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Managing material value creation matters in Integrated Reporting

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Abstract

Purpose - This paper explores how advanced integrated report preparers internalise and operationalise material value creation information to manage the generation of such information for the integrated report.

Design methodology/approach - The paper adopts a qualitative approach using in-depth semi-structured interviews to examine how information about material value creation matters in six South African organizations are managed.

Findings - The findings will be useful to Integrated Reporting adopters as to how they might implement appropriate processes and systems to determine, communicate, collect and process information about matters that substantively affect their value creation.

Originality/value - The paper contributes to the body of knowledge by providing insight on how material value creation matters are determined, communicated internally, and information about such matters generated.

Keywords integrated reporting, material value creation matters determination, value creation communication, processes and systems, advanced integrated report preparers, material value creation information

Paper type Research paper

JEL Descriptors A13, E22, G41, M14, O31

Managing material value creation matters in Integrated Reporting

1. Introduction

Integrated Reporting (IR) centres on how an organisation creates value by integrating financial and non-financial information in addition to considering a holistic view of a company's strategy, performance, and future prospects (Burke and Clark, 2016; Ernst and Young, 2016; Hsiao and Kelly, 2018; Stubbs *et al.*, 2016; The South African Institute of Chartered Accountants [SAICA], 2016). Executives overwhelmingly agree that bringing financial and non-financial information together improves insight into how businesses create value over time, which supports better decision-making (Black Sun, 2018). An integrated report should give stakeholders a more holistic view of the organisation's strategy, risks, and viability, by linking financial and sustainability information and providing forward-looking information about how the company deals with risks and opportunities (Hampton, 2012). The story told in an integrated report enables users to make an informed assessment about the organisation's ability to create value over time (Integrated Reporting Committee of South Africa [IRC SA], 2016).

Both practitioners and academics argue that "many firms still do not know what integrated reporting is … (or) how to begin embarking on the integrated reporting journey" (Burke and Clark, 2016, p. 275). The International Integrated Reporting Council (IIRC) and many other organisations and institutions (see for example Adams, 2015a; IRC SA, 2018; PwC, 2015) have released documents providing guidelines and steps on implementing IR and preparing an integrated report. Further, prior research investigated aspects the *to who*, *for whom* and *what* aspects on material matters in IR (Eccles *et al.*, 2014; Lai *et al.*, 2017; Steenkamp, 2018). However, at the time of writing, no guidelines and prior research were found on *how* material value creation matters are determined and managed.

The objective of this paper is to investigate *how* South African advanced integrated report preparers (a) determine what matters are material for their value creation, (b) communicate this throughout the organisation, and (c) generate information about such matters for reporting purposes. The contribution of the study is that it adds *how* materiality is internalised and operationalised to the IR body of knowledge.

The remainder of the paper proceeds as follows. Section 2 reviews the relevant literature and develops the research question. Section 3 discusses the methodology. Subsequently, the findings are presented in Section 4. Section 5 discusses the findings against the background of the existing literature and their implications. Section 6 concludes with the present study's limitations and contemplating avenues for future research.

2. Literature review

Annual reports have attracted significant scrutiny over the years, with studies finding they fail to effectively address all of the factors that drive value creation and are inadequate in describing the risks and opportunities a business faces (Black Sun, 2018; Cohen *et al.*, 2012; Dumay *et al.*, 2016; Ernst and Young, 2017; Flower, 2015; Stubbs *et al.*, 2016; Venner and Saavedra, 2015). Traditional financial reporting practices provide a static and incomplete picture of whether and how companies create value (Black Sun, 2018; Esch *et al.*, 2019). Instead, nonfinancial information that is 'concise, comprehensive, comparable, and credible' are required (Cohen *et al.*, 2011 in Esch *et al.*, 2019, p.119).

IR provides a holistic view of an organisation's value creation by integrating financial and non-financial information in addition to incorporating the company's strategy, business plan, six capitals, performance, and future prospects in an integrated report (Burke and Clark, 2016; de Villiers *et al.*, 2016; Ernst and Young, 2016; Stubbs *et al.*, 2016; SAICA, 2016). This "move towards integrated, narrative-based reporting around the central business model story" (Beattie and Smith 2013, p. 251) fosters strategic storytelling that allows "the company's story to be told in a way that it has not been told before" (Higgins *et al.*, 2014, p. 1102). Prior research has found that integrated reports are unique because each company has a unique value creation story (Steenkamp, 2018). An integrated report "may become the primary document given to investors, particularly if traditional financial reports are difficult to read and comprehend" (Lai *et al.*, 2017, p. 548).

Paragraph 2.22 of the IR Framework (The International Integrated Reporting Council [IIRC], 2021) states that those charged with governance are responsible for creating an appropriate oversight structure to support the ability of the organisation to create value. One of the guiding principles of the IR Framework (paragraph 3.17) is that an integrated report should disclose information about matters that substantively affect the organisation's ability to create value over the short, medium and long term, described as materiality (IIRC, 2021).

The current study does not aim to engage in the ongoing debate and research about materiality practices and rationales, and the many different challenges about the application of the materiality concept in corporate reporting (including auditing, financial, non-financial, and integrated reporting) (see for example Cerbone and Maroun, 2020; Eccles *et al.*, 2014; Edgley *et al.*, 2015; Lai *et al.*, 2017). Instead, it deems a brief discussion of materiality necessary because the materiality concept in IR represents a "starting point" for the IR preparation process (Lai *et al.*, 2017).

Accounting materiality is one of the most iconic and a fundamentally important reporting concept. It has a fuzzy ontology and a malleable nature (Edgley *et al.*, 2015), and is also described as an opaque concept (Beske *et al.*, 2020). Although cultural context influences the meaning of materiality, it forms the conceptual bedrock of corporate reporting (Eccles *et al.*, 2014). Decisions about materiality are a matter of professional judgement. In the audit process, materiality has been associated with the notion of a tolerable level of error in reporting (Edgley, 2014; Edgley *et al.*, 2015). However, materiality in Social and Environmental Reporting (SER), is significantly different from materiality in financial audit (Edgley *et al.*, 2015), and its malleable nature is accentuated in SER (Edgley *et al.*, 2015). Cerbone and Maroun (2020, p. 15) report that in the context of IR, "materiality is defined only with reference to financial performance". According to Eccles *et al.*, (2014), in the "language of the IIRC, material matters are those that are relevant and important" (p. 121), and as materiality is entity-specific, it poses challenges for the IR movement. As "it is problematic to construct a coherent, clearly defined, understanding of materiality when multiple logics underpin its operationalisation" (Edgley *et al.*, 2015, p. 14), materiality is regarded as a problematic reporting concept.

Various aspects related to materiality in the context of IR have been examined. Some scholars investigated the historical ontology in adopting materiality in IR (Edgley, 2014; Edgley *et al.*, 2015). Lai *et al.*, (2017) investigated *who* participates in the IR materiality determination process for an Italian firm that pioneered integrated reporting. Steenkamp (2018) investigated *what* organisations disclose in their integrated reports about their materiality determination processes. Although Eccles *et al.*, (2014) emphasised that the board of directors should put a process in place of how companies decide which matters to include in an integrated report, their study focussed on the *who* and *for whom* aspects. According to Beske *et al.*, (2020), companies fail to explain the methods and identification of material matters, even though materiality analysis is a growing phenomenon. Hence, they conclude that it remains unclear what the underlying processes are to define the content of integrated reports. Cerbone and Maroun (2020) add *how* materiality is internalised and operationalised is seldom considered. The current study attends to how advanced integrated report preparers internalise and operationalise materiality by firstly investigating *how* they decide which matters to include in their integrated reports. Secondly, by examining the managerial processes to ensure information about these matters are generated for inclusion in the integrated report.

According to Perego *et al.*, (2016, p. 59), companies have a weak understanding of the value of IR and can be "disproportionately focused on IR as an (external) communication toolkit rather than an (internal) managerial process". Higgins *et al.*, (2014) state that managers consider IR as an opportunity to solve strategic communication challenges. Communicating value creation stories is useful to internal users, assisting the decision process that leads to higher sustainable value creation (Esch *et al.*, 2019). Internalising IR within the organisation can lead to fundamental, persistent change in organisational strategies (Guthrie *et al.*, 2017). In order to implement IR, it is important that organisations consistently and effectively communicate a holistic view of their strategy, governance, and performance throughout all levels of the organisation, so as to promote buy-in and alignment of all activities with the company's strategy and accountability (Venner and Saavedra, 2015). Stronger internal communication can break down departmental barriers and stimulate dialogue between teams (de Villiers *et al.*, 2017).

Welch and Jackson (2007) report a paucity of definitions of what internal communication means. They argue that adopting a simple definition such as "all methods (internal newsletter, intranet) used by a firm to communicate with its employees …. lacks a sense of internal communication as part of strategic management" (pp. 182–183). Other definitions, they argue, also fail to take into account the breadth of engagement and collaboration that occurs within the internal communication exchange, including those interactions between strategic managers and employees (Welch and Jackson 2017). Rosendahl *et al.*, (2014) examined internal communication within the context of change management literature. They found management expanded their internal interactions to create a 'value dialogue' with employees, which was the "key to successful organisational change" (Rosendahl *et al.*, 2014). In the current study, internal communication encompasses the internal interactions to create a value dialogue between report preparers, report contributors (i.e. those who are responsible for gathering information about material value creation matters) and other employees. Thus, internal communication takes into account the engagement and collaboration, in line with the following description: "A group of processes or tools that are responsible for effective information flow and collaboration among participants within an organisation" (Jouany, 2019).

Prior research of internal communication in IR indicate diverse findings. Some scholars expressed concerns about the managerial processes. Lai *et al.*, (2017) suggest that managers are not satisfied with their effectiveness in internal communication: "We need to give a clearer, more transparent picture internally to favour engagement" (p. 545). McNally *et al.*, (2017) observed a disconnect in communication between reporting teams when contributing information to the integrated report. They found limited interaction between the finance and the sustainability teams and a lack of a shared understanding of their roles. This promoted a 'silo-approach' to reporting. Evidence of IR driving increased collaboration is not extensive (Higgins *et al.*, 2019). To the contrary, other scholars report that the integrated reporting process results in: better internal collaboration leading to a break down in organisational silos (Higgins *et al.*, 2019), that IR results in greater collaboration within teams (Steenkamp, 2018), increased understanding and communication across departments (Burke and Clark, 2016), and better and more informed decision making (Esch *et al.*, 2019; Kannenberg and Schreck, 2019; Steenkamp, 2018). The current study investigates if advanced integrated report preparers' internal communication resulted in increased or decreased collaboration, thus the effectiveness of their managerial processes.

Effective internal communication is important to enable report contributors to collect information about their organisation's material value creation matters. However, one of the biggest obstacles is that the processes for gathering data for disclosure in the integrated report are neither well developed nor standardised (Burke and Clark, 2016). Firms need to develop new accounting and management processes to collect information about non-financial aspects of their performance (Adams, 2015a; Hampton, 2012; Steyn, 2014). This, in turn, often demands a reconfiguration of reporting structures and subsequent costly and time-consuming adjustments to management information systems (Steyn, 2014). De Villiers *et al.*, (2016) argue that there is much to learn, especially regarding the internal processes and systems implemented to measure and manage relevant information for IR. Further research is also needed to inform the practical implementation of non-financial accounting and reporting and to explore changes to internal systems, processes, and decision-making upon adoption of IR (Adams, 2017).

Drawing from the above literature, this study examines advanced integrated report preparers' managerial processes to communicate material value creation matters through the organisation, and systems they have in place to generate information about these matters.

The IIRC singled out countries such as the UK, France, and Australia as leading adopters of IR (Sweet, 2019). However, IR adoption is voluntary in these countries and they only use some aspects and principles of the IR framework. South Africa, on the other hand, has fully embraced IR and is widely considered as the world leader in developing and promoting IR (Buitendag *et al.*, 2017; Burke and Clark, 2016; Dupont-Enzer, 2014; IRC SA, 2018; McNally *et al.*, 2017;

Rensburg and Botha, 2014; Steenkamp, 2019; Terry, 2017). Mandated in 2010, all companies listed on the Johannesburg Stock Exchange (JSE) must prepare integrated reports on an 'apply and explain' basis. The adoption of IR has led to South African organisations experiencing breakthroughs in understanding how value is created over time, as well as greater collaboration within their teams, more informed decision-making, and positive impacts on stakeholder relations (Adams, 2015b; Ernst and Young, 2016; IRC SA, 2018). Therefore, the subjects in this study are South African organisations, referred to as advanced integrated report preparers.

