

**Business Game State of Play: Case Studies  
on Decision Making in Business Game Companies**

Master Thesis

Handed in to

School of Music, Music Therapy, Psychology,  
Art, Communication & Technology (MPACT)

**Study Board of Communication and Digital Media – Aalborg  
Aalborg University**

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**Date of delivery: June 7, 2017**

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## Abstract

Topic: **Business Games State of Play: Case Studies on Decision Making in Business Game Companies**

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Course / Year: **Media Arts Cultures / 2015 - 2017**

4<sup>th</sup> Semester Placement: **Aalborg University**

Pages: **73**

Keywords: **serious games, business games, game-based learning, organisational learning, organisational challenges**

The last decade has seen the production of a considerable library of off the shelf serious games for use within organisational contexts that address challenges such as business acumen, strategy, change, leadership, and decision making among others. Most of these games are designed as flexible frameworks allowing them to be used across different industries and organisational sectors. On account of this flexibility in combination with other factors, the decision on which business game to use is still a challenging process particularly for users with little or no prior experience with using a game tool or the knowledge on how to evaluate one. Consequently, this decision is often deferred by the organisation to the business game company who then take on the role of cultural intermediaries, mediating between the sites of production and the sites of use of game based tools.

The aim of this study was an investigation into the decision-making processes that business game companies undertake when selecting or developing a game based solution to address an organisation's challenges. Investigations were made into where business game companies perceive the learning happening, what concerns there were with using business games designed as a framework to be used across different organisational sectors, and how these concerns influenced the choices between off the shelf and bespoke games. Empirical case studies of five business game companies were conducted using semi-structured interviews with key personnel within the companies. The interviews were recorded, transcribed and analysed through coding and theme identification.

The study identified five key considerations that business game companies bear in mind when identifying the right game tool to use: learning competencies, learning situations, transfer of learning, simulation fidelity and organisational resources. These

results indicate that rather than evaluating the game tool itself as an artefact, business game companies focus on the game play situations – before, during and after game play.

Based on these investigations, the study further hypothesized on what design or application considerations would have to be taken into account if business games were to be part of organisational development within a Kenyan context. To explore this hypothesis, this study constructed a narrative of technologically enabled subjectivities that enable the emergence of shared tastes which mobilise the transfer of business games into a different cultural context.

By tapping into the experiences of business game companies, the study enhances our understanding of factors to consider when evaluating the fit of a game based tool. The findings of this thesis could be used to help designers in game development, game facilitators and users to implement game tools more effectively. By exploring how technological access has underpinned the sharing of cultural tastes, this research also provides a basis for the exploration of cross cultural game compatibility.

Supervisor/s

Sune Gudiksen / Morten Søndergaard

**Declaration of Authorship**

I, Kasyoka Mwanzia

born the 23<sup>rd</sup> of April, 1977 in Nairobi Kenya

hereby declare,

1. that I have written my Master Thesis myself, have not used other sources than the ones stated and moreover have not used any illegal tools or unfair means,
2. that I have not publicized my Master Thesis in my domestic or any foreign country in any form to this date and/or have not used it as an exam paper.
3. that, in case my Master Thesis concerns my employer or any other external cooperation partner, I have fully informed them about title, form and content of the Master Thesis and have his/her permission to include the data and information in my written work.

Copenhagen, Denmark.

6/6/2017

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SIGNATURE

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## 1. Introduction

This research is an investigation into the factors that influence business game companies in the process of implementing game based solutions to address organisational challenges. The paper is structured on two levels; a meta cultural level and a concrete empirically based level.

The meta cultural section of this paper begins by taking a look at certain histories of difference and exclusion that have played a role with regards to access to technologies within a Kenyan context. In particular, it looks at how the influence of the digital divide together with local educational and social factors have historically acted as barriers to the development of technological competencies. By examining developments in access, majority of which have been borne by progress in infrastructural economies, I will highlight how these developments have amplified local relationships with technology. Taking the arguments of Dovey & Kennedy (2006), I consider the ways in which access to technology has underpinned the formation of new kinds of social and cultural identities as alternatives to traditional cultural structures and affinities. The intense manner in which technology is forefront in our these subjectivities “unsettles pre-existing identity formations: national, gendered, ethnic, racist” and constitutes sites of new identities (Poster, 2002, as cited in Dovey & Kennedy, 2006, p. 16). I adopt the authors’ term ‘technicities’ that captures identities whose practices and preferences have been critically constructed by the influence of technology. Drawing on Bourdieu’s theories of taste as cultural capital, I argue that technicities condition the participation in contemporary cultures of game production, mediation and use. Subjects relating via this technological competence contribute to the emergence of shared preferences, attitudes and taste. These new identities are also a way through which “those who are structurally marginal to the dominant technosphere” can reconfigure difference and move towards inclusion (Dovey & Kennedy, 2006, p. 18). Because computer games act as a key site for access and subsequent familiarity with technology, they underpin initiatives such as games for social change, games for gender parity and games for learning.

Bearing this in mind, the case study research takes a closer look at the practical applications of play and work given that “play has become both a part of the technological system in our relationship with the computer interface as well as part of the system of management favoured by the networked society” (Dovey & Kennedy, 2006, p. 19). It does

so by shifting focus from the sites of production and use - game developers and players respectively - to the mediators of games in the workplace, i.e. business game companies. The study explores the motivations and decision making processes by of business game companies as they seek to increase the reach and scope of game based learning within organisations. It does so by investigating how do business game companies develop the appropriate solution for organisations seeking a game based tool to address organisational challenges?

Concrete level	How do business game companies develop the appropriate solution for organisations seeking a game based tool to address organisational challenges?
	Empirical case study interviews of business game companies based on their role as intermediaries between sites of production and sites of use.
Meta Cultural level	If business games were to be part of organisational development within a Kenyan Context, would they be effective and if yes, what design or application considerations would have to be made?
	Theoretical discourse on the new subjectivities afforded by technicities and their influence on the removal of difference.

Table 1. Outline of the structure of this research paper



## 2. Background

Acclaimed as “the most popular contemporary form of new media production and consumption” (Dovey & Kennedy, 2006) and with a growing workforce comprised of the digital generation, games and the concepts of play in the workplace demand of us an equally dynamic, redefined way of reading and consuming this modern cultural artefact and the resulting contexts and experiences.

It is often pointed out that the term serious games is a contradictory one, attempting to bring together the concepts of play and seriousness when they are in fact, fundamentally different. The critics of this oxymoronic concept often refer back to Johan Huizinga, the Dutch historian whose study *Homo Ludens* (1955) famously argues for the frivolity of the activity of play defining it as “a free activity standing quite consciously outside ‘ordinary’ life as being ‘not serious’ (p. 13). There are two features in Huizinga’s definition that raise questions for the field of serious games. The idea of freedom of the play activity and the boundaries of play being within its own prescribed domain, the magic circle.

Freedom as an idea that is significantly bounded up in theories of what is at the core of play is invoked by both Huizinga (1955) and Caillois (1961). For Huizinga, play is described as voluntary and for Caillois, it is an activity in which there is no obligation for the player to take part. Huizinga’s general view is that use of play to serve a social function perverts the integrity of the play activity. Games as vehicles or tools for training or teaching sharply contrasts with Huizinga’s vision of play. This is especially pertinent within the workplace where game tools carry with them an element of obligatory participation and lacks the aspect of being a voluntary activity.

The second issue raised here is that of the ‘magic circle’. Huizinga (1955) sees play as being outside the bounds of the seriousness of daily ordinary, serious tasks of life. While the author uses the term with reference to a physical boundary such as the chessboard or the racetrack, he also states that these places can be imaginary spaces. He saw the distinction in “a matter of attitude... we play in a ludic spirit we face real life in spirit of seriousness” (Motte, 1995, p. 5). Whether as conceptual of physical space, the magic circle refers to a temporary enclosed world whose boundaries delineate the space where the game begins, ends and in which certain rules hold. Caillois’ (1961) stronger language talks of the corruption of the true nature of play by the “contamination of ordinary life”, insisting that play needs to be a “side activity” (p. 43). Even though games today and serious games in particular reject these demarcations and exist at odds with the proponents of the ‘magic circle island’, it is

important to keep in mind that Huizinga recognised that there are playful actions in which the boundaries of the magic circle exhibit fluidity. For example when adults interact with each other they will often slip in and out of playfulness and seriousness with each other over the course of their interaction (Rodriguez, 2006).

While Huizinga (1955) and Caillois (1961) argued for the separation of everyday life and play, this dividing line has long since broken down, play and games now ‘leak’ out exist ubiquitously within the practicalities of today’s everyday culture. When play exists in the spaces of the everyday, it inevitably becomes fused with seriousness. With concepts like gamification, we are seeing and experiencing more than just games and play for its own sake, but play has emerged as a medium for work, learning and social change and engagement. This pervasiveness demands of scholars and users alike an awareness and heightened critical engagement to the implicit meanings, messages and ideologies of games. “Play and games do not occur beyond meaning and culture but have a direct structural relationship with their dominant systems insofar as they license a space in which, meaning, status, power and identity can be subject to experimentation and become a ‘source of new culture’” (Dovey & Kennedy, 2006, p. 100).

In his 2006 essay, Hector Rodriguez argues that an alternative reading of Huizinga allows us to address the concerns surrounding serious games and offers as a basis on which to enlist Huizinga “as an ally rather than an opponent of the serious games movement” (Rodriguez, 2006, para. 3). With regards to freedom, we can look at the experience that play affords. The unpredictability of actions within play, especially when the outcomes of games involve chance and competition, still allow the player to question the outcome of the game in the knowledge that this outcome is not predetermined.

One cannot assert that boundaries of precision between the playful and the serious can exist: it is a distinction that is absent in the play of children and blurry in the contexts of adult play. “Anything playful may become serious, and conversely, serious matters are sometimes approached in a playful spirit” (Rodriguez, 2006, para. 25). For Huizinga (1955), play was observable in all aspects of society and he pointed out the manifestations of play within many serious aspects of culture such as politics, religion, and war. If we then return to the idea that the concept of using play to serve the function of learning is one that is abhorrent to the play theorists we can then adopt an alternative approach. If learning, as other aspects of culture also manifests elements of play, then the “use of serious games in the learning process illuminates the fundamental nature of the subject being taught” (Rodriguez, 2006).

Methodologically for developers of serious games, Rodriguez (2006) suggests two questions that should always be asked: “[1] What aspects of the subject matter in question already exhibit ludic features? And [2] how can a game designer exploit and highlight these aspects?” (para. 32). These questions while posed to developers and designers can by extension be applied to the context of this research to those involved in the selection of serious games and can serve as a methodology for making appropriate selections. It could be that this difference in approach towards games for learning could be a key with which to heighten the learning effectiveness of play and games. The author advocates for framework based models of serious games where the game provides “only a rough specification of the general region to be explored so the player’s individual trajectory may surprise even the designer” (Rodriguez, 2006, para 51). He goes on to point out that the efficacy of this approach is in supporting learning by allowing the players’ exploration of and tinkering with the system.

### **Play & Culture.**

Building off Huizinga’s (1955) foundation of play being a central part of culture and society, Caillois (1961) contributes to our understanding of games and play by examining the essence of play and interdependence of games and culture. Caillois argues that “the spirit of play is essential to culture” and that over time historical play activities saw a shift in their social function, rather than in their nature (p. 58). Caillois also provides us with classifications of the nature of games and the relationships between these classifications which gives us a set of tools which we can use to describe play elements within our subject matter and possibly use as aspects that we can heighten and exploit for learning.

Caillois (1961) presents four ‘quadrants’ or categories depending on the dominant element of play as well as a continuum based on the organising principle of play. He calls the four quadrants *agôn*, *alea*, *mimicry* and *ilinx* which relate to the domains of play of competition, chance, simulation and balance respectively. These elements can be placed along the continuum of opposite poles of *paidia* and *ludus*. Play within the domain of competition (*agôn*) are games such as football or chess. The category of chance (*alea*) has games such as roulette or playing the lottery. *Mimicry* (simulations and role plays) are games where players ‘make believe’ such as playing pirates or cowboys. And finally, within the domain of balance (*ilinx*) is play that is dominated by disorder and dizziness with elements of vertigo such as carnival rides or seesaws. Within his categorisations, the author does not differentiate between games that require physical skill versus mental skills.

While Caillois (1961) argues that there exists perfect symmetries between the different play categories such as the relationship between competition and chance (*agôn* - *alea*), most games display several of these four game elements with varying degrees. What is useful here is the ability to identify these ludic characteristics within the subject matter that the serious game intends to address and to create combinations that highlight and capitalise on them in order to exploit them in the game learning situation.

Huizinga's study that pointed out elements of play in all aspects of human culture led him to the conclusion that play activity was key to cultural development, a thread followed by Caillois. However, it could be argued that one weakness in Caillois' application of his theories to the societies that he examines is that produced by the author's bias towards the then colonial societies he was studying. Even though bearing in mind that Caillois was an anthropologist, it is my viewpoint that his applications are bound up in elements of bias in his societal comparative approach and his perception of the superiority of his own culture and prejudices towards primitive, non industrial societies. Caillois positions as opposites the *mimicry-illimix* cultures that are 'primitive' and evolve towards advanced or civilised *agon-alea* cultures. His model is "grounded in an uncritical vision of progress and a paternalistic, colonialist perspective upon the world" (Motte, 1995, p. 9).

Caillois posits that "it is not absurd to try diagnosing a civilisation in terms of the games that are especially popular there" (Caillois, 1961, p. 83). More modestly, however, I concur that games derive their meaning when situated within contexts of play and that by understanding the influence of traditions of play and games, we are better positioned to understand the meanings that games hold for their players. Studying the games and play of a particular society can enable us to "understand better the actions and conventions of thought constituting that particular culture" (Mäyrä, 2008, p. 21).

### **Cultures of production.**

The cultural role(s) that computer games play continues to be significant as they mediate for many people a large part of their experience with new media technologies and are "a critical point of access to... technology" (Dovey & Kennedy, 2006, p. 16). Coming from the cyborg identity of Donna Haraway and the connection of the user and technology as part and parcel of ordinary life, Dovey & Kennedy (2006) point out that the skills and preferences that are evident as a result of this technological connection are critical to the construction of contemporary identities. The authors lay out the term technicity to capture the intense manner in which technology is forefront in our new subjectivities. These sites of new identities

“unsettle[] pre-existing identity formations: national, gendered, ethnic, racialist” (Poster, 2002, as cited in Dovey & Kennedy, 2006, p. 16).

Just what is technicity? The term seeks to capture the identity of a subject who is a technological virtuoso and for whom this aspect is crucial for successful participation in contemporary culture.

“The significant aspect of the new term of ‘technicity’ is to encapsulate, in conceptual terms, the connections between an identity based on certain types of attitude, practices, preferences and so on and the importance of technology as a critical aspect of the construction of that identity. To be subjects within the privileged twenty-first-century first world is to be increasingly caught up in a network of technically and mechanically mediated relationships with others who share, to varying degrees, the same attitudes/ tastes, pleasures and preferences” (Dovey & Kennedy, 2006, p. 17).

