



# Management control systems and innovation: a case study grounded in institutional theory

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Accepted: 25 January 2023 / Published online: 18 February 2023  
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## Abstract

Drawing on the growing literature that has addressed the role of Management Control Systems in innovation and the literature on institutional theory, this study explores the case of Amorim Cork Composites to analyse how the situated rationalities within the company get reflected in the management control practices in use, and then how these practices are used to communicate and provide guidance when innovation is part of the strategy. The study uses a single case study approach at an innovative company, collecting data from 32 interviews, direct observations, and documentation of the company. Based on that data, this study is able to perceive the existence of a rationality that is constructed around the importance of innovation, which becomes a paramount part of the defined strategy and leaves signs on to the internal control practices of the company. After that, through a mix of strategic objectives, well-defined cascaded process of these objectives, values, mottos, objectives related to that situated rationality within the company, and with the commitment created within the “signing” of objectives contracts, managers are able to communicate strategically and provide guidance to the collaborators, driving them to action that makes them more aware.

**Keywords** Management Control Systems · Innovation · Institutional theory · Balanced scorecard

**JEL Code** M41 Accounting

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The authors would like to thank the editor, Professor Frank Verbeeten and the two anonymous reviewers for their helpful comments and suggestions. Also, we gratefully acknowledge comments and suggestions from Luís Pimentel, Rui Vieira, Ricardo Barradas and the participants of the BRU Research Seminar Series, XVIII Encuentro Internacional AECA, ENROAC & MCA Conference, XVIII International Congress of Accounting and Auditing (CICA), XXI Grudis Conference & Doctoral Colloquium, 44th EAA Annual Congress. Rúben Silva Barros gratefully acknowledge the financial support of Fundação para a Ciência e Tecnologia under the doctoral grant SFRH/BD/104181/2014. The authors are also grateful for the financial support of this institution under the grant UIDB/00315/2020.

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## 1 Introduction

The conceptual approach of institutional theory has provided a focal point in many accounting studies as it is considered helpful for understanding a phenomenon, taking into consideration the social-cultural contexts (Moll et al., 2018; Ribeiro & Scapens, 2006; Lounsbury, 2008). Recently, ter Bogt and Scapens (2019) revisited Burns and Scapens' (2000) framework, and extended it. One of the alterations is the introduction of the notion of situated rationality, which essentially constitutes the way actors think and rationalize what they are supposed to do in a given situation (ter Bogt and Scapens, 2019). Situated rationalities are expected to shape the rules and routines of the company (ter Bogt and Scapens, 2019), and by analogy the Management Control Systems (MCS) in use within the company. As it is a concept that is still little explored in the literature, Bertz and Quinn (2022) suggest that the situated rationalities need to be considered in greater depth.

Notwithstanding, the acknowledgement and recognition that these systems are shaped by the situated rationalities has been quite absent from the literature on MCS and innovation, as well as the recognition of the influences of institutions in an innovation driven context. Furthermore, MCS are by definition routines to maintain patterns (Simons, 1995), to coordinate (Müller-Stewens et al., 2020; Pagliarussi & Leme, 2020), convey information for decision making (Simons, 2014), and are able to frame cognitive models and communication patterns (Davila, 2005; Davila et al., 2009b). Nevertheless, how strategic communication and guidance is provided when innovation is paramount in strategic terms is very much an unexplored domain. In response to this lack of investigation this study merges the two research literatures and explores the case of Amorim Cork Composites (ACC), a developer and manufacturer of cork-material products. ACC's case allows us to analyse how the situated rationalities within the company become reflected in the management control practices and how these practices are used to strategically communicate and provide guidance when innovation is part of the strategy.

An in-depth, intensive, and interpretative case study on ACC was undertaken to allow a grounded and fine-grained assessment of their MCS and surroundings in a real-life context, with all the specificities and rich descriptions that are inherent to this research approach (Ryan et al., 2002). ACC is the innovative arm of a large Portuguese industrial group employing a solid use of management control practices. Besides having a strong history and culture regarding innovation, ACC has implemented the Balanced Scorecard (BSC) methodology since 2003. Since then, this methodology has been used by its managers as a tool to implement and revise strategy over time. With the stability thus gained, it has been possible to ensure an advanced state of institutionalization of these practices. Data for the study were collected from several sources: interviews, documents, observations of meetings, and visits to the company. Of these, the main source of data was the 32 interviews with various employees from different hierarchical levels. Thirty-one of these interviews were recorded and transcribed, which allowed further analysis with the qualitative software MAXQDA.

Also, for all purposes, this case study borrows ACC's understanding of innovation. Innovation at the case company is perceived as the creation of a new product

in which cork can provide additional value, a different application for an existing product or an existing application of cork, a transfer of products between segments, or simply the development of a new product for the portfolio. In broad strokes, the main form of innovation experienced in ACC is product innovation.

Based on this background, the results of the present study allow us to make contributions to both practitioners and the two bodies of literature here presented. First, perceived at the case company is a situated rationality, that is termed “innovation”, concerned with having a sustainable delivery of value through the development of new products creating opportunities and value for the raw material cork. Our results also allow us to contribute to the literature on MCS and innovation, by highlighting the important role that MCS may play in communicating and providing guidance to the organizational members’ actions relating to innovation. As mentioned above, the manner(s) in which strategic communication and guidance are conducted is quite absent from this body of literature, and the case of ACC provides valuable insight and evidence in this area. It is shown that through the inclusion of strategic objectives that are subsequently cascaded in a well-defined structure, values, mottos, and objectives related to the situated rationality identified within the company, managers are able to communicate strategically. With these characteristics of the cascading process and the commitment from the “objectives contracts” managers imprint guidance on the awareness and accountability of the collaborators.

Indeed, with these points it is possible to contribute to calls in the management accounting and control literatures to further explore matters related to control and innovation (e.g., Chenhall & Moers 2015; Moll, 2015; Fried, 2017; Major et al., 2018; Barros & Ferreira, 2019) and to calls to address these matters with qualitative research methods (Henri, 2006; Barros & Ferreira, 2019).

In a more modest way the study also contributes to the literature on institutional theory and on the ter Bogt and Scapens framework by showing how the identified situated rationality of “innovation” is reflected in the MCS. Also, exploring the unique solutions that the managers at the company adopted, it is argued that these systems are able to work in maintaining an existing rationality within the company. Maintenance is also promoted by the strategic communication and guidance that these systems provide. In other words, maintenance also strengthens the commitment to innovation of the collaborators within the company.

