings per week. We discovered that the average meeting number varies among the different sectors. The sectors organizing the highest average number of meetings are presented in Table 13.

**Table 13: Average number of meetings per week across sectors**

Sectors	Average number of meetings per week
Telecom, ICT & internet	15.14
Bank & insurances	13.33
Other services to organizations & private individuals	11.85
Construction	8.80
Socio-cultural & non-profit sector	7.75

One-way ANOVA:  $F(21,207) = 4.59, p = .00^{**}$

We found a similar trend regarding the region in which employees are occupied. According to our research data, organizations situated in Brussels arrange the most meetings compared to other Belgian regions. West Flanders and Luxembourg are the other two regions that organize a weekly number of meetings above the average of 6.41 meetings (Table 14).

**Table 14: Average number of meetings per week across regions**

Region	Average number of meetings per week
Brussels	12.10
West Flanders	7.00
Luxembourg	6.67
Antwerp	5.78
Limburg	5.44

One-way ANOVA:  $F(8,222) = 5.02, p = .00^{**}$

A difference in meeting numbers can also be found among job positions. The average amount of meetings increases in parallel with the hierarchical position of the employee (Table 15). The same applies to the variable 'educational degree': the higher the degree, the more meetings the respondent attends (Table 16).

**Table 15: Average number of meetings per week across job positions**

Job position	Average meeting number per week
Administrative employee	2.88
Operational employee	3.04
Professional employee	4.59
Middle manager	7.98
Top manager	15.00

One-way ANOVA:  $F(4,224) = 19.84, p = .00^{**}$

**Table 16: Average number of meetings per week across educational degrees**

Educational degree	Average meeting number per week
Secondary school	3.44
Professional bachelor	4.29
Academic bachelor	5.79
Academic master	7.64
Phd	9.20

One-way ANOVA:  $F(4,224) = 3.81, p = .01^{**}$

Above all, male employees meet more than female employees and employees with a non-Belgian origin meet more than Belgian employees. Male employees attend 8 meetings compared with female employees who attend 5 meetings on average per week. Apparently, non-Belgian employees almost double the amount of average meetings per week compared to their Belgian colleagues. Lastly, respondents, who indicated they already received trainings on meeting effectiveness, attended a higher amount of meetings than employees who did not (see Table 17 in Appendix 2 for concrete numbers and tests).

We can conclude that the number of meetings exhibit a relation with the following variables: organization size, gross monthly wage, recovery time, meeting duration, sector, region, job position, educational degree, gender, nationality and training.

#### **4.2.2.2 Meeting duration**

The average duration only varies across gender, age and facilitator presence. On average, female employees participate in meetings with a longer time slot. The meetings reported by female respondents last on average 2 hours and 6 minutes, whereas the meetings reported by male respondents take 1 hour and 34 minutes. The meeting duration peaks at an age between 36 to 45. Lastly, in the presence of an external party the average meeting duration is longer, compared to the non-presence (see Table 18 in Appendix 2 for concrete numbers and tests).

### **4.3 Meeting effectiveness**

In this second part of the result section, we illustrate the usability of the indirect meeting effectiveness measurement. Thereafter, we outline the difference between the direct and indirect measurement of meeting effectiveness in Belgium and their relation with other research variables, subtracted from our questionnaire.

#### **4.3.1 The usability of the indirect meeting effectiveness measurement**

As mentioned in the Methodology, we developed a model to measure meeting effectiveness indirectly. In order to get a first insight in the usability of our model, we ran an inter-item correlation analysis. Conform the academic literature, we found a strong level of correlation between the 26 items measuring meeting effectiveness (Cronbach's Alpha = .89). Based on this finding, we decided to conduct a factor analysis in order to explain these correlations. Unfortunately, this analysis did not result in an unequivocal meeting effectiveness component, since we discovered no less than five components. After a more profound examination of the output, we observed that the majority of the statements loaded high on the first component, which we assume to be meeting effectiveness.

We formulated three conditions to determine whether a statement could be used to measure the degree of meeting effectiveness: (1) strongest factor loading on the first component, (2) factor loading on the first component exceeding .40 (Hair, Black, Bain, & Anderson, 2014) and (3) loading on maximum two components, by which the second component loading is smaller than .40. Taking into account these criteria, fourteen statements were retained to measure meeting effectiveness (loadings on the first component ranging from .59 to .78). The other twelve statements could be reduced to four components, which present no direct proxy for meeting effectiveness, but nevertheless influence and facilitate this concept indirectly: facilities, preparation, participation and timing of the meeting. An overview of the statements and their related components (factor analysis) is given in Appendix 2 (Table 19).

In the further course of this research, we will use the average score of the fourteen items in order to determine whether a meeting is effective or not, measured in an indirect manner. This statement model forms a renewed research manner and more objective measurement of meeting effectiveness than the widely used seven-point scales in academic literature (direct measurement).

#### **4.3.2 Direct versus indirect measurement of meeting effectiveness**

In our survey, meeting effectiveness was measured in two ways: direct and indirect (see Methodology). In order to detect whether there was a difference between the two measurement methods, we computed the average effectiveness scores. We find an average score of 5.63 and 5.52, respectively for the indirect and the direct method. Since meeting effectiveness is measured on a seven-point scale, we can conclude that meetings are rather effective in Belgium. In line with this finding, we observe that only 7 percent of the reported meetings are ineffective<sup>2</sup>.

We detect that there is no significant difference between the two average meeting effectiveness scores (see Appendix 2, Table 20). This means that the respondents make a good estimation of the degree of meeting effectiveness when asked directly. Furthermore, a positive correlation is identified between these two effectiveness scores: if the fourteen statements receive a high (low) rating, than the seven-point scale represents a high (low) extent of meeting effectiveness as well.

#### **4.3.3 Relations between meeting effectiveness and demographics**

Directly and indirectly measured meeting effectiveness is significantly correlated with the number of meetings. This means that the degree of meeting effectiveness increases when respondents participate in more meetings. In addition, indirectly measured meeting effectiveness has a negative

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<sup>2</sup> Meetings were considered ineffective when the score on the seven-point scale was lower than 4.

correlation with the meeting duration: the shorter the meeting, the higher the extent of meeting effectiveness. We did not find significant relations between meeting effectiveness and work experience or between meeting effectiveness and recovery time (see Appendix 2, Table 21).

In addition, types of job position and nationality are variables in which the average degree of meeting effectiveness (direct and indirect method) varies across their different categories. The average effectiveness score increases parallel with the hierarchical position of the respondent, with the exception of an administrative employee. Meetings reported by administrative employees have a similar extent of effectiveness as meetings reported by middle managers (Table 22).

**Table 22: The average meeting effectiveness score per job position**

	Average meeting effectiveness score (direct method)	Average meeting effectiveness score (indirect method)
Administrative employee	5.88	5.77
Operational employee	5.23	5.39
Professional employee	5.10	5.41
Middle manager	5.75	5.77
Top manager	6.26	6.11

One-way ANOVA:  $F_{\text{direct}}(4,224) = 6.60, p = .00^{**}$ ;  $F_{\text{indirect}}(4,224) = 4.55, p = .00^{**}$

On average, we also find that non-Belgian employees directly and indirectly score the effectiveness of their meetings higher than Belgian workers (Table 23). This finding must be nuanced, since only 3.50 percent of our sample has a non-Belgian origin.

**Table 23: The average meeting effectiveness score per nationality**

	Average meeting effectiveness score (direct method)	Average meeting effectiveness score (indirect method)
Non-Belgian employees	6.37	6.39
Belgian employees	5.48	5.60

One-way ANOVA:  $F_{\text{direct}}(1,227) = 3.85, p = .05^{*}$ ;  $F_{\text{indirect}}(1,227) = 6.24, p = .01^{**}$

We do not find differences in the average meeting effectiveness scores between gender, sectors and regions. Furthermore, meeting effectiveness does not deviate if the respondents received trainings or not and/or if an external party was present during the meeting or not (see Table 24 in Appendix 2 for concrete numbers and tests).

#### 4.4 Meeting cost

In this section we apply the four roadmaps we created in the Methodology in order to calculate the meeting cost on employee, organization and country level.

##### 4.4.1 Roadmap 1: Average meeting cost per attendee

###### Step 1: Meeting cost per attendee

In this step we calculate the meeting cost per respondent. This results in the creation of a new column in our SPSS file in which 229 unique cost figures are given.

