



Open Research Online

Citation

Bezuidenhout, Stefan; de Villiers, Charl and Dimes, Ruth (2023). How management control systems can enable, constrain, and embed integrated reporting. *Accounting & Finance*, 63(4) pp. 4251–4273.

URL

<https://oro.open.ac.uk/97906/>

License

(CC-BY-NC-ND 4.0) Creative Commons: Attribution-Noncommercial-No Derivative Works 4.0

<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Policy

This document has been downloaded from Open Research Online, The Open University's repository of research publications. This version is being made available in accordance with Open Research Online policies available from [Open Research Online \(ORO\) Policies](#)

Versions

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding

How management control systems can enable, constrain, and embed integrated reporting

Stefan Bezuidenhout¹ | Charl de Villiers^{1,2}  | Ruth Dimes²

¹The University of Pretoria, Pretoria, South Africa

²The University of Auckland, Auckland, New Zealand

Correspondence

Charl de Villiers, The University of Pretoria, Pretoria, South Africa.

Email: charl.devilliers@auckland.ac.nz

Abstract

This study examines how management control systems (MCSs) may enable, constrain and embed the integrated reporting process within organisations. We analyse in-depth, semi-structured interview evidence using Tessier and Otley's MCS framework and institutional work. We find that organisational culture, clear responsibilities and ongoing stakeholder dialogue support the development of an integrated reporting process. In addition, an ongoing multi-stage process with regular stakeholder interaction helps to embed the integrated reporting process. Our paper provides comprehensive detail about the MCS associated with the process for preparing an integrated report that will be of interest to current integrated reporting (IR) practitioners and organisations considering adopting IR.

KEYWORDS

Institutionalisation, Integrated reporting, Management control systems

JEL CLASSIFICATION

F40

1 | INTRODUCTION

Integrated reporting (IR) aims to bring financial and non-financial information together in a single, forward-looking performance report (De Villiers et al., 2020) which explains an organisation's plans for value creation in relation to its strategy, governance, performance and prospects (IRF, 2021). IR is relevant for any stakeholders (not just investors) who are interested in an organisation's ability to create value over time. These include employees, customers, suppliers, business partners, local communities, legislators, regulators and policy-makers (IRF, 2021). Research evidence suggests that preparers find it challenging to produce high-quality integrated reports (De Villiers et al., 2020; McNally et al., 2017). Yet other research has found that the

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2023 The Authors. *Accounting & Finance* published by John Wiley & Sons Australia, Ltd on behalf of Accounting and Finance Association of Australia and New Zealand.

process of preparing an integrated report can encourage alignment between reporting and decision support systems (Adams & Simnett, 2011). As one of the goals of integrated reporting is to improve managerial decision-making (Eccles, 2014; IIRC, 2017), making IR unique compared to other external reporting formats, it is important to gain a deeper understanding of the relationship between management control systems (MCS) and integrated report production, an underexplored theme in the growing body of literature on IR (De Villiers, Venter, & Hsiao, 2017).

Our paper uses a single case study to explore the research question: How can MCSs enable, constrain, and embed the integrated reporting process? This research question is addressed through a case study of CellTech.¹ CellTech was chosen as it is a regular recipient of the 'Excellent' category in EY's 'Excellence in Reporting' awards in South Africa and makes specific reference to MCS in its report. Our case site enables us to explore the MCS within an organisation leading to the production of an externally recognised high-quality integrated report. This allows us to reflect on whether or not there is synergy between the quality of the external report and the quality of internal processes involved in producing the report. A series of 27 semi-structured interviews were conducted with various employees from different functional levels within CellTech. The data were analysed on the basis of the MCS framework of Tessier and Otley (2012), with reference to institutional work, to discuss our findings.

Our study responds to calls for a deeper understanding of how integrated reports are prepared and the impact of this process on organisations (De Villiers et al., 2014, 2016; De Villiers, Venter, & Hsiao, 2017; Kerr et al., 2015). Our findings suggest that the studies that consider an integrated report to be the outcome of an organisation's strategy rather than a tool to change behaviour (Chaidali & Jones, 2017; Stubbs & Higgins, 2014) may be limited in their view. At CellTech, a multi-stage process with regular strategic touchpoints during the year helps to embed integrated reporting as an ongoing annual process within an organisation and enable an integrated approach to decision-making to be seen as business-as-usual. We find that clear organisational responsibility, coupled with regular strategic dialogue with stakeholders, facilitates the report production process. This strategic dialogue is supported by an organisational culture which allows for easy interaction between departments, supporting the view of Cavicchi et al. (2019) that the planning processes occurring before the construction of an integrated report should be shared, but the report production itself should not. Our findings around organisational culture align with other studies (Dimes & De Villiers, 2020; Dumay & Dai, 2017; Feng et al., 2017) which consider organisational culture a key factor in integrated reporting leading to lasting organisational change. Our findings are consistent with the view that a balance of technical and social controls is necessary to embed the integrated reporting process and encourage improved internal decision-making. We also find that employees view social controls more favourably than more formal technical ones.

Our paper provides a step-by-step analysis of the various stages of integrated report preparation, highlighting what management actions enable and constrain this process and the perceptions of these actions by employees. We find that the information produced as part of the IR preparation process (in particular non-financial information relating to sustainability) is not used as effectively as it could be by managers internally. This aligns with other findings from sustainability research that suggest that externally reported information may not be used by managers within organisations as a form of control (Zharfpeykan & Akroyd, 2022). Although our findings are based on a single case study, they may provide useful guidance for practitioners already on the IR journey or considering the adoption of IR.

The remainder of this paper is structured as follows: Section 2 provides background on IR, MCSs, and institutional work, Section 3 outlines the research methodology and gives further details of the case company, Section 4 presents the key findings, Section 5 discusses the findings

¹CellTech is a pseudonym applied for the research, in accordance with the ethical requirements of the company. The rationale for the selection of the company is explained in the methodology section.

in relation to the existing literature, identifying contributions, and Section 6 concludes, highlighting the contributions of the papers and avenues for future research.

2 | BACKGROUND

This study is motivated by literature that encourages further investigation into the interaction between MCSs and integrated reporting (De Villiers et al., 2014, 2016; De Villiers, Venter, & Hsiao, 2017; Kerr et al., 2015). This section provides a background on integrated reporting, MCSs and the relationship between integrated reporting and MCSs.

2.1 | Integrated reporting

An integrated report is a report to stakeholders on the strategy, performance and activities of the organisation presented in a manner that allows stakeholders to assess the ability of the organisation to create and sustain value over the short, medium and long term (De Villiers et al., 2020; De Villiers & Sharma, 2020; De Villiers, Venter, & Hsiao, 2017; Dimes & De Villiers, 2020; IRC, 2011; IRF, 2021). An integrated report should therefore be the pinnacle of a process that commences with corporate values, strategy and the decision-making philosophy of a company. This includes historical financial information and operating reviews as well as information that is forward-looking, gives strategic direction and discusses targets, risks and opportunities that are addressed in the medium-to-long term (PWC, 2010). Integrated reporting has been accused of being increasingly targeted at investors, even though its initial aim was to be a single holistic report useful to a broad range of stakeholders (Thomson, 2015). Nonetheless, interest in integrated reporting is increasing and its holistic story-telling approach to value creation has been recommended by influential bodies such as the newly-formed International Sustainability Standards Board (ISSB; IFRS, 2022). This suggests that IR could be used not only to combine financial and non-financial information but also to potentially reconcile the different viewpoints of multiple stakeholders (De Villiers & Dimes, 2022).

The aim of integrated reporting is not only to provide a single comprehensive reference point for the multiple stakeholders of an organisation, but also to encourage 'integrated thinking' within organisations. Integrated thinking is closely connected with IR and concerns the organisational changes in decision-making that theoretically result from IR adoption, moving organisations from a shareholder-focused profit mentality towards a broader notion of value creation for all stakeholders (Adams, 2017). Evidence shows that adopting integrated reporting can benefit internal processes (Feng et al., 2017; McNally & Maroun, 2018; Oliver et al., 2016), as the integrated information necessary for the production of an integrated report brings external reporting and internal decision support systems closer together (Adams & Simnett, 2011). Internal decision-making, measured by improved investment efficiency, has also been shown to be associated with external IR quality (Barth et al., 2017). In this context, a deeper understanding of the report preparation process and the changes this may generate within organisations through the use of MCS is of critical importance.