This study can also be of interest to practitioners in the sense that it reveals some details of the control practices used and how they incorporate the strategic imperative of innovation.

The rest of the paper has five more sections. The next (Sect. 2) reviews the institutional theory literature and the earlier literature on the role of MCS on innovation. Section 3 explains the research methods, the data collection process, and how the data were analysed. Section 4 presents the case company and the results of the study. It identifies the situated rationality, discusses how that rationality is reflected in the management control practices adopted and how they are used to communicate and provide guidance. Section 5 has a discussion about the case. Section 6 provides the conclusions, limitations, and some possibilities for future research.

## 2 Theoretical background and literature review

### 2.1 Institutional theory: from Burns and Scapens (2000) to ter Bogt and Scapens (2019)

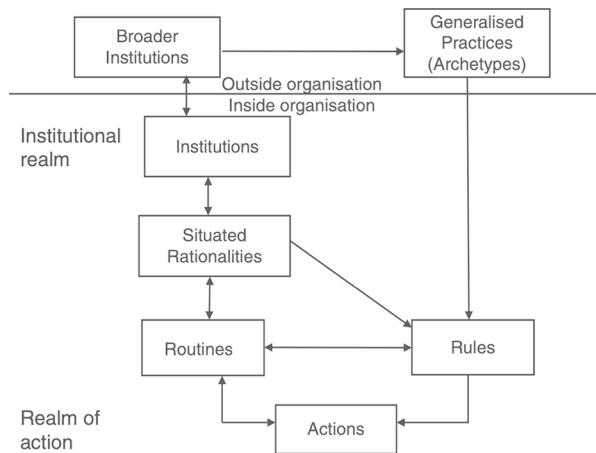
Institutional theory has been a dominant approach for understanding organizations (Greenwood et al., 2008). According to institutional theory, organizational behaviours or individual thoughts and actions are influenced by institutions (DiMaggio & Powell, 1991; Ribeiro & Scapens, 2006), with rationality being constrained by institutionalization (DiMaggio & Powell, 1991). Certainly, an institutionalist considers that action must be perceived as constituted by institutional rules and beliefs (Lounsbury, 2008), and that the current actions of individuals are the result of past actions (Wickramasinghe & Alawattage, 2007).

When introduced to the field, institutional theory was thus a way to help understand how and why individuals respond in a particular way to management accounting and control practices (Scapens, 1994; Burns & Scapens, 2000; Wickramasinghe & Alawattage, 2007). One of the first streams mentioned in the literature is old institutional economics (OIE), with its strength in explaining the constraining of practices by structures like institutions, rules, and routines (Oliveira & Quinn, 2015), or why and how certain behaviours emerged, are sustained, and change (Moll et al., 2018). Based on this stream, and to help developing the understanding on how management accounting practices change, Burns and Scapens (2000) introduced a framework to describe these processes. In that framework, through encoding, enacting, and the reproduction of rules and routines, practices become institutionalized (Burns & Scapens, 2000).

In the proposed framework, Burns and Scapens (2000) highlight that institutions shape action, and that action is produced and reproduced over time. In their graphic representation of the framework, at the top we have the institutional realm connected to the realm of action by rules and routines. Rules and routines first encode the institutional principles. These rules and routines are then enacted at a second moment by actors, typically as a result of tacit knowledge and reflexive monitoring. At a third moment, routines are repeated and may be changed in a conscious or unconscious manner. Finally, institutionalization of the rules and routines that were reproduced by individuals is achieved. Through institutionalization the authors explain that management accounting has the potential “*to underpin the ‘taken-for-granted’ ways of thinking and doing in a particular organization*” (Burns & Scapens, 2000: 5). In this framework, as observed by Bertz and Quinn (2022), management accounting has the potential to change in an organization over the long term, in slow motion, and in an evolutionary way.

However, with time researchers have identified issues with the framework. Some further studies have developed the model or some of its concepts even further (Quinn, 2011; Oliveira & Quinn, 2015; ter Bogt and Scapens, 2019). Recognizing the existence of issues with B&S, ter Bogt and Scapens (2019) improved the original framework, bringing it up to date with the more recent streams of institutional theory. The authors account for issues regarding the role of broader institutions and the tensions that arise between institutions and the organization, and at a broader level issues

**Fig. 1** Extended ter Bogt and Scapens (2019: 1810) framework



regarding trust, power, and agency in accommodating change. In improving the framework, the two core realms of the original version are maintained (Fig. 1) but the newer version allows that there are institutions located both inside and outside the organization. Broader institutions will shape the local institutions (without a hierarchical way of thinking) that are also shaped by the past experiences and history of the organization, groups, and individuals. Together these institutions shape the situated forms of rationality (a new concept) within the organization. Then, institutions and the situated rationalities affect routines. Also included in the framework are the generalized forms of practice that have the potential to also affect routines in the mimicking of practices – but more likely they affect rules. This is represented by the arrows in the model connecting all these boxes with the concepts. In the end it is the interaction between situated rationalities, rules, and routines that shapes action, which in this line of reasoning is also shaped by both the local and external institutions.

In developing the concept of situated rationalities the authors start by explaining that the reproduction of institutionalized behaviour may still involve some form of deliberation (ter Bogt and Scapens, 2019). The agents are likely to deliberate about the most appropriate routines in cases of routines/habits that conflict, in complex situations, and even when a particular routine is appropriate an understanding of the appropriateness is still necessary. That deliberation is supported by the logic of the situation where an individual is, allowing him to rationalize his choices and providing him the means by which the abstract institutions influence their deliberations over rules and routines (ter Bogt and Scapens, 2019). That situated logic is termed situated rationality by ter Bogt and Scapens. In the authors' words, situated rationality could be perceived as "*the taken-for-granted ways of thinking which actors adopt when taking actions in a specific situation*" (ter Bogt and Scapens, 2019: 1804). Thus, situated rationalities represent a form of rationality applied by individuals or specific groups regarding what they should do in a given situation (ter Bogt and Scapens, 2019), helping them to define their choices, actions, and how they think (ter Bogt and Scapens, 2019; Pagliarussi & Leme, 2020). The nature of the concept can also be captured in the dilemma posited by the actor deliberating what he/she is expected to do in a given situation. In so doing, the actors will apply a form of rationality that will

be shaped by the institutions, and therefore the situated rationalities within the organizations will be shaped by the multiplicity of the rationalities embedded in both the local and broader institutions (ter Bogt and Scapens, 2019). As forms of rationality, within an organization we will probably find multiple and different situated rationalities simultaneously, either by the existence of different professional groups or forms of rationalities concerning the history or experience of the particular organization (ter Bogt and Scapens, 2019). Also, Bertz and Quinn (2022) report on a situated rationality that a manager brought to a public organization based on his finance training and leadership.

