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**AN APPRAISAL OF THE PROJECT MANAGEMENT APPROACH FOR PROPERTY
REFURBISHMENT IN THE REAL ESTATE SECTOR IN IRELAND**

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MBA- General

Date: 20th August 2018.

Declaration

I declare that this dissertation is the result of my own independent research work unless the words have been placed in inverted commas (“...”) and all original sources, ideas that I have cited are properly acknowledged by means of complete reference. A full reference section is included with this dissertation.

No part of this research work has ever been / previously been submitted to any institution, college or university for the award of Degree or Diploma. This dissertation is fully in compliant with the academic policy of Dublin Business School.

Signed: *M. Eledan*

Date: 20/08/2018

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Abstract

The study was conducted to appraise project management approach that would be effective to facilitate property refurbishment in the real estate industry in Ireland. The objectives of the study were to examine the processes, policies, and procedures in terms of best practices that exist in the application of project management approaches used in sustainable property refurbishment as well as determine the factors that are required for the effective implementation of such projects in Dublin. The study also assesses if there were advantages derived by using project management techniques in property refurbishment projects within the case study area. Mixed research design was adopted in the quest of achieving the objectives and providing valid and reliable answers to the research questions of the study. To this end, the researcher embarked on a questionnaire survey of 45 property developers and project managers as well as carrying out key informant interviews with 5 housing Planners within the Dublin area of Ireland.

It emerged that sustainable property refurbishment follows the standard processes and procedures of project initiation, planning, implementation, monitoring and control and project delivery in Dublin as it is applicable in other climes globally. It was also discovered that time, quality, client satisfaction, dispute and litigation, health and safety, communication, technical requirements and environmental issues are very important for successful implementation of sustainable property refurbishment in Dublin. It was recommended that officials of the town planning authority should improve on their technical knowledge on the job through acquisition of professional training relating to project management and town planning. Property developers and project managers were also advised to improve on their technical know-how and expertise of project management for property refurbishment projects.

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Chapter One: Introduction

1.1 Introduction

The real estate industry is regarded as one of the major contributors towards the national economy of any country. In a practical term, real estate remains the backbone of any nation's infrastructural, economic and social development and therefore has a very complex linkage to a nation's prosperity. For instance, in Ireland during the Celtic Tiger period, the real estate sector contributed significantly not only to the economic growth of the country but also to its downfall as well. Despite the real estate sector (especially the 'housing and construction bubble') contributing enormously to the collapse of the Irish economy in 2008 that saw the country plunge into severe recession (DKM, 2012, p. 5), the sector remains very vital to both economic and social recovery especially in terms of solving the housing crisis and practical infrastructural decays. The impact of real estate contribution to the Irish economy since the country recovered from recession is well documented. According to the Central Statistics Office (CSO), about €14.6 billion has been accrued of in GDP per annum in real estate sector in 2016 alone (CSO, 2016a). The report also shows that construction industry particularly generated a significant amount of €7.1 billion in annual GDP in the same year under review.

Apart from economic implications, there is also social aspect in terms of ensuring that citizens' housing needs are met. This complex linkage makes researching real estate sector a top priority especially in a country like Ireland, which has undergone real estate collapse and recovery. According to Oxford Dictionary (2000), the concept of real estate in its simplest form comprises of land as a natural resource and all the other human and non-human features that are on it and surrounds it (for example property) to meet the human need of habitation, and other commercial and non-commercial purposes. Gaddy, Hart and Wolk, (2003, p. 13) therefore argue that real estate means "everything [at] below and above the earth's surface, plus all things permanently attached to it". In other words, real estate is more extensive than the term land and incorporates not just the physical segments of the land as provided by nature, but all that is permanently affixed to the land either by nature (example, trees, bushes, and minerals) or artificial attachment (example, buildings, gas lines, and roads) (Gaddy, Hart and Wolk, 2003, p. 12). Roulac *et al.*, (2006, p. 477) claimed that real estate development is an all-round procedure where activities

range from the transformation of brownfield sites to the buying of natural land to the refurbishment of existing buildings and to the trading of serviced sites for others to develop.

Given the goal of this thesis, the researcher will be focusing more on the ‘residential property refurbishment’ in the real estate sector of the Irish economy. The study will holistically evaluate property refurbishment techniques that is most recently applied in the Irish housing sector in terms of project management approach, knowledge gaps between the real estate stakeholders, government legislations and the implications for addressing housing needs. In property refurbishment, we deal mostly on extending the lifespan of a building which is already in existence either by modifying its structure or recreating an entirely new building that suits the contemporary time (Riley, 2011, cited in Ryu, 2014, p. 13).

In this regard, it should be noted that real estate ‘refurbishment’ includes all activities that deal with land and improvements on land by the people and the accompanying bundles of legal rights contained in it. The real estate sector can be classified into Residential, Commercial, Industrial, Agricultural and Special purposes, with each group having different types of building structures to meet the purpose for which it was invested in (Gaddy, Hart and Wolk, 2003, pp. 11–13). According to Alvani, Bemanian and Hoseinalipour (2014, p. 519), the accomplishment of construction projects and real estate business generally is tremendously influenced by the physical environment or topography, economy as well as political and the socio-cultural traditions, particularly the human-related components, which are typically not quite the same globally.

Refurbishment projects can be defined as construction works carried out in a building in the form of improving, remodelling, modernising, and modifying the property, which can be because of poor maintenance, neglect, obsolescence or complete deterioration. An existing building can be converted into different shapes and structures in accordance to the needs or ‘priorities’ of the builder and the property owner in particular, “whether they are individuals extending their homes, or a multi-national corporation developing a cutting-edge production facility, or a government department providing much needed social infrastructure” (Cunningham, 2013b, p. 2).

The point of refurbishment is to add value to the existing property and thus helps in the reduction of carbon cost of the building, which can be by enhancing the design to accommodate energy efficiency, for example (Ashworth, 1996, cited in Sodagar, 2013, p. 280).

It could be suggested that due to the expensive nature of new and modern apartments and their short supply to meet the increasing need for affordable shelter makes renovated or refurbished property highly sought after by individuals and households for residential purposes. Nevertheless, the issue of following standard project management approach in the property refurbishment exercise is also critical to ensuring safety in construction work and comfortability of occupants of the refurbished properties (Cunningham, 2013b, p. 15). This study takes into consideration the critical role played by project managers and how they manage different factors that affect property refurbishment exercise in Ireland.

1.2 Background to the study

According to Casey (2005, p. 1) “Dublin is a small capital by international standards, the size of a substantial provincial city in Britain or Europe, and yet its architecture clearly lays claim to its status”. Most of the accumulated houses found in the European continent were built in the 1900s and Ireland is not an exception to this phenomenon (BPIE, 2011, p. 35) Which comprises of mostly old structures found in Dublin with more than 40% of houses built before 1960 and 90% erected before 1990. In fact, several building currently existing in the EU (Dublin inclusive) will nevertheless be standing firm in 2050 (The Economist, 2013, p. 3). Over the span of Ireland's first urban century, legislation relating to housing and social policy played an immense part in deciding the nature, area, size and housing units throughout the nation (especially Dublin city) McManus, (2011, p. 254).

The human rights angle to the issue of housing is also a fundamental right, which is legitimately connected to other rights such as: food, water, health, job and family rights globally; thus, the United Nation in its Universal Declaration of Human Right 1948, Article 25.1 states that:

“Everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food, clothing, housing, and medical care and necessary social services...” (OHCHR, 2018).

From the foregoing, one of the indicators of sustainable development according to the United Nations is the fact that every individual or household has shelter over their head and hence, has access to standard accommodation or a house (OHCHR, 2018). Likewise, Bakar *et al.* (2010, p. 66) suggests that housing as a major component in urban development plays a significant aspect in achieving the objective of sustainable development. Therefore, housing property plays a crucial role in determining the economic situation of individuals, families and organisations. In addition, residential property (newly build or renovated) plays a significant role for end users' satisfaction, as they all live in various type of property, the cost and quality of their accommodation vastly impact their quality of life (Arnott and McMillen, 2007, p. 142). At the same time, McManus (2011, p. 22) points out that the supply of housing is something more than the accommodation of people or solving of social issue. Furthermore, the European Union Agency for Fundamental Rights integrates the international housing right into its Social Charter, which was agreed upon by all member States with the common view and obligation to “recognise and respect the right to social and housing assistance so as to ensure a decent existence for all those who lack sufficient resources” (EUAFR, 2015).

Thus, as an issue of human rights, provision of social housing has been recognised not just for ensuring decent shelter for all in society irrespective of social standing but also helps in boosting the overall economy while also addressing issue of homelessness. For instance, Ching, (2014, p. 2) explains that since buildings do not occur in solitude, their construction is conceptualized to meet various human activities in response to socio-cultural, economic and political needs, taking into consideration all these factors as it creates development opportunities. To this end, Bakar *et al.* (2010, p. 71) was able to demonstrate that the application of sustainable building characteristic has been a useful act for the sustainable development. Similarly, Hickey (2014, p. 4) was of the view that sustainability of building is premised on the design, construction and how the building is being used as daily life evolved in it.

Moreover, according to UN-Habitat, in Europe and the US, housing has turned out to be a greater asset for investment than a place to live; yet, when the property boom crashed in 2007-2008, housing investment slowed down in several countries...and [housing shortfalls represent a challenge that is hard to measure] (UN-Habitat, 2016, p. 49).

Dellepiane, Hardiman and Heras (2013, p. 3) emphasize that “the international financial crisis of 2008 had an uneven impact in different European economies, among those particularly severely affected were Ireland and Spain...with a collapse in property values of over 50 per cent”. While, other studies like Hearne (2017, p. 93) suggests that “the increasingly neoliberal orientation in housing policy in recent decades led to the crisis of 2008”. In 2008, it could be noted that after the great recession:

A slowdown in housing construction and an inability to purchase homes for many reasons has resulted in more people in Ireland renting than at any other time. An acute housing shortage, particularly in the Dublin City Area, has led to sharp and sustained increases in rent, driving hundreds of vulnerable families into homelessness

(O’Brien, 2015).

However, the real estate sector in Ireland has been faced with a lot of challenges in recent times, even though the economy has fully recovered and growing effectively. According to Simon Coveney T.D., then Minister for Housing, Planning, Community and Local Government state that the “lack of supply is driving up prices, increasing rents, which in turn influences homelessness” (Rebuilding Ireland, 2016b).

According to Department of Housing, Planning and Local Government, the vision of Irish Government on housing is to completely meet its commitments to those who require housing assistance, with the view to ensure a right to housing, and access to secure a decent home at an affordable price through its housing policy (DHPLG, 2016b). Although, much effort has been put in place by the Irish government to make housing affordable for its citizens, there are still difficulties faced by people towards ownership of homes. To buttress this further, Enda Kenny TD former Taoiseach stated that “in 2006, more than 93,000 new houses were built and by 2012, the figure had fallen to a little over 8,000 houses” (Dáil Éireann debate, 2016).

This short supply of housing over time due to recession in Ireland has led to high rents and even homelessness especially in big cities like Dublin. “Obviously in Ireland, as opposed to somewhere else in Europe, renting a property is not seen as a long-term alternative for households...as they would want to possess their own property” (Gerlach, 2015).

In the independent think tank, TASC website, Dr Rory Hearne claimed that “housing crisis is set to worsen and the government needs a radical change in approaches to increase housing building” (TASC, 2017). Lyons (2018) as reported in Daft.ie states that housing supply and demand are forces driving cost up or down, and as a result of rent increases landlords are exploiting the huge rise in demand (Hearne, 2017, p. 65). For instance, “a studio or a small one-bed flat of about 45sq m in Dublin will set you back €1,102 per month, making Dublin even more expensive than Paris” (McWilliams, 2018). The rent in Dublin City increased rapidly by approximately 30% while rises in excess of 20% were likewise recorded in some of the county councils within Dublin metropolis: Dún Laoghaire–Rathdown (26.2%), at the same time, Fingal was (22.8%), South Dublin (22.7%) and Kildare (20.3%) respectively (CSO, 2016b).

Furthermore, according to Lyons (2016), the total absence of any significant level of construction in Ireland in the last five years is a systemic failure in urgent need of policy answer. The latest report from the Central Statistics Office (CSO) on New Dwelling Completions (NDC), show that the numbers of new dwellings built has been increasing steadily each year to stand at 14,446 in 2017, a year-on-year increase of 45.7%. But in the first quarter of 2018 there were only about 3,526 new dwellings built (CSO, 2018), which is not adequate enough to address the current acute housing crisis in Dublin. The overall projection of building and construction activity is predicted to rise by roughly 14.1 and 12.7 per cent in 2018 and 2019 respectively (CBI, 2018, p. 26). In the Ireland’s Competitiveness Scorecard report, Peter Clinch states that “despite an increase in construction activity...property price inflation is likely to continue” (NCC, 2018, p. 6). The Central Bank of Ireland in its macro-finance review report emphasises that “uncertainty surrounds the exact level of new housing completions, as conflicting data from the ESB, BER and BCMS need to be considered” (CBI, 2017, p. 25).

However, a 2016 survey report conducted by the Society of Chartered Surveyors Ireland on “*Irish Construction Prospects*” indicated that the shortage of housing supply is the most significant challenges facing the residential property market because of skills shortage, lack of land, availability of finance, lack of profitability in residential construction due to high costs, change in planning process and building regulations (SCSI, 2016).

In the TASC paper, Dr Rory Hearne predicted that the current housing crisis would worsen and “it could take over 40 years to provide a permanent home to those on the Dublin City Council housing waiting list” (Hearne, 2017, p. 83). This implies that if the property crisis is to be solved and reduced then renovation of existing run-down buildings is the answer, as reinforced by the opinion of Lyons (2017) that says extra supply of housing is just the only solution.

With a specific vision to deal with the housing shortage, the Irish government under the *Rebuilding Ireland* has set up an initiative plan to double residential construction by delivering 25,000 homes annually in the period to 2021, while simultaneously bring empty and under-used housing stock back into utilization (Rebuilding Ireland, 2016a, p. 8). This is particularly jarring when faced with figures from the 2016 census which report over 183,312 vacant dwellings in the country (CSO, 2016c). As indicated by The Economist (2013, p. 3) refurbishment rates within the EU (including Dublin) are very low, standing at roughly 1% of the building stock. Consequently, it is normal that renovation work will turn out to be more significant later in the future. Rebuilding Ireland’s national vacant housing reuse strategy 2018-2021 report indicates that refurbishment costs for older properties (1940s and earlier) is significantly more costly (DHPLG, 2016c, p. 54).

But the most important aspect of sustainable development property is the transformation of old buildings for new use Hickey (2006, p. 47). Emmitt and Gorse (2014a, p. 1) explained that in refurbishment exercises, buildings are demolished, upgraded, altered for different purposes. While, Rahmat, Nordin and Ali (2005, p. 37) argued that refurbishment of property, in its structures, for example, modernization, renovation, rehabilitation and repair, is one of the most critical economic drivers in the construction industry of many developed countries. The authors also uncovered major reasons for house refurbishment such as physical deterioration and obsolescence.

In a related study, Boyd and Weaver (1994, cited in Rahmat, Nordin and Ali, 2005, p. 38) pointed out that property refurbishment is generally considered more complex and of higher risk and as having more cost and time over-runs than new build projects.

Emmitt and Gorse (2014a, p. 1) outlined further that building projects must meet all standard requirements for constructing such structure notwithstanding the nature of the requirement of the client. This makes housing refurbishment projects highly in need of 'project managers' to ensure that the entire work is properly managed up to a required standard in accordance with government regulations and that contingent risks are well managed while also ensuring cost effectiveness and that the needs of the client as well as the end users are being met.

While project management tends to be more pronounced in businesses, however, its range of skill is transferable beyond various businesses and professions. Because its main principles are universal, a similar technique is used in housing refurbishment projects to develop, create, organise and achieve project success (Larson and Gray, 2011, p. 4). This is corroborated by the opinion of Bakar *et al.* (2010, p. 66) that successful project management is becoming progressively imperative for sustainable housing to remain competitive in the modern day unique business environment. PMI (2017, p. 10) also supports this approach that project management is successfully proficient through the proper application and integration of project management method identified for the project. Nwachukwu and Emoh (2011, p. 57) claimed that the execution of any building project (both new buildings and newly refurbished) relies upon the technique for success embraced by the company in charge of its implementation and execution. In addition, the procedures for success in any building project are executed in the management of the project time, cost, quality and material management using project life cycle concept. Nwachukwu and Emoh (2011, p. 74) firmly emphasized the need to utilize the modern project planning and control techniques in accomplishing the required quality and material targets of a development plan and objective.

It is evident that an effective project management approach is crucial to successfully delivering property refurbishment in the property sector. This argument is backed up by Nwachukwu and Emoh (2011, p. 56) who suggest that the project success lies in the (effectiveness) and efficiency of project management. This view is also shared by Cunningham (2013, p. 1) who argues that project objectives can be accomplished, delivered to the required quality standards, securely, on time, and within the approved budget.

To this end, this research will investigate the processes, policies, and procedures of housing construction in Dublin and how different techniques of project management can improve and facilitate property refurbishment. As a direct result of this, a new area of best practices regarding project management in the subject area will be identified.

1.3 Thesis Statement

The housing crisis in Ireland particularly in the Dublin City Area and the need to facilitate effective property refurbishment to solve the identified real estate challenge led to choosing of this research topic on property refurbishment using project management approach. In essence, the current study carries on from where previous research on the subject matter has stopped, and with particular focus on the processes, policies, and procedures of housing construction in Ireland and how different techniques of project management can improve and facilitate property refurbishment.

1.4 Research Questions

Given the thesis statement and rationale behind the subject matter of the study; the following research question will serve as the central research question that will be answered by the study. The research question is as follows:

What project management approach would be effective to facilitate property refurbishment in the real estate industry in Dublin, Ireland?

In the light of the above research question, the following sub-research questions will also be answered to satisfy the different dimensions of the research problem which the current study intends to solve. These sub-research questions include:

1. What are the processes, policies, and procedures in terms of best practices that exist in the application of project management approaches used in sustainable property refurbishment?
2. What is/are the advantage(s) of using project management techniques in property refurbishment?