###### Step 2: Average meeting cost per attendee

We take the average of the 229 unique meeting costs (step 1) in order to calculate the average meeting cost for one attendee per meeting. This equals €115. We also calculate the averages per cost component, which are presented in Table 25.

**Table 25: Averages per cost components per attendee**

	<b>Average cost per attendee</b>
Meeting duration cost	€50.67
+ Travel cost	+ €8.93
+ Catering cost	+ €4.14
+ External party cost	+ €39.57
+ Recovery cost	+ €11.88
<b>= TOTAL COST</b>	<b>= €115.19</b>

##### 4.4.2 Roadmap 2: Average meeting cost for one Belgian organizations per year

###### Step 1: Meeting cost per attendee (roadmap 1 - step 1)



### Step 2: Average meeting cost per job position per meeting

In Table 26 we give an overview of the average cost per meeting for each job position. For example, the attendance of one professional employee during one meeting costs on average €118.38.

**Table 26: Average meeting cost per job position**

	<b>Average meeting cost per job position</b>
Administrative employee	€99.21
Operational employee	€66.89
Professional employee	€118.38
Middle manager	€127.74
Top manager	€134.92

### Step 3: Standard meeting composition in Belgium

Every respondent needed to indicate the composition of his/her most recent meeting. We calculate the average of all these reported compositions in order to compile a standard composition. This composition was already presented in Meeting culture demographics (Table 10).

### Step 4: Total meeting cost per standard meeting in Belgium

In Table 27 we multiply the outcomes of the previous two steps in order to define the total cost of one standard meeting in Belgium. This results in a total of €1052.85 for one standard meeting.

**Table 27: Total cost per standard Belgian meeting**

	<b>Average meeting cost per job position (Outcome step 2)</b>	<b>Standard meeting composition per job position (Outcome step 3)</b>	<b>Multiplied outcome</b>
Administrative employee	€99.21	1.03	€102.19
Operational employee	€66.89	1.53	€102.34
Professional employee	€118.38	3.90	€461.68
Middle manager	€127.74	1.96	€250.37
Top manager	€134.92	1.01	€136.27
<b>Total</b>			<b>€1052.85</b>

#### Step 5: Average meeting cost for one Belgian organization per year

The multiplication of the total meeting cost of one standard meeting (step 4), the average meeting number per week (Meeting culture demographics) and the average amount of work weeks per year (Methodology) results in the average meeting cost for one Belgian organization per year (see formula below). This means that a Belgian organization on average spends €307 744 on meetings each year.

Average meeting cost for one Belgian organization per year  
= €1052.85 (outcome step 4) x 6.41 (demographics) x 45.60 (average work weeks)  
= **€307 743.84**

#### **4.4.3 Roadmap 3: Total meeting cost in Belgium per year**

##### Step 1: Average meeting cost per attendee (roadmap 1 - step 2)

As outlined in the first roadmap, the average total meeting cost for per attendee equals €115.19.

##### Step 2: Belgian working population

As discussed in the Methodology, the working population in Belgium contains 4 635 546 employees.

##### Step 3: Total meeting cost in Belgium per year

By multiplying the outcomes of the first and second step, the total meeting cost for the complete Belgian working population can be computed. In order to calculate the total meeting cost in Belgium per year, we use the formula underneath.

Total meeting cost in Belgium per year  
= €115.19 (step 1) x 4 635 546 (step 2) x 6.41 (demographics) x 45.60 (work weeks)  
= **€156 076 869 461.03**

#### **4.4.4 Roadmap 4: Total cost of ineffective meetings in Belgium per year**

The main goal of this research is to calculate the cost of ineffective meetings in Belgium. But is there a cost difference between effective and ineffective meetings? No, apparently Belgian organizations do not spend more money on ineffective meetings (see Appendix 2, Table 28). Therefore, we can conclude that there is no cost difference between effective and ineffective meetings.

##### Step 1: Total meeting cost in Belgium per year (outcome roadmap 3)

As outlined in the third roadmap, the total meeting cost in Belgium per year is €156 076 869 461.

Step 2: Percentage of ineffective meetings in Belgium

As mentioned above (Direct versus indirect measurement of meeting effectiveness), 7 percent of the meetings in Belgium is ineffective.

Step 3: Total cost of ineffective meetings in Belgium per year

By multiplying the outcomes of the first and second step, the total cost of ineffective meetings in Belgium per year is computed. We use the formula underneath.

Total annual cost of Belgian ineffective meetings

= €156 076 869 461 x 7%

= €10 925 380 862

## 5 Discussion

We started this paper with the two most cited US meeting numbers: circa 33 per cent of the meetings in the US is considered ineffective, which results in an annual cost of 37 billion dollar (= 32.85 billion euro) (Atlassian, 2019; Baer & De Luce, 2019; Baer & Goudreau, 2015; Bailey, 2013; Devaney, 2016; Jarrett, 2013; Keith, 2015; MeetingKing, 2013; Pidgeon, 2014; ReadyTalk, 2019). After conducting a profound research, we found that 7 percent of the meetings in Belgium seems to be ineffective, resulting in the yearly cost of 10.93 billion euro.

### 5.1 Meeting effectiveness

A remarkable finding is the difference in effectiveness between Belgian and US meetings. It is very difficult to declare this difference, since it is unclear how meeting effectiveness is measured in the US. Therefore, we do not know whether the US number is based on objective and/or subjective measurements. If we can assume that a similar method as ours was used to identify the degree of effectiveness in the US, then we can think of two possible explanations for the difference in effectiveness between Belgian and US meetings: either Belgian employees have more effective meetings or the subjective perception of their meeting effectiveness is overrated.

Although, we tried to suppress socially desirable responses by measuring meeting effectiveness indirectly, eliminating subjectivity entirely is not possible using a questionnaire. Therefore, we propose that future research also include other methods such as observations and/or experiments in order to get a better insight in Belgian meeting effectiveness. Also, a bigger sample is required to obtain a better estimation. We recommend a minimum sample size of 385 respondents (confidence level 95% and margin of error 5%). The sample must include more respondents occupied in Wallonia, more non-Belgian respondents and more respondents with an employment statute other than a white collar worker. Nevertheless, we are convinced that this research entails a good first approach of the meeting effectiveness in Belgium. However, we have to emphasize that the explanations of our findings in the following section are speculations, since there is a lack of meeting literature about the demonstrated relations to support our assumptions. Therefore, these speculations need to be tested in future research.

According to our findings, Belgian meetings are rather effective with an average effectiveness score of 5.63 on a seven-point scale. This average score varies depending on the job position and the nationality of the attendees. We discovered that employees with a higher position in the organizational hierarchy have more effective meetings on average. Since we made use of a

questionnaire, we are not able to determine the causality between job position and the degree of meeting effectiveness. Therefore, both variables might influence each other in two ways. First, the job position of an employee may affect the meeting effectiveness. It might be that middle and top managers are more decisive and contribute more to problem solving and goal reaching. The authority and meeting experience of managers can, for example, ensure that core issues are discussed, participation is induced and clear goals are set before and after the meeting. In this way, the meeting effectiveness is optimized. Second, middle and top managers might be mainly invited to effective meetings, since colleagues value the presence, time and effort of these managers more. For this reason, colleagues ensure that the meeting topics are relevant, the attendees knew what was expected from them and foremost that the meeting was not a waste of time.

Looking into the link between meeting effectiveness and the nationality of the attendees, we suspect that the presence of non-Belgian attendees might result in a greater focus on the meeting process and mutual understanding due to assumed cultural differences. This may lead to a better alignment of reference frameworks, a more transparent communication and clearer agreements and role divisions. In order to test the above-mentioned assumptions on the relation between job positions/nationalities and meeting effectiveness, longitudinal, experimental and/or observational research is required.

It is surprising that there seems to be no relation between the extent of meeting effectiveness on the one hand and having received training or inviting an external party (facilitator, moderator or guest speaker) on the other hand. Unfortunately, we did not gather insights in the rationale of this via our questionnaire. Therefore, we formulate some assumptions in order to declare the absence of these relations ourselves. We think that there is no link between meeting effectiveness and having received training, because the content of these trainings might not necessarily align with our meeting effectiveness definition. It is possible that the trainings, for example, focused on meeting preparation and time management instead of focusing on the processes that affect meeting effectiveness according to our definition. If the trainings would have emphasized the relevance of the attendees, action planning and the opportunity to share ideas and ask questions, then we might have found a link between meeting effectiveness and having received trainings.