Although not stated by ter Bogt and Scapens (2019), the same reasoning could be applied to situations other than those in which management accounting routines should be chosen. Actors must also deliberate which paths to follow and that decision is subsumed within the situated rationality regarding what lies in front of the actors. In a similar vein, Cardinale (2018) argues that a structure not only “*open[s] up possibilities for action, but also that it actively encourages actors to settle upon some of those possibilities rather than others*” (Cardinale, 2018: 17). In this way, Cardinale (2018) builds the case that structures constrain, enable, and imprint dispositions that orient action. On the one hand, institutions constrain actions by making some possibilities impracticable and, on the other hand, they enable actions by making alternatives feasible. But institutions also orient actors to choose some worthwhile possibilities instead of other viable possibilities. Ultimately, this has some implications on the way structure affects action, since actors are pushed toward some courses of action instead of others (Cardinale, 2018).

From previous research it is also known that MCS employed in the organizational field can be seen as routines (Quinn, 2011; Oliveira & Quinn, 2015; Pagliarussi & Leme, 2020), playing a key role in the coordination of organizational actors' actions (Pagliarussi & Leme, 2020). Moreover, by following the teachings of the previous analysis, as situated rationalities are able to influence rules and routines, MCS are also shaped by them and influence behaviour. This should also be conveyed when looking at the influences of these systems on action, decision making, and on how these practices are used regarding different realities. However, in parallel, the literature that explores the role of MCS on innovation has progressed without this acknowledgment. Indeed, that line of research of control on innovation, to the best of our knowledge, has progressed without even considering the teachings of institutional theory. An exception is the work of Biswas et al. (2022), who studied MCS influence on micro-level practices during product innovation through the lens of institutional theory.

## 2.2 Research in MCS and innovation

In the last 40 years MCS have evolved into controls that are more complex and open (Chenhall & Moers, 2015). New features have added strategic aspects and concerns to the control solutions (Barros & Ferreira, 2019). Likewise, remarkably, Simons introduced the framework about the levers of control, and his identification of the interactive use of MCS recognized the role of these systems in exploring strategic uncertainties (Simons, 1995; Davila et al., 2009a). This acknowledgement opens

the door for management control practices to accept the necessary variation, and with that, the acceptance of innovation as well (Davila et al., 2009a). As Chenhall and Moers (2015) explain, when the importance of environmental uncertainty was accepted, organizations were forced to organize their structures to help achieve innovation in a way that allowed them to acquire competitive advantages.

Researchers have started to pay attention to the role of MCS in innovation and much ground has been covered to date. Scholars have analysed different configurations of controls in product development (Bellora-Bienengraber, 2019), the use of accounting information across different stages of product developments (Jorgensen and Messner, 2010; Feeney & Pierce 2018), MCS use regarding different types of innovation (e.g., Curtis & Sweeney 2017; Aaltola, 2018; Guo et al., 2019), the use of control systems across different innovation modes (Bisbe and Malgüeño, 2009), the combined used of controls and tensions in different settings (e.g., Curtis & Sweeney 2017; Zarzycka et al., 2019; Barros & Ferreira 2022), and even the use of MCS in driving organizations committed to open innovation (Biswas & Akroyd, 2022).

In this line of the combined used of controls, Fagerlin and Löfvstål (2020) also report on the use of informal controls. Many of these studies have in common the idea that has been in the management control literature for quite a while, of analysing controls not in isolation, but in combination (e.g., Malmi & Brown 2008; Grabner & Moers, 2013). In this sense, the Levers of control (LOC) framework has been a background that researchers have relied on (e.g., Bedford 2015; Bisbe and Malgüeño, 2015; Lopez-Valeiras et al., 2016; Healy et al., 2018; Müller-Stewens et al., 2020; Barros & Ferreira, 2022), as it allows for the consideration of multiple controls and the ways they are used (Chenhall & Moers, 2015). Resorting to the LOC framework, scholars have found significant links between MCS and innovation at an organizational level (Moll, 2015). Interactive use of systems is seen to aid in generating and disseminating knowledge, fostering collaboration (Henri, 2006), and promoting internal and external information flows (Lopez-Valeiras et al., 2016).

Undoubtedly, this line of research has witnessed considerable evolution and it is clear that there is a positive association between MCS and innovation (Guo et al., 2019). However, the need for further research to learn how MCS dovetail with innovation remains (Chenhall & Moers, 2015; Moll, 2015; Major et al., 2018). Following Simons definition, “[MCS] are the formal, information-based routines and procedures managers use to maintain or alter patterns in organizational activities” (Simons, 1995: 5)<sup>1</sup>. By this it is understood that MCS have inherent characteristics that allow them to orient behaviours and to increase the likelihood of achieving the organizational goals. Relating specifically to innovation (broadly speaking), Jorgensen and Messner (2010) provide evidence showing that accounting frames the strategizing process, and that both act as a general understanding to help the meeting of conflicting ends in new development projects. Also, it is known that the information carried in these systems is used for decision making at different stages of prod-

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<sup>1</sup> This would be the general definition followed in this study. However, the study still recognizes the more recent trends in which MCS are seen not as systems that operate in isolation but as a collection or package of controls that incorporate the whole strategic process from formulation to implementation (Malmi & Brown, 2008; Grabner & Moers, 2013).

uct development (Feeney & Pierce, 2018), and very recently Müller-Stewens et al. (2020) hypothesized that diagnostic and interactive use of systems permit effective coordination processes, finding evidence of it related to product newness in highly turbulent technological environments. Davila et al. (2009b; Davila, (2005)) also mention that MCS are stable and provide a frame for cognition, mental models, and actions. Indeed, as Simons (2014) points out regarding the definition of MCS, control systems carry information able to influence decision making and action. Nevertheless, the way that information is embedded, and how the importance of innovation is transmitted throughout the organization are areas that need further research. If internally the company has identified innovation as paramount, this should be reflected in these practices in order to communicate and align the internal behaviours. However, the literature fails to provide deep analysis on it.