The King Code of Governance Principles for South Africa 2009, also known as the King III (IoDSA, 2009) and the subsequent King IV Report (IoDSA, 2016), which is included in the listing requirements of the Johannesburg Stock Exchange (JSE), located in South Africa, requires companies listed on the JSE to publish an integrated annual report. South Africa is the only mandatory setting for integrated reporting in the world, but interest in IR is growing globally (IIRC, 2020). This growing interest makes our findings in the South African setting of particular relevance, as South African companies are seen as leaders in this emerging field and have more experience with IR in practice.

2.2 | Management control systems

Management control systems are tools that gather and use information to assist management in steering an organisation towards its desired strategic objectives (Anthony & Govindarajan, 2007). MCSs ensure that resources (including human, physical and financial) are acquired and used effectively and efficiently in attaining an organisation's goals (Simons, 1995). They address a key challenge in management, which is to achieve behavioural control so that employees contribute effectively to a firm's objectives (Merchant & Van der Stede, 2017). The design and the implementation of an integrated report represent phases of a more complex process in which MCSs play an essential role (Wulf et al., 2014). As MCS can be used by management to steer organisations (Siska, 2015), analysing the integrated reporting process through this lens can provide valuable insights (Gond et al., 2012).

We use Tessier and Otley's (2012) revised version of the Simons's (1995) levers of control framework to analyse the findings in our study. Although there are several MCS frameworks, it was important to consider both technical and social controls in operation at CellTech and also distinguish employee perceptions of controls from the controls themselves (a key difference between the Tessier and Otley framework and the original 1995 levers of control model). Simons's (1995) framework identifies four levers of control to manage positive and negative tensions in organisations (Tessier & Otley, 2012). The two positive levers of control are belief systems and interactive control systems, while the two negative levers of control are boundary systems and diagnostic control systems (Tessier & Otley, 2012). Tessier and Otley (2012) revised Simons's (1995) levers of control framework using positive, negative and neutral labels to describe employee attitudes towards controls, instead of attaching positive or negative attributes to the control itself as per Figure 1.

Tessier and Otley (2012) portray managerial intentions in the following levels, namely: types of controls (which consist of social and technical controls), and control systems (consisting of strategic performance controls, strategic boundary controls, operational performance controls and operational boundary controls) that can be used diagnostically or interactively, and have enabling or constraining roles that can lead to either reward or punishment. The reference to enabling/constraining reminds of institutional work, which will be discussed in subsection 2.4. Tessier and Otley (2012) divide MCSs into four categories. Strategic boundary controls are controls that have an impact on the whole organisation, and emphasise the desired state of the

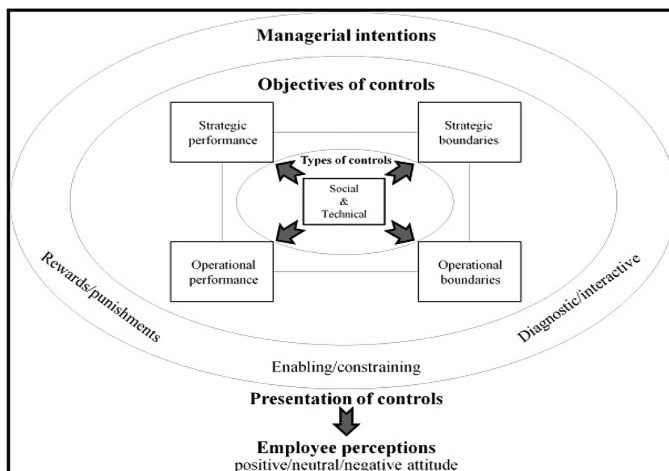


FIGURE 1 Simons' levers of control revised framework. Source: Tessier and Otley (2012, p. 173).

organisation. Strategic performance controls ensure that an organisation's strategy will lead to the attainment of the organisation's vision, and are focused on strategic uncertainties. Operational boundary controls inform employees of the limits, established by stakeholders, which are imposed on their actions at an operational level. Operational performance controls monitor what an organisation must do well to achieve its strategy. This study uses Tessier and Otley's (2012) framework to analyse and interpret the findings, following other studies in the field such as Dimes and De Villiers (2020) and Bui and De Villiers (2018).

2.3 | Integrated reporting and management control systems

Financial accounting, financial reporting, and integrated reporting do not affect corporate governance directly, but indirectly by requiring adequate MCSs (Wulf et al., 2014). Management accounting will have to meet new challenges in order to ensure a genuine implementation of integrated reporting, as the implementation of integrated reporting is likely to affect traditional structures and business processes (Bridges et al., 2020; Wulf et al., 2014). This paper aims to shed light on how MCS can enable, constrain, and embed the production of an integrated report. The existing literature on IR and MCS suggests that a consideration of both formal and informal controls is critical when examining this issue. Higgins et al. (2014) found that informal controls such as improved employee understanding and socialisation of integrated reporting could reduce reliance on formal control mechanisms, consistent with the findings of Collier (2005) and Chenhall and Euske (2007). A study of Novo Nordisk A/S, one of the first voluntary adopters of IR, also highlighted the importance of informal controls (Morsing & Oswald, 2009). Riccaboni and Leone (2010) stress the need for informal and formal control systems to complement and support one another in IR adoption. Bui and De Villiers (2017) recognise previous MCSs frameworks, although these frameworks do not identify a concrete relationship between MCSs and integrated reporting. Although an integrated report relies on a company's strategy, the reporting on KPIs are not required by the IIRC's Reporting Framework and it is left up to management to decide what information on performance should be included in an integrated report (De Villiers & Sharma, 2020). Therefore, although prior literature exists on MCSs and the relationship with the BSC, sustainability reporting, integrated reporting and strategy and integrated thinking, it provides little insight into how MCSs facilitate or limit the preparation process of an integrated report. This study therefore aims to enhance our understanding how MCSs facilitate or limit the preparation of an integrated report.

2.4 | Institutional work

As we are interested in how some MCS may enable and others constrain the production of an integrated report, and how the integrated reporting process becomes embedded, the role of managers and institutional behaviour is of interest. This is particularly the case with IR as it is the intention of IR to generate internal change through integrated thinking, driven by management actions. Lawrence and Suddaby (2006, p. 215) define institutional work as 'the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions'. We are interested in how integrated reporting and the organisational actors involved in the integrated reporting process maintain (and potentially disrupt) institutional norms. There are three types of institutional work under maintenance of institutions, as categorised by Lawrence and Suddaby (2006), which are of interest in this study, namely enabling work, deterring, and embedding and routinizing. Enabling work refers to the creation of rules that assist, complement and support institutions, deterring refers to how obstructions to institutional change and established, whereas embedding and routinizing ensure the maintenance of institutional norms through

behaviours becoming entrenched by repetition (Lawrence & Suddaby, 2006). Enabling, deterring, and embedding and routinising work can be related to our interest in how the process of producing an integrated report can be encouraged, hindered and embedded within organisations, and how (or if) the production of the report can lead to additional changes within the organisations through Integrated Thinking.

Enabling and deterring work also reminds us of the overall role of MCSs, according to Tessier and Otley's (2012) MCS framework, namely enabling or constraining behaviour. In addition, MCSs can embed and routinise procedures, such as the production of integrated reports and the use of integrated thinking, leading to its institutionalisation.

3 | RESEARCH METHODOLOGY AND METHOD

The objective of this study is to gain an understanding of how MCSs enable or constrain the integrated reporting process. Our research falls within the sphere of social research as it explores how people who work with integrated reporting understand and interpret the integrated reporting process. Stack (2019, p. 21) describes this type of enquiry as exploring 'the relationship between the knower (the researcher, in this research) and what can be known'. Stack (2019, p. 21) explains that interpretative research is characterised by observer inter-subjectivity and empathy, and observer closeness to the subject may affect what is observed (that is, it is not necessarily objective). The methodology is interactive, interpretative and qualitative. Stack (2019, p. 21) observes that in an interpretivist study 'research findings are usually specific and unique and cannot be generalised', a characteristic that applies to the present research.