Later sections of this paper draw attention to particular contexts that illustrate how this definition of technicities encapsulates subjects within developing countries whose participation has significantly advanced due to socio-economic advances.

To understand the broader social framework in which technicities operate, we can turn to Bourdieu’s theories of cultural consumption, particularly capital- a resource that enables the exercise of position or status and acts as sources of legitimate or real capital. Bourdieu (1984) argued that sharing similar material or symbolic elements of culture creates belonging to a particular identity and position. The elements that Bourdieu referred to included tastes, skills, credentials etc. “Taste, the propensity and capacity to appropriate (materially or symbolically) a given class of classified, classifying objects or practices, is the generative formula of life style (Bourdieu, 1984, p. 173). Like Bourdieu’s ‘new’ economies of French society in the 1980s, contemporary technicities are a sign system based on similarities, i.e. the idea of ‘people like us’.

Based on Dovey & Kennedy (2006), Bourdieu’s theoretical classifications of the bourgeoisie and new petit bourgeoisie can help us think about the role of taste and taste cultures surrounding technicities. In 1980 France, Bourdieu (1984) describes the bourgeoisie, or the taste-makers, as the ‘directors and executives of firms in tourism and journalism, publishing and the cinema, fashion and advertising, decoration and property development’ (p. 310). The new petit bourgeoisie were the middle managers who played a role of “presentation and representation (sales, marketing, advertising, public relations... and so forth)” (Bourdieu, 1948, p. 358). Comparably, the bourgeoisie in charge of the cultures of production would be the game developers and the new petit bourgeoisie dealing with the

cultures of representation would be the game publishers. As with the old French societal classifications, the game publishers are cultural intermediaries who use of the culture they represent to accomplish their work is also contributor in the production cycles of these cultures.

In this research the role of the business game company as a cultural intermediaries is seen for the angle of the role of publisher, and as separated from the developer even though both functions are frequently occurring in one design house. Closely aligned with the developers, the role of the cultural intermediary is to cultivate and to promote the taste of consumers by shaping their preferences and perceptions. This is particularly important to take into account when these disseminators are aligned with developers and designers who are considered vanguard as together they then “play a key role in creating the... technologies of tomorrow and their multiply desired imaginaries” (Dovey & Kennedy, 2006, p. 79). It could be argued that cultural intermediaries take up a kind of teaching role - one that shapes preferences and as a result mobilises consumer action - and in so doing, they frame certain products as valuable. As stated by Bourdieu (1984), the contribution of cultural intermediaries is to the “production of the value of the work, or what amounts to the same thing, of the belief in the value of the work” (p. 230).

Maguire & Matthews (2010) explain that cultural intermediaries “are the ‘transmission belt’ for the ethical retooling of the new economy, embodying and promoting an ethos of fun and pleasure in order to produce the need for their product and, by extension, themselves” (p. 5). Cultural intermediaries are sincere and convincing because they themselves fall into the category of ‘people like us’, they themselves are just like those whose tastes they are working to cultivate. Undoubtedly an advantageous trait of economic importance, however Bourdieu’s (1984) tone may be viewed as a bit more cynical when he described cultural intermediaries as “need merchants” who “sell so well because they believe in what they sell, ...[and] deceives one in so far as he deceives himself and is sincerely ‘sold’ on the value of what he sells” (p. 365).

As it is with taste that both unites and separates, so it is with material and symbolic capital. Cultural capital just like material capital is also a source of dominance and subsequently, inequalities. “Taste and lifestyle transform capital, the ‘balance sheet of the power relation’, into symbolic capital which in turn is generating further ‘actual’ capital” (Dovey & Kennedy, 2006, p. 77). Within the areas of technological taste, there are certain characteristics and sensibilities that have emerged as dominant, i.e. they are valued over others, and these work in society as drivers of not only social / symbolic capital but more

‘legitimate’, actual capital as well. Traditionally, the privileged technicities are manifested by interest and prowess with machines and systems. It is also aligned with the fascination with and the manipulating of technologies in both straightforward ways - such as playing the game to win - as well as other non mainstream interactions with technologies like hacking. But is there really more to this than just tendencies shared by geeks or people who love games and technology? Or do these characteristics a representation of something more? Representational dominance is important because it highlights power structures - and marks who is in the group and who is excluded. Historically, the dominant visual representation of these privileged technicities has been of the technologically competent white male, and has subsequently “produced a stereotype of women [and minorities] as technologically ignorant or incapable [while] simultaneously produce the relationship between men and technology as ‘natural’” (Dovey & Kennedy, 2006, p. 18). This disparity was infamously brought to the limelight by the sexist harassment of women in the gaming industry and the #Gamergate movement. So, like Bourdieu, we can look at the way in which cultural taste(s) “arise out of, and are mobilised in, struggles for social recognition and status” (Jenkins, 2002, p. 129).

Changes in cultural and economic barriers are at play, however, enabling access to experiences that will play a role in destabilising these dominant versions of technicities and shifting the axes of difference. Contemporary technicities are a way through which “those who are structurally marginal to the dominant technosphere” can reconfigure difference (Dovey & Kennedy, 2006, p. 18). This position also underpins the initiatives for games for social change, gaming for girls, and games for learning. Technicities and increased diversified representation is not enough however, changes need to occur not only in the realm of visibility and access but also within the actual structures of production. Visual dominance is highly influenced by the role any group plays within the systems of production of actual economic capital (Dovey & Dovey, 2007). It should be noted that when dominant technicities are responsible for production, then what is produced will be geared to the dominant demographic, creating a cycle of repetition and continual exclusion.

The dominant trend in representation in the gaming market and its subsequent association with technological virtuosity continues to be the young white male. This is despite the fact that statistics show that half of the world’s gamers are women (Roseboom, 2015). However, when investigated across genre, male dominance is seen in the action and strategy games while casual gamers like puzzles and social casino are favoured by women. While there are several other factors that influence this gender disparity in game type or genre, it does suggest that the dominant technicity within game cultures is the one that favours what we

would consider the hardcore game market that constitutes the traditionally masculine action and strategy genres.

Economically, the game development system for mainstream entertainment games is notoriously difficult to adequately fund, manage and succeed at. To bear the risks inherent in production, developers rely on the publishers to ensure their product is successful in the market. The publishers, to ensure a good return on investment, will in turn rely on an unforgiving system of development and work with well established developers who will make games that already established gamers will buy. This model impacts what kinds of games get made, who buys the games, who is then more likely to buy the next game and so on in a repetitive cycle of self preservation.

Game solutions therefore must take into account these complex networks of influencing factors. “Play and games do not occur beyond meaning and culture but have a direct structural relationship with their dominant systems insofar as they license a space in which meaning, status, power, and identity can be subject to experimentation and become a ‘source of new culture’” (Dovey & Kennedy, 2006, p. 100).

## **2.1. The Kenyan Context**

### **Mobilising technology and technicities in Kenya.**

The technological scene and the penetration of new media in Sub-Saharan Africa in general and in Kenya in particular has grown rapidly and uniquely over the last several decades. This section looks at the historical background of technologies in Kenya that have contributed to rapid growth in technological development, competencies and new technologically influenced identities. I look at the influences of Information and Communications Technology (ICT) as a key focus of the government, the location of global tech companies in the country’s capital, an occupational shift towards entrepreneurship together with a critical mass for not only production and consumption.

Underpinning these perspectives, I also consider how these developments constitute components that drive the region towards ownership of its own technologies and technological futures. They stem from questions such as whether core components such as hardware and software that have penetrated the region are those that have been designed and produced in other parts of the world or whether the region produces its own? Has there really been a shift from previously long accepted state of affairs that was to accept technological hand-me-downs towards local solutions that are socially and culturally relevant? I argue that



the circumstances at play, politically, socially, and economically, are core components that have developed from and continue to be mobilised by are in place working towards an ecosystem that is grappling for reduced difference and increased participation.

### **Post Colonial Perspectives.**

Technological input in developing countries can be viewed as a result of certain insufficiencies in the west, especially in the areas of technological experimentation and development. During the imperial era, the colonies presented skilled individuals and companies the chance to develop professional expertise. “Europe has long looked overseas for opportunities for technological experimentation and development that were not feasible in Europe itself. Colonies (and their successor states) in Africa, Asia and the Americas provided career openings for engineers, agronomists, doctors and technicians, for well-qualified women as well as men, opportunities that were often lacking or very restricted in Europe” (Arnold, 2005).

This remains true today, Kenya and other African countries still suffering from either a complete lack of, inadequate or faulty infrastructures that are opportunities for western intervention. These shortfalls are not restricted to infrastructure but also extend to legislation and regulation - companies are therefore often free of bureaucratic restrictions that would make projects illegal or otherwise prohibitively expensive in the developed world. For example, IBM recently supported a group of European engineers to develop and experiment in the development of cargo drones dubbed “flying donkeys”. Designed to carry loads of up to ten kilograms, they were pitched as a solution to transport cargo such as medicine and food to remote areas where other means of transportation was unavailable. Carrying out tests in Africa was ideal as the “airspace is not congested” as well as being free of strict regulations. Where this project may be viewed as a solution to the infrastructural challenges in Africa, could we also consider that these solutions “could perhaps serve as a proving ground for retailers like Amazon” (“The Pioneering Continent”, 2015).

“While colonies might still be the dumping ground for Europe’s unwanted goods and obsolete technologies”, Arnold (2015) argues that projects carried out in ex-colonial territories also “serve to realise the domestic ambitions or enhance the international reputation of Europe nation states – to demonstrate that they, too, could build transcontinental railroads, conduct nuclear weapons tests, erect big dams and gleaming airports” (p. 9). Overseas territories are still a utility through which European states can boost their standing in their own economies.

Having previously served only as a base for goods and labour from which the development in the west was fuelled, independence and decolonisation that took place around 1950s and 1960s enabled locals to begin to own economic, political and technological prerogatives that had previously been inaccessible to them. Though new technologies became available after independence such as railroads, and agricultural equipment, so called high technology where machinery was made and where agricultural produce was processed had never been located in the colonies. In addition, despite access, the post colonial generation was suddenly faced with technological advancements they did not know how to maintain let alone produce and what progress may have been made to transform agrarian communities to industrial ones was lost. Still even though independence allowed Africans access and control of technologies, it is difficult to say if independence brought about “technological liberation (as might be argued in the case of India) or, conversely, a new era of exploitation and extraction (as in many parts of tropical Africa” (Arnold, 2015). It is however, only at this point in the middle of the 20<sup>th</sup> century that the impact and influence of technology on life and culture for a majority of Africans began to be felt.

It is with respect to this historical context that new technologies and their accessibility have such a high appeal to developing communities much unlike the technologies of the 50s and 60s. New media technologies can also quickly be hybridised to acquire nuanced local meaning and use. Typically, while much of the developed world quickly moves on to the next emerging technological breakthrough, users of technologies within emerging markets will use ‘old’ technology for longer periods, experimenting with it, ‘abusing it’ and developing contextualised solutions that are based on local knowledge. Some of these ideas such as *m-Pesa* and *Ushahidi* which are discussed later in the section stem from certain particular, perhaps even peculiar, cultural traits such as budgetary constraints and the “mobile first paradigm” that dominates emerging markets (Hersman, 2012, p. 67).

### **Information Poverty.**

Any discussion of the penetration of new media in Africa requires a brief historical background. At the beginning of the use of the concept of the digital divide, the gap was defined by the inequalities in access to electronic information and communication technologies (ICT). That is, there existed a distinction between those who had access to information and those who did not. As access to the internet became more widespread, the definition experienced redefinition to include inequalities in effectiveness of use between those who were effectively using ICT and those who were not. One of these updated

viewpoints defined the digital divide as “inequalities in access to the Internet, extent of use, knowledge of search strategies, quality of technical connections and social support, ability to evaluate the quality of information, and diversity of uses” (DiMaggio, Hargittai, Neuman, & Robinson, 2001, p. 310).

The digital divide originally referring to the gaps in developed nations between the information rich and the information poor - the idea originating in the United States of America - however soon shone a spotlight on a larger crisis in developing nations. Not only was there the lack of access, there was the lack of the infrastructure that was necessary to even begin thinking of bridging this gap. Some scholars used the term Information Poverty to more adequately capture the larger problem that was evident in developing nations in and around the year 2000. Information poverty “encompasses the lack of access to emerging ICT, information infrastructure in general, skills to manipulate and use information, and basic educational and cultural barriers” (Gebremichael & Jackson, 2006).

On a global level, there is still a digital divide between Sub Saharan Africa and other developing nations. Dial this down to specific countries and there is another tier that divides the digitally rich from the digitally poor ((Norris, 2001). Usually drawn across socioeconomic lines - some of these divisions are relatively simple to conceptualise such as rural versus urban and others slightly more complex. Discrepancies in access will be seen between people living close to the town or village centre who may experience less information poverty than people living significantly further from transport and economic infrastructure such as main roads, the local shop or even the community church.

A highly critical debate at the time, the concept of the digital divide gained a place at the table at the G8 Summit in Kyushu-Okinawa in 2008. The Okinawa Charter on Global Information Society included an IT Digital Opportunity Taskforce whose solutions among others recognised the importance of bottom-up approaches to meeting the challenges of access and inclusion. Doubtfully attributable to a global charter, however, it was in this approach of home-grown solutions that an ICT shift in third countries began to happen.

While averse to the sweeping generalisation of Africa as a region - the region being hugely varied culturally as well as developmentally - regionally precise statistics are challenging to obtain. The generalisations in this paper are therefore supportive and illustrative towards the assertions contained within this study. The last decade saw extraordinary growth in the Internet usage in Africa from less than 2 percent of the world's internet usage in 2005 to 27.7 percent as at March, 2017 (‘Internet World Stats’, n.d.). Additionally, these impressive growth statistics do not account for those users who are

accessing new media without an internet connection particularly in telecommunications and home-grown ICT solutions such as mobile banking.

### **Mobile Penetration & the Internet.**

Without a doubt, much of the innovation seen in Kenya is made possible due to the advances and breakthroughs that continue to happen in the west and particularly in Asia. While clichéd, the image of the *Masai Moran* (warrior) - braided hair, clad in the distinct and well known red *shuka* (wrapper) grasping a spear standing in the vast emptiness of the plains of the Savannah among wildlife - using his smartphone does well to capture the extent of mobile phone penetration. With the possibility to be powered by a small solar panel the lack of basic infrastructure has not deterred the penetration of the mobile to even the most remote of villages. In addition thanks to the influence of the asian manufacturers, the cost of a smart phone is within reach for many people and some handsets cost as little as 25 euros.