### 2.3 Research purpose

Given this background, the study merges the two bodies of literature exploring the case of ACC, which with its specificities allows us to focus on both the concept of situated rationality and the role of MCS in innovation. More specifically, this study brings the developments made by ter Bogt and Scapens (2019) to the literature on the role of MCS and innovation, exploring how, at the case company, the situated rationality is reflected in the MCS practices, and how the management control practices in place are used to communicate and provide guidance to the organizational members when innovation is a critical part of the strategy.

Institutional theory is an interesting theoretical background in the sense that, with the acknowledgment that MCS are structures embedded in situated rationalities of the organizations that cannot be taken out of the equation, institutional theory is able to provide an explanation and better understanding of the findings.

## 3 Research method

The research purpose outlined earlier is addressed through a qualitative methodology using a case study approach. Case studies are considered the best way to gain deeper and holistic insights on complex organizational processes (Ryan et al., 2002; Eisenhardt & Graebner, 2007; Adams et al., 2018), and as institutional theory gives us as a core tenet that management accounting should be understood in its context, a case study is an ideal choice for the current study (Moll et al., 2018). Also, as Adams et al. (2018) highlight, an intensive case study in the interpretative tradition can allow a broader and richer understanding of management accounting practices. With this in mind, a single and interpretative case study was conducted, allowing for a greater focus and a more detailed analysis, offering richer descriptions and a contextualization of the phenomenon under study (Ahrens & Dent, 1998).



### 3.1 Case selection

The case company analysed in this study is Amorim Cork Composites, a Portuguese company working in the cork industry and integrated within a larger economic group. In a preliminary meeting the company demonstrated its availability to host the research and at the same time brought together two features considered as essential for the study's purposes: a strong orientation toward innovation and a set of formal management control practices in use to achieve the intended strategy. In fact, the history, culture, and posture of the company toward innovation are all features that make it appropriate for this study. Its strategy was built around innovation as a central element and it has a track record of continuously developing new products and new cork applications. Also, since 2003 ACC has implemented a system based on a Balanced Scorecard methodology and more recently has implemented an innovation system to help in the management of the innovation projects.

### 3.2 Data collection

Data collection progressed in two phases between November 2015 and September 2016, including interviews, observations (See Tables 1 and 2 in appendix for a list of the interviewees and observations), and the company's internal and external documentation information. The first phase comprehended a pilot case study to ensure the company's availability, suitability for the purposes of the research, and investigation of the practices in place. In this phase, six interviews were conducted, there were two visits to the company facilities, participation in an internal meeting, and diverse internal documentation was collected. The pilot case study allowed the researchers to ensure that ACC met the criteria for selection and to obtain a clear picture of the full range of employees available to interview.

In the second phase – the main case study – the primary data source consisted of an additional 26 interviews. Individuals from various levels within the company were interviewed to obtain multiple perspectives and maximize the depth of the analysis. At the same time, this strategy ensured the triangulation of information (Yin, 2018). More specifically, interviews were held with all the heads of the departments except one, and in the major departments two additional employees were interviewed. Here, as Eisenhardt and Graebner (2007) put it, the strategy was to choose numerous and highly knowledgeable informants. In the production department, which involves most of the company's employees, all the second line managers were interviewed.

In the course of the interviews, although a guide with a set of questions was prepared in advance, the conversation evolved into a more informal and unstructured dialogue form. This allowed the interviewer to simultaneously adapt the interview to the expertise of the interviewee and to gain flexibility to pursue new issues and themes as they arose in the conversation (Scapens, 2008).

Throughout these two phases, a total of 32 interviews were conducted and 2 visits to the facilities and showroom were held. Also, a researcher attended a meeting for all employees who are involved in the control system at which the results of the previous year were discussed and the objectives for the following year were presented. The interviews had an average duration of one hour and were all tape recorded (except

the first one, during which only logistic aspects of the research were treated) and transcribed *verbatim* thereafter. Since recording was not feasible in the visits, detailed reports were written immediately thereafter, on the same day.

A variety of documents were also requested, gathered, and addressed in the interviews. This allowed for the triangulation of information between different sources, building stronger interpretations (Yin, 2018). We had access to documents related to the MCS and the innovation processes, such as internal reports, organizational charts, PowerPoint presentations, information about the goals and evaluation measures, and examples of monthly reports of results from both employees and the senior managers.

### 3.3 Data analysis

Concerning the analysis of the data, all the files with the transcribed interviews and the visit reports were imported into MAXQDA, a qualitative data analysis software. Then, the analysis was started through the highlighting of sentences and passages that were interesting for the goal of the study. Notes in the form of memos were made to register observations or raise questions that arose during the analysis.

Throughout the analysis, it was perceived that some lines of reasoning echoed, and it emerged that at least one form of rationality was in place at the company. This was in line with ter Bogt and Scapens' concept of situated rationality. As the authors have pointed out, situated rationality is a theoretical concept that exists in the minds of the individuals but easier to identify than the institutions (ter Bogt and Scapens, 2019). To assert situated rationalities, we have kept in mind the concept developed by the authors and that they are shaped by the history of the company. With this we have sought to identify the logical way of thinking in order to perceive the lines of rationality applied. Therefore, we have looked at the history of ACC, the current strategy of the company, and the referential by which the internal collaborators think. Helpful in determining the situated rationality were also the examples provided by the works of ter Bogt and Scapens (2019) and Bertz and Quinn (2022).

## 4 Case background and results

### 4.1 The case company and the situated rationality of "innovation"

ACC is very oriented toward innovation. ACC's historical background can be traced to the industrial unit that was created to take advantage of the cork waste generated from the manufacturing of cork bottle stoppers. The goal was to transform this waste into cork granulates and those granulates into valuable agglomerates. The creation of this company was, by itself, an innovation in the sense that it came about as a way to create more value for a specific material. Today, ACC is a result of the merging of this activity with another business unit (BU) of the group that added the production of agglomerates of cork with rubber to the original production lines. As a result, the case company's main activities today are the production of granulates, agglomerates of cork, and agglomerates of cork with rubber.