3.1 | Case study method

This study comprises a case study in which in-depth semi-structured interviews with employees of the case site are analysed. The case site was identified by determining, from published integrated reports and annual financial statements of companies listed on the JSE, whether the company had specifically referenced the use of management controls, such as the BSC, in the compilation of their integrated report. The selected company for this study is a South African telecommunications company listed on the JSE. The company's integrated report was rated among the top 10 in South Africa in the annual EY 'Excellence in Integrated Reporting' awards 2019 (EY, 2020) and is a regular recipient of the 'Excellent' category in these awards. As the company makes specific reference to the BSC and other MCS in their integrated report, this suggests a link between a high-quality integrated report and the underlying MCS, representing ideal conditions to explore our research question.

3.2 | Data collection

The data consist of semi-structured interviews. The interviews were loosely structured using a series of open-ended questions. The questions were amended according to the flow of the interviews. Babbie and Mouton (2010) suggest that a researcher is often interested in determining the degree to which respondents hold a particular viewpoint. This information is obtained by asking a question and expecting an answer or by making a statement and interpreting the respondents' attitude towards the statement. Both questions and statements can be used to the researcher's advantage as it will allow flexibility in the design of items and can make interviews more interesting.

Twenty-seven interviews were conducted at the case site, using telephone and face-to-face modes of interviewing. Names of potential interviewees were provided by the office of the Chief

TABLE 1 Semi-structured interviews.

Interview number	Position	Duration (min)	Date
1	Manager: Investor Relations	51	03/2018
2	Specialist: CellTech Foundation: Specialist Projects	36	03/2018
3	Investor Relations: Specialist: Integrated Reporting	35	03/2018
4	Corporate Affairs: Specialist: Sustainability	62	03/2018
5	Manager: Business Intelligence	54	03/2018
6	Manager: Data Analytics	53	03/2018
7	Manager: Compensation	56	03/2018
8	Manager: Technology Strategy and Planning	53	03/2018
9	Assistant: Technology Strategy and Planning	48	03/2018
10	Specialist: Company Secretary	39	03/2018
11	Manager: Marketing Regulation	53	03/2018
12	Chief Financial Officer (CFO)	58	04/2018
13	Manager: Investor Relations (follow-up)	62	08/2018
14	External Consultant: Integrated Report (Telephone interview)	46	08/2018
15	Manager: Business Intelligence (follow-up)	63	08/2018
16	Manager: Compensation (follow-up)	57	08/2018
17	Investor Relations: Specialist: Integrated Reporting (follow-up)	36	08/2018
18	Manager: Media Relations	46	02/2019
19	Manager: Business Risk	63	02/2019
20	Corporate Affairs: Specialist: Sustainability (follow-up)	67	03/2019
21	Specialist: Human Resources, Performance Development	62	03/2019
22	Manager: Human Resources	63	03/2019
23	Manager: Supply Chain Management	49	03/2019
24	Investor Relations: Co-ordinator	52	05/2019
25	Investor Relations: Integrated Reporting Specialist Assistant	32	05/2019
26	Investor Relations: General Assistant	33	05/2019
27	Manager: Strategy Team	75	05/2019

Source: Own design.

Financial Officer (CFO) as well as the case site's Investor Relations department. Of the potential interviewees, 59% (22 out of 37) agreed to participate. Of these 22, five had follow-up interviews, giving 27 interviews in total. The interview time was between 32 and 75 min with an average duration of 52 min. Table 1 provides details of the interviews conducted.

3.3 | Thematic analysis

The interview data were transcribed, verified by the interviewees and NVivo was used to analyse, code and interpret the data. The data contained in the interview transcripts were analysed using coding to identify themes (Bryman & Bell, 2014) that emerged from the collective responses as recorded in the interview transcripts. Saldana (2015, p. 4) describes coding as 'the transitional process between data collection and more extensive data analysis'. The transcriptions were coded using thematic analysis, which is a flexible method of qualitative data analysis that seeks to 'identify, analyse and describe patterns, or themes, across the data set' (Bryman & Bell, 2014, p. 350).

The objective of the analysis was to allow the data, drawn from the voices of the interviewees, to speak for itself and for themes to emerge in a process of analytic induction. Analytical induction is 'the systematic examination of similarities within and across cases to develop concepts, ideas, or theories' (Brinkmann, 2013, p. 9). The process of analytic induction involves commencing without predetermined codes and coding the data according to the emerging themes and patterns. The codes thus emerge from the interview transcripts. Predominant themes were highlighted and the responses of the interviewees were compared to find similarities that indicated shared perceptions about integrated reporting and MCSs.

4 | FINDINGS

This section explains and discusses responsibility for preparing the integrated report, the working environment at CellTech, and each stage of the process that CellTech follows when preparing its integrated report. Table 2 provides an overview of our key findings with reference to Tessier and Otley's (2012) MCS framework:

4.1 | Responsibility for preparing the integrated report

Interviewees considered the responsibility for preparing CellTech's integrated report lie with their Investor Relations department. Ownership of the process ultimately belongs to the company's Chief Financial Officer (CFO), with the board providing the final approval of the integrated report that is to be published.

The Investor Relations department was further responsible for engaging with, among others, external stakeholders like existing investors, possible future investors and investor brokers in order to build and maintain good relationships with the company's current and future investors:

From a drive perspective [drive – the interviewee is referring to the instigators of the integrated reporting preparation process], it's us, investor relations, because we're responsible for the report.

(3)²

The head of the Investor relations department is responsible for executing the integrated reporting process, publishing of the integrated report, publishing of quarterly reports, engaging with stakeholders and reporting to the Chief Financial Officer. The department further includes an Integrated Reporting Specialist who is responsible for the collection of data from the various departments to be included in the integrated report, and to assist the head of the team. The team also has a co-ordinator who is responsible for the scheduling of meetings, internally and externally and organising road shows to engage with external stakeholders.

Before CellTech's listing on the JSE, the responsibility for preparing their annual reports resided within their financial department. A one-sided approach was followed where the necessary information needed was obtained from the various departments, without continuous interaction between the departments involved.

So it was somebody in group finance that pretty much did it ... focus would have been on the financial statements at that time ... then a little bit of insight into the business but very limited from that point of view.

(1)

²This number reflects the interview number that was allocated to each interviewee in order to protect interviewees' anonymity.

TABLE 2 The process for preparing the integrated report at CellTech and interaction with MCS.

Stage	Description	MCS interaction (objective, intention, presentation and perception)
	Responsibility for report preparation sits with the Investor Relations department	Operational performance control (technical), with the intention of enabling the production of a high quality integrated report. Viewed positively by employees
	Open-plan office design encourages conversation across departments	Strategic boundary control (social), with the aim of enabling communication around performance. The intention was to create and enable an environment where dialogue might occur, rather than this control being used interactively to force dialogue. Employees had a positive perception of this control
	A multi-stage process with regular stakeholder interaction (see stages below)	See analysis of each stage below
1	Obtain external feedback on recently published integrated report	Strategic performance control (technical) which enable the strategy to be linked to the vision of the organisation, using the integrated reporting process as a mechanism to achieve this. Management use this control interactively and it is viewed positively by employees
2	Obtain internal feedback on recently published integrated report	Operational boundary control (technical) to monitor what CellTech needs to do in order to improve on their integrated report. The control is used interactively and is viewed positively by employees
3	Refresh structure and content taking feedback into account	Operational performance control (technical), used as an enabling control. This control is viewed positively by employees
4	Identify goals, broad KPIs, business risks and opportunities	Strategy planning meetings serve as both a strategic performance control (technical) as well as an operational performance control (technical). Used both interactively and diagnostically, these controls are viewed positively by employees
5	Collection of financial and non-financial data	Operational boundary control system that enables monitoring against strategy. Used diagnostically. Viewed mostly positively by employees except for when information regarding risk needed to be provided for inclusion in the integrated report
6	Reporting and check-in with the Board	Operational performance controls (technical) imposing limits on employee actions at an operational level. Employees have a neutral perception of this control
7	Writing up and finalising the integrated report	Operational boundary controls (technical) to ensure that the final report links clearly to strategy. This control is viewed positively by employees

Source: Own design.

Since integrated reporting became mandatory, the interviewees within CellTech's Investor Relations and Corporate Affairs departments have experienced a more coherent organisational culture, receptive to integrated thinking:

The purpose is to show integrated thinking and how we have adopted the principles of triple bottom line into the organisation. It's not just about profitability. It's prosperity in the communities in which we operate, it is important.