Furthermore, the presence of an external party did not seem to have an impact on the degree of meeting effectiveness. The survey question gauging this presence comprises three possible external parties (facilitator, moderator and/or guest speaker). Therefore, we do not know which type of external parties was present during whose meeting. In case of a guest speaker, a meeting is called effective when the questions of the employee are answered, when the topic is relevant and when

the employees learn something new. If not, the presence of the guest speaker is perceived as a waste of time and therefore ineffective. The latter might be the explanation of the non-relation between meeting effectiveness and the presence of an external party.

In the case of a moderator or facilitator, we assume that they usually get invited in times of conflicts and problems which cannot be solved in one single meeting. We think that employees might only perceive the meeting in which the conflict or problem is solved and not the meetings working towards the solution as effective. Whereas according to our definition, the intermediate meetings are also considered effective when the subgoals are reached and questions of the attendees are answered. Further observational and/or experimental research is required to get more insights in the relation between the presence of an external party and the meeting effectiveness.

## **5.2 Meeting cost**

Another remarkable finding is the difference between the US meeting cost (32.85 billion euro) and our cost estimation for Belgium (10.93 billion euro). Intuitively, the US price tag seems to be very high. However if you consider that the reported meeting ineffectiveness in the US is five times higher than the Belgian effectiveness and that the US population is circa 30 times larger than the Belgium population, then it looks like their cost estimation of 32.85 billion euro is a tremendous underestimation. We assume that the reason for this underestimation can be explained by the US cost calculation method. For example, it could be that only the salary cost was included in their cost formula. Even though, this component is a substantial cost driver, there are more drivers that need to be taken into account when calculating the meeting cost. In this research, our aim was to create a cost formula which includes the most essential direct and indirect cost drivers. As a result of this study, we are able to identify how much money Belgian organizations on average spend on one meeting and what their average yearly meeting cost is.

### **5.2.1 Meeting cost per attendee**

In this research, we found that on average one meeting costs €115.19 per attendee. If employers want to make a rough estimation of the meeting cost per employee for one meeting, then we would suggest to use €115.19. Of course, this cost outcome is an average based on the complete sample of our research. It is important to be aware that the actual cost figure can vary depending on the present cost drivers, the meeting duration and the characteristics of the attendees. The average meeting cost per attendee is namely calculated based on the duration of a standard meeting (1 hour and 49 minutes). If employers want a better estimation of their actual meeting cost, then we propose to include the exact cost numbers in following formula (see Formula 1).

## Formula 1: Formula for calculating the meeting cost per attendee

$$\text{Meeting cost per attendee} = \text{Duration cost} + \text{External party cost} + \text{Travel cost} + \text{Catering cost} + \text{Recovery cost}$$

meeting duration x gross paytravel duration x gross pay  
(+ distance in km x gasoline)recovery duration x gross pay

We identified that the meeting duration is the most influential component in this cost formula. It is not only a direct factor in the cost calculation (duration cost), but it also has a profound impact on other cost components, such as the travel and recovery duration. Our findings suggest that the longer meetings take, the more the attendees are willing to travel for a longer time and the longer they need to recover. Thus, the meeting duration influences the meeting cost in a direct and indirect way.

The meeting duration is in its turn affected by three characteristics of the meeting composition: the gender of the attendees, the age of the attendees and the presence of an external party. We found that meetings reported by women take longer than those reported by men and by consequence cost more. According to us, a possible explanation for this finding might be that women in general attach more importance to socializing with colleagues and making sure everyone has the opportunity to participate in the meeting. Moreover, the meeting cost of employees with an age between 36 and 45 years might be higher than average, because they tend to have longer meetings. It is difficult to come up with a declaration for this finding, but we tried to formulate two possible explanations. We assume that employees within this age range occupy mid-level functions. Therefore, they hold meetings to make decisions for their own subordinates and organize meetings to translate decisions from higher hierarchical levels as well. It might also be that people in this age category experience a lot of changes in their home and work life, which might affect the time they spend in meetings (e.g. promotion, bore-out, talking about parenting etc.). Lastly, we observed that the presence of an external party prolongs the meeting duration. In our opinion, the increased meeting duration is not a result of the presence an sich, but the reason why the external party is present. We assume that external parties are mainly invited in order to solve problems (facilitator/moderator) or to provide in-depth information on a certain topic (guest speaker). In short, employers need to be aware that an external party not only increases the facilitator cost, but also can affect the meeting duration and therefore the duration, travel and recovery cost.

If employers want to compute the total cost of a meeting, then we suggest that they multiply the average meeting cost per attendee (€115.19) by the total number of meeting attendees. It is namely not necessary to take into account who exactly attended the meeting in terms of job position when making a rough estimation. Nonetheless, we did consider the job function of every attendee in our

cost calculation for one standard meeting in order to make the cost estimation as accurate as possible (€1052.85).

## **5.2.2 Yearly meeting cost per employee**

In the previous section we demonstrated how important the meeting duration is in the calculation of the meeting cost per attendee and how the duration is affected by the gender of the attendee, the age of the attendee and the presence of an external party. If employers want to calculate the meeting cost for one employee per year, then 'the number of meetings' becomes an important element in the cost formula. On average, organizations spend €33 669.58 on meetings per employee on a yearly basis. Of course, this cost outcome is based on the average number of meetings one employee has per week, which equals 6.41 meetings in our study.

If employers want to make a better estimation of their actual yearly meeting cost per employee, then we propose to use the cost formula below (see Formula 2). For the first part of this formula, we recommend to use the average meeting cost per attendee: €115.19, because we think that the most recent meeting is not as representative as the average of all the meetings of our sample (extreme meetings in terms of cost and duration balance each other out). We also propose to include the exact number of meetings per week and work weeks of each attendee.

### **Formula 2: Formula for calculating the yearly meeting cost per employee**

Yearly meeting cost per employee = €115.19 x Number of meetings on a weekly basis x Number of work weeks on a yearly basis

#### **5.2.2.1 Number of meetings on a weekly basis**

We recommend to use the exact number of meetings on a weekly basis per employee, because this number is a fundamental multiplier in the cost formula and can vary depending on three organizational demographics and five characteristics of the attendee. Our study revealed that sectors providing services (e.g. telecom, banks and insurances, socio-cultural institutions etc.) organize more meetings than other sectors. Therefore, the yearly meeting cost of service organizations is likely to be higher than average. Moreover, we found that organizations located in Brussels seem to be infected by the meeting syndrome, since they hold more meetings than elsewhere in Belgium. This can possibly be explained by the meeting culture that is present or the types of organizations that are located in that region. We assume that seeing others meet stimulates your own meeting behaviour. Third, employees occupied in bigger organizations tend to have more meetings than their colleagues working in smaller companies. We suppose that having more colleagues implies that



information needs to be shared with more people, a consensus needs to be enabled by more people and more opinions need to be heard. Therefore more meetings need to be organized.

Besides the influence of organizational demographics, the number of meeting is influenced by five characteristics of attendees. An employee with a higher educational degree meets more, which results in a higher meeting cost. This might be explained by the fact that their job content mainly consists of brainwork instead of operational activities. This type of tasks requires more information gathering, opinion exchanges and idea discussions which all take place in meetings. This assumption can also explain the fact that an employee with a higher position in the organizational hierarchy, such as a manager, attends more meetings. Moreover, managers usually have the coordination over several subordinates with whom they need to hold a lot of individual and team meetings. Third, it appears that men meet more than women. We clarify this finding by the assumption that the majority of the top functions is still assigned to male employees in Belgium and by the fact that employees in higher job positions tend to meet more. Since gross wage is linked to educational degree and job position, we were not surprised that the more an employee earns, the more meetings he/she attends. Lastly, we found that non-Belgian employees spend more time in meetings than Belgian employees. We assume that meetings (verbal communication) might be a better communication form than emails (written communication) for non-Belgians if they want to make themselves more understandable and overcome differences in culture and language.

