



# Disrupting Growth with Organisational Ambidexterity: GE and the Global Growth Organisation

Ndimi Bodika  
22374982

A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

10 November 2014

## **ABSTRACT**

This research aimed to investigate how GE developed an organisational ambidexterity capability to significantly accelerate its growth in emerging markets. Dissatisfied with its growth in emerging markets, GE launched the Global Growth & Operations organisation (GGO) in November 2010. The internationalisation process had been led by its P&Ls with an exploitation focus and needed a shift towards an exploration focus that would develop disruptive capabilities required to promote growth.

The research was undertaken as a case study of GGO in Sub-Sahara Africa (SSA) to gain an in-depth understanding of how the OA capability was developed and managed at GE. A qualitative research approach was adopted that consisted of a literature survey and 14 semi-structured interviews with senior leaders of the P&Ls and GGO for SSA.

The study found that a top brass leadership, supported unequivocally and well-resourced were key to GGO's ability to shift GE's centre of gravity to the emerging markets. A paradox mindset at ease with tension was characteristic of the leaders allowing them to engage constructively. GGO, ambidextrous itself, developed exploration and exploitation capabilities enabling the P&Ls to do business as usual in the emerging markets. A model to develop OA for market expansion was developed.

### **Keywords**

Organisational Ambidexterity, Internationalisation, Growth,

# DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

---

Ndimi Bodika

Date:

# ACKNOWLEDGEMENTS

Thanks be to God

To my supervisor, Tumo Kele, thank you for your advice and words of encouragement.

To the leaders and colleagues at GE, I am grateful for the time you have generously given me for participating in the interviews. Your inputs have been invaluable.

To my brother, Adi, thank you for your support and allowing me to hijack you on the last week-end.

To my parents, thank you for your support and being role models.

To my wife, Gina, thank you for enduring this two-year marathon with me. I could not have done it without you.

To my children, Daniel, David and Arielle, most precious of all, I hope this effort inspires you when you get older.

# TABLE OF CONTENT

ABSTRACT .....	II
DECLARATION .....	III
ACKNOWLEDGEMENTS .....	IV
TABLE OF CONTENT .....	V
LIST OF FIGURES .....	IX
LIST OF TABLES .....	X
<b>CHAPTER 1: INTRODUCTION.....</b>	<b>1</b>
1.1 THE OPPORTUNITY AND CHALLENGE OF EMERGING MARKETS.....	1
1.2 AIMS OF THE STUDY .....	3
1.3 STRUCTURE OF THE REPORT .....	3
<b>CHAPTER 2: LITERATURE REVIEW .....</b>	<b>4</b>
2.1 INTRODUCTION .....	4
2.2 DEFINING ORGANISATIONAL AMBIDEXTERITY.....	4
2.2.1 <i>Calling an Organisation Ambidextrous.....</i>	<i>4</i>
2.2.2 <i>Vagueness in the Meaning .....</i>	<i>4</i>
2.2.3 <i>Defining a Specific Meaning .....</i>	<i>5</i>
2.2.4 <i>A Dynamic Capability .....</i>	<i>6</i>
2.2.5 <i>Ambidexterity in the Internationalisation Process .....</i>	<i>8</i>
2.3 IMPLEMENTING ORGANISATIONAL AMBIDEXTERITY .....	10
2.3.1 <i>The Antecedents of Organisational Ambidexterity .....</i>	<i>10</i>
2.3.2 <i>A Typology to Describe Organisational Ambidexterity Implementation .....</i>	<i>11</i>
2.3.3 <i>Organisational Ambidexterity as a Multilevel Construct.....</i>	<i>16</i>
2.3.4 <i>Balancing Organisational Ambidexterity.....</i>	<i>17</i>
2.3.5 <i>Managing the Organisational Ambidexterity Tension .....</i>	<i>18</i>
2.4 MODERATING FACTORS.....	25
2.5 THE NEED FOR ORGANISATIONAL AMBIDEXTERITY .....	26
2.6 TRENDS IN ORGANISATIONAL AMBIDEXTERITY RESEARCH.....	28
2.7 KNOWLEDGE GAPS ON ORGANISATIONAL AMBIDEXTERITY .....	29
2.8 THE NEED FOR THIS RESEARCH .....	30
2.9 CONCLUSIONS.....	30

<b>CHAPTER 3: THE RESEARCH QUESTIONS.....</b>	<b>32</b>
3.1 INTRODUCTION .....	32
3.1.1 <i>Research Question 1: is GGO an OA instrument?</i> .....	32
3.1.2 <i>Research Question 2: How has GE developed OA capability with GGO?</i> .....	32
<b>CHAPTER 4: RESEARCH METHODOLOGY.....</b>	<b>33</b>
4.1 INTRODUCTION .....	33
4.2 RESEARCH METHOD .....	33
4.3 UNIT OF ANALYSIS .....	35
4.4 CASE SELECTION.....	35
4.5 DATA COLLECTION .....	36
4.6 DATA ANALYSIS.....	38
4.7 LIMITATIONS & ASSUMPTIONS.....	40
<b>CHAPTER 5: RESULTS.....</b>	<b>42</b>
5.1 INTRODUCTION .....	42
5.2 THE NEED FOR GGO.....	42
5.2.1 <i>Accelerating Growth in Emerging Markets</i> .....	42
5.2.2 <i>Scrap the Limited P&amp;L Growth Strategy</i> .....	43
5.2.3 <i>Develop New Capabilities</i> .....	44
5.2.4 <i>Need for an Influential Organisation</i> .....	44
5.2.5 <i>Globalising Efficiently</i> .....	45
5.2.6 <i>Assessing the Responses</i> .....	45
5.3 GGO AS A SEPARATE STRUCTURE .....	47
5.3.1 <i>Shifting the Centre of Gravity</i> .....	47
5.3.2 <i>Driving a different growth story</i> .....	48
5.3.3 <i>Separate but Complementary</i> .....	48
5.3.4 <i>Assessing the Responses</i> .....	49
5.4 CHARACTERISTICS OF GGO AND THE P&LS .....	50
5.4.1 <i>Differences in Culture</i> .....	50
5.4.2 <i>Differences in Processes</i> .....	51
5.4.3 <i>Differences in Leadership</i> .....	53
5.4.4 <i>Measuring GGO and the P&amp;Ls on OA characteristics</i> .....	54
5.4.5 <i>Measuring GGO and the P&amp;Ls on the Intellectual Capital Framework</i> .....	57
5.4.6 <i>Assessing the Responses</i> .....	58
5.5 ESTABLISHING GGO.....	59

5.5.1	<i>Success Factors of GGO</i> .....	59
5.5.2	<i>Prerequisites to Establish GGO</i> .....	62
5.5.3	<i>Challenges Experienced in Establishing GGO</i> .....	63
5.5.4	<i>Challenges to GGO's Future Existence</i> .....	65
5.5.5	<i>Transfer of Learnings from GGO to the P&amp;Ls</i> .....	66
5.5.6	<i>Independence of GGO from the P&amp;L</i> .....	67
5.5.7	<i>Assessing the Responses</i> .....	68
5.6	OPERATING GGO.....	69
5.6.1	<i>Differences in the Functions of Leadership</i> .....	69
5.6.2	<i>Differences in the Routines, Processes and Decision Making Mechanisms</i> .....	69
5.6.3	<i>Securing Resources for GGO</i> .....	70
5.6.4	<i>Managing the Tension between GGO and the P&amp;Ls</i> .....	70
5.6.5	<i>Assessing the Responses</i> .....	71
5.7	RESULTS OF GGO ON P&L PERFORMANCE .....	72
5.7.1	<i>Impact on Sales</i> .....	72
5.7.2	<i>Impact on P&amp;L Growth</i> .....	73
5.7.3	<i>Measuring GGO's Performance</i> .....	74
5.7.4	<i>Assessing the Responses</i> .....	75
5.8	IMPACT OF GGO ON GE .....	76
5.8.1	<i>Impact on GE Structure</i> .....	76
5.8.2	<i>GGO's Impact on GE's Capabilities</i> .....	77
5.8.3	<i>GGO's Impact on GE's Competitive edge</i> .....	78
5.8.4	<i>GGO's Impact on P&amp;Ls View of the Region</i> .....	79
5.8.5	<i>Assessing the Responses</i> .....	79
<b>CHAPTER 6: DISCUSSION OF RESULTS</b> .....		<b>81</b>
6.1	INTRODUCTION .....	81
6.2	RESEARCH QUESTION 1: IS GGO AN ORGANISATIONAL AMBIDEXTERITY INSTRUMENT?.....	81
6.2.1	<i>Establishing the Manifestation of Organisational Ambidexterity</i> .....	81
6.2.2	<i>The Role of GGO in the Development of Organisational Ambidexterity</i> .....	83
6.2.3	<i>GGO's Ambidextrous Capability Development Process</i> .....	85
6.3	RESEARCH QUESTION 2: HOW DOES GE DEVELOP ORGANISATIONAL AMBIDEXTERITY .....	88
6.3.1	<i>OA, Firm survival and Dynamic capability</i> .....	88
6.3.2	<i>Developing GGO and the Organisational Ambidexterity Capability</i> .....	89
6.3.3	<i>Proposed OA Market Expansion Framework</i> .....	96
6.3.4	<i>GGO, a Dynamic Capability</i> .....	98

<b>CHAPTER 7: CONCLUSIONS.....</b>	<b>99</b>
7.1 INTRODUCTION .....	99
7.2 IMPORTANCE OF THE STUDY .....	99
7.3 MAJOR FINDINGS .....	100
7.4 RECOMMENDATIONS ON DEVELOPING ORGANISATIONAL AMBIDEXTERITY .....	102
7.5 RECOMMENDATIONS FOR FUTURE RESEARCH .....	103
7.6 CONCLUSIONS.....	103
<b>CHAPTER 8: REFERENCE LIST.....</b>	<b>105</b>
<b>CHAPTER 9: APPENDICES.....</b>	<b>111</b>
9.1 INTERVIEW GUIDE.....	111
9.2 CONSISTENCY MATRIX .....	116

## **LIST OF FIGURES**

Figure 1. Ambidexterity and the internationalisation process.....	8
Figure 2. Global Dynamics as Perceived by GE in 2009 .....	10
Figure 3. OA Typology.....	12
Figure 4. An ambidextrous organisation: holding together two opposites .....	19
Figure 5. Recommended Structural Differentiation of an Ambidextrous Organisation .....	20
Figure 6. Conditions for OA Solution .....	27
Figure 7. GE Organisation Chart (2012) .....	47
Figure 8. Comparing GGO to the P&Ls on exploration and exploitation activities .....	56
Figure 9. Intellectual Capital Framework Grids .....	57
Figure 10. Measuring GGO and P&L on the intellectual capital framework.....	57
Figure 11. The Growth Challenge .....	86
Figure 12. Dual level implementation of OA with GGO .....	87
Figure 13. GGO's Capabilities Development Process.....	88
Figure 14. OA Market Expansion Framework .....	97

## **LIST OF TABLES**

Table 1. GE Geographic Revenues Analysis .....	1
Table 2. The Kang & Snell OA Intellectual Capital Framework.....	22
Table 3. The Turner et al. OA Intellectual Capital Framework .....	23
Table 4. Relevant Situations for Different Research Strategies .....	34
Table 5. List of Interviewees.....	37
Table 6. Five Misunderstandings on Case Studies (Flyvbjerg, 2006) .....	40
Table 7. Culture difference between GGO and the P&Ls .....	50
Table 8. Definitions of the Characteristics used to Test Exploration and Exploitation.....	55
Table 9. Comparing GGO Exploitation and Exploration Characteristics .....	55
Table 10. Intellectual Capital Dimensions.....	57

# Chapter 1: INTRODUCTION

## 1.1 The Opportunity and Challenge of Emerging Markets

General Electric (GE), incorporated in the United States (U.S.) on April 25 1892, was a diversified technology and financial services company with a global footprint and an annual revenue of US\$ 146 billion in 2013. GE provided services and products in more than 100 countries covering the aviation, power generation, healthcare, transportation and water processing industrial sectors.

The following table presents the global footprint of GE's revenues from 2006 to 2009 (General Electric, 2008, 2009). It was derived from the annual reports of GE of 2006 to 2010.

**Table 1. GE Geographic Revenues Analysis**

	2009	2008	2007	2006	'06 to '08 Growth	'08 to '09 Slump
(in billions)						
US	72.5	85.3	86.2	81.1	3%	-15%
Europe	36.9	44.0	39.9	32.6	16%	-16%
Pacific Basin	20.7	23.6	21.8	17.7	15%	-12%
Americas	12.6	14.8	12.6	11.5	13%	-15%
Middle East and Africa	10.0	10.1	8.0	5.5	36%	-1%
Other Global	4.1	4.7	4.0	3.2	21%	-13%
<b>Total</b>	<b>156.8</b>	<b>182.5</b>	<b>172.5</b>	<b>151.6</b>	<b>10%</b>	<b>-14%</b>
Global, excl. Europe	47.4	53.2	46.4	37.9	18%	-11%
Ratio to Total	30%	29%	27%	25%		
Global	84.3	97.2	86.3	70.5	17%	-13%
Ratio to Total	54%	53%	50%	47%		

*(Adapted from GE Annual reports '06 to '10)*

By 2008, the GE's revenues outside of the U.S. had grown at an average of 13% over the past decade (General Electric, 2009). Global revenues were growing steadily as a percentage of GE revenues from 47% (\$70.5 billion) in 2006 to 50% (\$86.3 billion) in 2007 and 53% (\$97.2 billion) in 2008 (General Electric, 2009). The global growth rate in revenues from 2006 to 2008 was 18% excluding Europe. Following the financial crisis the total revenues slumped by 14% (\$25.2 billion) in 2009. Revenues from the U.S. and Europe decreased by 15% and 16% respectively, while revenues from the rest of world decreased by an average of 11%, with the Middle East and Africa the most resilient, decreasing by just 1%. As the numbers indicate, the market outside of the U.S. became vital to GE's future growth.

Following the financial crisis of 2008, GE started restructuring its portfolio to increase the portion of its revenue generated by its infrastructure businesses from 31% of the total in 2008 to more than 60% in the future (Immelt, Jeffrey R., 2009). By 2009, 40% of the industrial revenues were generated in growth markets (General Electric, 2009) defined by GE as resource rich regions that have maintained a double digit growth over the previous decade. GE started reorganising itself to grow organically in these growth markets (General Electric, 2009), expecting a double digit growth in revenues from them (Immelt, Jeffrey R., 2009, p. 28).

These growth markets had seen the emergence of Emerging Multinational Enterprises (EMNE) in the industrial space that grew on the sale of products designed to serve the needs of the customer in these emerging markets. The quality of the EMNE's products would initially be lower than those of multinationals from developed regions such as GE but the products would adequately serve the customers at an affordable price. Over time, these EMNE's would capture a significant market share, amass sufficient resources, invest in R&D and improve the quality of their products (Hang, Chen, & Subramian, 2010). These EMNEs would then grow their footprint into other emerging markets and even into developed markets. This evolution of a product initially designed for an emerging market progressively improving in quality and finding its way into developed market is referred to as reverse innovation (Immelt, Govindaran, & Trimble, 2009). The emergence of these EMNE's posed a threat to GE's penetration in growth markets as well as in its own backyard in the long term. This threat motivated GE to take a proactive stance to go compete with these EMNE 'at the source' in the growth regions (Immelt et al., 2009).

GE consisted mainly of autonomous businesses (P&Ls) and a corporate office ("GE Organization Chart," 2012). The international expansion was led by the P&Ls. Up to 2009, GE's business model was mainly based on developing high end products for developed markets and adapting them to serve other markets (Immelt et al., 2009). Dissatisfied with GE's growth rate in emerging markets, GE's leadership led by Jeff Immelt, the Chairman, felt the need to disrupt GE (Immelt et al., 2009).

On the 28th of November 2010, GE announced the appointment of John Rice, Vice-Chairman, to lead a new organisation, Global Growth and Operations (GGO), which will oversee GE's operations and growth outside of the United States of America (U.S.) with a focus on high-growth markets. According to Jeff Immelt, GE anticipated its revenues from outside of the U.S. to account for at least 60 percent going forward at an expected annual growth rate of 15 percent (General\_Electric, 2010). The GGO organisation was meant to establish integrated

local organisations in growth markets separate to the P&Ls structure, with a leadership structure that reported directly to the chairman.

The purpose of GGO organisation was to explore and accelerate growth of GE in emerging markets while GE carried on exploiting its existing mature markets such as Europe and the U.S. This ability to conduct exploration and exploitation activities concurrently is referred to as organisational ambidexterity (OA).

## **1.2 Aims of the Study**

The aim of this study is to establish whether GGO is an OA instrument and how GE developed its OA capability with GGO.

## **1.3 Structure of the Report**

Following the introduction of the topic, the report presents a literature survey to build a theoretical framework on OA, discuss on the needs for OA, reviews the recent trends in the research on the topic and highlights the gaps. The research questions are then formulated and an elaboration of the research methodology is presented. The results are then presented and assessed and finally recommendations are made.

## **Chapter 2: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents a theoretical framework for an in-depth understanding of the topic. This framework facilitated the formulation of the appropriate research questions, the design of the research methodology and served as a basis for the analysis of the results.

The presentation of the literature review starts by defining the term organisational ambidexterity (OA) and its use. The implementation of OA is elaborated, its impact on an organisation is discussed and the antecedents and the moderating factors are examined. This is followed by a review of the need for OA, the trends in the research, the gaps in body of knowledge and a motivation for this research study.

### **2.2 Defining Organisational Ambidexterity**

#### **2.2.1 Calling an Organisation Ambidextrous**

Ambidexterity refers to the ability of using the left and the right hands equally well. Calling an organisation ambidextrous referred to its ability to conduct two different things concurrently that were contradictory or conflicting, such as exploration and exploitation, differentiation and integration, static and dynamic efficiency (Gulati & Puranam, 2009).

#### **2.2.2 Vagueness in the Meaning**

Recent meta-analysis on the OA topic by Birkinshaw and Gupta (2013), Nosella, Cantarello and Filippini (2012) and O'Reilly and Tushman (2013) felt the need to trace its origin and the key contributions that have shaped its meaning. According to O'Reilly and Tushman (2013) the first reference to OA dated back to a 1967 paper by Thomson (1967) on the trade-off between efficiency and flexibility. Birkinshaw and Gupta (2013) posited that the term ambidextrous organisation was first coined by Duncan (1976) to describe the dual structures that organisations put in place to handle contradictory dualities. In 1991, March(1991) wrote a paper on the exploration vs exploitation duality that organisations have to achieve concurrently to ensure their long term survival significantly. His work framed the ensuing research on the subject. In 1996 O'Reilly and Tushman (1996) used the concept to describe how companies could manage evolutionary and revolutionary change processes. In 2004, Gibson and Birkinshaw (2004)'s paper on the alignment vs adaptability duality introduced the notion of contextual ambidexterity.

Various reviews on the OA's body of research (O'Reilly & Tushman, 2013; Turner, Swart, & Maylor, 2013) noted a growing generalisation of the OA term to encompass more and more forms of duality phenomena that generated tensions in an organisation. These dualities included alignment vs adaptability (Gibson & Birkinshaw, 2004), exploitative vs explorative learning (Kang & Snell, 2009), deliberate vs emergent strategies (Bodwell & Chermack, 2010) and differentiation vs centralisation (J. J. P. Jansen, Simsek, & Cao, 2012). Nosella et al. (2012) and O'Reilly and Tushman (2013) raised the concern that the broadening of the definition of OA to become a catch-all term had made it move away from the phenomenon it originally attempted to describe and in the process the OA construct was losing its meaning and relevance.

The OA construct was used in multiple areas (Nosella et al., 2012; O'Reilly & Tushman, 2013; Turner et al., 2013) of research including organisational learning, strategic management, innovation and technology, organisation theory and behaviour and operations management. Recent reviews on the use of the OA construct have emphasized the fact it was coined to describe a capability (Nosella et al., 2012; O'Reilly & Tushman, 2013; Turner et al., 2013). Turner et al. (2013) described that OA was not something that managers do but that it is a way of looking at what they do.

The growing generalisation in the application of the OA construct to a wide and divergent range of dualities has rendered its meaning vague. Without specificity in the meaning, application and relevance of OA, it would be difficult to verify with certainty its occurrence for the purpose of this study and to justify the value of this research.

### **2.2.3 Defining a Specific Meaning**

A number of academics (Birkinshaw & Gupta, 2013; Junni, Sarala, Taras, & Tarba, 2013; Nosella et al., 2012; O'Reilly & Tushman, 2013) posited that the original meaning of OA was crystallised by March (1991) who defined it as the ability of an organisation to conduct both exploitation and exploration activities. March (1991) defined that exploitation include activities such as refinements, production, efficiency, execution and choice and that exploration include activities such as risk taking, experimentation, innovation, flexibility and variation. March (1991) further proposed that it was essential for an organisation's long term survival to balance the application of exploration and exploitation.

He and Wong (2004) highlighted that exploration and exploitation required substantially different structures, processes, strategies, capabilities, and cultures to implement and may have different impacts on a firm's adaptation and performance. March (1991) recognised the

tension that arose in pursuing these contradictory activities. O'Reilly and Tushman (2013) suggested that the OA term was also originally coined to specifically characterise the tensions that arose in pursuing both exploration and exploitation activities concurrently and thus that the term also referred to the capability of an organisation to resolve such tensions. Levinthal and March (1993) observed that organisations tended to conduct either one of those activities excessively to their own detriment. However, in order to survive in the long-term Levinthal and March (1993) posited that an organisation had to balance its attention to both activities.

Therefore, for the purpose of this research OA was defined according to March (1991) as the ability of an organisation to pursue both exploration and exploitation activities and to manage the tensions that arose. March (1991) stated that exploitation include activities such as refinements, production, efficiency, execution and choice and that exploration include activities such as risk taking, experimentation, innovation, flexibility and variation. Exploration produces new knowledge for the long term survival firm while exploitation refines existing knowledge for the short term survival of the firm.

This specific definition will allow a clearer, unambiguous assessment of OA for the purpose of this research.

#### **2.2.4 A Dynamic Capability**

A number of studies showed that very few firms survive in the long term (O'Reilly, Harreld, & Tushman, 2009; O'Reilly & Tushman, 2008). In their study of more than six million U.S. firms, Stubbart and Knight (2006) found that less than 0.1% lived to the age of 40, with only 10% of those founded in 1976 living to the age of 10. Louca and Mendonca (2002)' study of the U.S. largest manufacturing companies found that only 28 of an initial 266 companies survived the period 1917-1997. Foster and Kaplan (2001)' study of 1000 large firms found that their average life span decreased progressively from 95 years in 1935 to 15 years in 2005.

According to O'Reilley et al. (2009) some organisational scholars suggested that firms are inert and that as the environment changes, firms are unable to adapt and thus disappear. These firms are replaced by new ones better suited to the new environment. However, a number of firms have shown the ability to survive over long periods of time (more than 100 years), e.g. Xerox, 3M, Marriot and American Express founded in 1906, 1902, 1927 and 1850 respectively (O'Reilly & Tushman, 2008). Common to all these firms was the fact that they all changed over time the products or services they offered. For instance the initial main products or services of 3M, Marriot and American Express were mining products, beer and express delivery respectively and by 2008 had changed their offering to office supplies, hotels and financial

services respectively. These firms demonstrated the ability to change and adapt to a changing environment. O'Reilly et al. (2009) mentioned the position of adaptationists organisational scholars who argued that organisations can change when senior management, in the face of threats or opportunities, intervened to deliberately reconfigure the assets of the firm to help it change and survive.

Sapienza, Autio, George and Zahra (2006) succinctly summarised the notion of capability and dynamic capabilities. "Capabilities are configurations of routines and resources that allow an organization to achieve its goals (Nelson & Winter, 1982) whereas dynamic capabilities reflect a firm's capacity to reconfigure its capabilities to adapt to its environment."

Teece et al. (2007) defined dynamic capabilities as "the ability to integrate, build, and reconfigure internal and external competencies to address rapidly-changing environments". Therefore the few firms that survived over long period of time possessed the dynamic capability to change and adapt.

O'Reilly and Tushman (2008) stated that a dynamic capability was evidenced by "a set of actions (or routines) taken by senior management that permit the enterprise to identify opportunities and threats and reconfigure assets (people, organizational architectures, and resources) to adapt to these." They argued that ambidexterity was a dynamic capability because it allowed an organisation to identify new opportunities and act on it. They further proposed that in order for ambidexterity to be a successful dynamic capability, the senior management had to articulate a clear intent, communicate an over-arching vision and values, be aligned, setup an appropriate organisational architecture with targeted integration and have the ability to manage the conflict and trade-offs of pursuing exploration and exploitation concurrently.

Dynamic capability implies an ability to change. Organisation change theories such as Lewin's force field theory (Lunenburg, 2010) remarked that people and systems resist change in an organisation. According to Lewin's force field theory, change occurs when there is an imbalance between the driving forces for change and the forces resisting change. Change can be achieved by increasing the driving forces, using alternative driving forces or reducing the resisting forces. The balance or relationship between the driving and the resisting forces can be referred to as a tension. Lewin's thus proposed that an imbalance, i.e. a change in the tension, was required to drive change. Therefore a tension had to be created to drive change for a dynamic capability to be enacted.

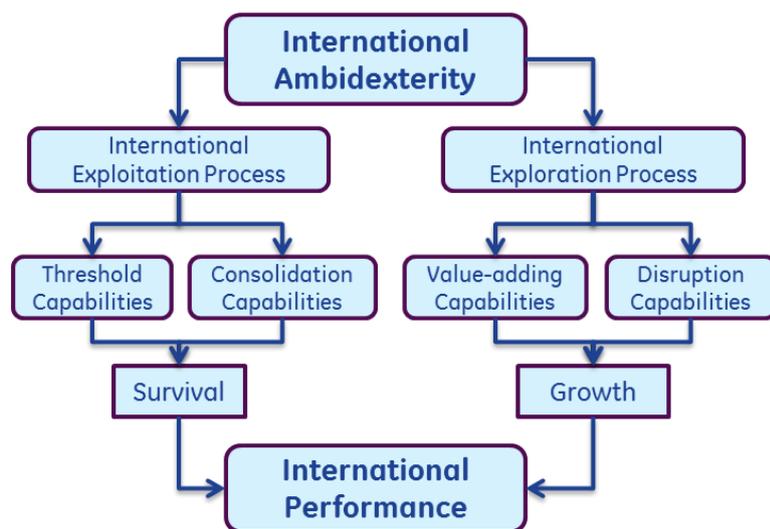
OA has been closely associated in literature with dynamic capability. This section has justified this association, supporting the notion of OA as a determinant factor of the long term survival a firm. Considering dynamic capability as a meta-construct of OA provides an additional perspective in the assessment of the OA phenomenon. The significant benefit of the dynamic capability of a firm further supports the importance of this research.

### 2.2.5 Ambidexterity in the Internationalisation Process

According to Welch and Luostarinen (1988), internationalisation was the process of increasing a firm’s involvement in international markets. Firms internationalised in order to seize opportunities such as to develop new markets or to build or acquire new resources and capabilities (Hsu, Lien, & Chen, 2013; Keen & Wu, 2011). In order to internationalise, a firm has to reconfigure its capabilities and resources to adapt to the new environment abroad. Thus internationalisation was also viewed as a dynamic capability (Sapienza et al., 2006). The internationalisation process was also perceived as an ambidextrous capability since it required both exploration (acquisition of new knowledge) and exploitation activities (refinement of existing knowledge) (Hsu et al., 2013; Keen & Wu, 2011).

Prange and Verdier (2011) proposed the concept of “international ambidexterity” as a framework to describe internationalisation in terms of an exploitation and an exploration process as depicted in Figure 1 below.

Figure 1. Ambidexterity and the internationalisation process



(Prange & Verdier, 2011)

Prange and Verdier (2011) argued that a firm pursuing an exploitative internationalisation process used dynamic capabilities (threshold and value adding) that are path-dependent and based on knowledge accumulation. In this case, the firm would develop a capability for its

domestic environment until it reaches a threshold sufficient to be implemented internationally. Thereafter the firm would undergo a consolidation process by learning and experience. Such a path-dependent learning process was constrained by its history, limiting the feasible paths for growth.

On the other hand, a firm pursuing an explorative internationalisation process was based on dynamic capabilities that were value-adding and disruptive enabling it to achieve new and innovative forms of competitive advantage. This approach would result in new knowledge and products unconstrained by prior knowledge and thus not path-dependent, promoting market growth.

Prange and Verdier (2011) proposed that exploitative internationalisation promoted survival while exploration internationalisation promoted growth. Hence a firm needed to be ambidextrous to balance the two approaches in order to survive and grow.