1.5 Aim and Objectives of the research

The aim of the research is to appraise a project management approach that would be effective to facilitate property refurbishment in Ireland real estate industry. In the light of the aim of the research, the following objectives will be achieved at the end of the study; they include:

1. To examine the processes, policies, and procedures in terms of best practices that exists in the application of project management approaches used in sustainable property refurbishment.
2. To assess if there is an advantage in using project management techniques in property refurbishment.

1.6 Significance of the research

Available information shows that there is little or no research done in this area. During the pilot study on relevant literature review and the foregoing reviewed studies, it has been discovered that the real estate industry in Ireland is becoming very important to the Irish economy due to the increase in the demand for housing. And in order to meet the demand an effective project management approach needs to be implemented, so that all stakeholders will meet the deadline to solve the housing crisis in Ireland. Furthermore, the hope of all stakeholders, such as developers, planners and project managers are dependent on the effective and efficient delivery in property refurbishment projects using project management concept. To this end, this research will make use of the project management approach framework, which allows property developers and project managers to exercise skills and knowledge to reach project goals through various activities.

It is expected that the study will be relevant to all stakeholders in both project management and the property industry as the data collected would potentially guide their framework policies, and procedures regarding the provision of an effective service delivery. Despite the fact that other researches have been undertaken in terms of project delivery, customer service satisfaction, in building construction projects, this research will look more closely at the use of a project management approach in property refurbishment. Furthermore, the research will contribute to the already existing vast body of knowledge on property refurbishment by providing vital information on effective practices.

Hence, the current study establishes a critical overview of effective factors of project management best practices, and a review of past literature on the project will be carried out. As a direct result of this, a new area of best practices regarding project management in this area will be identified. The outcome of the research also acts as a resource for further research in the field. It will also assist other researchers who are intrigued to identify focus area that needs further investigation in property refurbishment works. The research outcome would also be relevant to students especially Dublin Business School who may want to conduct research on similar studies or a related area.

1.7 Scope of the research

Notwithstanding the fact that the current research examines the Irish real estate industry, the focus of the investigation that is carried out is based on property refurbishment and how applying the right project management approach leads to successfully project delivery to solve the housing crisis within the study area. Similarly, project management approach is limited to the traditional project management approach which is perceived to also be compatible with property refurbishment projects. Lastly, research investigation in form of questionnaire survey and interviews were conducted on principal stakeholders in Dublin, being the capital city of Ireland and one of the most hit by the housing crisis. The choice of Dublin also offers the researcher easy access to the target participants of the study as well as real estate/housing authorities which are perceived to be concentrated in Dublin more than other cities across Ireland.

1.8 Structure of the research

The research follows the standard research structure of five chapters. The content of each chapter is explained below:

Chapter One: This chapter introduces the entire study and gives concise overview research information that led to the conceptualization of the current research, the thesis statement specifying the research gap to be filled by the current study and the research questions reflecting questions related to the research gap that were answered in the course of the research. The chapter also spotlights the aim and objectives of the research to be achieved in the course of the study which are also closely related to the research questions and thesis statement. Furthermore, the chapter reflects the significance of the research and the scope that binds the conduct of the entire study.

Chapter Two: This chapter reflects the conceptual, and theoretical literature review of previous research in order to establish the research basis for the current research and conceptually cum theoretically articulate the research gap as reflected in the thesis statement of the research. Specifically, the researcher reviews the identified concepts that form the crux of the subject matter which includes property refurbishment, project management and project management approach. Similarly, literature in the form of theoretical models is reviewed to reflect their interrelationship of the variables of the research and also advance a theoretical basis for the conduct of the current research. Furthermore, empirical studies reflecting previous studies that show the interrelationship of the identified variables or concepts of the study is undertaken leading to a gap in literature that gives room for the conduct of the current study.

Chapter Three: This chapter of the research reflects how the researcher answered the main and sub-research questions and achieves the aim and objectives of the research. In essence, the researcher explained the methodological choices and reasons for selecting them in place of other options towards arriving at valid and reliable and empirical information that formed the conclusions and recommendations on the research questions of the research. Precisely, the researcher in this chapter discussed the research philosophy, research approach and strategy, sample and sampling technique, data collection method and procedures, data collection instrument, data analysis, issues on research ethics and limitations of undertaking the research.

Chapter Four: This chapter of the research illustrates the outcome of the questionnaire survey and the interview conducted during the field work of the research. Specifically, the researcher presents, empirical analyses and interprets the opinion of the participants of the survey and interview in line with the research questions and afterwards develops valid and reliable conclusions and recommendations on the subject matter as reflected by the research questions and the objectives of the research.

Chapter Five: This chapter wraps up the entire dissertation. It discusses the conclusions arising from the field study in relation to the research questions; develops policy related and action plans to tackle the gaps noticed in the course of the study and also advances suggestions on further studies that could be carried out in order to increase the body of knowledge on the subject matter.

Chapter Six: This Chapter reflects on my learning experience before and during the period of conducting the dissertation and throughout the MBA program. Precisely, the section reflects the learning process and styles I adopted, and how it impacted positively on my dissertation and will influence me in my future career endeavours.

Chapter Two: Literature Review

2.1 Introduction

This chapter reflects the conceptual, empirical and theoretical literature review of previous research that are related to the topic in order to establish the research basis for the current research and both conceptually and theoretically articulate the research gap as reflected in the thesis statement of the research. Hart (2018, p. 3) describes literature review to be critical analysis and synthesis of existing research knowledge that are relevant to assist the researcher to solve the research issues surrounding the subject matter of the current study. This further corroborates the view of Williams (2013, p. 39) that literature review reflects the review of concepts and theories related to the variable of the current research with respect to findings from previous studies and hence, determine the place of the current study as outlined by its research questions.

Specifically, the researcher reviews the identified concepts that form the crux of the subject matter which includes property refurbishment, project management and project management approach. Similarly, literature in form of theoretical models is reviewed to reflect their interrelationship of the variables of the research and also advance a theoretical basis for the conduct of the current research. Furthermore, empirical studies reflecting previous studies that shows the interrelationship of the identified variables or concepts of the study is undertaken leading to a gaps in literature that gives room for the conduct of the current study.

2.2 Concept of Project Management

Brewer and Dittman (2013, p. 10) maintained that:

The genesis of project management can be traced back to the times of constructing the immense pyramids in Egypt. Whereas, few people think that Manhattan project in the mid-1940s was the first application of modern project management since it had a different project manager and technical manager; in any case, others would contend that the roots of present day project management tools and practices date to the 1950s.

According to Nwachukwu and Emoh (2011, p. 58), project management is a fusion of two concepts (project and management) into one which are merged together to achieve an economic driven goal or objective. Going back to the submission of Nwachukwu and Emoh (2011), the denotation of project management cannot be completely appreciated without a concise endeavour to define the two components. With respect to project, Leech (2004, p. 4) described project as a connected series of activities involving a scope of resources, planned to accomplish a specific result and regularly used as a tool of change, within a given time frame and is the duty of a single person or organisation.

Similarly, Snyder (2016, p. 8) stated that a project is a unique venture undertaken to produce distinct deliverables, products, or outcomes. “The most important and difficult part of the project is its beginning... If done carefully, the project has a chance of success. If done carelessly, or not at all, the project is doomed to failure” (Wysocki, Beck and Crane as cited in Cicala, 2017, p. 74). Whereas, Management is described as “planning, directing, controlling and co-ordinating of individual, group or organizational goal and objectives with the ultimate aim of achieving maximum benefit” (Nwachukwu and Emoh, 2011, p. 59). In the perspective of Carroll (2012, p. 10), management implies completing something through and with people, that has to do with planning, budgeting, allocating, scheduling, developing, motivating, reviewing, and giving feedback to accomplish a typical objective. It also means that the ‘management’ needs to be proactive to understand the dynamism of each project and also develop project strategy within the purview of the firm’s mission and vision to ensure that the project is successful.

Studies have shown that successful project follows four distinct management phases which include project initiation, project planning, project implementation and project closure. For instance, the Chartered Institute of Building (CIOB) conceptualized project management to be a managerial process that involves planning, decision making, organizing, execution and monitoring and control of a project following the sponsor’s scope and specifications from project initiation till project completion and delivery. In essence, project management is perceived as a typical managerial process of planning, decision making, execution of plans, direction, coordination, monitoring and control of resources and activities towards reaching the intended goal or objective (CIOB, 2014, p. 1).

The concept and practice of project management is better examined and discussed from the viewpoint of Project Management institute (PMI) because the body is perceived to be the custodian of project management principles and practices in modern business world. Currently, PMI “has members from more than 180 countries and more than 424,600 members... from virtually every major industry such as construction, information technology, health care and so forth” (Larson and Gray, 2014, p. 4). Therefore, project management was defined by PMI (2017, p. 10) as “the application of knowledge, skills, tools and techniques to execute projects effectively and efficiently to meet both process and product or service requirements”. Project management plays an important role in facilitating organisations to achieve procedures and strategies that ensure a successful delivery of outcome. Going by the definition of PMI (2017), it can be inferred that project management is a business tool adopted by management and their subordinates to effectively and efficiently execute projects and achieve the goals and objective of the mission of the organisation. This involves methodological processes which make use of human and non-human resources (in which the human resources determine the extent to which the non-human resources are applied) to achieve a defined purpose at a stated period of time.

Nevertheless, the above is only be achievable when management and workforce of the firm ensures that project management principles and practices adopted on the diverse projects of the firm are consistent with standards Pinto (2013, p. 54). Furthermore, Meredith and Mantel (2012, p. 1) considered project management from a systematic process and methodological perspective and expressed that it provides an organization with ground-breaking tools that enhance its capacity to plan, execute, and control its activities in the manners by which it uses its human resources (people, time, materials, finance, information, energy and so on) towards the achievement of the goals of the organization. Also, “it is the practice of organising, managing, and controlling project variables to meet the project outcomes and mission” (Snyder, 2016, p. 8).

PMI (2013, p. 14) suggests that “activities of project management should be in line with managerial and executive decisions and should be changed to match those decisions. Hence, these changes in a project environment, greatly affect the efficiency and success of the project”. The fact that project management principles and practices of the firm are tailored along the mission and vision of the firm made Kerzner (2018, p. 8) to suggest that “ by the 1990s,

companies had begun to realise that implementing project management was a necessity, not a choice; while in 2016 project management had spread to virtually every industry and best practices were being captured”. This view was supported by PMI (2017, p. 10), which states that to survive and remain competitive in the global economy, organisations are embracing project management to always deliver business value.

However, Meredith, Mantel and Shafer (2016, p. 13) are of the view that a significant amount of new advancements and transformation in project management are being driven by uncertain global markets, rapidly evolving technology and the probability of education procedures that occurs frequently. According to Lock (2014, p. 1), the concept of project management is to design, coordinate and control all activities so that the project is finished as effectively as possible despite every difficulties and risks. As a result, project management as a skill set is used to effectively and efficiently initiate a project and successfully complete it within a given period. Furthermore, Brewer and Dittman (2013, p. 143) claimed that project management helps the management and staff of a firm to overcome risky project, and also efficiently manages diverse company resources in such a manner that it will be just enough to meet the intended need of the firm. PMI (2013, p. 16) argues that project management emphatically centres around effective delivery of products, services or results. This successfully triggers visibility, competitiveness and sustainability with respect to projects conducted by a firm. Additionally, Wysocki (2014, p. 29) describes project management concept as an organised common-sense technique that uses the proper customer involvement to meet sponsor requirements and deliver expected incremental business value.

Meredith and Mantel (2012, p. 18) states that the project lifecycle consists of start and finish time putting into consideration objectives of meeting scope, time and cost concept in the entire project life cycle. At this stage, the project begins slowly, progress to the top, and afterwards, fall at the final stage of project delivery to the client. The project life cycle is the period that starts with the approval of project work and finished with the handover of the desired product or service to the client (Lock, 2014, p. 4).

A typical project management phase or project life cycle is depicted by figure 1 below:

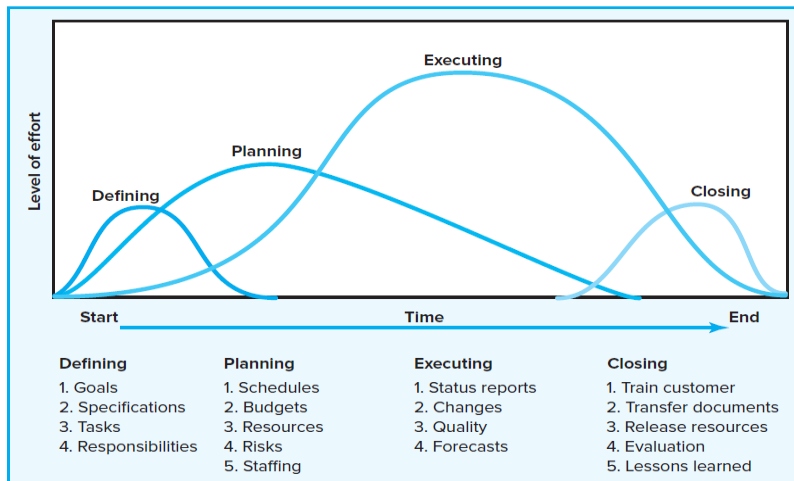


Figure 2.1: Project Life Cycle

Source: Larson and Gray (2014, p. 9).

The project management phases as represented in figure 2.1 above is also discussed as project lifecycle; and PMI (2017, p. 19) see it “as a progression of phases that a project passes through from its start to its completion”. Remarkably, the figure shows that each phase of the project flows naturally into another and is interdependent on each other to the extent that failure in one phase of the lifecycle might lead to the failure of the entire project been undertaken. In addition, as shown in the figure above, the life cycle passes through four stages: defining, planning, executing, and delivering (Larson and Gray, 2014, p. 8).

In a recent study, Bendale and Bhangale (2018) gave explanations on the factors that influence the success or failure of construction with extensive discussions on the project lifecycle stages. Specifically, Bendale and Bhangale (2018, pp. 1466–1467) implied that the project lifecycle should involve conceptualization of project idea, setting of project goals and objectives, determination of project scope and specifications, appointment of project management leadership as well as conduct of project feasibility study. Though, the concept behind the project objectives to be established in clear Strategic, Measurable, Agreed, Realistic and Time-bound (SMART) format is to develop business plan, have a clear statement of the objectives, to assist the project team focus and ensure all project stakeholders are involved in achieving a successful project result (Carroll, 2012, p. 54).

This is the logic why Pinto (2013, p. 54) argues that inside an organisation, effective project management is reliable. This concludes that an organisation's culture, structure, and strategy each have a significant influence, and they equally create an enabling environment in which a project will prosper. It could be seen that project management is the driving force behind every successful day to day business endeavour. At the same time, Oberlender (2014, p. 9) believes that project management needs a multi-disciplinary focus to organise the general requirements of a project with dependence on others to give the specialised skill.

In relation to the current study, project management concept is examined because it is essential in the successful execution of a project from start to finish and is adopted by project management professionals and consultants. Likewise, since property refurbishment follows the four-project management phase of project initiation, project planning, project execution and project closure as identified in Larson and Gray (2014, p. 9); PMI (2017, p. 18) which shows its central place in property refurbishment exercises. Given this premise, it could be suggested that project management concept is a major concept on which the subject matter of the current research is hinged. The next review of literature is on project management approaches that are adopted by project leaders in the bid to conduct cost-effective projects that are driven on project management standards to achieve outstanding project performance.

2.3 Project Management Approaches

As has been established by studies reviewed on the concept of project management, successful projects are based on effective and efficient management of the available resources that are deployed to execute the project. In the light of this conclusion, Singh and Lano (2014) noted that core project stakeholders decide on the right project management approach which will ensure that the project is implemented according to plan and given the available resources. In any project life, it is crucial to recognise or cooperate with all of the stakeholder's as soon as possible to minimise the risk of project failure and maximise project success (Young, 2016, p. 98). In essence, Meredith and Mantel (2012, p. 39) explained that project management approaches illustrates the strategy adopted by the project sponsor and project leadership to implement a given project to meet its objectives given available project resources at the time of initiating the project.

From the above, it therefore holds that project management approach is the procedure adopted by the project manager and entire project team in order to ensure that the scope and specification of the project are adhered to and resources are used judiciously in such a manner that they are enough to complete the project according to plan. Larson and Gray (2011, p. 3) suggests that project management is “a vehicle for doing good deeds and solving problems”. It could be pointed out that project management approach is the effective use of project management to achieve the objectives of a given project. Consequently, effective management of the procedure is critical to achieving project success. The project management approach provides tools and techniques to enhance the procedure and therefore accomplish project results effectively (PMI, 2017, p. 10).

2.3.1 PRINCE2 Project Management Approach

One of the modern project management approaches is the use of PRINCE2. According to Graham (2010, p. 8), PRINCE2 is an acronym meaning Projects In Controlled Environment, which is at present Version 2 and thus PRINCE2. Bentley (2006, p. 1) expresses that PRINCE2 planning techniques is centred on the product-based instead of project activities, however, it offers an arrangement of procedures that provide a controlled start, controlled progress and a controlled closure to any project. It depends largely on monitoring and control techniques as the basis on which the entire project lifecycle is driven from project initiation to completion. Hence, a typical PRINCE2 driven project comprises of starting the project; initiating the project; planning and directing the project; managing and controlling the project; management of project boundaries and closing up of the project (Singh and Lano, 2014, pp. 111).

In the event of starting a project using the PRINCE2, Vaníčková (2017, pp. 231) explained that because the approach is information technology driven there is slight difference when compared to the act of initiating a project using the traditional project management method. For instance, Vaníčková (2017, pp. 231) explained that the starting up process involves drafting an outline that reflects the business case for the project which defines the objectives, scope and targets of the project. With a clear understanding of the foregoing by the project sponsor, Vaníčková (2017, pp. 231) stated that the next steps will be to appoint a Project Board and Project Leaders (project contractors) who in turn will prepare a planning schedule that will lead to project initiation process.

At the project initiation stage, the Project Board conceptualise and document issues relating to project implementation, quality, risks and how the entire process will be monitored and controlled. This process might lead to reviewing the business case of the project with regards to the objectives, scope and specifications required to ensure that the project is successful (Vaníčková 2017, pp. 231).