These materials are later used by ACC in a wide range of applications that are subsequently commercialized around the world. ACC takes advantage of the acoustic, sealant, thermal, resistance, resilience, and even aesthetic characteristics of its cork granulates and agglomerates to later produce solutions with different characteristics. Their products range from sealing applications for diverse machinery to anti-vibrators for trains, and even components of footwear. The case company works for the aerospace, automotive, construction, and furnishing industries (among others). Because of the variety of properties of its raw materials and applications, from the very beginning of its existence the company felt the need to invest in research and development. With it the company has achieved the position of the most innovative business unit of the group, as can be seen in the passages below, collected from different sources:

*The launch of new products on the market and the development of new applications, two central goals of the BU's strategy, also made an important contribution to sales growth as well as helping to create value in the market. (2015 annual report and accounts of the holding)*

*ACC, from a generic point of view, has always been quite innovative, is one of the companies within the group, not demeaning anyone, but always with a high index of innovation and new products. (Industry global segment manager)*

From the passages above it is clear that innovation is a key component of ACC's business, and that there is a determinant role for innovation in its future. This is clearly perceived and reinforced in the following comment of the CEO and excerpt from an external document:

*I would say that in strategic terms in the company, the most important objective is linked to innovation. Even if it is not the one that has more weight in what is the result but, I think it is the one that is more strategic. In the sense that it is the one that guarantees future ... future sustainability. (...) Because we know that in this area selling the same products to the same customers is not the topic. Therefore, the issue of innovation is something that we realize that the more innovation the greater the increase of value. (CEO)*

*The central goal of growth in these markets [speaking about the markets in which ACC is present] will be supported by a number of initiatives specifically designed for this purpose and which should also result in the introduction of new products and gaining new customers... (2016 annual report and accounts of the holding).*

Therefore, creating value from cork and the products of the company is a high priority within the group and particularly at ACC. This emphasis makes innovation a concern of the day-to-day job of most of the employees:

*This is a company with many years, and there is the constant concern of all business areas in having new processes, new materials, new applications for our raw material. Or, otherwise we will easily stagnate. (Retail segment manager)*

*Composite cork is made from granulated cork bound together using different binding agents or incorporating other components (...) Today, as a result of technological advances and an unparalleled investment in R&D and Innovation, these different materials leverage cork's unique properties (...).* (company document)

Given this historical path, strategic positioning of the company, and clear way of seeing the future, a well-defined rationale came to light. Certainly, inside this organization exists a strong conviction that the future sustainability of the business and the creation of value resides in innovation, and more particularly product innovation. Or, in another way, there is a rationality in which the message conveyed is to think about being innovative. This is an idea clearly perceived by the message conveyed the first comment of the CEO (see above) and, also, in the passage below:

*Nobody has a contract that says that you must come up, you know, with one good idea (...) Trying to grow sales is a large aspect of my contract and of my team, and we realize that new business or a new product line will help that dramatically.* (Retail segment manager)

Therefore, we argue that internally the existence of a situated logic or form of rationality that encourages the individuals to the need and importance of innovation is perceived. It is a means to an end. In light of ter Bogt and Scapens (2019), there exists a situated rationality that will be termed “rationality of innovation”. This form of rationality is concerned with the development of the raw material (cork), with finding new opportunities, new ways to create value for the cork exploring its unique properties, and to go beyond the traditional portfolio of products. This identified situated rationality also has impacts on the internal management control practices and ACC’s day-to-day activities with characteristics that resonate with it.

## **4.2 The situated rationality of “innovation” and the management control practices**

The rationality of “innovation” therefore leaves its marks in the internal management control practices that are in place within the company. The case company has adopted two models well known in the literature: a BSC, and an innovation model based on a stage gate approach. In light of ter Bogt and Scapens’s (2019) framework, both BSC and the stage gate approach may represent generalized practices that influence the internal rules and routines within the company.

Specifically, the system based on the stage gate model approach, implemented more recently, is intended to manage the developments of new products. At its core this system is an application and legitimization of this situated rationality of “innovation”. A practice implemented to manage the innovation projects and at the same time to improve the process. It is a signal for the achievement and support of product innovation. The solution implemented starts with a funnel of ideas with grids to evaluate, and to select the best value propositions. Innovation in ACC is very market-oriented and the value propositions come mainly from salespeople or segment managers. The

propositions that arrive to this stage then pass through the funnel; after an evaluation of the business potential they pass through a series of milestones until they arrive to the industrialization phase.

The case company also has used a BSC methodology since approximately 2003 that outlines very clear routines to be followed throughout the whole year. Being less strongminded in the management of new product developments, the routines and procedures promoted by this practice affect a larger population. In this way, BSC and the strategy map are the most visible features of the management control practices within the company. The strategy map is defined annually, and is a double entry matrix with four perspectives (financial objectives, clients, processes, and infrastructures) and three strategic guidelines that represent the pillars of the whole strategy (growth, value, efficiency). For the year 2016 there were a total of 23 objectives divided by the various perspectives and guidelines. Once the strategy map is defined, a strategic scorecard is delineated that incorporates the goals and indicators for each objective, as well as the set of initiatives that must be put in place that year, identifying the employees responsible for each, the milestones, and the resources needed.

As with the BSC of most of private institutions, the top objective that appears on the strategy map is related to financial purposes, stating: “Deliver sustained remuneration for capital employed”. However, since internally there is a rationality associated with the importance of innovation to achieve both sustainability and financial return, innovation is further represented – objectively perceived through the inclusion of three very specific and broad objectives. The first, which is more structural, is included in the perspective of infrastructure and is specifically for the year 2016. It relates to the operationalization of an innovation network, which is understood as strategic to the company.

The second objective appears within the market perspective in the strategy map and simply states “Develop new products”. Measured by the sales of products that have not yet left the development stage, this objective aims to ensure that developments completed before the end of the previous year record sales. To a certain extent, the idea is to guarantee the acceptance of these new products in the market.

The third objective is broader in the sense that it is not assigned to the innovation department, and it is integrated in the guideline of value and in the market perspective. Again, it is a financial objective measured by the sales of all the portfolio of new products and applications in absolute value. Different from the second objective, this one focuses on sales of products that have left the development stage. Also, it is an objective that has become more stable over the years, appearing in various strategy maps. For example, for the year 2015 the same objective appears, defining a percentage of whole sales volume that has to come from the sale of new products.

Then, these objectives, whether related to innovation or not, are cascaded for the whole organization by objectives’ contracts that are carried out in the top-down direction through some limited negotiation between manager and employee, and that are called individual objectives contracts.

In sum, the features explained in this section allow for a perception of how the situated rationality of “innovation” imprints on the management control practices within the company. The practices go along with the “ways of thinking” for the value

creation through innovation. Also, in parallel, the processes of communication and guidance occur.