Banderia-de-Mello, Fleury, Aveline and Gama (2014) described the internationalisation process of a Brazilian software company as it expanded in both mature and developed markets. In both type of markets, the company had to acquire or develop new knowledge (exploration), and make use of its existing knowledge (exploitation), to establish itself in these markets. Their study supported the fact that ambidexterity was crucial to the successful internationalisation process of the organisation. Exploration was mainly achieved through acquisitions and alliances that brought in new knowledge, while exploitation was driven internally using the firm's own capabilities. The application of different modes of operation, namely internal organisation, acquisition and alliances (Stettner & Lavie, 2013) in pursuing exploration and exploitation helped reduce tension and resource competition (Banderia-de-Mello et al., 2014).

Finally, various studies supported the notion that OA was positively associated with a firm's internationalisation performance (Hsu et al., 2013; Keen & Wu, 2011; Luo & Rui, 2009; Prange & Verdier, 2011; Schweizer, Vahlne, & Johanson, 2010), highlighting the need for firms to have an OA capability in order to deal simultaneously with two (or more) contradictory yet necessary objectives when going international.

In conclusion, the internationalisation of a firm can follow either an exploitative process that promote survival or an explorative process that accelerates its growth. Pursuing an ambidextrous internationalisation process should lead to an improved international performance.

This research explores the OA construct at GE in relation to the role and impact of GGO, an organisation setup to lead the international growth of GE in emerging markets. This section provides a framework to better understand and assess the role and impact of OA in GE’s internationalisation process with GGO.

## 2.3 Implementing Organisational Ambidexterity

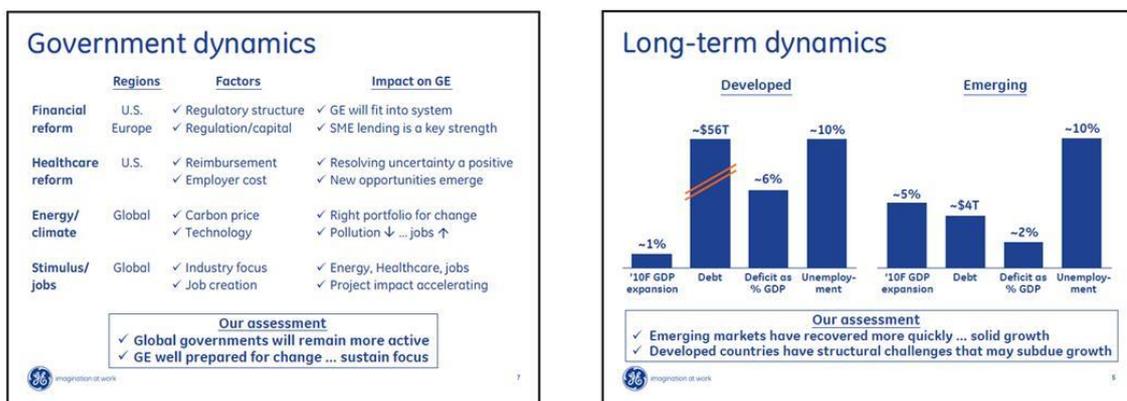
### 2.3.1 The Antecedents of Organisational Ambidexterity

According to their review of various studies on OA antecedents, O’Reilly and Tushman (2013) concluded that OA was most likely to occur under conditions of high environmental dynamism and uncertainty (Goossen & Bazazzian, 2012; J. J. P. Jansen, Vera, & Crossan, 2009), with increased competitiveness and that it was better suited to large firms that had more resources (Voss & Voss, 2013).

O’Reilly and Tushman (2008) pointed out that the OA antecedents were the same as those that have shown dynamic capabilities to be most valuable (Teece, 2007), strengthening the argument that OA is a dynamic capability.

In 2009, GE perceived the emerging markets as highly dynamic as depicted in Figure 2 below showing two slides extracted from Jeff Immelts outlook presentation to investors (Immelt, Jeffrey R., 2009). The theme of the presentation “Challenging environment, but improving” reflected the uncertainty felt by the organisation. With a turnover of US\$ 157 billion in 2009 (see Table 1), GE had at least US\$ 20 billion of excess cash available. The presentation further highlighted a strong focus on GE’s competitive advantage.

Figure 2. Global Dynamics as Perceived by GE in 2009



(Immelt, Jeffrey R., 2009)

The antecedents for OA seemed to have all been present at GE in 2009 prior to the establishment of GGO. The research should not only confirm the relevance of these

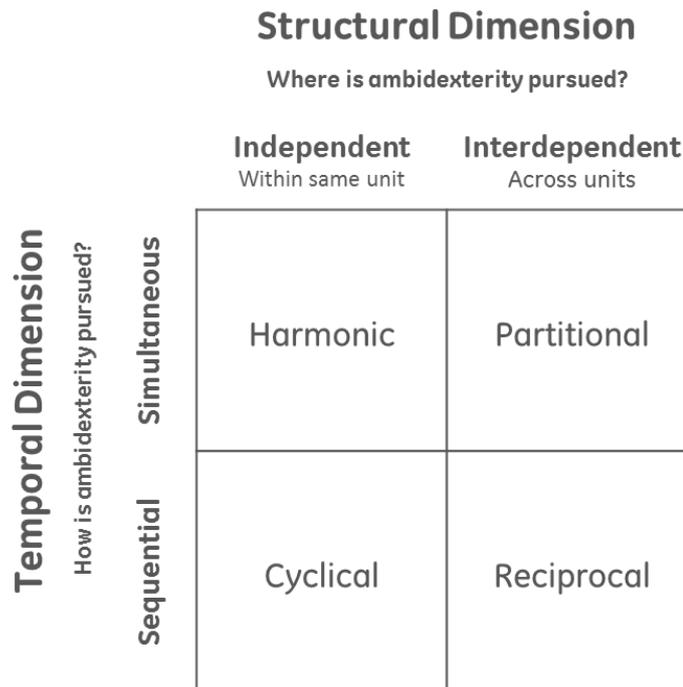
antecedents in the establishment of GGO and the OA capability at GE but should also test for other antecedents that might have caused it (if confirmed).

### **2.3.2 A Typology to Describe Organisational Ambidexterity Implementation**

The literature described mainly three methods of implementing OA, namely temporal, structural and contextual (Banderia-de-Mello, Fleury, Aveline, & Gama, 2014; O'Reilly & Tushman, 2013; Voss & Voss, 2013). Temporal OA referred to the alternate focus by the organisation, or a subunit, between exploration and exploitation, but only one is pursued at a given time (O'Reilly & Tushman, 2013; Turner et al., 2013) for a relatively long period. The temporal approach was also referred to in literature as vacillation (Boumgarden, Nickerson, & Zenger, 2012) or sequential ambidexterity (Goossen & Bazazzian, 2012; Raisch & Birkinshaw, 2008). Structural OA referred to the implementation of exploration and exploitation by different business units (O'Reilly & Tushman, 2013) usually concurrently. Contextual OA was coined by Gibson and Birkinshaw (2004) to describe the tension that arose within organisations as they attempt to align and adapt simultaneously within the same business unit. They found in the ambidexterity construct an appropriate term to frame the tension in pursuing these two conflicting objectives (Birkinshaw & Gupta, 2013). Therefore strictly speaking contextual OA as originally defined by Gibson and Birkinshaw (2004) was not related to the tension that arose in pursuing both exploration and exploitation. However for the purpose of this research contextual OA refers to the pursuit of exploration and exploitation activities within the same business unit. This interpretation had been used by recent scholars (Kang & Snell, 2009; Patel, Messersmith, & Lepak, 2013; Turner et al., 2013).

Simsek, Heavy, Veiga, & Souder (2009) proposed a two-dimension typology to describe different methods of implementing OA. The dimensions are referred to as temporal and structural. The temporal dimension indicated whether exploration and exploitation are conducted simultaneously or sequentially over time. The structural dimension indicated whether exploration and exploitation are conducted in separate units or within the same units. Simsek et al. (2009) typology was not specific to the duality of exploration vs exploitation and thus could be applied to any duality that caused tension. Their typology Simsek et al. (2009) defined four ways of implementing OA, namely harmonic, partitional, cyclical and reciprocal as illustrated in Figure 3 below.

Figure 3. OA Typology



*(Simsek et al., 2009)*

The typology reflected the flexibility and variation in the implementation of the OA construct. The unit of implementation could be the organisation itself or a business unit. Furthermore, OA could be implemented within a single organisation or across two (or more) organisations in an alliance with one focusing on the exploitation while the other on the exploration (O’Reilly & Tushman, 2013; Simsek et al., 2009).

The temporal dimension reflected the “debate” held by scholars on whether to implement exploration and exploitation simultaneously or sequentially (Gupta, Smith, & Shalley, 2006; Guttel & Konlechner, 2009). In that debate, sequential implementation also referred to as the “punctuated equilibrium” in the literature, proposed cycling through periods of exploration and exploitation as a more viable approach than the simultaneous pursuit of the two.

The typology proposed by Simsek et al. (2009) is used in the following sections to frame the different ways of implementing OA observed in the literature.

### 2.3.2.1 Cyclical OA

Cyclical OA referred to the sequential implementation of exploration and exploitation within the same business unit. In literature, cyclical OA was also referred to as temporal OA, sequential OA, punctuated equilibrium and vacillation (O’Reilly & Tushman, 2013). The shift in

focus between exploration and exploitation meant a shift in the structure and assets of the organisation over time to respond to the needs of the environment.

O'Reilly and Tushman (2013) suggested that cyclical OA was better suited to organisations in stable, slow moving environments and for relatively smaller firms that lacked the resources to simultaneously implement exploration and exploitation. However, O'Reilly and Tushman (2013) raised the concern that most studies on sequential OA described the phenomena at a high level of abstraction but did not provide details of what it meant at ground level to shift from either exploration or exploitation to the other mode.

O'Reilly and Tushman (2008) highlighted that a key antecedent to the successful implementation of cyclical OA was that the rate of change in markets and technologies had to proceed at a pace that permitted firms to shift organisational alignment sequentially. Goossen and Bazazzian (2012) also supported the suggestion that cyclical OA was suited to slowly changing environment.

### **2.3.2.2 Harmonic OA**

Harmonic OA referred to the simultaneous pursuit of exploration and exploitation within the same business unit. Simsek et al. (2009) referred to the term contextual OA defined by Gibson and Birkinshaw (2004) as an example of harmonic OA. As mentioned above, Gibson and Birkinshaw (2004) originally coined the term contextual OA to characterise the tension between alignment and adaptability, but for the purpose of our study contextual OA is redefined as harmonic OA.

Concurrently pursuing two competing objectives in a balanced manner within the same unit was challenging. Firstly the mindsets and routines needed for exploitation were usually radically different to those of exploration (Gupta et al., 2006). Secondly, the exploitation and exploration tasks competed for the same scarce resources. Thirdly, according to March (1991)'s definition of exploration and exploitation, these two activities were incompatible. Finally, in order to implement harmonic OA, individuals within a business unit must have the knowledge and skills to perform both exploration and exploitation activities.

Gibson and Birkinshaw (2004) observed that contextual OA could be achieved by setting up an appropriate culture and processes that empowered and allowed individuals to decide at their own discretion how to divide their time between the two conflicting and competing tasks of exploration and exploitation. Therefore contextual OA positioned the OA capability to the individual level rather than at the management level.

When implementing contextual OA, individuals conduct both exploration and exploitation activities and thus automatically learn from both domains. When exploration and exploitation are conducted in separate units, there is a need for an integration phase, which was usually driven by management. Guttel and Konlechner (2009) highlighted that the main advantage of harmonic OA was that it facilitated the knowledge transfer between exploratory and exploitative domains, without the need for an additional integration step led by an additional management layer.

In their study on organisational learning, Guttel and Konlechner (2009) presented specific characteristics of organisations that implemented harmonic OA. Firstly, the management team defined the constraints in terms of resources and targets for the organisation that individuals had to translate to their level to guide their activities. The individuals worked in project based structure and on a number of projects at a time. This arrangement allowed individuals to easily switch between exploration and exploitation activities. In addition, the management ensured that all the individuals were exposed to both type of activities. Furthermore the organisation's targets would be augmented by stretch objectives to prevent specialisation on project team level. The behaviour of individuals was governed by "semistruktures" whereby detailed procedures would guide them in some areas, such as performance monitoring, while in other areas such as decision making there were only a few simple rules. Guttel and Konlechner (2009) claimed that this loose-tight relationship kept the proper balance in the organisation between flexibility to cater for variation in demand and rigid structure to maintain cohesion. Finally, the human resource (HR) system continuously ensured that staff competencies were appropriate to conduct both exploration and exploitation. The trend was to drive the exploitation by the core staff with experience while the exploration would be stimulated by new recruits.

In terms of outcomes, Simsek et al. (2009) posited that harmonic OA was associated with improved stakeholder satisfaction, especially amongst customers and upper-level managers. They mentioned a number of studies that positively associated harmonic OA with the subjective ratings of business unit performance (Gibson & Birkinshaw, 2004) and the ability to simultaneously use existing capabilities and to develop new ones in corporate venture units (Hill & Birkinshaw, 2012).

### **2.3.2.3 Partitional OA**

Partitional OA referred to the concurrent application of exploration and exploitation through separate and independent business units. With respect to organisations that applied

partitioned OA, also referred to in literature as structural OA, each of the business units implementing exploration and exploitation had its own culture, structure, competencies, sub processes and management team and is internally aligned (O'Reilly & Tushman, 2008). However, in order to achieve ambidexterity, the exploration and exploitation business units had to be interdependent and thus necessitated a senior management team to coordinate the work of the two streams in order to ensure their integration (O'Reilly & Tushman, 2008, 2013).

Integrating the exploration and exploitation streams for the successful achievement of ambidexterity remained a significant challenge. Various integration mechanisms had been proposed, including the use of a shared vision (J. J. P. Jansen, 2008) coordination by a senior management team (Lubatkin, Simsek, Ling, & Veiga, 2006; Smith, Binns, & Tushman, 2010) and systems for knowledge integration (Tiwana, Baharadwaj, & Sambamurthy, 2007)

O'Reilly and Tushman (2008) pointed out that managing two separate business units with different competencies, incentives and cultures increased the chances for conflict and poor coordination. They suggested that this could be alleviated with a top management team across the business units with a common set of values that provided a common identity.

In a study of 20,000 alliances Lavie and Rosenkopf (2006) observed that exploration and exploitation could be pursued simultaneously across the function, structure and attribute domains of strategic alliances, whereby the exploration in one organisation was complemented by the exploitation in the other.

In terms of outcomes, Simsek et al. (2009) suggested that this type of ambidexterity was positively associated with improved innovation and financial outcomes. With respect to innovation, they stated that firms that "co-specialised exploitation and exploitation across separate sub units were more apt to achieve radical and incremental innovation performance", as supported by a number of studies (Atuahene-Gima, 2005; Prieto, Revilla, & Rodriguez, 2007). With respect to financial outcomes, partitioned OA was positively associated with financial performance (Hang et al., 2010), sales growth (He & Wong, 2004) and subjective ratings of performance (Schulze, Heinemann, & Abedin, 2008).

#### **2.3.2.4 Reciprocal OA**

Reciprocal OA referred to the sequential implementation of exploration and exploitation across separate and independent business units, whereby the output of one unit becomes the input of the other (and vice versa). According to Simsek et al. (2009) this type of ambidexterity had received to date the least attention from researchers. They suggested that researchers

from the social network perspective had proposed an implementation of reciprocal OA through the specialisation of exploitation and exploration across an inter-organisational network (Lavie & Rosenkopf, 2006; Tiwana, Bharadwaj, & Sambamurthy, 2007).

In their study of alliances of US software companies, Lavie and Rosnkopf (2006) highlighted that the key antecedent to the pursuit of this form of OA was the knowledge integration that could be achieved across alliances. This required that management be capable of disseminating information not only within but also across organisations, in order to facilitate the reciprocal information exchange between the exploitive and the exploratory domains (Mom, Van Den Bosch, & Volberda, 2007). Simsek et al. (2009) expected reciprocal OA to emerge where the expertise to explore and exploit resided in multiple units.

Simsek et al. (2009) stated that due to the limited amount of research conducted on this type of ambidexterity little was known on its outcomes. Furthermore it has to be noted that Simsek et al (2009) presented the inter organisational framework as the only manifestation of reciprocal OA.

#### **2.3.2.5 Conclusions**

The typology of Simsek et al. (2009) frames the implementation of OA into four types, each with its respective advantages and limitations. This typology would be used in this research to classify the observed manifestation of OA at GE and assess its suitability.

#### **2.3.3 Organisational Ambidexterity as a Multilevel Construct**

The literature has shown that OA can be implemented at different levels of an organisation, from the individual to the functional units or group, the organisation and even beyond the organisation's boundary to consider networks and alliances of firms (Nosella et al., 2012; Turner et al., 2013). Birkinshaw & Gupta (2013) proposed that OA is a multilevel construct that could occur concurrently at different levels in an organisation.

The distinct characteristics of the different levels require different set of skills, mechanisms and processes to manage the implementation of OA. Kang and Snell (2009) and Turner et al. (2013) proposed such mechanisms that will be described in section 2.3.5 below, see Tables Table 2 and Table 3 below.

A multibusiness firm, with approximately 300 000 employees in 2009 (General Electric, 2009), of which at least 50% were based outside of the U.S., GE was a multilevel organisation. This notion of OA as a multilevel construct will help better understand and classify observations of its manifestation that will be made during the course of this research.

#### **2.3.4 Balancing Organisational Ambidexterity**

Many scholars have argued that pursuing both exploitation and exploration without emphasizing one over the other was necessary to ensure the short and long term survival and a higher performance of the firm (March, 1991; Raisch & Birkinshaw, 2008; Tushman & O'Reilly, 1996).

A greater focus on exploiting existing competencies would result in a “success trap” whereby the very sources of their success would create inertia from the strategies, structures, people, and cultures that have created the success (O'Reilly & Tushman, 2008). This inertia would prevent the organisation from exploring and adapting to the changing environment, resulting in a poor performance in the long term (Levinthal & March, 1993). Furthermore, in the long term core competencies could become core rigidities (Leonard-Barton, 1992). Conversely, a greater focus on exploration would lead to a “failure trap” whereby new ideas are continuously replaced before having had the chance to be refined sufficiently to contribute to the firm’s revenue (Levinthal & March, 1993) and thus preventing the firm from reaping profit from its investments.

However, Gupta et al (2006) posited that under certain conditions, long-term survival might be feasible without a balanced OA whereby an organisation focuses solely on either exploitation or exploration. They presented the case of some companies in the semi-conductor industry that organised themselves such that some focused on R&D (i.e. exploration) while others on production (exploitation). However, the two camps had to work together to serve the industry. But one could argue that this was a form of reciprocal OA across organisations.

Stettner and Lavie (2013) highlighted the fact that exploration and exploitation could be pursued through internal organisation, alliances or acquisition. Internal organisation included the temporal, structural and contextual OA mechanisms. They noted that the terms internal organisation, an alliance or an acquisition referred to alternative modes of operation in the strategy literature. They argued that balancing exploration and exploitation within a single mode would result in conflicting routines, negative transfer and limited specialization and thus would undermine performance. They proposed that higher level of performance would be achieved by pursuing exploration and exploitation across different modes. Based on their study of 190 U.S. software firms, they recommended that exploitation would be better attained with internal organization while exploration through alliances or acquisitions. Therefore their recommendation was to balance OA across different modes and across different organisations.

O'Reilly and Tushman (2004) reviewed the different structures employed by 35 firms to implement OA within a single organization and found that implementing exploration and exploitation through structurally independent, i.e. partitional OA (Simsek et al., 2009), produced the best performance. Their study did not mention the balancing of OA but pointed out to the fact that partitional OA was the best method to successfully implement and integrate exploration in an organization that had an existing focus on exploitation.

In conclusion, balancing exploration and exploitation is central to the firm's performance and survival. The different forms of implementing OA (cyclical, harmonic, partitional and reciprocal) present different challenges to the balancing act. The literature does not give a definitive recommendation on the best form of implementation suited to balance OA and what level of balancing produces the best performance.

Insights from this research would support or not this suggested need to balance OA and/or help evaluate impacts of an imbalance.

### **2.3.5 Managing the Organisational Ambidexterity Tension**

March(1991) pointed out the fact that pursuing exploration and exploitation concurrently creates a tension as these activities often have opposing goals and compete for the same resources (Banderia-de-Mello et al., 2014). O'Reilly and Tushman (2004) emphasized that exploration and exploitation required two types of business orientation that were extremely different in their strategies, structures, cultures and processes, with those exploiting existing capabilities for profit and those exploring new opportunities for growth. Figure 4 below presents how they depicted the characteristics of an ambidextrous organisation.

Figure 4. An ambidextrous organisation: holding together two opposites

Alignment of	Exploitative Business	Exploratory Business
Strategic Intent	Cost, profit	Innovation, growth
Critical tasks	Operations, efficiency, incremental innovation	Adaptability, new products, breakthrough innovation
Competencies	Operational	Entrepreneurial
Structure	Formal, mechanistic	Adaptive, loose
Control, rewards	Margins, productivity	Milestones, growth
Culture	Efficiency, low risk, quality, customers	Risk taking, speed, flexibility, experimentation
Leadership role	Authoritative, top down	Visionary, involved



### Ambidextrous Leadership

Different alignments held together through senior team integration, common vision and values, and common senior team rewards

*(O'Reilly & Tushman, 2004)*

O'Reilly and Tushman (2013) suggested that OA was coined to characterise the tension that arise when implementing OA. The following sections suggest two implementation mechanisms used to help resolve the tension. A different mechanism, a paradox perspective, is then proposed to resolve the tension.

#### 2.3.5.1 Using structural differentiation

Goosen and Bazazzian (2012) argued that according to their observations of a subset of Fortune 500 firms most organisations combined both simultaneous (structural) and sequential balancing. They posited that the performance of either mode was contingent upon the firm's environment velocity, resource endowment and the business strategy. Sequential balancing allows an organisation to focus on one specific type of activities and thus benefit from the specialisation but faces the risk of either overexploitation or overexploration. Simultaneous balancing eliminates this risk but introduces the challenges of integrating the exploration and exploitation activities (Chen & Katila, 2008).

Despite the tension caused by OA, firms have shown the ability to manage the simultaneous, yet contradictory, management processes of exploration and exploitation (Lubatkin et al., 2006). To date the three main solutions of partitional, cyclical and harmonic OA have been proposed to manage the tension.

Jansen et al. (2008) argued that achieving OA through structural differentiation required the integration and application of the exploratory and exploitative efforts without corrupting the

internal structures and processes within each business unit. They proposed four types of integration mechanisms across two dimensions of integration, from senior team to organisational and from formal to informal. Senior team integration referred to the mechanisms that allowed for the departure from existing competences and skills within exploratory units, and for the on-going synergies and cross-fertilisation with ongoing businesses in exploitative units. Organisational integration referred to the mechanisms that allowed the knowledge transfer amongst the exploratory and exploitative units. Formal integration referred to the use of pre-established mechanisms and interfaces to integrate while informal integration referred to emergent social properties.

Jansen et al. (2008) posited that OA organisations should design and implement specific types of integration mechanisms at different level of an organisation. At the higher level, social integration among senior team should be encouraged, while formal cross-functional interfaces should be encouraged at the lower echelons to deepen the knowledge exchange between the distinct exploitative and exploratory business units.

From their study of 35 firms that experimented various forms of OA implementations, O'Reilly and Tushman (2004) observed that the best performance was achieved with the exploitative and the explorative units encapsulated into structurally independent units, each with its own culture, processes and structure, but with the leaders the units integrated into a senior management team, as shown in Figure 5 below. The senior management team was held together through a common set of vision, values and rewards as mentioned in Figure 4 above.

Figure 5. Recommended Structural Differentiation of an Ambidextrous Organisation



(Modified from O'Reilly and Tushman, 2004)

### **2.3.5.2 Using Harmonic OA**

As opposed to partitional OA, harmonic OA did not require integration mechanism and was better suited to small and medium firms that did not have the resources to implement OA through different business units (Patel et al., 2013).

Exploration refers to the development of new knowledge and exploitation to the refinement of existing knowledge. Kang and Snell (2009) proposed mechanisms to implement contextual ambidextrous learning through the human resource management. They highlighted the fact that contextual OA was mainly driven by the actions of individuals. They claimed that organisational learning was closely related to a firm's intellectual capital (IC), its knowledge stocks, made up of three components, namely the human, social and organisational. They claimed that managing the IC was closely related to the tensions between exploration and exploitation.

Kang and Snell (2009) referred to the human capital (HC) as the knowledge, skills and abilities of individuals, with specialists better suited for exploitation and generalists for exploration. The social capital (SC) referred to the knowledge stored in the relationships amongst employees that provided a conduit for knowledge exchange and combination. They defined a cooperative SC as a tightly coupled social system that include strong and dense network connections that was better suited to drive exploitation. An entrepreneurial SC was defined as a more loosely connected social system with weak and non-redundant relational networks that promoted exploration. The organisational capital (OC) referred to the knowledge stored in structures, processes and systems of an organisation. Mechanistic OC was characterised by standardised processes and structures and detailed routines and promoted exploitation. Organic OC was characterised by more simple rules, loosely connected to precedents and expectations, allowing individuals to be more autonomous and thus better suited to exploration. The IC framework proposed by Kang and Snell (2009) is illustrated below in Table 2.

**Table 2. The Kang & Snell OA Intellectual Capital Framework**

<i>Intellectual Capital</i>	<i>Organisational Learning</i>	<b>Exploitation</b>		<b>Exploration</b>	
		Acquisition (sharing)	Integration (combining)	Acquisition (sharing)	Integration (combining)
<b>Human Capital (HC)</b>	<i>Specialist</i>	Focused/refined search and narrow domains			
	<i>Generalist</i>			Broad search and multiple domains	
<b>Social Capital (SC)</b>	<i>Cooperative</i>	In-depth/limited range of knowledge exchange	Redundant and architectural knowledge		
	<i>Entrepreneurial</i>			Flexible/broad range of knowledge exchange	Brokering and synthesizing scattered knowledge
<b>Organisational Capital (OC)</b>	<i>Mechanistic</i>	Narrow definition and search	Detailed routines and standardised processes		
	<i>Organic</i>			Alternative interpretation	Principled based guidelines

(Kang & Snell, 2009)

Kang and Snell (2009) further developed their framework by proposing two distinct combinations of human, social and organisation capital to allow people-embodied knowledge to expand and integrate into organisational knowledge. The first combination or IC architecture was a combination of specialist HC, cooperative SC and organic OC. The second was a combination of generalist HC, entrepreneurial SC and mechanistic OC. They also proposed a human resource management framework to support the IC architectures.

Neil Turner et al. (2013) built on the intellectual capital framework of Kang and Snell (2009) to propose a set of mechanisms (i.e. processes, systems and structures) to enable the simultaneous pursuit of exploitation and exploration at the different level of an organisation (namely individual, group and organisation). They posited that the role of management was to arrange the knowledge assets in the most appropriate orientation in order to attain the desired organisational results. Their framework is presented below in Table 3.

**Table 3. The Turner et al. OA Intellectual Capital Framework**

Level of Analysis	Intellectual capital resources		
	Organisational capital	Social capital	Human capital
<b>Organisation</b>	Structural configuration and separation. Development and maintenance of inter-organizational relationships. Coexistence of formal and informal structures.	Knowledge-sharing relationships with new and existing external parties. HR practices supportive of ambidexterity.	Individuals reconcile and coordinate exploitative and exploratory functions. Management ability to reconfigure organizational assets. TMT behavioural integration and complexity.
<b>Group</b>	Reward systems to support ambidexterity. Processes for creating dense social relationships and informal coordination. Formal and informal managerial integration and control mechanisms.	Complex network of strong and weak ties for effective knowledge-sharing, supported by formal and informal behaviours. Relationships supportive of ambidexterity. Shared values and goals.	Strong, compelling vision. Participation in cross-functional interfaces. Transformational leadership.
<b>Individual</b>	Multiple cross-functional interfaces to accommodate formal and informal coordination. Use of both 'best-practice' and local managerial discretion and judgement.	Individuals creating and supporting the context for ambidexterity. Both relational- and task-focused leadership.	Taking the initiative; cooperative behaviour; multitasking; brokering.

*(Turner et al., 2013)*

### 2.3.5.3 Using a Paradox Mindset

On the basis of their study of firms in the product design industry, Andriouopoulos and Lewis (2009, 2010) proposed the use of a paradox mindset to manage the tension caused by OA. They proposed the use of paradoxes to express the different types of OA tensions experienced in a product design organisation, such as profit/breakthrough, passion/discipline, long-term adaptability/short-term survival, possibilities/constraints, diversity/cohesiveness. Expressing the tensions in terms of a paradox allowed one to better accept the combination of contradictory features and thus the tension. Managing the paradox was in itself paradoxical as it requires both integration tactics to appreciate their interdependence and differentiation tactics to focus resources and actions (Andriouopoulos & Lewis, 2010). Finally the paradoxical mindset would standardise the managerial approach yet at the same time allow for contextual variations, whereby firms would apply different integration and differentiation tactics.