(4)

McNally et al. (2017, p. 496) found that there was a 'disconnect between the teams preparing the different parts of the integrated report', resulting in a document with inconsistencies, but CellTech avoided this by having a single team (Investor Relations) responsible for report production. However, although the Investor Relations department took responsibility for the report production, the department did liaise with other departments to gather data, consistent with De Villiers, Hsiao, and Maroun (2017) who note that the implementation of integrated

reporting could facilitate better internal communication and encourage strategic dialogue across departments.

The clear responsibility for production of the integrated report is a type of operational performance control, placing limits on employees in order to achieve the desired strategic goals. The intentions of management were to enable the production of a high quality integrated report, and this control was largely viewed positively by employees. Apart from considering this as a control, it can also be viewed from an institutional work perspective as enabling work.

4.2 | The working environment at CellTech

The location of the Investor Relations department on the same floor as the Corporate Affairs department and an open-plan office layout facilitates the role of the integrated report preparation process. There is greater sharing of best practices, cooperation and communication between the two departments, as dialogue is stimulated between the two departments. CellTech uses open-plan offices to emphasise the desired state of the organisation. This is consistent with Tessier and Otley's (2012) description of management's intention through social controls to achieve positive internal outcomes.

We sit right next to each other. The whole tradition of you're having an office, is gone. We're more open-plan. I'm sitting with my staff. I used to have an office. That's gone now ... And that type of culture leads to faster decision-making because if staff have problems, you are there and they can speak to you directly. And decisions are made much faster as opposed to this hierarchy approach.

(25)

The use of open-plan offices to promote teamwork and communication is consistent with the findings of Hollis-Turner (2015). Dimes and De Villiers (2020) determine that organisational culture is used as a strategic boundary control, in terms of Tessier and Otley's (2012) framework, which enables integrated thinking. Our findings are similar. We find that the open-plan office is used as a strategic boundary control, with the aim of enabling communication around performance. We did not find that CellTech's open-plan offices were used interactively, however. Although interactive controls are used by management to, among others, stimulate dialogue and to create learning opportunities about strategic uncertainties in order to identify new strategies (Bui & De Villiers, 2018), the interviews revealed that CellTech's top management does not engage directly in the decision-making of subordinates. Instead, the goal was to create and enable an environment where such dialogue might occur between subordinates. Employees regarded the open-plan structure positively, demonstrating a positive perception of this control. Of course, these actions can also be seen as enabling work (institutional work).

4.3 | Stages in preparing the integrated report

CellTech's preparation of its integrated report is a multi-stage process that commences after the previous year's integrated report is published, usually in May or June of each year.

4.3.1 | Stage 1: obtain external feedback on recently published integrated report

From June to September, the Investor Relations department engages with external stakeholders as well as an external integrated reporting consultant to obtain feedback about the

content and structure of the recently published integrated report. This feedback is obtained by having a series of face-to-face meetings and via emails. The Investor Relations department also compares CellTech's integrated report to those of other peer companies in the same industry. They use this feedback to change the structure and future content of the integrated report as they regard the content in their integrated report to be of a high standard, and place emphasis on its ranking:

We of course take feedback and we take learnings and we look around, kind of what others are in essence doing, pushing a little bit the boundaries of good or excellent integrated reporting and we usually take feedback on our last year's integrated report. You've got rankings, EY's, company secretary, the King ranking, these things and they are very important ... where you can actually see kind of where's the strengths and weaknesses of your own reporting of your own report and other reports. And that forms an essential part of, it's a bit of reshaping.

(12)

This stage provides evidence of the use of strategic performance controls which enable the strategy to be linked to the vision of the organisation, using the integrated reporting process as a mechanism to achieve this. Management use this control (or enabling work) interactively and it is viewed positively by employees.

4.3.2 | Stage 2: obtain internal feedback on recently published integrated report

During September to November, the Investor Relations department engages with the board, the Executive Committee (EXCO), as well as managers of the various business units through emails and a series of face-to-face meetings to obtain feedback on the recently published integrated report's structure and content. The feedback is used to enhance the structure and content of the new integrated report even further:

while we reshape our report or evolve ... obviously our business evolves as well. And the other elements that come to the top of mind and become more and more important.

(12)

The series of internal feedback meetings in the preparation of the integrated report process serve as an operational boundary control to monitor what CellTech needs to do in order to improve on their integrated report. The meetings are interactive by nature as the board, EXCO, as well as managers of the various business units, engage to jointly improve the content and structure of recently published integrated report (Tessier & Otley, 2012).

4.3.3 | Stage 3: refresh structure and content by taking feedback into account

After obtaining feedback on the recently published integrated report from external as well as internal stakeholders, the head of the Investor Relations department, together with the department's integrated reporting specialist, start to incorporate the feedback obtained into the broad

framework of the new integrated report. The refreshment of the structure and deciding on the content to be included in the new integrated report takes place on a continuous basis throughout the preparation process of the integrated report.

The refreshing of the structure and content of the integrated report provides an overview of what CellTech needs to take into account in order to prepare an improved integrated report. This is an example of an operational performance control, where employees are guided by feedback data to improve the report.

4.3.4 | Stage 4: identify goals, broad KPIs, business risks and opportunities

CellTech's strategy planning process commences during December and January every year. The Investor Relations department is actively involved in this process, as CellTech's strategy plays a vital role in the preparation of the new integrated report. CellTech prepares their integrated report from a strategic point of view:

The integrated report is much wider I would say than it previously used to be so we consult much across the business in terms of what is going on. It starts with at some degree a strategy process that we run during December of every year. That strategy process basically brings all of business together. So we look at what our goals or what our objectives are of the next three years and what we want to achieve and that we balance with the risks that are out there, the opportunities that are out there, etcetera. And then brings all of the business together so we get various business units departments together, see what we need to achieve, see who needs to help out to achieve those, be it technology, the consumer business unit etcetera as well.

(1)

It is during this point in the preparation process of the integrated report that a series of strategy planning meetings between CellTech's Investor Relations department, the EXCO, the board, and the various heads of departments takes place. During these meetings CellTech's vision, goals, KPIs, business risks and opportunities are identified, which they include in their final integrated report. These meetings facilitate the preparation of the integrated report as they determine part of the content that CellTech includes in their integrated report.

There are regular meetings and discussions on the strategy, goals, and information that need to be included in the integrated report as it affects external stakeholders.

It is a formal series of meetings that we set up. Face to face, and we go through each of the elements of the strategy.

(27)

De Villiers et al. (2016) note that it is necessary to gain an understanding of how the integrated report aligns with strategy. This study finds that CellTech uses their strategy planning process consistently to ensure alignment between their integrated report and their strategy. McNally et al. (2017) note that companies divulge details on their strategy as a separate part of their integrated report. CellTech's 2019 report devoted a special section to strategy, but where McNally et al. (2017) note that companies make use of limited cross-referencing, this study finds that CellTech refers to their strategy throughout their 2019 integrated report.

Analysis of interviews show that strategy planning meetings serve as both a strategic performance control as well as an operational performance control. They serve as a strategic perfor-

mance control during the strategy planning process as they assist in monitoring that CellTech has the appropriate strategy in place to attain its mission. CellTech's strategy planning meetings also serve as an operational performance control as CellTech uses them to determine KPIs to ensure successful strategy implementation. The use of the strategy planning meetings during the preparation process of the integrated report as an operational performance control indicates that CellTech uses the strategy planning meetings not only to determine KPIs to ensure successful strategy implementation, but also to monitor the achievement of its strategy by focusing on key performance variables at an operational level.

4.3.5 | Stage 5: collection of financial and non-financial data

From February to May the collection of data for the integrated report takes place:

Then in February we sit down and we start getting business ready. They start updating their strategies, their performance, what went good, what went bad and give us some insight into what went bad. So the process we get to a detailed level, I would say we sit with the EXCO members and so kind of to understand what is happening in their areas and then we start working with their teams to write up the narratives and the data for instance as well.

(13)

The information that CellTech includes in their integrated report is guided by the principles and requirements of the International Financial Reporting Standards (IFRS), the IIRC's international <IR> Framework, the King Code on Corporate Governance 2016, also known as the KING IV report (IoDSA, 2016), the JSE listing requirements, the South African Companies Act, No. 71 of 2008 and the GRI Sustainability Reporting Standards.³ This is consistent with McNally et al. (2017, p. 498) who note that 'preparers default to existing guidelines to inform the scope and content of their integrated reports':

[T]here are specific disclosure requirements already in place. King is very specific in terms of what we disclose.