In addition to widespread mobile penetration, in 2007, the Kenyan government initiated a public-private partnership project to lay a submarine fibre-optic cable system that links the city of Mombasa at the Kenyan coast to Fujairah in the United Arab Emirates. Two years later with the arrival of the cable in Kenya, the effects of a reliable, more affordable and constant internet connection began to be felt. Internet access shifted from cyber cafes to mobile phones also on account of affordable mobile phones.

In 2011, a watershed moment for the Kenyan internet and mobile industry that drove hundreds of thousands of users onto the internet via the mobile platform bears mentioning. Google, Safaricom (the leading mobile network operator in Kenya and a subsidiary of Vodafone) and Huawei (the Chinese telecommunications company) partnered to launch a mobile phone – the IDEOS – in order to grow the subscriber base and increase internet usage, which at this point had already grown 180 percent in two years. Priced within reach of much of the middle class, this handset cost at a little under eighty euros and seven out of every ten phones sold in one quarter were Huawei IDEOS. The handset went on to sell more than 350,000 units in a little over 3 months (Kaigwa, 2017).

Demographically Kenya is a young country, the digital generation between the ages of 15 and 34 make up for 42 percent - almost half - of the population in urban areas. (Society for International Development, n.d.). These statistics can be extrapolated to several other countries in the region - the median age in 2012 was 34.2 years and the urban populations comprised of 87 percent of the total continent's population in 2014 (Arnett & Scruton, 2015). Historically, the social and educational conditions have placed emphasis and value on careers

in fields such as law, engineering and the life sciences. The technological innovation and growth that has been witnessed over the last decade has however seen a shift in the preferences of Kenyan youth from traditional educational tracks towards fields within ICT. Innovation Hubs and hacker spaces such as *iHub* and *m:lab* as well as incubators and seed fund companies like *88mph* and *Nailab* are examples of efforts towards local tech research, collaboration and production.

### **Contextualised Usages.**

Innovations are being developed that in an inverted situation are moving from the African context to the west. These are examples that demonstrate this shift in users having ascendancy over the idea of simply being passive recipients of foreign new media technologies.

The best known example of one of these technological innovations is the concept of mobile payment systems that had struggled to take a foothold in the west, but made surprising leaps in Kenya changing the financial landscape and serving as a model for similar systems in the west. Money payments using a mobile phone with *m-Pesa* managed to not only gain a foothold but also grew at a blistering pace and radically transformed the Kenyan economy by moving millions of unbanked Kenyans into the financial systems. Working by using Short Message Service (SMS) technology, *m-Pesa* does not even require a smartphone and can be used with the most basic of mobile handsets. Mobile money also inspired other sectors of the economy for example accessibility to health insurance with pay-as-you-go health insurance policies that were previously unattainable due to the requirement to pay insurance policies as a lump sum.

*Ushahidi*, another of Kenya's wildly successful mobile platforms is an activist mapping application that uses crowdsourcing of information to map crises and events and also gone on to be adopted in various other countries around the world. After a flawed election in 2007 and the ethnic-based violence that followed, the government instituted a ban on live media arguing that they were taking measures to ensure that false reporting did not fuel more violence. Reacting to this ban, *Ushahidi* - which means testimony - African developers, mostly Kenyan, built the website [ushahidi.com](http://ushahidi.com) using open source software in January 2008. Users could submit reports via Short Message Service (SMS) and all the information received was mapped for users to visualise what was taking place. Users were not only receiving information but sharing it as well and users themselves used it to counter false reports. Now used in crisis situations worldwide, it enables local observers to use their

mobile phones to submit eye witness reports to create a “temporal and geospatial archive of events” (re:publica, 2011).

### **The Kenyan Games Industry.**

Given the contexts discussed above, this section explores how cultural expression have been impacted by digital technologies. What does it mean to be an artist or writer or educator in Africa in this digital age of ubiquitous new media? Tegan Bristow – a digital media artist and the Head of Interactive Media at the Wits School of Arts at Wits University in Johannesburg – argues that “if digital and communication technologies are these great modular thing(s), they only augment systems of knowledge transfer that already exist quite naturally and quite substantially within Africa” (“How Is Digital Technology Changing Africa’s Cultural Landscape?”, 2017). It is not surprising then that many of the game examples that have garnered note in Kenya bear the cultural traits - value systems and the like - of the society in which they have been developed. Tackling mostly issues of social and behavioural change, it is however exciting to see content that reflects local themes, characters and anecdotes: *Haki: Shield & Defend* is an android game developed by Afroes about environmental change encouraging players to save trees from illegal logging; *Election Thief* that deals the issue of election fraud.

### 3. State of the Current Research

#### 3.1. Business game definitions

Serious games, business games, business simulations, management simulations, organisational games, edutainment etc. often used interchangeably despite efforts of scholars to provide definitions and clarity for this category of games.

##### **Serious games.**

The label serious game itself presents as an oxymoron statement as was discussed in chapter two of this paper. Most definitions touch on the concept that serious games endeavour for more than just entertainment. Some scholars suggest that the “serious” is said to reflect the purpose of the game, why it was created, and has no bearing on the content of the game itself” (Susi, Johannesson, & Backlund, 2007, p. 4). However, how does this definition bear onto the context of business games when the content of the game and its inherent seriousness is in fact what is pertinent to its definition. One might instead argue the term serious rather has no bearing on the activity of play. Serious games still provide the user with elements of entertainment, enjoyment and fun even though that is not their primary purpose.

##### **Business game.**

Even though traditionally the term business is seen to refer to an entity that is undertaking commercial activity, in this paper and for this research the word business includes non-commercial organisations such as non-profits, government etc.

The following considerations on the myriad expressions and definitions are outlined in a paper by Greco, Baldissin, & Nonino (2013) as a reference towards a new and more nuanced definition built on the purpose of the game.

1. Management vs Business: Maier & Größter (as cited in Greco et al. 2013) point out the synonymous use of management simulator and business simulator. The problem that is evidenced with a global acceptance of this synonymity can be seen in the example of Microsoft Flight Simulator (2006), while used to manage an airplane cannot be considered a business simulation. A management simulator can only reasonably be considered a business game if the player is involved in managing an organisational or business aspect such as a product portfolio or an organisational team.

2. Business game vs business simulation game: To clarify these two terms, Greco et al., (2013) make a distinction between a simulation and a simulation game. While a simulation is “a working representation of reality... [and] purports to have a relevant behavioural similarity to the original system” (citing Ruohomaki, 1995, p. 649) a simulation game adds on game features such as rules and competition. Based on this, Greco et al. (2013) argue that any game that references typical business actions, activities, events or processes could be considered a business simulation game. Based on this, they argue that all business games are simulation games (See Figure 1).

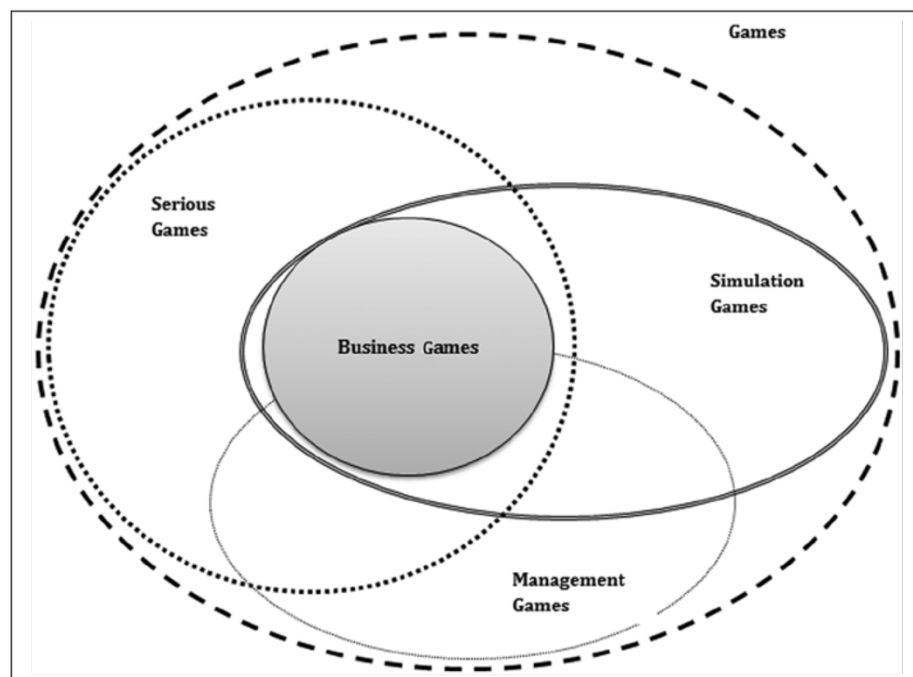


Figure 1. A graphical representation of the set of games and subsets. (Greco et al., 2013)

Making the case then, for a purpose-based definition of business games, Greco et al. (2013) argue for a definition that “focuses on the goals of the game rather than its technical characteristics” (p. 671). They conclude that “a business game is a game with a business environment that can lead to one or both of the following results: the training of players in business skills (hard and/or soft) or the evaluation of players’ performances (quantitatively and/or qualitatively)” (p. 649). By players’ performances, the authors are referring to the characteristics of users’ decisions. Quantitative decisions refer to financial choices such as prices of products while qualitative decisions deal with choices related to values such as stakeholder satisfaction. The authors go on to qualify this statement to include the argument that these skills need to be useful within a business setting. Both Susi et al. (2007) and Greco



et al. (2013) demonstrate that the definition of a business game needs to include the value of the game from the perspective of the organisation, that is, “the core reason why businesses care” (Susi et al., 2007, p. 5).

It is no doubt that business games developed for organisational or for academic use face the challenge of keeping up with the rapid visual and technological developments seen in entertainment games. “The difficulty of developing a serious game cannot be overstated. There are high expectations of gamers who have experienced the benefits of the multibillion dollar industry of entertainment games” (Graesser, 2017). It is therefore quite common for entertainment games that mirror certain organisations processes to occasionally be used, often by academics, in an attempt to bridge this gap. In these situations, can the purpose based definition offered by Greco et al. (2013) be used to qualify these games as business games?

Let’s consider the example of Sid Meier’s *Railroad Tycoon* (Meier, 1990) in which one plays as the owner of a railroad company business. The objective of the game is to manage this business that has presence in different geographical locations through tasks such as purchasing trains, building railway tracks and train stations as well as managing the train schedules. The popularity of this game besides the quality of the simulation is that it has the potential to be used for business learning; a player works to manage actual capital, equity, and loans and can experience real business processes such as the sale of bonds to raise additional capital for the company. According to Greco et al. (2013) in order to determine if *Railroad Tycoon* (Meier, 1990) would qualify as a business game, the questions to be posed would be: Would a real business use this game to improve the skills of their personnel? Are there decision and planning skills that can be developed by laying railroad tracks and routing trains while competing against the game’s railroad barons? Ultimately, it could be argued that based on a purpose based definition, it comes down to developing competencies in a specific area and it very well may be that a business could successfully answer yes to these questions.

### **Off-the-shelf, Customised or Bespoke games.**

For the purposes of this study, off the shelf games refer to ready to use games that are plug and play so to speak. These are games that are ready to use immediately after purchase and can be facilitated either by the business game company, by an external consultant or by organisation using it. These off-the-shelf games often have several cases or dilemmas that can be selected to more closely match the organisational challenge being addressed. Customised games refer to games that utilise the off-the-shelf framework but input specifics from the

organisation and the challenge that they are addressing. This is usually done by developing a customised case, for example including the specific organisational values into the decision making models within the game framework. Bespoke games are developed entirely from scratch and closely mirror the organisation's operations, focus on its specific challenge, and incorporates the organisation's specific values etc.

### **Gamification.**

It is sometimes useful to define something by what it is not. While there was no consensus on what label to assign to the games that are developed or used by the participants of this study, they were all in agreement that that the work they do is not gamification.

Often when one uses the term serious games or games in the workplace, most people will think of gamification. Gamification is now a well established technique within organisations that uses game elements and embeds them within work contexts to increase engagement and drive employee performance. A phrase by Sandy stone describes the development of games in the business systems of culture "insertion of the play mutation into the corporate genome" (as cited in Dovey & Kennedy citing 2006, p. 19).

Gamification however, has been widely criticised by academics and game developers for being used as a quick fix solution to make employees more efficient by making work more fun. It is argued that gamified systems rarely uses the more complex and diverse game solutions that can be experienced in games. In addition, gamification targets the improvement of individual, short term behaviours.

It is almost certain that gamification in the workplace has often been poorly implemented; actions that may be viewed by some employees as positive competitive motivation might be viewed by another as unfairness, for example using a leaderboard to project actual sales. Referencing research on gamification has brought along implementations that are more sensitive to the behavioural effects of gamified systems. In this same example in the case of a sales team, gamification would drive not the actual sales but rather the behaviours that lead to more sales such as sales leads and contacts with potential clients. Even when done right, gamification is still subject to reflective critique raising questions such as the reinforcement of individualism in the workplace or the increased psychological effects of addiction.

### 3.2. Literature Review

An overview of empirical studies around the theme of serious games over the last decade indicates that while games are being used in business, planning, and civic learning, the majority of use and subsequent research is concentrated in the disciplines of science, technology, engineering and maths (STEM), and health (Boyle et al., 2016). Regardless of the discipline, the development of a successful serious game is a challenging and costly affair. As identified in Poplin's (2012) study of a public participation game for the planning of a new campus in the city of Hamburg, cost and complexity are major areas of concern. These issues influenced the researchers of this study to conclude that future implementations would be to opt for an already developed game. The view that serious games are not practical to develop or use was also expressed by survey respondents in Danish manufacturing companies in a 2014 (Riedel, Feng, Hauge, Hansen, & Tasuya, 2015). Attempts have been made to use commercial off-the-shelf (COTS) entertainment games in learning contexts as an efficient and low-cost solution. Some successful uses of COTS include the use of SimCity4 to evaluate the effects of planning decisions with postgraduate students (Minnery & Searle, 2014) and the use of a modified copy of DOOM by the United States Marines to practice team tactics and develop military decision making skills (Curry, Price, & Sabin, 2016). While COTS entertainment games provide technologically advanced game options at a relatively low cost and can be acquired and implemented quickly, successful educational use of entertainment games are exceptional and movement is towards using custom games that are tailored for learning objectives rather than trying to elicit learning from entertainment games (Boyle et al., 2016).

The move away from using entertainment games for learning has produced a considerable library of off-the shelf serious games for fields like management and planning that address issues like strategic change and decision making. However, the decisions on which business game to use is still a challenging process particularly for users with little or no prior experience with using a game tool or the knowledge on how to evaluate one.

The analysis of games for learning appears to be divided into two main schools: the study of the player and players' experience, and the study of the game itself. On the one hand, the focus of serious games scholars has been on understanding player experience with constructs such as engagement and flow, and in identifying the game features that support these constructs. As individual player experience constructs are likely to be subjective, other studies have focused the measurement of learning outcomes with knowledge and skill

acquisition being the most frequently used evaluation yardstick (Boyle et al., 2016; Calderón & Ruiz, 2015).