They claimed that a mix of integration and differentiation tactics was required to manage and maintain the paradox. They proposed that three mechanisms were required to maintain OA. The first was the need to apply a multilevel approach. These paradoxes were evident across the different levels of an organisation and thus are the responsibilities of different actors across the firm from executives to individual workers. The second mechanism was the combination of integration and differentiation produced tactics that maintained OA. Actively driving differentiation and integration fostered the acceptance of the tension. The third mechanism was that the interplay between exploitation and exploration enabled absorptive capacity. This absorptive capacity helped foster the dynamic and the OA capabilities of the firm.

#### **2.3.5.4 The Role and Attributes of Leadership in Achieving OA**

Managing ambidextrous organisations required leaders to commit to paradoxical strategies explained by Smith et al. (2010) as multiple strategies that are contradictory yet interrelated. On the basis of in-depth interviews of 12 top management teams, Smith et al. (2010) defined four processes required to successfully manage paradoxical strategies, namely dynamic decisions, building commitment to both overarching visions and agenda specific goals, learning actively at multiple levels, and engaging conflict. They further posited that leaders can engage these processes through team-centric or leader-centric structures. Dynamic decision making referred to the ability of the leadership to simultaneously make decisions on both exploration and exploitation activities without giving preference to either. Actively learning at multiple levels referred to the ability of the leaders to understand in detail the specific needs of the explorative and exploitative strategies, compare and integrate them. Engaging conflict required the leaders the ability to encourage the conflict, learn from the tension that arises, cultivate distinctive roles to discuss different perspective and manage the conflict to allow the relief of emotional stress.

O'Reilly and Tushman (2004) A number of scholars have posited that the top leadership team would successfully achieve ambidexterity through three attributes, namely social integration, shared vision and values and common senior team rewards (Lubatkin et al., 2006; O'Reilly & Tushman, 2004). Jansen et al. (2009) examined the moderating role of transformational leadership in OA in relation to the three attributes. They defined a transformation leader as a person who "exhibit idealised influence, arouse inspirational motivation, provide intellectual stimulation and treat followers with individualised consideration". Their study confirmed that a strong and compelling shared vision was required to achieve OA but failed to support that social integration helped reconcile conflict. Their study indicated that team contingency rewards reduced interpersonal competition in the senior team and thus improved the achievement of OA. They also found that transformational leadership did not have an impact on the commitment of the senior team to a shared vision, had a positive impact on promoting social integration in the senior management team and negatively moderated the impact of team contingency rewards on the achievement of OA.

Finally, in their analysis of the impact of the changes in GE's organisational architecture from 1951 to 2001, Joseph and Ocasio (2012) suggested that "in order for firms to commit to new activities, sufficient top management attention must be directed to them to gain the necessary political support, visibility, and resources to survive."

### **2.3.5.5 Conclusion**

The concurrent implementation of exploration and exploitation activities produces a tension in the organization that need to be appropriately managed as each type of activity requires different strategies, structures, processes and cultures (O'Reilly & Tushman, 2004). They pull the organization in different directions and often compete for the same resources. The literature indicated that when OA was implemented through different structures (partitional and reciprocal OA) the tension was managed through a senior management team that performed the integration of the two units. When OA was managed contextually (cyclical and harmonic OA), the tension was managed by single individuals who performed both tasks. The management of the tension for these two types of implementation requires different set of skills and resources. However in both cases, the tension still needs to be dealt with. The paradox mindset can ease resolved the perceived conflict and facilitate the management of OA.

The mechanisms used to resolve the OA tension presented in this section would be compared with those that would be identified in the research to either confirm or not their relevance. The research might also reveal new mechanisms.

## **2.4 Moderating Factors**

From their review of the OA literature over the past 15 years, O'Reilly and Tushman (2013) suggested that leadership, culture and identity were key moderating factors of OA. In a prior review of the literature, Raisch and J. Birkinshaw (2008) reduced their findings of factors into three categories. The first category related to the factors that have a direct influence on OA itself. The key finding was that local conditions had a strong influence on OA and empirical studies had shown that highly dynamic and competitive environment promoted OA. The second category related to the factors that moderated the relationship between OA and performance. Referencing the work by Jansen, Van Den Bosch and Volberda (2006), they indicated that the dynamism and the competitiveness of the environments were significant moderators for this relationship. The third category related to moderators of the relationship between antecedents and OA. Raisch and J. Birkinshaw (2008) stated that few studies had been conducted on this relationship and referred to the study by Jansen et al. (2006) who found that firms operating in dynamic competitive environment favour the use of contextual ambidexterity rather than structural.

Lubatkins et al. (2006) found that in the case of structural OA, the behaviour of the top management team (TMT) was a key determinant to the success of OA with respect to their

ability to implement a unity of purpose, to synchronise their actions and to integrate the knowledge stocks across the exploration and exploitation business units.

In conclusion identifying the moderating factors of OA and their relative impact would help better manage the organisation and produce better performance. The presence of these factors will be sought in GE and GGO and their relevance reviewed as the impact of GGO on different aspect of performance would be assessed. The research might reveal other relevant moderating factors as well.

## **2.5 The Need for Organisational Ambidexterity**

A number of empirical studies demonstrated the positive association of OA with the performance of an organisation (Junni et al., 2013; O'Reilly & Tushman, 2013). For instance Hsu, Lien and Chen(2013)'s review of the performance of 207 Taiwanese firms in emerging markets found that OA promoted their performance. Another study by He and Wong (2004) on 206 manufacturing firms also found a positive relation between OA, innovation and sales growth.

OA plays a critical role in ensuring the long-term survival of an organisation (Gibson & Birkinshaw, 2004; Hill & Birkinshaw, 2012; March, 1991). Levinthal and March (1993) stated that OA allows the organisation to ensure its current and future viability. Gibson and Birkinshaw (2004) posited that OA equips the organisation with the dynamic capability to adapt to changes in the environment.

The dynamic capability dimension associated to OA gives a firm a competitive advantage. Dynamic capabilities allow organisations to reconfigure their assets and existing capabilities. March (1991) stated that the right balance in exploration and exploitation is optimal for organisational learning and helps maintain a firm's competitive advantage. O'Reilly and Tushman (2008) proposed that considering OA as a dynamic capability explained the long-term competitive advantage of the firms that implemented it well. O'Reilly and Tushman (2013) also stated that OA gave a firm the ability to 'leverage existing assets and capabilities from the mature side of the business in order to gain competitive advantage in new areas'. The association of OA and the ability of an organisation to adapt and sustain long-term competitive advantage was supported by a number of studies (Bodwell & Chermack, 2010; Gibson & Birkinshaw, 2004; Teece, 2007).

Finally, by enabling the dynamic capability of an organisation, OA promotes two growth factors. The first is the organisation’s ability to sense and seize new opportunities (O’Reilly & Tushman, 2013). The second is its entrepreneurial capability (Teece, 2007).

O’Reilly and Tushman (2008) proposed a framework to assess under which conditions ambidexterity should be considered to develop an opportunity. Using the two dimensions of operational leverage and strategic importance they defined four potential options to pursue with a new opportunity. If the opportunity had low operational leverage and low strategic importance then the opportunity should be spined off.

If the opportunity had a low strategic importance but high operational leverage, it should be developed internally or contracted out. The framework is summarised in the table below. If an opportunity had a low operational leverage but was strategically important, the recommendation was to operate it as a new business unit. Finally if the opportunity had high operational leverage, i.e. would benefit from using existing firm assets and operational capabilities, and had a high strategic importance, then an ambidextrous design was considered the most appropriate solution. The framework is summarised in the following diagram.

Figure 6. Conditions for OA Solution

<b>Operational Leverage</b>	Low	Independent Business Unit	Spin Off
	High	<b>Ambidextrous Organisation</b>	Internalise and/or Contracting
		High	Low
		<b>Strategic Importance</b>	

*(O’Reilly & Tushman, 2008)*

This framework is in line with the implementation of GGO. When we consider the opportunity that GGO was meant to pursue, it had both strategic importance and high operational leverage. A growing significant portion of GE’s revenues were being generated from emerging markets. It was strategically important for GE to establish a strong presence in these markets. Furthermore, GGO’s organisation had leveraged many of GE’s corporate functions to establish itself.

This section has reiterated the importance of OA in the short and long term survival of a firm such as GE. It reinforces the significance of the potential insights that may come out of this research.

## **2.6 Trends in Organisational Ambidexterity Research**

A prolific quantity of research has been conducted on OA in the various disciplines of organisation science, spanning the organisational design, strategy and learning schools of thought (Nosella et al., 2012; O'Reilly & Tushman, 2013; Turner et al., 2013). The high level of interest was due to the fact that OA was understood to be crucial to the firm's long-term survival, competitive advantage and performance (Junni et al., 2013; O'Reilly et al., 2009; O'Reilly & Tushman, 2008).

Neil Turner et al. (2013), O'Reilly and Tushman (2013), Nosella et al. (2012) conducted comprehensive reviews of the body of research done on OA. They all identified a gap in the knowledge of how organisations develop the OA capability. They all stated that there was little research on this question and suggested the topic as an area for future research (Nosella et al., 2012). They suggested that future research should investigate the routines, micro-foundations and key-mechanisms that moderate the emergence of OA in an organisation.

O'Reilly and Tushman (2013) pointed to findings from various studies that identified leadership, identity and culture as key moderators to the successful establishment of OA. O'Reilly and Tushman (2013) suggested that qualitative and in-depth studies should be conducted.

Most SME's don't have the resources to implement structural OA and would most likely create an environment that promote contextual OA allowing the implementation and integration of exploration and exploitation to be pushed down to the individual level (Andriopoulos & Lewis, 2009; Lubatkin et al., 2006). The trend was to explain their implementation of OA through the contextual framework (Patel et al., 2013). However there were few studies using empirical results to test the relationship between contextual OA and performance (Patel et al., 2013).

Other studies had attempted to explain the implementation of OA using the intellectual capital framework (Kang & Snell, 2009; Turner et al., 2013) and human resource management systems (Kang & Snell, 2009; Patel et al., 2013).

In conclusion, the main trend and request for future study in OA was to investigate in details the antecedents and mechanisms that helped develop OA in an organisation. This research is in line with the current trends and its outputs would thus be topical and relevant.

## **2.7 Knowledge Gaps on Organisational Ambidexterity**

Recent reviews on the body of knowledge on OA have suggested a number of gaps to investigate:

- Birkinshaw & Gupta (2013) proposed that OA was a multilevel construct and suggested studies that consider OA across two or more levels of analysis simultaneously, and how linkages of OA at different levels contribute to performance (Junni et al., 2013).
- Birkinshaw & Gupta (2013) proposed that OA was a managerial capability and suggested that further insight is needed into the nature of such managerial capability, taking a more detailed look at the decision making process, the decision makers and how the decisions are implemented.
- Birkinshaw & Gupta (2013) highlighted the fact that literature was vague on whether the different and competitive objectives of exploration and exploitation activities should be balanced, traded off against each other, reconciled or simply managed.
- Junni et al (2013) suggested that more research was needed to better understand the role of industry dynamics in OA, namely the pace of change, the complexity, the ambiguity and the unpredictability.
- O'Reilly & Tushman (2013) and Turner et al (2013) emphasized the role of the behaviour of leaders across the exploitative and explorative units in the successful implementation of OA and that more qualitative and in-depth studies are required to address knowledge gaps on the nature of their interfaces and the management of the tension that arise.
- O'Reilly & Tushman (2013) suggested that organisational culture and identity may play an important strategic capability in establishing OA and that further studies should be done on how firms and their leaders promote new cultures and identities that accommodate OA.
- Nosella et al. (2012) suggested that future studies should view ambidexterity as a capability and that little was known on the routines and mechanisms from which ambidexterity emerged enabling firms to resolve tensions.

## **2.8 The Need for this Research**

The extensive body of knowledge produced to date demonstrate the interest in the subject. The proposed research will investigate the manifestation of OA in a large firm and how this capability was developed. The results of this work would contribute to the OA body of knowledge with new insights on factors shaping the genesis of OA, an important gap in the literature (Nosella et al., 2012; O'Reilly & Tushman, 2013; Turner et al., 2013).

This work would be of interest to both the academic and the business communities as OA plays a determinant role in the survival of a firm, one of the most powerful actors in our society today.

## **2.9 Conclusions**

Organisational ambidexterity (OA) is the ability of an organisation to conduct both exploration and exploitation, in accordance to March (1991) definition. OA is a dynamic capability that allows an organisation to reconfigure itself and adapt to the changing needs of its environment. The OA construct can be used as framework to describe the exploitative and the explorative paths that an organisation could pursue in its internationalisation process.

OA is most likely to occur when the environment is highly dynamic, uncertain and competitive. A typology was proposed to describe the different implementations of OA, based on whether the exploration and exploitation functions were conducted concurrently (temporal dimension) and within the same business unit (structural dimension). This two-dimension typology proposed four forms of OA as harmonic (also known as contextual), partitional (also known as structural), cyclical (also known as punctuated) and reciprocal. OA could be implemented at the various levels of an organisation, namely the individual, the group and the organisational level. Partitional ambidexterity was found to be better suited to large firms that had the resources to implement OA in separate units. Firms with restricted resources favoured the use of harmonic ambidexterity. An organisation has to implement both exploration and exploitation in a balanced manner. A stronger emphasis on either exploration or exploitation will have a negative impact on the organisation.

Implementing OA creates tensions that need to be managed. When implementing OA through separate structures, a top management team (TMT) usually has the responsibility to manage the tension and the integration across the exploration and the exploitation team members and their strategies. In the case of harmonic OA the tension is managed by the individual. A number of intellectual capital mechanisms have been proposed to manage such tension at the

individual, group and organisational levels. The use of a paradox mindset was shown to help embrace and manage the tension.

The dynamism and the competitiveness of an environment were found to promote OA as well as the impact of OA on the organisation's performance. The quality of the top leadership was found to be a key moderating factor in the successful implementation of OA.

A number of studies have shown a positive association of OA with the performance of an organisation. OA is said to be essential to the long term survival of the firm. OA enhances the dynamic capability of a firm allowing it to adapt to changes in the environment, to maintain its competitive edge and grow. OA was also found to be the right strategy to employ in the pursuit of an opportunity that has low operational leverage and high strategic importance.

The OA topic has generated a prolific amount of research due its crucial importance in the survival of a firm. However there are still knowledge gaps in the details of how OA is established, implemented and managed. The aim of this research is to help fill some of these gaps.

## **Chapter 3: THE RESEARCH QUESTIONS**

### **3.1 Introduction**

The literature review suggested further investigation on how the OA capability was developed in organisations. Following the establishment of a new organisation in GE called GGO, the author noticed symptoms of the manifestation of OA. This research aims to first confirm the occurrence of the phenomenon and then to investigate its genesis. The purpose of this research was thus to augment the body of knowledge on OA with respect to its development in organisations. The following two research questions were formulated to frame the research to be conducted.

#### **3.1.1 Research Question 1: is GGO an OA instrument?**

The purpose of this question was to first confirm the manifestation of OA and how was it related to GGO. OA is characterised by the pursuit of exploration and exploitation activities that have specific characteristics. For instance exploitation includes activities such as refinement and efficiency and exploration activities such as risk taking and experimentation. The manifestation of OA characteristics would thus be tested and their association with GGO will be assessed. It has to be noted that research question 1 was framed with the underlying presupposition that GGO was an instrument of OA, assuming that the observed symptoms of OA were caused by GGO. It would thus be necessary to check that there could not be another cause.

#### **3.1.2 Research Question 2: How has GE developed OA capability with GGO?**

A positive answer to research question 1 would lead to research question 2 that sought to understand how the OA capability was developed with GGO. The approach was to gain a holistic insight on the genesis of GGO from its antecedents, to its establishment, its operation, its identity and the impact it had on the organisation. It has to be noted that GGO related to the international expansion of GE in emerging markets.

## **Chapter 4: RESEARCH METHODOLOGY**

### **4.1 Introduction**

The author of the research had been working at GE in the South African office and had witnessed a drastic change in the organisation following the establishment of a new organisation called Global Growth & Operations (GGO). The role and the impact of GGO presented what the author believed to be a manifestation of OA. The introduction of GGO seemed to have significantly improved the performance of GE in Sub-Saharan Africa. The aim of this research was to first confirm that the observed phenomenon was OA and secondly to gain an in-depth insight on how it was developed.

### **4.2 Research Method**

The purpose of the research was to investigate a phenomenon by first identifying what it was and how it occurred. A number of recent reviews on the body of knowledge of OA (Birkinshaw & Gupta, 2013; Junni et al., 2013; Nosella et al., 2012; O'Reilly & Tushman, 2013; Raisch & Birkinshaw, 2008) emphasized the fact that the understanding of OA was still superficial and called for more in-depth studies. This research aimed to gain an in-depth understanding of the deeper structures and relations of OA, which literature had indicated not to be directly observable. As per Saunders & Lewis (2012) definitions a critical realism philosophy was the perspective employed in this research.

The observed OA phenomenon first led to an enquiry through an extensive literature survey that gave an initial understanding of the phenomenon. Gaps in the body of knowledge on OA and the overall objective of the research led to the formulation of the two research questions.

Different methods are employed to conduct academic research. These include experiments, surveys, histories and case studies. The choice of a method depends on three conditions (Yin, 2003): (1) the type of research question, (2) the control over the behavioural events and (3) the focus on contemporary vs historical phenomena. Yin (Yin, 2003) suggested a framework to select the appropriate method shown below in Table 4

**Table 4. Relevant Situations for Different Research Strategies**

<b>Strategy</b>	<b>Form of Research Question</b>	<b>Requires Control of Behavioural Events</b>	<b>Focuses on Contemporary Events?</b>
Experiment	How, why?	Yes	Yes
Survey	Who, what, where, How many, how much?	No	Yes
Archival analysis	Who, what, where, How many, how much?	No	Yes/No
History	How, why?	No	No
Case study	How, why?	No	Yes

*(Yin, 2003)*

The form of research question 1 was “what” leading to the two options of survey and archival analysis. In our case, there were no archival records on GGO and therefore a survey was the appropriate method.

The form of research question 2 was “how”, where the investigator had no control over what happened and focused on a contemporary event at the time of research. Therefore, as per the framework given in Table 4 above, a case study was the appropriate method to use in order to address research question 2. The selection of the case study method was further supported by Simons (2009)’s definition of a case study that it was an in-depth study of a situation or phenomenon in its ‘real life’ context to gain insight in its complexity.

The two research questions led to the combined research approach of induction and deduction associated with a mixed data collection method of a survey and a case study. A survey was used to test and confirm by deduction that the phenomenon observed was OA. Induction was used to gain an in-depth understanding of the OA phenomenon and to draw conclusions.

The study was exploratory as it sought to discover information on a topic that was not clearly understood by the researcher (Saunders & Lewis, 2012). This led to the collection of data from a literature survey and interviews. Interviews allowed for the collection of qualitative data suitable for gaining insight.

OA is characterised by the concurrent implementation of exploration and exploitation. Hence in order to address research question 1, the manifestation of exploration and exploitation had to be established. Secondly the relationship of GGO with respect to exploration and exploitation had to be established as well. In order to assess the degree of the relationship of GGO to exploration and exploitation, quantitative data had to be collected. Therefore, both

qualitative and quantitative data were collected resulting in a mixed method approach to data collection. The data collection method used in this study was largely qualitative with a relatively smaller quantitative component.

The data was collected once from multiple sources and thus the study was a cross-sectional research (Saunders & Lewis, 2012).

### **4.3 Unit of Analysis**

The unit of analysis defines what the “case” is about, the “who” and the “what” that is being studied (Yin, 2014). The case was about the development of OA at GE. Practical constraints limited the scope of the investigation to GE in Sub-Saharan Africa. Therefore unit of analysis of this study was an organisation, GE in Sub-Saharan Africa, GE Africa.

GE consisted of various P&Ls managed as autonomous businesses and a corporate office that was superseded by GGO in growth markets only. GGO and six of its P&Ls were active in Sub-Saharan Africa under the umbrella of GE Africa (“GE Businesses in Africa,” n.d.). The six P&Ls were Transportation, Power & Water, Energy Management, Oil & Gas, Healthcare and Aviation. GE Africa had a turnover of \$5.2 billion in 2013. In our case, the unit of analysis could be considered to have encompassed multiple large businesses.

### **4.4 Case Selection**

The purpose of this study was to understand how OA is developed and augment the theoretical framework on this subject. Flyvbjerg (2006) challenged a perceived notion that one cannot generalise from a single case and thus that single case study could not contribute to scientific development. Flyvbjerg (2006) gave the example that a case study could generalise through falsification, whereby if an observation in a case study did not fit with a scientific proposition, the proposition could not be considered to be valid generally and thus had to be rejected or revised. Yin (2014) suggested that case studies could only be generalised to theoretical propositions and should not be used to make an inference to a population or universe because a case study is not a “sampling unit”. Yin (2014) referred to the mode of generalisation to be used with case studies as analytic generalisation whereby previously developed theory could be tested with the empirical results of the case study.

The case used to investigate the OA phenomenon was GE Africa. As previously mentioned, GE Africa consisted of six autonomous businesses with a total turnover of \$5.2 billion in 2013, each business operating in a different context. Therefore the empirical results obtained from

the research could be considered as a test of the theory across multiple businesses. Interrogating GE Africa gave more opportunities to observe a falsification of the theory on OA and at the same time offered greater level of confidence in a theoretical proposition if the empirical results proved it to be true across all the businesses. Using GE Africa as the case study gave a greater confidence in generalising the theories derived from the findings as the empirical results could be considered to have been effectively tested on a number of cases.

#### **4.5 Data Collection**

The data was collected in three stages from interviews, observations and secondary documentation found mainly from online internet sources. In the first stage, data was initially collected from secondary sources to gather context data points on GGO, GE Africa and its businesses with respect to the setup and operation of GGO, subsequent changes in the organisation and the performance of GE Africa.

The second stage consisted of a pilot interview. An interview guide was drafted using open and rating questions to gather data that would provide answers to the two research questions. A pilot semi-structured interview was conducted to test that the interview technique was appropriate, that the questions were well understood and that they provided the type of information sought (Saunders & Lewis, 2012). On the basis of the feedback from the pilot interview, the interview guide was updated and the interview technique tweaked.

The third stage consisted of conducting fourteen semi-structured interviews. The semi-structured interview format allowed a consistent line of inquiry to be pursued with a conversational approach (Yin, 2003) that permitted some discretion to add, modify or skip certain questions in order get further insight, clarification or avoid the repeat of information already gathered. Table 5 below shows the list of the senior managers that were interviewed across the P&Ls and GGO. The interviewees included six GGO leaders, six P&L leaders, one manager that assumed two leadership roles in GGO and of a P&L. Twelve interviewees were based in Africa, one in Middle East and another in Asia-Pacific.

Table 5. List of Interviewees

Role	GGO / P&L & department
President and CEO, GE Africa GE Officer	GGO
Commercial Financial Manager, Sub-Sahara Africa	GGO, Finance
Chief Financial Officer, GE Africa	GGO, Finance
Marketing Leader, Middle East & Africa	P&W, Marketing
General Manager, Middle East and Africa	Intelligent Platform
Sales Director, Sub-Sahara Africa	Energy Management, Digital Energy
Chief Financial Officer, Sub-Sahara Africa	O&G, Finance
Region Sales Director, Sub-Sahara Africa	O&G, Upstream
Marketing Leader, Asia Pacific	P&W, Marketing
Marketing Leader, Sub-Sahara Africa	O&G, Marketing
Business Leader, Sub-Sahara Africa	P&W, Power Generation Services
Director of Enterprise & Suppliers Development	GGO, Enterprise Development
Business Leader, Sub-Sahara Africa, Southern Africa Leader, GE Officer	Transportation, GGO
Commercial Director, Africa	Healthcare
<b>Total number of interviewees</b>	<b>14</b>

Eleven interviews were conducted face-to-face at GE offices in Johannesburg, South Africa and in Nairobi, Kenya. Three interviews were conducted by phone with those interviewees that could not be met face-to-face as they were located at a distant physical location at the time of the interview. Each interviewee was first approached with an introduction email describing the study and expressing the intent to conduct an interview. The interview guide was attached to each introduction email for the candidate interviewee to review. A complementary courtesy call was done when deemed necessary. Following the positive response of the candidate interviewee, a date and time was agreed upon to conduct the interview. The sending of the interview guide with the introduction email gave the interviewee ample time to prepare. Each interview started with an overview of the study and a reminder of the terms of consent. The interviews lasted on average 45min to an hour and followed the structure of the interview guide. At the end, the interviewee was thanked for his time and requested to email a scanned copy of the signed consent form if the interview was by phone. This interview process was in line with the recommendations of Saunders and Lewis (2012). All the interviews were digitally audio-recorded and transcribed afterwards for data recording and analysis.

The interview guide was the research instrument that contained the questions that were followed during the interviews. Appendix 9.1 presents the interview guide. The interview

guide had a consent note that included an introduction to the topic, the purpose of the interview and the terms of consent.

The GE organisation was made up of P&Ls and a corporate office (“GE Organization Chart,” 2012). GGO was established in growth markets where it superseded the corporate office function, which was the case for Sub-Saharan Africa. The interview sought to gain an insight on the development of the OA capability in GE by assessing GGO and the rest of the organisation, namely the P&Ls. Therefore assessing the role of GGO in developing the OA capability in GE required comparing GGO to the P&Ls. The questions in the interview guide were formulated to draw out that comparison.

The questions followed a line of inquiry that allowed for a holistic assessment of GGO in respect of the development of the OA capability at GE, starting with the antecedents of GGO, then its characteristics, its establishment, its operation, the results and finally the impact on the overall GE organisation. This holistic assessment allowed for collection of sufficient data points to address the research questions. Except for the characteristics section, the questions were open ended allowing for a free exploration of the concepts. The section on the characteristics of GGO had some rating questions to test the manifestation of OA in GGO and the P&Ls using known characteristics of exploration and exploitation identified from literature. Both quantitative and qualitative data were collected from these questions. The quantitative data were the ranked data points and the qualitative data was the comments made by the interviewees.

#### **4.6 Data Analysis**

Pattern analysis was the main strategy used in the analysis of the data. The two research questions led to two types of analysis, the first was the test of the occurrence of a known phenomenon and the second was the identification of information related to the development of the phenomenon. The pattern matching (Yin, 2014) technique was used to test the occurrence of the known phenomenon. This technique is based on comparing empirical patterns with predicted ones that were derived from the theories identified in the literature. The OA theory predicted the characteristics of exploration and exploitation activities. The first analysis thus consisted of testing whether the observed patterns matched the predicted characteristics of OA. The second analysis also used pattern matching to confirm the theoretical propositions that were identified in literature with respect to the development of OA. In addition, it identified new patterns that were deemed significant and were used as the basis for new theoretical propositions.

Two software applications were used to assist the analysis of the data, namely Atlas.Ti and Mindjet MindManager™. Atlas.Ti is a qualitative data analysis software that assisted with the initial coding of the transcripts. Following the initial coding, Atlas.Ti was instrumental in quickly retrieving relevant information from the 14 transcripts. MindManager™ was used at the later stage of the analysis as an additional tool in the identification of new patterns. MindManager™ was the principal tool used in recording key information from the literature survey and mapping out the theoretical framework.

The analysis started with a high level review of three transcripts of interviews from both P&L and GGO representatives to assess an approach to the coding. The coding started with the matching of the responses to the questions of the interview guide. Thereafter ideas and concepts in the transcripts were coded to first match theoretical propositions and concepts identified in the literature and when there was no match a new code was introduced.

A number of criteria were proposed as the basis to identify a significant pattern or insight. The occurrence of an idea or concept across multiple interviews would imply a pattern. Pattern matching (Yin, 2014), explained above, would be a basis for verification of a theoretical proposition. Finding a “black swan”, falsification, could potentially be the basis to reject a theoretical proposition (Flyvbjerg, 2006).

As each interviewee was a leader of a different, practically independent, function or business at GE, considering each interview as a different case introduced a new perspective to the data analysis. Flyvbjerg (2006) highlighted significant learnings that could be drawn from certain types of cases. The different businesses and functions represented by the interviewees offered a maximum variation across various dimensions (e.g. size, sector, footprint, age) that made an insight significant if it held true across all the cases. Some cases could be considered paradigmatic whereby the view of an individual could be considered a “metaphor” for GE Africa. Flyvbjerg (2006) further pointed out that cases that are most likely to confirm a proposition are the best candidate for falsification of propositions, while those that are least likely to confirm a proposition were the most appropriate to verify a proposition.

## 4.7 Limitations & Assumptions

The following paragraphs present limitations on the study in terms of the research design, execution and analysis.

Saunders and Lewis (2012) highlighted some criticisms levelled against case studies. One of which is that the close exposure to the study by the interviewer biases the findings. The second criticism was that a single case cannot be the basis “for placing faith in the findings.”

It could be argued that GE Africa was a multi-business organisation operating in diverse sector and thus improved the generalisation of the insight. However, the various businesses were bounded by an overall context with unique features such as culture and identify. This uniqueness or specificity could negatively impact the generalisation of the findings. However, as a case study, the findings could only be generalised to theoretical propositions (Yin, 2014).

