

Integrated Thinking and its Relevance in contemporary
Management Decisions: applying Integrated Thinking to
Volkswagen's emissions test scandal case.

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Abstract

In this fast pacing world, managers need to quickly adapt their strategies bearing in mind companies goals and business plan. Was not this challenging enough, the number of agents and aspects to have in consideration are increasing and their needs go from environmental sustainability to companies' profit and social impact. A wrong decision can unleash serious issues that affect companies' finances and name/image. Being so, the aim of this report is to highlight the usefulness of Integrated Thinking dealing with this reality, by applying this methodology to Volkswagen in a period where its reputation, strategy and business plan are being questioned and it has the need to overcome this situation.

Key words: Sustainability, Value Creation, Integrated Thinking, Integrated Reporting

Introduction

“Not everything that can be counted counts, and not everything that counts can be counted.”

(author not clearly identified but attributed to Albert Einstein).

Although this quote was written decades ago by one of the greatest minds ever, it could not be more contemporaneous and relevant in the context of managing companies.

In a time where competitiveness and value creation are critical goals for organizations and the number of stakeholders and interests in any market or industry are increasing, companies and their managers must take care of a wide range of issues, whose difficulty of measurement is increasing, and aligned all of them bearing in mind the company's goal and strategy.

A useful methodology that help managers to deal with this is Integrated Thinking which is a holistic (deals with the whole and not just a part) process that promotes sustainable growth and value creation for stakeholders over time, through share of information and increase connectivity across the value chain, as well as, sustainable initiatives which are ingrained into the business model, strategic decision-making and actions for organizations goals.

After exploring Integrated Thinking further, its philosophy, tools and utility, this essay will try to answer the following question.

Once Integrated Thinking focuses on connectivity and interdependencies of concepts and contents like capitals, performance, risks, opportunities or business model, to define and communicate how sustainable value is created among all shareholders, how could it help to deal with difficult situations or scandals such as Volkswagen cheating on emissions tests in the USA?

Literature Review

Integrated Thinking is a new term (Druckman, 2015) that reflects an existing methodology that has gained significant momentum in the last ten years.

In the first years, this methodology raised some concerns and doubts. On the one hand many see Integrated Reporting (the visible part of Integrated Thinking) as a potentially expensive activity because of the resources involved and the degree of cultural change required from the organization (Fisher, 2016). On the other hand, there is also evidence of substantive barriers to implementing some form of integrated thinking in organizations (Feng, Cummings and Tweedie, 2017), such as difficulty in monetizing some capitals or impacts.

This occurred because there were not sufficient examples or accurate guidelines on how to implement this managerial approach and its definition lacked clarity. This is precisely what was undertaken by Feng, Cummings and Tweedie (2017) in their report.

However, with further research, clearer definitions, creation of guiding organizations (e.g. IIRC – International Integrated Reporting Council: “global coalition of parties in the adoption of Integrated Reporting on an international basis as a means to improve communication about value creation, advance the evolution of corporate reporting, and make a lasting contribution to financial stability and sustainable development” – in IRCC web site) and effort from pioneer companies, efficiency, results and advantages of implementing Integrated Thinking methodology start to get visible in companies worldwide and from different sectors. These, through the usage of some tools like Balance Score-Card, the Triple Bottom Line or Sustainability Reporting, but mainly Integrated Reporting (<IR>). As Churet and Eccles (2014) suggest, “integrated reporting is only the tip of the iceberg: The visible part of what is happening below the surface. What is happening below the surface is integrated thinking”

As mentioned by Eccles and Saltzman (2011), Integrated Reporting benefits can be divided into three classes. The first is internal benefits, including improvement in decision making process, better internal resource allocation, greater engagement with stakeholders and reduction of operational and reputational risk. This is as suggested by IIRC research conducted by consultancy Black Sun, which found that, among organizations that had issued an integrated report, “79% agree that business decision-making has improved”, “79% agree identifying risks and opportunities has become more effective” and “91% have seen a positive impact on external engagement with stakeholders, including investors”. The second is external benefits, this is meeting the needs of stakeholders, such as providing non-financial, sustainable and value creation information that allow investors to have a clearer holistic picture, and so, take a more grounded decision. “The third is managing regulatory risk, including being prepared for a likely wave of global regulation, responding to requests from stock exchanges (...)” (Eccles and Saltzman, 2011, p. 59).

Balancing the pros and cons of adopting Integrated Thinking methodology and its tool <IR>, allowed Lee and Yeo (2016) to conclude that Integrated Reporting’s benefits exceed its costs. That is because, at a financial level, as Harvard Business School study hails, <IR> enables financial stability and “companies who adopt Integrated Reporting practices benefit from a greater understanding of their business, the business environment and their ability to create value. A greater understanding of the business enables companies and investors to make better decisions for long-term success” (Topazio, 2014, p. 4). At a social-economic level, there is a public sentiment of concern reflected in the choices of consumers and employment preferences, that increase economic incentives for companies to improve their nonfinancial or environmental, social, and governance (ESG) performance (Knauer and Serafeim, 2014)

Concluding, although there are an increasing number of reports attesting efficiency, value and advantages of Integrated Thinking and Reporting, none of those cover the usefulness of this

methodology in dealing with an extreme situation like a scandal, and it is this that the report will try to bring out to the light.

Integration Thinking its usefulness and application

Integrated Thinking methodology and its increasing relevance

After years of evolution, the most accepted definition of this methodology is the one provided by IIRC in 2013 where it defines Integrated Thinking as an “active consideration by an organization of the relationships between its various operating and functional units and the capitals that the organization uses or affects”. “Integrated thinking leads to integrated decision-making and to actions that consider the creation and sustain of value over the short, medium and long-term” (Druckman, 2014. p. 7). Value creation is defined as “the process that results in increases, decreases or transformation of resources which are caused by the company’s business activities, outputs and outcomes” (King, 2015, p. 477).

The capitals referred to in these definitions are the resources and relationships an organization depends on, once “value is embodied in the capitals that the organization uses and affects. So organization’s ability to create value in the short, medium, and long term depends on an understanding of the connectivity between its business model and a wide range of internal and external factors” and capitals (Busco, Frigo, Quattrone, Riccaboni, 2013, p. 36). Being so, these are the capitals that should be referred to in companies’ Integrated Reporting according to each company specific needs. Those capitals are financial (funds available to an organization to use in the production of goods or services which are obtained through financing, such as debt or investments); manufactured (physical objects an organization can use in the production of goods or services, including buildings, equipment and infrastructure); intellectual (knowledge-based intangibles, including intellectual property); human (people’s competencies, capabilities and experience, and their motivations to innovate and cooperate

with the different needs of the company); social and relationship (institutions and relationships within and between communities, stakeholders and other networks, and the ability to share information to enhance individual and collective wellbeing); and natural (all renewable and non-renewable environmental resources and processes that provide goods or services that allow company to create sustainable value) (The International <IR> Framework, 2013).

The integration of the six capitals in the external environment and its alignment with the company's value creation and business model, can be represented as is in figure1.