(7)

In terms of non-financial information, CellTech includes information that is not only guided by its strategy, but also material to the business and their investors' decision-making process:

So what we look at is all the material issues for the year. So in terms of media, what's been out there like the 'Data Must Fall' campaign. In terms of the investors what's bothering them, what questions they ask me in terms of regulatory. That's what form the basis of the report. What really matters to people and what are they thinking about. And the concerns they have ... It comes from our material issues, from stakeholders. As well as regulation, whatever is in the media, whatever is on the top of mind. Our strategy is crucial, so we address all the issues from media and investors, but by our strategy.

(3)

³This information was obtained from CellTech's 2019 Integrated Report.

The interviews above are consistent with what CellTech describes in its 2019 integrated report, which is to provide information on all those matters that they believe could substantively affect value creation. CellTech's process of identifying and prioritising the material matters for inclusion in the integrated report involved reviewing CellTech's business model, the interaction with the six capitals as identified by the IIRC, their operating environment and the interests of their key stakeholders as expressed during their normal business engagements. CellTech's integrated report further presents the material information through a clearly structured narrative that reviews who they are and how they create value, identifies those issues that have a significant impact on value, and outlines their strategy, performance and governance practices in ensuring long-term value creation. Additional information not material to their 2019 integrated report, but of interest for other purposes, is provided in other reports on their website.

CellTech uses its performance management system to collect financial as well as non-financial data for integrated reporting purposes:

So the performance management just helps again in terms of bringing a little bit more detail and colour in terms of the overall objective at the end of the day for us. So it helps engage much better with the business in terms of how 'do we achieve'. Also it's a measurement ultimately to gives us that way in terms of having various data points within the business, for instance are we delivering on what we said we want to deliver to get to the ultimate goal.

(1)

CellTech has a dedicated sustainability specialist who not only works in collaboration with the Executive Committee and CellTech's Foundation, but also with the heads of the various departments. This specialist looks at the risk and opportunities, with a specific focus on the social and environmental aspects impacting CellTech.

The inclusion of sustainability information in their sustainability report is based on materiality, thus, CellTech's key environmental impacts from both within the company as well as externally. CellTech's data sources for their sustainability report include CellTech's internal systems and portals, energy management system, customer connection portal as well as their Social and Ethics Committee reports. Secondary data are collected from publicly available information and reports, such as the Global System for Mobile Communication Association (GSMA) and other generic reports. This information is not readily available by the click of a button, and the process to get the data and information is therefore still manual and labour intensive.

Sustainability is one of CellTech's pillars in their overarching strategy. CellTech's own sustainability goals, guide management on where aid goes and where they are having an impact on, not only internally within the company but also externally on the social and environmental sphere. The United Nations sustainability goals are also used as a guide on how CellTech can strategically minimise its impact on its carbon footprint, not only internally from their operations, but also to enable the potential of their products and services. CellTech's sustainability goals are measured annually, as shown in Table 3.

The setting of KPIs commences when CellTech's executive team formulates the strategy for the new financial year. This results in a set of KPIs for each head of department (HOD), which is then cascaded down to the staff. One such KPI, according to CellTech's sustainability specialist, is the carbon footprint CellTech leaves, not only internally but also externally. According to CellTech's sustainability specialist, though, this is where they do not always 'get it right':

TABLE 3 Measurement of CellTech's sustainability goals.

Delivering social values	Investing in their people
Customer and customer satisfaction	Number of full-time employees
Enabled financial inclusion	Women representation in the workplace
Cash tax contribution	Ratio of average basic salary of men to women
Investment in CSI	Workplace-related fatalities
Investment in infrastructure	Skills development
Rural network sites	Black representation on Executive Committee
	Lost-time injury frequency rate
Responsible environmental management	
Direct greenhouse gas (GHG) emissions (Scope 1) (mt CO ₂)	
Access network electricity (GWh)	
Indirect GHG emissions (Scope 2) (mt CO ₂)	
Core network electricity (GWh)	
Indirect GHG emissions (Scope 3) (mt CO ₂)	
Electricity in buildings (GWh)	
Fuel consumption (diesel and petrol) (million litres)	
Total GHG emissions CO ₂ (including non-Kyoto Protocol emissions) (mt CO ₂)	
Network equipment and devices recycled (tons)	

Source: CellTech's 2019 and 2020 sustainability reports.

It's having those common goals and those common kind of KPI's to work towards. We can use the carbon one as an example because ideally, a large part of it does sit with the energy managers in business units, but it is fragmented and it does tend to fall all over the place.

To facilitate the collection of data needed for the integrated report, interview analysis show that CellTech uses their performance management system as an operational boundary control system, according to Tessier and Otley's (2012) framework. 'Operational performance controls involve critical performance indicators and include controls that enable the measurement, monitoring and the management of performance against a predetermined policy, plan or strategy' (Bui & De Villiers, 2018, p. 4). However, the comment around 'not getting it right' highlights the difficulty in determining managerial accountability for non-financial, 'collective' KPIs such as carbon emissions.

4.3.6 | Stage 6: reporting and check-ins with the board

The Investor Relations department prepares and publishes CellTech's quarterly results. They also have quarterly check-ins with the board on the implementation of strategy and the risks involved.

There are various check-ins, there is a board check-in that happens almost every quarter that the strategy team updates in terms of that so bigger macro goals type of objectives. It grows big projects, etcetera, key check-ins on deliverables on those projects, etcetera. Then we've got monthly reporting that takes place as well so there is monthly management meeting as well that takes place and there we look at both

key financial and key performance indicators as well. There is a report on that and then we will see deviations from those and interrogated that, based on that.

(13)

The check-ins with the board are classified as an operational performance control. At these check-ins, CellTech's board impose limits on the Investor Relations department, as they prescribe and approve the information that should or should not be included in the integrated report.

4.3.7 | Stage 7: writing-up and finalising the integrated report

The final write-up of the integrated report takes place during April and May. It is reviewed by the CFO and Chief Executive Officer (CEO) before final approval is provided by CellTech's board:

[A]nd full review is done by both the CFO and the CEO from back to front, every page.

(12)

The board ... in the first instance signs off the strategy of the group. The ARC [Audit and Risk Committee] is involved in things like risk management, etcetera, so they manage the risk around it. Then we presented the board the structural, material issues and those types of things to make sure we get input from the board, etcetera, before we actually get to a complete document. So all of that builds up at various phases in terms of getting their sign-offs and that insemminates in a printed report.

(1)

The Investor Relations department proceeds with the printing and publication of the final integrated report after the board approves a considered assessment of the six capitals (as referred to in the IIRC's Integrated Reporting Framework) informed by both CellTech's strategy and the internal materiality processes used to determine the content and structure of the integrated report.

This final stage of the integrated report production process shows management using operational boundary controls to ensure that the final report links clearly to strategy.

5 | DISCUSSION

The following section discusses the relationship between MCSs and the process of preparing an integrated report. We consider our findings in light of institutional work, exploring three key areas: MCSs that enable the production of an integrated report (enabling work); those that act as a deterrent (detering work); and those that help to embed and routinise the process (embedding and routinising work).

5.1 | Management control systems that enable integrated reporting (enabling work)

5.1.1 | Clear roles and responsibilities

According to interviewees, the roles and responsibilities of the members of the Investor Relations department are clearly defined and each member of the department knows what is expected of them. This is identified as an advantage, as roles and responsibilities are not duplicated and therefore the department's responsibilities are carried out more efficiently.

This research classifies the role and responsibilities within the Investor Relations department, as prescribed in the job descriptions of the members of this department, as an operational boundary control, as it is consistent with Tessier and Otley's (2012) definition of operational boundary controls. Tessier and Otley (2012) define operational boundary controls as a set of controls that inform employees of the limits (established by stakeholders) that are imposed on their actions at an operational level. These limits are communicated through social controls such as codes of conduct and through rules and procedures, which include policies and job descriptions (Tessier & Otley, 2012).