To contribute to the IR literature, the following research question was developed:

> How do advanced integrated report preparers internalise and operationalise material value creation matters?

3. Method

3.1 Data collection

According to Cerbone and Maroun (2020), "the materiality determination process is the responsibility of the preparer" (p. 7). Consequently, similar to their approach, the current study only engaged with preparers, deferring how stakeholders understand materiality in the IR context for future research. The primary source for collecting qualitative data from advanced integrated report preparers was through in-depth, semi-structured interviews. To obtain knowledge about these preparers' IR experiences and practices, and to refine the interview questions, discussions were held with IR consultants and experts in South Africa prior to conducting the study.

Following that, semi-structured interviews were conducted with six advanced integrated report preparers. These organisations were selected from companies included in the Ernst and

Young Excellence in Integrated Reporting Awards[1], Chartered Secretaries Southern Africa, and JSE Limited awards[2] with the assistance of an IR specialist partner in one of the Big 4 Auditing firms in South Africa (Table 1). As Table 1 details, the interviews included the key actors identified as being responsible for managing the IR process and drafting the integrated report.

<INSERT TABLE 1 HERE >

Interviews were conducted between 8 November 2018 and 11 February 2019. Prior to the interviews, participants were provided with an information sheet, consent form, and the questions that would be asked. Confidentiality and the right to withdraw from the research process were guaranteed at any time up until the return of the interview transcript from the interviewee. Each interview lasted approximately 45 minutes. Interviews, with consent from the participants, were conducted on Zoom and recorded, with the exception of one participant who chose to provide answers to the questions in writing. A research assistant transcribed the interview recordings, which were returned to the participants for verification and any corrections made accordingly.

3.2 Data analysis and interpretation

The aim of the interviews was to gain an understanding of how advanced integrated report preparers: (1) determine which matters substantively affect their value creation, (2) communicate such information to the report contributors, and (3) generate information about their identified material value creation matters. Examples of questions asked during the interviews follow:

[1] Since 2012, Ernst and Young has ranked the top 100 JSE listed companies, selected based on their market capitalisation as at the 31st of December the previous year. This is referred to as the Ernst and Young Excellence in Integrated Reporting Awards. In the 2018 Awards, these 100 companies accounted for 93% of the market capitalisation of the JSE at 31 December 2017.

[2] See https://www.bizcommunity.com/Article/196/583/184825.html

- How do you ensure you capture information that focus on your company's value creation, and information that is critical in understanding your value creation model?

- What processes and systems do you have in place to communicate your material issues identified for IR from the board level downwards through to the operational level?
- What systems do you have in place to collect and process material value creation information to enable you to prepare your integrated report?

To ensure identification of all the relevant details, both authors read each transcript several times and then open-coded interview transcripts independently to minimise misinterpretation and subjectivity. Both within-case analysis and cross-case patterns were examined to identify patterns, shared iterations and themes, and unique responses (Eisenhardt, 1989). Similarities and differences between participants' views were noted. As suggested by previous studies (Strauss and Corbin, 1990 in Lai *et al.*, 2017), the researchers discussed their independent coding and no substantial differences arose in this process. To ensure accuracy, completeness and consistency of the coding, the lead researcher completed and the support researcher reviewed the coding process.

4. Results

4.1 How material value creation matters are determined

All participants said to capture information about matters that substantively affect their value creation, they first determine what matters are material in their respective organisations. P1 uses a bottom-up approach to formulate their material value creation matters. They begin with the end in mind, by defining the outcomes they want to deliver to their stakeholders and then set KPI targets accordingly. On the other hand, four organisations (P3, P4, P5 and P6) use a top-down approach, which involve lengthy discussions between executive management and upper level management. P6 determines material value creation matters by aligning them with their strategic objectives. P3 remarked that cascading their strategy and material matters "*was possibly the largest organisation-wide change that occurred as a result of a more integrated way of approaching business*". P2 uses a more lateral approach where report preparers and contributors collaborate to determine their material matters in creating value.

Various means are used to determine what matters substantively affect their value creation. P1 uses a manual tool, namely a magnetic board, to discuss the material issues that need to be addressed in their integrated report. During these discussions, management and employees at an operational level evaluate the material matters of the previous year, whether each has improved or deteriorated, and if there are new matters that should be considered. This element of 'play' helps stimulate ideas and encourages each person to think individually.

P2 uses a business performance scorecard and obtains audit assurance on key sustainability information relating to their value creation, and this provides them with confidence that they are capturing the information correctly. P4 uses benchmarking gap analysis against peer companies so that they do not overlook information that stakeholders might feel is important. Prior to implementing IR, P6 already operated their business in an integrated way and identified material matters accordingly. These matters were already inculcated through the culture of the management and the business. Since these matters were static when they implemented IR, they only reorganised their existing information to show the value they create to various stakeholders. In some organisations, the audit committee discusses the material issues to be included in the report, but ultimately, it is executive management that drives the detail of the integrated report and the process.

Participants unanimously agreed that determining material matters as the starting point for IR processes, has many advantages. "*The process of preparing our integrated report offers an opportunity to step back and interrogate how we create value*" (P5). P6 stated that determining material matters first helped them simplify the reporting process and structure the integrated report. Many now use their respective material matters to drive their business.

4.2 How material value creation matters are communicated

P1 described their internal communications as a bottom-up approach. Since material matters are determined by operational level management and employees, they communicate these matters "up" to the executive management and the board. They then integrate these matters into performance management criteria using KPIs, which serve as the trigger for bonuses. This collaborative process helped employees to understand their own KPI targets in the context of materiality and gave them a greater sense of ownership in how material value creation value matters are determined. The four organisations, (P3, P4, P5, and P6) who use a top-down approach to determine material matters also use a top-down approach to communicate these matters to report contributors at lower levels of the organisation. P2 did not adopt either a top-down or bottom-up approach to determine and communicate these matters through the organisation. Instead, the report preparer would initiate informal face-to-face meetings with various report contributors at the regional leadership level such as discipline heads and managers. During these meetings, they discussed and collaborated which material value creation matters to include in the integrated report. The report preparer would then write up the draft integrated report and it was returned to these various contributors for proofreading and fact verification. Their collaboration process is then extended by sending the completed integrated report to the executive committee for final approval before sign off by the audit committee.

Participants pointed out some initial "teething problems" in getting collaboration from participants in their respective organisations. P2 found that their engineers were *"very technical people, they are no nonsense, salt of the earth"*, but it was initially difficult to get them to understand what was required from them and hence to get them on board. *"They felt very much like this (integrated reporting) was not their job. Their job was to extract product from the ground"*. P2 experienced that they had to communicate the purpose of IR in order to get contributors to understand what was required from them and to get their collaboration. Interestingly, at the time of the interview, P2 said they were still experiencing difficulty to get full collaboration from the finance department, as this department has an almost singular focus on financial numbers: *"Our CFO and his department, they are still a bit of an issue surprisingly. The engineers have adapted very well, but the accountants still ask questions [like] "Why do we have to spend so much time reporting on HIV/AIDS numbers in our business? Why do we give so much attention to it?"* Further, P2 also found it difficult to tell a cohesive value creation story through a singular lens due to the ineffective flow of information from regional offices who would provide data in different ways, with *"different interpretations, different definitions and different ways of capturing it"* (P2). They dealt with this issue by implementing SAP systems to capture uniform data from regional offices. Although P1 described their internal communication as a bottom-up approach, they mentioned that initially, it was a steep learning curve to educate report contributors about what was required for preparation of the integrated report.

A few participants pointed out that their internal communication of material value creation matters extends beyond the report preparer and contributor relationship to include communication to the remainder of the organisation's workforce. This was done through a variety of means that included: internal road shows (P4), social media platforms, such as Twitter, Facebook and Instagram (P2) and targeted internal communications specific to the relevant audience (P3). Interestingly, P3 explained that not all material matters need to be communicated to all employees and that they only communicate what is relevant to each of the report contributors: *"We are unlikely to communicate the group's risk register to our operational staff"* (P3). The CEO of P4 presented material value creation matters at internal roadshows attended by lower levels of management who would communicate the information to the rest of the organisation through operational workshops.

Some participants (P2, P4, and P5) also use the integrated report itself as a means to communicate material value creation matters to employees. P4 referred to the integrated report as a "go to" document or blueprint that highlighted material issues, and which both internal and external users were referred to. In P5, the CEO used the integrated report as the basis for addressing their annual management conference where material value creation matters were reiterated to senior level management. This information was then taken back to the rest of the workforce. P5's report preparer observed that the benefits of using the integrated report as a means of internal communication to "tell your story", *"has been worth it, even without any external benefit that integrated reporting might offer"*.

4.3 Systems to collect and process information about material value creation matters

Participants unanimously agreed that collecting information for IR strengthened processes and systems already in place. A variety of systems to collect financial and nonfinancial information are used to generate a huge amount of information for IR (Table 2).

<INSERT TABLE 2 HERE >

No organisation made any major investments into new technology or new systems when they implemented IR. P3 noted: "*we don't view our integrated reporting as an isolated process, so have not specifically developed information systems solely for our IR*". P2 made subtle changes to their already existing systems by employing programmers to write code which feeds straight into existing SAP software, for example, to automate their water measurement. They noted that this takes a lot of effort, time, and money. P6 highlighted that their systems adopt international best practice because their organisation is ISO 14000 and ISO 19000 compliant. Two participants made reference to having a SharePoint. P4 said that they have a SharePoint although it is not harmonised within all regions yet. P1 acknowledged that they would like to have a SharePoint in the future, as this will enable source owners to record information as it happens, making the system almost instantaneous.

With the exception of one, all participants have already collected nonfinancial information (referred to as Global Reporting Initiative (GRI) or sustainability information) for the board, social and ethics committee, and the audit and risk committee. P5 did not collect nonfinancial information prior to implementing IR. Consequently, they had to make significant changes in the types of information they collect "*because we did not have sustainability reports, remuneration reports and all the other green reporting and such things in place*" (P5). They stated that this "*was a blessing in disguise because what I have seen over time is that companies that had all those reports have struggled to tell their story*". P1 observed that the actual implementation of IR is not straightforward, recommending the investment of time and effort to help report contributors provide information in a concise, and integrated manner.

P2 described their processes to generate information for their integrated report as follows: they use responsibility centres to collect data in a specific format, at a specific time, using specific measurements and inputs. To ensure authenticity, an executive from each responsibility centre signs off on the information submitted. A draft integrated report is sent to them for proofreading and then to the entire executive team for sign-off. Thereafter, the audit committee signs off on behalf of the board. The board has two weeks to read through the integrated report and suggest changes.

Some participants pointed out that in the early days after adopting IR, when processing information to prepare the integrated report, it was challenging to connect information coming from a large number of report contributors, and to decide what information to select. P1 observed that report contributors often submitted lengthy reports. *"You start editing and bring it down to a bare minimum… and the first response is 'You made me write this long report and you're only reflecting this?' It took a little bit of a while but they then started to understand that they belong to the bigger process and we needed to show how and when these narratives needed to intertwine."* To deal with these challenges, participants sought to educate report contributors about the connectivity between departments. P4 implemented a quarterly reporting system from their departments, and the information is used to prepare the quarterly Board report.

5. Discussion and implications

5.1 How material value creation matters are captured

On the basis of our findings, the board is the ultimate custodian of reporting and plays an oversight and advisory governance role in the IR process. This is in accordance with the perspective of Eccles *et al.*, (2014) who proposed the ultimate responsibility to determine materiality lies with the board in order to fulfil its fiduciary responsibility. Extending prior research stating that ultimately the board should oversee the materiality determination process (Cerbone and Maroun, 2020; Eccles *et al.*, 2014; Edgley *et al.*, 2015), the current study found that it is executive management that drives the IR process ultimately. Additionally, the findings emphasise that although the integrated report typically goes to the audit committee before the board approves it, their role is largely around asking questions related to completeness and accuracy of telling the organisation's value creation story.