The next stage of using PRINCE2 project management approach is the controlling and management of project delivery. Hence, Bentley (2006, p. 3) explained that this stage of PRINCE2 approach helps the project team to remain on track of the project direction, taking into consideration project risk issues, ensuring quality standards are adhered to and diverse rules and regulations guiding the conduct of such project are strictly adhered to improve project performance or outcome. In essence, all forms of project budget overrunning and project scope creeping are avoided because project implementation activities are conducted based on controlled timescales; costs and judicious use of different project resources. Furthermore, and in order to keep track of diverse business environmental factors that tends to influence the successful implementation of the project, Singh and Lano (2014) noted that the project implementation boundaries are effectively and efficiently managed to the extent that identified project risks are not allowed to overshoot beyond their tolerance level and hence, have adverse effect on the final outcome of the project.

The final stage in PRINCE2 project management approach reflects activities related to closing of the project. According to Vaníčková (2017, p. 231), the closing stage of the project using PRINCE2 approach is synonymous with that of traditional project management approach. Therefore, Vaníčková (2017) proposed that the project is closed through final evaluation of the project outcomes, decommissioning of the project followed by reporting cost-benefit analysis of the project and crafting recommendations for future actions on similar projects in future. As illustrated on figure 2.2 below:



Figure 2.2: PRINCE2 project management approach stages

Source: adapted from www.keycomcorporate.co.uk

2.3.2 Stage Gate project management approach

Stage-gate project management approach such as the PRINCE2 project management approach is one of the modern project management approach adopted by proactive and result driven project managers. The approach was developed by Copper, R.G in 1986. In his 1990 publication, Cooper (1990, pp. 44) stated that Stage-Gate project management approach is a systematic process through which the entire project activities are grouped into stages and entry into a new stage is facilitated by gates which are stop-gaps that ensure monitoring and control and ensures that the project is on track.

PMI (2013, p. 549) describes the phase gate as a review at the end of a phase in which a decision is made to proceed to the next phase, to go on with the change, or to end a project or program. This view was supported by Meredith, Mantel and Shafer (2016, p. 198) which suggested that ‘careful reviews should be conducted at the end of each “phase” of the life cycle, with feedback given to the entire project team each time a project review was conducted’. Stage-gate project management approach just as the PRINCE2 project management approach is one of the modern project management approach models adopted as standard methodology required to deliver the projects efficiently and effectively within time and budget (Singh and Lano, 2014, pp. 107–108).

In a recent publication, PMI (2017, p. 21) states that in most organisations, the project phase stage is also referred to as stage-gate, management review, kill point and phase exit or phase review. Kerzner (2010, p. 203) claimed that “the stage-gate review is the most essential event of a project” and hence, it is for keeping projects on track and deciding whether they ought to be continued, redirected, or terminated (Schwalbe 2016, p. 62).

These justifies the thought shared by Meredith, Mantel and Shafer (2016, p. 198) that “the quality-gate process here did not allow one phase to being until the previous phase had been successfully completed, but many of the phase-gate systems allow sequential phases to overlap in an attempt to make sure that the output of one phase is satisfactory as an input to the next”. Similarly, Cooper (1990, p. 45) explained that the essence of each gate is to ensure outstanding project output is achieved to the extent that the entire process is devoid of discrepancies and ensures quality deliverables at each stage of the project until final completion.

However, stage-gate process is the beginning stage when organisation identify the need to introduce developing process for project management (Kerzner, 2017, p. 60). As a result of the intricacy, significant of various IT projects, and their outcomes there are needs to take time to review the status of a project at each stage Schwalbe, (2016, p. 62). Lock (2014, p. 16) suggests that stage-gating is a useful approach for the damage control of any project that cannot be characterized with certainty in its initial days.

To this end, Kerzner (2017, p. 60) insinuates that the stage-gate were made as the traditional organisational system was planned essentially for top-down hierarchy decision-making structure for control and communications, however, it is no longer functional for organisations that use project management and horizontal work process. Similarly, Schwalbe (2016, p. 62) explained that firm generally commits more funds as a project continues, and that a management review ought to happen after each stage to assess progress, critical achievement, and continued compatibility with organisational objectives. The stage-gating methodology can be utilized to approve such projects, releasing resources in controlled measures so that the risks can be kept within defined limits (Lock, 2014, p. 16).

According to Meredith, Mantel and Shafer (2016, p. 198) “phase-gate management systems were not meant as substitutes for the standard time, cost, and scope control usually used for project management. Instead, ... to keep senior management informed about the current state of the projects being carried out”. However, the entire stage-gate project management approach depends on common sense and best practice developed over numerous years and innumerable successful projects (Carroll, 2012, p. 8).

Just like the case with adoption of PRINCE2 project management approach, Cooper (1990 pp. 44–46) demonstrated that adoption of stage gate approach has positive and significant impact on the project success indices of cost, time, quality, dispute and litigation, project team health and safety and influence of the business environment.

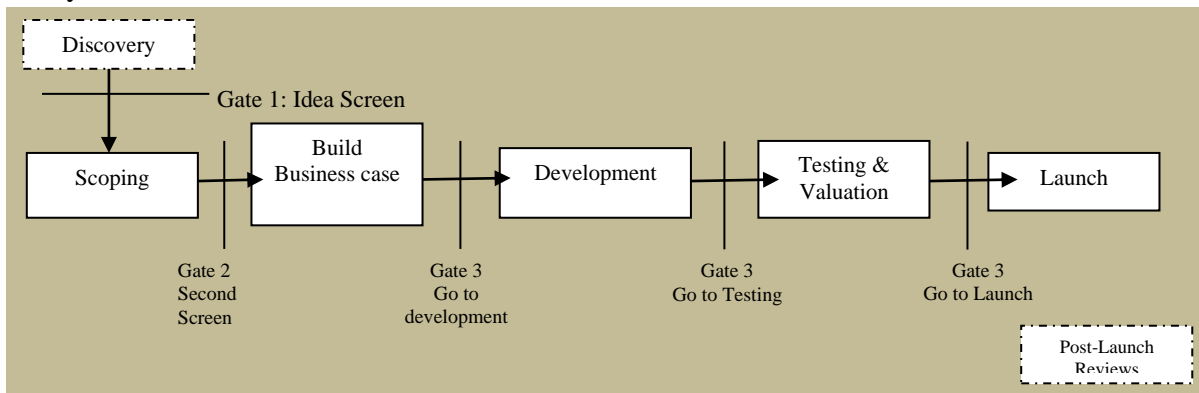


Figure 2.3: Stage gate project management approach stages as conceptualized for IT related project in 1986
Source: Cooper (2011).

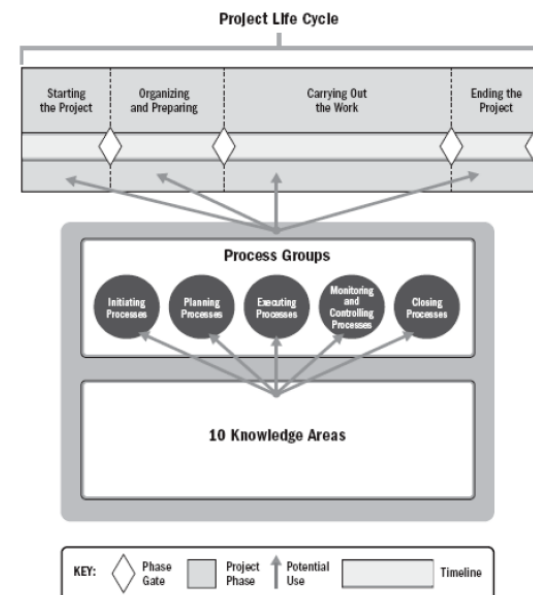


Figure 2.4: Stage-gate project management approach stages
Source: PMI (2017, p. 18).

2.3.3 Lean project management approach

The concept of lean project management approach evolved from the application of lean principles as adopted in manufacturing firm where production of goods and creation of value to the target market is done with maximum use of available resources devoid of wastage and conducted within stipulated timescale (Moujib, 2007). Lean is define as “a way of collective thinking to methodically stamp out waste whilst simultaneously maximising value” (Brophy, 2013, p. 3).

According to Moujib (2007), the lean project management approach is premised on zero tolerance for waste of project resources and that project target and final project delivery is done within planned project timeline. Using the Toyota Motors Production System on which the lean principles were premised, Womack, Jones and Roos (1990, cited in Moujib, 2007) opined that the lean project management approach ensures that a cost effective and proactive resource management process is conduct with strict monitoring and control of the cost items in the project budget to the extent that there is no form of budget overrunning and scope creeping during the period of the project. In essence, training is fundamental for all levels (top-bottom) in the firm to adequately execute transformation through lean six sigma (Burghall, Grant and Morgan, 2014, p. 274). Hence, this ensures that excess human resources costs are not incurred on the project.

Interestingly, Sayer and Williams (2012, p. 19) reinforced the success of the Toyota Production System as “the foundation for what is known as lean”. Overall, “lean is about VALUE...the creation, delivery, and retention of value” (Keegan and O’Kelly, 2015, p. 2). The lean approach framework diagram can be seen below:

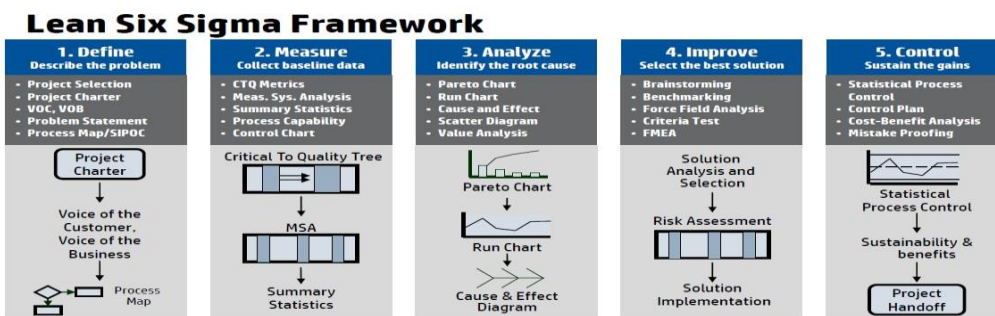


Figure 2.5: Lean project management approach stages

Source: <https://developsoftware.wordpress.com/category/enterprise-architecture/>

2.3.4 Benefits realization project management approach

PMI (2017, p. 546) states that “projects are initiated to realise business opportunities that are aligned with an organization’s strategic goals”. According to Serra (2015) the benefits realization project management approach is adopted by project managers to ensure that the project outcomes are in line with the objectives for which the projects was conceptualized through reduction of risks and ensure that at each project milestones the project is on track. Therefore, benefits realisation using project management approach means that “the success of the project is measured against the project objective and success criteria” (PMI, 2017, p. 547). For example, an effectively completed new building (refurbished) ought to provide an enabling environment that can quickly enhance user’s satisfaction (Lock, 2014, p. 11).

Thus, all the three main project goals of cost, performance and time tend to be realized at the time of hand over to the client. PMI (2013, p. 61) maintains that to ensure realization of benefits for the undertaken project, a test period (such as soft launch in services) can be part of the total project time before handing it over to the permanent operations. The benefits within the context of the approach are seen as outcomes of the project which are depicted by the scope and objectives and, their achievement forms the core of the entire project and risks that might undermine their achievement is proactively treated in the course of the project (Serra, 2015).

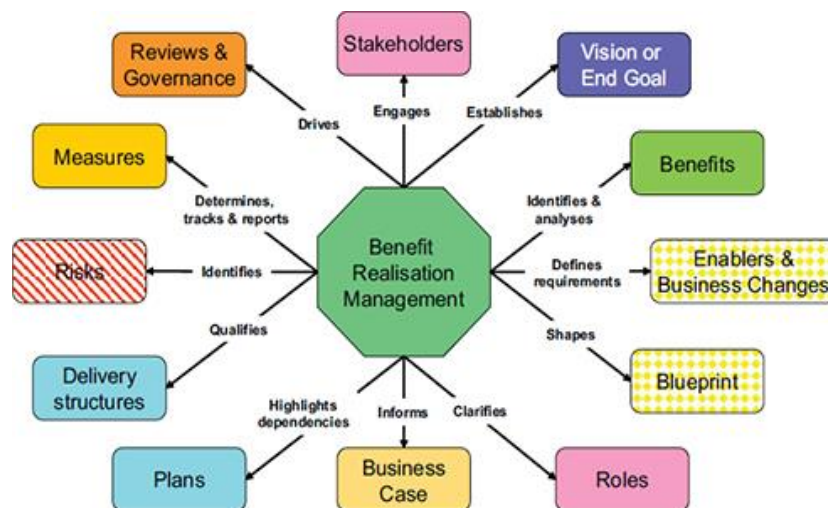


Figure 2.6: Benefits realization project management approach stages

Source: <http://www.gpmfirst.com/books/benefit-realisation-management/overview-benefit-realisation-management-brm>

2.4 Property Refurbishment

Property refurbishment has been discussed in previous studies and reports of Rahmat, Nordin and Ali (2005); BPIE (2011); Nwachukwu and Emoh (2011); Babangida, Olubodun and Kangwa (2012); CIOB (2014); Hickey (2014); Chudley and Greeno (2016); DHPLG (2016b); Rebuilding Ireland (2016a); and IASB, 2017) respectively. According to Shah and Kumar (2005, p. 1), with a rise in the number of ageing building infrastructure globally, there is an opportunity for an effective life care management (refurbishment) instead of demolition and reconstruct (new development). As “the average life span of a building is over 50 years and that a complete renewal of the existing building stock would take about 100 years, investing in building refurbishment is crucial to reduce energy consumption and greenhouse gas emissions in the EU [Dublin inclusive]” (Kaderják *et al.*, 2012, p. 1).

In its simplest form, property refurbishment means restoration of building to its initial state Hickey (2006, p. 29). It means that a property is restored back to an acceptable living or accommodative condition that is certified to be devoid of safety hazards for its occupants. “As a building reaches the end of its planned working life, decision have to be made by the FM professionals [including other stakeholders in the construction industry] regarding repairs, reuse or replacement of the building” (Haynes, Nunnington and Eccles, 2017, p. 24).

Furthermore, Emmitt and Gorse (2014a, p. 1) states that building are constructed, altered, upgraded, restored or demolished for variety of reasons. In other words, “refurbishment provides a positive counter to the negative processes of physical deterioration and obsolescence...” (Mansfield, 2009, pp. 151). Depending on the nature of the old or dilapidated physical and structural state of the property that is being refurbished, Babangida, Olubodun and Kangwa (2012, pp. 1290–1291) noted that the core objective of refurbishment is to improve on the functional performance of the property to the extent that it can serve a better and more productive purpose for its owners or occupiers in the near future. The issue of specifications and requirements bring to the fore diverse business cases that trigger the need for refurbishment of a property. For instance, Bhuiyan, Jones and Wanigarathna (2015, pp. 1094–1095) noted that property could be refurbished based on physical needs (to provide more space); functional

requirements (to integrate innovative technology); economic needs (to make a monetary gain); sustainability needs (to improve on the environmental impact and safety conditions of the property); and socio-cultural needs (to improve level of personal satisfaction and social status within the society). Emmitt and Gorse (2014a, p. 1) concluded that “...all building projects need to fulfill a function and meet set performance criteria, no matter how fundamental or sophisticated the client’s requirements may be”.

Hickey (2014, p. 5) states that sustainable property design is an expansive idea about the effect of a building in a few different ways, such as use of resources, environment, and society; and as suggested by Ching (2014, p. 3), this calls for full participation of property experts such as planners, architects, developers, building owners, project managers and additionally governmental. Whereas, Kaderják *et al.* (2012, p. 1) argues that building refurbishments are the consequence of complex decision techniques, involving various actors. Hence, “[property] refurbishment is multi-faceted and can be regarded as a generic or umbrella term which requires collaborative efforts to overcome the physical challenges”(Babangida, Olubodun and Kangwa, 2012, p. 1292). Some project activities relating to existing building renovation are illustrated in figure below:

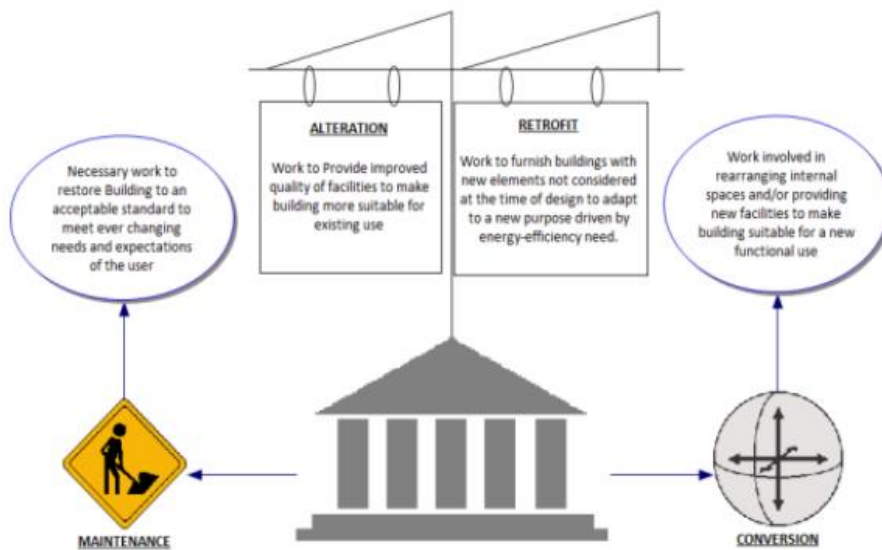


Figure 2.7: Building Renovation Diagram
 Source: Babangida, Olubodun and Kangwa (2012, p. 1292).

2.5 Project Management approach in property refurbishment

Notwithstanding the fact that property refurbishment has received sufficient attention by scholars in previously conducted studies, the research issue examining the relationship between project management approaches in property refurbishment projects is perceived to have received lesser research attention. Nevertheless, Shah Ali, Nizam Kamaruzzaman and Salleh (2009) noted that standard refurbishment projects can only be effectively, efficiently and successfully implemented using the most appropriate project management approach and within the premise of standard project management phases. This brings to the fore the importance of project management approach to the execution of successful property refurbishment projects.