### 4.3 MCS as communicators

First, the importance of communication for the holding company and the BUs of the group is clearly recognized:

*Internal communication has been a strategic focus of the holding for many years. As a group that experiences countless changes, restructurings, business alterations, and an intense level of recruitment, it is fundamental that different groups of employees are informed about and aligned with its short-, medium-, and long-term objectives.* (2016 annual report and accounts of the holding)

From the above excerpt from the annual report, one sees that managers attribute an important role to communication, whether because of the continuous changes or the turnover of employees. Some of the mechanisms used to guarantee a continual flow of communication are, as expected, the control practices in place that inform all involved in the system of the organization strategy. The practices inherent to the BSC are used by managers to communicate the strategy as well as the situated rationality of “innovation”. At the case company there are several procedures that guarantee a constant communication about their prevailing importance for the development of activities inside the company. This communication stance of the MCS comes in different ways and from different procedures. ACC presented the core value of innovation in their belief systems and mission statements related to innovation. That core value is presented both in the list of values of the company, and in presentations for various internal publics. Some mottos also appear such as: “Together towards innovation” (taken from an internal presentation).

Despite that, the most prominent mechanism for communication stems from the inclusion of innovative goals in the final set of objectives:

*(...) If the goals are all business as usual, this promotes doing the business as usual, and doing nothing else. So once again, if we want innovation, it is good that this is clear in the objectives.* (CEO)

Nevertheless, simply including innovative goals does not necessarily mean that the attention to innovation will reach all employees. The cascading process made from the strategy map to the individual contracts of objectives represents a clear signal through the inclusion of objectives connected to sales of new products. Although many of the contracts of objectives do not specify goals of value propositions that everyone should bring in, this objective ends up passing on the perspective of searching the market for new opportunities. Some comments point exactly to this:

[When asked about the objective of sales of new products] *New products, yes. They all have [The sales team]. (...) But what, in fact, probably, they have more*

*difficulty and, is less in focus, is that after that they have to go looking for them, right?* (Head of Asia sales department)

*People are encouraged to sell what is new and what is different and not just follow the traditional product portfolio. Therefore, and all people, as a rule, have goals of selling new products. It means that if they exist, they have to sell them; if they do not exist, they must create them. Or, give ideas so that they are created.* (Head of Human Resources department)

Also, an aspect that was evident and common to various interviews was the degree of understanding of a mutual reinforcement between innovation and growing sales (another important objective in the case company). In a very ingrained way, this constitutes another important reference to the communication of the need for the sales teams and segment managers to be aware and engage with the search for opportunities in the market and to bring proposals of new products to the company.

Besides the cascading process, there are other mechanisms at managers' disposal to put emphasis on innovation. One of the first opportunities is the meetings that seek to mobilize the internal employees to the goals that have been defined at the top management level. These meetings – internally called alignment sessions – happen twice per year<sup>2</sup>. The first occurs as soon as the strategic orientations and the strategic map are defined for the following year, providing a follow up of the strategic scorecard and a first contact with the orientations for the next year. The second meeting takes place at the beginning of the year after the closing of the strategic scorecards and all the individual contracts of objectives.

Throughout the alignment session the objectives regarding innovation were also reviewed and the CEO had the opportunity to remind the individuals regarding the importance of these objectives for accomplishing the strategy. As it is paramount to the company, the importance of innovation is also transmitted and emphasized. In addition to the communication at these meetings, the strategy map also plays an important role as an element of day-to-day dissemination of the importance of innovation. This map is able to provide a comprehensive idea of what the intended value-creating activities will be, and in the case company innovation is the core of these activities. As it is literally a sheet of paper that offers a graphic representation of the objectives and their causal relationships, it makes the relationship between the renewal of the product portfolio and the return of invested capital easily identifiable.

In short, MCS are used by the managers, apart from other purposes, to communicate and disseminate the previous identified rationality of “innovation”. Some of the initiatives pointed out here also allow for the collaborators to obtain guidance on the intended purpose of innovation.

#### **4.4 MCS as guides**

The MCS described above also work in the company as a way to provide guidance. They imprint in the minds of the organizational members some direction. Indeed, letting the collaborators know the overall scheme of objectives of the organization

<sup>2</sup> One of these meetings was observed (see Table 2 of the appendix).

represents just the beginning of the intrinsic and complex processes of MCS in innovation. The characteristics of the systems in use ensure that employees know the importance of all the objectives necessary to achieve the main goals of the BU. Then, the existing tools work by orienting the individuals to behaviours that guarantee that all the employees are moving in the same way.

The cascading process of the overall objectives, through the contracts of objectives, represent the first alignment tool of all the internal levels of the company. As it has served to communicate and reinforce the importance of innovation, it also represents a way to guide employees to the activities that managers perceive as more valuable. The main objective is the delivery of value but the contracts also present the most viable course of action: selling new products and creating new opportunities. In this regard, the objectives of selling new products reach the key elements in the context of innovation through the cascading process. Sales teams, the innovation team, and segment managers end up with innovation objectives that impose upon them, in a very discrete way, the need to search for new opportunities in the market. These kinds of financial measures regarding sales of new products impress the sales teams with the importance of their awareness:

*Moments ago I was talking and trying to set goals... X millions of sales of new products for 2018. (...) If you ask me, but what products? I have no idea. (...) And, therefore, if we don't have pipeline for that, what do we have to do? (...) Cause opportunities with sales teams, global segment management, in internal meetings, with partners, with customers, because we must immediately provoke the market to come up with new ideas to develop them. (CEO)*

*If we have as one of our goals to have x% of sales volume in new products, necessarily there is a permanent concern: add products to the portfolio, create new products, find new products for new applications. (Head of business development and global segment management)*

In this way, the practices and processes of control encourage the employees to follow a course of action, which in this case is to engage in activities and postures that help in product innovation. This encouragement is further reinforced by the commitment that is created with the “signing” of individual contracts of objectives and by the prioritization of innovation. Individual contracts result in a personal commitment created between the employee and the company, similar to the commitment seen by Davila (2000) in one of the research projects analysed. Although there is a small negotiating margin on the part of the employees, the process ends with the definition of the contract of objectives and respective weightings of each objective for the awarding of a bonus at the end of the year.