Finally, in a discussion paper, Flyvbjerg (2006) presented a good overview of the limitations of a case study that he referred to as misunderstandings. He challenged each of them with strong arguments and proposed re-statement for each misunderstandings. The following table presented those misunderstandings and the re-statements.

**Table 6. Five Misunderstandings on Case Studies (Flyvbjerg, 2006)**

<b>Misunderstanding (limitation)</b>	<b>Restatement</b>
1. General, theoretical (context-independent) knowledge is more valuable than concrete, practical (context-dependent) knowledge.	Predictive theories and universals cannot be found in the study of human affairs. Concrete, context-dependent knowledge is therefore more valuable than the vain search for predictive theories and universals.
2. One cannot generalize on the basis of an individual case; therefore, the case study cannot contribute to scientific development.	One can often generalize on the basis of a single case, and the case study may be central to scientific development via generalization as supplement or alternative to other methods. But formal generalization is overvalued as a source of scientific development, whereas ‘the force of example’ is underestimated.
3. The case study is most useful for generating hypotheses; that is, in the first stage of a total research process, while other methods are more suitable for hypotheses testing and theory building.	The case study is useful for both generating and testing of hypotheses but is not limited to these research activities alone.

<p>4. The case study contains a bias toward verification, that is, a tendency to confirm the researcher's preconceived notions.</p>	<p>The case study contains no greater bias toward verification of the researcher's preconceived notions than other methods of inquiry. On the contrary, experience indicates that the case study contains a greater bias toward falsification of preconceived notions than toward verification.</p>
<p>5. It is often difficult to summarize and develop general propositions and theories on the basis of specific case studies.</p>	<p>It is correct that summarizing case studies is often difficult, especially as concerns case process. It is less correct as regards case outcomes. The problems in summarizing case studies, however, are due more often to the properties of the reality studied than to the case study as a research method. Often it is not desirable to summarize and generalize case studies. Good studies should be read as narratives in their entirety.</p>

## **Chapter 5: RESULTS**

### **5.1 Introduction**

A questionnaire (see Appendix 9.1) was drafted to guide the semi-structured interviews through a series of questions designed to gain a holistic insight on GGO and the development of the OA capability. The questions addressed the following six topics: (1) the need for GGO, (2) the characteristics of GGO, (3) how was GGO established, (4) how is GGO operating, (5) the results of GGO and (6) the overall impact of GGO on GE.

Fourteen respondents from GGO and the P&Ls were selected. Most of the respondents were managers and executives. The software applications Atlas.Ti and Mind Manager were used to help analyse the responses.

The results are presented in the same layout as in the interview guide. Extracts of the responses from the interviews are given in the following sections to support the results that are presented. In order to maintain their anonymity, the respondents are referred to numerically and at times, their responses are slightly modified when necessary.

### **5.2 The Need for GGO**

The respondents were asked what the need for GGO was. The responses of the 14 respondents have been categorised into five main reasons elaborated in the following paragraphs.

#### **5.2.1 Accelerating Growth in Emerging Markets**

There was a wish to increase the growth rate of GE in emerging markets. There was a significant opportunity outside of the U.S. that the company could pursue as expressed by Respondent 11: *“I think with this continued growth of revenue outside the US, there was a decision made that we needed something structurally stronger, to make more of the global opportunity that GE was developing.”* This was made evident by a growing portion of GE’s revenue from outside the US:

*“GE started looking at it. Its revenue base was shifting from predominantly the US to international markets ... and the market in Asia, South America, Africa started taking a significant view. And as that was happening GE was actually selling into those areas.”*  
(Respondent 4)

GE's growth rate in emerging markets was unsatisfactory:

*"Being in an old US based company, 130 year old company the thinking was that we were not growing as quickly outside the U.S., particularly in developing markets, and so we always had what we call GE International with the National Execs sort of structure, and the idea was to fortify that structure with more of a focus on operationalizing growth in developing markets."*  
(Respondent 13)

As stated by Respondent 6, this led to GE's decision to act: *"About 4 years the board and Jeff decided that they wanted more focused in the region, especially in the developing markets"*. Thus the main purpose of GGO was to accelerate the growth in emerging markets, as articulated by Respondent 10: *"It was to identify or help identify and accelerate the identification of growth areas applicable to all the GE businesses"*.

### **5.2.2 Scrap the Limited P&L Growth Strategy**

Secondly there was a need to use a different growth strategy to the one employed by the P&Ls that had some limitations:

*"It was very difficult for each of the P&L to look at the smaller growth area or to have enough intelligence on regions. So that's why, you know, Jeff Immelt and then John Rice had set up to drive the growth from a region perspective."* (Respondent 7)

The P&Ls were pursuing opportunities in emerging markets individually. These markets were too small for any business to make a significant investment, as illustrated by Respondent 8: *"So for a P&L it was always money first and then infrastructure later"*. When these emerging market opportunities were assessed through the lenses of a global business they were too small, but when assessed through from the regional perspective, they were significant:

*"If you have a fifty million business in front of you that's opportunity for you, right. So from business which is five billion that's too small. Right? Too small to chase or to resource. So I think it brings the whole different perspective to the opportunity scale and gross opportunity."*  
(Respondent 7)

The nature and the drivers of the P&Ls were not suited to what was required to grow the business in these emerging markets *"where GE had little or no presence at all"* (Respondent 9), such as their poor appetite to risk, their unwillingness to go out of their comfort zone and their short term focus:

*“There was a need for a team or organization, willing or capable of taking more risk than what the businesses were willing to do, by making investment in new countries, new growth spaces, and then once these investments starts to bring orders, then it will be taken over by the business.” (Respondent 12)*

*“I think one of the main reasons is that we in the P&L are obviously very focused on making our quarterly numbers, we are very short term focused and the reason for the establishment of GGO the way I understand it is to go out and develop opportunities for us, establish contacts, leads and opportunities.” (Respondent 3)*

### **5.2.3 Develop New Capabilities**

These emerging markets required GE to develop new capabilities:

*“We saw a gap in the ability to address the opportunity in developing markets. We had growth everywhere including the US, but much lesser to an extent, and we didn’t have the capability to exploit that growth, to connect with it, to help deliver and to understand it.” (Respondent 13)*

New capabilities were required to enable GE to meet the local needs:

*“The P&Ls as you know them are domain experts in power, in healthcare. But not necessarily in opening new markets, in building relationships with Governments and just building a portfolio of distributors and channel partners. Even understanding about how to deal with localization mandates that have also been growing.” (Respondent 4)*

*“So we saw that many of our customers needed our products but they do not have the money. So we set up a funding function, this is the sales and project finance, which now supports the organisations that needed our products and equipment but did not have necessary the funding.” (Respondent 1)*

### **5.2.4 Need for an Influential Organisation**

GE needed an influential organisation that could pull the necessary resources and drive the necessary changes to develop its capabilities and properly position GE in emerging markets.

*“The process was to have a senior leader responsible for the activities in a region, not necessarily reporting but representing GE, as a one GE in those regions, to make sure we have the right resources, we got the right focus and really push the envelope if you will around what we really needed to do to grow in these developing market.” (Respondent 6)*

*“The need for GGO was in my opinion, based on the need for the company to stretch beyond what was its formal horizon of business.” (Respondent 9)*

*“The GGO organization was sponsored and led by really senior officers in the company so it meant that GE is very serious in the growth areas, focusing the whole GE machine behind the growth opportunity”.*(Respondent 10)

### **5.2.5 Globalising Efficiently**

GGO also fulfilled the need to optimise GE’s globalisation venture.

*“So if every P&L will go and set up their own infrastructure in every country it will be a lot of repetition of the efforts, duplication of efforts and duplication of costs and all those things, so of course GE was looking for more of an instrument where we can actually, where the basic infrastructure is set up by those, the one group, and then all of the P&Ls will go and leverage the existing infrastructure, and then really leverage and build the capability in those countries”* (Respondent 8)

This would be achieved through a single entity that would build a common backbone infrastructure for all the P&Ls to share, thus helping GE streamline its activities in the regions.

*“In a place like China as an example and I will use the example of government relations, you wouldn’t want to have a government relations person for each of the businesses in China, that just wouldn’t be an efficient way to do it, from a cost stand point and it wouldn’t be effective and nor would it be appreciated I think by the government to have 5 different government relations people representing GE trying to set up different meetings with them.”* (Respondent 14)

### **5.2.6 Assessing the Responses**

The literature suggested that OA is most likely to occur when the environment is highly dynamic and uncertain and experiences an increased level of competitiveness (Goossen & Bazazzian, 2012; J. J. P. Jansen et al., 2009; O’Reilly & Tushman, 2013). These were indeed the conditions experienced by GE in 2009, as expressed in Immelt’s presentation to investors of GE’s outlook in 2009 (Immelt, Jeffrey R., 2009), see section 2.3.1.

However, these conditions have not been mentioned by the respondents. The principal reasons mentioned by the respondents for the establishment of GGO were the need for a higher growth rate in emerging markets and the unsuitability of the growth strategy that was

led by the P&Ls. Essentially the respondents indicated that there was a need for a drastic change in the growth strategy of the organisation in order to achieve better results.

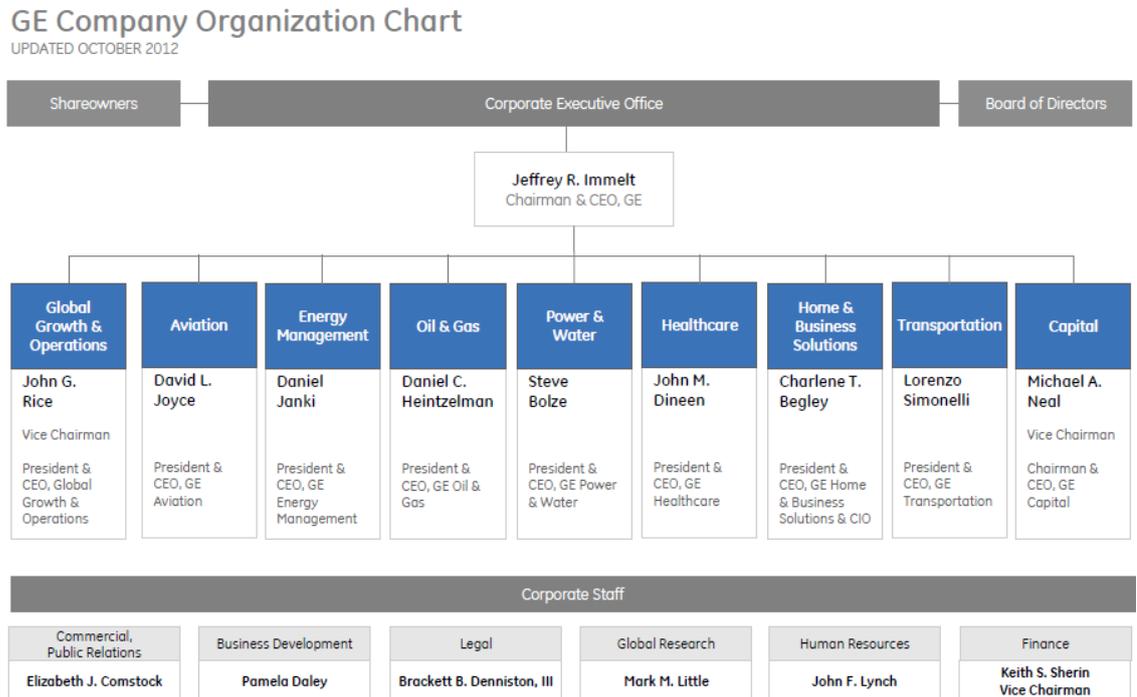
The call to action or the link to it is also missing in the literature's presentation of the OA antecedents. Their presence does not necessarily results in the development of OA. From the responses, one can identify that the responsiveness of GE's leadership to the challenging conditions was crucial in establishing GGO. This responsiveness is in fact a dynamic capability (O'Reilly & Tushman, 2008; Teece, 2007) of the organisation as it allowed GE to understand the challenge or opportunity of emerging markets and to set on a course to reconfigure itself with GGO.

Therefore in addition to the antecedents of an environment with high dynamism, uncertainty and increased competition, the organisation has to possess a dynamic capability that will allow it to respond. Furthermore, in this case with GE, this dynamic capability was evidenced from the top leadership of the organisation.

Assessing this situation through the framework on internationalisation proposed by Prange and Verdier (2011), see Figure 1, suggests a better assessment of the situation and the use of GGO. This framework proposed that an international exploration process would produce disruptive capabilities that would result in growth. It also posited that an international exploitation process results in a survival mode.

## 5.3 GGO as a Separate Structure

Figure 7. GE Organisation Chart (2012)



(“GE Organization Chart,” 2012)

As per the organisation chart depicted in Figure 7 above, GE consisted of two structures, the P&Ls (businesses) and corporate. The P&Ls were responsible for driving the business and had initially led the international expansion in the emerging markets. However, GGO was setup as a separate entity to the P&Ls reporting directly to the Chairman. The respondents were asked why in their opinion was GGO setup as a separate structures. Their responses centred around three reasons described in the following sub sections.

### 5.3.1 Shifting the Centre of Gravity

There was a need to use a different approach to the P&L led market expansion:

*“Sometimes to drive change in this company you need an independent view and local. I think we’ve tried and say well there’s an opportunity, business why don’t you go after it, three years later they are still telling you I don’t have enough time and energy to do it. So a separate organisation says no, this is something we could do now”.* (Respondent 13)

A profound alternative was required to change GE’s focus and shift “its centre of gravity”:

*“The key thought process was around shifting the centre of gravity. All the P&Ls were headquartered in the United States or Europe and as a result that’s where the majority of all*

*their senior people were as well as a lot of their employees. So the thought process was to put a separate structure with John Rice, who was the vice chairman, outside. He relocated outside from the US to Hong Kong. And then then has 10 reports in the developing markets".* (Respondent 6)

A separate independent and influential structure would promote a stronger case:

*"The thought process was to have a separate structure because it could also create a little bit of a creative tension between the businesses and GGO, in saying what needs to be done, how to get it done, etc. So the thought process was to shift the center of gravity by putting this organization outside of the US, and weigh in from outside the developing markets and really focus on the growth." (Respondent 6)*

### **5.3.2 Driving a different growth story**

A separate structure would communicate to the leadership of GE a different perspective originating from the regions themselves:

*"The leadership wanted to have a team that think in a different way and be measured in a different way. If you are part of the P&L you will just be an expansion of an existing way of thinking, or an existing way of measuring people. You will not necessarily be driving change in how you view the market, in driving real change in how we look at business growth. There had to be a team that is separate from the P&L to bring a new way of looking at the market, a new way of looking at growth spaces." (Respondent 12).*

A different perspective could not be articulated from within the P&L:

*"From my own observation, the reason why it is now sitting in a separate area is to avoid it having the biased influence, because the moment it sits in Power & Water it will start to ignore what comes out from the Oil & Gas, what comes out from the Transportation, what comes out from Healthcare, what comes out from Distributed Power. We want an eagle's view of all the GE businesses. So it can't sit in a P&L because the moment it sits in P&L it becomes a specialist in that sort of business, we don't want it to be a specialist, we want to have a holistic view of the GE business, that's representing all the five GE businesses" (Respondent 15)*

### **5.3.3 Separate but Complementary**

Even though GGO was a separate structure, it had the mandate to provide a complementary and enabling function to the P&Ls:

*“GGO was formed for opening the market, deal with the Government and so on, and allow the P&L to work under that umbrella, focusing on what they knew best.” (Respondent 4)*

*“GGO don't have specific short-term targets, they have more long term targets and it frees them up to go and develop opportunities, rather than chasing the short term number.” (Respondent 3)*

*“If you are looking at horizontal and vertical structures, GGO is more like a horizontal structure, which is really serving all the P&Ls to build the infrastructure in the country.” (Respondent 8)*

#### **5.3.4 Assessing the Responses**

In order to assess the results of this section, we shall draw on the results of the next section 5.4 on the assessment of the characteristics of GGO, which suggest that GGO has an exploration bias and the P&Ls have an exploitation bias. Therefore establishing GGO as a separate structure meant a partitional implementation of OA (Simsek et al., 2009), as illustrated in Figure 3 above.

According to O'Reilly and Tushman (2008) a partitional (or structural) implementation of OA allowed the exploration and exploitation units to have independent cultures, structures, competencies, sub-processes and management team. This would allow exploration and exploitation units to pursue strategies that were fundamentally different (March, 1991). Lavie and Rosenkopf (2006)'s study of 20,000 alliances who pursued a form of partitional OA across their structures, highlighted the complementarity of the exploration and exploitation units. The reasons given in literature for implementing partitional OA are aligned with the two main responses given by the respondents of seeking a different growth story and of being separate but complementary.

The suggested use of GGO to “shift the centre of gravity” of an organisation is a new insight on the potential use of OA. Considering the P&Ls to have an exploitation bias, this reason implies an attempt, or mechanism, to shift the orientation of GE towards exploration, on a large and significant scale. It is a significant attempt to disrupt the system.

With more than 50% of GE's revenues being generated from outside the U.S. since 2006 (General Electric, 2009) and a growing portion coming from emerging markets, this strategic move with GGO may be a signal of GE of its need to shift from the exploitation mode focused in the developed markets to an exploration mode that will allow it to grow in the emerging markets. This proposition of shifting GE from an exploitation to an exploration mode would be a long term process observable at the organisational level of GE. It would be a cyclical form of

OA, also referred to as sequential OA (O'Reilly & Tushman, 2013). O'Reilly and Tushman (2013) have pointed out that little is known on the mechanisms of sequential OA. This insight may start shedding some light on this topic.

## 5.4 Characteristics of GGO and the P&Ls

Three sets of questions were to compare GGO to the P&Ls and to assess their affinities to exploration and exploitation. They were first asked to freely state their opinions on the main differences between GGO and the P&L (Q2.1 and Q2.2, Interview Guide). Then they were asked to rate GGO and the P&L against a given set of exploration and exploitation criteria (Q2.3 and Q2.4, Interview Guide). Finally, they were asked to compare GGO to the P&Ls with respect to their culture, their processes and their leadership (Q2.5.1, Q2.5.2 and Q2.5.3, Interview Guide).

Since the responses to the first set of questions, Q2.1 and Q2.2, covered the same topics as those of the last set of questions, Q2.5.1, Q2.5.2 and Q2.5.3, they were all categorised under the same categories of culture, processes and leadership. The following sections present the responses.

### 5.4.1 Differences in Culture

The following table summarises the differences in the culture of GGO and the P&Ls expressed by the respondents into 6 distinct pairs of ideas. Each idea corresponds to a topic that at least two respondents mentioned.

Table 7. Culture difference between GGO and the P&Ls

GGO	P&L
<b>Risk taking</b> Willing to make big bets, investing first, Optimistic	<b>Conservative</b> Money first / invest after, Cautious
<b>Big picture thinking</b> Solution provider, One GE (cross P&Ls)	<b>Silo thinking</b> Product focus, narrow [P&L] focus
<b>Long term view</b> Strategic focus, >1 year horizon to develop an opportunity	<b>Short term focus</b> Execute, must deliver every quarter
<b>Pioneer</b> Initiate, develop opportunities	<b>Operational</b> Implement, produce, optimise
<b>Agility</b> Innovative [commercial], flexible, quick decisions	<b>Traditional</b> Tried & tested methods, structured decision making process
<b>Local perspective</b> Geared to meet & promote local opportunities	<b>Global lens</b> Prioritising opportunities on a global scale

The differences mentioned by more than half of the respondents were the risk taking and the big picture thinking of GGO, and the narrow focus and the short term horizon of the P&Ls.

*“When you think about GGO It’s more about driving growth, taking risks, thinking bigger, thinking outside the box”.* (Respondent 1)

*“The way I would like to think of it is GGO is here to compensate for the outsized market risk ... So what GGO is trying to do is compensate and eliminate the outsized risk so the P&L can compete on the same basis as it does elsewhere in the world.”* (Respondent 13)

*“We in the P&L are obviously very focused on making our quarterly numbers; we are very short term focused.”* (Respondent 3)

*“Each P&L is tight to their own process and have a hard time thing around them differently, whether it’s about product innovation, distribution, organization, etc ... And a narrower focus around growing businesses vs a holistic focus which is what you can do in GGO.”* (Respondent 6)

#### **5.4.2 Differences in Processes**

The respondents were asked to identify the main differences in the processes conducted in the P&Ls to those of GGO. The basic definition given for a process was “the way you do things to achieve a particular goal”. The respondents expressed mainly three differences described in the following sections.

##### **5.4.2.1 Similarity in Processes**

Most respondents highlighted the fact that many of the processes in GGO were similar to those of the P&Ls:

*“[Difference] in the processes? I wouldn’t say .. that’s what the GE hallmark is, strong processes.”* (Respondent 6)

*“Well we are on the same routines as the P&Ls around the planning processes, so the blueprint reviews, playbooks, we’re on the same process”.* (Respondent 13)

*“GGO is part of GE at the end of the day. So within GGO you will find the same processes that the businesses are doing. There are the growth playbook review, there are the blueprints, etc .. I don’t see today any process that is unique to GGO that the businesses don’t do. No.”* (Respondent 12)

*“So I think the thing that drives the decision making is very similar to the rest of GE, you know, and that is good, because if it is operating on a totally separate kind of calendar or way of approving funding or decision making, it will create a lot of discord, but because they operate on a similar calendar and follow the same sort of routines, we are able to align a lot better with the P&Ls.”* (Respondent 11)

#### **5.4.2.2 Difference in the Implementation**

The respondents indicated that the differences were mainly in the way the processes were implemented. In general the response centred around the strict application by the P&Ls while GGO exercised some flexibility.

*“I think definitely P&L processes are far more rigorous. When you think about NPI, new growth opportunities, etc. Far more vigorous, more established, definitely more bureaucratic.”* (Respondent 7)

*“The P&Ls have much more defined processes, that is one difference.”* (Respondent 8)

*“The processes that need to be followed within a P&L are very strict, things like being very strict about capturing opportunities within SFDC for our CRM process, following the process of receiving orders and handing it over from IT to OTR, there are very strict processes within the P&Ls, within GGO again the processes are much more relaxed.”* (Respondent 3)

*“To me it goes back to the question of the processes, it’s much leaner, it’s much more vertical organization, that enables I would say a faster decision making process compared to the P&L, that to me is a key difference, we in the P&L are more into horizontal organization which slows down everything, just for making a meeting, the P&L goes with 10 people which in reality just should be one or two, so that to me is a key difference.”* (Respondent 9)

#### **5.4.2.3 Unique Processes**

The respondents highlighted the fact that GGO and the P&Ls conduct some processes that were unique to each other. For instance GGO performs back office tasks such as IT processes that supported the P&Ls allowing them to focus on their core processes. Another example was that GGO did not manufacture products like the P&Ls.

*“I think, at GGO we tend to look at processes as what can all of GE do. So processes apply to the broader company and optimize for that. Whereas P&L look at processes that optimize for their supply chain, hierarchy, and customer base.”* (Respondent 13)

*“In terms of process I would say GGO is thinking about how to standardise processes across businesses, new processes maybe lighter. Businesses will be more traditional in that sense, with tried and tested kind of processes.” (Respondent 1)*

### **5.4.3 Differences in Leadership**

When asked about the difference in the leadership of GGO and the P&Ls, the responses centered around two themes. The first was a comparison in the level of seniority of the leaders operating in the same region. The second theme was the fact that leaders of both organisations shared the same traits and values and but had a different focus as they pursued different objectives.

#### **5.4.3.1 Seniority of Leaders**

Most respondents highlighted the fact that the senior GGO leaders had a higher grade than their P&L counterparts. This allowed GGO leaders to have an influential voice when addressing regional issues with their P&L counterparts.

*“In many of these developing markets the GGO structure is staffed with much more senior people than the businesses. So we have a level of responsibility and capability that don’t exist in the P&L in some of the developing markets.” (Respondent 6)*

*“So you have an officer in GGO. But you don't have an officer in P&L, but you can't compare because an officer has more authority, by definition.” (Respondent 4)*

*“So GGO is empowered and when I say empowered I mean both from a resource point of view, very senior leaders.” (Respondent 1)*

*“I think that one of the thing that Jeff and his leadership team gets to ensure GGO achieves in its role and its mandate, was to put big leaders in GGO. And you see team level of seniority with offices, many officers are in GGO, SEB’s at HQ and in the region.” (Respondent 12)*

#### **5.4.3.2 Same DNA, Different Focus**

Most respondents highlighted the fact that leaders in GGO and the P&Ls shared the same leadership traits, the same “DNA”, and that the difference was in their mandate or in the objectives they pursued.

*“In terms of quality of leadership I would say it’s probably the same but it’s just the way you think about a particular project. GGO will think very broadly, businesses will think specifically.” (Respondent 1)*

*“To me the leadership is similar, the reason is that all the people that are in GGO actually came from the P&Ls, so that’s why the leadership style is not very different, because the only thing they have started doing is what part of P&L and they just focus on one particular P&L, but as far as the GGO they are really style looking as the like (8 wing paraglides) for the whole of GE, that is the only difference but from leadership wise I think it’s very similar.”* (Respondent 8)

*“I think a lot of it is the same. Again it’s just a little bit different. We both have goals and objectives, and as I mentioned earlier, the goals and objectives of somebody in GGO might be a little bit more strategic, a little bit longer term, a little bit less certain, but we operate in the same way.”* (Respondent 14)

The difference in the focus mentioned by the respondents was aligned with the difference in culture the respondents mentioned earlier. GGO leaders were more risk taking, promoted big picture thinking, had a long term strategic view, were flexible and drove change to meet local needs. The P&L leaders used a global lens to make decisions, had a narrow focus on their business, were conservative and had a short term focus.

*“If I think about leadership, I think GGO will be more broader thinking. Businesses will be more deeper thinking.”* (Respondent 1)

*“I think GGO leaders are functional experts, and maybe broader thinkers. The P&L leaders tend to be more specialized and focused on their [business]”.* (Respondent 13)

#### **5.4.4 Measuring GGO and the P&Ls on OA characteristics**

March (1991) defined exploitation as activities that include refinements, production, efficiency, execution and choice and exploration as activities that include risk taking, experimentation, innovation, flexibility and variation.

The respondents were asked to compare GGO to the P&Ls in terms of the prevalence of seven exploration and exploitation activities on a five level scale as per the following table. Four exploration activities were tested, namely risk taking, experimentation, search and innovation. Three exploitation activities were tested, namely efficiency, execution and optimisation. The respondents were asked to compare the practice of these activities in the order presented in Table 9 below.

When asked to define or clarify a term, the respondents were given a response based on the following explanations.

**Table 8. Definitions of the Characteristics used to Test Exploration and Exploitation**

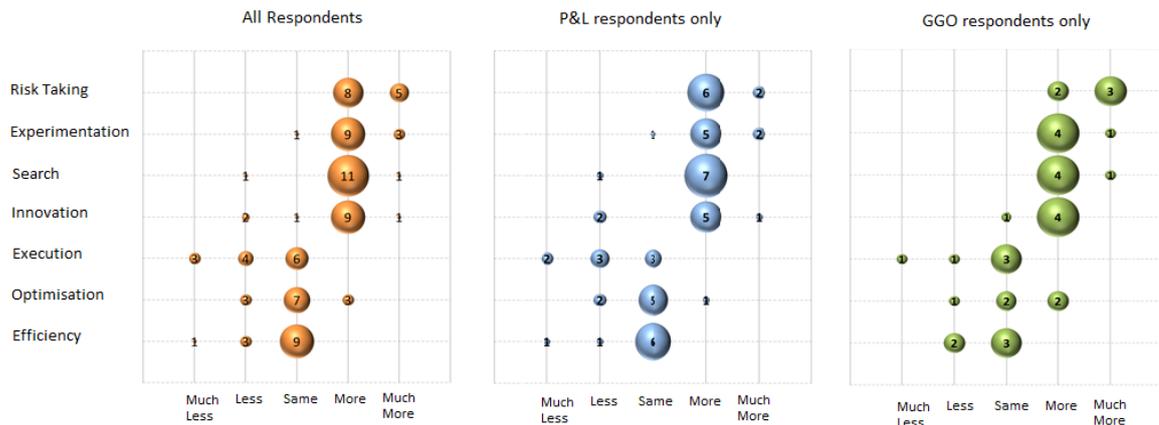
<b>Term</b>	<b>Explanation</b>
Execution	This refers to the carrying out of a commitment. For the P&Ls, it refers to the fulfilment of the obligations of a sales order.
Efficiency	This refers to the process of reducing waste in a process (or activity)
Optimisation	This refers to the process of making a process more effective (or activity)
Innovation	This refers to changing the way things are done, with new ideas, methods or products
Experimentation	This refers to embarking on a process or activity whose outcome is not sure.
Search	This refers to the process of looking for something different.
Risk taking	This refers to the act of taking risk, which in this context refers to investing in a venture whose outcome may result in the total or partial loss of the investment.