The results of our study contribute theoretically in that they agree with the findings of prior research and expand our knowledge related to materiality determination. Similar to Lai *et al.*, (2017), advanced integrated report preparers claimed that their strategy guides them when they determine IR materiality content; alike Stubbs and Higgins (2014), IR addresses "communication challenges associated with the company's strategy" (p. 1103); and Edgley *et al.*, (2015) that materiality aligns with strategy. The results also substantiate the result of Edgley *et al.*, (2015) that "the focus of materiality has shifted away from the report, towards improving corporate performance" (p. 13). One practical contribution of the current study is the following guidance related to improving performance: *"look at the information your organisation already utilises and define the important KPIs aligned to the strategy you have. If it doesn't align to your strategy, then stop doing it and concentrate on the things that matter*" (P5). We found that many organisations now use matters that materially affect their value creation to drive their businesses.

The findings from this analysis make an empirical contribution by extending the limited knowledge about *how* participants determine their material matters. Advanced integrated report preparers use a variety of ways such as a magnetic board, business performance scorecards, audit assurance, benchmarking gap analysis against peer companies, and discussions of the audit committee, to determine their material value creation matters.

5.2 How material value creation matters are communicated

This study found the organisation (P1) who adopted a "bottom-up" approach in their internal communication reported a higher level of collaboration than those who adopted a top-down approach. Similar to Rosendahl *et al's.*, (2014) observations, it appears that a bottom-up flow of information secured employee ownership, resulting in better collaboration and benefitting top managers. An interesting observation with this finding is that both P1 and the organisation in Rosendahl's case study are state-owned entities. This raises the question as to whether organisations with greater government ownership have greater flexibility in adopting more collaborative methods of engagement as experienced with these bottom-up approaches.

Dissimilar to Lai *el al's.*, (2017) assertion that IR construction was "never conceived as a top-down process but rather an interactive relationship among the board and managers to foster relevant choices" (p. 546), the current study found that the top-down approach prevailed as the most common method for communicating information about material value creation matters internally.

While Mio *et al.*, (2016) explored the use of an *internal* integrated report to communicate with employees, our findings suggest that media produced for an external audience, such as the integrated report and social media are also used to communicate material matters internally, particularly to lower level employees throughout the organisation. Girella *et al.*, (2019) also observed the use of the integrated report to communicate value creation internally in the context of SMEs. Welch and Jackson (2007) acknowledge that external communication mediums are appropriate in circumstances where message consistency is important and where senior managers are unable to meet and discuss matters with all employees. Our study adds to this limited body of literature on the use of the integrated report as an internal communication tool. Further, while Lodhia and Stone (2017) examined social media from the external communications perspective, we are not aware of prior research that has considered its role as a means to communicate material value creation matters to an internal audience.

The current study substantiates prior studies' findings regarding the people who contribute information in the internal communication process. Firstly, McNally *et al.*, (2017) found a disconnect in communication between reporting teams. However, this was the experience of only one participant in the current study who found that data was collected in diverse ways from regional offices. Our study extends the literature by providing insight as to how this preparer (P2) dealt with this issue. Secondly, prior scholars observed a lack of engagement from the finance people in IR (McNally *et al.*, 2017, Stubbs and Higgins, 2014). Again, our study found that only one participant (P2) stated that this was an ongoing challenge for them.

Chaidali and Jones (2017) raised concerns about both the length of integrated reports and that a report developed by one person would "impair the value of the document and prevent readers from engaging with different voices and sections" (p. 15). Some participants in the current study also had similar experiences. To deal with this, P1 said: *"[IR] has enhanced our capabilities to tell our stories in a much more comprehensive way and not be long-winded about it"*. Other participants expended time and effort to guide report contributors to think in an integrated way, so that they can provide information in a concise, material, and integrated manner. Further, to ensure a uniform tone and language throughout the integrated report, three participants said they now outsource the writing of the report to external writers. This varies from using a copywriter, editor, or publication house and appointing knowledge experts such as a specialist IR team at one of the Big 4 firms. P1 said: *"We use an editor to ensure that when we develop our reports, it is one voice coming through our report, not a HR narrative or other business unit narrative"*.

Overall, the findings in this section make an empirical contribution by extending the limited knowledge of *how* material matters are internally communicated within the organisation. Contrary to the observations of Lai *et al.*, (2017) we observe that managers are generally satisfied with their effectiveness in internal communication, but most indicated a desire to improve the conciseness of their reports and faced challenges in communicating this to report contributors.

5.3 How information about material value creation matters are collected and processed

The findings of the study provide insight about De Villiers *et al's*., (2016) point of view that there is much to learn regarding the internal processes and systems implemented to manage relevant information for IR. Contrary to prior research (Adams, 2015a; Hampton, 2012; Steyn, 2014) suggestions, participants stated that they did not have to make significant investments in new accounting and management processes to collect information about material value creation matters. In line with Steyn (2014), the study found that even though subtle, changes to the already existing systems were costly and time-consuming.

It also provides insight into the practical implementation of nonfinancial accounting and reporting (Adams, 2017). The majority of advanced integrated report preparers already collected nonfinancial information for GRI and Sustainability Reporting about matters that affect their value creation prior to implementing IR and simply had to reorganise how they construct the information for IR purposes. The challenge was how to connect the information collected from report contributors and which information to include in the integrated reports. The findings extend prior knowledge providing empirical evidence that collecting information for IR strengthened advanced integrated report preparers' processes and systems.

Other theoretical contributions are that the findings from the study support Burke and Clark's (2016) view that processes for gathering data for disclosure in the integrated report are not standardised, but oppose their opinion that such processes are not well developed, and also oppose prior scholars perspectives that new accounting and management processes are required (see for example Adams, 2015a; Hampton, 2012; Steyn, 2014). The findings show that a variety of systems are used to collect information about participants' material value creation matters but many of these were already in place and well developed before implementing IR.

As noted by Adams (2017), the study explored changes to internal systems and processes upon adoption of IR. On the basis of our findings, cascading their strategy and material matters "*was possibly the largest organisation-wide change that occurred as a result of a more integrated way of approaching business*" (P3). Other changes were insignificant such as, for example, reorganising information to show the value creation to various stakeholders. A practical contribution is that participants suggested to have a SharePoint, as that will make the system almost instantaneous.

Overall, interviewees were encouraging about implementing IR stating: *"know that it's a challenge for everyone", "take little steps, don't try to do it all at once", "the first report is time consuming", "get an expert, the first time around, don't do it on your own", "be humble enough to ask a professional to start with you", "tell an objective story"*, and *"tell it in such a way that a reader would say: 'I understand this company' after having read your integrated report"*. One interviewee even noted that if they could choose, they would stop doing all IFRS reporting and would only do Integrated Reporting (P5).

6. Conclusion, limitations and future research

The paper demonstrates that advanced integrated report preparers have diverse practices to internalise and operationalise material value creation matters. A variety of means are used to determine which matters substantively affect their value creation, to communicate these matters through the organisation, and to generate information about these matters for conveying their value creation stories in the integrated report. This suggests that a one-size-fits-all approach to manage material value creation matters and information in IR is not practical.

This study has limitations that also provide avenues for future research. The researchers acknowledge that the results are based on a relatively small sample size from a single jurisdiction. However, as in-depth interviews were undertaken, rich data was collected from South African organisations who have a wealth of practices and experience as IR was already implemented in 2010. Further, although the findings do not necessarily represent the IR practices of all South African organisations, they serve as a useful point of reference for future research, including for smaller listed companies, unlisted entities or public sector institutions. It is recommended that future research could test the issues investigated in the current study with a larger sample size, in countries with corporate governance systems different to South Africa, and where IR is voluntary.

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Table 1: Details of participant organisations

Participant organisation	GICS Sector	Industry	Interviewee position
P1	Industrials	Aviation and Aerospace, Airport Management	Senior-Specialist Corporate Strategy
P2	Materials	Mining	Vice-President Corporate Affairs
P3	Real Estate	Real Estate Investment Trusts	Financial Director
P4	Materials	Mining	Manager Investor Relations
P5	Consumer Services	Travel and Leisure	CFO
P6	Industrials	Construction and Materials	Financial Director

Table 2: Systems to capture financial and nonfinancial information

• SAP	• Formalised Microsoft and excel
• Quality management system	• Various stakeholder surveys
• Safety management system	• Staff surveys
• Environmental management system	• Industry related sustainability indices
• Property management systems	• ERP system to monitor, track, and capture data about training and management development training, recruiting, and staff retention.
• HR and payroll systems	
• Accounting systems	

Managing material value~~Value~~ creation matters in Integrated Reporting~~stories of advanced integrated report preparers~~

Abstract

Purpose - ~~–~~ This paper explores how ~~the processes and systems of~~ advanced integrated report preparers internalise and operationalise material~~and how they collect and communicate~~ value creation information ~~both internally and externally via the presentation of their value creation story in their integrated reports. The paper also details challenges associated with implementation of Integrated Reporting (IR), how~~ to manage the generation of such information ~~overcome them, and guidance~~ for the integrated report. ~~future adopters.~~

Design methodology/approach - ~~–~~ The paper adopts a qualitative approach using in-depth~~both~~ semi-structured interviews ~~and archival content analysis~~ to examine how information about material~~the collection and communication of~~ value creation matters~~information~~ in six South African organizations are managed.

Findings - The findings will be useful to Integrated Reporting~~new IR~~ adopters as to how they might implement appropriate processes and systems to determine, communicate, collect and process information about matters that substantively affect~~communicate~~ their value creation. ~~stories to both internal and external stakeholders.~~

Originality/value - The paper contributes to the body of knowledge by providing insight~~guidance~~ on how material value creation matters are determined, communicated internally, and information about such matters generated~~to assemble and communicate value creation stories in integrated reports, what challenges preparers may encounter and how to address these challenges~~.

Keywords integrated reporting, material value creation matters determination, value creation communication, processes and systems, ~~integrated thinking,~~ advanced integrated report preparers, material value creation information~~implementation challenges, adaptive structuration theory~~

Paper type Research paper

JEL Descriptors A13, E22, G41, M14, O31

Managing material value~~Value~~ creation matters in Integrated Reporting~~stories of advanced integrated report preparers~~

1. Introduction

Integrated Reporting (IR) centres on how an organisation creates value by integrating financial and non-financial information in addition to considering a holistic view of a company's strategy, performance, and future prospects (Burke and~~&~~ Clark, 2016; Ernst and~~&~~ Young~~, (EY),~~ 2016; Hsiao and~~&~~ Kelly, 2018; Stubbs *et al.,* 2016; The South African Institute of Chartered Accountants [~~(~~SAICA],~~),~~ 2016). Executives overwhelmingly agree that bringing financial and non-financial information together improves insight into how businesses create value over time, which supports better decision-making (Black Sun, 2018). An integrated report should give stakeholders a more holistic view of the organisation's strategy, risks, and viability, by linking financial and sustainability information and providing forward-looking information about how the company deals with risks and opportunities (Hampton, 2012). The story told in an integrated report enables users to make an informed assessment about the organisation's ability to create value over time (Integrated Reporting Committee of South Africa [~~(~~IRC SA],~~),~~ 2016).

Both practitioners and academics argue that "many firms still do not know what integrated reporting is … (or) how to begin embarking on the integrated reporting journey" (Burke and~~&~~ Clark, 2016, p. 275). The International Integrated Reporting Council (IIRC) and many other organisations and institutions (see for example Adams, 2015a; IRC SA, 2018; PwC, 2015) have released documents providing guidelines and steps on implementing IR and preparing an integrated report. Further, prior research investigated aspects the *to who, for whom* and *what* aspects on material matters in IR (Eccles *et al.,* 2014; Lai *et al.,* 2017; Steenkamp, 2018). However, at the time of writing, no guidelines and prior research were found on *how* material value creation matters are determined and managed. ~~However, none of these provide guidance on processes and systems that should be in place to collate and communicate information internally to enable organisations to tell their value creation stories in their integrated reports.~~

The objective of this~~This~~ paper is~~contributes~~ to investigate~~the body of knowledge by using case studies to examine~~ *how* South African advanced integrated report preparers (a) determine what matters are material for ~~assemble and communicate~~ their value creation, (b) communicate this throughout the organisation, and (c) generate information about ~~stories internally and externally. It also shares challenges these organisations face when implementing IR and how to address~~ such matters for reporting purposes. The contribution of the study is that it adds *how* materiality is internalised and operationalised to the IR body of knowledge~~challenges~~.

The remainder of the paper proceeds as follows. Section 2 reviews the relevant literature and develops the research question~~questions~~. Section 3 discusses the methodology. Subsequently,~~,~~ ~~followed by~~ the findings are presented in Section 4. ~~and a summary in~~ Section 5 discusses the findings against the background of the existing literature and their implications.~~. Finally,~~ Section 6 concludes with the present study's limitations and contemplating avenues~~suggests areas~~ for future research.