5.1.2 | Open-plan offices and organisational culture

CellTech's organisational culture and open-plan offices promote teamwork and communication within the company, which facilitates the preparation process of CellTech's integrated report. CellTech's organisational culture facilitates the role of the Investor Relations department as it represents a culture of continuous communication where all employees, including those of the Investor Relations department, are cognisant of the entity's strategy and goals. The organisational culture acts as a social control mechanism as part of CellTech's strategic boundary controls (Tessier & Otley, 2012). The use of open-plan offices to promote teamwork and communication is consistent with the findings of Hollis-Turner (2015). Dimes and De Villiers (2020) determine that organisational culture is used as a strategic boundary control, in terms of Tessier and Otley's (2012) framework, which enables integrated thinking. Our study shows that organisational culture can also be used as an operational boundary control in the preparation process of an integrated report. This study therefore contributes to the literature on MCSs and integrated reporting as it provides evidence that organisational culture and open-plan offices are used as both strategic and operational boundary controls to support the preparation process of CellTech's integrated report. This study also contributes to the extant literature as it provides evidence that CellTech's organisational culture supports the preparation of an integrated report by clearly defining the roles and responsibilities of the preparers of the integrated report.

5.1.3 | Strategic dialogue and strategy meetings

Evidence from this case indicates that non-financial information and materiality reporting is guided by the company's strategy. An integrated report tells the story of an organisation's value creation, referring specifically to a company's strategy (IRF, 2021). This is echoed by the research conducted by De Villiers, Venter, and Hsiao (2017), De Villiers and Sharma (2020), De Villiers et al. (2020), and Dimes and De Villiers (2020). This study contributes to the extant literature by providing evidence that strategy forms part of both strategic performance controls and operational performance controls, in terms of Tessier and Otley's (2012) framework. This study therefore confirms that strategy provides structure to the integrated report.

Sukhari and De Villiers (2019) find that the mandatory introduction of integrated reporting in South Africa led to enhanced disclosures regarding strategy, however these authors do not examine the link between integrated reporting disclosures regarding strategy and MCSs. Bui and De Villiers (2018) find that MCSs can support strategy. Dimes and De Villiers (2020) note that MCSs can enable and constrain integrated thinking, but their research does not provide an understanding of how MCSs facilitate the preparation process of an integrated report. Dimes and De Villiers (2020) note that MCSs can be used to facilitate a change in strategy. Green and Cheng (2019) focus on auditors' materiality judgements in an integrated reporting setting and note that the determination of the materiality of non-financial performance information is affected by the relationship to the company's strategy.

Clear roles, organisational culture and strategy meetings all help to encourage and enable integrated reporting. The open plan offices encourage open communication which is critical to the production of the integrated report, and also acknowledge integrated reporting as a team effort. The clear roles for individuals and teams help with accountability and also potentially help in communicating to new members of staff how the integrated reporting process works, reinforcing the annual processes necessary for report production. Planned strategy meetings are also likely to be diarised annually, reinforcing integrated reporting processes.

Before our study, it was unclear how the strategy planning process and strategic planning meetings supported the preparation process of an integrated report. Our breakdown of the annual reporting process and analysis of MCS shows this relationship clearly. The present study therefore not only contributes to the research of Bui and De Villiers (2018) and Dimes and De Villiers (2020), but also makes a practical contribution for integrated report preparers as it shows how strategic performance controls such as the strategy planning process and strategic planning meetings support the preparation process of an integrated report and help to encourage IR adoption. Our study provides evidence that KPIs determined during the strategy planning process are communicated to the different departments and individuals during the strategic planning meetings. Strategic planning meetings are not only used as strategic performance controls but also as an operational performance control, as these meetings control the cascading of the strategy, goals and KPIs to ensure successful strategy implementation within CellTech.

De Villiers and Sharma (2020) note that the IIRC does not require the reporting of any specific KPIs and that the IIRC's International Integrated Reporting Framework leaves the decision on what information on performance should be reported to management. Sukhari and De Villiers (2019) explain that companies may set their KPIs without considering their strategic goals, however, companies could benefit from considering how they disclose their strategy and amending their business model disclosure to be aligned with their strategic goals, KPIs and risks. According to Tessier and Otley's (2012) framework, KPIs can be used as an operational performance control. The present study contributes to the existing literature on MCSs and integrated reporting as it provides evidence that KPIs assist in the preparation of integrated reports. It also contributes to the practical understanding of how KPIs are used in the preparation of an integrated report. The evidence provided indicates that CellTech uses their KPIs as an operational performance control to support the preparation of their integrated reports, as CellTech reports on the performance and achievement of the company's KPIs.

5.2 | MCS that restrict the integrated reporting process (detering work)

The integrated reporting process at CellTech was largely regarded positively, with not much mention of how MCS might restrict the process. However, employee comments about previous processes were revealing. It is notable that when integrated reporting was performed by the finance team that it was less successful. This is consistent with other literature suggesting that the finance team can hinder the IR process (Adams, 2017). Our findings suggest, however, that the production of an integrated report is highly dependent on informal controls such as relations between departments and willingness to provide information. Therefore, we do not find that the finance team necessarily hinder the production of a report, rather that it is necessary to have a shared process for input into the report, clear organisational responsibility for the report production and a supportive and collegial working environment.

The interviews and the case site's integrated report confirm findings by McNally et al. (2017, p. 484) that note that there is limited evidence of materiality determinants that are informed by 'formal identification and analysis of stakeholders and their information requirements'. This study also finds that there are no internal processes for 'consistently determining what information is material' (McNally et al., 2017, p. 495). As materiality is critical for

the integrated reporting process, this lack of formal process may restrict the IR process. Other studies have found a more formal process conducted by the finance department (Lai et al., 2017) whereas the materiality determination process at CellTech was more informal and based on continued discussion not underpinned by formal documentation or guidelines.

The finding that the finance team could hinder the integrated reporting process reinforces our earlier findings that clear organisational roles and responsibilities are important for the preparation of an integrated report. In this case, allocating integrated reporting processes to the finance team could serve to restrict its institutionalisation (detering work) as integrated reporting needs to be seen as a collective effort by all employees in order to be successful.

5.3 | MCS that institutionalise the integrated reporting process (embedding and routinising work)

5.3.1 | A clear multi-stage annual process

The clear annual reporting process outlined in subsection 4.3 provides strong evidence that organisational actors recognise the integrated reporting process as embedded within CellTech. The process (as summarised in Table 2) shows a balance of formal and informal controls which lead to the production of the integrated report. Although this clear annual process could result in a shorter-term organisational focus, that is not the perception of CellTech employees, who instead regard their integrated reporting process as a continuous business process and not a reporting process that takes place once per year:

Very much continuous ... The integrated report is more an outcome of a very robust governance and management framework or process it takes. (12)

CellTech's integrated reporting process also seems an institutionalised process as there are no formal documentation or policies that guide the process:

Very much entrenched. No we do not have a policy, it's just entrenched ... in my view things have become entrenched in terms of, some of it was even there before we did the integrated report ... it's almost an outcome where the rest of the processes actually drive the behaviour. (12)

The above findings can be seen as examples of institutionalisation, where processes are embedded and taken for granted (DiMaggio & Powell, 1983; Venter & De Villiers, 2013).

5.3.2 | Regular dialogue with stakeholders

Very little literature exists on how feedback meetings assist in the preparation process of an integrated report. Our research thus contributes to the literature on MCSs and integrated reporting as evidence is found that CellTech uses external and internal feedback meetings as operational performance control systems to facilitate the preparation process of the integrated report. CellTech's feedback meetings monitor what CellTech needs to do in order to improve on the company's previous integrated report. This study further contributes to the literature on institutional work (Lawrence & Suddaby, 2006; Venter & De Villiers, 2013), as it demonstrates that CellTech's feedback meetings can be characterised as embedding and routinising.

5.4 | Informal and formal controls

Our study indicates that a balance of informal and formal controls is necessary to embed the integrated reporting process, supporting the view of Riccaboni and Leone (2010) that informal and formal controls should support and complement one another. We find the MCS at CellTech operating as a package rather than as a system (Merchant & Otley, 2020). While formal controls are provided through a multi-stage annual reporting process, a supportive and collegial atmosphere and regular opportunities for stakeholder dialogue are also critical. Our findings, however, do not support the view of Higgins et al. (2014) and Dimes and De Villiers (2020) that informal controls such as improved employee understanding and socialisation can reduce reliance on formal control mechanisms. Instead, we find that both forms of control are important in the production of an integrated report. We do, however, find that employee perceptions of informal controls are more positive and that this provides an environment where formal controls may operate more successfully.