#### ***5.2.2.2 Number of work weeks on a yearly basis***

Besides adapting the number of meetings on a weekly basis, employers can also change the number of work weeks in order to improve the meeting cost estimation for one employee per year. The number of work weeks and therefore the moments in which meetings can be organized can vary depending on the organizational holiday policy and sector's standard. Employees occupied in governmental or educational institutions have for example the right to take more vacation days than employees occupied in other sectors. The former has therefore a smaller number of work weeks.

## 6 Recommendations

“7% of the meetings in Belgium are ineffective!”

Does this statement give you the feeling that Belgian organizations are in trouble? We do not think so. Yet, according to our study, the Belgian economy is losing 10.93 billion euro per year due to ineffective meetings. This number on the contrary indicates that employees and employers within Belgian organizations should rethink their approach to meetings. Business4Good is well-placed to capitalize on our research results to raise awareness and create business opportunities. Therefore, we present some key facts in the first part of our recommendation section that can be used in the marketing campaign of Business4Good. Of course, these numbers can be distributed among every organization in Belgium via websites and social media, but we think it is more effective to mainly target organizations with an outstanding meeting culture. Our recommendations concerning the marketing strategy and target group can be found in the second section. Lastly, we believe that the impact of the marketing campaign can be enlarged by introducing a B4G cost calculator, whereby organizations can make a more concrete estimation of their meeting costs. The first outlines for this tool are described in the final part of the recommendations.

### 6.1 Awareness

We think that Business4Good can raise the most awareness by focussing on the numbers that matter the most to employees and employers. Employees are mainly worried about the time and energy they lose due to ineffective meetings, whereas employers are mostly concerned about the financial losses of these meetings. Underneath, we present some statements that can be used to target both groups. The numbers below are based on the findings in the results section, but we did some extra calculations in order to make these numbers more comprehensive for the target groups (see Appendix 3).

#### Employee awareness

“ $\frac{1}{3}$  of your working time = meeting time”

“Did you know you spend 70 work days per year in meetings?”

“Be aware that you dedicate 11 years of your life to meetings.”

“Check your agenda and notice that you attend 292 meetings this year.”

## **Employer awareness**

“Today, Belgium is wasting €30 million on ineffective meetings.”

“Each year, Belgian organizations spend together €156 billion on meetings.”

“Today, 5.9 million meetings are organized in Belgium.”

“Every year, €2357 per employee is thrown away due to ineffective meetings.”

## **6.2 Marketing strategy and target group**

Since Business4Good was recently founded and is still developing its credibility and brand recognition, we discourage a random distribution of the examined facts and figures. If randomly distributed, awareness might be raised but organizations will not necessarily contact Business4Good in order to reduce their meeting costs by making their meetings more effective. Personal communication is essential to make the connection between the cost figures and what Business4Good can do for the organization. Therefore, we think it is important to make use of the personal and professional network Business4Good already has and send personal messages with customized content including the most relevant findings for them. Furthermore, this network needs to be extended by visiting networking events and attending meeting conferences. Of course, it is not possible to make a personal connection with every employee in Belgium. That’s why we recommend to target types of organizations with an outstanding meeting culture, since they might be more responsive to training offers. We are convinced that awareness should be created, but only among the most relevant organizations.

We assume that organizations, in which numerous meetings are held, are more susceptible for our awareness numbers. Employees occupied in these organizations are daily confronted with a large amount of meetings and will therefore more quickly realize that meetings can imply major costs. According to our research, the number of meetings is linked to three organizational characteristics: organization size, region and sector. These three should form the foundation of the targeting strategy of Business4Good. The company should foremost focus on large organizations, organizations situated in Brussels and organizations operating in the telecom, bank and services sectors.

## **6.3 B4G Cost Calculator**

Besides personal contact, the website of Business4Good is a good channel to raise awareness on meeting effectiveness and the related costs, because the link between the cost figures and the services provided by the company is self-evidently. We propose to implement a B4G Cost Calculator

on the website, because we think that organizations will take the message more seriously if they can discover their meeting cost themselves.

With this tool, employees and employers can calculate the individual and total cost of their most recent meeting. As presented in Figure 2, the B4G Cost Calculator comprises more cost components compared to the existing tools, which mainly takes the salary cost into account. Therefore, Business4Good can offer a better estimation of the meeting cost. The cost of the person who is filling out the tool can be determined accurately and the cost of the other attendees will be based on the findings of our research (average meeting cost per job function). This tool can also be used during the workshops of Business4Good to grab the attention of and raise awareness among the workshop participants. In this way, a burning platform is created, whereby participants are more responsive to tips and tricks to improve meeting effectiveness and to increase the Return On the Meeting Investment (ROMI).

**Figure 2: B4G Cost Calculator**

## B4G Cost Calculator

Meeting duration:  hours  minutes

Recovery time\*:  hours  minutes

Gross monthly pay  euro

Transport mode

- In-house meeting
- By car
- By public transport
- By bike
- On foot
- Other mode of transport

Travel duration:  hours  minutes

Presence of external party\*\*

- Yes
- No

\*Recovery is the time period between the end of a meeting and the resumption of the work tasks  
\*\*An external party can be an external moderator, facilitator or paid guest speaker

Administrative employee

Executive employee

Professional employee

Middle manager

Top manager

Meeting composition

Catering facilities

- Nothing was provided
- Water, coffee and tea
- Soft drinks
- Breakfast
- Lunch (sandwiches and salads)
- Lunch (warm meal)
- Lunch (at a restaurant or bistro)
- Snacks (e.g. fruit, cookies, cake etc.)
- Dinner (sandwiches and salads)
- Dinner (warm meal)
- Dinner (at a restaurant or bistro)

## 7 Conclusion

When looking for literature about meetings, we detected that most research is conducted in the US and therefore the findings mostly relate to US companies. There seems to be a common ground about the degree of meeting effectiveness and the corresponding costs, but it remains unclear how research on the US meeting culture, effectiveness and costs was undertaken. We did not even find information on the meeting culture, effectiveness and costs in Belgium. However, this information would be of great interest for Belgian organizations considering the effort and financial investments in meetings. In addition, coaching and training companies can use this information to promote their services. Business4Good, a Belgian professional development company, saw business and marketing opportunities in closing this information gap and raising awareness. Therefore, we attempted to provide accurate facts and figures on the Belgian meeting culture, effectiveness and costs by conducting a quantitative survey research.

### 7.1 What does the meeting culture look like in Belgium?

Our findings suggest that 5.9 million meetings are daily organized in Belgium and that employees spend one third of their work time in meetings. These high numbers certainly indicate that there is evidence of a meeting culture within Belgian organizations. But what does this meeting culture look like?

On average, Belgian employees attend 6 meetings per week, which lasts almost two hours per meeting. A standard Belgian meeting comprises 9 attendees and in 12 percent of the cases an external party such as a facilitator, moderator or guest speaker is invited as well. The majority of the Belgian companies organize their meetings in-house and provide catering facilities for the attendees. After a meeting, employees on average need almost half an hour to recover and get back to work. Since we found that only a minority of Belgian employees has already received a training on meeting effectiveness, there is still business potential for Business4Good.

Even though, these numbers offer an insight in the overall meeting culture in Belgium, we want to underline that every organization has a unique meeting culture. For example, our research indicates that the sector, the region and the size of the company determine how many meetings their employees attend on average. In the interest of future research, we recommend to conduct more in-depth research on the differences in meeting culture between Belgian organizations.

## **7.2 How (in)effective are meetings in Belgian organizations?**

The results of our research indicate that meetings are rather effective in Belgium. Belgian meetings receive a score of 5.63 on a seven-point scale in terms of effectiveness. In line with this finding, we observe that only 7 percent of Belgian meetings is ineffective. It seems like Belgian organizations do not need much help to improve their meeting effectiveness. This is bad news for coaching and training companies such as Business4Good. But if we translate these numbers to cost figures, then we observe that there still is a business opportunity and therefore a potential market for training services.

## **7.3 What is the financial cost of ineffective meetings in Belgium?**

In order to answer this research question, we compiled cost formulas including the following cost components: meeting duration cost, travel cost, catering cost, external party cost and recovery cost. The outcomes of our cost calculations indicate that Belgian organizations invest tons of money in (ineffective) meetings. Our country is wasting no less than €10.93 billion due to ineffective meetings.