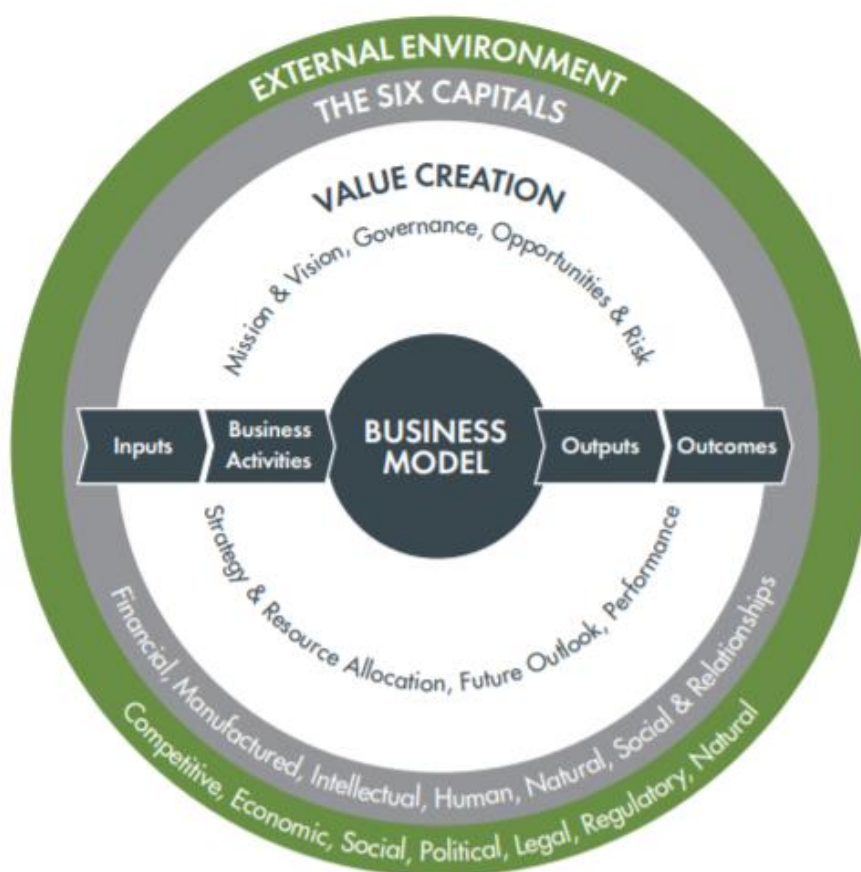


Figure 1: Context of capitals in the business model and external environment

Source: CGMA Briefing: “Integrated Thinking - The next step in integrated reporting”

Although there are not strict rules to follow when implementing Integrated Reporting, so that companies can adapt this report to their specific needs, there are 7 guiding principles and 8

content elements that IIRC advise companies to use. This is, following these seven guiding principles, companies should include the eight content elements in their Integrated Report to take advantage of the Integrated Thinking methodology. The guiding principles and content elements are explained and schematically shown in figure 2.

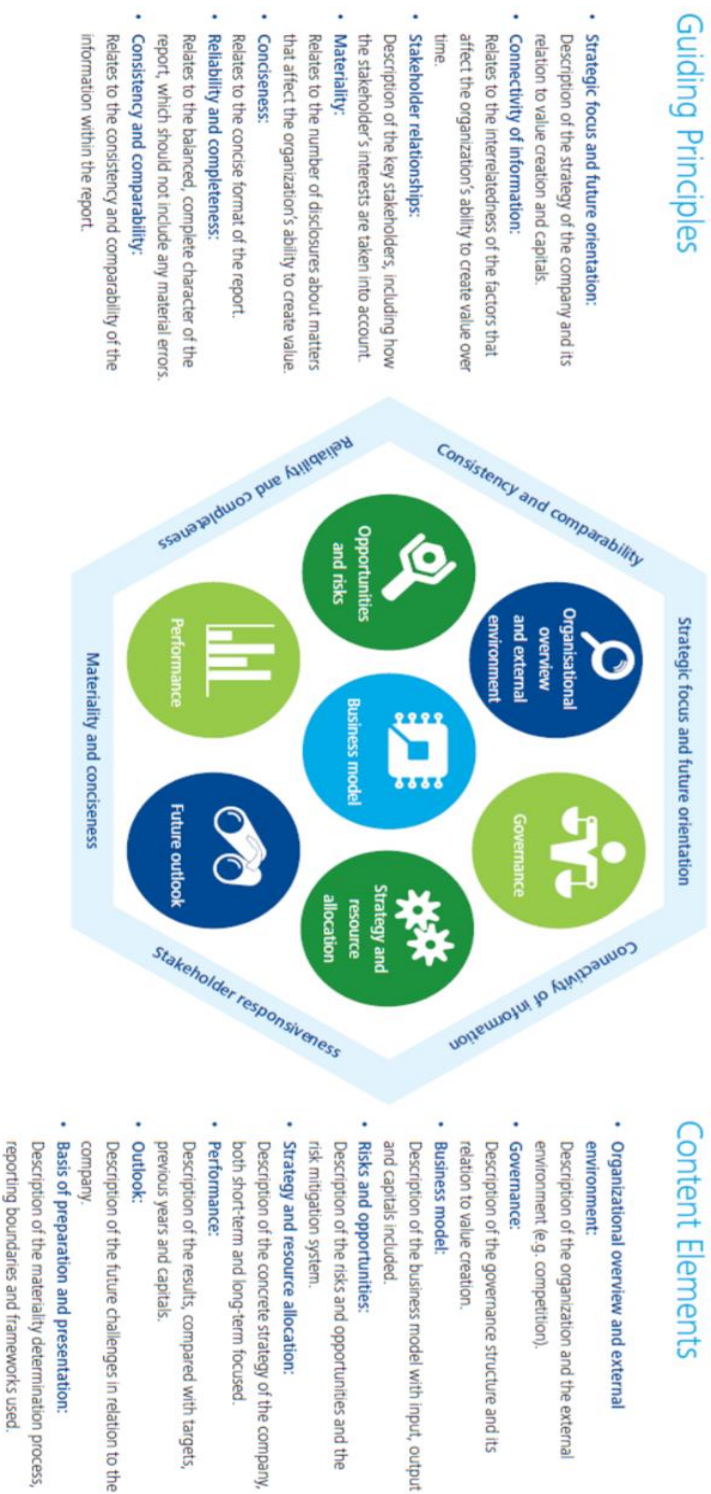


Figure 2: 7 Guiding Principles and 8 Content Elements from the IIRC

Source: Deloitte's report: "Integrated Reporting as a driver for Integrated Thinking? – Maturity of <IR> in the Netherlands 2015"

So far, we got to know what Integrated Thinking is, what it aims for, which capitals should managers take into consideration to implement this management methodology and how it is visible and supported in organizations by its tools. But is there, indeed, a need for this methodology?

Integrated Thinking through “Integrated reporting brings together material information about an organization’s strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates. It provides a clear, concise representation of how an organization demonstrates sustainability and creates value.” (Topazio, 2014, p. 2). Being so, Integrated Thinking could be organizations’ answer to people’s increasing perception (due to recent financial crisis and corporate scandals) of businesses as one of the major causes of social, environmental, and economic problems.