6 | CONCLUSION

This study provides an understanding of how MCSs play a role in the preparation of an integrated report, and how they may enable, constrain, and embed the integrated reporting process, contributing to its institutionalisation. We identify the links between MCSs and different forms of institutional work, namely the fact that MCSs can enable (enabling work), constrain (detering work), and entrench (embedding and routinising work) procedures. Our case study contributes to a body of evidence suggesting that the integrated reporting process can bring internal benefits (Feng et al., 2017; McNally et al., 2017), as our data largely show positive results and a positive perception of the MCS supporting the process by CellTech employees, who were notably supportive of informal controls such as open-plan office structures.

Our study is one of the first to provide a detailed stage-by-stage analysis of the production process for an integrated report, indicating the interaction with MCS at every stage. Our study sheds light on the annual IR preparation process, contributing to academic knowledge around the IR preparation process by revealing a multi-stage process with regular dialogue with stakeholders and links to strategy development. This study responds to the literature that encourages further investigation of the interaction between MCSs and integrated reporting (De Villiers et al., 2014, 2016; De Villiers, Venter, & Hsiao, 2017; Kerr et al., 2015).

Evidence from this case study indicates that clear organisational responsibilities, a collegial working environment, and regular strategic stakeholder dialogue facilitated the preparation of an integrated report, enabling integrated reporting to become embedded and institutionalised. Evidence further indicates that strategic planning meetings can be used as both strategic performance controls and operational performance controls in the preparation of an integrated report (enabling). The study also provides evidence that a company's organisational culture can be used as both a strategic boundary control and an operational boundary control to enable the preparation process of the integrated report. It is notable that when the integrated reporting process was owned by the finance department, it was viewed by employees as less successful, potentially providing evidence to support Adams's (2017) view that the finance function may constrain (deter) long-term value creation. However, it appears from our evidence that an organisational culture that allows for regular formal and informal dialogue and communication is more important than individual departmental ownership of the process in enabling, embedding and therefore institutionalising IR. Our study also contributes to the literature on integrated reporting and MCS by demonstrating the enabling role of a balance between formal and informal controls in the successful production of a high-quality report. Our case provides evidence of controls supporting and complementing each other (supporting; Riccaboni & Leone, 2010),

while we do not find evidence of informal controls overriding formal controls, contrary to Dimes and De Villiers (2020).

Our findings may be of interest to current IR practitioners, and those considering adopting IR. Prior research suggests that organisations find it difficult to produce high-quality integrated reports (De Villiers et al., 2020; McNally et al., 2017). Although a single case study, this case provides evidence that certain management actions can enable or constrain the successful production of a high-quality integrated report. The continuous multi-stage process adopted by CellTech is likely to interest and inform practitioners. In addition, practical guidance suggesting clear organisational roles and responsibilities suggest that to produce a high-quality report a single team should have responsibility, provided that team is able to form sound relationships with holders of financial and non-financial information. However, consistent with other studies in the sustainability field, we find that non-financial information provided for external reporting is not used very effectively for internal control purposes.

As with all research, this study is subject to certain limitations. This is a single case site, which precludes generalisation, but allows for in-depth examination of particulars, facilitating generalisation to theory (Scapens, 1990; Yin, 1994). The possibility of interviewer bias was mitigated by careful attention to the analysis of the participants' responses, as described in the method section. Interviewee bias was further mitigated by the open-ended nature of the questions, the close link between the interview questions and the research question, and the use of theoretical frameworks to analyse the data.

ACKNOWLEDGEMENTS

Open access publishing facilitated by The University of Auckland, as part of the Wiley - The University of Auckland agreement via the Council of Australian University Librarians.

DATA AVAILABILITY STATEMENT

Data is available from the authors upon request.

ORCID

Charl de Villiers  <https://orcid.org/0000-0002-0715-8957>

REFERENCES

- Adams, C. (2017) Conceptualising the contemporary corporate value creation process. *Accounting, Auditing and Accountability Journal*, 30(4), 906–931.
- Adams, S. & Simnett, R. (2011) Integrated reporting: an opportunity for Australia's not-for-profit sector. *Australian Accounting Review*, 21(3), 292–301.
- Anthony, R. & Govindarajan, V. (2007) *Management control systems*. Chicago, IL: Mc-Graw-Hill.
- Babbie, E. & Mouton, J. (2010) *The practice of social research*. Cape Town: Oxford University Press Southern Africa.
- Barth, M.E., Cahan, S.F., Chen, L. & Venter, E.R. (2017) The economic consequences associated with integrated report quality: capital market and real effects. *Accounting, Organizations and Society*, 62, 43–64. Available from: <https://doi.org/10.1016/j.aos.2017.08.005>
- Bridges, C.M., Yeoman, M. & Harrison, J. (2020) Implementation of integrated thinking and reporting – integrated thinking or integrated reporting, which comes first? In: De Villiers, C., Hsiao, P.C.K. & Maroun, W. (Eds.) *The Routledge handbook of integrated reporting*. London: Routledge.
- Brinkmann, S. (2013) *Qualitative interviewing. Understanding qualitative research*. New York: Oxford University Press.
- Bryman, A. & Bell, E. (2014) *Research methodology: business and management contexts*. Cape Town: Oxford University Press Southern Africa (Pty) Ltd.
- Bui, B. & De Villiers, C. (2017) Carbon emissions management control systems: field study evidence. *Journal of Cleaner Production*, 166, 1283–1294.
- Bui, B. & De Villiers, C. (2018) Management control systems to support sustainability and integrated reporting. In: De Villiers, C. & Maroun, W. (Eds.) *Sustainability accounting and integrated reporting*. Routledge: Abington.
- Cavicchi, C., Oppi, C. & Vagnoni, E. (2019) On the feasibility of integrated reporting in healthcare: a context analysis starting from a management commentary. *Journal of Management and Governance*, 23(2), 345–371.