**Table 9. Comparing GGO Exploitation and Exploration Characteristics**

	Much less	Less	Same	More	Much more
Risk Taking					
Execution					
Optimisation					
Innovation					
Efficiency					
Search					
Experimentation					

The responses were reordered as in Figure 8 below to first show the pattern on exploration activities (risk taking, experimentation, search and innovation) and then the pattern on exploitation activities (execution, optimisation, efficiency). The responses to each activity were plotted using bubbles whose size is proportional to the number of responses.

Figure 8. Comparing GGO to the P&Ls on exploration and exploitation activities



As can be seen in Figure 8, the pattern on the exploration activities suggest that GGO is doing more of the exploration activities than the P&Ls. This perception is maintained when considering only the P&L responses or only the GGO respondents. More than half (3) of the GGO respondents stated that GGO was doing much more risk taking while a quarter (2) of the P&Ls respondents gave the same answer.

The responses on the exploitation activities were mixed. When considering the responses from all the respondents on exploitation, almost half (6) of them said that GGO and the P&Ls were on par while the remaining respondents said that GGO is doing less. When considering the responses from the P&Ls respondents only, a majority (5) stated GGO was doing less execution while three stated GGO was on par with the P&Ls. Three of the GGO respondents believed that GGO was on par with the P&Ls while the other two believed GGO is doing less.

On optimization the overall response from all the respondents was that GGO was on par with the P&Ls. The responses of the P&Ls respondents were also balanced on GGO being on par with the P&Ls. However out of the five GGO respondents, two believed GGO was doing more on optimisation and two believed GGO was on and one that GGO was less. Most of the respondents referred to the shared services function when ranking GGO on optimization.

On efficiency the majority of the respondents (9) stated that GGO was on par with the P&Ls. Most of the P&Ls respondents (6) stated that GGO was on par while the rest (3) stated that GGO was doing less on efficiency than the P&Ls. Three out of the five GGO respondents stated that GGO was on par with the P&Ls and the remaining said GGO was doing less. Most of the respondents referred to the shared services function when ranking GGO on the efficiency.

### 5.4.5 Measuring GGO and the P&Ls on the Intellectual Capital Framework

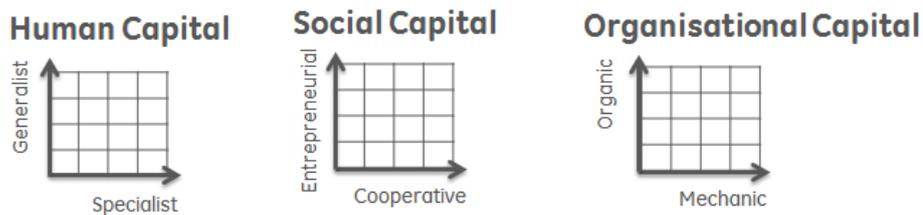
Considering the potential implementation of contextual ambidexterity, the respondents were also asked to measure GGO and the P&Ls against attributes the Kang and Snell (2009) intellectual capital framework presented in section 2.3.5.2. The framework measures the exploration and exploitation orientation in terms of the human, social and organisational capital using pairs of dimensions as per the following table.

Table 10. Intellectual Capital Dimensions

	Human	Social	Organisational
Exploration	Generalist	Entrepreneurial	Organic
Exploitation	Specialist	Cooperative	Mechanistic

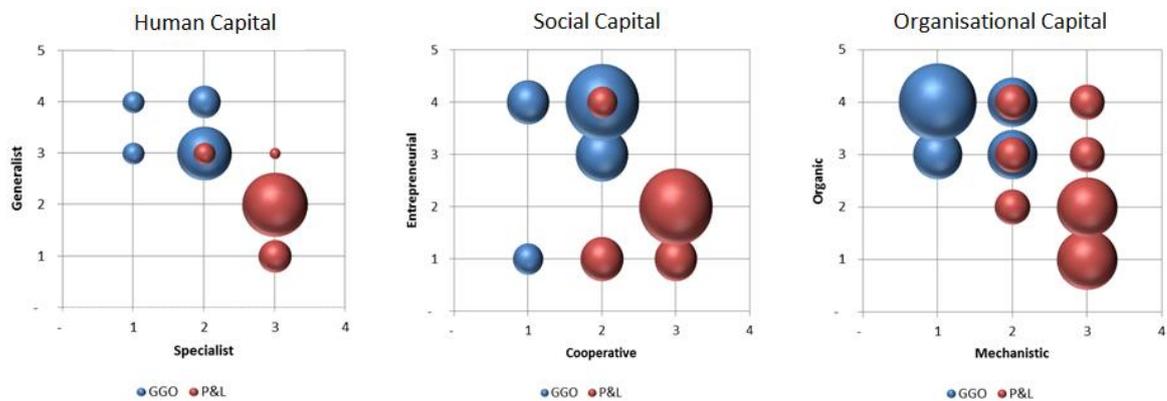
The respondents were asked to position their ranking of GGO and the P&Ls on three grids representing the human, social and organisational capital, as depicted below.

Figure 9. Intellectual Capital Framework Grids



The responses are depicted in Figure 10 below. The size of the bubbles represents the number of responses on a given point of the grid.

Figure 10. Measuring GGO and P&L on the intellectual capital framework



On human capital, the responses on the composition of the personnel show GGO to be concentrated midway on the specialist dimension and in the upper range on the generalist

dimension. The high number of generalists reflects GGO's focus on growth activities led by individuals who need to be familiar with the wide product portfolio of the various P&Ls. The relatively significant number of specialists in GGO reflects corresponds to those affected to the shared services, such as human resources or finance specialists. The P&Ls are shown to have many specialists and few generalists, reflecting their focus on their product.

On social capital, the distribution of GGO responses is concentrated midway on the cooperative dimension and in the top range on the entrepreneurial dimension. This reflects the risk taking and exploratory focus of their activities. The relatively high rating on cooperative reflects the tight controls required in the provision of the shared services. The distribution of P&Ls responses is mostly concentrated in the top range of the cooperative dimension and in the lower range on the entrepreneurial dimension. This clearly reflects the strict adherence to processes and a closely knit group.

On organizational capital, the distribution of GGO responses is concentrated in the top range on the organic dimension and in the bottom range of the mechanistic dimension. This bias on organic reflects GGO's disposition to exploration. The distribution of the P&Ls is concentrated in the top range of the mechanistic dimension. This implies the use of standardised processes and routines, characteristic of an exploitation focus. On the organic dimension, the P&Ls responses had a strong concentration in the lower range but also had some responses in the upper range. It could be attributed to the processes associated with the strong innovation culture that characterises GE (Downie & McMurray, 2012).

The distribution of the GGO and the P&Ls responses shows an almost distinctive separation on human capital and social capital, while some overlap on the organizational capital. The responses on GGO are located on the top half of each grid, showing a definitive affinity to exploration. However, the GGO responses are located midway on the horizontal axis on the human and the social capital while they are concentrated to the left side on the organizational capital grid. This shows that GGO has a relatively strong focus on exploitation on the human and social capital, while a little bit less on organizational capital. The responses in respect of the P&Ls are mostly distributed in the bottom right area of the human, social and capital grids, showing a clear association to exploitation.

#### **5.4.6 Assessing the Responses**

The responses have confirmed the manifestation of exploitation and exploration activities and of the implementation of OA thereof. The results show that the P&Ls have an exploitation

bias. GGO was found to perform both exploration and exploitation. Therefore, GGO was itself ambidextrous.

This cooperation between GGO and the P&Ls presents a unique configuration. The literature has presented the use of structural differentiation for the purpose of completely separating the exploration and the exploitation activities, as shown in Figure 3. OA Typology on the OA typology. This case presents a unique configuration whereby this strict separation does not apply. In this case the two business units worked together with the exploitation performed by the two units and the exploration by a single unit. This case could be considered a “black swan”, a falsification of the structural differentiation proposition on the implementation of OA.

Considering GGO to be ambidextrous introduces the manifestation of OA at various levels. The first is between GGO and the P&Ls and the second is within GGO. This case supports the notion of OA as a multilevel construct (Birkinshaw & Gupta, 2013) and presents an example of its application, addressing the call for more studies on this topic.

The results have also shown the difference between the exploration and the exploitation units, i.e. GGO and the P&Ls, to be in the cultures and while the processes and the leadership traits were said to be similar across the two units. The literature suggested a significant difference across the processes and the leadership traits as well (J. J. Jansen, George, Van den Bosch, & Volberda, 2008; O’Reilly & Tushman, 2004, 2008), as depicted in Figure 4.

This inconsistency between the literature and the results could be attributed to two factors. The first could be a different interpretation of the terms, culture and processes. The second factor could be the specific conditions of GE that led to the similarities. The respondents have highlighted that GGO leaders were former P&Ls leaders and that leaders at GE all share similar traits throughout the organisation. Secondly, the respondents have also highlighted that GE used processes that are flexible enough to be implemented across of the various organisations within GE, as one respondent puts it “the hallmark of GE”.

## **5.5 Establishing GGO**

Five set of questions were asked to fathom the genesis of GGO.

### **5.5.1 Success Factors of GGO**

The respondents were asked what they believed were GGO’s success factors. The framing of the question assumed that GGO had achieved some degree of success. The answers of the

respondents could be grouped into five factors that were mentioned by at least two respondents.

#### **5.5.1.1 Senior leadership and support from the top**

Seven of the respondents (>50%) attributed the success of GGO to the seniority of its leaders. The seniority of the leaders allowed GGO to get the right resources and make things happen. In addition, the experience of the senior leaders equipped GGO with the skills to navigate the organisation and negotiate fairly with their P&L counterpart.

*“I think it’s just putting the right leaders in and making sure that we staffed it with the right people with the right capabilities and really understanding [...] and having senior leaders located in each one of these regions.”* (Respondent 6)

*“I think strong leadership. Strong leadership.”* (Respondent 4)

*“The fact that they installed big leaders both at HQ and in the regions was also a contribution to the success.”* (Respondent 12)

In addition, many respondents alluded to the strong support GGO enjoyed from the top leadership of GE, as observed by Respondent 13: *“Number one is top leadership support from the chairman and the board.”*

#### **5.5.1.2 Talent**

Four of the respondents mentioned that the talent and skills of the GGO personnel were instrumental to the success of GGO. Experienced, senior GE leaders were appointed to lead GGO, who in turn ensure the recruitment of talented individuals.

*“I think it’s just putting the right leaders in and making sure that we staffed it with the right people with the right capabilities and really understanding [...] and having senior leaders located in each one of these regions.”* (Respondent 6)

*“And then the third part is, this has not been in every country or where you have had the right sort of GGO and talent, they have played a great role in opening doors for the P&L in creating true business opportunities for GE by being in a country, having the relationships, building the brand, and hence creating access where previously a standard P&L sales person hasn’t been able to sort of gain the same sort of attraction.”* (Respondent 11)

### **5.5.1.3 Resourced**

Two of the respondents proposed the fact that GGO was adequately resourced a key contributing factor to its success.

*“So GGO is empowered and when I say empowered I mean both from a resource point of view, very senior leaders, and also from a funding point of view, so they are funded.”* (Respondent 1)

*“Initially I think they went huge, right. So loads of people, loads of budget. So I think that was one of the big factors for establishing this big job”.* (Respondent 7)

### **5.5.1.4 Market Presence: Understanding & Meeting the Market Needs**

Five of the respondents suggested the fact that being present in the market was a key contributor to GGO success as it enabled GGO to better understand the customer needs resulting and develop opportunities.

*“The biggest thing is that they are in the markets, there is no replacement for being in the market, you can’t develop a place, you can’t participate in the developing market without being local so I think that’s probably the number one thing I would say.”* (Respondent 14)

*“I would say its ability to listen to the P&L, its ability to adapt internally and externally, to listen to the internal customer, and also to listen to the external customer.”* (Respondent 12)

### **5.5.1.5 Adding Value**

Five of the respondents referred to an ability of GGO to add value in the emerging markets with a capability that P&Ls could do or did not fulfil in emerging markets. This included for instance the ability to develop new markets with flag planting or to provide a cross P&L solution to a customer.

*“I would say the second thing would be the advantage point of looking across the different P&Ls and engaging in the market at maybe a level that isn’t P&L specific so they are able to look from a customer view point so what is the problem that is trying to be solved versus how can I sell my product”.* (Respondent 14)

*“I think the other part has been the ability to build local relationships, at a much more senior level, has also contributed to a better perception of the company in the region and the ability to have more high profile discussions than was previously held.”* (Respondent 11)

Many respondents referred to the GGO’s provision of a back office infrastructure,

*“.. and also filling the gap on infrastructure.”* (Respondent 13)

*“.. and help us support in growing in those countries in building the infrastructure and that is what the main success factor for that is.” (Respondent 8)*

#### **5.5.1.6 Miscellaneous**

Other significant responses mentioned once included the ability of GGO to quickly adapt, the ability to be proactive and the ability to highlight the importance of a region by presenting the aggregate value of all the P&Ls revenues.

### **5.5.2 Prerequisites to Establish GGO**

The respondents were asked what they believed had to be put in place to establish GGO.

#### **5.5.2.1 Leadership Commitment**

The most common suggestion given by at least five respondents was the commitment from top leadership that allowed GGO to be adequately resourced with senior leaderships and other means.

*“I mean the main thing was putting big people in these jobs. You identify the seriousness of your actions [Jeff’s] by the people you put in charge of it. So [with] John Rice, the vice chairman, we gonna do this, we gonna do it right, I [Jeff] put a big guy in there and it was a big show of capability.” (Respondent 6)*

*“I would say senior leadership commitment. I would say budget. You need lots of money to do this .... If you have senior leadership, all of these tend to fall in place and if you have a budget you can do it.” (Respondent 13)*

#### **5.5.2.2 Clearly and Distinct Role of GGO**

Another suggestion made by two respondents was the articulation of clear and distinct objectives of GGO and its scope:

*“A single vision coming from Jeff and how to grow the company because the sum, the aggregate of the P&Ls, could not see that.” (Respondent 9)*

*“Clearly defining what GGO was and was not, I think that was really the key thing here right. So where it’s going to play and where it’s not gonna play. What is going to do and what is not going to do.” (Respondent 1)*

#### **5.5.2.3 Filling the Gap**

Another common suggestion was the fact that there was a need the P&Ls could not fulfil.

*“There was a need. There was a need for a team, an organization, a parallel organization that will look at business growth from a different angle, different from how the businesses look at it. This was the key motivators. Jeff Immelt and the leadership reacted to the need by creating GGO.”* (Respondent 12)

### **5.5.3 Challenges Experienced in Establishing GGO**

The respondents were asked to mention what they believe were the main challenges in establishing GGO.

#### **5.5.3.1 Confusion on the Role & Scope of GGO**

Five respondents mentioned that the main challenge was a lack of clarity in the role and objectives of GGO, differentiated to the P&Ls.

*“We have already mentioned one of them which is defining the scope of GGO”.* (Respondent 1)

*“I think confusion, new organization, new established roles and responsibilities, so it may be difficult and caused confusions.”* (Respondent 13)

This seems to contradict the previous reference the articulation of clear and distinct objectives and scope as a success factor. This may point out an inconsistency in the messaging or in the perception around GGO. Otherwise it may reflect progression in time in the understanding of the scope and objectives, whereby it might have become clearer over time.

#### **5.5.3.2 Finding Local Talent**

Five respondents indicated that finding local talent was one of the main challenges in establishing GGO:

*“Finding talent.”* (Respondent 2)

*“How are you going to get the people? Do they have the right training?”* You know. (Respondent 4)

#### **5.5.3.3 Scepticism on the Value Add of GGO**

Six respondents suggested that one of the main challenges was the scepticism on the value add of GGO and that it will thus be an additional cost to the organisation.

*“You needed to get rid of that perception across the P&Ls that this was a structure that was just going to add cost and no additional value”.* (Respondent 11)

*"I think the concern was that are these guys going to create another layer of bureaucracy and friction within the organization and will the benefit they bring exceed any sort of taxation on the cost associated with the organization". (Respondent 14)*

Value Add was earlier mentioned as a success factor of GGO. Therefore this mention as a challenge reflects the precarious nature of this perception.

#### **5.5.3.4 Conflict Between P&Ls and GGO**

Two respondents indicated that the lack of clear rules of engagement and the scope in a given territory became a significant challenge leading to friction between the P&Ls and the GGO representative.

*"Conflict of power within the P&Ls, and second point I have to add, the overlapping of business. Sometimes we might fight who talked to the customer or who discussed this, so a bit of overlapping, hard to segregate each one's role". (Respondent 9)*

*"The main challenge was how do we figure out the rules of engagement within the P&Ls and GGO." (Respondent 10)*

The previous results on the characteristics of GGO and the P&Ls reflected a bias towards exploration and exploitation respectively. This conflict could be the characteristic OA tension.

#### **5.5.3.5 Back Office Implementation**

Two respondents mentioned that developing the service capabilities of the back office in new markets to serve all the P&Ls was difficult:

*"The complexity of simplification, reducing many back offices into one." (Respondent 2)*

*"Third I would say is the of course if you're going into a new country that has no infrastructure you can imagine that really building infrastructure is a major, major challenge." (Respondent 8)*

Driving efficiency in the globalisation process through shared services was a priority of GGO.

#### **5.5.3.6 Resistance to Change**

Two respondents emphasized the resistance to changing the way GE operates, which was mainly driven by P&Ls, was a major challenge in establishing GGO.

*"I think the biggest one is culture change. I think, because again people don't like a corporate entity coming in and then they're dictating." (Respondent 7)*

*“They had their own ways of doing things and when GGO came in, there was a little bit of resistance from the P&Ls to say hey who are these guys now who are telling us to dance according to a certain tune. So it was one of the key challenges in terms of resistance from the P&Ls.”* (Respondent 15)

This suggests that GGO had a strong leverage enabling it to carve out its space from the P&Ls role.

#### **5.5.3.7 Miscellaneous**

Some responses raised by a single respondents but still worth mentioning included the lack of support across the board, defining the metrics to measure GGO performance and having the P&Ls delegate power to their regional representative in order to make decision with their GGO counterparts.

*“The second piece in terms of challenge was, and continues to be a question or a challenge, was to clearly define a metrics by which GGO can be measured. I think more work needs to be done on that piece to come up with a universally agreed metrics on measuring GGO’s impact on the company”* (Respondent 12)

#### **5.5.4 Challenges to GGO’s Future Existence**

The respondents were asked what they believed the main challenges to GGO’s future were. All the respondents emphasised the necessity of GGO to stay relevant by through value-addition. For instance the value-add could be developing a pipeline of opportunities or providing back office support that the P&Ls did not have in the region.

*“I think maintaining relevance and value add.”* (Respondent 13)

*“So I think it’s gonna be a question of relevance in certain regions. And making sure that again we don’t get process creep and organization creep in GGO, and making sure that the businesses see value in what we do.”* (Respondent 6)

It was important that GGO’s contribution be distinct and perceptible.

*“I think the main challenge is we obviously need to see an outcome, we need to see a pipeline being developed, we need to see the relationships being established, we need to see GGO doing their job so if those things are not being done, why keep GGO?”* (Respondent 3)

A second theme that came out was the notion that GGO’s was a transitory instrument used to address the risks that the P&Ls could not handle in emerging markets. Therefore once the

risks are mitigated and the business handed over to the P&Ls, there may not be any further need for GGO.

*“First point to know GGO is not going to be here forever. Markets are going to mature and once it matures it will not necessarily need GGO. So the idea is to help grow this market to a stage whereby GGO is no longer needed. At that stage only that need to happen is that all the resources that GGO will have will transition into P&Ls.”* (Respondent 1)

*“I would expect as the world becomes more developed, the GGO organization gets smaller and smaller.”* (Respondent 14)

### **5.5.5 Transfer of Learnings from GGO to the P&Ls**

The respondents were asked how did the knowledge gained by GGO transferred to the P&Ls. Two of the respondents referred to the continuous dialogue that happens between the leaderships of the GGO and the P&Ls as the knowledge transfer mechanism. This knowledge transferred was enabled through an integrated leadership team:

*“The second is having one leadership team that is both GGO and the P&Ls with Jay. I would say there’s also the engagement between the different leaders, whether it’s in region and outside the region. And also at the top, senior leaders, officer level at GGO talking to P&L leadership about opportunity issues.”* (Respondent 13)

Assuming GGO to have a transient role, two respondents referred to the eventual transfer of GGO skilled personnel into the P&Ls as a learning transfer mechanism.

*“So I’m saying that we do have in house support that help support the business and in time that transfers to the business and that’s how it get transferred to the business. The whole idea is that we should move everybody over when the time is right.”* (Respondent 1)

Two respondents referred to GGO getting the P&Ls involved into their activities such as when working on an opportunity as a mechanism to share and transfer the GGO knowledge.

*“I was in Nigeria last week working with GGO, and the fact that we sat in many meetings with GGO, and you get a feel for how GGO operates, you get a feel for the kind of interactions that they have with our customers but at a different level, and it goes towards experience so we are learning from them, by attending meetings with them.”* (Respondent 3)

Many of the respondents stated that the P&Ls would engage GGO if they perceived value, and in the process learned from GGO.

*“Wherever there’s credible content you will find that the P&Ls are reaching out on their own to GGO, because the P&Ls guys are opportunistic and they will reach out to any team that will help them make their numbers.”* (Respondent 12)

However, one respondent, a leader of a P&Ls, indicated that he saw no transfer of learning happening between GGO and his P&Ls.

#### **5.5.6 Independence of GGO from the P&L**

The respondents were asked whether GGO was independent of the P&Ls. At the exception of one, the respondents stated that GGO is independent but working cooperatively with the P&Ls. By independence the respondents referred to the fact they were two separate organisations, each with its own reporting structure and budget. They also all agreed that GGO had an independent decision making process.

*“I would say they’re independent but they work together very well. [They should not be] independent. I think they need to be cooperative but on the other hand [GGO does not] answer to any of the businesses so [GGO] can make what [it] thinks is the right call for the company even if at the time the businesses may not agree.”* (Respondent 6)

However both organisations were measured on the same metrics and thus cooperated because the success of one meant the success of the other.

*“GGO is a separate entity, but it does well when the business does well, and it needs to work harder when the business isn’t doing well.”* (Respondent 13)

Many respondents referred to the fact that GGO often went on developing an opportunity on its own or even against the P&L’s opinion, and when the opportunity had sufficiently been developed, the P&L would be pulled in. This approach often nudged the P&Ls out of their comfort zones.

*“So it’s a balancing act, how can GGO remain a risk taking, forward looking, aggressive entity, while also staying connected to the businesses so that the investment GGO make in countries, geographies and sectors that are new can later on be owned by the businesses. If that piece doesn’t happen GGO will be working in isolation which I think will be a big risk.”* (Respondent 12)

*“I would say it’s pretty independent and it’s almost antagonizing the P&L just to create a shock to make the P&L react. So I say yes it’s pretty independent”.* (Respondent 9)

Tension or conflict was expected if not sought after in order to drive change.

### **5.5.7 Assessing the Responses**

O'Reilly and Tushman (2013) posited that leadership, culture and identity as key moderating factor of OA. The results agree on the leadership factors. The literature further specify the the critical role of the senior leadership team which was corroborated with the feedback from the respondents.

The respondents did not mention the value of culture and identity directly. O'Reilly and Tushman (2013) explained that the culture and the identity of the organisation must not resist necessary exploration or exploitation changes to happen for OA to be implemented successfully. This resistance to change is mentioned by the respondents as one of the challenges experienced in establishing GGO, supporting the literature. It seemed that GE was able to overcome it. It has to be noted that the pursuit of exploration and exploitation initiatives has been part and parcel of GE culture and history (Downie & McMurray, 2012; Immelt, Jeffrey R., 2009; Immelt et al., 2009; Joseph & Ocasio, 2012).

The respondents highlighted the need of GGO to carry on adding value. This factor was not raised in literature as significant for the successful implementation of OA. This factor may sound obvious but the long term focus and strategic orientation of GGO made it difficult to reconcile its value with a short term, transaction focused partner in the P&Ls. Being able to demonstrate value was crucial to GGO's relevance and its future existence, and thus to the successful implementation of OA.

Joseph and Ocasio (2012) emphasized the need of top management support for important initiatives like GGO to survive. This supports the respondents' emphasis on the commitment from leadership as prerequisite for GGO. The other two prerequisites advanced by the respondents of a distinct role for GGO and the need to fill a gap are self-evident. They justify the existence of GGO.

The respondents highlighted three mechanisms of knowledge integration between GGO and the P&Ls. The first was through the interactions of leaders in the integrated senior management team. This type of knowledge integration was supported by literature (Lubatkin et al., 2006). The second was a transfer of skilled personnel from GGO to the P&Ls. This was not highlighted in the literature. This was due to the specific relationship between GGO and the P&Ls, whereby GGO develop capabilities for the P&Ls. The third mechanism was the attraction of the P&Ls to GGO for their value adding services that brought them to work

together. The literature depicted a picture of partitioned OA whereby the exploration and exploitation units worked separately and independent, reconciled only through the top management layer. In this case, GGO and the P&Ls worked collaboratively at both the top management level and at the operational level across the two units.

## **5.6 Operating GGO**

Five questions were asked to the respondents to gain an insight on the differences in the running of GGO and the P&Ls.

### **5.6.1 Differences in the Functions of Leadership**

The respondents were asked about differences in the functions the GGO leaders performed to those of the P&Ls. In line with their responses on the differences in the leadership, most of the respondents stated that there was no significant difference in most of the functions but rather a difference in focus. Some of the differences evoked were that GGO leaders had the additional mandate to promote their respective regions and had to manage and communicate with a relatively more diverse range of stakeholders than their P&Ls counterparts.

*"I think a lot of it's the same, again it's just a little bit different, we both have goals and objectives, and as I mentioned earlier, the goals and objectives of somebody in GGO might be a little bit more strategic, a little bit longer term, a little bit less certain, but we operate in the same way, In that we have goals and objectives, we have operating mechanisms, we have cross functional teams and again there has to be alignment between the P&L and GGO in order to be successful". (Respondent 14)*

*"I also think the GGO leader needs to and I suppose it's similar to the P&Ls, the leader anywhere needs to be setting the example for the staff, and setting the example, being a role model, being a mentor or whatever, all those kinds of things". (Respondent 3)*

*".. they've got to make sure they communicate to a much bigger forum. I think they are the ones who are really bringing a sense of the OneGE concept, the accountability, to communicate and to bring everybody on the same page." (Respondent 8)*

### **5.6.2 Differences in the Routines, Processes and Decision Making Mechanisms**

The respondents were asked about differences in the routines, processes and decision making mechanisms used in GGO to those in the P&Ls. It has to be noted that all the respondents from GGO were former P&L leaders. The common thread in their responses was the practical lack of differences as they all employed GE generic processes that were flexible and applicable

across all operating units. The few highlighted differences were the fact that GGO did not manufacture products and that GGO performed back office functions. The routines and processes used to drive performance and make decisions were similar across GGO and the P&Ls.

*“Yes it’s the same decision making process, if anybody asks you like if whether you are a GGO or a P&L person, they will ask you same 4 or 5 questions, in order to reach their decision and that is same across GGO”* (Respondent 8)

*“In terms of how they drive decision making process, how we as a P&L do, I think we are very similar. We’ve got the same urgency to take decisions. We’ve got the same way of looking at things.”* (Respondent 10)

### **5.6.3 Securing Resources for GGO**

The respondents were asked to give their opinions on how GGO secured its resources. The common answer from all the respondents were the use of a business case showing a great opportunity for GE.

*“With pain. We have to build a business case. The business case has to justify the ask. The strategic benefit has to be clear and the execution capacity also has to be obvious.”* (Respondent 13)

### **5.6.4 Managing the Tension between GGO and the P&Ls**

The respondents were asked to give their opinion on how the tension between the two organisations was managed. All the respondents acknowledged the existence of a tension and in fact that it should be expected. Tension was mainly resolved through continuous, open and constructive engagement between the management teams of the two organisations.

Tension arises when GGO and the P&L have different opinions on how to address a particular opportunity.

*“If there’s something of common interest, then there’s no tension, I don’t think. If it’s stuff that the P&L think it’s unimportant then there’s tension. Or if the P&L deems that GGO would slow them down..”* (Respondent 2)

If necessary, GGO has the resources to develop an initiative or opportunity on its own when there is no buy in from the P&L. GGO would develop such an opportunity in order to sufficiently address the associated risks to a proof of concept level.

*“First of all, generally constructive engagement with the rest of the organization. Constructive also include, not being afraid of conflict. So expecting some conflict and managing it, some better than others. So there’s a lot of engagement. The other thing is we do have a budget, so we can put money behind some of our ideas, that’s a key, that’s a big motive. If it’s a great idea and if you can pay for it, people are much more likely to pay a lot of attention.”*  
(Respondent 13)

The leader is the key factor in the management of the tension. The leader would use tension to his advantage to drive change. A leader with the appropriate clout is essential to create and manage such a tension.