Our research offers a lot of facts and figures on the meeting culture, effectiveness and costs in Belgium. It is vital that Business4Good provides the right information in the right manner to the right organizations. For that reason, we formulate three recommendations. First, we initiate a marketing campaign using the numbers that matter the most to the potential customers (right information). Second, we identify a target group, which is most responsive to training offers (right organizations). Besides providing organizations of general numbers in order to raise awareness, we introduce the B4G Cost Calculator. This is a tool that organizations can use to calculate their own meeting cost (right manner).

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## 9 Appendix 1

### Start of Block: Demographics

Q3

Thank you for participating in our survey about (the cost of) meetings in Belgium. The first part of the questionnaire is about your organizational, job and personal demographics which are necessary components for our calculations. All the data will be processed **confidentially and anonymously**.

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Page Break

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Q5

### Organizational demographics

What is the size of the organization you work for?

- Number of employees (3) \_\_\_\_\_
- 

Page Break

---

Q7 Which sector does your organization mainly operate in?

- Agriculture, horticulture, livestock farming & fishing (1)
- Energy & environment (2)
- Electronics & technology industry (3)
- Food production and other fast moving consumer goods (4)
- Textile industry & fashion (5)
- Other industrial sectors (6)
- Construction (7)
- Logistics, transport & distribution (8)
- Retail & wholesale (9)
- Hotel, restaurant & café (10)
- Tourism, sport & recreation (11)
- Bank & insurances (12)
- Telecom, ICT & internet (13)
- Design office & engineering (14)
- Media, marketing & communication (17)

- Human Resources (18)
- Legal services, notary services & law (19)
- Other services to organizations & private individuals (20)
- Healthcare (21)
- Education & scientific research (22)
- Government: EU (23)
- National government (24)
- Socio-cultural & non-profit sector (25)
- Other sectors (26)

*Skip To: Q39 If Q7 = Government: EU*

---

Page break

Q32 Which region is your organization located in?

(In case there are locations in more than one region, please provide the region where you primarily work)

- West Flanders (1)
- East Flanders (2)
- Flemish Brabant (except Brussels) (3)
- Brussels (11)
- Antwerp (4)
- Limburg (5)
- Hainaut (6)
- Brabant Wallon (7)
- Namur (8)
- Liège (9)
- Luxembourg (10)

---

Page Break

Q8

Job demographics

How many years of work experience do you have?

- Years (since your first job) (1) \_\_\_\_\_
- 

Q28 What is your employment statute?

- Blue collar worker (arbeider/ouvrier) (1)
  - White collar worker (bediende/employee) (2)
  - Statutory worker civil services (statutaire ambtenaar/fonctionnaire statutaire) (3)
  - Contractual worker civil services (contractuele ambtenaar/fonctionnaire contractuel) (4)
- 

*Display This Question:*

*If Q28 = Blue collar worker (arbeider/ouvrier)*

Q29 Which job department are you mainly employed in?

- Production (1)
  - Logistics, purchase, distribution & transport (2)
  - Hotel, restaurant & café (3)
  - Other (4) \_\_\_\_\_
-

Display This Question:

If Q28 = White collar worker (bediende/employee)

Q29 In which job department are you mainly employed?

- Administration & secretariat (1)
  - Sales (2)
  - ICT & internet (3)
  - Production (4)
  - Finance & accounting (5)
  - Consultancy & counseling (6)
  - Logistics, purchase, distribution & transport (7)
  - Engineering (8)
  - Government services (9)
  - Marketing & communication (10)
  - Human resources & staff management (11)
  - Research & development (12)
  - Education (13)
  - Medical & paramedical (14)
  - Management & direction (15)
  - Social services (16)
  - Academic & scientific research (17)
  - Design, journalism & creative professions (18)
  - Juridical (19)
  - Hotel, restaurant & café (20)
  - Tourism (21)
  - Liberal professions (22)
  - Franchising & branch management (23)
  - Other (24) \_\_\_\_\_
-

*Display This Question:*

*If Q28 = Statutory worker civil services (statutaire ambtenaar/fonctionnaire statutaire)*

*Or Q28 = Contractual worker civil services (contractuele ambtenaar/fonctionnaire contractuel)*

Q30 In which job department are you mainly employed?

- Administration & secretariat (1)
- ICT & internet (2)
- Finance & accounting (3)
- Engineering (4)
- Government services (5)
- Human resources & staff management (6)
- Education (7)
- Academic & scientific research (8)
- Other (9) \_\_\_\_\_

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Page Break

Q9 Which job position do you mainly occupy?

- Administrative & supportive employee (no supervising authority - supporting the core business; e.g. reception, security or maintenance worker) (5)
- Executive/operational employee (no supervising authority - execute the core business; e.g. postman, sales staff, production worker) (4)
- Professional employee (no supervising authority - specific expertise; e.g. accountant, jurist, pharmacist) (3)
- Middle manager (supervising authority over part(s) of the organization; e.g. team leader, foreman, business unit manager) (2)
- Senior & top manager (supervising authority over the whole organization; e.g. CEO, CFO, COO, general manager) (1)

*Display This Question:*

*If Q7 = Government: EU*

Q39

Job demographics

What is your grade within the European Union?

▼ AST/SC1 (1) ... AD12 (8)

Display This Question:

If Q7 = Government: EU

Q40 Which salary step are you at?

▼ 1 (1) ... 8 (8)

Display This Question:

If Q7 = Government: EU

Q41 How many years of work experience do you have?

- Years (since the start of your career) (1)

\_\_\_\_\_

Page Break

Q20

Personal demographics

What is your gender?

- Man (4)
- Woman (5)
- X (6)

Q35 What is your age?

- < 18 (8)
- 18 - 25 (1)
- 26 - 35 (2)
- 36 - 45 (3)
- 46 - 55 (4)
- 56 - 65 (5)
- 66 - 75 (6)
- > 75 (7)

Page Break

Q31 What is your nationality?

- Belgian (1)
- Other nationality (please specify) (2)

\_\_\_\_\_

Q27 What is the highest educational degree you obtained?

- Secondary school (no higher education) (1)
- Professional bachelor (2)
- Academic bachelor (3)
- Academic master (4)
- PhD (5)

**End of Block: Demographics**

---

**Start of Block: Effectiveness & Cost Meeting**

Q12

Meetings

In this section of the survey, we would like you to reflect on **meetings**. To increase the reliability of this study we ask you to keep the following definition of a meeting in mind while completing the questionnaire.

A **meeting** is the moment when two or more people meet face to face or digitally in a professional context in order to answer questions they can't answer individually. It may be spontaneously or planned with internal and/or external stakeholders inside or outside the organization. Congresses and Symposia are not considered meetings in the context of this study, since meetings require two-way communication.

How many meetings do you on average attend or lead on a weekly basis?

- Number of meetings (1) \_\_\_\_\_

Q26 Approximately, how much time do you need to recover from a meeting and get back to working productively?

(Recovery is the time period between the end of a meeting and the resumption of the work tasks)

- Hours (1) \_\_\_\_\_
- Minutes (2) \_\_\_\_\_

---

Page Break

Q27 Have you ever received training on how to participate in or lead effective meetings?

- Yes (1)
- No (2)

---

Page Break

Q37

In this section of the questionnaire we attempt to characterize your most recent meeting. Please keep your **most recent meeting** in mind while completing the following questions.

Facts and Figures

How many people occupying the following positions were present during your most recent meeting (including yourself)? Please fill out '0' if no one from a specific category was present.

- Administrative/supportive employee (1) \_\_\_\_\_
- Executive/operational employee (2) \_\_\_\_\_
- Professional employee (3) \_\_\_\_\_
- Middle manager (4) \_\_\_\_\_
- Senior & top manager (5) \_\_\_\_\_

---

Page Break

Q19 What was the duration of your most recent meeting approximately?

- Hours (1) \_\_\_\_\_
- Minutes (2) \_\_\_\_\_

---

Page Break

Q21 How did you travel to your most recent meeting?

(If you used multiple transport modes, select the one you travelled the most kilometers with)

- The meeting was organized in-house, therefore I did not need to travel (1)
- By car (2)
- By public transport (3)
- By bike (4)
- On foot (5)
- Other mode of transport (6) \_\_\_\_\_



*Display This Question:*

*If Q21 = By car*

*Or Q21 = By public transport*

*Or Q21 = By bike*

*Or Q21 = On foot*

*Or Q21 = Other mode of transport*

Q22 How long did it take to travel to the meeting approximately?