2. Literature review

Annual reports have attracted significant scrutiny over the years, with studies finding they fail to effectively address all of the factors that drive value creation and are inadequate in describing the risks and opportunities a business faces (Black Sun, 2018; Cohen *et al.,* 2012; Dumay *et al.,* 2016; Ernst and~~&~~ Young, 2017; Flower, 2015; Stubbs *et al.,* 2016; Venner and~~&~~ Saavedra, 2015). Traditional financial reporting practices~~Financial information alone does not~~ provide a static and incomplete~~complete~~ picture of whether and how companies create~~are truly creating~~ value (Black Sun, 2018; Esch *et al.,* 2019)~~).~~ Instead, nonfinancial information that is 'concise, comprehensive, comparable, and credible'~~strategic and future-oriented information in addition to information about non-financial dimensions of performance~~ are required (Cohen~~. The method of communication is also important. Calculative content (for example in financial reports) limits dialogue; Lai et al. (2018) suggest that integrated reporting can fill this gap by facilitating more meaningful dialogues between preparers and users.~~

~~Many major companies produce multiple reports to detail the organisation's social and environmental performance (Elkington, 2009). However, such information is largely considered insufficient to meet the information needs of a broad range of stakeholders (Busco~~ *et al.,* 2011 in Esch~~2013). These stakeholders have become increasingly vocal in their demands for organisations to safeguard *all* forms of capital, not just financial capital (Chen & Perrin, 2017). Further, separate financial and corporate social responsibility reports do not integrate well with each other, do not integrate financial and non-financial information in one report[1], and are criticised as being disconnected from the strategy and value-creation activities of the entity (Roth, 2014; Simnett & Higgins, 2015; Stubbs~~ *et al.*, 2019, p.119~~2016~~).

~~[1] The IIRC found only 1.4% of Fortune 500 companies combined sustainability and financial data in one report.~~

IR provides a holistic view of an organisation's value creation by integrating financial and non-financial information in addition to incorporating the company's strategy, business plan, six capitals, performance, and future prospects in an integrated report (Burke and~~&~~ Clark, 2016; de Villiers *et al.,* 2016; Ernst and~~&~~ Young, 2016; Stubbs *et al.,* 2016; SAICA, 2016). ~~The IR process also facilitates shifts in business thinking (Elkington, 2009).~~ This "move towards integrated, narrative-based reporting around the central business model story" (Beattie and~~&~~ Smith 2013, p. 251) fosters strategic storytelling that allows "the company's story to be told in a way that it has not been told before" (Higgins *et al.,* 2014, p. 1102). Prior research has found that integrated reports are unique because each company has a unique value creation story (Steenkamp, 2018). An integrated report "may become the primary document given to investors, particularly if traditional financial reports are difficult to read and comprehend" (Lai *et al.,* 2017, p. 548).

Paragraph 2.22 of the IR Framework (The International Integrated Reporting Council [IIRC], 2021) states that those charged with governance are responsible for creating an appropriate oversight structure to support the ability of the organisation to create value. One of the guiding principles of the IR Framework (paragraph 3.17) is that an integrated report should disclose information about matters that substantively affect the organisation's ability to create value over the short, medium and long term, described as materiality (IIRC, 2021).

The current study does not aim to engage in the ongoing debate and research about materiality practices and rationales, and the many different challenges about the application of the materiality concept in corporate reporting (including auditing, financial, non-financial, and integrated reporting) (see for example Cerbone and Maroun, 2020; Eccles *et al.,* 2014; Edgley *et al.*, 2015; Lai *et al.,* 2017). Instead, it deems a brief discussion of materiality necessary because the materiality concept in IR represents a “starting point” for the IR preparation process (Lai *et al.,* 2017).

Accounting materiality is one of the most iconic and a fundamentally important reporting concept. It has a fuzzy ontology and a malleable nature (Edgley *et al*., 2015), and is also described as an opaque concept (Beske *et al.,* 2020). Although cultural context influences the meaning of materiality, it forms the conceptual bedrock of corporate reporting (Eccles *et al.,* 2014). Decisions about materiality are a matter of professional judgement. In the audit process, materiality has been associated with the notion of a tolerable level of error in reporting (Edgley, 2014; Edgley *et al.,* 2015). However, materiality in Social and Environmental Reporting (SER), is significantly different from materiality in financial audit (Edgley *et al.,* 2015), and its malleable nature is accentuated in SER (Edgley *et al.,* 2015). Cerbone and Maroun (2020, p. 15) report that in the context of IR, “materiality is defined only with reference to financial performance”. According to Eccles *et al.,* (2014), in the “language of the IIRC, material matters are those that are relevant and important” (p. 121), and as materiality is entity-specific, it poses challenges for the IR movement. As “it is problematic to construct a coherent, clearly defined, understanding of materiality when multiple logics underpin its operationalisation” (Edgley *et al.,* 2015, p. 14), materiality is regarded as a problematic reporting concept.

Various aspects related to materiality in the context of IR have been examined. Some scholars investigated the historical ontology in adopting materiality in IR (Edgley, 2014; Edgley *et al.,* 2015). Lai *et al.,* (2017) investigated *who* participates in the IR materiality determination process for an Italian firm that pioneered integrated reporting. Steenkamp (2018) investigated *what* organisations disclose in their integrated reports about their materiality determination processes. Although Eccles *et al.,* (2014) emphasised that the board of directors should put a process in place of how companies decide which matters to include in an integrated report, their study focussed on the *who* and *for whom* aspects. According to Beske *et al.,* (2020), companies fail to explain the methods and identification of material matters, even though materiality analysis is a growing phenomenon. Hence, they conclude that it remains unclear what the underlying processes are to define the content of integrated reports. Cerbone and Maroun (2020) add *how* materiality is internalised and operationalised is seldom considered. The current study attends to how advanced integrated report preparers internalise and operationalise materiality by firstly investigating *how* they decide which matters to include in their integrated reports. Secondly, by examining the managerial processes to ensure information about these matters are generated for inclusion in the integrated report.

According to Perego *et al.,* (2016, p. 59), companies have a weak understanding of the value of IR and can be "disproportionately focused on IR as an (external) communication toolkit rather than an (internal) managerial process". Higgins *et al.,* (2014) state that managers consider IR as an opportunity to solve strategic communication challenges. Communicating value creation stories is useful to internal users, assisting the decision process that leads to higher sustainable value creation (Esch *et al.*, 2019). Internalising IR within the organisation can lead to fundamental, persistent change in organisational strategies (Guthrie *et al.,* 2017). In order to implement IR, it is important that organisations consistently and effectively communicate a holistic view of their strategy, governance, and performance throughout all levels of the organisation, so as to promote buy-in and alignment of all activities with the company's strategy and accountability (Venner and Saavedra, 2015). Stronger internal communication can break down departmental barriers and stimulate dialogue between teams (de Villiers *et al.*, 2017).~~& Saavedra, 2015).~~

~~Ernst and Young (2013, p. 7) note that "communicating value creation is not simply a question of merging financial and non-financial information". Instead, it is a comprehensive picture "communicated through alignment between many factors including business practices, tangible and intangible assets, material financial and non-financial capital risks, the company's strategy, its engagement with multiple stakeholders, sustainability agenda, governance practices and~~

~~future goals over the short, medium and long term" (Ernst and Young, 2013, p. 7). Naturally, integrated report preparers may use financial, non-financial, and narrative means to communicate information about their value creation stories. Such an approach can help weave an intricate story that informs both shareholders and other stakeholders of how outcomes result from the organisation's inputs, business activities, and outputs (Ernst and Young, 2013).~~

~~Communicating value creation stories in integrated reports may be useful particularly for stakeholders other than financial capital providers because they may have no other resources to evaluate how a firm may create value for *them*. Moreover, the reporting process itself can also help internal users to make decisions leading to higher sustainable value creation (Esch et al., 2019). Internalising IR within the organisation can lead to fundamental, persistent change in organisational strategies (Guthrie *et al.*, 2017). Interestingly, Perego (2016, p. 59) suggests that companies have a weak understanding of the value of integrated reporting and are "disproportionately focused on IR as an (external) communication toolkit rather than an (internal) managerial process".~~

~~Nonetheless, implementing IR presents challenges, including understanding how it can be done successfully (Perego et al., 2016; McNally et al., 2017; Stubbs & Higgins, 2014); to what extent IR processes are integrated and embedded in organisations' systems (de Villiers et al., 2014); what form integrated reports should take in order to emphasise the interconnectedness of financial and non-financial information (Cheng et al., 2014); and how the adoption of IR influences management control systems (Perego et al., 2016; de Villiers, Venter et al., 2016). According to Burke and Clark (2016), one of the biggest obstacles is that the processes for gathering relevant data are neither well developed nor standardised. De Villiers, Maroun *et al.*, (2016) argue that there is much to learn, especially regarding the internal processes and systems~~

~~implemented to measure and manage relevant information for IR.~~ Welch and Jackson (2007) report a paucity of definitions of what internal communication means. They argue that adopting a simple definition such as "all methods (internal newsletter, intranet) used by a firm to communicate with its employees …. lacks a sense of internal communication as part of strategic management" (pp. 182–183). Other definitions, they argue, also fail to take into account the breadth of engagement and collaboration that occurs within the internal communication exchange, including those interactions between strategic managers and employees (Welch and Jackson 2017). Rosendahl *et al.,* (2014) examined internal communication within the context of change management literature. They found management expanded their internal interactions to create a 'value dialogue' with employees, which was the "key to successful organisational change" (Rosendahl *et al.,* 2014). In the current study, internal communication encompasses the internal interactions to create a value dialogue between report preparers, report contributors (i.e. those who are responsible for gathering information about material value creation matters) and other employees. Thus, internal communication takes into account the engagement and collaboration, in line with the following description: "A group of processes or tools that are responsible for effective information flow and collaboration among participants within an organisation" (Jouany, 2019).

Prior research of internal communication in IR indicate diverse findings. Some scholars expressed concerns about the managerial processes. Lai *et al.,* (2017) suggest that managers are not satisfied with their effectiveness in internal communication: "We need to give a clearer, more transparent picture internally to favour engagement" (p. 545). McNally *et al.*, (2017) observed a disconnect in communication between reporting teams when contributing information to the integrated report. They found limited interaction between the finance and the sustainability teams and a lack of a shared understanding of their roles. This promoted a 'silo-approach' to reporting. Evidence of IR driving increased collaboration is not extensive (Higgins *et al.,* 2019). To the contrary, other scholars report that the integrated reporting process results in: better internal collaboration leading to a break down in organisational silos (Higgins *et al.,* 2019), that IR results in greater collaboration within teams (Steenkamp, 2018), increased understanding and communication across departments (Burke and Clark, 2016), and better and more informed decision making (Esch *et al.,* 2019; Kannenberg and Schreck, 2019; Steenkamp, 2018). The current study investigates if advanced integrated report preparers' internal communication resulted in increased or decreased collaboration, thus the effectiveness of their managerial processes.

Effective internal communication is important to enable report contributors to collect information about their organisation's material value creation matters. However, one of the biggest obstacles is that the processes for gathering data for disclosure in the integrated report are neither well developed nor standardised (Burke and Clark, 2016). Firms need to develop new accounting and management processes to collect information about non-financial aspects of their performance (Adams, 2015a; Hampton, 2012; Steyn, 2014). This, in turn, often demands a reconfiguration of reporting structures and subsequent costly and time-consuming adjustments to management information systems (Steyn, 2014). De Villiers *et al.,* (2016) argue that there is much to learn, especially regarding the internal processes and systems implemented to measure and manage relevant information for IR. Further research is also needed to inform the practical implementation of non-financial accounting and reporting and to explore changes to internal systems, processes, and decision-making upon adoption of IR (Adams, 2017).