Thus, Babangida, Olubodun and Kangwa (2012) explained that application of the right project management approach helps the project manager and other project site professionals take into consideration the different refurbishment regulations such as health and safety, quality assurance and standards, planning and conservation, sustainability, time and cost that have to be adhered to for successful implementation of sustainable refurbishment. In related study and to buttress the opinion of Babangida, Olubodun and Kangwa, (2012), the Department of Housing, Planning and Local Government (DHPLG, 2016a) stated that with respect to property refurbishments projects in Ireland, the Irish property industry policies for property refurbishment requires that project leaders on project refurbishment projects should adopt project management approach that adhere strictly to the provisions of building regulations, fire regulations, conservation legislation and planning regulations so as to ensure that the project is successful and sustainable in the long run.

In a recent development within the Irish property industry, the Department of Housing, Planning and Local Government (DHPLG) and the Irish Association of Self Builders (IASB) mandated that property developers and other project managers working on property refurbishment projects should comply with standard building regulations, fire regulations, conservation legislation and planning regulations and incorporate same into their project management approach during the implementation of the project (IASB, 2017). This decision by these two associations was to ensure that the welfare and the safety of the project clients and end-users of the property are achieved during and after the refurbishment project.

The primary objective of Irish health, safety and welfare legislation could be said to be: placing a legal responsibility on employers and workers; set out legal standards; stress out the significant of accident prevention and so forth (Kinsella, 2012, p. 1; Hunt, 2018, p. 59).

In the light of the foregoing, the current and practical application and adherence to project management elements required for successful implementation of sustainable property refurbishment in Dublin forms part of the fulcrum of the current study. The Irish government plays an extensive role in the construction industry, which impacts and shapes the pattern of property refurbishment through its building regulations and approaches. The Department of Housing, Planning and Local Government statutory aim is that at every strategic level, planning implies ensuring that the right development takes place in the right areas and at the right time (DHPLG, 2016e). Chudley and Greeno (2016, p. 65) explained that adherence to building regulations is crucial during refurbishment exercises because it sets out the required performance standard for re-designing and renovation of buildings. In addition, Emmitt and Gorse (2014a, p. 11) also maintained that adherence to building regulations is also important because of safety and health reasons; while Hickey (2014, p. 3) noted that building standards in Ireland is enforced to achieve quality, satisfaction and safety of the lives of the occupants and substantiality of the building.

The Irish government introduced new policies as an integrated plan to bring vacant and under-utilised housing stocks back into use for both private and social housing purposes (DHPLG, 2016d). In contrast, as published in *The Irish Times* (Kelly, 2016) points out that “some older public-housing schemes are vacant, and they no longer meet modern living standards, and that the trend has been to build a new rather than renew [refurbish]”. Finally, according to the Irish government website, the objectives of the relevant housing strategy and policies must be met before any work can be carried out (Housing Agency, 2018).

2.6 Gap in Literature

During the pilot study on relevant literature review and the foregoing reviewed studies, it has been discovered that the real estate industry in Ireland is becoming very important to the Irish economy due to the increase in the demand for housing and in order to meet the demand an effective project management approach needs to be implemented, so that all stakeholders will meet the deadline to solve the housing crisis in Ireland. Therefore, the hopes of all stakeholders, such as developers, planners and project managers are dependent on the effective and efficient delivery of property refurbishment projects using a tried and tested project management concept.

In the same instance, an effective project management approach that would help solve the successful implementation of sustainable property refurbishment in Dublin, mandates that certain criteria be met during project life cycle. A successful project outcome is measured in terms of budget, duration (time spent), quality of end-product, sponsor and client satisfaction, disputes and litigation, health and safety effectiveness of communication and environmental issues. According to Emmitt and Gorse (2014a, p. 1), property refurbishment projects are undertaken due to environmental reasons in order to improve the environmental and safety conditions of occupants of housing properties. To this end, this thesis is being undertaken to:

1. Examine the processes, policies, and procedures in terms of best practices that exist in the application of project management approaches used in sustainable property refurbishment.
2. Assess if there is an advantage in using project management techniques in property refurbishment.

Chapter Three: Methodology

3.1 Introduction

Given the research gap discovered in the literature review chapter of this thesis and the justification of the research problem and research questions; this chapter therefore reflects the methodological efforts of the researcher towards answering the research questions as well as achieving the purpose of the research. The chapter reflects explanation on crucial research methodology issues regarding to research philosophy, research approach and strategy, sample and sampling technique, data collection method and procedures, data collection instrument, data analysis, issues on research ethics and limitations of the research. Furthermore, the explanations in each section of the chapter also reflects the theoretical and research reasons why some methods were chosen in place of others given the opinion of scholars from previously conducted studies on research methodology.

The research methodology is tailored towards the research procedure and choices advanced by Saunders, Lewis and Thornhill (2012, p. 128) as depicted in the “*research onion*” in the diagram below:

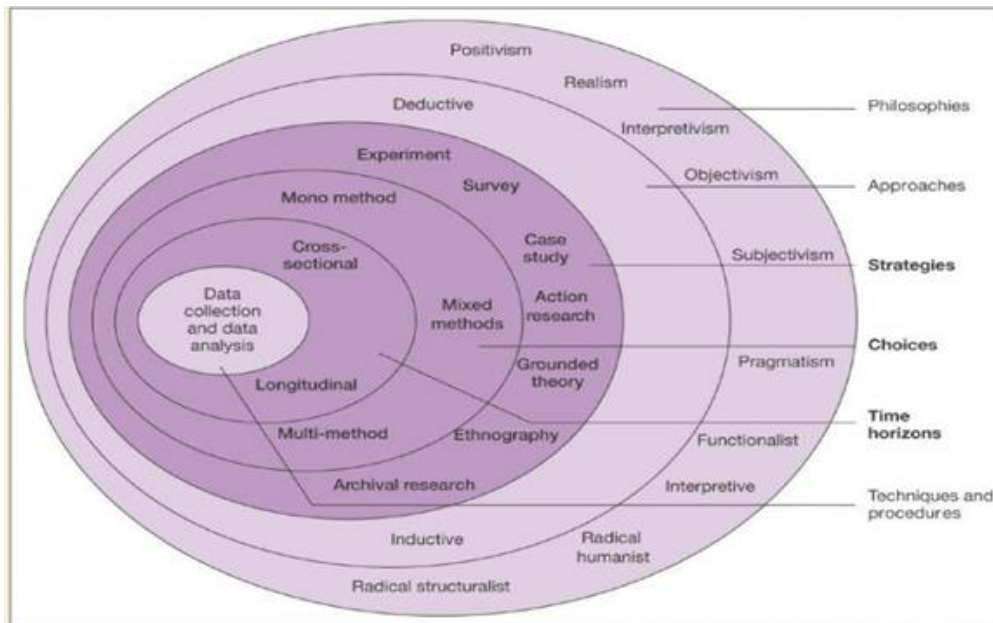


Figure 3.1: The Research Onion

Source: Saunders, Lewis and Thornhill (2012, p. 128).

3.2 Research Philosophy

Saunders, Lewis and Thornhill (2016, p. 124) posited that research philosophy deals with development of knowledge on the subject matter, which helps the researcher to understand the relationship between identified variables or behaviour of a social phenomenon; and develop the right research methodology. To this end, Saunders, Lewis and Thornhill (2016, p. 125) explained that a research philosophical paradigm depicts the theoretical underpin suitable for the empirical examination of the subject matter that forms the research problem under which the research was undertaken. In essence, determination of the right research philosophical paradigm assist the researcher to choose the appropriate methods for research approach and strategy, sample and sampling technique, data collection method and procedures, data collection instrument, and data analysis.

There are different philosophical paradigms adopted by authors to underlay their studies so that the studies are theoretically oriented and also generate empirical outcomes on the subject matter of the research. Nevertheless, the researcher adopted pragmatism philosophical paradigm because the current dissertation sought to practically appraise project management approach that would be effective to facilitate property refurbishment in the Irish real estate industry. To this end, the selection of pragmatism as a philosophical paradigm was based on the fact that Saunders, Lewis and Thornhill (2016, p. 143) noted that it advances research process that reconciles the gaps of objectivism and subjectivism; and hence, ensures that research findings are based on empirical information or data.

Additionally, the researcher adopted as a pragmatism philosophical paradigm on the premise that Saunders, Lewis and Thornhill (2016, p. 143) opined that it ensures that the outcome of the research is devoid of subjectivity, rationalization and bias in reporting the findings of the research. In essence, its adoption in the current research gives a perception that objective, valid and reliable answers are arrived at in relation to the research questions and that the researcher conducts an ethical study that is devoid of manipulation of findings of results from the field of the research.

Furthermore, the researcher was of the opinion that the use of pragmatism philosophical paradigm would not only help the researcher to solve the problem of the study following ethical research methods but also assist the researcher to adopt the right set of methodological steps such as the research approach, research strategy, determination of sample size, sampling method, research instrument and method of data analysis. To this end, the researcher can categorically state that the adoption of pragmatism philosophical paradigm was in consonance with the research onion posited by (Saunders, Lewis and Thornhill, 2016, p. 124). Also, the researcher relied on the opinion of Saunders, Lewis and Thornhill (2016, p. 144) that the fact that pragmatism allows for the use of mixed methods in terms of face to face structured interviews, questionnaire surveys and already processed data also informed the decision of its choice as a tool.

3.3 Research Design

Ketchen and Bergh, (2009) explained that the research design of a study reflects the methods on which data gathering for the purpose of the study is premised. A research design is a general plan of how the researcher set about answering the research question Saunders, Lewis and Thornhill (2012, p. 159). This notion was backed by Bryman and Bell (2011, p. 48) who express that a research design provides a framework for the collection and analysis of information. In essence, it depicts the research approach and research strategy adopted by the researcher to empirically answer the research questions and achieve the purpose for which the study was conceptualized by the researcher. In this regard, two fundamental aspects of research design adopted for the current research are explained below.

3.3.1 Research Approach

The research approach of a research according to Creswell (2014, p. 31) is synonymous with the research design of the study and depicts the sources through from where the researcher collected data or information for the purpose of the research. According to Bryman and Bell (2011, p. 37) research approach of a study illustrates the methodological choice adopted by the researcher with regards to what sources of data or information is leveraged on for data gathering purposes towards answering the research questions of the study.

Given the available research resources at the disposal of the researcher and the fact that the research was laid on pragmatism philosophical paradigm, the researcher decided to adopt the triangulation research approach. In this regard, the researcher adopted a mix of qualitative and quantitative research approach to collect valid and reliable data (raw data and numerical data) and information (non-numerical and already processed data). In essence, the approach to collection of data during the course of the research was from both primary and secondary sources.

This decision of the researcher is in consonance with the submission of Ketchen and Bergh (2009) that triangulation research approach fits in precisely with pragmatism philosophical paradigm because both research choices offers the researcher objective perspective and empirical outcomes on which the conclusion and recommendations with regards to the research questions are developed. Furthermore, Creswell (2014, p. 32) maintained that the use of both qualitative and quantitative research approach gives the researcher enough data and information which can be juxtaposed together and also used to the validity of each other and hence lead to crafting of sound and reliable conclusion and recommendations on the research question and objectives of the research at the end of the entire research.

In essence, the researcher used mixed method approach to answer the following questions:

1. What are the processes, policies, and procedures in terms of best practices that exist in the application of project management approaches used in sustainable property refurbishment?
2. What is/are the advantage(s) of using project management techniques in property refurbishment?

3.3.2 Research Strategy

Research strategy within the purview of research design according to Creswell (2014, p. 41) reflects how the researcher embarked on the data gathering process based on the research approach that has been selected for the field study. With the adoption of pragmatism philosophical paradigm and mixed method research approach; the researcher adopted a combination of key informant interview and questionnaire survey as research strategy through which empirical and reliable data were elicited from the target questionnaire survey participants

and target key informant interview interviewees. This research strategy was also adopted based on the research resources available to the researcher at the time of conducting the field study and taking into consideration ethical issues and the time allocated for the completion of the research.

In the light of the foregoing, key informant interviews were conducted with government housing planners in the Housing Planning Authority of Dublin City Council and questionnaire survey were conducted on property developers and project managers within the same case study area. Hence, data was collected from professional real estate practitioners who also are perceived to have an understanding of the project management practices, approach and processes as it relates to property refurbishment in Dublin. The researcher also deemed it necessary to leverage secondary information in the public domain such as peer-reviewed journal articles, newspaper extracts and other relevant publications and academic presentations related to the subject matter of the current research. This step was taken in order to ensure that the researcher had sufficient valid and reliable data and already processed information, which can be analysed to advance objective conclusions and recommendation on the research questions of the thesis.

3.4 Data Collection Instruments and Procedure

This section of the methodology chapter gives an explanation of the nature, structure and procedure used in data collection given the data collection strategy discussed in section 3.3.2 above. Specifically, the nature, structure and procedure adopted for the questionnaire survey and the key informant interview are explained below.

3.4.1 Questionnaire

De Vaus (2002, cited in Saunders, Lewis and Thornhill 2012, p. 416) states that using questionnaire incorporates all methods of information gathering in which an individual is asked a similar set of questions in predetermined order. Bryman and Bell (2011) state that a questionnaire serves as one of the most used research instruments for gathering data during a research process due to its flexibility and its ability to collect data from large number of participants in a short period of time and a guarantee of confidentiality regarding their personal identity.

The researcher agrees with the opinion of Bryman and Bell (2011); and hence, one of the reasons why the questionnaire was adopted as a research instrument for data collection during the field survey of the current research. The questionnaire was also used by the researcher based on its perceived ability to elicit empirical, valid, reliable and objective data from target participants of the survey, which interestingly forms the crux of the pragmatic philosophical paradigm on which the current research was based.

With regards to structure, the questionnaire was written in English - this being the official language of communication among property developers and project managers in Dublin. Furthermore, the questions were crafted in a simple and clear manner with no ambiguity and hence, it was easy for each participant of the survey to comprehend what each question meant, and the question also elicited the right and perceived objective responses for the participants. Similarly, the questions reflected in the questionnaire were crafted in open and closed ended format. To this end, close ended questions constrained survey participants to pre-determined answer options of the researcher, which followed the 5-point Likert scale approach; while the open-ended questions gave the survey participants the opportunity to give their diverse opinions.

In terms of content, the questionnaire was structured along the line of the research questions of the study so that each of the research questions was anchored on each section of the questionnaire. To this end, the questions in the questionnaire were structured into three (3) distant sections as follows:

Section 1: questions were asked on participants' demographic status.

Section 2: questions were asked on the processes, policies, and procedures that exist in the application of a project management approach used by developers and project managers in terms of property refurbishment. This section also included questions on factors that are required for the effective implementation of best practice in project management for sustainable property refurbishments. In all, this section related to the first research question of the study.

Section 3: questions were asked on assessing the advantages in using project management techniques in property refurbishment. This section related to the third research question of the study.

3.4.1.1 Questionnaire reliability and validity

Saunders, Lewis and Thornhill (2012, p. 419) stated that the reliability and validity of questions reflected in the questionnaire were important factors that ensured that the right set of questions were asked to the target participants of the survey and that the target participants in turn give objective and unbiased responses to the questions. Furthermore, Neuman (2014, p. 212) states that reliability and validity are concepts, which assist to create the truthfulness, credibility, or believability of findings. It was against this backdrop that the researcher conducted reliability and validity examination on the draft questionnaire before it was developed into the final questionnaire administered during the field survey.

3.4.1.1.1 Determination of Questionnaire Reliability

Neuman (2014, p. 212) stated that the term reliability also means dependability or consistency. Testing the reliability of the questionnaire is an exercise undertaken by the researcher to ensure that the questions finally written in the questionnaire are reliable in the sense that they would be able to generate valid opinion from participants of the survey. The end result of testing the reliability of the questionnaire is the guarantee that reliable conclusions and recommendations are crafted at the end of the research.

In order to determine the reliability of the draft questionnaire, the researcher conducted a pilot study on the draft questionnaire on ten (10) property developers and project managers (who were not part of the actual participants of the final survey) who were confirmed to have advance and practical knowledge and understanding about the subject matter. To this end, the selected real estate cum project management professionals critiqued the adequacy and relevance of the questions in the draft questionnaire vis-à-vis the research questions and subject matter of the research and suggested questions to be removed, added or re-crafted. The result of the exercise led the researcher to develop the final questionnaire taking into consideration the opinion of the professionals.

3.4.1.1.2 Determination of Questionnaire Validity

Jackson (2016, p. 67) stated that questions used in a questionnaire are valid (truthful or genuine) when the researcher adopts or adapts them from outcome of previous research related to the subject matter of the current research.

Building on the opinion of Jackson (2016) the researcher ensured that questions that were reflected in the final questionnaire were either adopted or adapted from findings of previous studies as reflected in the literature review section of the research.

Table 3.1 below gives an overview of previous studies from where questions were either adopted or adapted to develop the questionnaire of the current research:

Section of survey questionnaire	Research issue measured	Authors
1	Project management approach processes, policies, and procedures and property refurbishment including the factors that are required for the effective implementation	Emmitt and Gorse (2014a); BPIE (2011); Nwachukwu and Emoh (2011); Cunningham (2013a, 2013b); Kerzner (2013); Hickey (2014); Wysocki (2014); Meredith, Mantel and Shafer (2016); Rebuilding Ireland (2016a); PMI (2017).
2	Advantage(s) of using project management techniques in property refurbishment	Emmitt and Gorse (2014b); Carroll (2012); PMI (2013, 2017); CIOB (2014); (Larson and Gray (2014); (Chudley and Greeno (2016); IASB (2017).

Table 3.1:Source of questions used in the questionnaire
Source: Researcher.

3.4.1.2 Approval of questionnaire survey and access to participants

In a bid to conduct an ethical research, the researcher got an approval from the supervisor and sought for University approval to access the target participants of the survey given the different platforms where the questionnaire survey was conducted. To this end, both online and offline platforms were used to administer questionnaire to the target participants using online platform and face to face methods. For instance, the researcher was able to meet with housing planners in Dublin City Council, some project managers and property developers were also meet at construction site, real estate conferences and workshops held in Dublin during the course of the research where the purpose of the research was shared with them. To this end, interested target participants left their contact details with the researcher and copies of the questionnaire were forwarded to their email contacts.

Similarly, the researcher was able to communicate with Irish members of Project Management Institute through network events within Dublin area with the opportunity of discussing the research work. In essence, those that participated in the study did so voluntarily and hence, can be concluded that the questionnaire survey was ethically conducted by the researcher. This claim is also substantiated by the fact that each participant of the study received a cover letter detailing the reasons for the research and were obliged to sign guarantee of confidentiality regarding their personal identity prior to their participation in the survey and hence, had ample time to decide on being part of the survey or not.