- Hours (1) \_\_\_\_\_
  - Minutes (2) \_\_\_\_\_
- 

*Display This Question:*

*If Q21 = By car*

Q23 What was the travel distance in kilometers approximately?

- Amount of kilometers (1) \_\_\_\_\_
- 

Page Break \_\_\_\_\_

Q24 Which catering facilities were provided during your most recent meeting?

(Multiple answers are possible)

- Nothing was provided (1)
  - Water, coffee and tea (2)
  - Soft drinks (3)
  - Lunch (sandwiches and salads) (4)
  - Lunch (warm meal) (5)
  - Lunch (at a restaurant or bistro) (6)
  - Snacks (e.g. fruit, cookies, cake etc.) (7)
  - Dinner (sandwiches and salads) (8)
  - Dinner (warm meal) (9)
  - Dinner (at a restaurant or bistro) (10)
  - Other (11) \_\_\_\_\_
- 

Page Break \_\_\_\_\_

Q25 Was an external moderator, facilitator or paid guest speaker present at your most recent meeting?

- Yes (1)
  - No (2)
-

Q11

Subjective perception of the meeting

Please indicate to what extent you agree with the following statements about the characteristics of **your most recent meeting**.

	Completely disagree (1)	Disagree (2)	Slightly disagree (3)	Impartial (4)	Slightly agree (5)	Agree (6)	Completely agree (7)
The meeting was necessary considering the content and purpose of it. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The presence of every attendee was relevant and needed for the meeting. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The discussed topics were relevant for every attendee. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A structured agenda was distributed before the meeting. (4)

The attendees came prepared to the meeting. (5)

Clear goals were set before the meeting. (6)

The duration was appropriate for the meeting. (8)

The meeting room suited the number of attendees. (9)

The appropriate meeting

facilities  
(e.g.  
beamer,  
flipcharts,  
writing  
utensils etc.)  
were  
available.  
(10)

The  
appropriate  
work  
environment  
(e.g. seating,  
lighting,  
temperature  
etc.) was  
present. (11)

The  
organization  
you work for  
has a  
meeting  
policy. (e.g.  
agreements  
on the  
frequency,  
duration,  
content or  
structure of  
meetings)  
(12)



The agreed timeslot was respected. (14)

The attendees arrived on time. (15)

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Page Break

Q17 Please indicate to what extent you agree with the following statements about the characteristics of your most recent meeting.

	Completely disagree (1)	Disagree (2)	Slightly disagree (3)	Impartial (4)	Slightly agree (5)	Agree (6)	Completely agree (7)
The core issues were discussed during the meeting. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All attendees had the opportunity to participate and speak up during the meeting. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All attendees were focused and engaged during the meeting. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The attendees multitasked during the meeting (e.g. were on their phone). (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate 'Completely agree' for this statement.

(18)

The questions you had before the meeting were answered during the meeting. (15)

The attendees valued and respected each other's contributions. (16)

The attendees could share their opinion and ask questions during the meeting. (17)

The postulated goals were achieved as a result of the

meeting. (21)

The attendees  
knew what  
was expected  
from them  
during the  
meeting. (10)

The attendees  
knew what  
was expected  
from them  
after the  
meeting. (20)

The  
responsibilities  
were clear to  
every  
attendee  
during the  
meeting. (11)

The attendees  
knew which  
tasks they had  
to do after the  
meeting. (19)

The meeting  
was a waste of  
time. (22)



---

Page Break

Q18

Keeping the following guide of meeting effectiveness in mind, please could you rate the degree of the effectiveness of **your most recent meeting** on a seven-point scale.

Factors of an **effective meeting**:

- felt like a good use of my time
- achieved the clearly defined goals, which were relevant to my work
- was 'worth it' in terms of time, effort and resources needed to make it happen
- was well prepared, well executed and results-driven
- had a timely start, decisive end and clear follow-up plan

- Completely disagree (2)
- Disagree (3)
- Slightly disagree (4)
- Impartial (5)
- Slightly agree (6)
- Agree (7)
- Completely agree (8)

**End of Block: Effectiveness & cost meeting**

---

**Start of Block: Gross pay**

Q32 In this last question we ask for your **monthly gross pay (without extralegal benefits)**. This information helps us calculate the cost of meetings (in terms of your time) and will not be used for any other purpose. We guarantee this answer will not be linked to your personal or organizational demographics in any way and will remain completely **anonymous and confidential**.

- Gross pay (in euro) (1) \_\_\_\_\_

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Page Break

Q33 Thank you for your participation in our questionnaire!

Based on your responses on the survey, academic literature and practical experience, we will compile a model to estimate the effectiveness of meetings in Belgium and how much money is lost due to ineffective meetings. Your participation will help us get more insights on the amount of meetings, the influential factors of their effectiveness and the meeting cost components. If you have any questions regarding the survey or the research (results), you can always send an email to [camille.cooman@hotmail.com](mailto:camille.cooman@hotmail.com) or [rin.verstraeten@gmail.com](mailto:rin.verstraeten@gmail.com).

**End of Block: Gross pay**

## 10 Appendix 2

**Table 1: Indirect measurement of meeting effectiveness**

Overview of the questioned statements and the link with the scientific literature

Questioned statements	Link with the scientific literature
The meeting was necessary considering the content and purpose of it.	Allen, Landowski & Lehmann-Willenbrock, 2014; Lukes, 2011; Rogelberg, 2019; Romano & Nunamaker, 2001
The presence of every attendee was relevant and needed for the meeting.	Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Rogelberg, 2019; Romano & Nunamaker, 2001
The discussed topics were relevant for every attendee.	Lukes, 2011
A structured agenda was distributed before the meeting.	Leach, Rogelberg, Warr & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Lukes, 2011; Nixon & Littlepage, 1992; Rogelberg, 2019; Romano & Nunamaker, 2001
The attendees came prepared to the meeting.	Lukes, 2011; Romano & Nunamaker, 2001
Clear goals were set before the meeting.	Allen, Landowski, & Lehmann-Willenbrock, 2014; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Rogelberg, 2019
The duration was appropriate for the meeting.	Leach, Rogelberg, Warr, & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Romano & Nunamaker, 2001; Yankelovich, Walker, Roberts, Wessler, Kaplan & Provino, 2004
The meeting room suited the number of attendees.	Leach, Rogelberg, Warr & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Romano & Nunamaker, 2001; Yankelovich, Walker, Roberts, Wessler, Kaplan & Provino, 2004
The appropriate meeting facilities (e.g. beamer, flipcharts, writing utensils etc.) were available.	Leach, Rogelberg, Warr & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Rogelberg, 2019; Romano & Nunamaker, 2001; Yankelovich, Walker, Roberts, Wessler, Kaplan & Provino, 2004
The appropriate work environment (e.g. seating, lighting, temperature etc.) was present.	Leach, Rogelberg, Warr & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Rogelberg, 2019; Romano &

	Nunamaker, 2001; Yankelovich, Walker, Roberts, Wessler, Kaplan & Provino, 2004
The organization you work for has a meeting policy. (e.g. agreements on the frequency, duration, content or structure of meetings).	Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017
The agreed timeslot was respected.	Leach, Rogelberg, Warr & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992
The attendees arrived on time.	Leach, Rogelberg, Warr & Burnfield, 2009; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Rogelberg, 2019
The core issues were discussed during the meeting.	Nixon & Littlepage, 1992; Rogelberg, Scott & Kello, 2007
All attendees had the opportunity to participate and speak up during the meeting.	Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Rogelberg, 2019
All attendees were focused and engaged during the meeting.	Rogelberg, 2019; Romano & Nunamaker, 2001
The attendees multitasked during the meeting (e.g. were on their phone).	Rogelberg, 2019
The questions you had before the meeting were answered during the meeting.	Business4Good
The attendees valued and respected each other's contributions.	Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Rogelberg, 2019
The attendees could share their opinion and ask questions during the meeting.	Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017
The postulated goals were achieved as a result of the meeting.	Allen, Landowski, & Lehmann-Willenbrock, 2014; Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017
The attendees knew what was expected from them during the meeting.	Nixon & Littlepage, 1992; Rogelberg, Scott & Kello, 2007
The attendees knew what was expected from them after the meeting.	Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Rogelberg, 2019
The responsibilities were clear to	Rogelberg, 2019

every attendee during the meeting.	
The attendees knew which tasks they had to do after the meeting.	Lehmann-Willenbrock, Rogelberg, Allen & Kello, 2017; Nixon & Littlepage, 1992; Rogelberg, 2019
The meeting was a waste of time.	Rogelberg, 2019