Drawing from the above literature, this study examines~~uses case studies to examine the value creation communication of~~ advanced integrated report preparers' managerial processes to communicate material value creation matters through the organisation,~~preparers internally~~ and systems they have in place to generate information about these matters.~~externally. The following research questions are developed:~~

~~RQ 1: What processes and systems do advanced preparers have in place to gather and communicate information about their value creation internally?~~

~~RQ2: Where, how and to whom do advanced integrated report preparers communicate their value creation stories externally in integrated reports?~~

~~RQ 3: What challenges do advanced integrated report preparers experience when implementing IR and how do they deal with them?~~

~~Beattie and Smith (2013) note that most value creation literature is grounded principally in economics, management, and accounting theory. Integrated reporting and thinking have been examined using a range of lenses, including institutional theory (e.g., de Villiers et al., 2017), organisational strategy and change (e.g., Guthrie et al., 2017; Massingham et al., 2019), and agency, stewardship, and legitimacy theories (e.g., Camilleri, 2018).~~

~~However, none of these theoretical approaches sufficiently explain how organisations communicate value creation, which is perceived to comprise a new topic area. Using an inductive approach in case studies to generate theory for new topic areas (Eisenhardt 1989), we use Adaptive Structuration Theory (AST) to develop an IR value creation communication model that conveys the value creation story to both internal and external stakeholders.~~

~~At its core, AST describes the interaction between members of a group as they utilise rules and resources within those interactions (Poole, 2000). The structure within the group is fluid, and adapts and changes as the rules and resources that enable and constrain the group actions and interactions also change (DeSanctis & Poole, 1994). We thus suggest that AST is suitable to~~

~~explain how the IR process and systems change internal corporate interactions as departments within an organisation utilise technology and resources and convey that information to internal and external stakeholders.~~

~~3. Methodology~~

The IIRC singled out countries such as the UK, France, and Australia as leading adopters of IR (Sweet, 2019). However~~); however~~, IR adoption is voluntary in these countries and they only use some aspects and principles of the IR framework~~ are used~~. South Africa, on the other hand, has fully embraced IR and is widely considered as the world leader in developing and promoting IR (Buitendag *et al.*, 2017; Burke and~~&~~ Clark, 2016; Dupont-Enzer, 2014; IRC SA, 2018; McNally *et al.,* 2017; Rensburg and~~&~~ Botha, 2014; Steenkamp, 2019; Terry, 2017). Mandated in 2010, all companies listed on the Johannesburg Stock Exchange (JSE) must prepare integrated reports on an 'apply and~~or~~ explain' basis. The adoption of IR has led to South African organisations experiencing breakthroughs in understanding how value is created over time, as well as greater collaboration within their teams, more informed decision-making, and positive impacts on stakeholder relations (Adams, 2015b; Ernst and~~&~~ Young, 2016; IRC SA, 2018). Therefore, the subjects in this study are South African organisations, referred to as advanced integrated report preparers.~~ are the focus of this study.~~

To contribute to the IR literature, the following ~~The~~ research question was developed:

> How do advanced integrated report preparers internalise and operationalise material value creation matters? ~~conducted~~

3. Method

3.1 Data collection

According to Cerbone and Maroun (2020), "the materiality determination process is the responsibility of the preparer" (p. 7). Consequently, similar to their approach, the current study only engaged with preparers, deferring how stakeholders understand materiality in the IR context for future research. The primary source for collecting qualitative data from advanced integrated report preparers was through in-depth, semi-structured~~two phases. Firstly, pilot~~ interviews. To obtain knowledge about these preparers' IR experiences and practices, and to refine the interview questions, discussions were held~~conducted~~ with IR consultants and experts in South Africa prior to conducting the study~~to refine the qualitative research instrument and seek guidance about integrated reporting experiences and practices of South African organisations~~.

Following that, semi-structured interviews~~In the second phase, case studies~~ were conducted with six advanced integrated report preparers. These ~~to gain rich information about processes and systems in gathering and communicating information internally and conveying their value creation stories externally in their integrated reports. Six South African~~ organisations were selected from companies included in the Ernst and Young Excellence in Integrated Reporting Awards[2], Chartered Secretaries Southern Africa, and JSE Limited awards[3] with the assistance of an IR specialist partner in one of the Big 4 Auditing firms in South Africa (Table 1). As Table 1 details, the ~~RQ1 and RQ3 were examined through in-depth semi-structured~~ interviews included the key actors identified as being responsible for managing the IR process and drafting the~~and RQ2 via content analysis of the participant companies' 2018~~ integrated report.~~reports.~~

<INSERT TABLE 1 HERE >

~~All interviewees are directly engaged with their organisation's IR practices and preparation of the integrated report.~~ Interviews were conducted between 8 November 2018 and 11 February 2019. Prior to the interviews, participants were provided with an information sheet, consent form, and the questions that would be asked. Confidentiality and the right to withdraw from the research process were guaranteed at any time up until the return of the interview transcript from the interviewee. Each interview lasted approximately 45 minutes. Interviews, with consent from the participants, were conducted on Zoom and recorded, with the exception of one participant who chose to provide answers to the questions in writing. A research assistant transcribed the interview recordings, which were returned to the participants for verification and any corrections made accordingly.

3.2 Data analysis and interpretation

[2] Since 2012, Ernst and Young has ranked the top 100 JSE listed companies, selected based on their market capitalisation as at the 31st of December the previous year. This is referred to as the Ernst and Young Excellence in Integrated Reporting Awards. In the 2018 Awards, these 100 companies accounted for 93% of the market capitalisation of the JSE at 31 December 2017.
[3] See https://www.bizcommunity.com/Article/196/583/184825.html

The aim of the interviews was to gain an understanding of how advanced integrated report preparers: (1) determine which matters substantively affect their value creation, (2) communicate such information to the report contributors, and (3) generate information about their identified material value creation matters. Examples of questions asked during the interviews follow:

- How do you ensure you capture information that focus on your company's value creation, and information that is critical in understanding your value creation model?
- What processes and systems do you have in place to communicate your material issues identified for IR from the board level downwards through to the operational level?
- What systems do you have in place to collect and process material value creation information to enable you to prepare your integrated report?

To ensure identification of all the relevant details~~To minimise misinterpretation and subjectivity~~, both authors read each transcript several times and then open-coded interview transcripts independently to minimise misinterpretation and subjectivity. Both within-case analysis and cross-case patterns were examined to identify patterns, shared iterations and themes, and unique responses (Eisenhardt, 1989). Similarities and differences between participants' views were noted. As suggested by previous studies (Strauss and Corbin, 1990 in Lai *et al.*, 2017), the researchers discussed their independent coding and no substantial differences arose in this process. To ensure accuracy, completeness and consistency of the coding, the lead researcher completed and the support researcher reviewed the coding process~~These were discussed and differences resolved to ensure that emergent themes were not overlooked. This triangulated approach allowed the researchers to develop an IR value creation communication model to explain participants' IR value creation practices~~.

4. Results

4.1 How material value creation matters are determined

All participants said to capture information about matters that substantively affect their value creation, they first determine what matters are material in their respective organisations. P1 uses a bottom-up approach to formulate their material value creation matters. They begin with the end in mind, by defining the outcomes they want to deliver to their stakeholders and then set KPI targets accordingly. On the other hand, four organisations (P3, P4, P5 and P6) use a top-down approach, which involve lengthy discussions between executive management and upper level management. P6 determines material value creation matters by aligning them with their strategic objectives. P3 remarked that cascading their strategy and material matters "*was possibly the largest organisation-wide change that occurred as a result of a more integrated way of approaching business*". P2 uses a more lateral approach where report preparers and contributors collaborate to determine their material matters in creating value.

Various means are used to determine what matters substantively affect their value creation. P1 uses a manual tool, namely a magnetic board, to discuss the material issues that need to be addressed in their integrated report. During these discussions, management and employees at an operational level~~Both authors also conducted independent content analyses of the participants' integrated reports for the 2018 financial year (which are the sampling units). These reports are publicly available for download (in pdf format) on each organisation's website. As Krippendorff (2004, p. 81) notes, "data are always the products of chosen procedures and are always geared toward particular ends." Data is therefore made and not discovered in content analysis (Steenkamp & Northcott, 2007). This study utilises form oriented (objective) content analysis in which the occurrences of information pertaining to value creation are identified (Smith & Taffler, 2000).~~

~~The two principal kinds of units that should be defined, separated, and identified when conducting content analysis are recording and context units (Krippendorff, 2004). The choice of units should always be "dictated by the purpose of an analysis" (Krippendorff, 2004, p. 108). The recording units are the specific segments of content that are distinguished for separate~~

~~description, recording, coding, and classification (Weber, 1990). The text may include pictures, symbols, and other communications and is not restricted to written material (Krippendorff, 2004; Liu & Chen, 2005). Visual images have become an integral part of corporate reporting, as not all information is presented through typographical conventions of narratives (Steenkamp & Northcott, 2007). In this study, the recording units are visual images (such as graphs, figures, charts, tables, and flow diagrams) and narrative presentations (the paragraph). The context units comprise sections of the integrated report.~~

~~4. Findings~~

~~Section 4.1 presents the processes and systems used to gather and communicate value creation information internally. Section 4.2 presents value creation information communicated externally in integrated reports. Section 4.3 explores challenges in the implementation of IR. Drawing on these findings, Section 4.4 proposes an IR value creation communication model.~~

~~4.1 Processes and systems to collate and communicate value creation internally~~

~~This section presents the findings of RQ1: financial and non-financial data capture systems (Section 4.1.1), the role of the board and its sub-committees (Section 4.1.2), capturing matters that substantively affect value creation (Section 4.1.3), and internal communication activities (Section 4.1.4).~~

~~4.1.1 Financial and non-financial data capture systems~~ evaluate the material matters of the previous year, whether each has improved or deteriorated, and if there are new matters that should be considered. This element of 'play' helps stimulate ideas and encourages each person to think individually.

P2 uses a business performance scorecard and obtains audit assurance on key sustainability information relating to their value creation, and this provides them with confidence that they are capturing the information correctly. P4 uses benchmarking gap analysis against peer companies so that they do not overlook information that stakeholders might feel is important. Prior to implementing IR, P6 already operated their business in an integrated way and identified material matters accordingly. These matters were already inculcated through the culture of the management and the business. Since these matters were static when they implemented IR, they only reorganised their existing information to show the value they create to various stakeholders. In some organisations, the audit committee discusses the material issues to be included in the report, but ultimately, it is executive management that drives the detail of the integrated report and the process.

Participants unanimously agreed that determining material matters as the starting point for IR processes, has many advantages. "*The process of preparing our integrated report offers an opportunity to step back and interrogate how we create value*" (P5). P6 stated that determining material matters first helped them simplify the reporting process and structure the integrated report. Many now use their respective material matters to drive their business.

4.2 How material value creation matters are communicated

P1 described their internal communications as a bottom-up approach. Since material matters are determined by operational level management and employees, they communicate these matters "up" to the executive management and the board. They then integrate these matters into performance management criteria using KPIs, which serve as the trigger for bonuses. This collaborative process helped employees to understand their own KPI targets in the context of materiality and gave them a greater sense of ownership in how material value creation value matters are determined. The four organisations, (P3, P4, P5, and P6) who use a top-down approach to determine material matters also use a top-down approach to communicate these matters to report contributors at lower levels of the organisation. P2 did not adopt either a top-down or bottom-up approach to determine and communicate these matters through the organisation. Instead, the report preparer would initiate informal face-to-face meetings with various report contributors at the regional leadership level such as discipline heads and managers. During these meetings, they discussed and collaborated which material value creation matters to include in the integrated report. The report preparer would then write up the draft integrated report and it was returned to these various contributors for proofreading and fact verification. Their collaboration process is then extended by sending the completed integrated report to the executive committee for final approval before sign off by the audit committee.

Participants pointed out some initial "teething problems" in getting collaboration from participants in their respective organisations. P2 found that their engineers were *"very technical people, they are no nonsense, salt of the earth"*, but it was initially difficult to get them to understand what was required from them and hence to get them on board. *"They felt very much like this (integrated reporting) was not their job. Their job was to extract product from the ground".* P2 experienced that they had to communicate the purpose of IR in order to get contributors to understand what was required from them and to get their collaboration. Interestingly, at the time of the interview, P2 said they were still experiencing difficulty to get full collaboration from the finance department, as this department has an almost singular focus on financial numbers: *"Our CFO and his department, they are still a bit of an issue surprisingly. The engineers have adapted very well, but the accountants still ask questions [like] "Why do we* *have to spend so much time reporting on HIV/AIDS numbers in our business? Why do we give so much attention to it?"* Further, P2 also found it difficult to tell a cohesive value creation story through a singular lens due to the ineffective flow of information from regional offices who would provide data in different ways, with *"different interpretations, different definitions and different ways of capturing it"* (P2). They dealt with this issue by implementing SAP systems to capture uniform data from regional offices. Although P1 described their internal communication as a bottom-up approach, they mentioned that initially, it was a steep learning curve to educate report contributors about what was required for preparation of the integrated report.