*“I think it’s tough, I think we’ve been, again I come back to leadership, we’ve been lucky to have a leader who’s happy to create that tension, who is respected for what he brings to the table.”* (Respondent 11)

Leaders would employ different style to manage such tension, in order to achieve a desired outcome. Different styles would create different working environments.

*“So the GGO leader [name X1] was like a CEO and then the P&Ls naturally reported to him. The cohesion was very strong and because of that dynamic, every time [name X1] requested something for [region X2], be it thorough GGO or the P&L things progressively went smooth, right [...] Then you get a place like [region X3], right, where the country leader was [name X4]... and the country leader for GGO for a long time just had misalignment, right. Disagreement in various [...] I think it really depends on the leadership style. Some leaders thrive on tension, they actually create tension, right, to antagonize and then push the business further. But some leaders are more open or more careful in producing that kind of collaborative environment like in [country X], right.”* (Respondent 7)

### **5.6.5 Assessing the Responses**

The responses in respect to the differences in the leadership, the routines and the processes are similar to those given in the previous section 5.4 on the differences in the characteristics of GGO and the P&Ls.

The respondents indicated that GGO had to build a business case to motivate for resources. This is indeed normal. But an important point to note is that the remark made by a respondent that a separate budget was allocated to the GGO, independent from the P&Ls. It gave GGO autonomy in its actions. Joseph and Ocasio (2012) emphasized the necessity to avail adequate resources to a new initiative for its survival.

The respondents highlighted that the tension was due to divergence in the business orientation of GGO and the P&Ls which could be considered as the exploration and the exploitation units. This tension is characteristic of OA (March, 1991).

The respondents presented two mechanisms to deal with the tension. The first was a disposition to accept it as normal and to be expected and to deal with it using “constructive engagement”. The second is to purposefully and “happily” use it to generate an engagement. Smith et al. (2010) suggested the notion of engaging, if not encouraging, conflict as one of the processes used by top leaders to manage paradoxical situations such as OA.

## **5.7 Results of GGO on P&L Performance**

The respondents were asked on their opinions in respect of the impact of GGO on the P&Ls performance.

### **5.7.1 Impact on Sales**

The respondents were asked to evaluate whether GGO had an impact on the sales figures in the region. All the respondents, except one, mentioned various GGO interventions that enabled sales transactions for the P&Ls.

*“Funding is a big deal in this region. So if they don’t have funding they will not buy your equipment. Here we are saying we are giving you equipment and we are also funding. In fact as you probably know, in some instance, we have even put some equity on the table. If you think about the wind deal in Kenya, Kipeto, we put money where our mouth is. If it was not for GGO this [deal] would not have happened.”* (Respondent 1)

All the GGO respondents were of the opinion that GGO had a significant impact on sales. However they had no direct measurements to quantify the incremental impact of GGO on sales. Their argument was based on the significantly higher sales figures and growth rate that the region has attained since the introduction of GGO in 2011.

*“The growth in the development market has been dramatic. I think that’s been the real impact. Just take a look at Africa, we went from a 1.5b order rate in 2011 and we’re up to 4b now. So I think it’s tremendous amount of focus on the developing markets that translates into orders and sales across the businesses.”* (GGO respondent)

The feedback from the P&Ls respondents was mixed. Most acknowledged that GGO had a positive impact in enabling sales transactions. In some instance, GGO even paid for a P&L’s headcount enabling it to drive sales.

*“80% of my team until the end of this year is still financed by GGO. They are paid. Yet we are a P&L. But that team has grown sales in power generation products, significantly. GGO saw the opportunity.” (P&L respondent)*

Some P&L respondents believed that the interventions of GGO were good but have yet to bear results.

*“To date I have seen very little impact, the big impact that I have seen from GGO, so it hasn’t been a significant change in numbers just yet, but it is a significant change on the relationship that we have with our customers. As an example, our business, has [few] people looking after the whole of Africa, ..., so the fact that when we want to go to Cameroon, Zambia, Mozambique, Nigeria, there is a GE organization through the GGO that have at least made contact with the customer, open doors, makes us having meetings a lot easier. So our relationship with the customer has been significantly improved due to GGO and that should translate into increased sales.” (P&L respondent)*

Other P&Ls respondents stated that GGO had no impact on their sales figure and did not expect a positive impact in the future.

*“In terms of sales, zero.” (P&L respondent)*

It has to be noted that the view of the GGO respondents cut across all the P&Ls in the region, while the feedback from each P&L respondent was mostly based on the perspective of his business only.

### **5.7.2 Impact on P&L Growth**

The respondents were asked whether GGO had an impact on the growth of the P&Ls in the region as well as on the performance of the P&Ls in areas other than sales and growth. All the respondents, except one, said that GGO had a positive impact on the growth. The impact of growth was expressed in terms of a various factors that include an increase in the headcount and leadership level based in the region, in the footprint across more countries and in the provision of a backbone infrastructure that allowed them to do business easier and faster.

*“Footprint definitely, so they opened Angola market for us, although we were in Algeria already as a P&L, went direct. They expanded our reach into the MOH away from the private market. I think re-sourcing, it helped in a way, sponsored headcounts on a practical level for us which we then took over 2 years and then specifically the MOU’s with the governments, which*

*drove a lot of our growth, Kenya, Ghana, Nigeria, Algeria, we are busy with Egypt.”*  
(Respondent 10)

*“So absolutely, exactly what I was saying. The fact that we have got an in country contact, we know that they are GGO. We know that they are not [P&L name], but they can open doors for us. They can introduce us. They can go with us to meetings. So at the moment, I see the GGO guy in Nigeria, I see him as part of my team. So absolutely, it has grown our resources and footprint in Nigeria, similarly in Zambia, in Cameroon and Mozambique. I am feeling that my team is bigger.”* (Respondent 3)

### **5.7.3 Measuring GGO’s Performance**

The respondents were asked how they measured the performance of GGO. The common response was that the measure should be incremental sales and orders. This refers to the amount of revenues that GGO has brought to a P&L in addition to its projected expectations, referred to as its operating plan. It has to be noted that this measure of sales and orders is the same used to measure the performance of the P&Ls.

*“What is great about GGO, as part of the GE and P&Ls, we are measured on the same number, measured on the delivery value for the GGO shareholder, so if GGO is successful, it should reflect in the order book.”* (Respondent 11)

*“Q: How is the impact of GGO measured? A: It’s mostly orders and sales.”* (Respondent 14)

However it was mentioned that calculating the incremental figure was difficult and there was no example given of the practice. The second quantitative measure mentioned was the role of GGO in building a long term pipeline of opportunities for the P&Ls, as they focused on a short term horizon. Therefore presenting a healthy pipeline of opportunity was a second measure for GGO’s performance, especially on its ability to grow the business.

The next type of measures mentioned was of a qualitative nature. These measures include the ability to influence major clients such as government, the presence of GGO in countries of interest, the support they give in closing a deal successfully and the extent to which they create an enabling environment for the P&Ls.

*“There are two ways of measuring the growth, cause that’s what we’re about. One is overall GE growth. So for each subregion, the commercial team is measured by how much the business, the P&L, is growing. So they are also accountable to the growth of the P&L. Over and above that, there is a requirement to bring to the table what is called incremental sales. In*

*order words, sales that the businesses did not have in their OP plans already. So they need to bring to the table orders that the businesses did not plan for. On top of that they also need to demonstrate that they also have a healthy pipeline. Every year we target a specific number, for each subregion that you need to bring in a pipeline at the end of the year that would be this healthy and this needs to be achieved. So those are the three ways that we measure the organization.” (Respondent 1)*

*“You have the quantitative measures which are the orders and sales and things like that. But then I think there’s a lot of qualitative measures which are more around influence, how are things perceived globally. You see that through press, you see that through Jeff or John or some of the business leaders and their interactions with other leaders around the world. I think it’s both quantitative and qualitative.” (Respondent 6)*

*“You really have to hold them accountable for a longer term growth aspect rather than just near term, because near term will sometimes be done by P&L.” (Respondent 7)*

#### **5.7.4 Assessing the Responses**

It has to be noted that the role of GGO was to enable the P&Ls to accelerate their growth in emerging markets. Therefore the success of GGO had to be measured through the performance of the P&Ls in the emerging markets. The literature suggested a positive association of OA with sales (O’Reilly & Tushman, 2013) and growth (He & Wong, 2004) and subjective ratings of performance (Schulze et al., 2008). The respondents were certain of the positive impact of GGO on the growth and other measures of performance of the P&Ls, excluding sales. However, they had a mixed response on the impact of GGO on sales. While the GGO respondents all shared a positive view, the P&L respondents had a mixed response.

All the respondents mentioned positive interventions of GGO, and even those that did not confirm a positive impact of GGO on sales. This suggested a disconnect between the action of GGO and the sales. This may be due to two reasons. The first was the fact that GGO did not complete or own the sales that it enabled. It had to rely on the P&L to conclude the transactions. The second is the lack of an agreed upon metric of the incremental value on sales due to GGO’s interventions, as was evidenced from the responses. While the GGO leaders had the clear metric of sales and orders as the measure of GGO’s performance, the P&Ls leaders were for the most unclear or just used a subjective deduction that GGO’s intervention should produce a positive outcome.

## 5.8 Impact of GGO on GE

The respondents were asked to give their view on the impact of GGO on the overall organisation with respect to GE's structure, its capabilities and competitive edge. The respondents were also asked to evaluate whether GGO had an impact on the P&Ls view of the region.

### 5.8.1 Impact on GE Structure

The feedback of the respondents on the impact of GGO in respect of the overall structure of GE could be summarised in three themes, namely the globalisation of GE, an enabling environment and a new dimension in the matrix.

Respondents indicated that GGO had globalised GE by increasing the diversity in its leadership with more representatives from the various regions of the world. This globalisation empowered regions with local leaders and HQs, allowing for decision making to happen locally.

*"So obviously we now have very senior regional leaders in GGO. Before we didn't have that. So there is a lot more decision making that can now be made at regional level, compared to before. There is a lot of empowerment. The structure is a lot flatter, cutting short the route to HQ. So HQ is now inside the region as opposed to somewhere outside the region. I would say it has flattened the span of the organization"* (Respondent 1)

*"I do say that it has made the GE organization from a demographics stand point more representative, I think we have got the most global workforce today that we have ever had and if you go back and compare to 10 years ago I think you would find that it was predominantly white Americans, Europeans, maybe some South American's that sort of thing"* (Respondent 14)

GGO is providing a backbone infrastructure to the P&L creating an enabling environment thus improving the efficiency by allowing the P&Ls to focus on their business.

*"I think, what GGO is doing recently is being more efficient in structure to GE in the regions. And this has really been adopted by the shared services concept. So HR for example, one team supporting of the businesses, instead of each people having it's own HR team. So that change in structure has allowed the company to be more efficient in utilizing internal resources."* (Respondent 12)

Respondents pointed out the fact that as a new organisation, GGO, has bloated GE with a new dimension of complexity, additional resources and bureaucracy. On the positive side, one of the respondents saw it as offering a wider choice of career opportunities.

*“It’s almost like the structure has been doubled, not quite, but expanded on, without immediate returns. So it’s like GE has suddenly grown in resources, there is almost a bit of a duplication of structure”.* (Respondent 3)

*“It’s open up a lot more of opportunities for people. I think people have the ability to do much more, much broader careers with richer career path. Whether they want to do something in region, it allows us to do more transferring of people across businesses and regions to get you growth.”* (Respondent 6)

### **5.8.2 GGO’s Impact on GE’s Capabilities**

The respondents were asked how GGO has impacted on the GE’s capabilities. The respondents have indicated that GGO developed a number of capabilities in the regions it operates. The capabilities that GGO developed can be summarised as follows:

- Ability to handle the region’s risk
- Ability to deal with governments
- Ability to develop a strong brand and influence local players
- Ability to develop projects and to provide project finance
- Ability to offer clients a cross P&Ls solution, rather than just equipment
- Provision of an enabling environment with a back office infrastructure, handling shared services for all the P&L
- A talented pool of individuals able to promote the interests of the various P&Ls
- Ability to make local decision and influence GE
- Ability to handle large scale initiatives locally

Here are extracts of some of the responses,

*“I think it has vastly improved our capability to handle at least this growth market. It has vastly improved our capability to get a brand recognition and engagement across the region.”* (Respondent 13)

*“I think it has a positive effect on government relations and policy, as well as expanding and developing a story on localization”.* (Respondent 2)

*“In a lot of markets, it’s created a better sense of who GE is, as a more complete organization. It has also, I think, created a good environment around how you engage with governments and how you work with governments, not only from a government affairs perspective, but more broadly than that, around local content, around skills and talent development. I think it has had a real impact there.”* (Respondent 11)

*“Definitely the risk taking has improved because of GGO stepping in different places. And 2nd the infrastructure in different countries because we didn’t have that infrastructure in many countries [for] a lot of P&Ls. So GGO actually built that. So those are 2 capabilities. And the third I would say is project finance.”* (Respondent 8)

### **5.8.3 GGO’s Impact on GE’s Competitive edge**

The respondents were asked how GGO has impacted on GE’s competitive edge. Their feedback can be summarised in the following key advantages:

- Offering a solution to local customers
- Engaging local government at senior levels
- Being present and influential and complying with localisation requirements
- Having a large footprint in the region
- GE becoming a recognised and strong brand

Here are extracts of some of the responses,

*“The biggest one is the ability for us to provide solutions instead of equipment. Before now it was not easy for us to provide solutions. We were basically equipment providers or sellers. We now have a situation where we can sit down with the customer and ask him what does he want to achieve. You want to have electricity in your industry?. Ok, let’s talk about that. And this is what we are going to provide from you. How are you going to provide for that generation, how you gonna transmit it, how are you going to distribute it, how you gonna fund that, then, oh you don’t have fuel, so how we can get you fuel so that you can have fuel to generate the power. Before now we were saying here are our turbines and here is our equipment for our distribution, you go figure it out. Not in so many words, but basically that is what it was.”* (Respondent 1)

*“When we’re dealing with governments, around infrastructure and things like. It shows that we’re really serious. You take a look at what we’ve done in sub-Saharan Africa, the localization push, the project we’re doing in Calabar, the project we’re gonna do in Angola, and in South*

*Africa the CIC. None of that would have happened if it was only one business to doing it. It's really been supported by the whole of GE. I think in all of those it gives us a competitive edge when we go to market against our competitors.” (Respondent 6)*

*“I think the impact has been on the strength of the brand in this region. I think it has also made it clear that we can bring senior level leadership attention and investment to be competitive. It puts a much bigger meat ball behind wherever any commercial tries to do it in the region. Bigger presence, bigger footprint.” (Respondent 13)*

#### **5.8.4 GGO’s Impact on P&Ls View of the Region**

The respondents were finally asked whether GGO has had an impact of the P&Ls view of the region. A consistent response was that GGO has helped reduced the risk perception to a level that the P&Ls are now considering manageable. GGO has created an enabling environment and provided evidence that the region is a great opportunity for the future growth of GE.

*“No we’ve got a big voice on the table, it goes off from the kind of leadership and expertise we are able to offer. So you get a situation where, in the past, big leaders were not interested in the, first of all visiting the region, P&L leaders were not interested in visiting the region or even attending to the nitty gritty. But now GGO has done two things, it has called the attention of the leadership. Secondly we are able to demonstrate pipeline for the region, and show that you cannot ignore the opportunities that exist in this white space. And because we have a big voice on the table in the name of our president, of our CEO, people listen and attend to us. So that is the influence we have brought to the table. We’ve been able to bring back a lot of people who were either sitting elsewhere in the world, in the globe, back to the region and really helped to develop the case for the three year.” (Respondent 1)*

*I think it’s changed their view dramatically. The potential of what’s available from the standpoint of not just sales and orders but also in terms of people and talent. Sub-Sahara Africa was like the last thought process in most of people’s minds and now I think we’re up there as people think about where future growth is gonna be.” (Respondent 6)*

*“I would say they now actually have a view of SSA. So it helped form a strategy around the region whereas before the strategy was limited at best. It also raised the visibility of the opportunity, and helped to reduce the perception of unmanageable risk.” (Respondent 13)*

#### **5.8.5 Assessing the Responses**

The overall response was that the introduction of GGO has had an impact on GE’s structure, its capabilities, its competitive edge and on the view that the P&Ls had on Sub-Sahara Africa. This

reflected the dynamic capability associated with OA that enables an organisation to reconfigure its resources and capabilities in order to seize an opportunity or to face a challenge (O'Reilly & Tushman, 2008; Sapienza et al., 2006; Teece, 2007).

## **Chapter 6: DISCUSSION OF RESULTS**

### **6.1 Introduction**

The aim of the research was to investigate the role of GGO in the development of the organisational ambidexterity (OA) capability at GE. This phenomenon was investigated by means of two research questions. The first question sought to first establish evidence of OA when comparing GGO to the rest of the organisation, namely the P&Ls. If confirmed, the second question sought to investigate further how OA was developed with GGO.

It has to be reminded that the unit of analysis, the case, is GE in Sub-Sahara Africa, comprising of the GGO and P&Ls operating in this region.

### **6.2 Research Question 1: Is GGO an Organisational Ambidexterity instrument?**

Research question 1 sought to establish whether GGO played a role in the development of OA at GE. In order to answer this question one needed to first identify a manifestation of OA in GE and that it was associated with or caused by GGO. Once confirmed, the role of GGO in respect of OA could be assessed.

#### **6.2.1 Establishing the Manifestation of Organisational Ambidexterity**

Firstly, knowing where GGO fit in GE's organisational structure helped understand its role. Figure 7 above shows that GE's structure consisted of the P&Ls and a corporate organisation. GGO was created to operate as a separate structure to the P&Ls (General\_Electric, 2010) in emerging or growth markets where it superseded the corporate structure. GGO could be considered an augmented corporate office in emerging markets.

The respondents described the genesis of GGO as follows. The senior leadership was dissatisfied with GE's growth rate in emerging markets initially led by the P&Ls and concluded that the P&Ls growth strategy was inappropriate to achieve the desired growth rate (section 5.2.2). GGO was established with the main purpose of accelerating growth in emerging markets (section 5.2.1). GGO had to drive a new growth strategy (section 5.2.2) that required the development of new capabilities (section 5.2.3). In addition to accelerating growth, GGO was asked to optimise GE's globalisation process (section 5.2.5) with the provision of shared services. Senior leaders were appointed to lead GGO as it required a strong influence within GE to drive the necessary changes (section 5.2.4).

GGO's purpose of driving growth was characteristic of exploration as suggested in the framework of Prange and Verdier (2011) on the internationalisation process of an organisation shown in Figure 1. This is also supported by O'Reilly and Tushman (2004)'s model of an ambidextrous organisation depicted in Figure 4. The respondents commented that accelerating growth in the emerging markets required an appetite for risk, flexibility and a long term investment. These were essentially exploration attributes (March, 1991; O'Reilly & Tushman, 2004).

The respondents were asked to describe the differences in cultures, processes and leadership between GGO and the P&Ls. The differences in the culture presented in Table 7 showed that the attributes of GGO which included risk taking, innovation, agility and long term focus were characteristic of exploration and those of the P&Ls which included profit motives, execution, optimisation and short term focus were characteristic of exploitation (March, 1991; O'Reilly & Tushman, 2004).

The respondents indicated that many of the processes implemented across GGO and the P&Ls were similar but implemented with different emphasis. For instance the P&Ls implemented their processes with more rigour and less flexibility than GGO. This difference is symptomatic of the differences between the exploration and exploitation mechanisms proposed by Kang and Snell (2009)'s framework on organisational capital (see Table 2). Differences in the processes were associated with functions that were unique to either GGO or the P&Ls. For instance, GGO did not manufacture.

The same functions conducted across GGO and the P&Ls employed the same processes, independently of the orientation of their context towards either exploration or exploitation. Therefore the orientation towards exploration or exploitation did not influence a process. The literature review did not give much insight on the differences in processes employed across exploitation and exploration. This was actually identified as a gap to investigate in future research (Birkinshaw & Gupta, 2013; O'Reilly & Tushman, 2013).

With respect to the feedback on differences in the leadership of GGO and the P&Ls, the respondents highlighted two important attributes. The first was that in a given region the GGO leaders had either the same or a higher seniority level than their P&L counterparts. The second was that the leaders across the two organisations shared the same traits or style and that the difference lied in the focus or objectives they pursued. Therefore the exploration and

exploitation units did not require a different style of leadership, if GGO was considered an exploration unit and a P&L an exploitation unit.

The presence of common traits, or values, in the leaders of GGO and the P&Ls was suggested by O'Reilly and Tushman (2004) as a key ingredient for senior management team to successfully implement OA, as shown in Figure 4. Neil Turner et al. (2013) also recommended the use of shared values as a mechanism to build social capital in the senior management team, see Table 2.

The feedback on the differences in the cultures, processes and leadership of GGO and the P&Ls showed that the respondents perceived a distinction in the cultures only and a similarity in the processes and the leadership styles. The difference in the cultures could be symptomatic of an orientation of GGO on exploration and the P&Ls on exploitation.

The ranking of GGO and the P&Ls against the exploration and exploitation criteria revealed no distinct orientations of the two organisations towards either exploration or exploitation. As depicted in Figure 8, when measured against exploration activities, GGO was ranked higher than the P&Ls, but when measured against exploitation activities, GGO was ranked on par with the P&Ls. These results implied that while GGO did more exploration than the P&Ls, GGO did as much exploitation as the P&Ls. In other words GGO was itself ambidextrous, performing both exploration and exploitation activities.

The comments made by the respondents when ranking GGO high on the exploitation criteria revealed that they were referring to the improvements made by GGO in the provision of shared services. The shared services were support functions, such as human resources, that GGO performed for all the P&Ls instead of each P&L doing it on its own in an emerging market. The shared services were placed under GGO with the exploitative agenda of running them efficiently.

In conclusion, the manifestation of OA was evidenced by the concurrent manifestation of exploration and the exploitation across the P&Ls and GGO. However, while the P&Ls were found to have a distinct orientation on exploitation, GGO was shown to be ambidextrous itself, performing both exploration and exploitation activities.

### **6.2.2 The Role of GGO in the Development of Organisational Ambidexterity**

We have established in the previous section that when the P&Ls and GGO were compared, the P&Ls seemed to have an exploitation orientation while GGO was ambidextrous. The purpose of GGO was to improve the growth performance of GE in its internationalisation process.

The internationalisation process framework proposed by Prange and Verdier (2011), shown in Figure 1 provides an appropriate framework to explain the role of GGO in developing OA. Due to their orientation on exploitation, the P&Ls, initially led the growth strategy in emerging market following an international exploitation process that had promoted survival (Prange & Verdier, 2011). GGO was established to drive growth in emerging markets and followed an international exploration process. Prior to GGO, GE's internationalisation process was focused on exploitation. GGO thus developed an OA capability with the introduction of exploration activities.

According to the internationalisation framework of Prange and Verdier (2011), GGO would drive growth by exploring and developing dynamic capabilities that are value-adding and disruptive, as described in the following examples. GGO created an enabling environment for the P&Ls with the provision of shared services. GGO developed new capabilities for GE in Sub-Saharan Africa such as the government relations function (see section 5.2.3). The project development and project finance functions disrupted the market with the ability to develop and finance opportunities (see section 5.7.1). GGO had also disrupted GE itself by financing the establishment of a new P&L after it had identified a market opportunity (see section 5.7.1). GGO had taken on a risk, or a bet, that the P&Ls were not prepared to do.

GE had a well-established culture of innovation (Downie & McMurray, 2012) that has supported its growth for more than a 100 years. This innovation culture was part and parcel of the P&Ls which worked in close collaboration with the R&D centres, GE's global research centres (General Electric, n.d.-b), and promoted innovation programs such as GE Ecoimagination (General Electric, n.d.-a). However, it seemed that despite this innate strong culture of innovation, the P&Ls could not adapt to the emerging markets environment. Using an exploitation approach to internationalisation, the P&Ls had employed a path-dependent learning process that was limited by their history and knowledge accumulation (Prange & Verdier, 2011) in markets that did not equip them with competences suitable for emerging markets conditions.

Furthermore, GE needed new capabilities beyond new products to grow in these emerging markets, of a structural and commercial nature, that required a significantly new business model. Another constraint was the organic path that GE had adopted for its international expansion (General Electric, 2009) restricting the search to a solution from within. Hence GE had to disrupt itself, to break away from the path-dependent approach the P&Ls had followed.

As realised earlier, GGO was itself ambidextrous as it also performed exploitation activities such as optimising the provision of support functions through a shared services platform or stepping in to execute an opportunity when a P&L could not do it. The GGO respondents also mentioned that GGO would implement company-wide process improvement initiatives that are applied in P&Ls such as “FastWorks”.

Two types of OA were manifested. The synergy between GGO and the P&Ls was an illustration of partitional (structural) ambidexterity where exploitation and exploration activities are performed in separate business units simultaneously (Simsek et al., 2009). Secondly, GGO was itself an ambidextrous organisation implementing harmonic OA as both exploration and exploitation were conducted simultaneously within the same unit (Simsek et al., 2009). GGO would develop new capabilities (exploration), e.g. government relations, while at the same exploiting existing capability, e.g. optimising a support function.

This combination of partitional and harmonic OA optimised GE’s performance by allowing GGO to develop new capabilities for exploration and exploitation. Business development is an example of an exploration activity. The exploitation capabilities would be either handed over to P&L to enhance their core activity (e.g. new P&L division) or be retained by GGO to provide an enabling function (e.g. finance processing).

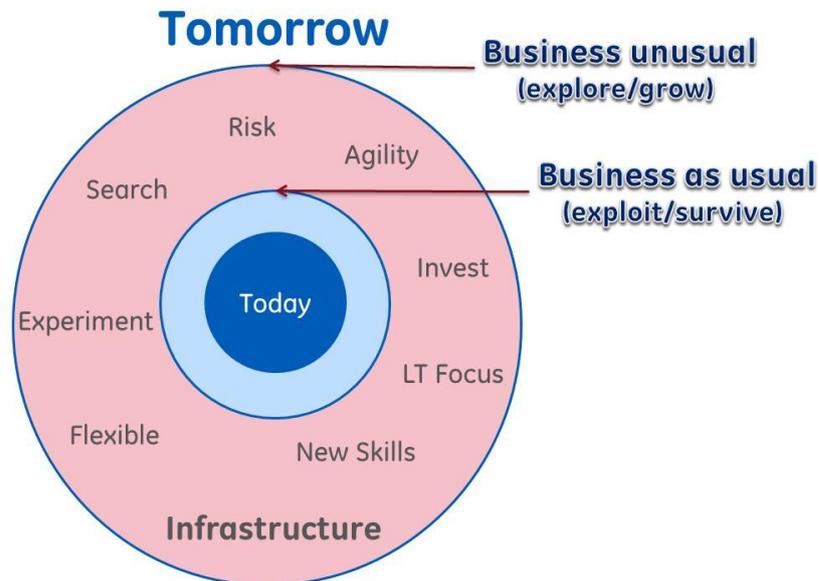
Most of the literature has presented cases that developed OA to develop new capabilities to produce new goods and/or services. This study presents a different use of OA, the development of commercial and structural capabilities. GGO was setup to accelerate growth (and sales). But the production and the sales of goods and services remained the responsibility of the P&Ls. Therefore GGO could only achieve its objective by enabling the P&Ls to sell more and grow faster. The success of GGO was intrinsically associated with the success of the P&Ls. The role of GGO as an enabler meant that once the P&Ls are enabled and grow their business at a satisfactory rate, there may not be any further need for GGO. GGO may well be a transitory solution.

### **6.2.3 GGO’s Ambidextrous Capability Development Process**

This section summarises the role of GGO in the development of the OA capability at GE. Figure 11 below illustrates the growth challenge posed to GE in emerging markets. Carrying on “business as usual” with its P&Ls driving the internationalisation in exploitation mode, GE would have a modest growth trajectory in emerging markets. However, in order to achieve a significantly higher level of growth, the P&Ls had to engage in a number of exploration activities that were beyond their capabilities and level of comfort. A “disruptive” initiative had

to be implemented to stretch the P&Ls and enable them to grow in this market, “Business unusual”.