- Chaidali, P. & Jones, M.J. (2017) It's a matter of trust: exploring the perceptions of integrated reporting preparers. *Critical Perspectives on Accounting*, 48, 1–20.
- Chenhall, R.H. & Euske, K.J. (2007) The role of management control systems in planned organizational change: an analysis of two organizations: accounting, organizations and society. *Accounting, Organizations and Society*, 32(7/8), 601–637.
- Collier, P.M. (2005) Entrepreneurial control and the construction of a relevant accounting. *Management Accounting Research*, 16(3), 321–339.
- De Villiers, C. & Dimes, R. (2022) Critical analysis of the contribution of integrated reporting (IR) to sustainability. In: Adams, C. (Ed.) *Handbook of accounting and sustainability*. Cheltenham: Edward Elgar Publishing Limited.
- De Villiers, C., Hsiao, P.-C.K. & Maroun, W. (2017) Developing a conceptual model of influences around integrated reporting, new insights, and directions for future research. *Meditari Accountancy Research*, 25(4), 450–460.
- De Villiers, C., Hsiao, P.-C.K. & Maroun, W. (2020) Introduction to the Routledge handbook of integrated reporting – an overview of integrated reporting and this book, which entails different perspectives on a maturing field and a framework for future research. In: De Villiers, C., Hsiao, P.-C.K. & Maroun, W. (Eds.) *The Routledge handbook of integrated reporting*. Routledge: London.
- De Villiers, C., Kerr, J. & Rouse, P. (2016) A new conceptual model of influences driving sustainability based on case evidence of the integration of corporate sustainability management control and reporting. *Journal of Cleaner Production*, 136(A), 78–85.
- De Villiers, C., Rinaldi, L. & Unerman, J. (2014) Integrated reporting: insights, gaps and an agenda for future research. *Accounting, Auditing and Accountability Journal*, 27(7), 1042–1067.
- De Villiers, C. & Sharma, U. (2020) A critical reflection on the future of financial, intellectual capital, sustainability and integrated reporting. *Critical Perspectives on Accounting*, 70, 101999. Available from: <https://doi.org/10.1016/j.cpa.2017.05.003>
- De Villiers, C., Venter, E. & Hsiao, P. (2017) Integrated reporting: background, measurement issues, approaches and an agenda for future research. *Accounting and Finance*, 57(4), 937–959.
- DiMaggio, P.J. & Powell, W.W. (1983) The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147–160.
- Dimes, R. & De Villiers, C. (2020) How management control systems enable and constrain integrated thinking. *Meditari Accountancy Research*, 29, 851–872. Available from: <https://doi.org/10.1108/MEDAR-05-2020-0880>
- Dumay, J. & Dai, T. (2017) Integrated thinking as a cultural control? *Meditari Accountancy Research*, 25(4), 574–604.
- Eccles, R.G. (2014) *The integrated reporting movement: meaning, momentum, motives, and materiality*, 1st edition. New York: John Wiley & Sons.
- EY's Excellence in Integrated Reporting Awards (EY). (2020) Available from: <https://integratedreportingsa.org/ircsa/wp-content/uploads/2020/09/EY-Excellence-in-Integrated-reporting-2020-Report.pdf> [Accessed 23rd March 2021].
- Feng, T., Cummings, L. & Tweedie, D. (2017) Exploring integrated thinking in integrated reporting – an exploratory study in Australia. *Journal of Intellectual Capital*, 18(2), 330–353.
- Gond, J., Grubnic, S., Herzig, C. & Moon, J. (2012) Configuring management control systems: theorizing the integration of strategy and sustainability. *Management Accounting Research*, 23(3), 205–223.
- Green, W.J. & Cheng, M.M. (2019) Materiality judgements in an integrated reporting setting: the effect of strategic relevance and strategy map. *Accounting, Organizations and Society*, 73, 1–14.
- Higgins, C., Stubbs, W. & Love, T. (2014) Walking the talk(s): organisational narratives of integrated reporting. *Accounting, Auditing and Accountability Journal*, 27(7), 1090–1119.
- Hollis-Turner, S. (2015) The influence of open plan work-environments on the productivity of employees: the case of engineering firms in Cape Town. *Problems and Perspectives in Management*, 13(2), 51–56.
- IFRS. (2022) *Integrated reporting: articulating a future path*. Available from: <https://www.ifrs.org/news-and-events/news/2022/05/integrated-reporting-articulating-a-future-path/> [Accessed 21st January 2021].
- IIRC. (2017) *Creating value: the cyclical power of integrated thinking and reporting*. Available from: https://integratedreporting.org/wp-content/uploads/2017/05/CreatingValue_IntegratedThinkingK1.pdf [Accessed 21st January 2021].
- IIRC. (2020) *Integrated thinking and strategy state of play report 2020*. Available from: https://integratedreporting.org/wp-content/uploads/2020/01/Integrated-Thinking-and-Strategy-State-of-Play-Report_2020.pdf [Accessed 21st January 2021].
- Institute of Directors in Southern Africa (IoDSA). (2016) *King IV report on corporate governance in South Africa*. Johannesburg: Lexis Nexus South Africa.
- Institute of Directors in Southern Africa (IoDSA) and King III. (2009) *King code of governance for South Africa, 2009*. Parklands: Institute of Directors in Southern Africa.
- Integrated Reporting Committee of South Africa (IRC). (2011) *Framework for integrated reporting and the integrated report*. Available from: [www.sustainabilitysa.org/Portals/0/IRC of SA Integrated Reporting Guide Jan 11.pdf](http://www.sustainabilitysa.org/Portals/0/IRC%20of%20SA%20Integrated%20Reporting%20Guide%20Jan%2011.pdf) [Accessed 25th April 2012].
- Integrated Reporting Framework (IRF). (2021) Available from: <https://integratedreporting.org/wp-content/uploads/2021/01/InternationalIntegratedReportingFramework.pdf> [Accessed 21st January 2021].

- Kerr, J., Rouse, P. & De Villiers, C. (2015) Sustainability reporting integrated into management control systems. *Pacific Accounting Review*, 27(2), 189–207. Available from: <https://doi.org/10.1108/PAR-08-2012-0034>
- Lai, A., Melloni, G. & Stacchezini, R. (2017) What does materiality mean to integrated reporting preparers? An empirical exploration. *Meditari Accountancy Research*, 25(4), 533–552.
- Lawrence, T.B. & Suddaby, R. (2006) *Institutions and institutional work*, 2nd edition. London: Sage Handbook of Organization Studies, Sage, pp. 215–254.
- McNally, M., Cerbone, D. & Maroun, W. (2017) Exploring the challenges of preparing an integrated report. *Meditari Accountancy Research*, 25(4), 481–504.
- McNally, M. & Maroun, W. (2018) It is not always bad news. *Accounting, Auditing & Accountability Journal*, 31(5), 1319–1348. Available from: <https://doi.org/10.1108/AAAJ-05-2016-2577>
- Merchant, K.A. & Otle, D. (2020) Beyond the systems versus package debate. *Accounting, Organizations and Society*, 86, 101185.
- Merchant, K.A. & Van der Stede, W.A. (2017) *Management control systems. Performance measurement, evaluation, and incentives*, 4th edition. Pearson: Pearson Education Limited. ISBN: 978-1-292-11055-4.
- Morsing, M. & Oswald, D. (2009) Sustainable leadership: management control systems and organisational culture in Novo Nordisk A/S. *Corporate Governance: The International Journal of Business in Society*, 9(1), 83–99.
- Oliver, J., Vesty, G. & Brooks, A. (2016) Conceptualising integrated thinking in practice. *Managerial Auditing Journal*, 31(2), 228–248. Available from: <https://doi.org/10.1108/MAJ-10-2015-1253>
- PWC. (2010) *King's Counsel, Integrated Reporting, Steering point, PriceWaterhouseCoopers, Business School Corporate Governance Series*. March 2010, South Africa. Available from: <https://www.pwc.co.za/en/assets/pdf/steering-point-kingiii-intergratedreporting-13.pdf> [Accessed 1st June 2012].
- Riccaboni, A. & Leone, L.E. (2010) Implementing strategies through management control systems: the case of sustainability. *International Journal of Productivity and Performance Management*, 59(2), 130–144.
- Saldana, J. (2015) *The coding manual for qualitative researchers*. Singapore: Sage Publications.
- Scapens, R.W. (1990) Researching management accounting practice: the role of case study methods. *British Accounting Review*, 22, 259–281.
- Simons, R. (1995) *Levers of control: how managers use innovative control systems to drive strategic renewal*. Boston, MA: Harvard Business School Press.
- Siska, L. (2015) The concept of management control system and its relation to performance measurement. *Procedia Economics and Finance*, 25, 141–147.
- Stack, E. (2019) *Research methodology*. Unpublished course material. Grahamstown-Makhanda: Department of Accounting, Rhodes University.
- Stubbs, W. & Higgins, C. (2014) Integrated reporting and internal mechanisms of change. *Accounting, Auditing and Accountability Journal*, 27(7), 1068–1089.
- Sukhari, A. & De Villiers, C. (2019) The influence of integrated reporting on business model and strategy disclosures: business model and strategy disclosures. *Australian Accounting Review*, 29(4), 708–725.
- Tessier, S. & Otle, D. (2012) A conceptual development of Simons' levers of control framework. *Management Accounting Research*, 23, 171–185.
- Thomson, I. (2015) 'But does sustainability need capitalism or an integrated report' a commentary on 'the international integrated reporting Council: a story by flower'. *Journal Critical Perspectives on Accounting*, 27, 18–22.
- Venter, E. & De Villiers, C. (2013) The accounting profession's influence on academe: South African evidence. *Accounting, Auditing and Accountability Journal*, 26(8), 1246–1278.
- Wulf, I., Niemöller, J. & Rentzch, N. (2014) Development toward integrated reporting and its impact on corporate governance: a two dimensional approach to accounting with reference to the German two-tier system. *Journal of Management Control*, 25(2), 135–164.
- Yin, R.K. (1994) *Case study research: design and methods*, 2nd edition. Applied Social Research Methods Series, Volume 5. Thousand Oaks, CA: Sage Publishing.
- Zharfpeykan, R. & Akroyd, C. (2022) Factors influencing the integration of sustainability indicators into a company's performance management system. *Journal of Cleaner Production*, 331, 129988.

How to cite this article: Bezuidenhout, S., de Villiers, C. & Dimes, R. (2023) How management control systems can enable, constrain, and embed integrated reporting. *Accounting & Finance*, 63, 4251–4273. Available from: <https://doi.org/10.1111/acfi.13092>