A few participants pointed out that their internal communication of material value creation matters extends beyond the report preparer and contributor relationship to include communication to the remainder of the organisation's workforce. This was done through a variety of means that included: internal road shows (P4), social media platforms, such as Twitter, Facebook and Instagram (P2) and targeted internal communications specific to the relevant audience (P3). Interestingly, P3 explained that not all material matters need to be communicated to all employees and that they only communicate what is relevant to each of the report contributors: "*We are unlikely to communicate the group's risk register to our operational staff*" (P3). The CEO of P4 presented material value creation matters at internal roadshows attended by lower levels of management who would communicate the information to the rest of the organisation through operational workshops.

Some participants (P2, P4, and P5) also use the integrated report itself as a means to communicate material value creation matters to employees. P4 referred to the integrated report as a "go to" document or blueprint that highlighted material issues, and which both internal and external users were referred to. In P5, the CEO used the integrated report as the basis for addressing their annual management conference where material value creation matters were reiterated to senior level management. This information was then taken back to the rest of the workforce. P5's report preparer observed that the benefits of using the integrated report as a means of internal communication to "tell your story", *"has been worth it, even without any external benefit that integrated reporting might offer".*

4.3 Systems to collect and process information about material value creation matters

Participants unanimously agreed that collecting information for IR strengthened processes and systems already in place. A variety of systems to collect financial and nonfinancial information are used to generate a huge amount of information for IR (Table 2).

~~Organisation suggested that they~~ <INSERT TABLE 2 HERE >

No organisation made anyn~~no~~ major investments into new technology or new systems~~. Company F said they did not have to make any significant changes in their processes and systems~~ when they implemented IR. P3~~or how they think and do business because these were already integrated. Company C~~ noted: "*we don't view our integrated reporting as an isolated process, so have not specifically developed information systems solely for our IR*". ~~They suggested, however, that they may introduce new or expand existing processes and systems, as they further embed integrated thinking throughout the organisation. For instance: "*we are continuously rolling out the installation of smart electricity and water meters at our buildings. This allows us to better manage the consumption and billing of water and electricity, and to also identify opportunities to reduce consumption. This in turn informs our environmental sustainability planning and strategy and also provides valuable insights and information for our integrated reporting*" (Company C).~~

~~A variety of automated financial and non-financial systems are in place to collect a huge amount of information for IR (Table 2).~~

~~<INSERT TABLE 2 HERE>~~

P2 made subtle changes to their already existing systems by employing

~~Company B also has~~ programmers to write code which feeds straight into existing SAP software, for example, to automate their water measurement. They noted that this takes a lot of effort, time, and money. P6~~Company F~~ highlighted that their systems adopt international best practice because their organisation is ISO 14000 and ISO 19000 compliant. Two participants made reference to having~~Further, because their industry is heavily regulated in terms of safety and environmental issues, they ensure information is collected from~~ a SharePoint. P4 said~~regulatory and an integrated reporting perspective. Company D added~~ that they have a SharePoint although it is not harmonised within all regions yet. P1 acknowledged that ~~Company A said~~ they would like to have a SharePoint in the future, as this will enable~~enabling~~ source owners to record information as it happens, making ~~which will make~~ the system almost instantaneous.

With the exception of one, all participants have already collected nonfinancial information (referred to as Global Reporting Initiative (GRI) or sustainability information) for the board, social and ethics committee, and the audit and risk committee. P5 did not collect nonfinancial information prior to implementing IR. Consequently, they had to make significant changes in the types of information they collect "*because we did not have sustainability reports, remuneration reports and all the other green reporting and such things in place*" (P5). They stated that this "*was a blessing in disguise because what I have seen over time is that companies that had all those reports have struggled to tell their story*". P1 observed that the actual implementation of IR is not straightforward, recommending the investment of time and effort to help report contributors provide information in a concise, and integrated manner.

P2 described their processes to generate information for their integrated report as follows: they use~~Participants referred to non-financial information presented in the integrated report as Global Reporting Initiative (GRI) or sustainability information. With the exception of one, all~~

~~participants typically collect such information for the Board in addition to the Social and Ethics Committee and Audit and Risk Committee prior to implementing IR. Company B for example, uses~~ responsibility centres to collect data in a specific format, at a specific time, using specific measurements and inputs. To ensure authenticity, an executive from each responsibility centre signs off on the information submitted. A draft integrated report is sent to them for proofreading and then to the entire executive team for sign-off. Thereafter, the audit committee~~Audit Committee~~ signs off on behalf of the board~~Board~~. The board~~Board~~ has two weeks to read through the integrated report and suggest changes. ~~Company E did not collect non-financial information prior to implementing IR. Consequently, they had to make significant changes in the types of information they collect "*because we did not have sustainability reports, remuneration reports and all the other green reporting and such things in place*" (Company E). They stated that this "*was a blessing in disguise because what I have seen over time is that companies that had all those reports have struggled to tell their story*".~~

Some participants pointed out that in the early days after adopting IR, when processing information to prepare the integrated report, it was challenging to connect information coming from a large number of report contributors, and to decide what information to select. P1 observed that report contributors often submitted lengthy reports. *"You start editing and bring it down to a bare minimum… and the first response is 'You made me write this long report and you're only reflecting this?' It took a little bit of a while but they then started to understand that they belong to the bigger process and we needed to show how and when these narratives needed to intertwine."* To deal with these challenges, participants sought to educate report contributors about the connectivity between departments. P4 implemented a quarterly reporting system from their departments, and the information is used to prepare the quarterly Board report.

5. Discussion and implications

5.1 How material value creation matters are captured

On the basis of our findings, the board~~*4.1.2 The role of the board and its sub-committees*~~

~~Paragraph 2.22 of the IR Framework states that those charged with governance are responsible for creating an appropriate oversight structure to support the ability of the organisation to create value (IIRC, 2013). Most respondents indicated that the Board~~ is the ultimate custodian of reporting and plays an oversight and advisory governance role in the IR process. This is in accordance with the perspective of Eccles *et al*., (2014) who proposed the ultimate responsibility to determine materiality lies with the board in order to fulfil its fiduciary responsibility. Extending prior research stating that ultimately the board should oversee the materiality determination process (Cerbone and Maroun, 2020; Eccles *et al.,* 2014; Edgley *et al.,* 2015), the current study found that it is executive management that drives the IR process ultimately. Additionally, the findings emphasise that although the integrated report typically goes to the audit committee before the board approves it~~In some organisations, the Board approves the integrated report, while in others, the Audit Committee does so on behalf of the Board. Regardless, the integrated report typically goes to the Audit Committee before the Board approves it. Some variation in the role of the Audit Committee was observed. In some organisations, the Audit Committee discusses the material issues to be included in the report while in others~~, their role is largely around asking questions related to completeness and accuracy of telling the organisation's value creation story. ~~Ultimately, it is executive management that drives IR regarding the detail of the report and the process.~~

The results of our study contribute theoretically in that they agree with the findings of prior research and expand our knowledge related to materiality determination. Similar to Lai *et al.,* (2017), advanced integrated report preparers claimed that their strategy guides them when they determine IR materiality content; alike Stubbs and Higgins (2014), IR addresses "communication challenges associated with the company's strategy" (p. 1103); and Edgley *et al.,* (2015) that materiality aligns with strategy. The results also substantiate the result of Edgley *et al.,* (2015) that "the focus of materiality has shifted away from the report, towards improving corporate performance" (p. 13). One practical contribution of the current study is the following guidance related to improving performance: "*look at the information your organisation already utilises and define the important KPIs aligned to the strategy you have. If it doesn't align to your strategy, then stop doing it and concentrate on the things that matter*" (P5). We found that many organisations now use matters that materially affect their value creation to drive their businesses. The findings from this analysis make ~~*4.1.3 Capturing matters that substantively affect value creation*~~

~~The IR Framework paragraph 3.17 states that~~ an empirical contribution by extending the limited knowledge ~~integrated report should disclose information~~ about *how* participants determine their material matters. Advanced integrated report preparers use a variety of ways such as a magnetic board, business performance scorecards, audit assurance, benchmarking gap analysis against peer companies, and discussions of the audit committee, to determine their material value creation matters.

5.2 How material value creation ~~that substantively affect the organisation's ability to create value (IIRC, 2013). All participants said they first determine what~~ *matters are communicated*

This study found the organisation (P1) who adopted a "bottom-up" approach in their internal communication reported a higher level of collaboration than those who adopted a top-down approach. Similar to Rosendahl *et al's.,* (2014) observations, it appears that a bottom-up flow of information secured employee ownership, resulting in better collaboration and benefitting top managers. An interesting observation with this finding is that both P1 and the organisation in Rosendahl's case study are state-owned entities. This raises the question as to whether organisations with greater government ownership have greater flexibility in adopting more collaborative methods of engagement as experienced with these bottom-up approaches.

Dissimilar to Lai *el al's.,* (2017) assertion that IR construction was "never conceived as a top-down ~~material in their respective organisations: "*the*~~ process but rather~~*of preparing our integrated report offers*~~ an interactive relationship among the board and managers to foster relevant choices" (p. 546), the current study found that the top-down approach prevailed as the most common method for communicating information about material value creation matters internally.

While Mio *et al.,* (2016) explored the use of an *internal* integrated report to communicate with employees, our findings suggest that media produced for an external audience, such as the integrated report and social media are also used to communicate material matters internally, particularly to lower level employees throughout the organisation. Girella *et al.,* (2019) also observed the use of the integrated report to communicate value creation internally in the context of SMEs. Welch and Jackson (2007) acknowledge that external communication mediums are appropriate in circumstances where message consistency is important and where senior managers are unable to meet and discuss matters with all employees. Our study adds to this limited body of literature on the use of the integrated report as an internal communication tool. Further, while Lodhia and Stone (2017) examined social media from the external communications perspective, ~~*opportunity to step back and interrogate how*~~ we are not aware of prior research that has considered its role as a means to communicate material value creation matters to an internal audience.

The current study substantiates prior studies' findings regarding the people who contribute information in the internal communication process. Firstly, McNally *et al.,* (2017) found a disconnect in communication between reporting teams. However, this was the experience of only one ~~*create value*" (Company E). This enables~~ participant in the current study who found that data was collected in diverse ways from regional offices. Our study extends the literature by providing insight as to how this preparer (P2) dealt with this issue. Secondly, prior scholars observed a lack of engagement from the finance people in IR (McNally *et al.,* 2017, Stubbs and Higgins, 2014). Again, our study found that only one participant (P2)~~organisations to redefine their group strategy, and many now use these material matters to drive their business. Company F~~ stated that this was an ongoing challenge for~~approach helped~~ them.

Chaidali and Jones (2017) raised concerns about both ~~simplify~~ the length of ~~reporting process and structure the~~ integrated reports and that a report developed by one person would "impair the value of the document and prevent readers from engaging~~, in addition to ensuring that their strategic objectives are aligned~~ with different voices and sections" (p. 15). Some participants in the current study also had similar experiences. To deal with this, P1 said: *"[IR] has*~~their material issues. Cascading their strategy and material matters~~ *enhanced our capabilities to tell our stories in a much more comprehensive way and not be long-winded about it"*. Other participants expended time and effort~~Company C's relational approach~~ to guide report contributors to think in an integrated way, so that they can provide information in a concise, material, and integrated manner. Further, to ensure a uniform tone and language throughout the integrated report, three participants said they now outsource the writing of the report to external writers. This varies from using a copywriter, editor, or publication house and appointing knowledge experts such as a specialist IR team at one of the Big 4 firms. P1 said: "*We use an editor to ensure that when we develop our reports, it is one voice coming through our report, not a HR narrative or other business unit narrative".*

Overall, the findings in this section make an empirical contribution by extending the limited knowledge of *how* material matters are internally communicated within the organisation. Contrary to the observations of Lai *et al.,* (2017) we observe that managers are generally satisfied with their effectiveness in internal communication, but most indicated a desire to improve the conciseness of their reports and faced challenges in communicating this to report contributors.