In a more internal perspective, the “2010 Annual study of the composition of equity market value in the S&P 500” done by Ocean Tomo in 2010 concluded that the value of intangible assets has grown from 17% in 1975 to over 80% in 2010 of total market value for S&P 500 companies. This is a massive proportion of organizations’ true value not to be properly considered neither by current financial accounting standards nor by managers when they are building their strategies and aligning it with companies’ goals and business model. It is easy to see that the increasing value and preponderance of intangible assets increase the need of new managerial tools like Integrated Reporting and the methodologies behind it.

Besides dealing and properly valuing non-financial and intangible assets, Integrated Report also focuses on the external business environment which allow managers to identify opportunities in a quickly changing and risky external environment, and those may become competitive advantages if effectively assessed and managed.

By implementing this methodology, companies are one step closer to break down internal silos, and so, have a holistic overview and a better or more efficient flow of information and communication. Which, with the help of Integrated Report, improved disclosure of useful information to different stakeholders. For investors this disclose could mean a reduction of cost of capital; for employees, it increases engagement and motivation to deliver more and of higher quality value, for clients and prospects it gives a better business and brand perception which is crucial in today's marketing activities.

It is becoming hard to argue that Integrated Thinking and its tools like Integrated Reporting do not give an answer to plural needs and concerns of stakeholders and can help companies to generate value by just changing the way managers interpret their business, becoming a useful managerial methodology not only for the present but for future challenges. However, in a particular and delicate situation like the one Volkswagen have to deal after its cheating in emissions test scandal what can Integrated Thinking do to help?

Volkswagen's emissions test scandal and management style

Back in September 2015, a scandal erupted in USA and quickly spread around the world, with the help of media channels, mass communication technologies and social networks, which brought consequences not only financial, but also in society, environment and politics. The Environmental Protection Agency (EPA) found that the German car giant, Volkswagen, cheated on emissions tests in the USA adding a software to its engines that detected when the cars were being tested in laboratory and changing the performance and emission of pollutants like nitrogen oxide to improve results.

It all started when the USA, and specially, the state of California tightened the limits of pollutant gases emissions and no car producer, but Volkswagen, were being able to meet those requirements in their diesel engines. Its competitors were intrigued and even had looked

into its cars in order to try to find the “secret” technology that would allow those results, but their effort was in vain. However, after doing some on-road emission tests, which were not detected by the “defeat device”, West Virginia University found huge discrepancies between real emissions and those measured on tests (Nunes and Park, 2016). This is, the Volkswagen’s engines emitted nitrogen oxide pollutants up to 40 times above what is allowed in the USA.

Here there were no turning point and Volkswagen admitted “it had found “irregularities” in tests to measure carbon dioxide emissions levels” (Hotten, 2015, p. 2) and a series of internal and external overwhelming devastating consequences on stakeholders of Volkswagen followed.

As far as internal consequences are concerned, beside firing some managers, the CEO (at the time) Martin Winterkorn resigned, and having hired key people like Thomas Sedran, the former CEO of Opel as head of corporate strategy (Associated Press, 2015), there were structural changes, such as “Volkswagen decentralizing its management structure by giving division managers more autonomy” (Jung and Park, 2017, p. 134). However, these reforms have been received with skepticism. Nevertheless, economic and brand image consequences were the most visible and had the greatest impact.

In economic terms, the German car giant not only faced worldwide economic losses caused by fines, recalls and decreased sales (Jung and Park, 2017), which the costs in total were expected to exceed the amount of half-year of profits [6.5 billion euros] (Eddy, 2015), but also a huge loss of market value.

According to BBC News, Volkswagen “shares have fallen by about a third [after] the scandal broke”.

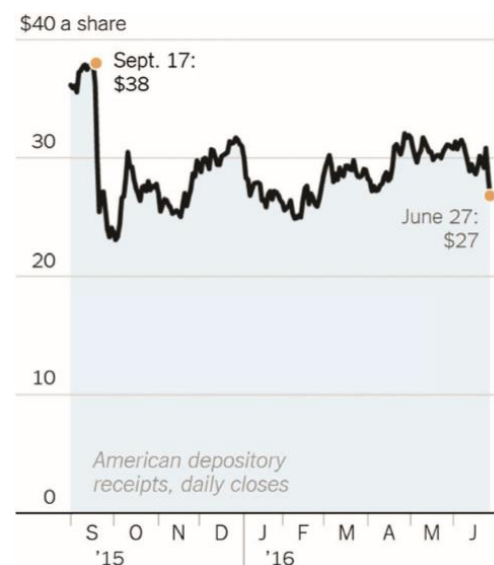


Figure 3 – Volkswagen stock market value before and after the scandal

This last is known to cause cancer, emphysema, bronchitis and other respiratory problems (Gates, Keller, Russell, & Watkins, 2015; Selin, 2015). From a public health perspective, “health damages from the hazardous pollutants of diesel engines could cost \$100 million (Selin, 2015)” (Jung and Park, 2017, p.132).

With such negative consequences, the majority of them quite predictable, something wrong was occurring inside Volkswagen, or at least, its managers and decision makers were not integrating and considering the costs of all capitals while planning their strategies. Clearly, Volkswagen just took into consideration financial capital and neglected other capitals like human, social and relationship, and natural. This led to a value “creation” that was not resultant from an alignment of strategy with internal and external resources.

Previous the diesel engine scandal, Volkswagen leadership style was austere as its CEO, Martin Winterkorn, “authoritarian leadership style allowed no autonomy to subordinates, cultivated fear, and discouraged open communication across the management hierarchy” (Jung and Park, 2017, p.129). Besides this, “Winterkorn’s lack of vision and innovative mindset (...) limited the opportunities for developing innovative technologies and for being ahead of the emerging ecofriendly automobile market” (Jung and Park, 2017, p.129-130). After these considerations, there are no doubts that Volkswagen was losing great opportunities to take advantage of its human capital as well as its social and relationship capital, once “close communication and collaboration with employees who possess knowledge and willingness to accept other experts’ opinions is a key to success” (Jung and Park, 2017, p.135).

Moreover, Volkswagen was known for its insular governance. This is, Volkswagen had a highly centralized management style where members of the board were not willing to hear negative information about their projects neither to disengage a failing course of actions. This became clear when “although some Volkswagen engineers and technicians informed their

supervisors about emission rigging activities in the year 2011, supervisors ignored the alert (Boston, Varnholt, & Sloat, 2015)” (Mansouri, 2016, p.211-212).

These both facts (the “insular governance” that do not appreciate opposing perspectives and the under usage of human capital to develop the company and improve value creation) helped to detect a lack of a holistic view of the business by managers and decision makers, giving another hint to understand why this scandal occurred and why Integrated Thinking could be useful to improve Volkswagen’s management style.

Analyzing the pre-scandal Volkswagen’s managerial methodology, it becomes clear that the diesel engine scandal had its roots in the Volkswagen’s culture, approach and managerial style. This is, the scandal was not “one-off mistake”, but, as BBC News mentioned, “must have had a chain of management commands that approved fitting cheating devices to its engines”.

This happens because Volkswagen’s managerial style, culture and mindset did not evolve into today’s business’s needs, integrating in the decision-making process and in the strategic planning all the capitals that interfere in company’s value creation. As Goodman, McGrath and Leah said in 2015, “in accordance with [Volkswagen’s] culture, the demand and expectations of the company should be fulfilled regardless of how employees are able to perform the tasks” and “the mindset of some departments of the company (...) fails to comply the rules” if it is necessary to achieve the company’s goals. Even the financial rewarding system implemented in Volkswagen “leads employees not to come out with dissenting opinions” (Mansouri, 2016, p.212).