Scholars such as Arnab et al., (2015) point out that a fundamental aspect of serious games lies in translating the relationship between the tools of game play (game mechanics) and the game's instructional purpose. Studies have thus attempted to provide frameworks for this kind of serious game analysis linking game and learning mechanics. There are models, however, that arguably are too detailed in their analysis of game element minutiae. Such models include micro-method approaches that involve, for example, matching the mechanics of a game against an inventory of 400 game components (Carvalho et al., 2015). Other frameworks require a more profound understanding of game taxonomies particular to each framework (Amory, 2006; Arnab et al., 2015; Carvalho et al., 2015). While insightful, from the perspective of a non-expert user particularly one without prior game analysis knowledge, these frameworks are difficult to use and to apply.

Furthermore, the limitations with these models is that they “focus on the learning of individuals in formal training or the educational context [with] little attention to the learning of teams, groups, organisations, networks or systems in a policy or organisational context” (Mayer et al., 2014, p. 509). Based on the experience of exploiting serious games within teams in the manufacturing industry in Denmark, Riedel et al., (2015), assert while in-game goals need to be carefully aligned with the course goals, just as crucial is the consideration of the context of use. Given the importance then of the consideration of the situation, it is not often that we would find that the game itself as an object or an artefact will be held up to individual scrutiny and therefore the game mechanics will play only a minor role within the bigger picture of the context of use.

These organisational contexts consist of predominantly blended learning environments with the game as just one piece of the puzzle to a multi-pronged solution, rather than the game as the sole instructional tool. Blended learning – where learning is orchestrated by other learning activities that bookend the game play session – stems from Kolb's (1984) learning cycle: ways of grasping experience (concrete experience and abstract conceptualisation) working with ways of transforming experiences (reflective observation and active experimentation). The process mixes up and repeats the actions of ‘Do-Observe-Think-Plan’, a “recursive process that is sensitive to both the learning situation and what is being learned” (Kolb, 1984, p. 51). When taking into consideration the learning situations that involve groups require, the aspect of dialogue, as a means of transferring individual learning towards shared consolidated learning across the team, becomes central. The distance

from the real enabled by mimicry in game situations is an ideal set up for problem solving dialogues that involves mutual trust around a common situation that makes it possible for honest discussions to take place (Schein, 1993).

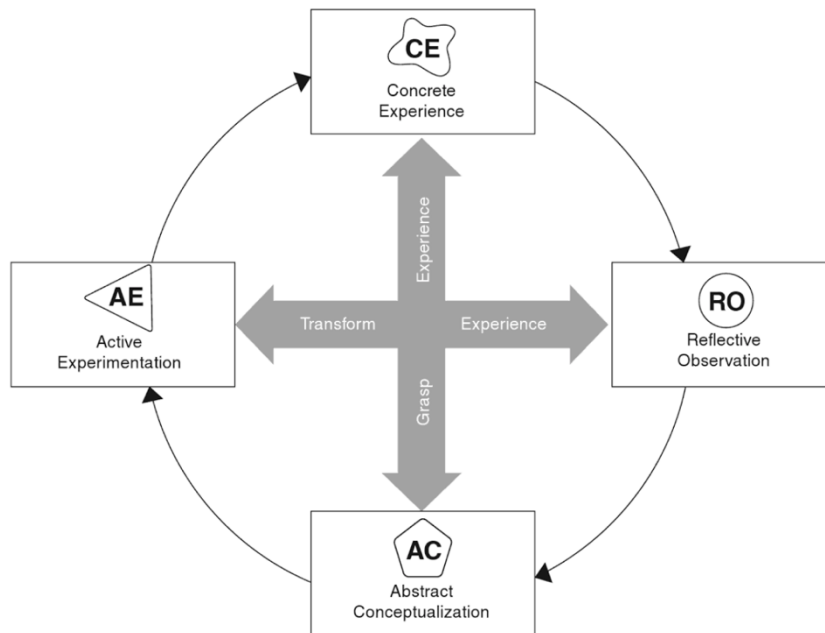


Figure 2. Kolb's (1984) Experiential Learning Cycle (p. 51).

Ready to use off the shelf games for use in organisations are typically developed to ensure that their context of application can be flexible. This means that any one business game can be used to address one or more organisational challenges. This is achieved by using portability or bootstrapping as features of their design (Kollars & Rosen, 2015).

Portable business games are those where “the framework and the mechanics stay consistent but the subject matter, case, approach, or debriefing changes according to the needs of the particular” situation (Kollars & Rosen, 2015, p. 204). The most common example of portability in business games is seen in the use of cases. For example, a business game such as *Changesetter* (Relation Technologies, n.d.) that is designed to simulate the management of organisational change has different cases to address different scenarios such as the introduction of a new system in the office or just as easily, the merger between two companies. By concentrating on the general dynamics of the issue to be addressed, the business game is repurposed with either off-the-shelf cases that closely align with the organisational challenge, or with customised cases that use the precise organisational issues all within a solid game framework.

Bootstrapping on the other hand removes this fidelity to the real-world organisational situation and calls on the users of the game to engage in abstract play. For example, a business game like *Jonathon Strangeways* (Elgood Effective Learning, n.d.) that uses the investigation and solving of a murder mystery to addresses organisational challenges like problem solving, team skills and communication. Players explore themes such as their communication style and how this affects teamwork. By stepping away from the real situation, players may escape situational paralysis and experience more freedom to speak out and participate without fear of judgement from colleagues or superiors or of doing the wrong thing. A point of note is that bootstrapping requires a certain level of common knowledge since players are called upon to draw “from culturally available contexts as the first foothold in the game” (Kollars & Rosen, 2015, p. 206). In addition, while it is usually the case that the use of business game does not focus only on the game play and typically would not end in a vacuum, the debriefing process becomes particularly essential. Tying the learning outcomes to the experiences within the simulation, debriefing revisits the organisational challenges that inspired the use of the game play and ensures that connections are made to the user’s real world situations.

Since several business games make use of portability and bootstrapping, it is necessary to address some of the concerns surrounding these game features, the most significant of which are twofold. Firstly that portability might sacrifice the complexity of content for adaptability and secondly that bootstrapping lacks clear focus on the set of actors, and clear connections to the real world setting. A portable game does not necessarily imply a simple experience, as less-saturated game play often leaves room for discussion where users can raise relevant concepts that are not built into the game (Kollars & Rosen 2015; Henriksen & Børgesen, 2016). In a well designed game with a solid framework, complexity can then be built into the cases. When making the choice to implement a game tool that utilises bootstrapping as a game feature, it requires that the learning outcomes have been carefully considered and that the debriefing process is solid (Kollars & Rosen, 2015).

Part of this broader learning structure, the process of debriefing is the “review and analysis of events that occurred in the game itself” in order to provide linkages between the game play and the learning outcomes (Garris, Ahlers, & Driskell, 2002, p. 454). We saw previously that this process is especially critical when a game makes use of bootstrapping as a feature and includes elements of fiction and fantasy. Debriefing in breakout groups, plenary sessions or workshops typically include descriptions of what happened in the game, thoughts on why certain actions were taken by the players, and reflections on what other actions they

or others could have taken. When debriefing is key for linking the relationships between abstract play and real world application, and when the games learning outcomes are likely to be multiple, the role of the facilitator/instructor is crucial though it is often overlooked and understated. Facilitators require a key understanding of, and the ability to properly administer, the beneficial characteristics of the business game. Facilitator action is important to not only drive the game play but also to support users to make the appropriate linkages in order for their own learning to occur.

There is a breadth of literature on the competencies that can be boosted by the use of business games. Synthesis of several avenues of research has proposed that these learning outcomes can be broadly categorised as skill based, cognitive and affective (Garris et al., 2002). Skill-based learning outcomes focus on developing technical or motor skills such as acquired in flight training. Cognitive learning outcomes comprise of declarative knowledge, procedural knowledge and strategic knowledge. Declarative knowledge is factual and data based – knowledge of what. Procedural knowledge is demonstrative on the application of knowledge – knowledge of how. While strategic knowledge “requires applying learned principles to different contexts or deriving new principles for general or novel situations” (Garris et al., 2002, p. 456). Affective learning outcomes may often occur alongside other learning outcomes as a corollary - however, attitude changes are also the targeted training objectives.

### **3.3. Statement of the Problem & Research Questions**

Bearing these points in mind, it is clear that the choice of a business game solution is a decision that takes into account a diverse range of factors. The assertion is that “the task at hand is not to continue selling the concept of active learning through games and simulations but to assist in developing them smartly such that the disincentives to using them decrease and the frequency with which a particular exercise is used increases” (Kollars & Rosen, 2015, p. 211), then this study aims to move in this direction by seeking to identify principles that can aid us in this endeavour.

By tapping into the experiences of business game companies, this study aims to gain insight into the hows and whys of the decision making processes they undertake when selecting or developing a game based solution to address an organisation’s challenges. The overall question of this study is: How do business game companies develop the appropriate solution for organisations seeking a game based tool to address organisational challenges? It will seek to answer this by asking the following research questions:

1. Where do business game companies perceive the learning happening when using business games?
2. What are the concerns when using business games that are designed as a framework that can be used to address a variety of challenges across different organisational sectors?
3. How do these concerns affect game choice between off-the-shelf games, customised games and bespoke games?

### **3.4. Significance of the Study**

The intent of this research is a contribution to the knowledge base about practices surrounding business game use to address organisational challenges. Specifically, this study focuses on capturing business game companies' observations on where learning happens when using a game tool, and how this knowledge drives the decisions surrounding not only what type of game to develop but also which games to select and implement in various situations. This is particularly crucial as quite often, a business game could potentially be used to address different challenges (Riedel et al., 2015).

Whether driven by economic strategies or as responses to particular need contexts, understanding these decision making patterns can serve as a reference point on considerations as to why game based learning solutions tend towards certain characteristics and why this gaming niche is developing as it is. This research is also timely as the use of business games becomes more prevalent and users become more familiar with, critical of and demanding regarding the outcomes of integrating games to address organisational challenges.



## 4. Methodology

### **The choice of a qualitative approach.**

Generally, the choice of a qualitative study is steered by research that takes an explorative approach and is asking *why* or *how* questions. The methods and strategies that then stem from these questions are geared towards giving the researcher an in depth understanding of the topic at hand. Specifically, a qualitative inquiry was warranted as the nature of the research question was exploratory. The study explores the participants' experiences with delivering appropriate game based solutions to organisations facing specific corporate challenges and by so doing uncover the strategies for eliminating some of the constraints to business game use by asking the following *how* question:

**How do business game companies develop the appropriate solution for organisations seeking a game based tool to address organisational challenges?**

The choice for a qualitative approach for this study was driven by several reasons. Firstly, the study explores a thought, action, and response process that is embedded in how the participants experience decision making, which would be difficult to elicit using quantitative research methods. For this study, I will explore the perceptions and experiences of the participants in addressing constraints that affected the why and which of the game choice.

Secondly, locating these experiences within their particular context serves to complete the frame within which the participants' decisions are taken (Corbin & Strauss, 2008). To understand the decisions taken, this study focuses on game development companies' experiences when consulting a client who has intention to implement a business game.

Thirdly, beyond trends and general tendencies, qualitative research allows in depth exploration and the chance to expose individual meaning; focus beyond the description and frequency of problems to clarity regarding the deeper causes (Patton, 2002; Flyvbjerg, 2006). This study uses strategies that allow direct contact with people with whom the researcher can engage in order to discover insights into their personal experiences.

And finally a qualitative study enables the researcher to be take up a role as an active participant in the study. Rather than disappearing behind a preset survey, the interview method in this study accommodates the researcher's role as a co-producing participant in the process itself (Brinkmann & Brinkmann, 2013). "Particularly in qualitative research, the role of the researcher as the primary data collection instrument necessitates the identification of personal values, assumptions and biases at the outset of the study" (Creswell, 2009, p. 196).

While theoretical in my approach within this study, I am coming from an applied design background and want to be able to guide practice around the development and use of business games through the insights that will emerge. As an active participant researcher, qualitative methods acknowledge that positions and conclusions in data collection and interpretation cannot be divorced from myself as I engage in this kind of inquiry, and that this interplay of subjectivity and reflexivity is a vital part of the research (Corbin & Strauss, 2008).

### **Research Design Strategy.**

The design strategy for this study is the selection of cases for study based on purposeful sampling.

### ***The case study.***

Case studies as a methodology is however affected by several misunderstandings with regards to their contribution to knowledge; misconceptions that are capably addressed by Flyvbjerg's (2002) argument for acknowledgment of the contribution to social science that is effected by case study exemplars. These are summarised in the table and elaborated further below.

<b>Misconceptions about Case Studies</b>	<b>Argumentation</b>
Practical knowledge not as valuable as theoretical	Cases provide learning on human behaviour that does not simply follow rule governed action
Single cases cannot be generalised	Cases are ideal for falsification by identifying black swans
Cases are not useful for testing hypothesis or building theory	Cases are useful for both and can be increased by strategic case selection.
Cases contain subjective bias towards verification of researchers' preconceptions	Cases are no more biased than other methods and contain bias towards falsification rather than verification.
Difficult in summarising	Cases have irreducible value in their narrative.

Table 2. Misconceptions on and arguments supporting case study research

The author cautions against the five great misunderstanding with regards to case study research: (1) practical knowledge is not as valuable as theoretical knowledge; (2) single cases do not permit generalisation and therefore cannot contribute to scientific knowledge; (3) the case study is not useful for hypotheses testing and theory building but is more suited for generating hypotheses; (4) the bias in the case study is towards verification of the researcher's preconceived notions; (5) and summarising to develop general propositions from a case study is difficult.

Tackling these misunderstanding that question the theory, reliability, validity and generalisability of the case study as a scientific method, Flyvbjerg (2002) addresses these misconceptions as follows:

- 1) In the fields of the humanities and social sciences where researchers are working with human behaviour that does not simply follow rule governed action, context-independent theory cannot exist. Cases are studied therefore, not to provide rule based proof or statistical averages but to elicit learning.
- 2) The case study provides opportunity for critical reflexivity by identifying "black swan" cases: observations that do not fit within the generalised propositions and in so doing be generally significant to inspire further investigation.
- 3) The testing of hypotheses is directly linked to the ability to generalise. As argued above, generalisability is possible with the case study and with a strategic selectivity of cases generalisation can be increased.
- 4) Containing no greater bias towards verification than other methods, several researchers report that the case study tends towards falsification rather than verification with preconceived assumptions often being proven wrong.
- 5) And finally, the rich narrative that case studies uncover need not comply with formulaic reductions. While it stands that there exist difficulties in summarising case studies, it is more desirable to view the complexities of case study narrative in its totality.