**Table 5 (1): Sample demographics (N = 229)**

Sector	N		Organization size	N	
		%			%
Agriculture, horticulture, livestockfarming & fishing	3	1.30	0-100	74	32.30
			101-500	71	31.00
Energy & environment	5	2.20	501-1000	13	5.70
Electronics & technology industry	7	3.10	1001-2500	20	8.70
			2501-5000	14	6.10
Food production and other fast moving consumer goods	10	4.40	5001-7500	5	2.20
			7501-10.000	1	.40
Textile industry & fashion	2	.90	> 10.000	31	13.50
Other industrial sectors	17	7.40			
Construction	5	2.20	<b>Region</b>		
Logistics, transport & distribution	8	3.50	West Flanders	18	7.90
			East Flanders	45	19.70
Retail & wholesale	7	3.10	Brussels	40	17.50
Hotel, restaurant & café	0	0	Flemish Brabant	21	9.20
Tourism, sport & recreation	1	.40	(expect Brussels)		
Bank & insurances	9	3.90	Antwerp	91	39.70
Telecom, ICT & internet	22	9.60	Limburg	9	3.90
Design office & engineering	3	1.30	Hainaut	1	.40
Media, marketing & communication	7	3.10	Brabant Wallon	1	.40
			Namur	0	0
Human Resources	3	1.30	Liège	0	0
Legal services, notary services & law	2	.90	Luxembourg	3	1.30
Other services to organizations	13	5.70	<b>Employement statute</b>		

Healthcare	69	30.10	Blue collar worker	5	2.20
Education & scientific research	18	7.90	White collar worker	203	88.60
Socio-cultural & non-profit sector	4	1.70	Statutory worker civil services	16	7.00
National government	4	1.70	Contractual worker civil services	5	2.20
Other sectors	10	4.40			

### **Nationality**

Belgian	221	96.50
Other nationality <sup>3</sup>	8	3.50

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<sup>3</sup> French (3), German (2), Maltese (1), Spanish (1), British (1)

**Table 5 (2): Sample demographics (N = 229)**

	N	%		N	%
<b>Work experience<sup>4</sup></b>			<b>Age</b>		
0-5	75	32.80	18-25	48	21.00
6-10	25	10.90	26-35	69	30.10
11-15	22	9.60	36-45	37	16.20
16-20	29	12.70	46-55	54	23.60
21-25	18	7.90	56-65	21	9.20
26-30	34	14.80			
31-35	13	5.70	<b>Educational degree</b>		
36-40	10	4.40	Secondary school	18	7.90
41-45	3	1.30	Professional bachelor	82	27.10
			Academic bachelor	14	6.10
<b>Job position</b>			Academic master	125	54.60
Administrative and/or supportive employee	24	10.50	PhD	10	4.40
Executive and/or operational employee	26	11.40	<b>Gender</b>		
Professional employee	88	38.40	Man	122	53.30
Middle manager	64	27.90	Women	106	46.30
Senior & top manager	27	11.80	X	1	.40

<sup>4</sup> In years



**Table 9: Meeting demographics (N = 229)**

	N	%		N	%
<b>Number of meetings</b>			<b>Transport mode</b>		
0-5	141	61.60	In-house meeting	152	66.40
6-10	48	21.00	Car	55	24.00
11-15	20	8.70	Public transport	6	2.60
16-20	9	3.90	Bike	5	2.20
21-25	4	1.70	Foot	11	4.80
> 26	7	3.10			
			<b>Transportation duration<sup>5</sup></b>		
<b>Training meeting effectiveness</b>			0	152	66.40
Yes	90	39.30	1-15	23	10.00
No	139	60.70	16-30	16	7.00
			31-45	10	4.40
<b>Catering facilities</b>			46-60	10	4.40
Nothing was provided	97	42.36	61-90	10	4.40
Water, coffee and tea	123	53.71	> 90	8	3.50
Soft drinks	23	10.04			
Breakfast	1	.44	<b>Meeting composition<sup>6</sup></b>		
Lunch (sandwiches and salads)	27	11.79	Administrative and/or supportive employee	1.03	10.92
Lunch (warm meal)	1	.44	Executive and/or operational employee	1.53	16.22
Lunch (at a restaurant or bistro)	2	.87	Professional employee	3.90	41.36
Snacks	11	4.80	Middle manager	1.96	20.78
Dinner	2	.87	Senior and top manager	1.01	10.72

<sup>5</sup> In minutes

<sup>6</sup> On an average total of 9.43 meeting attendees

(sandwiches and salads)

Dinner (warm meal)	1	.44	<b>External party</b>		
Dinner	0	0	Yes	27	11.80
(at a restaurant and bistro)			No	202	88.20

**Table 12: Bivariate correlations: sample and meeting culture ( $N = 229$ )<sup>7</sup>**

Means, standard deviations, correlation scores and significance levels

	<b>M</b>	<b>SD</b>	<b>1.</b>	<b>2.</b>	<b>3.</b>	<b>4.</b>	<b>5.</b>	<b>6.</b>
1. Number of meetings (on a weekly basis)	6.41	7.14						
2. Organization size	5685	21731.77	.25**					
3. Work experience (in years)	15.44	12.11	.11	-.02				
4. Recovery time (in minutes)	27.63	44.55	-.17*	-.09	-.05			
5. Meeting duration (in minutes)	108.93	92.61	-.19**	-.04	.09	.20**		
6. Travel duration (in minutes)	16.86	38.67	-.11	-.08	.03	.14*	.49**	
7. Gross monthly wage (in euro)	4504.30	4337.82	.36**	.12	.33**	-.08	-.07	-.03

<sup>7</sup> Pearson correlation.  $M$  = mean;  $SD$  = standard deviation; correlations between variables;  $N = 229$ .  
\*\* $p < .01$ . \* $p < .05$ .

**Table 17: Average meeting number per week across gender/nationalities/past training attendance**

Table 17 (1): Average meeting number per week across gender ( $N = 228$ )<sup>8</sup>

	<b>M</b>	<b>SD</b>
Man	7.81	8.27
Woman	4.85	5.17

One-way ANOVA:  $F(1,226) = 10.15, p = .00^{**}$

Table 17 (2): Average meeting number per week across nationalities ( $N = 229$ )

	<b>M</b>	<b>SD</b>
Belgian	6.22	6.98
Non-Belgian	11.75	9.68

One-way ANOVA:  $F(1,227) = 4.72, p = .03^*$

Table 17 (3): Average meeting number per week across past training attendance ( $N = 229$ )

	<b>M</b>	<b>SD</b>
Respondents who received training on meeting effectiveness	9.60	8.36
Respondents who did not received training on meeting effectiveness	4.35	5.31

One-way ANOVA:  $F(1,227) = 33.89, p = .00^{**}$

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<sup>8</sup> Excluding 'X' category due to insufficient response rate (only 1 respondent)

**Table 18: Average meeting duration per week across gender/age ranges/external party attendance**

Table 18 (1): Average meeting duration per week across gender ( $N = 228$ )<sup>9</sup>

	<b>M</b>	<b>SD</b>
Man	94.33	68.62
Woman	125.92	112.50

One-way ANOVA:  $F(1,226) = 6.74, p = .01^{**}$

Table 18 (2): Average meeting duration per week across age ranges ( $N = 229$ )

	<b>M</b>	<b>SD</b>
18-25	91.94	81.82
26-35	101.23	83.04
36-45	150.95	126.28
46-55	108.70	74.37
56-65	99.67	104.83

One-way ANOVA:  $F(4,224) = 2.55, p = .04^*$

Table 18 (3): Average meeting duration per week across external party attendance ( $N = 229$ )

	<b>M</b>	<b>SD</b>
Meeting including attendance of an external party	248.89	144.61
Meeting not including attendance of an external party	90.23	63.57

One-way ANOVA:  $F(1,227) = 100.37, p = .00^{**}$

<sup>9</sup> Excluding 'X' category due to insufficient response rate (only 1 respondent)