That goes against all the good practices and modern managerial key recommendations, where in this fast-changing global marketplace top managers are encouraged to take the most out of their resources and employees, while both explore new technologies, solutions and

approaches, as well as, exploit current strengths in order to sustain the company's competitiveness (Jung and Park, 2017).

Saying this, although some relevant issues become clear and partly answer our question, what remains unanswered is why should Volkswagen start looking for an Integrated Thinking methodology and apply Integrated Report?

Integrated Thinking and its tools in Volkswagen's emissions scandal case

Besides all the advantages previously mention about this managerial methodology, in this specific case of Volkswagen, the company should focus on "cleaning" its brand image and reputation, and having an extra attention to human, social and environmental impacts while keeping its competitiveness.

An ACCA (the Association of Chartered Certified Accountants) study mentioned by Neil Stevenson (2015), concluded that "Two-thirds of investors surveyed had lost trust in company reports since the onset of the global financial crisis". The same is plausible to happen in a scandal like this so the change to this new reporting could be a step towards social and consumers good brand perception and to increase reputation. This is also corroborated by Hoque (2017) that state in his report that "after the many financial scandals and crises, transparency about the board of companies and their activities become main concern". This is where Integrated Reporting becomes handy, once it "is a prominent tool for corporate governance to interact with its key stakeholders (OECD, 2014)" and clearly shows their strategies, goals and how Volkswagen managers and decision makers are going to accomplish them. This is essential once, "politicians, regulators and environmental groups now question the legitimacy of Volkswagen's emissions testing" and in no time all stakeholders will question company's activities, goals and mainly trustworth and reputation.

Adding to this, a “higher level of disclosure help [companies] to become transparent, so, firms may gain investors’ trust on those charged with governance (...) and increase corporate reputation. That reputation [and transparency] helps board to negotiate with stakeholders (Simnett et al., 2009)” (Hoque, 2017, p.244) and reduce supply-chain risks due to interactions with suppliers and different categories of customers. As Gardberg and Fombrun (2006) mentioned, “Enhancing corporate reputation able to create significant business advantages”. So, a shift to Integrated Thinking allows Volkswagen to enter in a positive spiral that will help it to recover its good and strong image which will have an impact on the finance of the company, once this may allow the company to both reduce costs and increase revenues as it is explained ahead.

As mentioned before, Integrated Report is becoming a very used tool by investors and they favor companies that they understand how they are creating value and if they are sustainable not only in the short but also in the long term. This is why Bloomberg added back in 2009 nonfinancial data to its information offerings over thousands of public companies. As a result, as Eccles & Saltzman highlight in their report “Achieving Sustainability Through Integrated Reporting”, in the second half of 2010, customers in 29 countries accessed more than 50 million environmental, social and governmental (ESG) indicators.

This is to say that even in the stock market, the adoption of Integrated Thinking by Volkswagen can bring some advantages, once investors look for information and relations between capitals and elements that Integrated Report provides. Furthermore, with the trust, transparency and reputation that would increase with the information disclosed and better understanding of the company’s business plan and strategy, Volkswagen could charge premium prices for their products and reduce their cost of capital. This reduction in cost of capital means increase in profit and earnings per share, which reflects appreciation of stock prices (Dhaliwal et al., 2011).

When it comes to competitiveness, Volkswagen should increase the efficiency of its available resources and capitals. This could be easily done and with minimal or none additional cost with the integration of human, and social and relations capitals once, “free exchange of information could help the company become more innovative and effectively address new demands from the industry” (Jung and Park, 2017, p.135), and other shareholders. This is crucial to not get stuck in time as so happened before with its managerial style. This gets even more relevance once Volkswagen competitors are also positioning themselves to adopt and take the most out of the Integrated Thinking methodology. This fact is highlighted by the fact that, not only Volvo is one on the pioneer companies adopting Integrated Thinking and implementing Integrated Reporting, but also General Motors are giving steps towards this methodology, being one of the participants in “The Second Annual NYSSCPA” which theme was “Sustainability Assurance: Creating Value through Integrated Thinking”. Being so, Volkswagen should take firm steps towards Integration Thinking to take the most out of this methodology, clean its brand image and do not get behind its competitors.

As mentioned before, Integrated Thinking and Integrated Reporting allow companies’ managers and decision makers to have a holistic perspective of the business and its surroundings, so it put them in a privileged position to give a more efficient response towards society and environment with financial measures. This include the integration of externalities, specially the negative ones. Knowing this, Volkswagen can use this methodology and its tools to assure that nobody needs to pay for its activities or mistakes. As suggest Nunes and Park (2016), Volkswagen should negotiate with the different entities in order to, using its know-how and Research & Development department, “invest” the huge amount of money of the penalties in developing traditional technology and innovative solutions to create cleaner and more environmentally friendly engines and car components. In practical terms, if this investment results in an increment of Volkswagen electronic vehicles on roads, it may

“compensate the emission of Volkswagen cars with deceptive device” (Mansouri, 2016, p.214) and lead to innovative solutions and new technologies, that may not only be used within the car production industry, that are social and environmental friendly and so more sustainable and in line with modern management needs.

Although it seems that the outcomes of implementing Integrated Thinking methodology and the regular use of its tools like Integrated Report would have raised some red flags when previous de scandal decisions were made and could help Volkswagen to overcome these difficult times, there are some drawbacks that Volkswagen would face when implementing this methodology.

First, Integrated Report is a very complete report, being so it requires a wide range of information from different departments and stakeholders which could create difficulties in collecting it. Furthermore, a structure that meets the stakeholders needs and provides all the relevant information without creating a too long and disinteresting report must be reachable and this takes time and effort from a plurality of stakeholders.

Secondly as all the shifts in any company, it takes time and requires a period of learning before everything is settled and all the advantages of this methodology can be reflected in Volkswagen results, efficiency and value creation.

Finally, there are “indications that companies that produce excellent integrated reports do not necessarily have financial stability, nor do they serve the agenda of sustainability”. For example, mining company Lonmin “was awarded the status of “excellence” in their integrated reporting by Ernst & Young for the past three years, but was associated with the Marikana Tragedy” – on 16 August 2012 a dispute between Lonmin’s Rock Drill operators and the company resulted in 34 deaths and innumerable injuries at one of Lonmin’s mines in South Africa (Tolsi, 2013) - (Schörger and Sewchurran, 2015). This is even more relevant for

Volkswagen once if it uses Integrated Thinking and its tools to help clear its brand image, it should make sure the trade-offs between capitals and the decisions made do not create room for doubts about stability and specially sustainability.

Conclusion

After doing all this research and highlight some examples of how Integrated Thinking can help companies to consider all the aspects (capitals) that may influence their value creation, it seems that this methodology can really be helpful to take the most out of each company business plan, the increasing of efficiency of the resources used, and in last the increase of the companies profit by reducing its costs. This is also true in difficult situations like the one Volkswagen has been facing, just as in the examples I provided should express, once the transparency and free communication between different stakeholders increases the trust and knowledge. This, undoubtedly, helps a company to recover its brand image and reputation while keeping, or even increasing, its competitiveness.