3.4.2 Interview

Given earlier explanation in section 3.3; key informant interview was conducted with five (5) government housing planning officers in the Planning Department at Dublin City Council. The steps and method of interview was adopted because of the submission of Neuman (2014, p. 320) that the outcome gives more robust and perceived objective information to the researcher on issues relating to the subject given the calibre of persons that are interviewed. In the light of the foregoing, the researcher can state that the outcome of the interview provided valid and reliable information about the subject matter which were used to improve on and also validate the responses of the questionnaire survey participants.

3.5 Sample size and sampling technique

According to Saunders, Lewis and Thornhill (2012, p. 258) sampling is necessary when it is not possible to collect information from the entire population.

3.5.1 Sample size

The sample size of a study according to Bryman and Bell, (2011) describes the proportion of a given target population which is selected to be examined in respect of a social phenomenon and outcome of the examination used to reflect the perceived opinion of the entire population. To this end, the sample size of the study was determined through the rule of thumb/researcher judgment and at least 50 project managers and property developers were sampled during the questionnaire field survey. The selected sample figure is based on the opinion of White (2009, p. 22) that such responses from the number of target participants' offers valid and reliable opinion to the research questions and conclusion and recommendation on the subject matter can be formed on their

views. In essence, 50 project managers and property developers were sampled during the course of the research.

3.5.2 Sampling technique

Convenience sampling was used to select the participants that participated in the questionnaire survey. This means that only available target participants as at the time scheduled for the questionnaire survey were sampled and administered questionnaire accordingly. However, no target participant was forced to participate in the study and those that participated did so out of their willingness to contribute to the success of this study.

3.6 Data Analysis

Descriptive statistical method was used to analyse the opinion of participants from the questionnaire. The specific descriptive analytical tools used included graphs and frequency tables. Data from the interview was interpreted, and conclusion from the findings was drawn using both inductive and deductive reasoning. Interestingly, the use of descriptive statistical methods follows the use of pragmatism philosophical paradigm and triangulation research approach as opined by Kumar (2014, p. 327). This also follows the methodological choice set reflected in the Saunders, Lewis and Thornhill (2012, p. 128) research onion.

3.7 Research Ethics

Bailey and Burch (2016, p. 15) states that ethics comes from the Greek word *ethos*, which means moral character. The researcher can conclude that the research was ethically conducted following standard research methodology guidelines as outlined in Saunders, Lewis and Thornhill (2012, p. 160). The research design and plan do not bring damage, embarrassment or any other material disadvantage to those being researched. In addition, in the context of conducting this research, ethics allude to the standard of behaviour that guides researchers' conduct in relation to the right of an organisation or individuals who become the subject of the research work or are affected by it Saunders, Lewis and Thornhill (2012, p. 228). These moral standards guide researcher and play an essential part in decision making during the research work.

The evidence of this conclusion has been explained across each section of the chapter, such that each research choice or procedure undertaken by the researcher was done based on ethical research standards. The researcher can also state that there was no manipulation of any sort before, during and after the questionnaire survey, key informant interview and the eventual presentation, analysis and discussion of the findings from the research instruments. To this end, the research is of the opinion that the conclusions and recommendations developed from the findings of the field survey were objective and reflected the intended opinion of the participants of the field survey and also depicts a clear picture of the issues raised in the subject matter of the research.

Chapter Four: Analysis of Findings and Discussion

4.1 Introduction

This analysis of findings and discussion chapter illustrates the outcome of the questionnaires, survey and the interviews conducted during the course of gathering data for this study. Specifically, the researcher presents and analyses the opinion of the participants of the survey and interview in line with the research questions and afterwards, develops valid and reliable conclusions, as well as proffering recommendations on the subject matter as reflected by the research questions and the objectives of the study. For the purpose of clarity, the researcher has divided this chapter into sections that reflects the analysis and discussion of each of the questionnaire as well as data obtained from the interviews. Given the outcome of the field study, analysis of the questionnaire is based on forty-five project managers and property developers (n-45) that participated in the survey. Also interviews from key informants of town planning officers (n-5) within the Housing Planning Department of the Dublin City Council were analysed.

4.2 Analysis and discussion of participants' demographic data

This part reflects analysis and discussion of participants' demographic data as required for the purpose of the research.

4.2.1 Gender distribution

Table 4.1 below shows the gender distribution of the participants in this study.

Gender	Number of Participations	Percentage (%)
Male	36	80
Female	9	20
Total	45	100

Table 4.1: Gender Distribution

Source: Survey Questionnaire

While 80% are male, 20% are female according to the data presented in Table 4.1. Hence, it can be concluded that more than 50% of the participants of the survey were of the male gender, which also suggests that this sector of the department of housing in Ireland is male dominated. However, as key professionals in the property construction project, they tended to consist of

players from diverse background with different technical skills and proficiency (El-sokhn and Othman, 2014, p. 5). It is stated that “the magic and power of teams is capture in the term ‘synergy’, which is derived from the Greek word *sunergos*: working together” (Larson and Gray 2014, p.375). Nevertheless, the outcome of table 4.1 shows that female project managers and property developers are also found in the real estate industry in Dublin where male outnumbered their female colleagues.

4.2.2 Access to formal project management training

Answer options	Frequency	Percentage (%)
Yes	40	89
No	5	11
Total	45	100

Table 4.2: Access to formal project management training

Source: Survey Questionnaire

Table 4.2 shows the participants’ access to formal project management training. According to PMI (2017, p. 56), one of the prerequisites of being a project manager and by extension a property developer is the acquisition of professional project management training. Table 4.2 shows that 89% of the participants indicated they acquired formal project management training, while 11% suggested otherwise. This finding confirms the findings of Kerzner (2013, p. 334) that some project management professionals become project managers on diverse project through continuous learning and informal project management training.

According to Kerzner (2013), these project managers engage in learning on-the-job with the expectation that less error would be made and throughout the years have gained requisite skills that are comparable with the expertise of those project managers that were trained through formal project management courses, programs and internships. Nevertheless, the researcher observed that project managers with informal project management training have higher project management performance than those with less formal project management training due to increase in the learning curve of the former. On this note, Burghall, Grant and Morgan (2014, p. 274) claimed that “learning isn’t just in the classroom but is also on the job”.

4.2.3 Years of experience working as project management professional

Table 4.3 shows the opinion of participants with respect to their years of experience working as project management professionals in Dublin.

Answer options	Frequency	Percentage (%)
1-3 years	4	9
4 -10years	18	40
11-15 years	9	20
16 years above	14	31
Total	45	100

Table 4.3:Years of experience working as project management professional

Source: Survey Questionnaire

While 40% and 20% of the participants indicated that they have worked between 4-10 years and 11-15 years respectively; 31% and 9% also indicated that they have worked in the same real estate industry for over 16 years and about 1-3 years respectively. Given these findings, it can be inferred that a total of 91% of the participants of the survey have at least 4 years of experience working in projects across Dublin.

4.2.4 Years of experience working on property refurbishment projects within Dublin

Table 4.4 shows the participants with respect to their years of experience working on property refurbishment projects within Dublin.

Answer options	Frequency	Percentage (%)
1-3 years	9	20
4 -10years	27	60
11-15 years	7	16
16 years above	2	4
Total	45	100

Table 4.4: Years of experience working on property refurbishment projects within Dublin

Source: Survey Questionnaire

As shown above on table 4.4, about 60% and 20% of the participants opined that they have worked on property refurbishment projects within Dublin between 4 -10 years and 1-3 years respectively. Whereas 16% indicated that they have worked for 11-15 years and 4% shows they

have also worked in the same project for over 16 years. The findings show that the entire participants of the survey had varying years of experience working on property refurbishment projects within Dublin and it was perceived also that they gave valid and reliable response with respect to the questions aimed at answering the research questions and achieving the objectives of the study.

4.2.5 Participants' current role on managing property refurbishment projects within Dublin

Answer options	Frequency	Percentage (%)
Property developer	5	11
Project manager	20	44
Site Supervisor	12	27
Site Engineer	8	18
Total	45	100

Table 4.5: Participants' current role on managing property refurbishment projects within Dublin

Source: Survey Questionnaire

Table 4.5 shows the participants response with respect to their current role on managing property refurbishment projects within Dublin. About 11% and 18% of the participants opined that they were property developers and site engineers respectively; while 44% and 27% indicated that they were project managers and site managers respectively. This outcome shows a blend of property refurbishment professionals who according to Leech (2004, p. 3) noted are project leaders, comprising key professionals with variety of different functional skills found on typical property refurbishment projects.

4.3 Participants' opinion on processes, policies, and procedures that exist in the application of a project management approach in property refurbishment projects

This analysis and discussion section is related to the feedback of survey participants to the processes, policies, and procedures that exist in the application of a project management approach used by developers and project managers in terms of property refurbishment. The section also includes analysis and discussions on factors that are required for the effective implementation of best practice in project management for sustainable property refurbishments.

4.3.1 Project management processes and procedures followed in property refurbishment in Dublin

Data from the survey questionnaire is represented in Table 4.6 below for our forty-five respondents (N=45) based on a Likert-scale measures ranging from 1 to 5, where **1=Strongly Agree**, **2=Agree**, **3=Neutral**, **4= Disagree** and **5= Strongly disagree**

Processes and procedures in Project	No.	1	2	3	4	5	Total
Initiation Where N=45	%						N=45
Development of a business case for the project	No. %	44 98	0 0	0 0	1 2	0 0	45 100
Undertake a feasibility study to determine the viability of the project	No. %	27 60	13 29	5 11	0 0	0 0	45 100
Develop a project charter	No. %	36 80	6 13	3 7	0 0	0 0	45 100
Appoint project leadership	No. %	40 69	3 7	2 4	0 0	0 0	45 100
Set up a project office	No. %	9 20	31 69	3 7	2 4	0 0	45 100
Processes and procedures in Project							
Planning and Design. Where N=45	No.	1	2	3	4	5	Total
	%						
Define project goal, scope and specifications	No. %	9 20	36 80	0 0	0 0	0 0	45 100
Design property refurbishment plan	No. %	45 100	0 0	0 0	0 0	0 0	45 100
Determine project risks, state assumptions and constraints	No. %	40 89	5 11	0 0	0 0	0 0	45 100
Design or map out project timeline and deliverables	No. %	36 80	9 20	0 0	0 0	0 0	45 100

Develop project budget	No. %	45 100	0 0	0 0	0 0	0 0	45 100
Prepare project resources (human and non-human) for project implementation	No. %	36 80	9 20	0 0	0 0	0 0	45 100
Get necessary building permits for refurbishment	No. %	36 80	9 20	0 0	0 0	0 0	45 100
Processes and procedures in Project Implementation. Where N=45							
Execution of project design, scope and specifications as reflected in the overall project plan	No. %	27 60	18 40	0 0	0 0	0 0	45 100
Procure and deploy resources to the project site as specified in project plan	No. %	45 100	0 0	0 0	0 0	0 0	45 100
Monitor and review progress at each milestone of the project	No. %	36 80	9 20	0 0	0 0	0 0	45 100
Effective management of issues related to health and safety of project personnel and other site visitors	No. %	45 100	0 0	0 0	0 0	0 0	45 100
Processes and procedures in Project Monitoring and Control. Where N=45							
Timely review of project timelines, milestones and other site management issues	No. %	36 80	9 20	0 0	0 0	0 0	45 100
Continuous review and assessment of the quality of the work done on site	No. %	36 80	9 20	0 0	0 0	0 0	45 100
Review of project scope and specification with planned design and address issues of deviations	No. %	27 60	18 40	0 0	0 0	0 0	45 100
Review budget performance to avoid project cost overrun	No. %	18 40	27 60	0 0	0 0	0 0	45 100
Monitor and control issues related to project risks	No. %	36 80	9 20	0 0	0 0	0 0	45 100
Processes and procedures in Project Completion and Delivery. Where N=45							
Comprehensive project evaluation review which includes giving feedback on project failure or success, lessons learned, and recommendations for future projects	No. %	9 20	36 80	0 0	0 0	0 0	45 100
Embark on administrative completion activities such as confirming that the project has met all specifications and	No. %	36 80	9 20	0 0	0 0	0 0	45 100

requirements of the project sponsor and other stakeholders							
Embark on physical handover of project to the project recipient and ensuring that all project delivery documents have been validated and submitted to project sponsor or recipient	No. %	45 100	0 0	0 0	0 0	0 0	45 100
Conduct contract completion activities such as addressing issues related to meeting the terms and conditions of the project and formally closing the project contract	No. %	27 60	18 40	0 0	0 0	0 0	45 100

Table 4.6: Project management processes and procedures followed in property refurbishment in Dublin

Source: Primary Survey Questionnaire

Table 4.6 reflects participants opinion on project management processes and procedures followed in property refurbishment in Dublin. On project management processes and procedures related to project initiation, table 4.6 shows that 98% of the participants strongly agreed that development of a business case for the project is a core aspect of project initiation for property refurbishment in Dublin while 2% disagree. Similarly, 60% strongly agreed and 29% agreed, although 11% are not sure whether or not a feasibility study on the project should be undertaken to determine the viability of the property to be refurbished. It can be seen from table 4.6 above that 80% of the participants strongly agreed, while 13% agreed and 7% were neutral whether project charter has to be developed at the initial stage of refurbishing a property. Furthermore, 69% of the participants strongly agreed that one of the processes during project initiation of a property refurbishment project is appointment of project leadership, while only 7% agreed and 4% were neutral. Also, about 20% of the participants strongly agreed and 69% agreed on the fact that a project office is usually set up during the project initiation phase of a property refurbishment project. However, 7% were indifferent if such activity is required at the project initiation stage and 4% of the participants disagreed.

On project management activities related to project planning and design with regard to property refurbishment in Dublin, table 4.6 reflects that all the participants strongly agreed that ‘design property refurbishment plan’ and ‘development of project budget’ are crucial aspects of project management in property refurbishments. Similarly, 20% and 80% of the participants strongly

agreed and agreed respectively that defining project goal, scope and specifications is done at this planning and design stage; while 89% and 11% of the participants strongly agreed and agreed respectively that determination of project risks and stating assumptions and constraints that will govern the execution of the project is also treated during the planning and design stage of property refurbishment in Dublin.

In the same instance, 80% and 20% of the participants strongly agreed and agreed respectively that design or mapping out project timeline and deliverables is part of the project management activities under a property refurbishment project within the case study area. While 80% and 20% of the participants strongly agreed and agreed respectively that project resources in terms of human and non-human resources are arranged for effective implementation of the identified property to be refurbished. In the same vein, 80% and 20% of the participants strongly agreed and agreed respectively that the project design and planning stage of the property refurbishment project that they have been engaged in included getting necessary building permits for refurbishment before the commencement of the project.

Table 4.6 also shows the response of participants with regards to project management processes and procedures related to project implementation of property refurbishment projects in Dublin. To this end, the entire participants strongly agreed that procurement and deployment of resources to the project site(s) as specified in the project plan blueprint as well as effective management of issues related to health and safety of project personnel and other site visitors ranks high among the project management activities undertaken during the project implementation of property refurbishment project. In the same vein, 60% and 40% of the participants strongly agreed and agreed respectively that a typical project implementation of property refurbishment project include execution of project design, scope and specifications as reflected in the overall project plan; just as 80% and 20% of the participants strongly agreed and agreed respectively that embarking on monitoring and review progress at each milestone of the project is also crucial to the success of this stage of the property refurbishment project adventure.

Furthermore, table 4.6 also shows the opinion of participants with regards to project management processes and procedures related to project monitoring and control for property refurbishment projects in Dublin. To this end, 80% and 20% of the participants strongly agreed and agreed respectively that one of the project monitoring activities undertaken during a property refurbishment project in Dublin is timely review of project timelines, milestones and other site management issues. Similarly, 80% and 20% of the participants strongly agreed and agreed respectively that continuous review and assessment of the quality of the work done on site is also carried out during the project period; and 60% and 40% of the participants strongly agreed and agreed respectively that review of project scope and specification with planned design and addressing issues of deviations ensures that the project is on track with its objectives, technical specifications and scope. In the same regards, 40% and 60% of the participants strongly agreed and agreed respectively that review of the budget performance is undertaken in order to avoid project cost overrun; and 80% and 20% of the participants strongly agreed and agreed respectively that monitoring and control issues related to project risks is also crucial to the success of this stage of the property refurbishment project phase.

Table 4.6 also reflects the response of participants with regards to project management processes and procedures related to project completion and delivery of property refurbishment projects in Dublin. In this regard, 20% and 80% of the participants strongly agreed and agreed respectively that comprehensive project evaluation review which includes giving feedback on project failure or success, lessons learned, and recommendations for future projects is undertaken at the project completion and delivery of property refurbishment projects in Dublin. Similarly, 80% and 20% of the participants strongly agreed and agreed respectively that they embark on administrative completion activities such as confirming that the project has met all specifications and requirements of the project sponsor and other stakeholders. Also, 60% and 40% of the participants strongly agreed and agreed respectively that they conduct contract completion activities such as addressing issues related to meeting the terms and conditions of the project and formally close the project contract while the entire participants strongly agreed that they embark on physical handover of project to the project recipient and ensuring that all project delivery documents have been validated and submitted to project sponsor or recipient.

The above analysis on project management processes and procedures followed in property refurbishment in Dublin as reflected in table 4.6 gives insight to the fact that project management activities adopted on typical commercial and industrial projects as established in chapter 2 of the study is the same for project management for property refurbishment in Dublin. Furthermore, it can also be inferred that whatever the project management approach used by property developers and project managers on property refurbishment projects in Dublin, sustainable property refurbishment tended to follow the well documented standard processes and procedures of project initiation, planning, implementation, monitoring and control and project delivery as earlier established in the literature review chapter of the research (CIOB, 2014; Larson and Gray, 2014; IASB, 2017). Based on the observation and result of the pilot study conducted by the researcher before the study, refurbished properties in Ireland and Dublin in general usually follow all quality, safety and durability standards owing to the fact that standard project management processes and procedures were adhered to in the implementation of the property refurbishment project.