The case study was selected even though it does not offer empirical data that can be generalised from a sample to a population but because it is rich in information and offers thick data about the topic of interest. "Case studies offer critical insights into the challenges, solutions, and strategies that led to the design of a successful-or unsuccessful-game... For those who both make and study games, case studies are one of the most valuable forms of game design writing" (Salen & Zimmerman, 2006, p. 22). Researchers and readers of research that use case studies are invited to examine case study narrations "in order to answer

that categorical question of any case study: ‘what is this case a case of?’” (Flyvbjerg, 2006, p. 238).

### ***Sampling.***

**Possible stakeholders.** Within this paradigm of contextuality: that experience, actions and discourse (phenomena), there were three possible stakeholders within the scope of game development and use that would offer insight: game companies/designers, game developers and game users/players. This study considers the game company as a designer taking up a role whose focus is on the big idea or concept behind the game. The game developers are those who are responsible for the underlying systems, structure and mechanics including programming, artwork etc. It is not easy to delineate where one role ends and the other begins as there is often frequent overlap, in the cases of this study, these functions occur within the same company. Even though all but one of the participants in the study are involved in the development of business games, this study has approached the business game companies within their roles as mediators between the game designer/developer and the organisation looking for a game based tool.

Working within the constraints of having to make the most effective use of limited resources, purposeful sampling was used to identify and select the cases that were used in this study. These cases are individuals who are knowledgeable in the selection, development and adaptation of business games. In addition, a major driving factor was that the individuals in the case studies had the willingness and the availability to participate in the research.

The strategy implemented in this research - the typical case strategy - places an emphasis on the similarity of the cases selected. The organisations in this study are illustrative what would be considered a typical example and would illustrate the normal or average decision making patterns that a game developer would encounter. The purpose of this sample is not to conclude with generalised statements that apply to all participants, rather to provide illustrative awareness to others who would be unfamiliar with the situation under investigation (Patton, 2002). Nonetheless, even though typical case sampling is used to narrow variation ranges and focus on similarities, the case studies selected are expected to display a fair amount of homogeneity; and variations are expected to emerge in the analysis (Palinkas et al., 2015).

### ***Data Collection.***

The first option for the method to collect data was a closed ended questionnaire where participants would have responded to predetermined quantitative items in order to provide a

general pattern of decision making. Conceptually this appeared as an attainable goal however, two issues were uncovered with regards to the resources available to be able to support this type of inquiry. The first constraint was that a fairly large number of respondents would have been required to attain a confidence level in the upper percentile. Even at a relatively small population size of 100, an estimated appropriate sample size would be 46 (Barlett, Kotrlik, & Higgins, 2001), even before accounting for non responses. Secondly, there was the concern of low response rates particularly to web or mail administered surveys (Fan & Yan, 2010; Riedel et al., 2015).

On further development of the research gap that this study aimed to address, the survey interview/questionnaire was eliminated in favour of a more naturalistic style of inquiry in the form of semi structured conversational interview. According to Patton (2002), there are three kinds of data collection that will yield qualitative findings: the in-depth interview, direct observation and written documents. As the research question of this study seeks to examine the “experiences, opinions, feelings and knowledge” (Patton, 2002, p. 4) from people, interviews were selected. Rather than asking participants questions such as “How important are options for adaptability of the game? Not at all relevant, somewhat relevant, or extremely relevant”, the study opens up the question to ask “What are the concerns with designing a game as a framework that can be used for different challenges in different industries?”.

### ***The Interview.***

The aims and objectives of the interviews was to explore the participants’ points of view on the research questions. Without setting out to collect measurements, the interview sought the perspectives and attitudes of the participants, and viewed the participants as what Rubin & Rubin (2005) term as "conversational partners" (p. 128).

Rather than selecting to perform structured/survey interviews, this study chose to craft interview questions that would encourage the participant to provide in depth responses. While there are interview types such as the survey interview that could tend towards “reduc[ing] participants to passive containers of information” (Riessman, 2012, p. 367), the interview that elicits conversation allows for the participant to provide both depth and detail into their experiences. Narrative inquiry and narrative analysis has demonstrated use in a wide variety of disciplines and professions from history, law, sociology and even biology through interpretations of descriptions. Structured around a particular ‘case’ - be it an individual, group or organisation - narratives elicited from knowledge seeking dialogues can tell us a great deal about processes (Riessman, 2012).

After consideration of the points above and in order to obtain data dense interviews, I chose to make use of the semi structured interview format (Corbin & Strauss, 2008; Brinkmann & Brinkmann, 2013). While using description eliciting questions such as “Tell me about the story behind the game”, I was able to maintain a measure of influence on the area of discussion while at the same time permitting the discussion to be informative without restricting or predetermining the responses. The general structure of the interview questions were divided into two: 1) knowledge questions that elicited factual information - the way things are surrounding the research topic, and 2) opinion and values questions—the participants experiences regarding the topic—which formed the bulk of the interview. The interviews were conducted either in person, over the phone or via Skype and voice recorded.

Similar to the critiques on the case study as method regarding validity, objectivity, reliability and generalisation, Brinkmann & Brinkmann (2013) tackle the external opposition to qualitative interviewing with similar conclusions to Flyvbjerg (2006).

### **Analysis Procedures.**

The analysis procedure aimed to discover recurring ideas and patterns of thought from the interview participants and used Creswell’s (2009) six step process - presented here in a cyclically but were applied iteratively and with varied order.

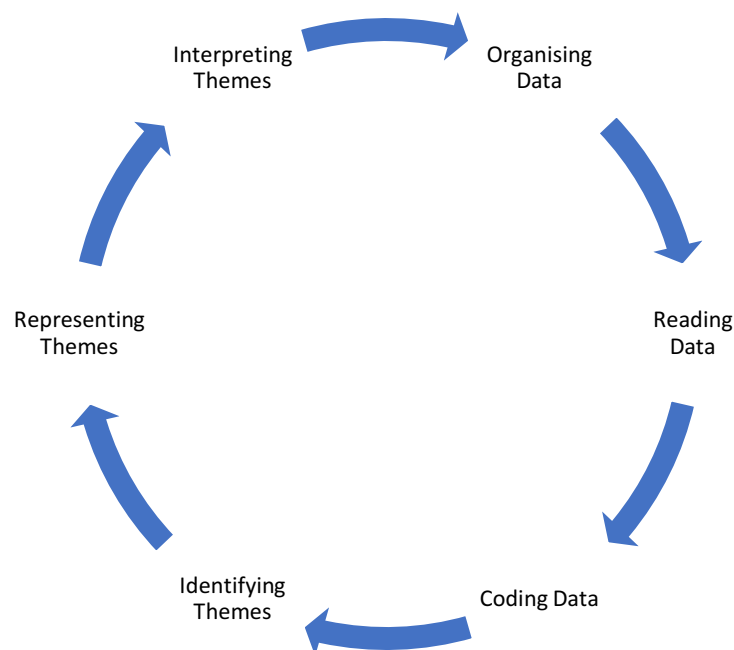


Figure 3. Creswell's (2009) six step analysis process.

- 1) Organising the data: I transcribed the recorded interviews verbatim using NVivo software.
- 2) Reading through the data: I read through as well as listened several times to the interviews to get a general idea of what the participants were saying and also to reflect on if the information from the interviews contained enough depth for the purposes of the study. This information was sometimes carried through to interviews that I made afterwards.
- 3) Coding the data: I began detailed analysis with *in vivo* coding but realised that while the participants were talking about the same thing, they were not using the same words or phrases. I then made the decision to use labels (referred to as nodes within NVivo) to segment sentences.
- 4) Identifying the themes: Based on the codes, categories emerged that I used to identify themes and appear as the headings of the findings in Chapter 6.
- 5) Representing the themes: I discuss the findings structured around the themes, by presenting a discussion that presents quotations and perspectives of the interview participants.
- 6) Interpreting the themes: Chapter 6 looks at the findings in relation to the literature and theories presented at the beginning of this study.

### **Challenges & Limitations**

Having experienced first hand the technological advancements within Kenya that are discussed in the contextualisation section of the meta cultural considerations of this paper, my interpretations have been based by my personal experience. For the last decade, I have taken up various roles within marketing and advertising. I bring to this study the knowledge of experience of both the concept of technicities and the role of the cultural intermediary. The biases that I bring with me to this study as a result will influence my experience as data collector, my analysis and my interpretation. It is my belief that these experiences are invaluablely insightful rather than pernicious.

Due to the resource-based constraints, iterative approaches of sampling and re-sampling, interviewing and re-interviewing to attain saturation in this particular study would not be possible. These challenges and limitations are reflected on further in the conclusion chapter of this thesis and provide avenues for further research.

## 5. Cases

### 5.1. Relation Technologies

Interview Participant: Leif Sørensen, CEO

Founded: 2009

Headquarters: Roskilde, Denmark

Website: [www.relationtechnologies.com](http://www.relationtechnologies.com)



Figure 4. Floorboard setup of *Changesetter* (Relation Technologies, n.d.).

Relation Technologies portfolio includes three case-based game frameworks plus the option for clients to develop a bespoke game. The companies' main game is *Changesetter*, a game tool used to manage and implement change within the workplace. The starting point of this game was for organisations to learn about the theories of Rick Maurer and has since gone



on to include other leadership theories within it. The learning goals of the game are to spark awareness on resistance by various stakeholders within a change process.

A variety of off the shelf cases that represent different scenarios are available. These cases can be further customised for increased fidelity to the players' situation. Completely new bespoke cases can also be designed.

CASE	SCENARIO
Co-Creation – Customer Driven Innovation	Rethinking traditional sales strategies
The New ITC – Coming Together	Merging two IT companies
Restructuring and Synergies – an Organisational Change Process	Restructuring a financial company
Destination CRM – Globally aligned	Implementing a new system in a sales team
Changesetter Colleagues	Implementing a new IT system in a department

Table 3. Case Scenarios in *Changesetter* (Relation Technologies).

While *Changesetter* is typically played around the physical circular board, there is also an online simulator through which players can follow the progress in the game. Other digital tools include a mini game - Changesetter Web App Game - that acts as a sort of teaser to the actual game is also available and playable online. After the actual game play, there is access to an online set of analysis tools on a platform called *ChangesetterLive*.

Implementation of Changesetter is carried out by certified consultants. Certification in the use of the game is carried out as a two-day certification training. Leif (Relation Technologies) acknowledges that the current certification model is acting as a barrier to increasing the reach of the game. With 7,000 unique users per year and a projected 200,000 players by 2020 on a global scale, he reflects that it will be challenging to try and retain the current proximity to both consultants and users and a change in the accessibility model must be developed.

When it comes to bespoke games, the company has developed a plug-and-play format to developing bespoke games with a financial outlay on the part of the client from approximately 800 Euro to 20,000 Euro excluding production or digital versions.

## 5.2. Elgood Effective Learning

Interview Participant: Christine Elgood, Managing Director

Founded: 1973

Headquarters: Tadley, Hampshire, England

Website: [www.chris-elgood.com](http://www.chris-elgood.com)



Figure 5. *Jonathon Strangeways* played by a leadership team during a road trip to their retreat location (Elgood Effective Learning, 2017).

Elgood Effective Learning offers 21 game titles dealing with various organisational challenges, examples of which are presented in the table below.

GAME	The Way Forward	The Ethics Challenge	Jonathon Strangeways
FIELD	Business Strategy Team Building	Business Strategy Decision Making (Ethical Dimension) Teamwork	Communication Interpersonal Skills Problem Solving Team Building
PLATFORM	Board based game with online support	Board based game	Card game
GAME MODEL	Off the shelf with face- to-face or remote facilitation.	Off the shelf with facilitation	Off the shelf
SCENARIO	Managing employee perception and external stakeholder perception of a company.	Maximising the share value of a multinational company by creating a financial strategy and a customer policy.	Solving a murder mystery using clues scattered among players.

Table 4. Game scenarios in *The Way Forward*, *The Ethics Challenge* and *Jonathon Strangeways* from the game portfolio of Elgood Effective Learning.

*The Way Forward* was designed after a request from the Bradford Management Association's Alumni Society who wanted a platform that would give their MBA graduates opportunities to apply and thereby retain their learned theoretical knowledge. The game is played in teams comprising of between 4 and 6 members who play the role of a board of directors of a fictitious multinational furniture company. The game is split over three to five periods with each period representing a half year. Team members analyse provided data to create a strategy that is affected both by the quality of their own decision and that of the other teams.

*The Ethics Challenge* is only available to be played with facilitation from Elgood Effective Learning as a one day play session. The starting point for this game was personal drive on the part of Christine Elgood as a reaction to improve the knowledge base around the topic.

I was incensed by some things I saw and I thought why don't people understand this? I thought, how can I help, how can I improve the knowledge base? I design games and simulations, why don't I design one about this (Christine, Elgood Effective Learning). Played with a minimum of three teams comprising of between 3 and 5 participants each, team members represent newly instated senior management of a national grocery chain. Team members discuss strategic business decisions with the overall objective to emerge as the most admired company among all the teams. The game runs over rounds or decision periods with discussion sessions in-between and a final debrief after the third decision period.

*Jonathon Strangeways* requires players to work together to solve a murder mystery using clues on a set of cards dealt at random. Lasting between 45 and 90 minutes, the game uses a plug and play model and can be played without any external facilitation. The game package contains a manual and other supporting documentation.

When designing a bespoke business game, Elgood Effective Learning shares a 10-step design process document with their clients to ensure that the client is aware of the processes that will be involved. Christine explains that because many clients who want a custom simulation have no idea what to expect or how much effort will be required on their part, the 10-step design process highlights the key stages as well as potential problems.

### 5.3. Canmas

Interview Participant: Dr. Wolfgang Karrlein, Managing Partner

Founded: 2011

Headquarters: Munich, Germany

Website: [www.canmas.biz](http://www.canmas.biz)



Figure 6. Close-up of the work mat of *Celemi Tango* (Celemi, n.d.).

Unlike the other participants in the case studies, Canmas does not develop its own games but rather makes use of ready-made business simulations by the Swedish company Celemi. From the Celemi Portfolio, Canmas offers a selection of twelve business simulations.

*Celemi Tango* teams play as managers of companies in competition with each other within the same market. A minimum of three teams play over the course of one and a half to two days which corresponds to seven years of the fictional company's operation. Speaking about playing the entirety of the simulated business years, Wolfgang (Canmas) explains that *Celemi Tango* like other Celemi games is quite flexible and players can experience the successful gains by playing up to year five for example. In the game, players have to find ways to attract, develop and keep talented employees and the right clients to maintain a competitive edge amongst the other teams. Teams do this while keeping an eye on the company's financials to create linkages between talent management and corporate strategy and profitability.

GAME	Celemi Tango	Celemi Apples & Oranges
FIELD	<ul style="list-style-type: none"> <li>• Customer, People and Talent management</li> <li>• Strategy</li> <li>• Leadership</li> <li>• Competitive Positioning</li> </ul>	<ul style="list-style-type: none"> <li>• Business Acumen</li> <li>• Business Finance</li> <li>• Profitable growth</li> <li>• Cash flow</li> <li>• Operational efficiency</li> </ul>
PLATFORM	Board based game with digital support	Board based game
GAME MODEL	Off the shelf	Off the shelf
SCENARIO	Managing the decision on attracting, developing a talented employee base while ensuring brand equity and shareholder value.	Leading an established fictitious company through challenges by applying financial insights that will accelerate corporate growth.