However, there are some drawbacks like the cost of time and learning required in order to collect all the relevant information and build a useful report that meets all stakeholders needs. It is also true that there are still some aspects of this methodology that are not fully understood by companies and need to be further developed. However, with more use and the increasing number of companies that are interested in Integrated Thinking and its tools, the future will bring the necessary clarifications and companies will recognize the “benefits of integrated thinking to enhance their competitiveness and support their sustainability from all perspectives” (SAICA report: Integrated Thinking - An Exploratory Survey).

With all this, it is also possible to conclude that Integrated Thinking methodology would not prevent a scandal (as the Lonmin company example shows). However, if its tools are applied following the principles suggested by IIRC, all the capitals are took into account and the content elements (of <IR>) are well thought, Integrated Thinking would, undoubtedly, “warn” managers and decision makers and give them motives to think carefully before taking any decision. What is also true, is that a good implementation of this methodology could help

Volkswagen in this difficult period and recover their brand image, financial stability and sustainable value creation.

Integrated Reporting as the most relevant tool of Integrated Thinking “is a catalyst to enhancing integrated thinking in organizations”, once it helps managers to adopt this methodology when drafting organizations’ strategies and a business plan, giving them an holistic perspective that allow managers to better combine all capitals and resources and deal with conflicting interests of the various stakeholders that often result in trade-offs that must be wisely considered to do not negatively influence the long term view and value creation, as well as the companies’ goals.

To conclude, this scandal was, not only, “a wake-up call for auto companies to pay more attention to clean energy technology” and “the importance of long-term technology strategies” (Jung and Park, 2017, p.134), but also, an important message for all organizations that in this modern world there is an increasing relevance of all aspects and all of them should be integrated and taken into consideration when a company takes a decision. Being so a methodology like Integrated Thinking with its tools like Integrated Reporting will have an increasing relevant role in present and future companies’ management, no matter how hard is the situation the company is facing.

References

Hage, Jack. 2014. "6 Tips for Integrated Thinking". Journal of Accountancy, December: 20-21.

Fahri Karakas, Mustafa Kavas. 2008. "Creative brainstorming and integrative thinking: skills for twenty-first century managers". Development and Learning in Organizations: An International Journal, Vol. 22 Issue: 2, pp.8-11

Pablo Rodríguez-Gutiérrez. 2018. "Exploring the Implications of Integrated Reporting for Social Investment (Disclosures)". Social and Environmental Accountability Journal, 38:1, 106-107

Bruce, Robert. 2015. "Integrated thinking is the next step". Accounting And Business UK, 1: 26-27

Stevenson, Neil. 2015. "Integrated thinking". Accounting And Business, 4: 36-38

King, Mervyn E. 2015. "The Role of Integrated Thinking in Changing Corporate Behaviour". Global Policy, 6 (4): 477

Rich-Tolsma, Matthew and Oliver, John. 2016. "Addressing the Complexity Gap: Developing Integrated Thinking Skills at Board Level". Board Leadership newsletter, 143: 1-3.

Brian Leavy. 2011. "Roger Martin explores three big ideas: customer capitalism, integrative thinking and design thinking", Strategy & Leadership, Vol. 39 Issue: 4, pp.19-26

G. Eccles, Robert & Saltzman, Daniela. 2011. "Achieving Sustainability Through Integrated Reporting". Stanford Social Innovation Review, Summer: 56-61

Knauer, Andrew and Serafeim, George. 2014. "Attracting Long-Term Investors Through Integrated Thinking and Reporting: A Clinical Study of a Biopharmaceutical Company". *Journal of Applied Corporate Finance*, 26(2): 57-64

Busco, Cristiano; L. Frigo, Mark; Quattrone, Paolo and Riccaboni, Angelo. 2014. "Leading Practices In Integrated Reporting". *Strategic Finance*, September: 23-32

Busco, Cristiano; L. Frigo, Mark; Quattrone, Paolo and Riccaboni, Angelo. 2013. "Redefining Corporate Accountability through Integrated Reporting". *Strategic Finance*, August: 33-41

Judy Oliver, Gillian Vesty, Albie Brooks. 2016. "Conceptualising integrated thinking in practice", *Managerial Auditing Journal*, Vol. 31 Issue: 2, pp.228-248

Tianyuan Feng, Lorne Cummings, Dale Tweedie. 2017. "Exploring integrated thinking in integrated reporting – an exploratory study in Australia", *Journal of Intellectual Capital*, Vol. 18 Issue: 2, pp.330-353

Serafeim, George. 2014. "Integrated Reporting and Investor Clientele". *Harvard Business School Working Paper*, No. 14-069

Charl de Villiers, Leonardo Rinaldi, Jeffrey Unerman. 2014. "Integrated Reporting: Insights, gaps and an agenda for future research", *Accounting, Auditing & Accountability Journal*, Vol. 27 Issue: 7, pp.1042-1067

Velte, Patrick and Stawinoga, Martin. 2017. "Integrated reporting: The current state of empirical research, limitations and future research implications". *Journal of Management Control*, 28(3), 275-320

Habhab, Lydia. 2016. "Integrated thinking and reporting (IR) focusing on value creation in the public sector: an introduction for leaders".

- Schörger, Daniel and Sewchurran, Kosheek.** 2015. "Towards An Interpretive Measurement Framework To Assess The Levels Of Integrated And Integrative Thinking Within Organisations". *Risk governance & control: financial markets & institutions*, 5(3), 44-66
- Enamul Hoque, Mohammad.** 2017. "Why Company Should Adopt Integrated Reporting?". *International Journal of Economics and Financial Issues*, 7(1), 241-248
- Mauro Fracarolli Nunes, Camila Lee Park.** 2016. "Caught red-handed: the cost of the Volkswagen Dieselgate", *Journal of Global Responsibility*, Vol. 7 Issue: 2, pp.288-302
- Jae C. Jung and Su Bin "Alison" Park.** 2017. "Case Study: Volkswagen 's Diesel Emissions Scandal". *Thunderbird International Business Review*, 59 (1), 127-137
- Mansouri, Nazanin.** 2016. "A Case Study of Volkswagen Unethical Practice in Diesel Emission Test". *International Journal of Science and Engineering Applications*, 5 (4), 211-216
- Hotten, Russell.** 2015. "Volkswagen: The scandal explained". BBC News web site
- Yen-pei, Chen.** 2017. "Integrated Reporting supports better business performance and stakeholder relationships, but there is room for improvement". ACCA Global web site
- Fisher, Liz.** 2016. "Integrated reporting: the battle for hearts and minds". ACCA Global web site
- Perrin, Sarah.** 2017. "Reap the rewards of integrated reporting". ACCA Global web site
- Topazio, Nick.** 2014. "CGMA Briefing: Integrated Thinking - The next step in integrated reporting". *Chartered Institute of Management Accountants*, 1-10
- Slack, Richard and Campbell, David.** 2016. "Meeting users' information needs:

The use and usefulness of Integrated Reporting”. The Association of Chartered Certified Accountants, 1-48

Web sites consulted

<http://www.accaglobal.com/gb/en/student/sa/features/career-development--integrated-reporting.html>

Summary

Introduction

In a time where competitiveness and value creation are critical goals for organizations and the number of stakeholders and interests in any market or industry are increasing, companies and their managers must take care of a wide range of issues, whose difficulty of measurement is increasing, and aligned all of them bearing in mind the company's goal and strategy.