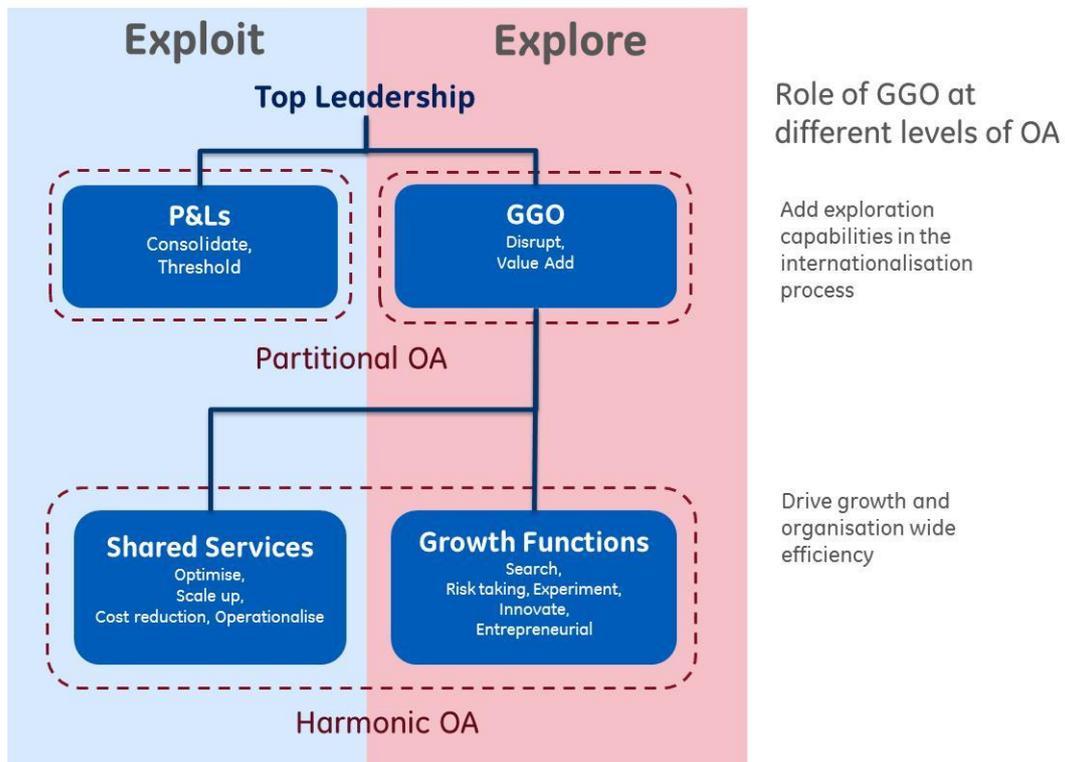
Figure 11. The Growth Challenge



GGO was thus established to develop the exploration capabilities for the P&Ls in these emerging markets. As remarked by one respondent, GGO’s role was to address the “outsized” risks of these emerging markets, allowing the P&Ls to focus on what they know best. In Figure 11 above the reddish region represent the exploration space that GGO had to fill. In essence GGO augmented the internationalisation process with exploration capabilities to promote growth (Prange & Verdier, 2011).

As illustrated in Figure 12 below, the first type of ambidexterity, partitional OA, was managed at the top leadership level with GGO and the P&Ls playing the exploration and the exploitation roles respectively. The second type is harmonic OA managed at GGO’s level to manage its own exploration and exploitation activities.

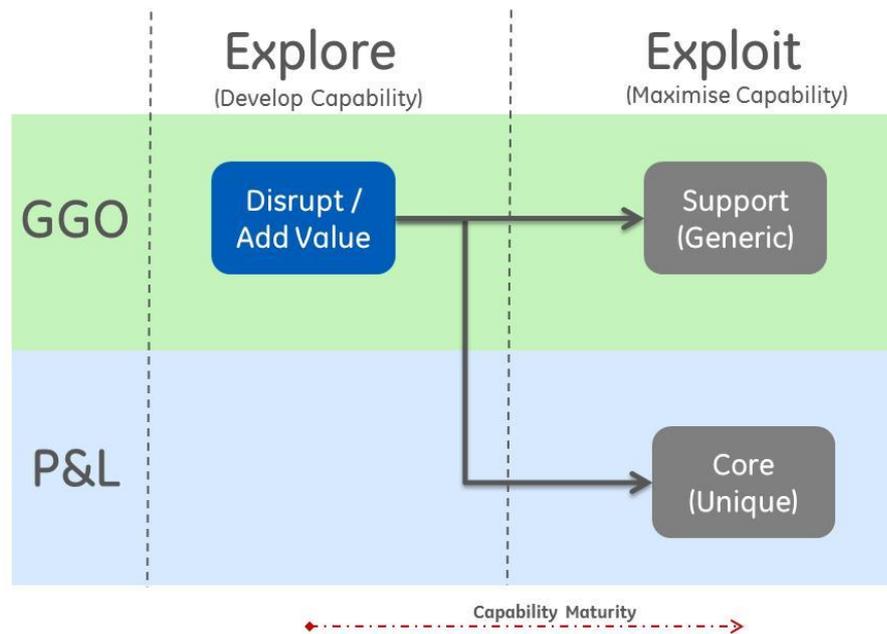
Figure 12. Dual level implementation of OA with GGO



The manifestation of OA at two levels supports the proposal that OA is a multilevel construct (Birkinshaw & Gupta, 2013).

GGO was developing capabilities for three types of application as illustrated in Figure 13 below. The first type had an exploration focus and referred to disruptive or value adding capabilities such as the project development function. The second type had an exploitation focus and referred to capabilities that resided within GGO such as the shared services. The third type had an exploitation focus and referred to capabilities initiated by GGO to be later transferred to a P&L function. For instance GGO would finance the setup of a P&L function in the region until it becomes sustainable and stand on its own.

Figure 13. GGO's Capabilities Development Process



### 6.3 Research Question 2: how does GE Develop Organisational Ambidexterity

Research question 2 sought to understand how GE developed its OA capability with GGO. Answering this question allowed the current theoretical framework to be tested and gave new insights on the subject matter.

#### 6.3.1 OA, Firm survival and Dynamic capability

Jeff Immelt, chairman of GE, wanted GE to have a higher growth rate in emerging markets (General\_Electric, 2010; Immelt et al., 2009). GE's P&Ls were well established in mature markets such as the U.S. and Western Europe, and had led GE's expansion in the growth markets. GE consisted of the P&Ls and a corporate office. The P&Ls were responsible for GE's business operations and the corporate office provided them with support functions. Achieving a higher growth rate meant changing GE's approach to the emerging markets. Due to their role, the P&Ls had to be at the centre of a new growth strategy.

A new growth strategy had to change the way the P&Ls operated in emerging markets, yet taking into consideration that they will carry on business as usual in their mature markets. GE's new growth strategy had to be ambidextrous allowing the P&Ls to change how they operated in growth markets without affecting the current capabilities they employed in existing mature markets.

Overall the respondents indicated that GGO had a positive impact on GE's performance in the region. This meant that the OA capability developed by GGO, described in the previous section, had a positive impact on GE. The interview guide was structured to get from the respondents a holistic perspective of the development of GGO from its antecedents to its establishment, operation and impact as presented in the results section of this report. A close inspection of the data in association with the literature on OA has revealed four key steps that GE went through to develop GGO and GE's OA capability. These four steps have been reduced into a proposed framework shown in Figure 14 to guide a firm's market expansion based on OA capability development.

The following sections present the results in terms of four key steps that helped GE developed OA using GGO. In the first step a need is expressed to change the course of business in order to achieve a new target and this change requires an ambidextrous capability. The second step is breaking down this change into its finer details and identifying the various exploration and exploitation capabilities required. The third step is to assess the constraints on the firm and choose the approach and the type of OA to employ. The fourth step is to execute with a strong leadership at the helm.

### **6.3.2 Developing GGO and the Organisational Ambidexterity Capability**

#### **6.3.2.1 The Change Imperative**

GE's leadership saw a great opportunity for growth outside of the US and was dissatisfied with GE's growth rate in emerging markets (section 5.2.1). In addition, significant competitors were emerging from these markets, and using reverse innovation they even posed a future threat of competing in GE's own backyard (Immelt et al., 2009). GE's leadership felt the imperative to accelerate growth in these emerging markets (section 5.2.1).

The P&Ls led the initial expansion of GE in emerging markets. But the P&Ls' growth strategy had limitations that constrained GE's growth rate in these markets (section 5.2.2). For instance, these markets were at time too risky and too small for a P&L to make the necessary large investment that would allow it to grow. A different growth strategy was required that would have to adopt a different perspective on these markets (section 5.2.2) and develop new capabilities to meet their specific needs (section 5.2.3).

However the P&Ls were responsible for the business operations at GE. Therefore the P&Ls still had to be at centre of the new growth strategy as they would ultimately own the ensuing business in these emerging markets. Therefore the growth strategy had to cater for the

exploitation focus of the P&Ls, as described previously (section 6.2.1) and at the same time help the P&Ls develop new capabilities to accelerate their growth in these emerging markets. In essence, the new growth strategy had to enable the P&Ls to develop an OA capability allowing them to carry on exploiting their existing markets while at the same time exploring the emerging markets.

The first step was the top leadership expressing a strong need to change the business model of the organisation in order to grow faster in emerging markets. The change had to develop an OA capability allowing GE to carry on exploiting its current capabilities while at the same time exploring to develop new capabilities for the emerging markets. The change would have a significant impact on GE and needed strong leadership and influence.

The literature survey suggested that OA is most likely to occur when the environment is highly dynamic, uncertain and competitive (Goossen & Bazazzian, 2012; J. J. P. Jansen et al., 2009). The respondents only referred to the uncertainty (risk) of the environment and the need for a different business model to address these emerging markets. However, Immelt et al. (2009) had acknowledged the dynamism and the competitive nature of these markets in addition to the wish to improve the growth performance (General\_Electric, 2010).

### **6.3.2.2 Detailing the change required**

Section 5.4 presents the areas of change that were addressed by GGO, namely culture, processes, leadership and structure. These areas were characteristic of the differences between exploitative and explorative units (O'Reilly & Tushman, 2004). As described in Table 7, the culture of the P&Ls was conservative, silo-thinking, short-term focused, operational, traditional and assessed the market through a global lens. However in compete in the emerging markets, the P&Ls had to develop a culture of risk taking, big picture thinking, long term focus, pioneering, agility and address the market with a local perspective (section 5.4.1). These new capabilities were characteristic of exploration (March, 1991; O'Reilly & Tushman, 2004).

Business processes were also affected by GGO but not as drastically as culture (section 5.4.2). As suggested by the respondents, similar processes were employed in both GGO and the P&Ls. This pointed out to the fact that GE had processes that were flexible enough to accommodate both type of organisations, exploitative and explorative. The main difference was not in the use of the processes but in the way they were implemented. For instance the P&Ls seemed to be stricter than GGO. The other difference was that not all processes from the P&Ls were applicable to GGO.

The third area of change was leadership (section 5.4.3). The GGO organisation was equipped with senior leaders allowing it to have the necessary influence to mobilise resources and to drive change. Most of the GGO leaders were experienced former P&Ls leaders and therefore had the same DNA making the dialogue with their P&Ls counterpart smoother. The difference in the leadership between the two organisations was in the area of focus that led to either an exploitative or an explorative bias. This difference was like two opposite sides of a coin working for the same overarching objective of driving value for the organisation.

Section 5.3 describes the changes in the structure of the organisation that GGO brought about the achievement of three outcomes. The first outcome was a shift in the centre of gravity (section 5.3.1). The centre of power and decision making needed to shift from a US centric base to the regions where growth was happening. This was achieved by having GGO organisations led by strong leaders in the growth regions. The second outcome was to allow each GGO region to drive its own growth story (section 5.3.2). This was achieved by resourcing the various GGO organisations adequately with both talented people and means. The third outcome was to have in GGO an organisation that complemented the P&Ls (section 5.3.3). This was achieved by GGO as providing an enabling environment to the P&Ls. This was necessary because as mentioned above, GE is run by P&Ls.

In conclusion, the change required had profound impact on various aspects of the organisation such as its culture, processes, leadership and structures. A detailed understanding of the changes was required to design a solution that will identify the right capabilities required to enable the change.

#### **6.3.2.3 Selecting the course and the type of Organisational Ambidexterity**

An appropriate vehicle was required to drive the changes in order to achieve a higher growth rate for the P&Ls in the emerging markets. As mentioned above, the changes required needed GE to be ambidextrous. In this section we shall review the type of ambidexterity that was employed with GGO in order to achieve the desired change and objectives as well as the advantage of a being separate structure.

From the literature survey on the antecedents of OA (section 2.3.1), it was noted that OA is most likely to occur under conditions of high dynamism, uncertainty and increased competitiveness in the environment uncertainty (Goossen & Bazazzian, 2012; J. J. P. Jansen et al., 2009). Furthermore partitional OA was better suited to large firms that had more resources (Voss & Voss, 2013). This was clearly the case of GE, a large firm experiencing a shift towards dynamic emerging markets, facing strong competition.

Simsek et al. (2009) proposed a typology to characterise four ways to implement OA as observed in the literature (section 2.3.2), namely the cyclical, the harmonic, the partitional and the reciprocal forms as depicted in Figure 3 above. These four types were based on a two-dimension grid consisting of the temporal and the structural dimensions. If we were to first consider OA in the relationship between GGO and the P&Ls, GGO was a separate structure conducting the explorative activities while the P&Ls were focused on exploitation. Hence one could consider GGO and the P&Ls to be a partitional implementation of OA.

However, the results have shown that GGO was itself ambidextrous, conducting both explorative and exploitative activities (see section 6.2.1). Within GGO there were some functions focused on exploitation (e.g. shared services) and others focused on exploration (e.g. business development). This suggested a harmonic implementation of OA within GGO. But it was also pointed out that GGO could do both the exploration and the exploitation using the same business unit or individuals. For instance, GGO could be asked to execute on an opportunity that it had developed because the P&L was unable to do so. This suggested a cyclical implementation of OA within GGO.

The above two paragraphs have demonstrated the concurrence of three types of OA within the same organisation. The papers reviewed in the literature survey have mostly presented the occurrence of a single type of OA. Birkinshaw and Gupta (2013) suggested that OA was a multilevel construct but that more research need to be done on this notion.

The three types of OA, namely partitional OA, cyclical OA and harmonic OA seemed to have occurred concurrently to accommodate the conditions of different types of environments and demands that existed in GE.

Partitional OA allowed for exploration and exploitation to occur across two business units, namely GGO and the P&Ls, allowing the two units to work complementarily (Lavie & Rosenkopf, 2006). As mentioned in section 2.3.2.3 above, partitional OA was positively associated with sales growth (He & Wong, 2004) and financial performance (Hang et al., 2010).

Considering GGO as a single unit and ambidextrous meant the implementation of harmonic OA (Simsek et al., 2009). It has to be noted that this instance of harmonic OA was not related to contextual OA. Contextual OA is based on the premise that both exploration and exploitation are conducted and managed by the same single individuals who switch between the two activities at their own discretion (Gibson & Birkinshaw, 2004). In this case different divisions of GGO were conducting the exploitation and exploration. For instance the shared

services functions were conducting exploitation activities. If we were to consider the subdivisions of GGO as separate structures, then this OA could also be considered partitional. Therefore, the form or type of OA can be assessed differently depending on the organisational level considered.

Cyclical OA is suggested as potentially another type of OA implemented by GGO in the case where GGO would develop an opportunity (exploration) and then be asked to execute it (exploitation). This implied a sequential application of exploration and exploitation within the same business unit and thus cyclical OA. But Simsek et al. (2009) specified that cyclical OA is associated with the focus of the entire business unit, in this case GGO, on either exploration and exploitation (see section 2.3.2.1), implying a reconfiguration of assets. This is not the case. Therefore, only two types of OA, namely harmonic and partitional could be considered to have occurred concurrently.

The application of each form of OA was contingent on constraints in the environment and the firm. The high dynamism of emerging markets favoured the use of partitional OA (O'Reilly & Tushman, 2013). GE had sufficient resources to support the financial burden of setting up and running two separate business units to conduct the exploration and the exploitation activities. Finally GE's processes and the quality and culture of its leadership allowed for the pursuit of exploration and exploitation activities within the GGO organisation.

If we were to use the internationalisation process proposed by Prange and Verdier (2011), illustrated in Figure 1, to interpret GE's expansion in emerging markets, one could say that the P&Ls had initially followed an international exploitation process. This process focused on consolidation and threshold capabilities that promoted the survival of the P&Ls in the emerging markets rather than growth. Thus GGO, using a separate structure to the P&Ls, enabled the pursuit of an international exploration process in order to produce new value-adding and disruptive capabilities that would promote growth.

In conclusion, GE had to follow a different internationalisation process focused on exploration in order to promote growth in the emerging markets. Different types of OA were used to develop various exploitation and exploration capabilities, contingent on the constraints in the environment and the firm.

#### **6.3.2.4 Leading the way**

The fourth step is to execute with the right leadership at the helm. The literature has emphasized the important role of leadership in the successful implementation of OA whereby

the leadership team has the task to create a unity of purpose, synchronise the actions across the exploration and exploitation units and to integrate their knowledge (Lubatkin et al., 2006; Turner et al., 2013).

The GGO leadership was characterised by five determinant factors. The first factor was the pursuit of a stretched goal, the second was the appointment of “big” leaders to GGO, the third was adequate amount of resources availed to GGO and fourth was the strong support provided to GGO from GE’s top leadership. These factors are in line with the suggestion by Joseph and Ocasio (2012) that in order for new organisations to commit to new activities and survive top management support was required to gain the appropriate political support, visibility and resources.

GGO was initiated and supported from the chairman of GE, Jeff Immelt, who placed at its helm one his most senior leaders, John Rice, a vice chairman. The stretch target was to get global sales to reach at least 60% of GE revenues, to maintain at least a 15% global growth rate and to decentralise GE enabling it to respond faster to local demands of the global markets it served (General\_Electric, 2010). As per the feedback from the respondents during their interviews, GGO was well resourced and staffed with top experienced leaders. The GGO leaders were able to drive change through “constructive engagement” with the P&Ls leaders and when necessary GGO would lead an initiative itself (Respondent 13).

The GGO leaders played an important role in managing the tension with the P&Ls (see section 5.6.4) characteristic of the implementation of OA (Banderia-de-Mello et al., 2014). As per the feedback from the respondents, leaders in GE purposefully created what they referred to as “creative tension” (see section 5.6.4). As highlighted by respondent 13, a certain level of conflict or tension was part and parcel of GE’s culture. The leaders embraced the tension that arose in the interactions between GGO and the P&Ls as an enabler in driving change and stretching the organisation. This ability to embrace tension is similar to the paradox mindset proposed by Andriouopoulos and Lewis (2009, 2010) to help accept a tension created by a condition with conflicting or contradictory features.

In placing John Rice as the leader of GGO, Jeff Immelt conveyed a strong message on the importance of GGO for GE. In Sub-Saharan Africa, GGO leaders had either the same or a higher level of seniority than their counterparts in the P&Ls. The seniority and clout of its leaders gave GGO a strong influence in the decision making processes. It allowed GGO to swiftly mobilise resources to pursue an opportunity with a sound business case. The extent of GGO’s

influence was such the P&L leaders used GGO leaders as alternative channels to address issues that they found difficult to address through their own P&L structures.

The respondents agreed overall that GGO had a positive impact on the growth of GE on parameters such as footprint and headcounts. However, there was a mixed response on the impact of GGO on sales. Some respondents indicated that the impact was positive, others that there was none and for the rest the jury was still out.

This mixed response could be attributed to the fact that there was no recognised standard measure of GGO's performance. The GGO respondents indicated that their performance was measured on the sales figure similarly to the P&Ls. Most of the P&L respondents did not have a hard metric for GGO's performance. Some used soft metrics such as claiming that GGO's facilitation on sales transaction should have a positive impact on sales.

The lack of a standard metric affected the appreciation by the P&Ls of GGO's contribution. All the respondents had indicated that the determining factor in the future existence of GGO was its value-add and relevance. The relevance of GGO to the P&Ls would remain subjective and difficult to prove without an agreed upon standard metric of performance.

The respondents highlighted the fact that leaders of GGO and the P&Ls had the same traits. O'Reilly and Tushman (2004) suggested the sharing of common values as an important ingredient of the senior management team in successfully managing OA. This similarity in traits meant that, similarly to the leaders that were interviewed for this study, all leaders embraced conflict and tension as a healthy and necessary condition in their exchange of ideas. This thus facilitated the resolution of the OA tension.

The top leadership of GGO and the P&Ls played the important role of integrating the work of both organisations through the common understanding that they all contributed to the performance of the same organisation (see section 5.6.1). This was facilitated by an integrated top leadership team and the application of common performance measures such as sales and orders on both organisations. In addition, most of the GGO leaders were former experienced P&Ls leaders who had a strong social capital (network) which facilitated their engagement with their counterparts (Kang & Snell, 2009). O'Reilly and Tushman (2013) had indeed emphasized the importance of top management as a key moderating factor for the successful implementation of OA.

Various leaders (respondents) pointed out that GGO was transitory. They remarked that GGO's role was to enable the growth of the P&Ls in emerging markets, and that once the risks

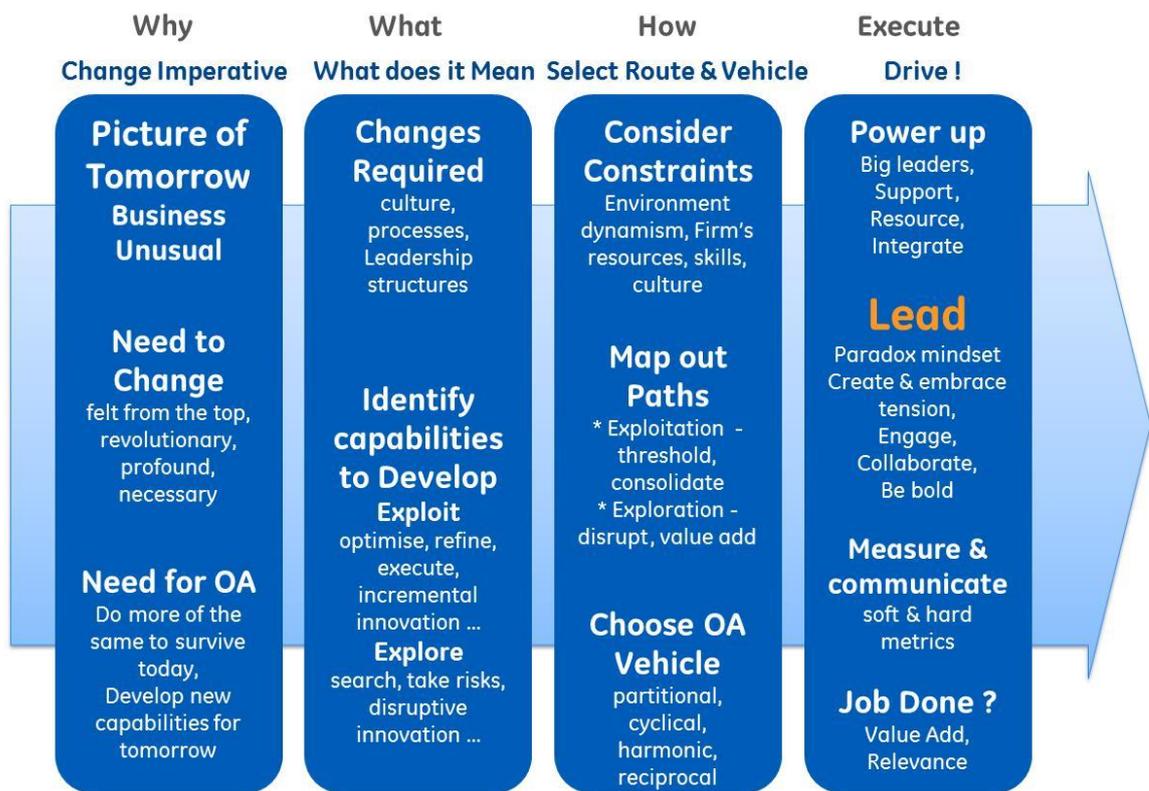
were addressed and the infrastructure was properly established there would not be any further need for GGO, as the P&Ls would then take over the role of leading the growth of their respective businesses. The use of a separate structure for GGO could thus be interpreted as an appropriate transitory instrument that could be done away with in the future without affecting the P&Ls.

The successful execution of GGO's mandate relied on the quality of its leadership that was empowered with "big" leaders, resourced adequately and enjoyed the full support of the top leadership of GE. The GGO leaders were integrated in the top leadership with the P&Ls leaders where they all embraced the tension between their organisations, engaged each other constructively and collaborated with a unity of purpose. The lack of an agreed upon or standard metric of the performance of GGO affected the objective valuation of GGO's contribution. This could impact on its future existence which depended on its relevance that would be only justified with an objective valuation of its contribution in the long term.

### **6.3.3 Proposed OA Market Expansion Framework**

Figure 14 below proposes a framework for a firm to develop the necessary OA capabilities to expand into a new market. The underlying principles of this framework do not limit its application to the internationalisation process only. The framework was derived from the four-step analysis of the establishment of GGO and the development of the OA capability described in the previous sections.

Figure 14. OA Market Expansion Framework



The first step, the “Change Imperative”, is the expression of a need from the top leadership of the organisation to change the course of business, to do “Business Unusual”, in order to attain an outcome different from the current course. The capabilities required to effect the change must have OA characteristics.

The second step is to take a deep dive in the details of the changes required in the culture, processes, leadership and structure of the organisation. This detailed analysis will drive the identification of the exploitation and exploration capabilities required.

The third step is to select the appropriate approach and to design the right organisational structure that will implement the appropriate types of OA, all contingent on the constraints of the environment and the firm.

The fourth step is to drive the change with the right leaders who should be supported from the top leadership, equipped with adequate resources and integrated with the top leadership structures of the organisation. This A-team are made of leaders who are at ease with the tension generated in an ambidextrous organisation, engage with the counterpart, are bold when necessary and have a collaborative mindset. The performance of the new organisation

must be measured with metrics agreed upon by all stakeholders. A continuous check must be done to ensure that the exercise still add value.

#### **6.3.4 GGO, a Dynamic Capability**

The role of GGO at GE has supported the suggestion made by O'Reilly and Tushman (2008) that ambidexterity is a dynamic capability. As mentioned in section 2.2.4, they stated that ambidexterity allows an organisation to identify new opportunities and act on it by reconfiguring its assets.

The feedback of the respondents on the impact of GGO on GE (section 5.8) suggested that GGO allowed GE to identify opportunities, reconfigure its assets and structure and improved its competitive edge. The following are instances of the reconfiguration of GE that ensued the introduction of GGO. GE had become a more globalised organisation with a greater diversity of leaders representing the various regions GE operated in. GGO reconfigured the provision of shared services in emerging markets to create an enabling environment for the P&Ls. GGO had added a level of complexity in the structure of the organisation. GE developed new capabilities enabling GE improving its competitiveness. GE developed the ability to better handle the risks of emerging markets and deal with their governments. GGO changed the perception the P&Ls had of Sub-Sahara Africa region enabling them to see and pursue opportunities.

## **Chapter 7: CONCLUSIONS**

### **7.1 Introduction**

The purpose of this chapter is to reiterate the importance of this study, present the major findings, discuss the limitations and make recommendations on business applications and on future areas of research.

### **7.2 Importance of the Study**

Organisational ambidexterity (OA), the ability of an organisation to explore and to exploit, is crucial to the survival of a firm (March, 1991). OA allows a firm to exploit its current capabilities in the short term and to develop new capabilities that will allow it to adapt in the long term in response to a changing environment. Conducting exploration and exploitation concurrently is a difficult task (Birkinshaw & Gupta, 2013) as they involve different objectives, knowledge processes, values and practices (O'Reilly & Tushman, 2004) that are opposing and at time conflicting (Banderia-de-Mello et al., 2014) as they pull the organisation in different directions and compete for scarce resources.

General Electric (GE), founded in 1892 had a turnover of US\$ 157 billion in 2009. Well known for its innovation culture (Downie & McMurray, 2012) and dynamic capability that have allowed it to continuously adapt (Joseph & Ocasio, 2012) both organically and inorganically, offering new product and services, evolving its business model and playing in new markets. However, the dissatisfaction of its leadership with GE's performance in emerging markets led to a radical change in its approach. The initial attempt to penetrate emerging markets was led by its P&Ls using an international exploitation process that had limited capabilities in addressing the market conditions, such as the ability to handle the risk of these markets. Using a new organisation, the Global Organisation and Operations (GGO), this shows that GGO led an explorative internationalisation process that has allowed GE to reconfigure itself and develop new capabilities to handle the conditions of emerging markets resulting in an improved performance. This approach has allowed the P&Ls to maintain their exploitation focus while GGO developed exploration capabilities that enabled the P&Ls to grow in these emerging markets. This study has investigated how GE positively disrupted its growth trajectory in emerging markets through the perspective of an OA capability development process.

### **7.3 Major Findings**

This study confirmed the critical role of leadership in the successful development of OA capability. The role of the top leadership, that integrate the leaders from the exploitation and exploration business units, is to reconcile the conflicting strategies and give direction (O'Reilly & Tushman, 2004). The leadership must be able to embrace objectives that are paradoxical (Andriopoulos & Lewis, 2010) and use the tension that arises in the organisation to its own advantage to achieve OA (Smith et al., 2010). The research has shown that the use of shared values facilitated social integration in the top senior management teams and that the leaders embraced the tension and considered robust engagement as healthy. Using the same measures of performance across the exploitative and explorative units with an understanding that they will be achieved differently, e.g. a short term vs a long term focus, allows the leadership to operate them in complementarity for the overall benefit of the organisation through constructive engagement amongst the various leaders, in line with the literature on contingency team rewards (J. J. P. Jansen et al., 2009).