Table 5. Game scenarios in *Celemi Tango* and *Celemi Apples & Oranges* from the game portfolio of Canmas.

In *Celemi Apples & Oranges* each team runs a company that is facing challenges such as loss of market share and a dissatisfied customer base. *Apples & Oranges* can be played with a fairly large group with each facilitator being able to handle teams of up to 30 people. “I think... [with] Apples & Oranges we included about 3,000 people in a relatively short time. And this is a value of the simulation, you can quickly incorporate a high number of people.” (Wolfgang, Canmas). The game is played over the course of six to eight hours and corresponds to three years of operation within the fictitious company. The focus of the game is for players to understand the foundations of business finance and the drivers of organisational value. In one example of the implementation of *Apples & Oranges*, Wolfgang (Canmas) explains that they firstly “wanted to educate people or to make them understand why it has a value if the share price ... is higher compared to a lower price.” Secondly, they needed to have a sales team that was used to selling hardware experience a mind shift with regards to cash flow when selling services.

When it comes to bespoke games, Wolfgang (Canmas) explains that the Celemi games allow the facilitator flexibility in implementation by tailoring the focus of the game.

What we have applied Tango in the last case was to give the people the big picture... and so we added something which is not part of *Tango* in itself. We took away something [talent descriptors] from *Tango* and replaced it with something that was tailored to what the customer wanted to develop. (Wolfgang, Canmas)



### 5.4. Traction Strategy

Interview Participant: Tamara Eberle, Partner | Facilitation / Process Design

Founded: 2000

Headquarters: Toronto | Vancouver, Canada

Website: [www.tractionstrategy.ca](http://www.tractionstrategy.ca) / <http://innovateordinosaur.com>



Figure 7. Explore game set of *Innovate or Dinosaur*. (Traction Strategy, n.d.)

Traction Strategy provides one off-the-shelf board based game within their portfolio, *Innovate or Dinosaur* - a game that helps teams engage in creative and critical thinking to create new ideas for real challenges within the organisation and then make decisions and plans to transform these ideas into action. A board based game, *Innovate or Dinosaur* consists of two parts – Explore and Evolve - that can be used either together or separately depending on the needs of the organisation.

The trigger point for this game was in response to a client need who needed innovative ideas to survive in a crashing economic situation. The game makes use of a variety of



creative thinking techniques for example polarity thinking - what would not work, chosen randomly and applied as suits the product or service innovation challenge best.

In the EXPLORE portion of the game, players aim to get to the finish line before their competitors by coming up with new ideas and by handling crises creatively. Players can make use of already identified opportunities or the game can tackle real world organisational challenges by having the player create their own opportunity cards prior to the start of the game. These cards are situations within the players' real work that have an opportunity for improvement. Players then apply a range of creative thinking techniques to these opportunities and move on with the game play once the team has at least one new actionable idea.

EVOLVE helps to move the creative thinking ideas from the previous game play session into action. This part of the game evaluates what actions are needed to implement the idea based on organisational factors like resources, organisational goals, team strength etc.

When compared to other games discussed in this study, *Innovate or Dinosaur* is unique as it can be used either in a one-off game play session as seen with the other business game or parts of the game can be used within the day to day workings of the organisation as a creativity tool. For example, individually one could use the EXPLORE card deck at one's desk or as a team for quick brainstorming or critical thinking around an idea.

In addition to *Innovate or Dinosaur*, Traction Strategy partners with other companies to use their game tools wherever there may be a fit with a client. In addition, the company also designs bespoke games for clients.

### 5.5. InContext Consultancy Group

Interview Participant: **Karin Vrij**, Trainer/Consultant

Founded: 1993

Headquarters: Munich, Germany

Website: <https://www.incontext.nl/en/> / [www.incontextsimulations.com](http://www.incontextsimulations.com)



Figure 8. iPad business game *BizzBuilder* (Incontext Simulations, n.d.)

InContext Consultancy Group tends to drive their focus towards creating mainly bespoke games that they refer to as tailor made solutions. The company makes a distinction between a game and a simulation.

We make the distinction that is really within InContext. A business simulation represents the business. It could be a part of the business or it could be the full business. And the players are a part of the simulation. So they will play a role. For instance, they play sales or production or headquarters, whereas in a business game its more a board game wherein they can make decisions and more think about it instead of acting within the simulation itself. (Karin Vrij, InContext Consultancy Group).

The company lists an offering of seven management games either board based or online for example, the team development game *Linxs*. Four business simulations dealing with strategy implementation, customer satisfaction, production control and competition are also available as off the shelf options.

GAME	Bizzbuilder	Linkxs
FIELD	Customer Satisfaction Investing in business relationships	Team Development Collaboration and Assistance Competition and Conflict
PLATFORM	Played on iPads	Board based game
GAME MODEL	Off the shelf	Off the shelf
SCENARIO	Manage client relationships for internal and external relationships (colleagues and clients) within a business unit for a fictitious global auditing company.	Leading an established fictitious company through challenges by applying financial insights that will accelerate corporate growth.

Table 6. Game scenarios in *Bizzbuilder* and *Linkxs* from the game portfolio of InContext Consultancy Group.

In *Bizzbuilder*, players are set up in teams consisting of up to three players per iPad with each iPad representing a business unit. Each business unit is independent, works on its own projects and has its own clients and staff. The team members manage their projects with their own staff or by hiring the expertise of other business units at the table. The game system gives the team feedback about the revenue, staff turnover and client perception based on their decisions. With subsequent game rounds, better scores result in new projects that evolve the business unit and are driven by team's strategic decision.

*Linkxs* is played by four teams comprising of two or three team members each. The aim of the game is to successfully construct three-dimensional object from two dimensional cardboard cut-outs. Each team has to complete two tasks however each team is only provided with partial information and must communicate with other teams in order to get the rest of the information they need to complete the task. Embracing abstraction as a game feature, the gameplay encourages negative behaviour in order to provide valuable insight into developing more effective communicative and cooperative behaviours in the workplace.

## 6. Themes

The following sections discuss the main themes of the interviews outlined under Motivations, Decisions and Processes. Each them also contains sub themes that emerged from analysis of the interview data which are listed below and subsequently discussed in depth.

1. Trigger or starting point
2. Motivation for game use by the company
3. Game type: off-the-shelf, customised or bespoke
4. Digital components
5. Perceived learning
6. Learning structure
7. Game incompatibility

### 6.1. Motivations

#### 6.1.1. The trigger or starting point.

Capturing what stimulated and set into motion the development of one or more several games and in some cases, the business itself. The triggers could be summarised as falling into one or more of the following:

1. Client Need
2. Industry or Portfolio Gap
3. Theoretical framework

Where the business game company had several games in their portfolio, the interview focused on one or two games either from my prior knowledge of the company's range of games or was prompted by the interview dialogue.

Firstly, with regard to the trigger for a particular game artefact, according to participants, the starting point of the development of a particular game was on occasion in response to a particular client's need. One participant explained:

we do a lot of interviews within the organisation, and based on the interviews we think 'this is your main problem, these are the key levers, these could be your KPIs and we will propose such kind of a game or simulation (Karin, InContext Consultancy Group).

Where the business game company was choosing from a range of games in their portfolio, according to participants, the decision making process begins with looking at the client's

needs and asking “what’s your objective as a company, what are your challenges?” (Wolfgang, Canmas).

Secondly, some game artefacts are a result of personal drive from the end of the business game company. The business game company recognised either a gap in their portfolio and or in the industry and this became the motivation for a particular game. “I thought, how can I help, how can I improve the knowledge base? I design games and simulations, why don't I design one about this?” (Christine, Elgood Effective Learning, discussing *The Ethics Challenge*). In both of these situations - client request or personal drive - there tends to be the coupling of this initial drive with a theoretical framework; that is there is “a kind of marriage” between the two (Christine, Elgood Effective Learning).

In some cases as well, the theory is the triggering factor behind the development of the game artefact. The business game develops as a “simple, understandable, applicable model” that will be useful contextually to drive learning about certain organisational theories without resorting to a heavy psychological or theoretical approach (Leif, Relation Technologies).

#### **6.1.2. Continued motivation for game use.**

Exploring the rationale and motivations of the business game companies in continued use of business games - beyond economic business strategic reasons, what are some of the reasons the companies have in developing and using these approaches?

Most participants indicated their concern that organisational learning needed to be something different not only in terms of content but also method. ‘Death by PowerPoint’ - a phrase that was overheard in another forum - captures the sentiment surrounding learning in organisations. One participant reflected that “learning in organisations I think is so boring”. When faced with the alternative, “we want you to learn instead of sitting and looking at a PowerPoint presentation or reading a book” he continues. There is confidence that a business game is recognisable as a better option to the usual models of learning, and states “I’m quite sure that using our platform is at a higher quality than looking at a PowerPoint” (Leif, Relation Technologies).

Besides an innovative and active approach, participants indicated that the business game tool was able to respond to the needs of an organisation to absorb new competencies in a fairly short amount of time. Something that may previously have required staff absences as key personal attended courses and that took a longer amount of time, “and this is a value of the simulation, you can quickly incorporate a high number of people” (Wolfgang, Canmas).

Most participants indicated that the visual and the tactile played a key role in creating understanding. Some examples of these visual motifs and symbols included seeing the actual cash flow of a company through the physical representation of tokens (Wolfgang, Canmas discussing *Celemi Tango*); or in getting your team members to get on board a boat as a symbol for agreement (Leif, Relation Technologies discussing *Changesetter*).

Some responses from the interview participants revealed a higher level motivation to alter institutionalised managerial focuses when dealing with organisational challenges from deliveries and targets to one that is more focused on people.

Instead of focusing on the classical project management framework which is deadlines and deliverables and timescales and charts, you actually look at where do I think I have my people and what is the natural next step? Not in order to reach my deadlines but in order to move people which eventually will give you the same results or even a better result (Leif, Relation Technologies).

Collectively, these responses regarding the motivation of game use support the development games based on situational need. The three triggers identified by the study participants iterate the findings of Boyle et al., (2006) that games for learning are developed and geared towards specific learning objectives rather than trying to use entertainment games to elicit learning.

## 6.2. Decisions

### 6.2.1. Game Type: Off the Shelf, Customised or Bespoke

Bespoke games - those made from scratch for one particular client were used less often by most of the interview participants. However, for one participant bespoke games emerged as the most preferred type of game to develop, saying “we love to make tailor made [simulations] (Karin, InContext Consultancy Group). For the business game companies that did make bespoke games, they estimated that they would do so about five to six times within a year.

Majority of the participants' client base was using a game from the business game company's portfolio and in several cases this was with some variations of the standardised off-the-shelf version, i.e. a customised game. In many games this ‘customisation’ will happen with regards to the context applied around the game scenario when the game is being played. As a facilitator or consultant, knowledge of both the game and the organisational needs come

into play when deciding on the level or ways to customise a game. As one participant explained:

So in the one context I could talk about cars and in other context I could talk about service offerings, service packages. I leave it up to the imagination of the people to say this is something you develop. What could it be in your case? Or it could be some kind of financial contracts, mortgage, whatever kind of thing. So I let them think in their own terms (Wolfgang, Canmas).

This kind of situational customisation happens whenever there is the transfer from the fictional made up scenario to the real life situation of the players. Some participants noted however, that fidelity to the actual organisational situation of the clients playing the game would be highly dependent on the group dynamic. One participant comments that

depending on the group, you could also choose to either go very close to their own context or stay away from their context because if you get close to the context it could be [volatile] because you have managers in the room that like to see themselves in a specific way. So you also have to know the group in order to know how close you can get” (Wolfgang, Canmas).

This was reiterated by another participant who mentioned that “each person will know best what their objectives are, what their group is like” (Tamara, Traction Strategy).

Customisations also happen when the consultant or facilitator takes an off-the-shelf game and builds a case around it while maintaining the game mechanics and elements. Cases in the business game context refer to the in-game scenarios and are reflected in the games' characters, decision frameworks, values etc. Many of the games in the portfolios of the participants covered a broad range of topics such as entrepreneurship, operations management, strategy among others, however, there are often times when a particular organisation is facing a unique business or management issue that requires a specific scenario in order for the challenge to be adequately addressed, which is where a customised case would be developed. In one game, the opportunity to tackle real world challenges could be done ad hoc where

the players control the input in the game. For example, the very first thing you do is you fill out these opportunity cards. And they are blank. So, let's say you were working on something in your workplace, could be something as simple as you would like to be more organised with your filing system. So on the card you would write there's an opportunity to be more organised with my filing system. And then the card goes into the game and

you are working with this card and applying creative thinking techniques to your real opportunity” (Tamara, Traction Strategy discussing *Innovate or Dinosaur*).

Other considerations regarding the customisation or the development of a bespoke game involve practicalities such as the resources available. “You can build a beautiful game wonderfully crafted but if the people facilitating it don't understand it and don't have the facilitation skills, its a disaster” (Christine, Elgood Effective Learning). The entry point in terms of resources for a bespoke game were still relatively high with one participant indicating a time investment of two to four months with a financial outlay from 20,000 Euro to as much as 200,000 Euro.

Several studies on the development of bespoke games continually indicate cost and complexity as some of the most influential barriers to the successful development and deployment of a bespoke business game (Poplin, 2012; Riedel et al., 2015; Boyle et al., 2016). The responses from the interview participants corroborate this position with bespoke games being used less frequently than off the shelf or customised games. As mentioned in the literature review the use of game features such as portability and bootstrapping (Kollars & Rosen, 2015) are two methods with which to mitigate the production risks that would be encountered in game development. In some situations, both portability and bootstrapping were made use of within the same play situation. For example as explained by one participant while using an off the shelf game, “depending on the group, you could also choose to either go very close to their own context or stay away from their context” (Wolfgang, Canmas). Maintaining a level of abstraction enables participants to experience the freedom to speak out as the game scenario retains enough distance from the real world.

In addition to the adaptability of games that use portability and bootstrapping as features, the participants also reflected on the concern that this would lead to the sacrifice of complexity in the game play. Participants however said that this was “actually the opposite” (Leif, Relation Technologies), allowed the facilitator to “customise the focus” (Wolfgang, Canmas). These responses are in agreement with Henriksen & Børgesen (2016) who argue that less complex situations are beneficial towards opening up the space for players to incorporate their own interpretations and learning. A game such as *Linkxs* (InContext Consultancy Group) could risk being dismissed as being too simple as it deals with rather basic game play of building cardboard objects, however, the experiences in the game provide mirrors into the players’ inherent opinions regarding collaboration and is in fact a versatile and influential tool.