A useful methodology that help managers to deal with this is Integrated Thinking which is a holistic (deals with the whole and not just a part) process that promotes sustainable growth and value creation for stakeholders over time, through share of information and increase connectivity across the value chain, as well as, sustainable initiatives which are ingrained into the business model, strategic decision-making and actions for organizations goals.

After exploring Integrated Thinking further, its philosophy, tools and utility, this essay will try to answer the following question.

How could it help to deal with difficult situations or scandals such as Volkswagen cheating on emissions tests in the USA?

Literature Review

Integrated Thinking is a methodology that has gained significant momentum in the last ten years.

In the first years, this methodology raised some concerns and doubts. On the one hand many see Integrated Reporting (the visible part of Integrated Thinking) as a potentially expensive activity because of the resources involved and the degree of cultural change required from the organization (Fisher, 2016). On the other hand, there is also evidence of substantive barriers to implementing some form of integrated thinking in organizations (Feng, Cummings and Tweedie, 2017), such as difficulty in monetizing some capitals or impacts.

This occurred because there were not sufficient examples or accurate guidelines on how to implement this managerial approach and its definition lacked clarity. This is precisely what was undertaken by Feng, Cummings and Tweedie (2017) in their report.

However, with further research, clearer definitions, creation of guiding organizations (e.g. IIRC – International Integrated Reporting Council: “global coalition of parties in the adoption of Integrated Reporting on an international basis as a means to improve communication about value creation, advance the evolution of corporate reporting, and make a lasting contribution to financial stability and sustainable development” – in IRCC web site) and effort from pioneer companies, efficiency, results and advantages of implementing Integrated Thinking methodology start to get visible in companies worldwide and from different sectors. These, through the usage of some tools like Balance Score-Card, the Triple Bottom Line or Sustainability Reporting, but mainly Integrated Reporting (<IR>). As Churet and Eccles (2014) suggest, “integrated

reporting is only the tip of the iceberg: The visible part of what is happening below the surface. What is happening below the surface is integrated thinking”

As mentioned by Eccles and Saltzman (2011), Integrated Reporting benefits can be divided into three classes. The first is internal benefits, including improvement in decision making process, better internal resource allocation, greater engagement with stakeholders and reduction of operational and reputational risk. This is as suggested by IIRC research conducted by consultancy Black Sun, which found that, among organizations that had issued an integrated report, “79% agree that business decision-making has improved”, “79% agree identifying risks and opportunities has become more effective” and “91% have seen a positive impact on external engagement with stakeholders, including investors”. The second is external benefits, this is meeting the needs of stakeholders, such as providing non-financial, sustainable and value creation information that allow investors to have a clearer holistic picture, and so, take a more grounded decision. “The third is managing regulatory risk, including being prepared for a likely wave of global regulation, responding to requests from stock exchanges (...)” (Eccles and Saltzman, 2011, p. 59).

Balancing the pros and cons of adopting Integrated Thinking methodology and its tool <IR>, allowed Lee and Yeo (2016) to conclude that Integrated Reporting’s benefits exceed its costs. That is because, at a financial level, as Harvard Business School study hails, <IR> enables financial stability and “companies who adopt Integrated Reporting practices benefit from a greater understanding of their business, the business environment and their ability to create value. A greater understanding of the business enables companies and investors to make better decisions for long-term success” (Topazio, 2014, p. 4). At a social-economic level, there is a public sentiment of concern reflected in the choices of consumers and employment preferences, that increase economic incentives for companies to improve their nonfinancial or environmental, social, and governance (ESG) performance (Knauer and Serafeim, 2014)

Concluding, although there are an increasing number of reports attesting efficiency, value and advantages of Integrated Thinking and Reporting, none of those cover the usefulness of this methodology in dealing with an extreme situation like a scandal, and it is this that the report will try to bring out to the light.

Integrated Thinking methodology and its increasing relevance

After years of evolution, the most accepted definition of this methodology is the one provided by IIRC in 2013 where it defines Integrated Thinking as an “active consideration by an organization of the relationships between its various operating and functional units and the capitals that the organization uses or affects” to create value over time (Druckman, 2014. p. 7).

The capitals referred to in these definitions are the resources and relationships an organization depends on, once “value is embodied in the capitals that the organization uses and affects. So organization’s ability to create value in the short, medium, and long term depends on an understanding of the connectivity between its business model and a wide range of internal and external factors” and capitals (Busco, Frigo, Quattrone,

Riccaboni, 2013, p. 36). Being so, these are the capitals that should be referred to in companies' Integrated Reporting according to each company specific needs. Those capitals are financial (funds available to an organization to use in the production of goods or services which are obtained through financing, such as debt or investments); manufactured (physical objects an organization can use in the production of goods or services, including buildings, equipment and infrastructure); intellectual (knowledge-based intangibles, including intellectual property); human (people's competencies, capabilities and experience, and their motivations to innovate and cooperate with the different needs of the company); social and relationship (institutions and relationships within and between communities, stakeholders and other networks, and the ability to share information to enhance individual and collective wellbeing); and natural (all renewable and non-renewable environmental resources and processes that provide goods or services that allow company to create sustainable value) (The International <IR> Framework, 2013).

Although there are not strict rules to follow when implementing Integrated Reporting, so that companies can adapt this report to their specific needs, there are 7 guiding principles and 8 content elements that IIRC advise companies to use.

Integrated Thinking through "Integrated reporting brings together material information about an organization's strategy, governance, performance and prospects in a way that reflects the commercial, social and environmental context within which it operates. It provides a clear, concise representation of how an organization demonstrates sustainability and creates value." (Topazio, 2014, p. 2). Being so, Integrated Thinking could be organizations' answer to people's increasing perception (due to recent financial crisis and corporate scandals) of businesses as one of the major causes of social, environmental, and economic problems.

In a more internal perspective, the "2010 Annual study of the composition of equity market value in the S&P 500" done by Ocean Tomo in 2010 concluded that the value of intangible assets has grown from 17% in 1975 to over 80% in 2010 of total market value for S&P 500 companies. This is a massive proportion of organizations' true value not to be properly considered neither by current financial accounting standards nor by managers when they are building their strategies and aligning it with companies' goals and business model. It is easy to see that the increasing value and preponderance of intangible assets increase the need of new managerial tools like Integrated Reporting and the methodologies behind it.

Besides dealing and properly valuing non-financial and intangible assets, Integrated Report also focuses on the external business environment which allow managers to identify opportunities in a quickly changing and risky external environment, and those may become competitive advantages if effectively assessed and managed.

By implementing this methodology, companies are one step closer to break down internal silos, and so, have a holistic overview and a better or more efficient flow of information and communication. Which, with the help of Integrated Report, improved disclosure of useful information to different stakeholders.

It is becoming hard to argue that Integrated Thinking and its tools like Integrated Reporting do not give an answer to plural needs and concerns of stakeholders and can help companies to generate value by just changing the way managers interpret their business, becoming a useful managerial methodology not only for the present but for future challenges. However, in a particular and delicate situation like the one Volkswagen have to deal after its cheating in emissions test scandal what can Integrated Thinking do to help?