Evidence from the data outcomes in table 4.6 is a testament to the fact that property developers and project managers in Dublin follow standard project management processes and procedures and hence, ensures the durability of refurbished properties. Earlier studies have found that when project management principles are adopted effectively in property refurbishment projects that it usually leads to both the rejuvenation and durability of the target property as well as making it even more energy efficient (Kaderják *et al.*, 2012, p. 1). This is in sharp contrast with what Nwachukwu and Emoh (2011); Ogunde *et al.* (2017) discovered in developing countries like Nigeria: that building projects (property refurbishment inclusive) collapse as well as undergo wear and tear over a short period of time because of poor project management practices adopted during the project initiation, planning, implementation, monitoring and control and project delivery periods.

This discrepancy can be analysed in relation to the strength of regulatory provisions. For instance, Western countries like Ireland tended to have very strong housing regulations and policies as developed in DHPLG (2016a, 2016b, 2016c); whereas in developing countries like the Nigerian context as analysed by Nwachukwu and Emoh (2011); Ogunde *et al.* (2017) study,

housing regulations and government policies tended to be very weak and underdeveloped. As we found in the literature review according to IASB (2017) professional regulations, in a typical property refurbishment project in Dublin, it is strongly required that project managers undertake a feasibility study to determine the viability of the project; develop a project charter, determine project risks, state assumptions and constraints, design or map out project timeline and deliverables, develop project budget, prepare project resources (human and non-human) to project site and get necessary building permits for refurbishment before project implementation. This also confirms other analyses in the wider literature like Carroll (2012); Lock, (2014); PMI, (2017).

4.3.2 Project management factors for successful property refurbishment in Dublin

Given the outcome of table 4.6, it was established that property developers and project managers in Dublin take into cognizance the standard project management activities from project initiation to project completion and delivery. Nevertheless, those processes and procedures would not have been possible if factors required for successful implementation of the project were not taken into consideration. Arising therefore, table 4.7 reflects the feedback of participants on project management element/factors required for successful implementation of sustainable property refurbishment as it is applicable to Dublin, as shown below:

Where: **1=Strongly Agree, 2=Agree, 3=Neutral, 4= Disagree and 5= Strongly disagree.**

Project management element required for successful implementation of sustainable property refurbishment. Where N=45	No %	1	2	3	4	5	Total
Cost	No. 27 % 60	18	0	0	0	0	45 100
Time	No. 18 % 40	27	0	0	0	0	45 100
Quality	No. 36 % 80	9	0	0	0	0	45 100
Satisfaction	No. 45 % 100	0	0	0	0	0	45 100
Dispute and litigation	No. 0 % 0	18	27	0	0	0	45 100
Health and safety	No. 36 % 80	9	0	0	0	0	45 100
Communication	No. 36 % 80	7	2	0	0	0	45 100
Technical requirements	No. 40 % 89	2	3	0	0	0	45 100
Environmental issues	No. 40 % 89	2	3	0	0	0	45 100

Table 4.7: Project management factors for successful property refurbishment in Dublin

Source: Survey Questionnaire

Table 4.7 shows that 60% and 40% of the participants strongly agreed and agreed respectively that cost is one of the factors that ensures successful implementation of property refurbishment project in Dublin; just as 40% and 60% of the participants also strongly agreed and agreed respectively that time is equally a factor that is taken into consideration for similar project and within Dublin. Similarly, the entire participants strongly agreed that client satisfactions are factors taken into consideration by them. However, 40% of the participants agreed that dispute and litigation issues are taken into consideration for successful sustainable property refurbishment in Dublin whereas 60% were neutral. It can be observed from table 4.7 that 80% of the participants strongly agreed and 20% agreed that quality as well as health and safety is critical in the implementation of the project. Almost 80% of the participants strongly agreed and 16% agreed that effective internal and external communication among project team members and

various project stakeholders on project site are crucial to the successful implementation of property refurbishment projects in Dublin, while 4% were neutral. Lastly, the result of technical requirements and environmental issues show that 89% of the participants strongly agreed, 4% agreed and 7% were indifferent.

In relation to findings from previous studies, the outcome of table 4.7 gives convergent views about issues relating to project management factors that needs to be taken into consideration for successful project implementation and most especially property refurbishment projects in Dublin. For instance, the participants of the survey have proved that project cost is crucial to the success of property refurbishment projects in Dublin, which also corroborated the analysis of Lock (2014, p. 30); PMI (2017, p. 231) that the project budget (cost) needs to be carefully developed to capture all the required expenses that will be undertaken on the project in order to avert insufficient funds that might lead to project failure. Similarly, the opinion of Carroll (2012, p. 54); Larson and Gray (2014, p. 129); Bendale and Bhangale (2018) on the fact that in order to avoid project budget overrun there is a need to develop a specific, measurable, attainable, realistic and timely (SMART) project cost, which corroborated the findings in this current study as reflected in table 4.7. Hence, property refurbishment projects in Dublin tend to fail when there is budget overrun due to wrong costing and insufficient funds to be deployed for successful implementation of the project.

On the issue of time, the opinion of participants confirms the conclusion of Carroll (2012, p. 54; Larson and Gray (2014, p. 31); PMI (2017, p. 18) that SMART project milestones for each activity and phase of the project life cycle is crucial to the success of implementing the project and also determines how soon the project will be delivered to its recipients. The analysis of Carroll (2012)) is also shared by Nwachukwu and Emoh (2011) on the fact that when there is wrong project timing to the extent that project milestones are not met when due, the outcome may result in project failure, delay or abandonment. In essence, it can be inferred that property refurbishment projects in Dublin are likely to fail or delayed when the project team is not working according to project timeline for each of the project milestone.

With respect to quality, the opinion of participants of the survey gives credence to the conclusion of DHPLG (2016a); PMI (2017, p. 273) that any project implementation activity that is not premised on quality assurance and quality standards as posited by the regulations governing implementation of such project will lead to project failure. Hence, implementing a property refurbishment project in Dublin without recourse to quality assurance and quality standards as required by building laws will be a future threat to the health and safety of the occupants of the property. Furthermore, the issue of project quality is closely related to client satisfaction which has been proved by PMI (2017) and also perceived to be corroborated by the opinion of participants in table 4.7. To this end, PMI (2013) maintained that it is only when projects are implemented following required quality assurance and quality standards that it will create utility (satisfaction) to the project client or final recipient of the project. In essence, a project client can only be satisfied on the outcome of a refurbished property when quality assurance and quality standards were adhered to with regards to the project scope and technical specifications. For instance, if a property was to be refurbished to improve on the environmental and safety conditions of occupants of the property as noted by (Bhuiyan, Jones and Wanigarathna (2015) but the outcome of the project was below quality assurance and quality standards, it will leave the project client unsatisfied at the end of the project.

Given the outcome of interaction with some industry stakeholders during the field work of the study, the researcher could state that the issue of dispute and litigation is one area in project management that project leaders and sponsors do not want to engage in and hence, ensure that the project is founded on adherence to rules and regulations binding on successful implementation of such property. Hence, the opinion of participants in table 4.6 that they get necessary building permits for refurbishment of a property and perceived to also ensure that the property ownership documents are intact before implementation of the project is to avert issues of dispute and litigation that might arise from other interests or third parties to the project.

With regards to health and safety, the opinion of participants of the survey corroborates the analysis of Kinsella (2012); PMI (2017); Hunt (2018) on the pivotal position that health and safety of project team members, site visitors and final recipients of a project plays during the project lifecycle. In this regard, Kinsella (2012, p. 5) maintained that health and safety

precautions are mandated to be adhered to by all relevant project team members and stakeholders in order to avert all forms of site accidents, bodily injuries and incapacitation which have high tendency to undermine the success of the project. In essence, Chudley and Greeno (2016) and Hickey (2014) noted that health and safety precautionary measures help to reduce the level of preventable project risks that have been identified to undermine the success of the project.

The opinion of participants of the survey with regards to the issue of communication as a factor required for successful implementation of sustainable property refurbishment in Dublin confirms the conclusion of previous studies that communication among project team members and project leaders on the subject matter remain very crucial. For instance, Carroll (2012, p. 29); Larson and Gray (2016, p. 99) insisted that poor communication within the project team triggers communication breakdown and if not handled proactively will lead to the failure of the project. PMI (2017, p. 373) also viewed the issue of communication from the standpoint of language differences especially when the project team is multicultural in nature. According to PMI (2017) language differences might cause misinterpretation of what have been communicated and hence, leads to wrong feedback and then trigger poor project performance. In the view of Lock (2014, p. 51) good communication incorporates satisfactory feedback paths through and over the organisation.

The issue of technical requirement is another project management factor that is critical for successful implementation of sustainable property refurbishment in Dublin as identified by the participants of our survey. To this end, the opinion of participants as depicted in table 4.7 confirms the conclusion of PMI (2017, p. 56) that property refurbishment project requires higher technical skills and expertise on the part of project developer or project manager towards meeting the refurbishment specifications of their clients. Carroll (2012, p. 17) agrees with the conclusion of PMI (2017) that successful project managers know how critical it is to create, refine and follow plans to meet project objectives. In essence, appointing project developer or project manager without requisite technical competencies to execute a property refurbishment project will only lead to implementation of a refurbishment project that will not meet the satisfaction requirements of the client and is also likely to fall short of required quality standards and assurance of the project and hence, undermine the success of the entire project process.

The opinion of participants with regards to environmental issues corroborates the analysis of Emmitt and Gorse (2014a, p. 1) as established in chapter 2: that one of the reasons why property refurbishment projects are undertaken is due to environmental reasons in order to improve the environmental and safety conditions of occupants of the property. Nevertheless, and from the standpoint of the researcher’s understandings about implementation of a successful and sustainable property refurbishment, it can be inferred that it is highly important that project developer or project manager understands the environmental implications of undertaking the project based on their technical and professional experience. Hence, risk appraisal and analysis is crucial as outlined in Lock (2014, p. 44), it is therefore advised that a technical feasibility study to determine the environmental viability of the project given the diverse environmental risks that are associated with the surrounding area where the project is sited is undertaken before project commencement.

4.3.3 Level of importance of project management factors for successful property refurbishment in Dublin

Table 4.8 below reflects participants’ views on the level of importance placed on each of the identified project management factors required for successful implementation of sustainable property refurbishment as it is applicable to Dublin. Using a scale of MI; VI; I; N; and LI where: *MI-Most Important; VI- Very Important; I-Important; N- Neutral; LI- Little Important*

Project management elements required for successful implementation of sustainable property refurbishment.	No. %	MI	VI	I	N	LI	Total N=45
Cost	No. %	40 89	5 11	0 0	0 0	0 0	45 100
Time	No. %	5 11	36 80	0 0	4 9	0 0	45 100
Quality	No. %	40 89	3 7	2 4	0 0	0 0	45 100
Satisfaction	No. %	27 60	16 36	2 4	0 0	0 0	45 100
Dispute and litigation	No. %	40 89	3 7	2 4	0 0	0 0	45 100

Health and safety	No. %	45 100	0 0	0 0	0 0	0 0	45 100
Communication	No. %	40 89	2 4	3 7	0 0	0 0	45 100
Technical requirements	No. %	31 69	9 20	5 11	0 0	0 0	45 100
Environmental issues	No. %	40 89	3 7	2 0	0 0	0 0	45 100

Table 4.8: Level of importance of project management factors for successful property refurbishment in Dublin

Source: Survey Questionnaire

Obviously, as shown in table 4.8 the entire group of participants claimed that health and safety are the most important elements required for successful implementation of sustainable property refurbishment. Going forward, virtually all the participants believe that quality, dispute and litigation, communication, and environmental issues are also most important, very important and important elements. In the same instance, 89% of the participants show that cost is most important and 11% also shows very important respectively. Similarly, 11% of participants considered time as most important, whereas 80% describe time as very important elements that are required for successful implementation of sustainable property refurbishment and 9% remain neutral. Furthermore, 69% of the participants indicated that technical requirements are most important, while 20% claim to be very important and 11% are also important elements. However, 60%, 36%, 4% of the participants illustrated that client satisfaction is the most important, very important and important respectively as factors that are required for successful implementation of sustainable property refurbishment in Dublin.

It is interesting that the outcome of table 4.8 gives credence to the opinion of participants in table 4.7 as to the fact that cost, time, quality, satisfaction, dispute and litigation, health and safety, communication, technical requirements and environmental issues are project management elements required for successful implementation of sustainable property refurbishment in Dublin. Furthermore, the outcome of table 4.8 gives credence to the findings and analysis of Emmitt and Gorse (2014a); Babangida, Olubodun and Kangwa (2012); Carroll (2012); Kinsella (2012); PMI (2013, 2017); Alvani, Bemanian and Hoseinalipour (2014); Hickey (2014); Lock (2014); Chudley and Greeno (2016); DHPLG (2016a); Kerzner (2017); Vaničková (2017); Hunt

(2018) as reflected in chapter 2, which stated the importance of the identified factors to the success of project executed using PRINCE2, Stage-Gate, lean and benefits realization project management approaches respectively. In essence, it can be inferred that no matter the project management approach adopted for implementation of property refurbishment in our Dublin study, the factors of cost, time, quality, satisfaction, dispute and litigation, health and safety, communication, technical requirements and environmental issues are crucial to the success and sustainability of the project.

4.4 Participants’ opinion on advantages of using project management techniques in property refurbishment

This analysis and discussion section is related to the opinion of survey participants in relation to the advantages of using project management techniques in property refurbishment in Dublin.

4.4.1 Advantages of using project management techniques in property refurbishment in Dublin

Table 4.9 reflects participants’ views on the advantages of using project management techniques in property refurbishment in Dublin.

Where: 1=Strongly Agree, 2=Agree, 3=Neutral, 4= Disagree and 5= Strongly disagree.

Advantages of using project management techniques in property refurbishment. Where N=45	No. %	1	2	3	4	5	Total
Improves the likelihood of achieving project scope and specifications within the given project timeline	No. %	40 89	5 11	0 0	0 0	0 0	45 100
Ensures implementation of project, using best and standard practices throughout the project life cycle	No. %	9 20	36 80	0 0	0 0	0 0	45 100
Ensures effective and efficient prioritization of and application of available project resources	No. %	40 89	5 11	0 0	0 0	0 0	45 100
Ensures that project scope, budget and schedule are systematically and strategically set at the beginning of the project	No. %	43 96	0 0	2 4	0 0	0 0	45 100

Averts the possibilities of project scope creeping and project budget overrunning	No. %	27 60	16 36	2 4	0 0	0 0	45 100
Averts risks of project delay, failure and abandonment	No. %	9 20	36 80	0 0	0 0	0 0	45 100
Ensures effective communication among project team leaders and members leading to outstanding project performance	No. %	40 89	5 11	0 0	0 0	0 0	45 100
Improves quality of project delivery given the calibre and synergy of expertise and technical know-how of the different project leaders and members	No. %	43 96	2 4	0 0	0 0	0 0	45 100
Increases the level of customer satisfaction at delivery of each project	No. %	36 80	9 20	0 0	0 0	0 0	45 100
Ensures sustainability of project delivered	No. %	14 31	27 60	4 9	0 0	0 0	45 100

Table 4.9: Advantages of using project management techniques in property refurbishment in Dublin.

Source: Survey Questionnaire.

In this regard, the entire participants strongly agreed that the use of project management techniques in property refurbishment in Dublin improves the likelihood of achieving project scope and specifications within the given project timeline, ensures effective and efficient prioritisation of and application of available project resources, and ensures that project scope, budget and schedule are systematically and strategically set at the beginning of the project. Similarly, the entire participants strongly agreed that application of appropriate project management techniques ensures effective communication among project team leaders and members leading to outstanding project performance and improves quality of project delivery given the calibre and synergy of expertise and technical know-how of the different project leaders and members with respect to property refurbishment projects in Dublin.

It could be seen, that the survey data finding also in table 4.6 shows that 80% agreed that application of the appropriate project management techniques ensures implementation of project, using best and standard practices throughout the project life cycle and averts risks of project delay, failure and abandonment respectively. Likewise, 80% also strongly agreed that an advantage of using project management techniques in property refurbishment increases the level of customer satisfaction at the delivery of each project. Furthermore, table 4.9 shows that 60% strongly agreed and 40% agreed that adoption of appropriate project management techniques on

property refurbishment projects as applicable to Dublin averts the possibilities of project scope creeping and project budget overrunning. Whereas, 31% strongly agreed and 60% agreed, while 9% of the participants were neutral to the sustainability of the project delivered respectively.

The outcome of table 4.9 gives interesting insights on the pivotal role application of project management techniques/approaches has on the successful outcome of in property refurbishment in Dublin. To this end, it can be deduced that property developers and project managers on property refurbishment projects adopts project management techniques they deem fit to be compatible to execution of the project given the available project resources and hence, lays credence to the conclusions of previous studies on the subject matter as reflected in Chapter 2 of the study and also confirmation of the fact that standard project management phases are followed in the execution of property refurbishment projects in Dublin.

4.5 Analysis and discussion of responses for key informant interview

Below is the outcome of the key informant interview conducted with five (5) government officials in the Housing Planning Authority of Dublin.

4.5.1 Demographic distribution of interviewees

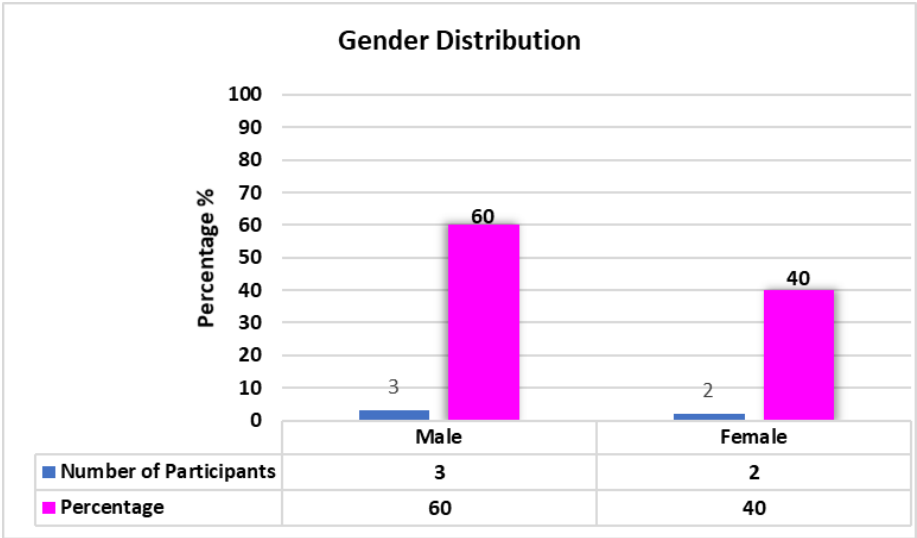
Table 4.10 reflects the views of interviewees of the key informant interview on issues related to their demographic status.