### 6.2.2. Digitalisation

One of the study participants had a high usage of digital games and while they had some board games in their portfolio, they explained their preference for use of the digital as being based on two factors. The first was that it was a good marketing strategy, a digital game “seems more innovative, so people like it, its more new, its fresh” (Karin, Incontext Consultancy Group). Secondly, that the advantage of using a digital platform is that you could get direct, instant feedback, and further, allowed the business game company to build a game that worked based on more complex rules.

Most of the games being used by the participants in the study, however, are board based games, a couple of which are run with digital support. This digital support was explained as being

a kind of excel sheet, a very sophisticated one just to show the teams the outcomes of the team decisions. But it [the computer] does not calculate what you haven't seen or see on the paper. Its just to make up nice pie charts but with the data you see before you... the computer does nothing that you can't see or that you have not decided on the table (Woflgang, Canmas).

Another participant explained that “generally speaking where we have a computer in the background, it would usually be because the maths and the metrics in it [the game] are relatively complex so there's a lot of calculations” (Christine, Elgood Effective Learning). Other incorporations of digital components within the games discussed were, for example, the option to play a simplified web app version of the game as well as have access to an online portal that provides various support tools linked to the game play (Relation Technologies, *Changesetter*).

Some of the participants discussed their preference for the physical game and the sense of touch associated with a board game. One participant commented: “you know there's something about the tactile that is quite special” (Tamara, Traction Strategy).

Reflecting on a client's shift from board based games towards the same game's digital version, one participant suggested that there might be value in a digital game for “teams scattered all over the globe” (Christine, Elgood Effective Learning). This shift for this particular client was a solution for the client's subscriber base that was becoming more global and no longer had physical proximity to the existing localised training facilities. These comments suggest that the decision for the use of a digital game may sometimes be based on organisational management concerns rather than in the value and the potential of the digital medium itself.

I'm a strong believer in that in person, collaborative dynamic" said one participant which resonated with most of the rest of the participants who zoned in on the value of being able to interact and have face to face discussions which were encouraged by sitting at a table around a board game (Tamara, Traction Strategy).

Several participants placed value on people being able to interact face to face rather than on a digital platform, with justifications varying from the digital not being an option to it being an inferior alternative. "You have to gather in the same room. That's one prerequisite. You can't play it online because it doesn't function that way. There's no way to do that" was the explanation given by one participant (Wolfgang, Canmas). While another participant cited an example of a game that is available as a locally facilitated game as well as having the option for it to be played remotely, she pointed out the different success rates between the two methods of implementation. Players who are not located locally access the content by watching videos and playing without any facilitator interaction. The game results are evaluated through the share prices of the game's fictional company - and the prices of the teams who played locally were consistently higher than those of teams who played on the digital platform. The participant "put that down to the fact that the face to face guys interact with each other and with the facilitators" (Christine, Elgood Effective Learning discussing *The Way Forward*).

Participants also discussed some barriers towards creating digital games. "To be honest, it's a lot of money to create... It's a business decision and it's also based on a decision based on the constraints that we have" one participant stated, pointing out the financial resources required (Tamara, Traction Strategy). Additionally, from a business perspective, one participant pointed out that there was a strategic business advantage to maintaining the use and development of the board games and that from a competitive advantage "digitalisation might not be the best strategic move" (Wolfgang, Canmas).

As seen in Chapter 2, technological prowess, a growing workforce that comprises of the digital generation, as well as the ubiquity with which we find new media technologies in our everyday life are factors that underpin the initiatives for serious games. What was apparent at the beginning of this study was that majority of the games in use were board based games and the responses from the interview participants corroborate this finding. Contrary to expectations however was the sense that there appeared not to be any striking urgency on the part of most of the participants to move away from the use of board games to digital platforms.

### 6.2.3. Perception of learning

An important characteristic with regards to the game use situations that emerged from the interviews is that even with the more complex games, business games are rarely used as a stand alone solution, rather they are usually one part of a larger process of tackling organisational challenges. In addition, within the situation when the game is being played, the game itself is also part of a larger process that involves bookending the game play with presentations, breakout groups, workshops, seminars or as one participant described them “evaluator rounds” (Karin, InContext Consultancy Group). With this in mind, participants observe that as a result, there are several touch points where learning happens:

1. In game play
2. Through reflective dialogue surrounding the game play
3. During adaptation and application

One participant observed: “I think some of it [the learning] happens in the room because they make a decision and they see it on the board” (Christine, Elgood Effective Learning). This remark ties in with the visual motivation for using a game mentioned earlier where another participant mentions: “So you see it, you feel it” (Wolfgang, Canmas). They explain that the players can experience the triggering of a change in perception directly within the actual play activity and they can attribute this awareness to these visual aspects of the game. For one participant, however, they explained their strategy was to “put all of the learnings in the simulation itself” (Karin, InContext Consultancy Group).

There was a sense amongst participants that the following two touch points were those with the most impact and value: reflective dialogue and real world application. This viewpoint also goes on to influence the learning structure discussed in the next section. Commenting on the importance of dialogue that triggers reflection, one of the participants explained:

The real value is discussing on the table... When they [the players] start saying ‘ahh, now I understand what we have maybe thought wrong. [Or] when I pose the question and you say ‘oh, well I think I have to think about that’ and I say, ‘that's exactly what I want you to have’. Because when you start thinking about something, then something moves (Wolfgang, Canmas).

According to most of the participants, the weightier of the learning touch points is the point when the experimentation and application of insights gained from within the game shifts into the real world challenges that the players are experiencing. Talking about this transfer to real life a participant said

it's just important that they actually reflect on what they think is relevant and not relevant, for their own context... And that's actually where I reckon as the most important part of the learning. This is where the value is created. Because here they are making transfer from the theory to their everyday working situation (Leif, Relation Technologies).

On the part of the learner playing the game, an analytical reflection on the experience is necessary in order to transfer the new knowledge to the real life organisational situation. One participant explained their use of discussion sessions, which they refer to as evaluator rounds. "In the evaluations in between [the game play] its about how you can improve within the simulation and the last evaluation is not about the simulation anymore but about what would you like to apply in daily life" (Karin, InContext Consultancy Group).

Although these responses indicate that these touch points may follow a common path: reflection - game play - application or game play - reflection - application they are also iterative. Additional touch points may occur after the game play if the game includes a component - usually digital - that gives the provision for the user to revisit the game.

Prior studies have highlighted the tendency for games for learning to be more concerned with learning and less with transfer (Henriksen & Børghesen, 2016). However, the responses from the study participants in this section indicate the contrary with the business game companies maintaining a keen focus on strategic learning competencies. As discussed in chapter three, this is knowledge that requires the learner to apply learned principles to new contexts. The player reflects on what they have experienced, analyse this experience, creates conceptual models to make meaning from it and finally ask "now what?". This iterative process can be viewed as a spiral, where with each round played, the players attain more knowledge which is then tested with subsequent game play in further rounds and so on as so forth, and eventually serving as a guide for actions in the real world.

The interview participants responded that the value of learned knowledge has the intended outcome when transfer occurs. The knowledge of how - i.e. procedural knowledge - acquired in the game play is extrapolated to strategic knowledge in debriefing sessions and subsequently into the workplace.

It is important to point out here, however, that this transfer of knowledge from the learning situation to the real life context is only observed by the business games companies as part of the facilitation cycle at the tail end of the learning process. By and large learning is evaluated through reflective dialogue and its subsequent influence within the organisation is reported rather than observed.

### 6.3. Processes

#### 6.3.1. Learning Structure

As mentioned earlier business games are typically being used as part of a larger learning/change/management process. In some cases, before actually experiencing the game, users could be exposed to some introductory materials. In one case where the game was based on particular theories, a participant gave the scenario where

you have people gathered into groups, you put the theories out to people who are attending... and then you ask ‘could you please organise these signs into the structure that is most common or most used from your everyday working situation?’ (Leif, Relation Technologies).

Users would then reflect on their own organisational situation and use that to arrange the theories or decide on the most logical sequence of organisation.

All the games discussed with the participants in this study are played in teams - team size varied but was usually not more than six. Users of the game are continuously involved in discussion among the team members during the game play with several in-game decisions requiring team consensus. Most games discussed are divided into sections such as rounds, chapters, business years or a decision period. Within the actual game play, the first round is typically one that the players use to understand the game environment. One participant described the subsequent rounds as experimental rounds in which players get to make decisions and see “the effects of the actions they do and they can try out different things, other things than they will do in normal life” (Karin, InContext Consultancy Group).

The facilitators make use of breaks in between these player rounds for reflection, presentations, workshops and the like. During these sessions, the facilitators will tend to focus on the outcomes of the game play thus far. One participant mentions posing questions such as

Team Alpha, let’s listen to you. What was your rationale behind the decision you have taken and how would you comment on why you ended up in this business year like you have? ...And team Beta, let’s presume you’re a consultant, what do you suggest for team alpha then to do now for the next year? (Wolfgang, Canmas).

Another participant explained these session as being structured around reflections such as: “So now they share information about why did you chose that and what was the result? Why and how did you [do] this and what happened? So here, they are sharing examples from the game” (Leif, Relation Technologies).

Sometimes theoretical or research-based materials was presented during these breaks to support the metrics or the mechanics that the users had experienced during the game play. It is worth paying attention to this particular facet in the learning structure as well as to the presentation of introductory material. Supplementary information was in most cases presented to the users by use of conventional methods such as powerpoint presentations or printed out handouts containing reading materials. Taking these out-of-game learnings into account, the players then return to the game to complete the remaining sections for example having played three rounds in a game representing year one to three before a breakout session, they then return to play year four and five.

At the complete end of the planned facilitation - typically running over one or two days - there is a final debriefing. It is during these debriefs that the players get to discuss the plans for application of the game play towards their real world contexts. With the game play having provided some visual structure, the players move to the stage where “people work their own situations into the game framework.

One participant spoke about providing leave behind materials that contained some real world examples that were relevant to the issues covered within the game.

We reference it to current things that have happened in the press. We leave them with a reference sheet. These are some of the issues that we've discussed, you might think it won't happen to you but here's a weblink for a company who has had a [similar situation] recently. So a bit like what you did is a bit like [this company], read about it (Christine, Elgood Effective Learning discussing *The Ethics Challenge*).

Some games are structured to allow the players to return to the game play and review their actions decisions and outcomes. For example, one game allows participants to map their own situation into a digital platform that mirrors the physical game play.

So now they [the players] are extending the game to becoming more of a concept or a thing that helps you in your everyday working situation. And in that framework you can do tasks, you can click back [on] the theories. So instead to it being a game, you use exactly the same graphic design, same framework, the same understanding (Leif, Relation Technologies discussing *ChangesetterLive*).

Mentioning that this was additionally advantageous because learning could continue to happen as a team even though players no longer needed to be in the same room together anymore, and further analysis of on important aspects from the game could be accessed individually as well as shared with the group as a whole.

The responses from the participants regarding the learning structure indicate that the learning structure is designed in a way that can support the player to access all the stages of the learning cycle, i.e., do, observe, think and plan (Kolb, 1984). The players have an experience within the game play (Do) that serves as the basis for discussions in breakout sessions to ask “what happened?” in response to their game play actions (Observe). These reflections are then assimilated into concepts where the player asks “how can I influence the outcome?” (Think), which are tested out actively in subsequent rounds of play (Plan). It could be said that knowledge stacks up or increases with each reiteration in game play round to anchor the debriefing and subsequent transfer.

### **6.3.2. Game Incompatibility**

When it came to the decision on whether a business game company would turn down a client, this influenced by a variety of considerations. On occasion, it was determined by the the business game companies’ skill sets. Giving a scenario where a client may want an animated digital simulation, one participant said

you kind of self select yourself out because that's [digital simulations] not what we're really good at. I would have to find somebody to do it and then maybe it wouldn't be a very good product. So were quite good at recognising the things that would be a bit of a stretch for us (Christine, Elgood Effective Learning).

Another participant echoed the same point of view by reflecting on what they wanted to be as an organisation.

I think you have to be really clear about how you're different in your business. What is the special thing that you have to offer and that you might not be for everyone. But there's a quote "With niches come riches". So we've spent a lot of years trying to figure out how to really make things narrower, as opposed to trying to be everything to everyone (Tamara, Traction Strategy).

It was acknowledged by most participants that the financial entry point was still relatively high but that once a client had decided to use a game, the decision not to proceed with a particular client was “very rarely about money” (Christine, Elgood Effective Learning).

Participants revealed that they would also be likely to make the decision on whether or not to take up a client based on the of the attitude of the client towards the game and the process involved. One participant explained that the client needed to understand that the game was being used to “achieve something” and would decline to move forward if “they [the client] want to play a game because its a game” (Karin, InContext Consultancy Group).

In another answer, a participant said: “usually we say no because it has more to do with whether we believe the client is committed and able to deliver on their part of the project” (Christine, Eglood Effective Learning). This was reiterated by another participant who emphasised the importance of reciprocity on the part of the client.

So for instance I need to know if I'm going to facilitate the game with a group, I need to know that they're going to play. That they're in it. It's like imagine trying to play basketball with a 10-year-old who doesn't want to play basketball and just stands there. And then you throw the ball and they don't do anything. So there has to be some willingness to abandon your... preconceived ideas about processes (Tamara, Traction Strategy).

Occasionally, the need to rethink an already selected solution based on the players' response, behaviour and attitude during game play was also something that one participant mentioned. Realising in the midst of one game play session that there was reluctance by the players taking part in the training, the facilitator made the decision to stop the game and feedback these observations of resistance back to the players. Ownership of the process and the outcome is crucial with one participant summing up

we want to give you the accountability that you take something out of this training and we can't tell you what to take out of this training. It's your decision. If you say there's nothing in it for me, that's fine (Wolfgang, Canmas).



## 7. Discussion

This section discusses the insights gained through the literature and the empirical inquiries on two levels. Firstly, on a concrete level it examines the themes that emerged from the the interview data structured according to the issues raised through the research questions that were set out at the beginning of this study. Secondly, it reflects on the implications of these findings on a Meta Cultural level within the Kenyan context.

### 7.1. Concrete Level Discussion

**Research Question 1: Where do business game companies perceive the learning happening when using business games?** The aim of this question was twofold; first to uncover what learning competencies are being focused on and secondly where is the perceived value within the game-based learning cycle.

The study in section 6.2.3 indicates the touch points where perceived learning occurs: directly within the game play; through reflective dialogue within game play and in breakout sessions; and during adaptation and application. The accompanying descriptions of this learning indicates that the key value was evidenced by players' capability in application of the game play towards their real world situation, i.e. transfer.

The interview responses place critical emphasis on transfer, that connections will happen between the learning spaces and the real world. This situates the perceived value along the axis of transforming experience of Kolb's (1984) learning cycle - on the continuum between reflecting on the experience and testing out what was learned during the experience. This continuum of processing knowledge takes into account the experiences of the players from their real world experience prior to the game play situation as well as their in game experience.