Financial measures related to innovation are included in these contracts creating accountability for meeting these goals. The commitment created by this symbolic act of signing the contract then encourages the employee to focus on the areas covered by it. The employees end up showing a greater awareness for those areas, prioritizing the themes underlying the objectives they must achieve:



*An objective also has a way of indicating where you want to go, and of helping us clearly realize that if I have this, it is because this is a priority. (Project Manager 1)*

As the above comments show, employees become focused on those objectives in which innovation is also measured, giving, to some extent, the guarantee of their prioritization. Thus, the commitment and focus promoted by these contracts end up fostering the path. They provide a way forward, serving as a guideline for the allocation of employees' attention. Focusing on some strategic points, these contracts make innovation appear as a point of arrival, guiding the behaviours. These ideas are conveyed in the following comments:

*[The BSC] is also a model that, and for me this is very important, that is not only about the "what" but the "how". (...) The direction is also part, it is not only the speed and the point of arrival. (CEO)*

*It is not because it is linked to the contract of objective that there is a desire to be innovative. Okay, if you have a goal whose relative weight represents 30, 40% of the objective it's obvious. So, in a way, we are forcing the team to devote more attention to innovation. (...) It is obvious that the contracts or the objectives can influence or push the direction of innovation. (Retail segment manager)*

Briefly, the analysis made earlier provided an understanding of how the communication and guidance inherent in the management control methodology is used in the case company.

## 5 Discussion

Up to this point this study has sought to explore the situated rationalities of ACC. More specifically, we explored how this rationality translates into the management control practices that the company has in place, and how these practices are used at the macro level of the company to communicate and provide guidance for the organizational members.

First, inside ACC there is a clear rationality of "innovation" that crosses all the hierarchical levels from the top managers to the lowest levels included in the performance practices. This rationality relates to a settled way of thinking that attributes to innovation a place of relevance to the future of the company in terms of results and other success measures. In other words, advancing the rational or presented way of thinking is to guarantee a constant flow of innovation for sustainability of the business. In broad strokes, the rationality that attributes importance to innovation becomes a significant component of the strategy, is interpreted as a way to achieve future success, and is incorporated in the management control routines. This is not far from the works of Revellino and Mouritsen (2015) and Davila (2005), in which they highlight the role of accounting in providing background so that innovation can occur within the bounds of the defined strategies.

What was seen in terms of practices is that the most visible is the BSC, and more recently the company implemented a system similar to a stage gate approach. This latter one is a clear sign of innovation as a means to an end. These two, according to ter Bogt and Scapens' (2019) extended framework, are two generalized practices that influence the internal control systems applied. ACC has implemented for quite some time a set of performance measurement practices based on the BSC model (since 2003), with a strategy map, a cascading process of objectives well implemented. In fact, today ACC's BSC model is clearly a set of routines that are institutionalized at the organizational level. These practices have been in place for many years and have been maintained despite the rotation of employees over time and the internal changes that the company has gone through. Furthermore, BSC-associated practices strongly determine the internal routines that are used by the managers and reached a state of natural enactment. A set of strategic objectives that the management team defined is found in the strategy map, and some of them are directly related to innovation.

Relating to the features perceived in ACC's rationality of "innovation", as presented in the previous section, they were not adopted specifically as a strategic guideline for innovation. Instead, a main goal similar to the ones that are common amongst private companies is delineated and the underlying rationality is marked by the inclusion of some objectives directly related to it. Looking at the set of strategic objectives and the strategy map, the management team has defined an array of three objectives directly related to innovation. The main goal still is the delivery of sustained results and, undeniably the inclusion of the rhetoric associated with the rationality provides the way to achieve that sustainability or the interpretation on the path that should be pursued. In other words, the findings indicate that these three specific strategic objectives in combination with the rest made the systems and practices lead the organizational members to the specific rationality within the company. The most powerful element in this – the financial measures related to innovation – end up being included in the individual contracts of objectives, and thus, as in the study of Curtis and Sweetney (2017), accountability is created for meeting these goals. Furthermore, as in Jorgensen and Messner (2010), the stage gate process also provides a formal structure that reminds persons of the importance of the profitability.

This dressing given to the prevailing rationality and the further signs of it within the internal control practices, in its core, is consistent with the arguments of Cardinale (2018), in the sense that MCS give to employees a frame of reference with the viable alternatives when faced with the eventualities of the day-to-day activities.

In fact, the objectives of sales of new products have never failed, thereby indirectly showing the power of the management control routines in the orientation aspect. A further important aspect is the stability achieved by the institutionalization of these practices. As Thornton et al. (2012) report, the stability of institutions and organizational practices allow for the activation of the schemes embedded in the logics of the organization as a default of actors' cognitive processes. MCS are developed to help managers achieve the intended strategies, assisting decision making and representing the situated rationalities of the organization. They could be understood as top-down schemas providing actors with cognitive structures to shape their attention, help with problem solving, and guide their decisions.

This idea of schemas, as Thornton et al. (2012) further explain, highlights how actors understand, remember, and act upon complex information by relying on knowledge about the working mode of the world. Moreover, the authors also explain that the capacity to allocate cognitive resources from individuals is scarce, which means that organizations tend to develop structures and processes to shape individuals' focus of attention (Thornton et al., 2012). In the case company this is what happens with their MCS. First, through the long-time routinization of the practices, and the time over which they have been enacted, they achieved a state of stability and a state of importance within the daily life of the employees. Simultaneously, as some authors have mentioned, MCS are capable of framing cognitive models, actions, and communication patterns (Davila, 2005; Davila et al., 2009b).

Also, as a result, the BSC internal practices represent a way for managers to maintain and sustain the situated rationality. This complements the findings of Bertz and Quinn (2022). They attribute to the generalized practice of the BSC a role in the change of the situated rationality. Complementing it, our findings suggest that these generalize practice when already encoded in the rules and routines (or, an institutionalized practice) within the company and is also a way to maintain it in the existing situated rationality. Graphically, this reinforces the double-headed arrows from the situated rationalities to routines presented in ter Bogt and Scapens' (2019) framework (Fig. 1). The stability and the routinization of the BSC allows sustaining the situated rationality of innovation. It is also possible to argue that the maintenance of this rationality could be influenced by the constant and important use of the practices as instruments of communication and guidance of the collaborators. As reported by Bertz and Quinn (2022) for the BSC, the MCS allowed the managers to communicate to lower levels in a strategic way. They provide newly entered collaborators and "old" collaborators with knowledge of the way things should work. The core values, mission statements, and objectives cascaded through various collaborators work with an active attitude of constant reminder about the situated rationality. Also, exposing strategy maps in meetings, for example, represents a way to communicate the strategy and its principles. The messages passed from institutional communications and presentations, values that are shared, and the cascading process of the objectives contracts all come as a way of communication and guide the action of the collaborators. Then, again, the cascading process of the objectives and the commitment from the signing of these contracts increases commercial awareness and accountability.