Research issue examined and answer options	Frequency	Percentage (%)
Gender		
Male	3	60
Female	2	40
Total	5	100
Access to formal housing management training		
Yes	0	0
No	5	100
Total	5	100
Years of experience in Housing Policy		
1-3 years	0	0
4 -10years	1	20
11-15 years	3	60
16 years - above	1	20
Total	5	100

Years worked in Housing Planning Department in Dublin		
1-3 years	1	20
4 -10years	0	0
11-15 years	3	60
16 years - above	1	20
Total	5	100
Current role in Housing Authority or Housing Association in Dublin		
Planning Officer	4	80
Deputy Planning Officer	0	0
Senior Planner	1	20
Other	0	0
Total	5	100

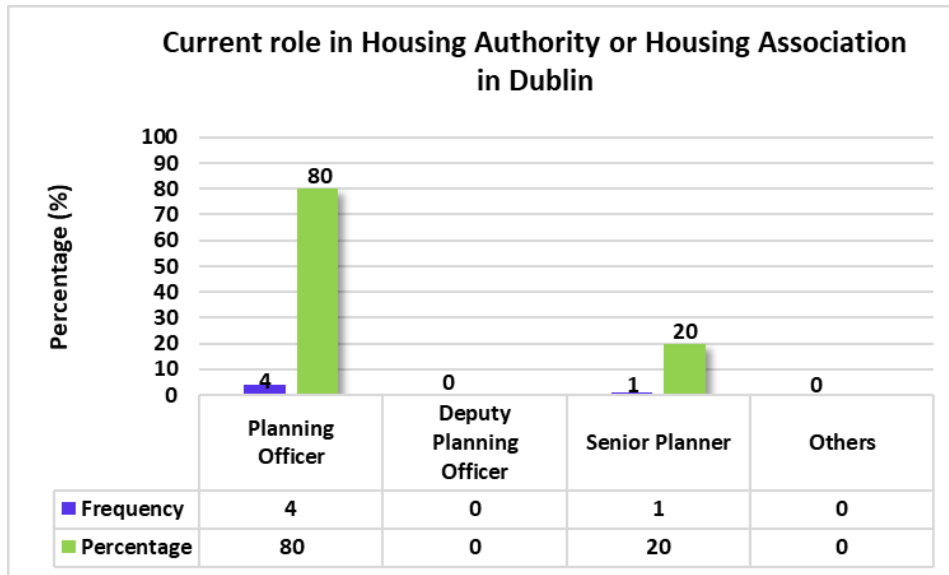
Table 4.10: Demographic distribution of interviewees
Source: Interview Question

With regards to gender, table 4.10 shows that 60% of the interviewees were of the male gender while 40% were of the female gender as illustrated in the Graph 4.1 below:



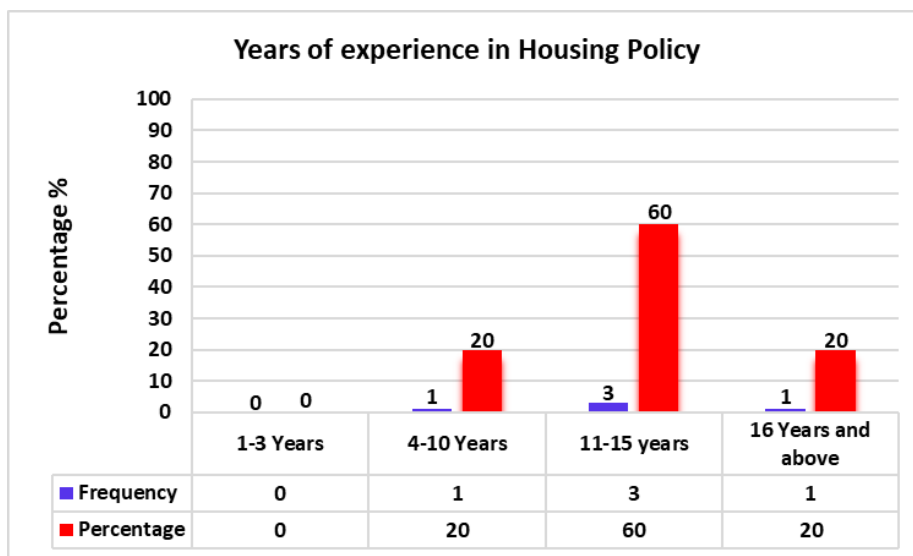
Graph 4.1: Demographic distribution of interviewees.
Source: Interview Questions.

Also, 80% of the interviewees stated that they were Planning Officers while 20% indicated to be Senior Planners as seen in the Graph 4.2 below:



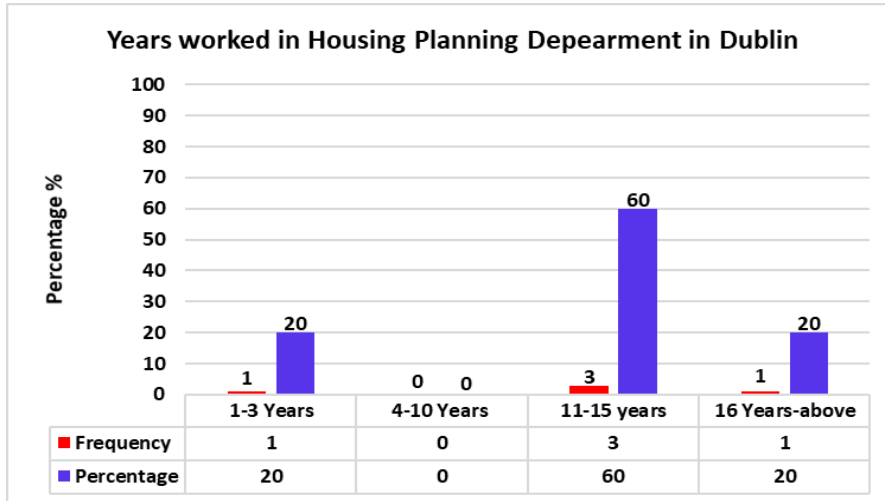
Graph 4.2: Roles in Housing Authority / Housing Association in Dublin.
Source: Interview Questions.

On the years of experience in Housing Policy, 20% each stated that they have 4-10 years and 16 years and above respectively while 60% stated that they had 11-15 years of experience in Housing Policy as represented in Graph 4.3 below:



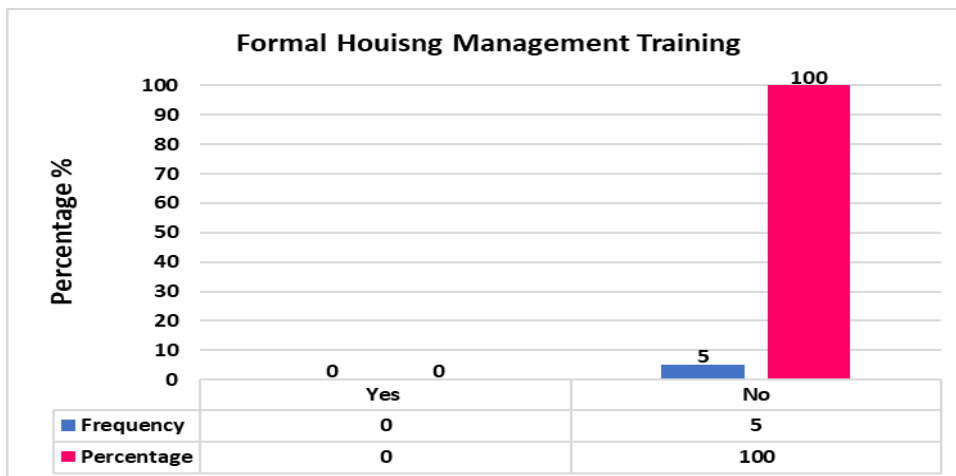
Graph 4.3: Number of Years of experience in Housing Policy.
Source: Interview Questions.

Furthermore, 20% each also opined that they have worked for the Housing Planning Department in Dublin for 1-3 years and 16 years and above respectively while 60% also opined that they have worked in same Department for 11-15 years as showed in Graph 4.4 below:



Graph 4.4: Number of Years Work in Housing Planning Department in Dublin.
Source: Interview Questions.

On the issue of access to formal housing management training, the entire interviewees said that they have not undergone any form of training relating to housing management as shown in Graph 4.5 below. This is a sharp contrast to the opinion of the participants of the questionnaire survey where over 80% of the participants indicated that they have had access to formal project management training, which gives them improved technical knowledge on successfully implementing property refurbishment projects especially in Dublin.



Graph 4.5: Formal Housing Management Training
Source: Interview Questions.

4.5.2 Project management procedures and process for property refurbishment in Dublin from interviewees' perspective

Table 4.11 shows the views of interviewees on project management procedures and process for property refurbishment in Dublin.

Research issue examined and answer options	Frequency	Percentage (%)
Standard project management procedures undertaken for property refurbishment in Dublin		
Adoption of traditional project management phases	5	100
No adoption of traditional project management phase	0	0
Total	5	100
Irish property industry policies for property refurbishment required of developers and project managers		
Building Regulations	5	100
Fire Regulations	5	100
Conservation legislation	5	100
Planning Regulations.	5	100
Compliance with Irish property industry policies for property refurbishment by developers and project managers		
Yes	5	100
No	0	0
Not sure	0	0
Total	5	100
Project management elements required for successful implementation of sustainable property refurbishment.		
Cost	5	100
Time	5	100
Adherence to Irish property industry policies	5	100

Table 4.11: Project management procedures and process for property refurbishment in Dublin from interviewees' perspective

Source: Interview Question

On the issue of standard project management procedures undertaken for property refurbishment in Dublin, the entire interviewees opined that standard project management procedures are adhered to by property refurbishment project team in the event of refurbishing a property in the Dublin area.

This outcome is a confirmation of the opinion of property developers and project managers that they follow traditional project management procedure of project initiation, planning, implementation, monitoring and control and delivery of property refurbishment projects in Dublin.

On the issue of most important standard policies within the Irish property industry that are expected to be adhered to by developers and project managers when refurbishing a property, Table 4.11 shows that the entire interviewees indicated that Irish property industry policies for property refurbishment required of developers and project managers include building regulations, fire (health and safety) regulations, conservation legislation and planning regulations. Table 4.11 also shows that the entire interviewees stated that the identified Irish property industry policies for property refurbishment are adhered to by developers and project managers in the event of refurbishing a property in the Dublin area. This outcome corroborates the opinion of property developers and project managers that they take into consideration housing policies while refurbishing properties within the case study area.

On the issue of project management elements required for successful implementation of sustainable property refurbishment, Table 4.11 above shows that the entire interviewees stated that cost, time and adherence to Irish property industry policies are crucial factors necessary for successful implementation of sustainable property refurbishment in Dublin. Nevertheless, the researcher tentatively concludes that Irish property industry policies also lists factors such as adherence to quality standards, need for client satisfaction, health and safety, communication, consideration for environmental issues and technical issues as part of what property developers and project managers should take into consideration while refurbishing a property. Hence, a validation of the opinion of questionnaire survey participants on issues relating to project management elements required for successful implementation of sustainable property refurbishment.

4.5.3 Interview question: What do you consider to be the advantages of using project management techniques in property refurbishment?

On the above question, the first interviewee opined that the advantage of adopting project management techniques in property refurbishment include better use of resources such as time and money, quicker turnover of useable buildings into the market and ensures that more thought goes into planning the project. The 2nd interviewee noted that it allows for a proven method of property refurbishment to be followed thus reducing risks of mistakes and inappropriate development while the 3rd interviewee stated that it also ensures that best practice is followed. In the same instance, the 4th interviewee opined that adopting project management techniques in property refurbishment saves time and resources, helps in getting the required outcome from the project and ensures best value for money. The last interviewee maintained that improved quality control, customer satisfaction, consistency in approach and efficient delivery of projects are the advantages of adopting project management techniques in property refurbishment in Dublin. The interviewee's responses validated the conclusion of (Emmitt and Gorse, 2014b; Bentley, 2006; Kerzner, 2010; Carroll, 2012; Kinsella, 2012; CIOB, 2014; Hickey, 2014; Lock, 2014; Oberlender, 2014; Larson and Gray, 2016; Meredith, Mantel and Shafer, 2016; PMI, 2017; Hunt, 2018) in the literature review chapter of the research.

Chapter Five: Conclusions and Recommendations

5.1 Summary

This thesis was undertaken to appraise project management approach that would be effective to facilitate property refurbishment in the real estate industry in Ireland. To this end, the researcher examined the processes, policies, and procedures in terms of best practices that exist in the application of project management approaches used in sustainable property refurbishment as well as determine the factors that are required for the effective implementation of such project in Dublin. The researcher also tried to assess if there were advantages derived by using project management techniques in property refurbishment projects within the case study area. In the quest of achieving the objectives and providing valid and reliable answers to the research questions of this study, the researcher embarked on a questionnaire survey of 45 property developers and project managers as well as key informant interview of 5 housing Planners within the Dublin area of Ireland. The conclusions from the field surveys are reflected in this chapter and also recommendations are advanced on the gaps noticed during the course of the field work of the study.

5.2 Conclusions

With reference to the findings from the questionnaire field survey and the outcome of the key informant interviews and the assurance that valid and reliable responses were given by the participants of the study, the following conclusions were made on the research questions of the study.

Research Question 1: *What are the processes, policies, and procedures in terms of best practices that exist in the application of project management approaches used in sustainable property refurbishment?*

Given the findings of the study, it can be reliably concluded that sustainable property refurbishment follows the standard processes and procedures of project initiation, planning, implementation, monitoring and control and project delivery in Dublin as it is applicable in other climates globally. In essence, if project management processes and procedures are followed during property refurbishments projects in Dublin, it can be concluded that typical activities undertaken

include development of a business case for the project, conduct feasibility study to determine the viability of the project, development of a project charter, appoint project leadership and set up of the project office. Also the project planning and design processes and procedures adopted for property refurbishments projects in Dublin include definition of project goal, scope and specifications, design of property refurbishment plan, determining project risks, stating of assumptions and constraints, designing or mapping out the project timeline and deliverables, development of project budget, preparation of project resources (human and non-human) for project implementation and acquisition of necessary building permits for property refurbishment.

Similarly, it can be concluded that project implementation processes and procedures adopted for property refurbishments projects in Dublin include execution of project design, scope and specifications as reflected in the overall project plan, procurement and deployment of resources to the project site as specified in project plan, monitoring and review progress at each milestone of the project and effective management of issues related to health and safety of project personnel and other site visitors. Also, the outcome of the study shows that project monitoring and control adopted for property refurbishments projects in Dublin include timely review of project timelines, milestones and other site management issues, as well as continuous review and assessment of the quality of the work done on site, including the review of project scope and specifications with planned design to address issues of deviations, the review of budget performance to avoid project cost overrun, and the monitoring and control issues related to the project risks.

Lastly, it can be tentatively concluded that completion and delivery adopted for property refurbishments projects in Dublin include comprehensive project evaluation review, which includes giving feedback on project failure or success, lessons learned, and recommendations for future projects and embark on administrative completion activities such as confirming that the project has met all specifications and requirements of the project sponsor and other stakeholders. It can also be concluded that the process includes embarking on physical handover of project to the project client or recipient and ensuring that all project delivery documents have been validated and submitted to project sponsor; as well as conducting the contract completion

activities such as addressing issues related to meeting the terms and conditions of the project and formally closing the project contract.

With respect to policies and practices from the Ireland regulation point of view, it can be concluded that property developers and project managers are bounded by Irish property industry policies in the event of undertaking property refurbishment projects. These regulations include: building regulations, fire regulations, conservation legislation and planning regulations, which were discovered to be adhered to by concerned property refurbishment practitioners in Dublin. On the issue of project management elements/factors required for successful implementation of sustainable property refurbishment, the findings show convincingly that time, quality, client satisfaction, dispute and litigation, health and safety, communication, technical requirements and environmental issues are very important for successful implementation of sustainable property refurbishment in Dublin.

Research Question 2: *What is/are the advantage(s) of using project management techniques in property refurbishment?*

Given strong evidences from the findings of this study, it can be tentatively concluded that the advantages of using project management techniques in property refurbishment include improvement in the likelihood of achieving project scope and specifications within the given project timeline, ensuring implementation of the project using best and standard practices throughout the project life cycle, as well as ensuring effective and efficient prioritisation and application of available project resources; and that project scope, budget and schedule are systematically and strategically set at the beginning of the project.

Furthermore, it was also discovered that the use of project management techniques in property refurbishment in Dublin help to avert not only the possibilities of project scope creeping and project budget overrunning but also help to avert risks of project delay, failure and abandonment as well as ensure effective communication among project team leaders and members leading to outstanding project performance and improved quality of project delivery.

Thanks to the calibre and synergy of expertise and technical know-how of the different project leaders and members. Other advantages discovered in the course of the study were the fact that project management techniques increase the level of customer satisfaction at delivery of each project and ensures sustainability of the projects delivered.

5.3 Recommendations

With regards to some of the gaps discovered in the course of the study, the following recommendations are suggested:

1. It is recommended that officials of the Housing Authority or Housing Association within Dublin should improve on the professional training in order to enhance their technical knowledge and expertise towards delivering effective service to the Dublin Housing regulation. Training should include acquisition of technical know-how on current global trends in managing housing crisis through effective town planning strategies. Similarly, property developers and project managers should also improve on their professional training in project management especially in the area of property refurbishment.
2. Increased funding should be deployed to the Housing Authority and Housing Associations in order for the officials to carry out their oversight functions on the activities of property developers and project managers during property refurbishment exercise and to ensure that standard regulations are adhered to and hence, ensure successful and sustainable refurbishment projects.