This emphasis does not exclude the other stages within Kolb's (1984) cycle, rather it points out that business game companies are particularly attentive to ensure that shared learning within the group and that there is complete execution of all stages of the learning cycle. Players get to the stage where they ask 'now what?' or 'what will I do differently', they access the active experimentation phase and in so doing completely execute all stage of the learning cycle.

With a shift from classroom style learning where previously information was given through verbal instruction accompanied by visual presentations such as PowerPoint, organisational learning has moved towards experiential learning. Professional interest in game based learning is underpinned by the fact that "how we view learning has changed from

being able to recall information to being able to find and use information” (Garris et al., 2002, citing Simon 1996, p. 441). With regards to competences gained, the results indicate that business game companies focus on applicable competencies described as Garris et al. (2002) as strategic knowledge. It could be argued that learning competencies do not occur in isolation, so when it came to affective knowledge that was in some cases the target of the learning activity such as a shift in attitudes regarding particular decisions, it appears that there are strategic knowledge competencies that are subsumed within here as well. For example, Elgood Effective Learning reported success in using a game focused on business ethics (affective competencies) to effect a shift in managerial attitudes towards corporate reputation that in turn influence managerial choice.

Although the research goal of this question was to highlight learning in and around the use of a game tool, I acknowledge the difficulty in demonstrating that such learning did in fact occur. As mentioned in Chapter 3, there is a breadth of literature that has evaluated the use of business games and proven their effectiveness in improving knowledge within educational contexts. Part of the difficulty lies in the nature of what learning is, how it is learned and that this process is individually unique. As a result, whether for individuals or for a group, it is difficult to capture and demonstrate that learning occurred. Many evaluation methodologies used to evaluate learning have also been noted to be lacking in scientific rigour (Gosen & Washbush, 2004).

This study however shows that business game companies studied concur with the view that game tools occasion the learning cycle of experiential learning. The participants of the study report the observation of transfer taking place in post game planning and have received reported feedback from managers of organisations that they have worked with on the impact of the knowledge and/or skills acquired within the real world situations. The results also show that the iterative game play cycles support the learning cycle and we can conclude supports the development of strategic knowledge competencies.

**Research Question 2: What are the concerns surrounding business games that are designed as a framework that can be used to address a variety of challenges across different organisational sectors?** With this question, the aim was to investigate the advantages and drawbacks to implementing off the shelf games given the concerns of loss of complexity and lack of pertinence. The interview data in section 6.2.1 expounded on the use of game cases to introduce complexity and in 6.3.1 the application of blended learning structures to ensure relevance.

Off the shelf games make use of design features that allow their use across different sectors, industries and cultural contexts. The study shows that the use of portability - consistent framework and mechanics with changing cases based on the organisational situation - increased the scope and flexibility of any particular game. By making use of in game scenarios that are based on the situation within an organisation, the use of game cases in an off the shelf business game afforded a wealth of information and challenges that addressed the concern of complexity.

The use of bootstrapping – focus on concepts and skills in abstract situations – was valuable for fast implementation as well as for eliminating the apprehension inherent in addressing sensitive situations. Fictional scenarios avoid discussion paralysis that often occurs when there is fear of speaking incorrectly or being perceived as being ‘wrong’. This is particularly pertinent in organisations where authority or power relations influence the company culture or where members of staff have a long history of working together.

Together, these features tackle the concerns regarding complexity or the lack of it. As highlighted by Kollars & Rosen (2015), “a simple design, therefore, does not automatically lead to a simple... experience” (p. 205). Use of the game tool was framed by a combination of activities that bookended the game play session itself as part of a larger learning process within the organisation. The findings of the study reinforce the use of an optimised learning process that combines complexity with less saturated game play that leaves room for players to travel along their own trajectory based on their own experiences. As explained by Rodriguez (2006), this is a way of supporting learning by designing a system that “allows the player actively to learn by exploring and tinkering with the system” (Rodriguez, 2006, para 51).

**Research Question 3: How do these concerns affect game choice between off-shelf, customised games and bespoke games?** Given the observations from research question 2, the consideration of which type of game solution to select was heavily influenced by the business game companies’ perception of the organisational situation and the game company’s game portfolio and working model.

All the interview participants in this study play active roles as facilitators; the interview responses evidence the importance of intuitive knowledge on how a particular game tool will provide situational effectiveness and on how to manage, or when necessary intervene, in the learning situation to ensure a successful outcome.

The use of bespoke simulations was more influenced by the complexity of the organisational challenge rather than by the resource capabilities of the client. There was no indication of an assumption that a realistic game - that is a game that maintained close fidelity to the organisation and the specific organisational challenge as would be the case with bespoke games - would automatically result in better achievement of the learning outcomes and subsequent applicability and transfer to the real world situation. Nonetheless, after complexity, the choice for a bespoke game appeared to come down to a question of resources. It seemed that despite the fact that the entry point for a bespoke game was still relatively high, financial considerations came after the consideration of the resources of personnel or time. Given the emphasis placed on the importance of dialogue as a major influence on transfer, the preference for use of board based games seemed to be influenced by preference and technical capability on the part of the business game company.

The ludic elements at work in the learning situations facilitated by the participants in the study embrace the idea of designing and creating play situations that extend the already inherent play elements from the issue being addressed and using the game medium as a field of exploration of these elements. For example, aspects from Caillois' (1961) categories such as competition (*agôn*) already present in business contexts are utilised for example by having teams competing against each other and used together with the aspect of role-play (*mimicry*) where players act out roles within the fictional game organisation. A well balanced mix of the playful and the serious is achieved by exploiting the ludic aspects within the challenge that they were seeking to address and embracing the ambiguous and negotiable boundaries of a games magic circle.

To sum up, I go back to the overall question of this study: **How do business game companies develop the appropriate solution for organisations seeking a game based tool to address organisational challenges?**

I have framed the business game companies as cultural intermediaries, who take up the role of embodying and then promoting the business game as an important tool in today's organisational culture. As users as well as merchants, the effectiveness in the ability of the business game company in choice and sales is their first hand knowledge of the situations they address, they "sell so well because they believe in what they sell" (Bourdieu, 1984, p. 365). There is the perceptible influence of tacit knowledge on the part of the business game companies that is significant though somewhat intangible. This subjective knowledge

requires the ability to be able to translate the core of the clients' challenge across the following considerations:

- 1) Learning Competencies: Which strategic or affective outcomes is the main targeted objective? What do the players need to learn?
- 2) Blended Learning Situations: How and with whom (facilitators) do the players need to learn?
- 3) Transfer: What needs to be in place to ensure that connections to the real-world situation occur?
- 4) Portability & Bootstrapping: What level of fidelity to the real-world situation is required in the game scenario to effect this learning?
- 5) Resources: What are the considerations of time, finances, or commitment on the part of the organisation?

The study has gone some way towards enhancing our understanding of what factors to consider when evaluating the fit of a game based tool. By tapping into the experiences of the business game companies, the study highlights what developers, facilitators and users can take into consideration. In general, therefore the focus is less on the game artefact itself and more on the player experience. However, this attention to the player experience is not on constructs such as engagement or flow as seen in most analyses of serious games, rather business game companies are more concerned with the play situation and the transfer of learning. While frameworks linking game mechanics to learning goals (Amory, 2007; Arnab et al., 2015; Carvalho et al., 2015) are a source of insightful perspectives particularly for game designers, these frameworks could be considered too place to narrow a focus towards the artefact to be of practical use to a facilitator of a business game tool or a company looking to use a business game who needs to consider the broader game play contexts of use.

## 7.2. Meta Cultural Level Discussion

**What does this mean in a larger context?** The conclusion in the previous section that tacit knowledge on the part of the business game company and facilitator is required for the game solution to be effective raises the concern of what role cultural differences would play in these situations.

The meta-cultural section of this study began by looking at the situating of play within culture. Taking the work of Dovey & Kennedy (2006) it took steps towards making a case for the commonality that technological access and prowess creates between subjects in third and first world cultural contexts. The cultural contextual section in chapter 2 then provided

insights into the Kenyan context. It suggested that Kenyans have not only embraced technological identities to be consumers and producers, but have also seen progress to become technological innovators in their own right. This discussion suggests that by virtue of sharing elements of technological prowess, there exists the capacity for the sharing of practices based on these new subjectivities.

Mäyrä (2008) states that a game "gains its significance only when experienced by a player in a cultural context" (p. 19). The author bases his position on the work of a musicologist Leonard B. Meyer who argues that a piece of music will evoke different meanings based on the listener's ability to connect the piece of music to their own history of musical experiences. The concept of game cultures are similarly "built upon layers of learning and experience among all the previous games that the particular group of individuals sharing this culture have interacted with before" (p. 19).

Certainly not solely attributable but definitely influential, technicities have played a role in the mitigation of cultural difference. We are experiencing contemporary identities for whom across cultures there is an amount of shared minds, tastes and manners for situational transfer to occur. There are undoubtedly nationally cultural specificities that will arise and need to be taken into account, in the same way that each organisation has its own culture and subcultures that the business game companies are already encountering and managing.

The case studies that were selected cover a wide range of national and cultural situations. Though the business game companies are all from western developed countries, it could be argued that the games they develop and implement are transferrable, several of which are already being played in other countries and cultures.

The question is, **if business games were to be part of organisational development within a Kenyan context, would they be effective and if yes, what design or application considerations would have to be made?**

By embracing the term "technicities" it was suggested that new subjectivities based on technological aptitude levels out the playing field for those who may previously have been structurally marginalised. However, within the definition of technicities, Dovey & Kennedy (2006) point out that the tastes and preferences that form the basis for these identities is not absolute, and are shared "to varying degrees" (p. 17). There may be two possible factors that have emerged that could be taken as possible predictors for the successful implementation of business games within Kenyan organisations.

The first is that Kenya is demographically young country with a majority of the current workforce being part of the digital generation (15-34 years old). The second would be the

strength of the country as a technological innovator with wildly successful mobile based innovations within finance and information sharing. These two factors put together suggest that the current workplace consists of employees for whom play through games and gamification are likely to be a significant part of their current societal interactions. The concept of play is now regularly part of organisational management with several organisations regularly undertaking team building events that primarily focus on physical game play. If as identified by Bourdieu (1984) the contribution of a business game company as a cultural intermediary is in framing business games as valuable, then the situation suggests an efficacious environment for business game companies to promote the use of business games within Kenyan organisations.

Additionally, given the argument for the import of technicities, with regards to the use of digital vs. non-digital games, it could be argued that non-digital games offer a low cost, relatively easy platform with which to deploy the use of games within Kenyan organisations. They can also be adapted relatively fast to suit a particular challenge or cultural aspect. However, non-digital games could appear to be old fashioned which could affect motivation. In addition, non-digital games provide fewer opportunities for repeated stimulus after the game which may be a necessary consideration especially when game concepts are relatively new and may need continuous reinforcement.

Undoubtedly, culturally unique complexities exist in the Kenyan workplace such as paternalism, disparities between societal culture and organisational culture, patronage and legacies of entitlement, bureaucratic leadership and management systems. The tacit knowledge of the cultural situation becomes especially crucial for the business game company as well as for the game facilitator when identifying the learning competencies that the game needs to tackle and how to do so within the scope of the local idiosyncrasies. For example, it could very well be that an organisation would like a game solution to address strategy and competitive positioning but are dogged by a management whose position is secured by political patronage.

In general therefore, the findings of this study suggest that business games may not require alternative design considerations as much as they would require finesse in terms of sensibility towards the learning situation.

### **7.3. Methodological Afterthoughts**

This section is a short reflection on what alternative approaches might have contributed to alternative views in the development and contents of the study. These observations also give rise to reflection on other avenues for further research.

#### ***Observation of play.***

This study would have benefited for participation in one of the game play activities to include the researchers own observations. These observations on the learning situations would have provided insights into the learning structures that are being used by the business game companies. This way I would have been able to further understand from a first hand experience the influence of facilitation in concretising the game play experience as well as the ways in which transfer was supported.

#### ***Investigation of the digital vs material.***

There are studies that have covered the influence of use of tangible material in serious play (Gudiksen, Poulsen, & Buur, 2014), the metaphoric roles actual three-dimensional objects carry, as well as the significance of embodied experiences such as thinking with the hands and body (Roos, 2006). While reasons for the choice of digital versus analogue did emerge, the line of questioning in the interviews indicates a research bias given the theoretical background framing the study. Questions towards the study participants was framed around reasons for the lack of use of digital rather than with reasons for use of analogue. Reframing of the questions would likely have yielded more discussion on the benefits of using tactile board based games rather than comparisons between the analogue and digital.



#### 7.4. Further Research

In which direction could this study now go? This study has been useful in opening up questions that could be possible avenues for further research:

Concrete level	Long term observations within organisations using games to document learning and transfer
Meta Cultural level	Applied research in the implementation of business game within Kenya and/or the design of culturally specific game tools for the region.
Both	Building a business game database

Table 7. Avenues for further research on concrete or meta cultural levels

##### ***Long term observational studies within organisations.***

There is the opportunity for long term observational research within organisations to obtain demonstrable knowledge to document the learning transfer.

It would be interesting for active observations of learners in their real life organisational contexts after the game based intervention to be made. This could produce interesting findings and is therefore an opportunity for long term observational research to document the learning transfer when the clients return to their real life situations.

##### ***Application within the Kenyan Context.***

The hypothesis laid out in the meta cultural discussion of this paper indicate that there is significant potential to explore the use of business games within Kenyan organisations. Firstly, more broadly, research is needed to uncover the culturally contingent organisational cultures. Following this, investigations on the use of business games would demonstrate if business games are able to bridge cultural contexts. Effective implementation experiments would suggest several potential avenues for organisational interventions that could prove to be significant in the region.

##### ***Business game database.***

Greco et al. (2013) develop a taxonomy of business games that consists of 40 elements for comprehensive description of a business game. While beyond the scope of this paper, this taxonomical approach may help towards disambiguations such as those raised by games like *Railroad Tycoon* (Meier, 1990). Based on a fairly large number of nearly 40 elements, it is

thorough and a capable basis for the authors' undertaking to develop a database of business games. Searches for this database however, yielded no results and research into other business game databases yielded either stalled results such as the Serious Games Studies Database (n.d), or nothing at all and remains a gap that needs to be filled. The most recent cataloguing of business games that Greco et al. (2013) could find is the 1997 assessment by Chris Elgood (Elgood, 1997) with 354 games described according to subject and target group as well as other information like number of players and play time.

Building a community of reference will be beneficial in identifying developments and trends within the development of business games. Such knowledge is useful for the development communities towards the improvement of current business games as well as the innovative development of new games. Since one's choice is only as good as one's options - for managers within organisations, better access to what games are available will likely lead to more suitable game choices. Such a game database that is sizeable and reliable will require a collaborative effort of both businesses and academia (Greco et al., 2013). A large, frequently updated database that includes non-digital as well as foreign language business games would provide a rich resource for the needs of organisations, researchers and developers alike.

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