With this, the actors' inclination to search for new proposals and opportunities in the markets is increased. At the bottom line, this is similar to what Curtis and Sweeney (2017) perceive in their case study at Caseco about the role of MCS as increasing the commercial awareness to market opportunities of future developments. Interestingly, following this logic, the study shows that in part it is possible to contradict Bisbe and Otley's (2004) and Bedford's (2015) views that MCS do not increase the propensity of the company to experiment with new products.

## 6 Concluding remarks

Relying on developments made by ter Bogt and Scapens (2019) to the Burns and Scapens (2000) framework, this study reports on an in-depth case study at ACC, an acknowledged innovative company in the cork industry. Specifically, the study departs from most institutional theory studies in the sense that it does not analyse the process of change and the role of management accounting in it, isomorphism, or even the institutionalization of practices. It addresses the terminology developed by ter Bogt and Scapens (2019) to explore ACC's case and characteristics that allow us to observe: how the situated rationality of innovation within the case company is imprinted on the management control practices implemented; and, how these practices communicate and provide guidance to the organizational members in relation to innovation.

With very robust and institutionalized management control practices, the findings obtained through the case of ACC permit us to make contributions to the literature on the MCS and Innovation, and, in a more modest way, to the literature on institutional theory. Regarding the first body of research, although this study is not the first case study that seeks to provide deeper understandings of the relationship between MCS and innovation, our findings highlight the important role that these systems may play in communicating and guiding organizational members to behaviours and actions more related to innovation. The literature that seeks to connect MCS and innovation has taken a light approach on how strategic communication and guidance is provided to the collaborators of the company. Looking at it in a macro-organizational way, the results show that through the inclusion of values, mottos, objectives that underpin the situated rationality, the cascading process of some of these objectives, and the use of objectives contracts, the managers are able to strategically communicate and provide guidance. With this, the study also responds to the calls to dig further into this line of research (e.g., Chenhall & Moers 2015; Moll, 2015; Fried, 2017; Major et al., 2018; Barros & Ferreira, 2019), especially by resorting to qualitative research methods such as the case study (Henri, 2006; Barros & Ferreira, 2019).

To the literature on the extended B&S framework, we are able to address the call of Bertz and Quinn (2022: 97) that the situated rationalities “*need to be considered in more fine grained detail ...*”. A situated rationality, termed rationality of “innovation”, within the company was identified and our results lead us to assert that the MCS, as practices established long ago and institutionalized, are able to maintain the situated rationalities within the company. MCS also help in achieving the constant strategic communication and guidance that are inherent to these practices and have been enacted on a continuous basis.

Lastly, there are also more general contributions to both practitioners and the literature in exposing and detailing the solution implemented at ACC and how a set of combined control practices can make a flourishing habitat that includes innovation.

Aside from these contributions, from the research choices made there are also some limitations that should be acknowledged. First, the results presented should be considered carefully. The use of a single case study means that although this study has provided a very in-depth analysis of the role of MCS on innovation at ACC, this represents the situation of only the case company. Different companies in different sectors with different contexts and with different management control protocols may choose to use other tools to represent the innovation. It should not be neglected that management accounting is a situated practice (e.g., ter Bogt and Scapens, 2019).

At the same time, the analysis conducted using the institutional theory perspective was very focused on the sphere of organization, underplaying the institutions within and outside the company, their influence, and even their impacts and tensions.

Nevertheless, there are also future research opportunities. When it is considered that innovation at ACC is very market driven, it is possible to ask if other postures regarding the origins of novel ideas could require different approaches and different controls. In this regard, Revellino and Mouritsen's (2009) study acknowledges that the development process of new products entails a multiplicity of controls, which could also be the case of managing different forms of innovation.

## Appendix

Phases	Date	Interviewee	Duration (minutes)
First phase: Pilot case study	19-11-2015	- Member of the Holding	40
	16-12-2015	- Head of innovation department	
	16-12-2015	- Head of management control	
	16-12-2015	- Head of Management Control	95
	16-12-2015	- Head of innovation	65
	23-12-2015	- Head of Management Control	32
	09-01-2016	- Head of Management Control	77
	05-02-2016	- Head of Management Control	52

**Table 1** (continued)

Phases	Date	Interviewee	Duration (minutes)
Second phase: main case study	30-06-2016	- Head of business development and global segment manager	80
	30-06-2016	- Head of Human Resource department	73
	30-06-2016	- Chief Financial officer	60
	30-06-2016	- Head of Footwear department	80
	30-06-2016	- Head of Production department	43
	04-07-2016	- Head of Asia sales department	58
	04-07-2016	- Head of Marketing department	50
	04-07-2016	- Head of innovation	55
	09-07-2016	- Laboratory manager	47
	09-07-2016	- Treasury manager	55
	11-07-2016	- Head of Quality and environment department	46
	11-07-2016	- Project Manager 1	59
	11-07-2016	- Project Manager 2	53
	11-07-2016	- Retail segment manager - EMEA	60
	12-07-2016	- Industry global segment manager	60
	12-07-2016	- Retail segment manager - NAM	45
	13-07-2016	- Japan and Korea Market developer	50
	13-07-2016	- Agglomerates production manager	65
	13-07-2016	- Industry Segment Manager - NAM	37
	14-07-2016	- Logistics manager	73
14-07-2016	- Services and maintenance manager	70	
14-07-2016	- Granulates production manager	70	
15-07-2016	- Cork with rubber production manager	45	
20-07-2016	- India Market developer	68	
20-07-2016	- Industry global technical manager	62	
16-09-2016	- Chief Executive officer	60	
Total			1885

**Table 2** List of direct observations and their duration

Direct Observations moments and contacts:	
Tour of the showroom	60 min
Tour of the production facilities	130 min
Alignment meeting with all the employees	60 min

**Funding** Open access funding provided by FCT|FCCN (b-on).  
Open access funding provided by FCT|FCCN (b-on).

**Data availability** The data generated and analysed during the current study are not available due to confidentiality issues.

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