The use of generic processes and routines that are flexible enough to be used in both explorative and exploitative units allows for similar core measures of performance to be used across GGO and the P&Ls, the exploration and exploitation units. This property allowed just the need of leadership to change their focus in order to create the appropriate exploration or exploitation contexts, without spending much effort on the need to change processes and cultures.

The manifestation of OA was observed at two levels of the organisation using different forms. The first occurrence was partitional OA in the relationship between GGO and the P&Ls and the second was harmonic as GGO was itself ambidextrous. This confirms the nature of OA as a multilevel phenomenon (Birkinshaw & Gupta, 2013). The multilevel and multiform implementation of OA allowed GE to develop different types of exploration and exploitation capabilities. It allowed GGO to develop growth capabilities and two types of exploitation capabilities. The first type of capabilities referred to the shared services and the second type referred to capabilities initiated by GGO that, once sustainable, would be transferred to the P&Ls.

Simsek et al. (2009) defined a typology of OA based on the dimensions of time and structure and suggested that contextual OA corresponded to what they called harmonic OA, referring to the simultaneous implementation of OA within the same structure. The type of harmonic OA found in this case was not related to contextual OA that further specified that the exploration

and exploitation are conducted by the same individual. In the case of GGO, different functions performed the exploration and exploitation. But this reflection raised a question on the application of the term contextual OA. By definition, contextual OA is related to the capability of an individual to select a task to do between exploration and exploitation at his own discretion. This assumes that the individual has the competence to assess both types of activity. The researcher suggests that contextual OA is a decision making process and should not be associated with an implementation form of OA. The researcher further proposes that all leaders that manage ambidextrous teams or organisations possess contextual OA capability. This proposition would be recommended as an area for further research.

The international expansion of GE into emerging markets was led by the P&Ls which, in line with their nature, adopted an international exploitation process (Prange & Verdier, 2011). This approach was unsuitable to the emerging markets that required exploration capabilities for the business to grow. The organisational structure adopted with GGO allowed for a specific type of OA that produced the required exploration capabilities that enabled the P&Ls in doing business in emerging without changing their core focus. The structure is such that GGO could be considered a transitory arrangement until the market becomes mature or the P&Ls grow to a level where GGO is no more relevant.

The respondents remarked that one of the objectives of establishing GGO was to shift the centre or gravity from the U.S. centric to a global outlook. GE has been led by the P&Ls who have exploitation bias, while GGO has an exploration bias when considering the internationalisation process. Therefore this suggested shift in the centre of gravity may imply a long term shift of GE to an exploration mode as it positions itself to capture more of the global market where most of its revenues are generated. If this bears out to be true, it will be a practical example of the implementation of sequential OA and an opportunity to understand this phenomenon in detail, a current gap in the literature (O'Reilly & Tushman, 2013).

The literature suggested that OA is positively associated with growth (Jurni et al., 2013) and the increase in sales (O'Reilly & Tushman, 2013). Following the establishment of GGO in Sub-Saharan Africa (SSA), the footprint of the P&Ls had significantly increased. GE sales in SSA increased significantly from US\$ 1.8 billion in 2011 (Dolan, 2012) to US\$ 5.2 billion (Mark, 2014) in 2013 to an average growth rate above 60% p.a. since the introduction of GGO in 2010 well above the rate prior to it (see Table 1). The research did not collect data to confirm the direct association of GGO to the sales performance but most of the respondents agreed that GGO positively enabled their operations in the region. The successful collaboration between

GGO and the P&Ls could be attributed to the ingeniously crafted symbiotic nature of their relationship. The success of GGO was measured through the success of the P&Ls. The results support the literature findings on the positive impact of OA on growth.

The main impact of the ambidextrous capability developed with GGO was in changing the way GE does business and not on the product it supplies to the markets. New business models were created to allow the P&Ls to adapt its approach in an emerging market, Sub-Saharan Africa, resulting in an improved penetration and higher revenues.

The impact of GGO has significantly improved the growth of GE in Sub-Saharan Africa in comparison to the first attempt by the P&Ls. This result supports Prange and Verdier (2011) proposal that exploitative internationalisation promotes survival while exploration internationalisation promotes growth.

Finally, this study proposes a four phased framework to develop OA capabilities for market expansion. The first phase is the initiation of the process with a strong need expressed by the top leadership to pursue contradictory objectives, the paradox imperative, requiring an OA capability. The second phase is to conduct a detailed analysis of the exploration and exploitation capabilities required and the required organisational changes required such as cultures and processes. The third phase is to consider the constraints of the environment and the firm, to map out the appropriate exploration and exploitation paths to follow and to select the adequate form(s) of OA to implement. The last phase is to execute the overall strategy with strong leaders at the helm, supported by the top leadership and adequately resourced.

#### **7.4 Recommendations on Developing Organisational Ambidexterity**

Implementing OA can be a very costly exercise (Junni et al., 2013; O'Reilly & Tushman, 2013). GE used a partitional approach, also referred to as a structural, for the development of its ambidextrous capability. This approach requires a large amount of resources that GE could afford. This may not be feasible for smaller firms which should consider contextual ambidexterity that make use of existing structure and personnel. But this latter form of ambidexterity requires a high skilled personnel that can perform both exploration and exploitation and lowers the leadership and decision making to the individual or group level.

GE already had an innovation and leadership culture to disrupt and drive change prior to GGO. GGO helped stretch the organisation further without affecting significantly the culture and processes. In addition, GE had a large pool of experienced skills that could be redeployed. This may not be the case for many firms. Firms that want to develop an ambidextrous

capability must consider the amount of effort required to develop the appropriate culture and processes.

The difficulty in measuring the impact of an exploitative unit may challenge their value to an organisation. In such instance, it is important that leadership understands the value of OA in the long term survival of the firm and ensure its ability to explore. However, exploration tends to have a high failure rate in its initiatives. Therefore the leadership of a firm must keep its exploration activities in check.

## **7.5 Recommendations for Future Research**

The research has contributed to the body of knowledge on the development of the ambidextrous capability in organisations. The results, conclusions and limitations of this research suggested the following areas to be investigated in the future:

- The concurrent manifestation of multiple forms of OA, the antecedents and their impact to augment the findings of this study;
- The impact of OA on the structure of an organisation and the capabilities that it develops rather than sales and growth;
- Associating OA with organisational change theories to further investigate its dynamic capability;
- Exploring the paradox mindset and the purposeful use of tension by leadership in assessing how to handle the implementation of OA;
- Investigate the proposition that a contextual OA capability is necessary to all leaders that manage ambidextrous organisations or team.
- Further qualitative studies on how OA is developed;
- Investigate whether GGO is a symptom of a sequential OA phenomenon happening at GE;

## **7.6 Conclusions**

This research has shown how OA was developed at GE using a disrupting organisation, GGO, that allowed GE to adapt its internationalising process resulting in an improved performance. It has highlighted four factors required in the successful development of OA, namely the need for such capability, an understanding of the changes that need to be made in the organisation in terms of leadership, structure, processes and culture, the use of the appropriate form(s) of OA and the role of leadership in setting the direction and managing the tension to drive the

required changes. The impact of GGO on GE's performance in Sub-Saharan Africa has highlighted the role of OA in positively disrupting the growth of a firm.

## Chapter 8: REFERENCE LIST

- Andriopoulos, C., & Lewis, M. W. (2009). Exploitation-Exploration Tensions and Organizational Ambidexterity: Managing Paradoxes of Innovation. *Organization Science*, 20(4), 696–717. doi:10.1287/orsc.1080.0406
- Andriopoulos, C., & Lewis, M. W. (2010). Managing Innovation Paradoxes: Ambidexterity Lessons from Leading Product Design Companies. *Long Range Planning*, 43(1), 104–122. doi:10.1016/j.lrp.2009.08.003
- Atuahene-Gima, K. (2005). The coffee paradox: Global markets, commodity trade and the elusive promise of development, 69, 61–83.
- Banderia-de-Mello, R., Fleury, M. T. L., Aveline, C. E. S., & Gama, M. (2014). UNPACKING AMBIDEXTERITY IMPLEMENTATION IN THE INTERNATIONALIZATION OF EMERGING MARKET MULTINATIONALS. *Working Paper*. Retrieved from <https://damore-mckim.northeastern.edu/uploadedFiles/Events/Aveline.pdf>
- Birkinshaw, J., & Gupta, K. (2013). Clarifying the Distinctive Contribution of Ambidexterity to the Field of Organization Studies. *Academy of Management Perspectives*, 27(4), 287–298. doi:10.5465/amp.2012.0167
- Bodwell, W., & Chermack, T. J. (2010). Organizational ambidexterity: Integrating deliberate and emergent strategy with scenario planning. *Technological Forecasting and Social Change*, 77(2), 193–202. doi:10.1016/j.techfore.2009.07.004
- Boumgarden, P., Nickerson, J., & Zenger, T. R. (2012). Sailing into the wind: Exploring the relationships among ambidexterity, vacillation, and organizational performance. *Strategic Management Journal*, 33(6), 587–610. doi:10.1002/smj.1972
- Chen, E. L., & Katila, R. (2008). Rival Interpretations of Balancing Exploration and Exploitation: Simultaneous or Sequential? In *The handbook of technology and innovation management* (pp. 197 – 214). John Wiley & Sons. Retrieved from [http://books.google.com/books?hl=en&lr=&id=6e\\_NFDN6KPUC&oi=fnd&pg=PR5&dq=%22The+Financing+of%22+%22the+time+was+right+for+a+handbook+that+provided+some+order+to+the+plethora%22+%22technology+strategy,+entrepreneurship,+and+product+development,+and+!%22+&ots=93-ZBv2aDJ&sig=h\\_9TsfW91N9hk95BlrH6UtXvp4I](http://books.google.com/books?hl=en&lr=&id=6e_NFDN6KPUC&oi=fnd&pg=PR5&dq=%22The+Financing+of%22+%22the+time+was+right+for+a+handbook+that+provided+some+order+to+the+plethora%22+%22technology+strategy,+entrepreneurship,+and+product+development,+and+!%22+&ots=93-ZBv2aDJ&sig=h_9TsfW91N9hk95BlrH6UtXvp4I)
- Dolan, D. (2012, May 11). GE sees double-digit revenue growth in Africa. *Reuters*. Addis Ababa. Retrieved from <http://www.reuters.com/article/2012/05/11/ozabs-ge-africa-idAFJ0E84A05J20120511>
- Downie, H., & McMurray, A. J. (2012). The Evolution of GE's Product Innovation Strategy. In *Proceedings of 19th International Business Research Conference*. Retrieved from <http://www.mktgsensei.com/AMAE/Innovation%20and%20New%20Products/GE%20Innovation%20Strategy.pdf>
- Duncan, R. B. (1976). The ambidextrous organization: Designing dual structures for innovation. *The Management of Organization*, 1, 167–188.

- Flyvbjerg, B. (2006). Five Misunderstandings About Case-Study Research. *Qualitative Inquiry*, 12(2), 219–245. doi:10.1177/1077800405284363
- Foster, R., & Kaplan, S. (2001). *Creative destruction: Why companies are built to last and underperform the market - and how to successfully transform them*. New York.
- GE Businesses in Africa. (n.d.). Retrieved November 1, 2014, from <http://www.ge.com/africa/b2b>
- General Electric. (2008). *GE 2008 Annual Report*. General Electric. Retrieved from [http://www.ge.com/ar2008/pdf/ge\\_ar\\_2008.pdf](http://www.ge.com/ar2008/pdf/ge_ar_2008.pdf)
- General Electric. (2009). *GE 2009 Annual Report*. General Electric. Retrieved from [http://www.ge.com/ar2009/pdf/ge\\_ar\\_2009.pdf](http://www.ge.com/ar2009/pdf/ge_ar_2009.pdf)
- General\_Electric. (2010, November 8). *GE Names Vice Chairman John Rice to Lead GE Global Growth & Operations | Business Wire*. [Press Release]. Retrieved from <http://www.businesswire.com/news/home/20101108006198/en/GE-Names-Vice-Chairman-John-Rice-Lead#.U2KMNoGSxCY>
- General Electric. (n.d.-a). Ecomagination. Retrieved October 25, 2014, from <http://www.ge.com/about-us/ecomagination>
- General Electric. (n.d.-b). GE Research and Development. Retrieved October 25, 2014, from <http://www.geglobalresearch.com/>
- GE Organization Chart. (2012, November). Retrieved from [www.ge.com/pdf/company/ge\\_organization\\_chart.pdf](http://www.ge.com/pdf/company/ge_organization_chart.pdf)
- Gibson, C. B., & Birkinshaw, J. (2004). The antecedents, consequences, and mediating role of organizational ambidexterity. *Academy of Management Journal*, 47(2), 209–226. doi:10.2307/20159573
- Goossen, M. C., & Bazazzian, N. (2012). Consistently Capricious: Simultaneous and Sequential Exploration and Exploitation. Presented at the Druid Academy Conference 2012, University of Cambridge - UK: Druid Academy. Retrieved from [http://druid8.sit.aau.dk/acc\\_papers/xdtscove7l9cstasoi8cfy1esud9.pdf](http://druid8.sit.aau.dk/acc_papers/xdtscove7l9cstasoi8cfy1esud9.pdf)
- Gulati, R., & Puranam, P. (2009). Renewal Through Reorganization: The Value of Inconsistencies Between Formal and Informal Organization. *Organization Science*, 20(2), 422–440. doi:10.1287/orsc.1090.0421
- Gupta, A. K., Smith, K. G., & Shalley, C. E. (2006). The interplay between exploration and exploitation. *Academy of Management Journal*, 49(4), 693–706.
- Guttel, W. H., & Konlechner, S. W. (2009). Continuously hanging by a thread: Managing contextually ambidextrous organizations. *Schmalenbach Business Review: ZFBF*, 61, 150.
- Hang, C. C., Chen, J., & Subramian, A. M. (2010). Developing disruptive products for emerging economies: lessons from Asian cases. *Engineering Management Review*, 41(4), 119–126.

- He, Z.-L., & Wong, P.-K. (2004). Exploration vs. Exploitation: An Empirical Test of the Ambidexterity Hypothesis. *Organization Science*, 15(4), 481–494. doi:10.1287/orsc.1040.0078
- Hill, S. A., & Birkinshaw, J. (2012). Ambidexterity and Survival in Corporate Venture Units. *Journal of Management*. doi:10.1177/0149206312445925
- Hsu, C.-W., Lien, Y.-C., & Chen, H. (2013). International ambidexterity and firm performance in small emerging economies. *Journal of World Business*, 48(1), 58–67. doi:10.1016/j.jwb.2012.06.007
- Immelt, Jeffrey R. (2009, December 15). *GE Renewal*. Presented at the GE Annual Outlook Investor Meeting. Retrieved from [www.ge.com/investor-relations/](http://www.ge.com/investor-relations/)
- Immelt, J. R., Govindaran, V., & Trimble, C. (2009, November). How GE Is Disrupting Itself. *Harvard Business Review*, (October).
- Jansen, J. J., George, G., Van den Bosch, F. A., & Volberda, H. W. (2008). Senior team attributes and organizational ambidexterity: The moderating role of transformational leadership. *Journal of Management Studies*, 45(5), 982–1007.
- Jansen, J. J. P. (2008). Structural Differentiation and Ambidexterity- The Mediating Role of Integration Mechanisms.pdf.
- Jansen, J. J. P., Simsek, Z., & Cao, Q. (2012). Ambidexterity and performance in multiunit contexts: Cross-level moderating effects of structural and resource attributes. *Strategic Management Journal*, 33(11), 1286–1303. doi:10.1002/smj.1977
- Jansen, J. J. P., Van Den Bosch, F. A., & Volberda, H. W. (2006). Exploratory innovation, exploitative innovation, and performance: Effects of organizational antecedents and environmental moderators. *Management Science*, 52(11), 1661–1674.
- Jansen, J. J. P., Vera, D., & Crossan, M. (2009). Strategic leadership for exploration and exploitation: The moderating role of environmental dynamism. *The Leadership Quarterly*, 20(1), 5–18. doi:10.1016/j.leaqua.2008.11.008
- Joseph, J., & Ocasio, W. (2012). Architecture, attention, and adaptation in the multibusiness firm: General electric from 1951 to 2001. *Strategic Management Journal*, 33(6), 633–660. doi:10.1002/smj.1971
- Junni, P., Sarala, R. M., Taras, V., & Tarba, S. Y. (2013). Organizational ambidexterity and performance: A meta-analysis. *The Academy of Management Perspectives*, 27(4), 299–312.
- Kang, S.-C., & Snell, S. A. (2009). Intellectual Capital Architectures and Ambidextrous Learning: A Framework for Human Resource Management. *Journal of Management Studies*, 46(1), 65–92. doi:10.1111/j.1467-6486.2008.00776.x
- Keen, C., & Wu, Y. (2011). An ambidextrous learning model for the internationalization of firms from emerging economies. *Journal of International Entrepreneurship*, 9(4), 316–339. doi:10.1007/s10843-011-0081-2

- Lavie, D., & Rosenkopf, L. (2006). Balancing exploration and exploitation in alliance formation. *Academy of Management Journal*, 49(4), 797–818.
- Leonard-Barton, D. (1992). Core capabilities and core rigidities: a paradox in managing new product development. *Strategic Management Journal*, 13, 111–125.
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14(S2), 95 – 112.
- Louçã, F., & Mendonça, S. (2002). Steady change: the 200 largest US manufacturing firms throughout the 20th century. *Industrial and Corporate Change*, 11(4), 817–845. doi:10.1093/icc/11.4.817
- Lubatkin, M. H., Simsek, Z., Ling, Y., & Veiga, J. F. (2006). Ambidexterity and Performance in Small-to Medium-Sized Firms: The Pivotal Role of Top Management Team Behavioral Integration. *Journal of Management*, 32(5), 646–672. doi:10.1177/0149206306290712
- Lunenburg, F. C. (2010). Forces for and Resistance to Organizational Change. *National Forum of Educational Administration and Supervision Journal*, 27(4).
- Luo, Y., & Rui, H. (2009). An ambidexterity perspective toward multinational enterprises from emerging economies. *The Academy of Management Perspectives*, 23(4), 49–70.
- March, J. G. (1991). Exploration and Exploitation in Organizational Learning. *Organization Science*, 2(1), 71–87.
- Mark, C. (2014, August 4). General Electric To Invest \$2 Billion In Africa By 2018. *International Business Times*. Retrieved from <http://www.ibtimes.com/general-electric-invest-2-billion-africa-2018-1647754>
- Mom, T. J., Van Den Bosch, F. A., & Volberda, H. W. (2007). Investigating Managers' Exploration and Exploitation Activities: The Influence of Top-Down, Bottom-Up, and Horizontal Knowledge Inflows\*. *Journal of Management Studies*, 44(6), 910–931.
- Nosella, A., Cantarello, S., & Filippini, R. (2012). The intellectual structure of organizational ambidexterity: A bibliographic investigation into the state of the art. *Strategic Organization*, 10(4), 450–465. doi:10.1177/1476127012457979
- O'Reilly, C. A., Harreld, B. J., & Tushman, M. (2009). Organizational Ambidexterity: IBM and Emerging Business Opportunities. Retrieved from [http://www.researchgate.net/publication/46479634\\_Organizational\\_Ambidexterity\\_IBM\\_and\\_Emerging\\_Business\\_Opportunities/file/50463516bf011cae51.pdf](http://www.researchgate.net/publication/46479634_Organizational_Ambidexterity_IBM_and_Emerging_Business_Opportunities/file/50463516bf011cae51.pdf)
- O'Reilly, C. A., & Tushman, M. L. (2004). The ambidextrous organization. *Harvard Business Review*, 82(4), 74–83.
- O'Reilly, C. A., & Tushman, M. L. (2008). Ambidexterity as a dynamic capability: Resolving the innovator's dilemma. *Research in Organizational Behavior*, 28, 185–206. doi:10.1016/j.riob.2008.06.002
- O'Reilly, C. A., & Tushman, M. L. (2013). Organizational Ambidexterity: Past, Present, and Future. *Academy of Management Perspectives*, 27(4), 324–338. doi:10.5465/amp.2013.0025

- Patel, P. C., Messersmith, J. G., & Lepak, D. P. (2013). Walking the Tightrope: An Assessment of the Relationship between High-Performance Work Systems and Organizational Ambidexterity. *Academy of Management Journal*, 56(5), 1420–1442. doi:10.5465/amj.2011.0255
- Prange, C., & Verdier, S. (2011). Dynamic capabilities, internationalization processes and performance. *Journal of World Business*, 46(1), 126–133. doi:10.1016/j.jwb.2010.05.024
- Prieto, I., Revilla, E., & Rodriguez, B. (2007, March 22). Information technology and the ambidexterity hypothesis: an analysis in product development. Social Science Research Network.
- Raisch, S., & Birkinshaw, J. (2008). Organizational Ambidexterity: Antecedents, Outcomes, and Moderators. *Journal of Management*, 34(3), 375–409. doi:10.1177/0149206308316058
- Sapienza, H. J., Autio, E., George, G., & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, 31(4), 914–933.
- Saunders, M., & Lewis, P. (2012). *Doing Research in Business & Management - An Essential Guide to Planning Your Project*. Pearson Education Limited.
- Schulze, P., Heinemann, F., & Abedin, A. (2008). BALANCING EXPLOITATION AND EXPLORATION. In *Academy of Management Proceedings* (Vol. 2008, pp. 1–6). Academy of Management. Retrieved from <http://proceedings.aom.org/content/2008/1/1.385.short>
- Schweizer, R., Vahlne, J.-E., & Johanson, J. (2010). Internationalization as an entrepreneurial process. *Journal of International Entrepreneurship*, 8(4), 343–370. doi:10.1007/s10843-010-0064-8
- Simons, H. (2009). *Case Study Research in Practice*. 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom: SAGE Publications, Ltd. Retrieved from <http://srmo.sagepub.com/view/case-study-research-in-practice/SAGE.xml>
- Simsek, Z., Heavey, C., Veiga, J. F., & Souder, D. (2009). A typology for aligning organizational ambidexterity's conceptualizations, antecedents, and outcomes. *Journal of Management Studies*, 46(5), 864–894.
- Smith, W. K., Binns, A., & Tushman, M. L. (2010). Complex Business Models: Managing Strategic Paradoxes Simultaneously. *Long Range Planning*, 43(2-3), 448–461. doi:10.1016/j.lrp.2009.12.003
- Stettner, U., & Lavie, D. (2013). Ambidexterity under scrutiny: Exploration and exploitation via internal organization, alliances, and acquisitions: Exploration and Exploitation. *Strategic Management Journal*, n/a–n/a. doi:10.1002/smj.2195
- Stubbart, C. I., & Knight, M. B. (2006). The case of the disappearing firms: empirical evidence and implications. *Journal of Organizational Behavior*, 27(1), 79–100. doi:10.1002/job.361

- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. doi:10.1002/smj.640
- Thompson, J. (1967). *Organizations in Action: Social Science Bases of Administrative Theory*. Trans. Publishers.
- Tiwana, A., Baharadwaj, A., & Sambamurthy, V. (2007). 2007 - The Influence on Interunit Linkages on Technology Development Performance.pdf. *Social Science Research Network*. Retrieved from [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=985094](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=985094)
- Tiwana, A., Bharadwaj, A., & Sambamurthy, V. (2007, January). The Influence on Interunit Linkages on Technology Development Performance: An Empirical Study of the Mediating Role of Knowledge Integration. *Social Science Research Network*. Retrieved from <http://ssrn.com/abstract=985094>
- Turner, N., Swart, J., & Maylor, H. (2013). Mechanisms for Managing Ambidexterity: A Review and Research Agenda: Mechanisms for Managing Ambidexterity. *International Journal of Management Reviews*, 15(3), 317–332. doi:10.1111/j.1468-2370.2012.00343.x
- Tushman, M. L., & O'Reilly, C. A. (1996, June 1). Ambidextrous Organizations: Managing Evolutionary and Revolutionary Change. *California Management Review*, 38(4), 8–34.
- Voss, G. B., & Voss, Z. G. (2013). Strategic Ambidexterity in Small and Medium-Sized Enterprises: Implementing Exploration and Exploitation in Product and Market Domains. *Organization Science*, 24(5), 1459–1477. doi:10.1287/orsc.1120.0790
- Welch, L. S., & Luostarinen, R. (1988). Internationalization: Evolution of a concept. *Journal Of General Management*, 14(2), 34–55.
- Yin, R. K. (2003). *CASE STUDY RESEARCH Design and Methods* (Third., Vol. 5). London: SAGE Publications.
- Yin, R. K. (2014). *Case study research: Design and methods*. Sage publications. Retrieved from <http://books.google.com/books?hl=en&lr=&id=AjV1AwAAQBAJ&oi=fnd&pg=PP1&dq=%22or+records,+or%22+%22should+consider+changing%22+%22In+the+most+elementary+sense,+the+design+is+the+logical+sequence%22+%22the+investigator+in+the+process+of+collecting,+analyzing,+and%22+&ots=gkOctDIT7K&sig=BAq67feAQ3OGMjQNyB4c-ogGfJU>

## Chapter 9: APPENDICES

### 9.1 Interview Guide

# MBA Research Questionnaire

## Informed Consent

I'm conducting research on the ability of an organization to simultaneously conduct exploration and exploitation activities, referred to as organizational ambidexterity (OA). OA is said to be essential to a firm's long-term survival. This research investigates GE's Global Growth Organisation (GGO) as an OA instrument. Our interview is expected to last about an hour, and aims to first test the proposal that GGO is an OA instrument and secondly to investigate how the OA capability is developed in an organisation. Your participation is voluntarily and you can withdraw at any time without penalty. Of course, all data will be kept confidential. No individual names will be revealed. If you have any concerns, please contact me or my supervisor. Our details are provided below.

Researcher: Ndimi Bodika  
[Ndimi.Bodika@ge.com](mailto:Ndimi.Bodika@ge.com)  
+27829334945

Research Supervisor: Tumo Kele  
kelet@gibs.co.za  
+27117714164

Signature of participant: \_\_\_\_\_

Date: \_\_\_\_\_

Signature of researcher: \_\_\_\_\_

Date: \_\_\_\_\_

# Questions

## 1. Needs addressed by GGO

- 1.1. What was the need for GGO?
- 1.2. Why is GGO setup as a separate structure to the P&Ls?

## 2. Characteristics of GGO

- 2.1 What are the main differences of GGO to the P&Ls?
- 2.2 What are the unique characteristics of GGO?
- 2.3 In comparison to the P&Ls, how would you rate the ability of GGO to drive the following tasks?

	Much less	Less	Same	More	Much more
Risk Taking					
Execution					
Optimisation					
Innovation					
Efficiency					
Search					
Experimentation					

- 2.4 Please mark with a black X where you would rate GGO and with a red X where you would rate the P&Ls in the following matrices

Generalist -----^			
	Specialists ----->		

X: GGO, X: P&Ls

Entrepreneurial ↑ ----- ↑			
	Cooperative ----- →		

X: GGO, X: P&Ls

Organic ↑ ----- ↑			
	Mechanistic ----- →		

X: GGO, X: P&Ls

2.5 How are the following aspects of GGO different to the P&Ls

2.5.1 Culture

2.5.2 Processes

2.5.3 Leadership

### 3. Establishing GGO

3.1 What were the distinct factors that contribute to the success of GGO?

3.2 What were the prerequisites in establishing GGO?

3.3 What were the main challenges experienced in establishing GGO?

3.4 What are the main challenges in maintaining GGO's existence in the future?

3.5 How are the learnings from GGO transferred to the P&Ls?

3.6 How independent is GGO from the P&L?

#### **4. Operation of GGO**

4.1 What are the key functions of the leadership of GGO?

4.2 What are the key routines and processes of GGO that drives the decision making process?

4.3 How does the leadership of GGO secure resources to drive its agenda?

4.4 How does the leadership of GGO manage the tension with the rest of the organization in driving its agenda?

4.5 How are the outputs and learnings of GGO integrated with the P&Ls?

#### **5. Results of GGO**

5.1 What has been the impact of GGO on performance?

5.2 What has been the impact of GGO on sales?

5.3 What has been the impact of GGO on the overall growth of the P&Ls?

5.4 How is the impact of GGO measured by GGO and by the rest of the organization?

## **6. Impact of GGO on GE**

6.1 How has GGO impacted on the organizational structure of GE?

6.2 How has GGO impacted on the capabilities of GE?

6.3 What have been the impacts of GGO on GE's competitive edge?

6.4 How has GGO influenced the view of the P&L's on Sub-Saharan Africa

## 9.2 Consistency Matrix

Questions	Literature Review	Data Collection Tool	Analysis
Is GGO A manifestation of OA?	Definition Antecedents Typology Managing the Tension	Interview Guide: Need for GGO Characteristics of GGO & P&Ls Operating GGO	Content analysis, Pattern matching
How has GE developed OA capability with GE?	Implementing Moderating Factors Needs	Need for GGO Establishing GGO Operating GGO Results Performance Impacts	Content analysis, Pattern matching