**Table 19: Indirect measurement of meeting effectiveness (factor analysis)**

Overview of the questioned statements and their related components

Questioned statements	Component 1 Meeting effectiveness	Component 2 Meeting Facilities	Component 3 Meeting preparation	Component 4 Meeting participation	Component 5 Meeting timing
The meeting was necessary considering the content and purpose of it.	X				
The presence of every attendee was relevant and needed for the meeting.				X	
The discussed topics were relevant for every attendee.	X				
A structured agenda was distributed before the meeting.			X		
The attendees came prepared to the meeting.			X		

Questioned statements	Component 1 Meeting effectiveness	Component 2 Meeting Facilities	Component 3 Meeting preparation	Component 4 Meeting participation	Component 5 Meeting timing
Clear goals were set before the meeting.			X		
The duration was appropriate for the meeting.	X				
The meeting room suited the number of attendees.		X			
The appropriate meeting facilities (e.g. beamer, flipcharts, writing utensils etc.) were available.		X			
The appropriate work environment (e.g. seating, lighting, temperature etc.) was present.		X			

Questioned statements	Component 1 Meeting effectiveness	Component 2 Meeting Facilities	Component 3 Meeting preparation	Component 4 Meeting participation	Component 5 Meeting timing
The organization you work for has a meeting policy. (e.g. agreements on the frequency, duration, content or structure of meetings).		X			
The agreed timeslot was respected.					X
The attendees arrived on time.					X
The core issues were discussed during the meeting.	X				
All attendees had the opportunity to participate and speak up during the meeting.				X	

Questioned statements	Component 1 Meeting effectiveness	Component 2 Meeting Facilities	Component 3 Meeting preparation	Component 4 Meeting participation	Component 5 Meeting timing
All attendees were focused and engaged during the meeting.	X				
The attendees multitasked during the meeting (e.g. were on their phone).				X	
The questions you had before the meeting were answered during the meeting.	X				
The attendees valued and respected each other's contributions.	X				
The attendees could share their opinion and ask questions during the meeting.	X				



Questioned statements	Component 1 Meeting effectiveness	Component 2 Meeting Facilities	Component 3 Meeting preparation	Component 4 Meeting participation	Component 5 Meeting timing
The postulated goals were achieved as a result of the meeting.	X				
The attendees knew what was expected from them during the meeting.	X				
The attendees knew what was expected from them after the meeting.	X				
The responsibilities were clear to every attendee during the meeting.	X				
The attendees knew which tasks they had to do after the meeting.	X				
The meeting was a waste of time.	X				

**Table 20: Direct versus indirect measurement of meeting effectiveness (N = 229)**

Means, standard deviations, results Paired Sample T-test and Pearson's Correlation

	M	SD
Indirect measurement Meeting effectiveness	5.63	.89
Direct measurement Meeting Effectiveness	5.51	1.27

Paired Sample T-Test:  $t(228) = -1.82, p = .07$ ; Pearson's Correlation:  $r = .69, p = .00^{**}$ **Table 21: Bivariate correlations: direct and indirect measurements of meeting effectiveness (N = 229)**

Means, standard deviations, correlation scores and significance levels

	M	SD	Indirectly measured effectivity (Factor analysis)	Directly measured effectivity (Seven-point scale)
1. Work experience (in years)	15.44	12.11	.07	.02
2. Monthly gross wage (in euro)	4504.30	4237.82	.10	.12
3. Organization size	5685	21731.77	.02	.04
4. Number of meetings (on a weekly basis)	6.41	7.14	.13*	.19**
5. Meeting duration (in minutes)	108.93	92.61	-.13*	-.06
6. Recovery time (in minutes)	27.63	44.55	-.79	.07
7. Travel duration (in minutes)	16.86	38.67	-.02	-.40

\*  $p < .05$ ; \*\* $p < .01$

**Table 24: One-way ANOVAs and Non-Parametric Test: direct and indirect measurements of meeting effectiveness (N = 229)**

	Indirectly measured effectivity (Factor analysis)		Directly measured effectivity (Seven-point scale)	
	F	Sig.	F	Sig.
1. Gender <sup>10</sup>	F(1,226) = .00	.97	F(1,226) = .67	.41
2. Age (NT)	F(4,224) = 1.99	.10	F(4,224) = 1.53	.19
3. Education degree (NT)	F(4,224) = .16	.96	F(4,224) = .26	.90
4. Sector (NT)	F(21,207) = .87	.64	F(21,207) = 1.01	.46
5. Region (NT)	F(8,220) = .66	.73	F(8,220) = 1.00	.44
6. Job position (NT)	F(4,224) = 4.55	<b>.00**</b>	F(4,224) = 6.60	<b>.00**</b>
7. Training meeting effectiveness	F(1,227) = 1.55	.22	F(1,227) = .66	.42
8. Facilitator (NT)	F(1,227) = .39	.53	F(1,227) = .25	.62
9. Employment Statute (NT)	F(3,225) = .31	.82	F(3,225) = .12	.95
10. Nationality (NT)	F(1,227) = 6.24	<b>.01**</b>	F(1,227) = 3.85	<b>.05*</b>

\* p < .05; \*\*p < .01; (NT) = Non-Parametric Test was completed; numbers in bold represent significance (p < .05) according to Non-Parametric Test, more specifically K Independent Samples.

<sup>10</sup> Excluding 'X' category due to insufficient response rate (only 1 respondent)

**Table 28: Average cost per effective versus ineffective meeting (N = 229)**

	<b>M</b>	<b>SD</b>
Effective meeting	1043.51	2540.65
Ineffective meeting	1152.39	1015.54

One-way ANOVA:  $F(1,227) = .03, p = .85$

## 11 Appendix 3

**“½ of your working time = meeting time”**

Minutes spend per week in meetings

= Average meeting per week x Average meeting duration (in minutes)

= 6.41 x 109

= 698.69

Percentage of your working time spend in meetings

= Minutes spend per week in meetings / Average working minutes per week<sup>11</sup>

= 698.69 / 2280

= 0.306

**“Did you know you spend 70 work days in a year in meetings?”**

Hours per week spend in meetings

= Minutes per week in meetings / 60 Minutes in one hour

= 698.69 / 60

= 11.64

Working hours per year spend in meetings

= Hours per week spend in meetings x Amount of work weeks in one year

= 11.64 x 45.6

= 530.78

Work days per year spend in meetings

= Working hours per year spend in meetings / Average work hours per day<sup>12</sup>

= 530.78 / 7.6

= 69.84

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<sup>11</sup> We make calculations based on a work week of 38 hours, which equals 2280 minutes.

<sup>12</sup> We make calculations based on a work week of 38 hours, which equals 7.6 hours a work day.

**“Be aware that you dedicate 11 years of your life to meetings.”**

Work days spend in meetings in a whole career

= Work days per year spend in meetings x Average Belgian career duration in years<sup>13</sup>

= 69.84 x 36.70

= 2563.13

Years spend in meetings in a whole career

= Work days spend in meetings in a whole career / Total amount of work days in a year

= 2563.13 / 228

= 11.24

**“Check your agenda and notice that you attend 292 meetings in one year.”**

Average number of meetings on a yearly basis

= Average meeting per week x Amount of work weeks in one year

= 6.41 x 45.6

= 292.30

**“Today, Belgium is wasting €30 million on ineffective meetings.”**

Daily cost of ineffective meetings in Belgium

= Annual cost of ineffective meetings in Belgium / Amount of days in one year

= 10 925 380 862 / 365

= 29 932 550.31

**“Each year, Belgian organizations spend together €156 billion on meetings.”**

This cost figure is already calculated in the result section (Roadmap 3: Total meeting cost in Belgium per year).

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<sup>13</sup> This number is based on The Economic Policy Committee’s Aging Working Group study of Federal Planning Bureau (2017)

**“Today, 5.9 million meetings are organized in Belgium.”**

Yearly amount of meetings organized in Belgium

= Average number of meetings on a yearly basis x work population in Belgium

= 292.30 x 4 635 546

= 1 359 605 642

Daily amount of meetings organized in Belgium

= Yearly amount of meetings organized in Belgium / Total amount of work days in a year

= 1 359 605 642 / 228

= 5 942 851.30

**“Every year, €2357 per employee is thrown away due to ineffective meetings.”**

Yearly cost of the ineffective meeting

= Average yearly meeting cost per employee x Percentage ineffective meetings

= 33 669.58 x 0.07

= 2356.87