5.3 How information about material value creation matters are collected and processed

The findings of the study provide insight about De Villiers *et al's*., (2016) point of view that there is much to learn regarding the internal processes and systems implemented to manage relevant information for IR. Contrary to prior research (Adams, 2015a; Hampton, 2012; Steyn, 2014) suggestions, participants stated that they did not have to make significant investments in new accounting and management processes to collect information about material value creation matters. In line with Steyn (2014), the study found that even though subtle, changes to the already existing systems were costly and time-consuming.

It also provides insight into the practical implementation of nonfinancial accounting and reporting (Adams, 2017). The majority of advanced integrated report preparers already collected nonfinancial information for GRI and Sustainability Reporting about matters that affect their value creation prior to implementing IR and simply had to reorganise how they construct the information for IR purposes. The challenge was how to connect the information collected from report contributors and which information to include in the integrated reports. The findings extend prior knowledge providing empirical evidence that collecting information for IR strengthened advanced integrated report preparers' processes and systems.

Other theoretical contributions are that the findings from the study support Burke and Clark's (2016) view that processes for gathering data for disclosure in the integrated report are not standardised, but oppose their opinion that such processes are not well developed, and also oppose prior scholars perspectives that new accounting and management processes are required (see for example Adams, 2015a; Hampton, 2012; Steyn, 2014). The findings show that a variety of systems are used to collect information about participants' material value creation matters but many of these were already in place and well developed before implementing IR.

As noted by Adams (2017), the study explored changes to internal systems and processes upon adoption of IR. On the basis of our findings, cascading their strategy and material matters~~and~~ "*was possibly the largest organisation-wide change that occurred as a result of a more integrated way of approaching business*" (P3). Other changes were insignificant such as, for example, reorganising information to show the value creation to various stakeholders. A practical contribution is that participants suggested to have a SharePoint, as that will make the system almost instantaneous. ~~". Company A noted that they begin with the end in mind, by defining the outcomes they want to deliver to their stakeholders and then set KPI targets accordingly.~~

~~Participants use a variety of means to determine what matters substantively affect their organisation's ability to create value. Company A uses a manual tool, a magnetic board, to discuss the material issues that need to be addressed in their integrated report. During these discussions, executives evaluate the material matters of the previous year, whether each has improved or deteriorated, and if there are new matters that should be considered. This element of 'play' helps stimulate ideas and encourages each person to think individually.~~

Overall, interviewees~~Company B uses a business performance scorecard and obtains audit assurance on key sustainability information relating to their value creation, and this provides them with confidence that they are capturing the information correctly. Company D uses benchmarking gap analysis against peer companies so that they do not overlook information that stakeholders might feel is important. Company F utilises information about their material issues prior to implementing IR, focusing on reorganising existing information to show the value they create to various stakeholders.~~

~~*4.1.4 Internal communication activities*~~

~~When communicating from the board level down to the operational level, some organisations have a committee for each of the following issues: strategic objectives, material issues, top risk,~~

~~and key performance. Participants communicate these issues to the entire workforce through a variety of ways such as operational workshops, internal road shows, targeted internal communications, and integrating these matters into performance management criteria using KPIs. Company A specifically mentioned that their organisation's Board keeps employees accountable to deliver on the set of KPIs (which serve as the trigger for bonuses). Although participant organisations and Boards support IR and sign off their integrated reports, the executive management drives IR. Company D pointed out that they communicate this information in the most concise and simple manner so that employees can understand it. Two interviewees noted that such communication is largely the result of the culture of the management and the business; high level strategic issues are typically only discussed at executive and board committee workshops.~~

~~In some organisations, managers use the integrated report on a quarterly basis to communicate information about the value creation process to their employees. Company E distributes a copy of the integrated report to senior management to ensure that they understand the risks, opportunities, strategy, and strategic objectives. Further, their Chief Executive Officer addresses the seven pillars presented in their integrated report and their annual management conference. An interesting finding is that Company A stated they have a bottom-up approach, in which management and employees on an operational level formulate and put forward 'their story' as it relates to materiality, to their stakeholders, to the business environment as well as the risk associated with their strategic objectives. This information is then presented to the Board and various subcommittees.~~

~~*4.2 Communication of value creation externally in integrated reports*~~

~~This section presents the following findings of RQ2: *where* (Section 4.2.1), *how* (Section 4.2.2), and *to whom* (Section 4.2.3), analysing the content of participants' integrated reports. To minimise the risk of identifying interviewees, the integrated reports are randomly referred to as Report 1, 2, and so on in this discussion.~~

~~*4.2.1 Where in integrated reports are value creation communicated?*~~

~~During the pilot study, interviewees observed that integrated report preparers convey the most important information in the first 20 pages of their reports. Therefore, to ascertain the importance that participants place on communicating their value creation stories, we investigated *where* in the integrated report they do so. The study found that participants told their value creation stories in the first 20 pages of their reports, starting anywhere from page 6 up to page 11, typically after providing information about how to read their integrated report and an overview of the company and its strategy. This indicates that advanced integrated report preparers regard their value creation stories as important and strategically communicate this in a prominent position in their reports.~~

~~*4.2.2 How is value creation communicated in integrated reports?*~~

~~We also analyse *how* they tell their value creation stories. All participants use the IR Framework value creation process flow diagram to tell their value creation story. Five of the participants referred to this flow diagram as their Business Model while the other referred to it as their Value Creation Model. Although not all organisations use the terminology of the IR Framework (namely 'input', 'activities', 'outcome' and 'output'), the majority do or use synonymous concepts or words. Diagrams 1 and 2 are examples of two participants' flow diagrams to tell their value creation stories.~~

~~<INSERT DIAGRAM 1 HERE>~~

~~<INSERT DIAGRAM 2 HERE>~~

~~Evident from these two flow diagrams is the unique illustrations, indicating the uniqueness of each organisation's value creation. Both reports use the terms input, output, and activities, but in different ways[4]. Report 1 illustrates the six capitals as inputs whereas Report 2 uses the six capitals for inputs, outputs, and outcomes.~~

~~From participants' flow diagrams, it is clear that companies use different measures to illustrate the impact of the organisation's value creation on their six capitals. For example, Report 1 describes the impact on the six capitals in the inputs in both financial values and in narrative terms whereas Report 2 only describes the impact on inputs in narrative terms. Further, Report 2 also illustrates the impacts on outputs and outcomes of the six capitals in two quantitative measures (i.e. financial and non-financial) and a qualitative measure (narratives). Table 3 presents a summary of the measures that participants use to illustrate the impact of the organisation's value creation on their six capitals.~~

~~<INSERT TABLE 3 HERE>~~

~~Table 3 demonstrates that three measures are used to show the impact of value creation on the six capitals: financial, non-financial, and qualitative measures, and that each company uses different measures to convey their message. Firms primarily use qualitative narrative terms (35 incidences), followed by non-financial (18 incidences), and financial measures (14 incidences).~~

~~[4] Participants' use of terms inputs, activities, outputs, and outcomes in their business models are in line with those terms as used in the IR Framework.~~

~~Only one of the participants utilise outputs related to the six capitals in their business model and hence this is omitted from Table 3.~~

~~One company[5] in particular devoted a significant amount of space in their integrated report (Report 3) to communicate their value creation story. They termed the front section (pp. 9-46) of their integrated report 'Essential Reads' and devoted eight of these pages to value creation. This demonstrates the importance they place on their value creation story. They first provide a one-page information graphic named 'Delivering our value creation indicators', as presented in Diagram 3.~~

~~<INSERT DIAGRAM 3 HERE>~~

~~As evident in Diagram 3, value creation indicators are shown in financial and non-financial measures, and further designate whether the outcome of each indicator is positive, negative or neutral for each stakeholder. The company also illustrates their value creation story to various stakeholders by presenting stakeholders' identified goals and other useful information pertaining to each stakeholder group (see Diagram 4 for an illustrative extract).~~

~~<INSERT DIAGRAM 4 HERE>~~

~~In addition, this company designates a Value Creation section in their integrated report (pp. 65-106), where they provide information about the value they create for each of the six capitals. Interestingly, this is the only report that specifically details what value means to the company. They described value as follows in their integrated report:~~

~~[5] This company has ranked in the top 10 with honors category of the EY Excellence in Integrated Reporting Awards for the last few years.~~

~~*"For us, value encompasses more than profitability. Our approach is centred around people and this is communicated through our tagline: 'We're not [their core business]. We're people'. Relationships are central to who we are and what we want to achieve. Value for [our company] therefore, means to achieve our stakeholders' goals which are measured through tangible, as well as intangible indications"* (Report 3).~~

~~During the interviews, participants alluded to the use of *iconography* in their integrated reports as a means to better connect with their report users. Consequently, we investigated the use of iconography to communicate their value creation stories. Diagrams 5 and 6 are examples of iconography used in Reports 3 and 1.~~

~~<INSERT DIAGRAM 5 HERE>~~

~~<INSERT DIAGRAM 6 HERE>~~

~~As shown in these two diagrams, companies use unique icons, which are largely self-explanatory. It is believed that the use of iconography enhances the communication of organisations' value creation stories and are hence recommended as a means to enhance the readability of integrated reports.~~

~~*4.2.3 Stakeholders to whom value creation is communicated*~~

~~Participants communicate their value creation to numerous stakeholders. A summary of the broad and generic categories of these stakeholders is presented in Table 4.~~

~~<INSERT TABLE 4 HERE>~~

~~It should be pointed out that only one participant mentioned "sustaining and growing the business" among their stakeholders. It therefore appears that participants implicitly imply that value is created for the organisation itself. Communicating value creation information relevant to~~

~~numerous stakeholders is inferred to enable them to make informed assessments about the organisation's ability to create value for itself as well as to numerous stakeholders.~~

~~*4.3 Challenges in implementing Integrated Reporting*~~

~~The purpose of the third research question is to provide guidance on challenges regarding implementation of IR in order to enhance value creation communication internally and externally. This section discusses key challenges (Section 4.3.1), how to address them (Section 4.3.2), and guidance for future adopters of IR (Section 4.3.3).~~

~~*4.3.1 Key challenges*~~

~~The majority of participants note that a significant challenge relates to people contributing information to prepare the integrated report, referred to as 'Report contributor'. First, it is difficult to tell a story through a singular lens with information that came from a large number of report contributors, each offering their own perspective. One company stated that their biggest challenge was to harmonise the dynamic reporting of the connectivity between different departments. This is because report contributors do not reflect the connectivity in the information they contribute: "*although the harmonisation is very challenging, it is very important and brings a lot of benefits to the business because every year people from different departments learn from the process. They learn about other activities, how others report on it, how they can benefit from other departments and vice versa. In essence, the reporting drives our business*" (Company D).~~

~~Added to the challenge of receiving a large amount of information from various report contributors is the challenge of collating and completing the integrated report within time constraints. A second challenge was to get report contributors to understand what IR is about and what is required from them. Company B said that their "*engineers are not generalists, they are*~~

~~*conservative, no nonsense, salt of the earth people, but very technical people".* Although these engineers adapted very well, this organisation also faces the ongoing challenge of shifting the finance department's almost singular focus on the financial numbers in order to collate information about non-financial issues.~~

~~Additional challenges relate to consistency in classifying, quantifying, measuring, and reporting of information as well as reliability of the non-financial information due to the variety of means available for capturing information in addition to different definitions and interpretations (Company B). Company A experienced a steep learning curve to educate report contributors about preparation of the integrated report; initially, contributors prepared very lengthy reports. However, they remarked that IR was very beneficial to them and "*definitely one of those things that has enhanced our value. It has enhanced our capabilities to tell our stories in a much more comprehensive way and not be long-winded about it*" (Company A).~~

~~*4.3.2 Addressing key challenges*~~

~~In order to address time constraints, participants recommend sufficient planning and organisation by communicating to report contributors within the organisation about the requirements and putting systems in place to ensure that the data is available and the collection of data is streamlined. To reduce the length of the reports, organisations indicate a focus on improving their storytelling and the use of imagery and iconography to better connect with their report users. Company B experienced challenges related to the reliability and uniform presentation of non-financial information and put systems in place aligned with their SAP systems.~~

~~To address the challenge arising from the large number of report contributors, participants sought to educate people about the connectivity between departments. Company D implemented a quarterly reporting system from their departments, and the information is used to prepare the~~

~~quarterly Board report. Company B experienced challenges with the attitude of key managers and operational staff and resolved the issue by getting the CEO on board and letting them drive the IR process.~~