Volkswagen's emissions test scandal and management style

Back in September 2015, the Environmental Protection Agency (EPA) found that the German car giant, Volkswagen, cheated on emissions tests in the USA adding a software to its engines that detected when the cars were being tested in laboratory and changing the performance and emission of pollutants like nitrogen oxide to improve results. This is, the Volkswagen's engines emitted nitrogen oxide pollutants up to 40 times above what is allowed in the USA.

Volkswagen admitted "it had found "irregularities" in tests to measure carbon dioxide emissions levels" (Hotten, 2015, p. 2) and a series of internal and external overwhelming devastating consequences on stakeholders of Volkswagen followed.

As far as internal consequences are concerned, beside firing some managers, the CEO (at the time) Martin Winterkorn resigned, and having hired key people like Thomas Sedran, the former CEO of Opel as head of corporate strategy (Associated Press, 2015), there were structural changes, such as "Volkswagen decentralizing its management structure by giving division managers more autonomy" (Jung and Park, 2017, p. 134). However, these reforms have been received with skepticism. Nevertheless, economic and brand image consequences were the most visible and had the greatest impact.

In economic terms, the German car giant not only faced worldwide economic losses caused by fines, recalls and decreased sales (Jung and Park, 2017), which the costs in total were expected to exceed the amount of half-year of profits [6.5 billion euros] (Eddy, 2015), but also a huge loss of market value. According to BBC News, Volkswagen "shares have fallen by about a third [after] the scandal broke".

About its reputation and brand image, it is hard to point a value to the losses, however there are no doubts that Volkswagen's corporate image was dimmed and discredited, which with "the loss of trust would escalate to threaten the long-term profitability of the company" (Jung and Park, 2017, p.135). Volkswagen is aware of this and knows the repercussions it may bring. That is why Martin Winterkorn said Volkswagen had "broken the trust of our [its] customers and the public" and his successor, Mr. Mueller referred, when he took his post as new CEO, that his "most urgent task is to win back trust for the Volkswagen Group".

"Beyond directly affecting the corporate image (Preston, 2015) and the market value of Volkswagen itself (Snyder and Jones, 2015), it has also called into question the legacy of the "made in Germany" brand for high-level engineering (Löhr, 2015a) and general quality (Chambers, 2015)" (Nunes and Park, 2016, p.289).

This is only one example of external consequences of this Volkswagen action, however they are mainly social and health consequences. Social costs were visible in “Wolfsburg, where VW headquarters was located, [once its economy] was immensely affected by the scandal” (Jung and Park, 2017, p.132). On the health consequences, we are all aware that diesel engines emit a great number of harmful pollutants such as nitric oxide and nitrogen oxide. This last is known to cause cancer, emphysema, bronchitis and other respiratory problems (Gates, Keller, Russell, & Watkins, 2015; Selin, 2015). From a public health perspective, “health damages from the hazardous pollutants of diesel engines could cost \$100 million (Selin, 2015)” (Jung and Park, 2017, p.132).

With such negative consequences, the majority of them quite predictable, something wrong was occurring inside Volkswagen, or at least, its managers and decision makers were not integrating and considering the costs of all capitals while planning their strategies. Clearly, Volkswagen just took into consideration financial capital and neglected other capitals like human, social and relationship, and natural. This led to a value “creation” that was not resultant from an alignment of strategy with internal and external resources.

Previous the diesel engine scandal, Volkswagen leadership style was austere as its CEO, Martin Winterkorn, “authoritarian leadership style allowed no autonomy to subordinates, cultivated fear, and discouraged open communication across the management hierarchy” (Jung and Park, 2017, p.129). Besides this, “Winterkorn’s lack of vision and innovative mind-set (...) limited the opportunities for developing innovative technologies and for being ahead of the emerging ecofriendly automobile market” (Jung and Park, 2017, p.129-130). After these considerations, there are no doubts that Volkswagen was losing great opportunities to take advantage of its human capital as well as its social and relationship capital, once “close communication and collaboration with employees who possess knowledge and willingness to accept other experts’ opinions is a key to success” (Jung and Park, 2017, p.135).

Moreover, Volkswagen was known for its insular governance. This is, Volkswagen had a highly centralized management style where members of the board were not willing to hear negative information about their projects neither to disengage a failing course of actions. This became clear when “although some Volkswagen engineers and technicians informed their supervisors about emission rigging activities in the year 2011, supervisors ignored the alert (Boston, Varnholt, & Sloat, 2015)” (Mansouri, 2016, p.211-212).

These both facts (the “insular governance” that do not appreciate opposing perspectives and the under usage of human capital to develop the company and improve value creation) helped to detect a lack of a holistic view of the business by managers and decision makers, giving another hint to understand why this scandal occurred and why Integrated Thinking could be useful to improve Volkswagen’s management style.

Analyzing the pre-scandal Volkswagen’s managerial methodology, it becomes clear that the diesel engine scandal had its roots in the Volkswagen’s culture, approach and managerial style. This is, the scandal was not “one-off mistake”, but, as BBC News mentioned, “must have had a chain of management commands that approved fitting cheating devices to its engines”.

This happens because Volkswagen's managerial style, culture and mindset did not evolve into today's business's needs, integrating in the decision-making process and in the strategic planning all the capitals that interfere in company's value creation. As Goodman, McGrath and Leah said in 2015, "in accordance with [Volkswagen's] culture, the demand and expectations of the company should be fulfilled regardless of how employees are able to perform the tasks" and "the mindset of some departments of the company (...) fails to comply the rules" if it is necessary to achieve the company's goals. Even the financial rewarding system implemented in Volkswagen "leads employees not to come out with dissenting opinions" (Mansouri, 2016, p.212).

That goes against all the good practices and modern managerial key recommendations, where in this fast-changing global marketplace top managers are encouraged to take the most out of their resources and employees, while both explore new technologies, solutions and approaches, as well as, exploit current strengths in order to sustain the company's competitiveness (Jung and Park, 2017).

Saying this, although some relevant issues become clear and partly answer our question, what remains unanswered is why should Volkswagen start looking for an Integrated Thinking methodology and apply Integrated Report?

Integrated Thinking and its tools in Volkswagen's emissions scandal case

Besides all the advantages previously mention about this managerial methodology, in this specific case of Volkswagen, the company should focus on "cleaning" its brand image and reputation, and having an extra attention to human, social and environmental impacts while keeping its competitiveness.

An ACCA (the Association of Chartered Certified Accountants) study mentioned by Neil Stevenson (2015), concluded that "Two-thirds of investors surveyed had lost trust in company reports since the onset of the global financial crisis". The same is plausible to happen in a scandal like this so the change to this new reporting could be a step towards social and consumers good brand perception and to increase reputation. This is also corroborated by Hoque (2017) that state in his report that "after the many financial scandals and crises, transparency about the board of companies and their activities become main concern". This is where Integrated Reporting becomes handy, once it "is a prominent tool for corporate governance to interact with its key stakeholders (OECD, 2014)" and clearly shows their strategies, goals and how Volkswagen managers and decision makers are going to accomplish them. This is essential once, "politicians, regulators and environmental groups now question the legitimacy of Volkswagen's emissions testing" and in no time all stakeholders will question company's activities, goals and mainly trustworth and reputation.