~~Participants are using a variety of alternatives to attend to these challenges. Three participants said they now outsource the writing of the report to external writers so as to ensure uniform tone and language throughout the integrated report. Company F employs a copywriter who holds interviews with the CEO, CFO and all other content providers. Company E uses knowledge experts such as a specialist IR team at one of the Big 4 firms. One advantage of using these specialists is that they provide a gap analysis highlighting areas that are not best practice. Company A partners with advisory services and also a publication house. To ensure the report is written in one voice, they also appointed an editor. However, not all interviewees believe that engaging professional writers is a good idea. One interviewee said "*it is good to use specialists but I don't think it is good to use a report writer. You can see a mile off when a report has been written by a journalist, or somebody has been paid to write it, because it is sometimes disjointed, the strategy doesn't flow*" (Company E).~~

~~Some interviewees acknowledged that they still face ongoing challenges and solutions to some issues are still a work in progress. One such issue is gaining a clear understanding of their broader outcomes in terms of the six capitals and another is measuring their organisation's effects on the six capitals.~~

~~*4.3.3 Guidance for future adopters of IR*~~

~~Most companies note that achieving buy-in from the Board and Management is essential so that integration becomes part of the business enabling it to be managed in an integrated way. One participant also suggested that the integrated report should be aligned with the Board Committee~~

~~reporting. Company A observed that the actual implementation of IR is not straightforward, recommending the investment of time and effort to help report contributors provide information in a concise, material, and integrated manner and to treat IR as a special project in the beginning stage of the IR journey.~~

~~Interviewees were unanimous about soliciting external help, particularly that of IR specialists. They felt that specialists understood the IR Framework and could provide a disclosure checklist to help the company produce a more relevant report. Company E solicited help from a specialist and subsequently reduced total report preparation time from 3 - 4 months down to 3 - 4 weeks. They observed that it is challenging to stay relevant: "*I don't have the time to keep up to speed with all the developments. So it really helps to have specialists to get involved, to guide the way forward*" (Company E). Company A notes a specialist can assist organisations to learn about the outcomes of the integrated report, the impact it can have on how they run their business, and also impacts how people perceive the organisation from a reputational perspective.~~

~~A few felt strongly about using experts, especially when preparing the first integrated report. One nine-year veteran noted: "*[IR] is so technical these days, especially for a listed firm, I don't think you can afford not to take external advice. You really need a specialist just to assist and to give you the right guidance*" (Company F). Company B advised that although the IIRC website provides a huge body of work, thought leadership, and good examples of integrated reports, organisations should seek experts that are well positioned to educate Management and the Board on integrated reporting and thinking. One commented that they "*were specifically looking for somebody that has strong advisory skills in terms of taking us another notch higher, in getting our reporting better*" (Company A). However, one participant disagreed on the use of report writers as they could lead to a disjointed report with a strategy that didn't flow. The report should~~

~~be written by someone who "*sit[s] in all the strategic and high level operational meetings*", as they "*know exactly what's going on in the business and that's really the only way to get a quality report*" (Company E).~~

~~One participant pointed out the need for organisations to understand their risks and opportunities in order to devise a strategy accordingly "*look at the information your organisation already utilises and define the important KPIs aligned to the strategy you have, If it doesn't align to your strategy, then stop doing it and concentrate on the things that matter*". (Company E).~~

~~Participants recommended early implementation of IR: "*we did Integrated Reporting before we did effective Integrated Management and Integrated Thinking in the company. Now our report accurately reflects the way our company is managed*" (Company B). Interviewees~~ were encouraging about implementing IR stating: *"know that it's a challenge for everyone", "take little steps, don't try to do it all at once", "the first report is time consuming", "get an expert, the first time around, don't do it on your own", "be humble enough to ask a professional to start with you", "tell an objective story",* and *"tell it in such a way that a reader would say: 'I understand this company' after having read your integrated report"*. One interviewee even noted that if they could choose, they would stop doing all IFRS reporting and would only do Integrated Reporting (P5). ~~Reports (Company E).~~

6. Conclusion, limitations and future research

The paper demonstrates that advanced integrated report preparers have diverse practices to internalise and operationalise material ~~*4.4 Proposed integrated reporting*~~ value creation matters. A variety of means are used to determine which matters substantively affect their ~~*communication model*~~

~~While integrated reporting is primarily seen as a method for communicating~~ value creation, to communicate these matters through ~~information to external users, interviewees repetitively attested to internal reflection, interaction between group members, and transformative changes across~~ the organisation~~, as they sought to compose and tell their value creation story. This intertwining resulted in improved decision-making, which ultimately benefited both external~~

~~stakeholders~~ and ~~management. Adopting Poole's (2000) Adaptive Structuration Theory (AST), the findings of this study are used~~ to generate~~develop an Integrated Reporting Value Creation Communication Model, illustrated in Figure 1.~~

~~<<INSERT FIGURE 1>>~~

~~Figure 1 illustrates those internal inputs and activities that contribute to the IR value creation process. The intertwining between these and integrated thinking flows to the output, which is the integrated reports. The ultimate outcome of the IR value creation communication process is that it enables stakeholders and management to make informed decisions. This integrated thinking and reporting of participants' value creation communication constitutes an organic and evolutionary process that leads to improved organisational efficiency and mostly positive changes in how participants interact with each other across the organisation.~~

~~*5. Summary*~~

~~All participants firstly determine what comprises an organisation's material matters. This simplifies the reporting process and structuring of the integrated report. It also allows them to reflect on how they create value. They use a variety of means (such as a magnetic board, business performance scorecard, obtaining audit assurance on key sustainability information, and benchmarking gap analysis) to determine what matters substantively affect their organisation's ability to create value.~~

~~Participants unanimously agreed that collecting information for IR strengthened their processes and systems. A variety of existing systems were in place to collect~~ information about ~~their value creation processes. The majority of organisations already collected non-financial information for GRI and Sustainability Reporting and simply had to reorganise how they construct the information for IR purposes.~~

~~In terms of oversight structure, the Board is the ultimate custodian and plays an advisory governance role in the IR process. Participants employ a variety of means to communicate their strategic objectives, material issues, top risk, and key performance areas from the board level to the entire workforce. In some organisations, managers use the integrated report on a quarterly basis to communicate information about the value creation process to their employees.~~

~~The key challenge identified by companies when implementing IR relates to the contributors to the integrated report. They found it difficult to tell a story through a singular lens with information that came from a large number of contributors as well as from a variety of departmental sources, each offering their own perspective. They addressed this challenge by educating people about the connectivity between departments. To ensure a uniform tone and language throughout the integrated report, three participants said they now outsource the writing of the report to external writers. This varies from using a copywriter, editor, or publication house and appointing knowledge experts such as a specialist IR team at one of the Big 4 firms.~~these matters for conveying

~~Interviewees offered the following guidance:~~

- ~~Get buy-in from the Board and Management so that integration becomes part of the business enabling it to be managed in an integrated way. Preferably, also align the integrated report with the Board Committee reporting. It is imperative that IR is led by the decision-makers.~~
- ~~Implement IR early and treat it as a special project, especially initially, as the actual implementation of IR is not straightforward. Expend time and effort to guide report contributors to think in an integrated way, so that they can provide information in a concise, material, and integrated manner.~~

- ~~Solicit external help, including IR specialists, especially for writing the first integrated report.~~

~~Content analysis revealed that it is now standard practice for integrated report preparers in South Africa to present the most important information in the first 20 pages of their integrated reports. All participants communicate their value creation through the flow diagram provided in the IR Framework. Five of the participants referred to this flow diagram as their Business Model while the other referred to it as their Value Creation Model. Three measures are used to show the impact of value creation on the six capitals: financial, non-financial, and qualitative measures. Qualitative narrative terms are the most prominent (35 incidences), followed by non-financial (18 incidences), and financial measures (14 incidences). Further, participants communicate value creation to various stakeholders beyond financial capital providers. All participants use iconography in communicating~~ their value creation stories in the integrated report.~~and throughout their integrated reports in order to better connect with their report users.~~

~~*6. Conclusion*~~

~~The paper demonstrates that although implementing IR is challenging, these challenges can be overcome. Further, it shows that a variety of processes and systems are used to collect and communicate value creation information internally to enable organisations to tell their value creation stories in the integrated reports. All participants tell their value creation stories early in the integrated report, through their business model, in quantitative and qualitative terms. The majority present information about creating value from all six capitals, and they use financial and non-financial measures as well as narrative terms to communicate their value creation stories. Advanced integrated report preparers present information about their value creation to a variety of stakeholders, not only to providers of financial capital. The findings show that organisations create value in unique ways, and consequently tell their value creation stories in a variety of ways in their integrated reports.~~ This suggests that a one-size-fits-all approach to manage material~~communicating~~ value creation matters~~internally~~ and information in IR~~externally~~ is not practical. ~~The advanced integrated report preparers' experiences presented in this paper will be useful to other organisations in tailoring their value creation processes and systems to their own circumstances, reporting needs, and stakeholders. Using AST, this paper proposes an Integrated Reporting Value Creation Communication Model, illustrating the reciprocal intertwining between integrated thinking and reporting.~~

This study has~~is not without~~ limitations that also provide avenues for future research.~~.~~ The researchers acknowledge that the results are based on a relatively small sample size from~~may be perceived as~~ a single jurisdiction~~limitation~~. However, as in-depth interviews~~case studies~~ were undertaken, rich data was collected from ~~. Another potential limitation is that the research was conducted in one country only (South Africa) and the results may not be applicable in other contexts (geographically or internationally). However, since~~ South African organisations who have a wealth of practices and experience as IR was already implemented ~~IR~~ in 2010~~, their practices and experiences provide valuable practical insights~~. Further, although the findings do not necessarily represent the IR practices of all South African organisations, they serve as a useful point of reference for future research, including for smaller listed companies, unlisted entities or public sector institutions. It is recommended that future research could test the issues investigated in the current study with a larger sample size, in countries with corporate governance systems different to South Africa, and where IR is voluntary.

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Table 1: Details of participant organisations

Participant organisation~~Company~~	GICS Sector	Industry	Interviewee position	~~Date of report~~
P1~~Company A~~	Industrials	Aviation and Aerospace, Airport Management	Senior-Specialist Corporate Strategy	~~31 March 2018~~
P2~~Company B~~	Materials	Mining	Vice-President Corporate Affairs	~~31 December 2018~~
P3~~Company C~~	Real Estate	Real Estate Investment Trusts	Financial Director	~~31 August 2018~~
P4~~Company D~~	Materials	Mining	Manager Investor Relations	~~31 December 2018~~
P5~~Company E~~	Consumer Services	Travel and Leisure	CFO	~~31 March 2018~~
P6~~Company F~~	Industrials	Construction and Materials	Financial Director	~~30 June 2018~~

Table 2: Systems to capture ~~Automated~~ financial and nonfinancial information~~non-financial data capture systems~~

• SAP	• Formalised Microsoft and excel
• Quality management system	• Various stakeholder surveys
• Safety management system	• Staff surveys
• Environmental management system	• Industry related sustainability indices
• Property management systems	• ERP system to monitor, track, and capture data about training and management development training, recruiting, and staff retention.
• HR and payroll systems	
• Accounting systems	

~~**Table 3: Measures used to show impact of value creation on capitals**~~

~~**Organisation/ Six capitals**~~	~~**Company A**~~	~~**Company B**~~	~~**Company C**~~	~~**Company D[6]**~~	~~**Company E**~~	~~**Company F**~~
~~**Inputs**~~						
~~Financial~~						
~~Manufactured~~						
~~Human~~						
~~Social and Relationship~~						
~~Intellectual~~						
~~Natural~~						
~~**Outcomes**~~						
~~Financial~~						
~~Manufactured~~						
~~Human~~						
~~Social and Relationship~~						

~~[6] Combine Human and Intellectual Capital~~

~~Intellectual~~				
~~Natural~~				

~~**Legend:**~~ ~~= Financial measure~~ ~~= Non-financial measure~~ ~~= Qualitative measure/narrative terms~~

~~**Table 4: Stakeholder groups of advanced integrated report preparers**~~

~~Clients/ tenants / customers~~
~~Capital providers: Investors, funders, financial institutions, shareholders, bond holders, credit rating agencies~~
~~Third party owners~~
~~Partners, professional bodies, competitors~~
~~Employees / workforce~~
~~Unions~~
~~Supply chain businesses: Partners, contractors, subcontractors, suppliers, brokers~~
~~Government / Regulating Committee / Various Regulators~~
~~Communities~~
~~NGO's~~
~~Environmentalists~~
~~Media and special interest groups~~