Adding to this, a "higher level of disclosure help [companies] to become transparent, so, firms may gain investors' trust on those charged with governance (...) and increase corporate reputation. That reputation [and transparency] helps board to negotiate with stakeholders (Simnett et al., 2009)" (Hoque, 2017, p.244) and reduce supply-chain risks due to interactions with suppliers and different categories of customers. As Gardberg

and Fombrun (2006) mentioned, “Enhancing corporate reputation able to create significant business advantages”. So, a shift to Integrated Thinking allows Volkswagen to enter in a positive spiral that will help it to recover its good and strong image which will have an impact on the finance of the company, once this may allow the company to both reduce costs and increase revenues as it is explained ahead.

As mentioned before, Integrated Report is becoming a very used tool by investors and they favor companies that they understand how they are creating value and if they are sustainable not only in the short but also in the long term. This is why Bloomberg added back in 2009 nonfinancial data to its information offerings over thousands of public companies. As a result, as Eccles & Saltzman highlight in their report “Achieving Sustainability Through Integrated Reporting”, in the second half of 2010, customers in 29 countries accessed more than 50 million environmental, social and governmental (ESG) indicators.

This is to say that even in the stock market, the adoption of Integrated Thinking by Volkswagen can bring some advantages, once investors look for information and relations between capitals and elements that Integrated Report provides. Furthermore, with the trust, transparency and reputation that would increase with the information disclosed and better understanding of the company’s business plan and strategy, Volkswagen could charge premium prices for their products and reduce their cost of capital. This reduction in cost of capital means increase in profit and earnings per share, which reflects appreciation of stock prices (Dhaliwal et al., 2011).

When it comes to competitiveness, Volkswagen should increase the efficiency of its available resources and capitals. This could be easily done and with minimal or none additional cost with the integration of human, and social and relations capitals once, “free exchange of information could help the company become more innovative and effectively address new demands from the industry” (Jung and Park, 2017, p.135), and other shareholders. This is crucial to not get stuck in time as so happened before with its managerial style. This gets even more relevance once Volkswagen competitors are also positioning themselves to adopt and take the most out of the Integrated Thinking methodology. This fact is highlighted by the fact that, not only Volvo is one on the pioneer companies adopting Integrated Thinking and implementing Integrated Reporting, but also General Motors are giving steps towards this methodology, being one of the participants in “The Second Annual NYSSCPA” which theme was “Sustainability Assurance: Creating Value through Integrated Thinking”. Being so, Volkswagen should take firm steps towards Integration Thinking to take the most out of this methodology, clean its brand image and do not get behind its competitors.

As mentioned before, Integrated Thinking and Integrated Reporting allow companies’ managers and decision makers to have a holistic perspective of the business and its surroundings, so it put them in a privileged position to give a more efficient response towards society and environment with financial measures. This include the integration of externalities, specially the negative ones. Knowing this, Volkswagen can use this methodology and its tools to assure that nobody needs to pay for its activities or mistakes. As suggest Nunes and Park (2016), Volkswagen should negotiate with the different entities in order to, using its know-how and Research &

Development department, “invest” the huge amount of money of the penalties in developing traditional technology and innovative solutions to create cleaner and more environmentally friendly engines and car components. In practical terms, if this investment results in an increment of Volkswagen electronic vehicles on roads, it may “compensate the emission of Volkswagen cars with deceptive device” (Mansouri, 2016, p.214) and lead to innovative solutions and new technologies, that may not only be used within the car production industry, that are social and environmental friendly and so more sustainable and in line with modern management needs.

Although it seems that the outcomes of implementing Integrated Thinking methodology and the regular use of its tools like Integrated Report would have raised some red flags when previous de scandal decisions were made and could help Volkswagen to overcome these difficult times, there are some drawbacks that Volkswagen would face when implementing this methodology.

First, Integrated Report is a very complete report, being so it requires a wide range of information from different departments and stakeholders which could create difficulties in collecting it. Furthermore, a structure that meets the stakeholders needs and provides all the relevant information without creating a too long and disinteresting report must be reachable and this takes time and effort from a plurality of stakeholders.

Secondly as all the shifts in any company, it takes time and requires a period of learning before everything is settled and all the advantages of this methodology can be reflected in Volkswagen results, efficiency and value creation.

Finally, there are “indications that companies that produce excellent integrated reports do not necessarily have financial stability, nor do they serve the agenda of sustainability”. For example, mining company Lonmin “was awarded the status of “excellence” in their integrated reporting by Ernst & Young for the past three years, but was associated with the Marikana Tragedy” – on 16 August 2012 a dispute between Lonmin’s Rock Drill operators and the company resulted in 34 deaths and innumerable injuries at one of Lonmin’s mines in South Africa (Tolsi, 2013) - (Schörger and Sewchurran, 2015). This is even more relevant for Volkswagen once if it uses Integrated Thinking and its tools to help clear its brand image, it should make sure the trade-offs between capitals and the decisions made do not create room for doubts about stability and specially sustainability.

Conclusion

After doing all this research and highlight some examples of how Integrated Thinking can help companies to consider all the aspects (capitals) that may influence their value creation, it seems that this methodology can really be helpful to take the most out of each company business plan, the increasing of efficiency of the resources used, and in last the increase of the companies profit by reducing its costs. This is also true in difficult situations like the one Volkswagen has been facing, just as in the examples I provided should express, once the transparency and free communication between different stakeholders increases the trust and knowledge.

This, undoubtedly, helps a company to recover its brand image and reputation while keeping, or even increasing, its competitiveness.

However, there are some drawbacks like the cost of time and learning required in order to collect all the relevant information and build a useful report that meets all stakeholders needs. It is also true that there are still some aspects of this methodology that are not fully understood by companies and need to be further developed. However, with more use and the increasing number of companies that are interested in Integrated Thinking and its tools, the future will bring the necessary clarifications and companies will recognize the “benefits of integrated thinking to enhance their competitiveness and support their sustainability from all perspectives” (SAICA report: Integrated Thinking - An Exploratory Survey).

With all this, it is also possible to conclude that Integrated Thinking methodology would not prevent a scandal (as the Lonmin company example shows). However, if its tools are applied following the principles suggested by IIRC, all the capitals are taken into account and the content elements (of <IR>) are well thought, Integrated Thinking would, undoubtedly, “warn” managers and decision makers and give them motives to think carefully before taking any decision. What is also true, is that a good implementation of this methodology could help Volkswagen in this difficult period and recover their brand image, financial stability and sustainable value creation.

Integrated Reporting as the most relevant tool of Integrated Thinking “is a catalyst to enhancing integrated thinking in organizations”, once it helps managers to adopt this methodology when drafting organizations’ strategies and a business plan, giving them an holistic perspective that allow managers to better combine all capitals and resources and deal with conflicting interests of the various stakeholders that often result in trade-offs that must be wisely considered to do not negatively influence the long term view and value creation, as well as the companies’ goals.

To conclude, this scandal was, not only, “a wake-up call for auto companies to pay more attention to clean energy technology” and “the importance of long-term technology strategies” (Jung and Park, 2017, p.134), but also, an important message for all organizations that in this modern world there is an increasing relevance of all aspects and all of them should be integrated and taken into consideration when a company takes a decision. Being so a methodology like Integrated Thinking with its tools like Integrated Reporting will have an increasing relevant role in present and future companies’ management, no matter how hard is the situation the company is facing.