5.4 Limitations of the study

It is a typical practice to use the judgement of experts in the study of argument (Kumar, 2014, p. 273); however, there are limitations to this research. The limitations of this current study include issues relating to data gathering. For instance, it was difficult getting access to the target participants of the questionnaire survey and that of the key informant interviewees. However, the researcher was still able to get good participations and responses, which was sufficient to develop valid and reliable conclusions and recommendations on the subject matter of the study. In addition, insufficient time to conduct an extensive study and the wider scope of the research work was also part of the limitations.

5.5 Suggestion for future studies

The followings are suggested for considerations in further studies:

1. Comparative study of implementation of property refurbishment projects using Stage Gate Model and PRINCE 2 project management approaches in Dublin. This is suggested because the current study assumed the use of basic or traditional project management approach in relation to property refurbishment projects in Dublin. It is expected that the outcome will bring to the fore the dynamism of the identified project management approaches following same project management stages as adopted under the traditional project management approach model.
2. There is also need for further study to investigate further the role of project management factors towards successful implementation of sustainable property refurbishment in Dublin.

Chapter Six: Reflective Report

6.1 Introduction

The motivation to be enrolled on the MBA programme at Dublin Business School (DBS) was borne out of my quest to improve my competencies, skills sets and technical know-how as a budding administrator and project management professional. This was also to add to my current managerial expertise and competencies and also help me to proactively, innovatively, effectively and efficiently manage my firm and those I will be appointed to direct in the near future. Notwithstanding, the fact that the MBA programme was tasking, high demanding, in the final analysis it was a worthwhile adventure of a life time.

6.2 Reflection on learning process

One of the crucial aspects of my MBA programme at Dublin Business School was learning, which also formed the fulcrum on which my skills sets, and competencies acquired during the programme was premised. In the course of my studies, I can state that I adopted the Experimental Learning Theory (ELT) advanced by Alice Y. Kolb and David A. Kolb (2005). Thus, in all the modules (especially research module) I undertook throughout the entire programme, I followed the Kolb and Kolb (2005) four stages of learning process in ELT, which include abstract conceptualization, active experimentation, reflective observation and concrete experience as shown in Figure 6.1 below. Hence, new things were learnt starting with the process of abstract conceptualization of the idea, leading to active experimentation of the social phenomenon that revolves around the subject matter of the idea, which is complimented by reflective observation of the different scenarios of the issue and consequently trigger concrete experience.

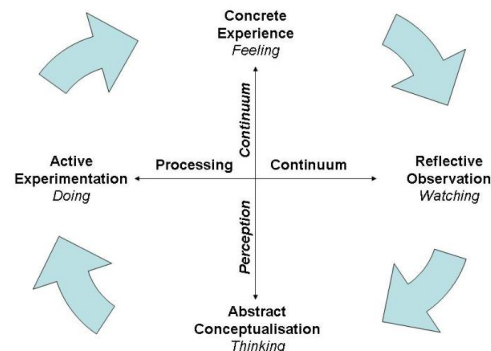


Figure 6.1: The four stages of learning process

Source: Alice Y. Kolb and David A. Kolb (2005).

Interestingly, this learning process was adopted during the dissertation module of the MBA programme just as other modules that were taken before the dissertation. In this regard, I conceptualized the idea of appraising the project management approach that would be effective to facilitate property refurbishment in the Irish real estate industry – focusing on property refurbishment projects in Dublin and leveraging on information from stakeholders such as property developers, project managers, sites engineers and also government officials in the Housing Planning Authority in Dublin.

After conceptualization of the idea, research questions were developed leading to the active experimentation as reflected by the field survey of the study. The reflective observation of the different scenarios of the issue was achieved through analysis and discussion of the findings from the field survey and hence, leading to concrete experience as depicted by the conclusions and recommendations on the subject matter and further suggestion for future studies.

6.3 Reflection on the dissertation writing process

I am happy that the research turned out as successful as I proposed at the proposal stage of conducting the research. Firstly, the methodology went as planned based on what was proposed. To this end, the study was premised on pragmatism philosophical paradigm, which determined the right set of research methods and procedures to be adopted based on the available research resources during the implementation of the field survey. In the light of the aforesaid, I adopted a mixed method approach that combines both the qualitative and quantitative research paradigm, which involved key informant cum questionnaire survey research strategies respectively.

With the foregoing and following the research onion of Saunders, Lewis and Thornhill (2012, p. 128), an ethically driven questionnaire survey was conducted on property developers, project managers, site managers and site engineering that have or were currently working on property refurbishment projects within the Dublin area. The same success was also achieved during the key informant interview conducted on five (5) government housing planning officers in the Housing Planning Department of Dublin City Council. Interestingly, the outcomes of both exercises were able to give me robust data, which were analysed and discussed against findings of previously conducted studies and led to novel conclusions and recommendations on the research questions of my thesis.

Furthermore, there was excellent interconnection with the literatures reviewed and the outcome of the findings of the study and hence, further confirmation on the validity and reliability of the research instruments and the conclusions and recommendations of the study.

Nevertheless, the major challenge encountered during the conduct of the research was that of data gathering. As explained in Chapter 5 of the study, it was difficult getting through to the target participants of the questionnaire survey and that of the key informant interviewees. However, I was still able to get good participations and reliable responses, which was sufficient to develop valid and reliable conclusions and recommendations on the subject matter of the study.

6.4 Reflection on own learning style

With regards to what I have discovered is my learning style as displayed throughout the MBA programme and most especially during the dissertation period, I found out that I have been able to adopt a blend of learning styles from the standpoint of the Honey and Mumford (1986), Honey and Mumford Learning Styles and Mumford (2007) Learning Cycle. Practically, during the dissertation period I would say I adopted the Honey and Mumford (1986), Honey and Mumford Learning Styles, which saw me acting as a pragmatist, theorist and reflector (Honey and Mumford, 1982).

To this end, I was logical and analytical following the footsteps of a pragmatist and theorist; while as a reflector I observed findings by linking them with previous studies (previous experience) in order to arrive at a clear picture of the relationship between the variables that were examined under the subject matter of the study. Similarly, I discovered that I was engaged in asking why, what, and how questions, which formed the crux of the *'converging'* and *'diverging'* learning styles posited by Mumford's (2007) Learning Cycle. Hence, I engaged in extensive thinking of issues and leveraging on different scenarios or perspectives on the issues and came up with the appropriate solutions to proactively tackle the issues as shown in Figure 6.2 below:

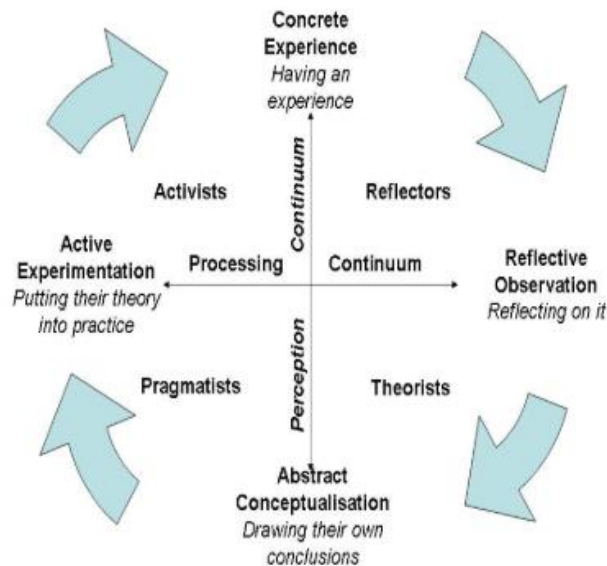


Figure 6.2: Honey and Mumford Learning Styles and Mumford Learning Cycle
 Source: Honey and Mumford, (1982).

6.5 Reflection on sources of information

Owing to the fact that this dissertation was to be a baseline study on which future studies will be hinged and for the fact that the outcome was also intended for practical policy action and direction with regards to property refurbishment in Dublin; most recent academic related studies within the period 2005 to the present were used. Furthermore, I ensured that only peer reviewed journal articles and book publications were used for the purpose of literature review, choosing the methodological approach and discussion of the findings of the field survey.

6.6 Reflection on dissertation formulation

The research was conceptualized and undertaken to appraise project management approach that would be effective to facilitate property refurbishment in Ireland's real estate industry. In essence, the study was inspired by the housing crisis in Ireland particularly in the Dublin City Area and the need to facilitate effective property refurbishment to solve the identified real estate challenge led to the choosing of this research topic on property refurbishment using project management approach. In essence, the current study carried on from where previous research on the subject matter had stopped, and with particular focus on the processes, policies, and procedures of housing construction in Ireland, how different techniques of project management

can improve and facilitate property refurbishment projects and the advantages of using project management techniques in property refurbishment projects in Dublin.

6.7 Assessment of learning and skills acquisition and development and future application

As a budding project management professional, the conduct of the study gave me a practical insight into the application of the project management stages, especially as it relates to the adoption of traditional project management approach in property refurbishments projects in Dublin. Furthermore, I was able to put into practice all I have learnt during the research methods module in my MBA studies at the Dublin Business School. In addition, the feedback from my lecturers was positively adopted. This reflects on Cottrell (2015, p. 222) that “such feedback, provided by experts who want you [me] to succeed, is an extremely valuable resources”. Going further, conducting the research improved my academic research knowledge and professional project management skill sets tremendously. I also found that my interpersonal skills set were improved from my extensive interaction with the various stakeholders in the Irish property industry that participated in the questionnaire survey as well as the interviews.

Lastly, my analytical competencies were greatly enhanced through the rigorous exercise of literature review and analysis and discussion of findings during the period of the research. On the whole, I was able to practically discover the processes, policies, and procedures in terms of best practices that exist in the application of project management approaches used in sustainable property refurbishment; as well as identify the advantages of using project management techniques in property refurbishment projects in Dublin.

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Appendices

Appendix 1: Questionnaire Form

Section 1: Demographic Data

Instruction: Please tick in the box alongside the option that best describes your answer to each of the questions that follows below:

1. Gender: Male Female

2. Do you have formal project management training? Yes No

3. How many years of experience do you have working on project teams across Dublin?

1-3 years 4 -10years 11-15 years 16 years - above

4. How long have you worked on property refurbishment projects within Dublin?

1-3 years 4 -10years 11-15 years 16 years - above

5. What is your current role on managing property refurbishment projects within Ireland?

Property developer Project manager Site Supervisor Site Engineer

Other: Please specify.....

Section 2: Processes, policies, and procedures that exist in the application of a project management approach used by developers and project managers in property refurbishment

1. Given your experience on property refurbishment in Dublin, which of these *processes and procedures* has your project team has followed in undertaking your project? Please tick (x) as appropriate

Where: **1**=Strongly Agree, **2**=Agree, **3**=Neutral, **4**= Disagree and **5**= Strongly disagree.

A. Processes and procedures in Project Initiation	1	2	3	4	5
Development of a business case for the project					
Undertake a feasibility study to determine the viability of the project					
Develop a project charter					
Appoint project leadership					
Set up a project office					
B. Processes and procedures in Project Planning and Design					
Define project goal, scope and specifications					
Design property refurbishment plan					
Determine project risks, state assumptions and constraints					
Design or map out project timeline and deliverables					
Develop project budget					
Prepare project resources (human and non-human) for project implementation					
Get necessary building permits for refurbishment					
C. Processes and procedures in Project Implementation					
Execution of project design, scope and specifications as reflected in the overall project plan					
Procure and deploy resources to the project site as specified in project plan					
Monitor and review progress at each milestone of the project					

Effective management of issues related to health and safety of project personnel and other site visitors					
D. Processes and procedures in Project Monitoring and Control					
Timely review project timelines, milestones and other site management issues					
Continuous review and assessment of the quality of the work done on site					
Review of project scope and specification with planned design and address issues of deviations					
Review budget performance to avoid project cost overrun					
Monitor and control issues related to project risks					
E. Processes and procedures in Project Completion and Delivery					
Comprehensive project evaluation review which includes giving feedback on project failure or success, lessons learned, and recommendations for future projects					
Embark on administrative completion activities such as confirming that the project has met all specifications and requirements of the project sponsor and other stakeholders					
Embark on physical handover of project to the project recipient and ensuring that all project delivery documents have been validated and submitted to project sponsor or recipient					
Conduct contract completion activities such as addressing issues related to meeting the terms and conditions of the project and formally closing the project contract					

2. Given your experience on property refurbishment in Dublin, please indicate the degree of importance of the following factors in successful property refurbishment as it is applicable to Dublin? Please tick (x) as appropriate

Where: **1**=Strongly Agree, **2**=Agree, **3**=Neutral, **4**= Disagree and **5**= Strongly disagree.

Project management element required for successful implementation of sustainable property refurbishment.	1	2	3	4	5
Cost					
Time					
Quality					
Satisfaction					
Dispute and litigation					
Health and safety					
Communication					
Technical requirements					
Environmental issues					

3. How would you rate the effective implementation of property refurbishment projects with regards to project management elements required for successful implementation of sustainable property refurbishment identified earlier? Please tick (x) as appropriate.

Project management elements required for successful implementation of sustainable property refurbishment.	Most Important	Very Important	Important	Neutral	Little Important
Cost					
Time					
Quality					
Satisfaction					
Dispute and litigation					
Health and safety					
Communication					
Technical requirements					
Environmental issues					

Section 3: Assessing the advantages of using project management techniques in property refurbishment

Given your experience, please indicate the degree to which you agree on the advantages of using project management techniques in property refurbishment? Please tick (x) as appropriate

Where: **1**=Strongly Agree, **2**=Agree, **3**=Neutral, **4**= Disagree and **5**= Strongly disagree.

Advantages of using project management techniques in property refurbishment	1	2	3	4	5
Improves the likelihood of achieving project scope and specifications within the given project timeline					
Ensures implementation of project, using best and standard practices throughout the project life cycle					
Ensures effective and efficient prioritization of and application of available project resources					
Ensures that project scope, budget and schedule are systematically and strategically set at the beginning of the project					
Averts the possibilities of project scope creeping and project budget overrunning					
Averts risks of project delay, failure and abandonment					
Ensures effective communication among project team leaders and members leading to outstanding project performance					
Improves quality of project delivery given the caliber and synergy of expertise and technical know-how of the different project leaders and members					
Increases the level of customer satisfaction at delivery of each project					
Ensures sustainability of project delivered					

Appendix 2: Interview Form

Interview Questions for Housing Planner Officers in the City Council.

Personal details

Please give your professional experience in the property industry in Dublin?

Instruction: Please place an (X) in the box alongside the option that best describes your answer:

- 1. Gender: Male Female

- 2. Do you have formal housing management training? Yes No

- 3. How many years of experience do you have in Housing Policy?
 1-3 years 4 -10years 11-15 years 16 years - above

- 4. How long have you worked in Housing Planning Department in Dublin?
 1-3 years 4 -10years 11-15 years 16 years - above

- 5. What is your current role in Housing Authority or Housing Association in Dublin?
 Planning Officer Deputy Planning Officer Senior Planner
 Other: Please specify.....

Interview Question 1

- 1. As a stakeholder in the Irish property industry, what in your experience are the standard project management procedures undertaken by a property refurbishment project team in the event of refurbishing a property in Dublin area?

- 2. What do you consider to be the most important standard policies within the Irish property industry that are expected to be adhered to by developers and project managers when refurbishing a property?

3. In your opinion, are these policies followed in respect of refurbishment of property in Dublin?

4. In your opinion and experience, what are the project management elements required for successful implementation of sustainable property refurbishment as it affects real estate industry in Dublin.

Interview Question 2

1. What do you consider to be the advantages of using project management techniques in property refurbishment?

INFORMATION SHEET FOR PARTICIPANTS

PROJECT TITLE

An appraisal of the project management approach for property refurbishment in the real estate sector in Ireland.

You are being asked to take part in a research study on the project management approach that would be effective to facilitate property refurbishment in the real estate in Ireland.

My name is Moses Eledan, I am student, currently undertaking MBA program at Dublin Business School. This research project in part fulfilment of the requirements for my MBA Program being awarded by Dublin Business School.

However, this academic research will look more closely at the use of a project management approach in property refurbishment. Furthermore, the aim of the research is to appraise a project management approach that would be effective to facilitate property refurbishment in the real estate in Ireland. This project has been approved by the Research Ethics Committee of Dublin Business School.

Moreover, in this research study, you will be asked to give your views on the above research topic by answering certain questions; your answer is completely your own perspectives. The questions asked will be related to project management approach and its effectiveness to facilitate property refurbishment. This will enable the researcher to discover the project management approach to facilitate property refurbishment. This research study requires to obtain the consent or ethical approval of participant which could be done by briefing and signature could be taken.

TIME COMMITMENT

The study typically takes 10 minutes and it will be carried out in one sitting.

PARTICIPANTS' RIGHTS

You may decide to stop being a part of the research study at any time without explanation required from you. You have the right to ask that any data you have supplied to that point be withdrawn / destroyed.

You have the right to omit or refuse to answer or respond to any question that is asked of you. You have the right to have your questions about the procedures answered (unless answering these questions would interfere with the study's outcome. A full de-briefing will be given after the study). If you have any questions because of reading this information sheet, you should ask the researcher before the study begins.

CONFIDENTIALITY/ANONYMITY

The data I collect does not contain any personal information about you except your opinion about the research subject. The data which I collect via this survey is only for my academic purpose which will not be published outside of Institute.

FOR FURTHER INFORMATION

I, Moses Eledan or / and John Lamont will be glad to answer your questions about this study at any time. You may contact my supervisor at john.lamont@dbs.ie or DBS phone number: (01) 417 7500.

INFORMED CONSENT FORM

PROJECT TITLE:

An appraisal of the project management approach for property refurbishment in the real estate sector in Ireland.

PROJECT SUMMARY:

The aim of the proposed research is to appraise a project management approach that would be effective to facilitate property refurbishment in the real estate in Ireland. The study will examine the processes, policies, and procedures that exists in the application of a project management approach used by developers and project managers in terms of property refurbishment. Furthermore, it will also identify factors that are required for the effective implementation of best practice in project management for sustainable property refurbishment. The study will assess if there is an advantage in using project management techniques in property refurbishment.

The research carried out in this study will contribute to the already existing vast body of knowledge on property refurbishment by providing vital information on effective practices, and also act as a resource for further research in the field. The research outcome would also be relevant to students or other researcher who may want to conduct research on similar studies or a related area.

By signing below, you are agreeing that: (1) you have read and understood the Participant Information Sheet, (2) questions about your participation in this study have been answered satisfactorily, (3) you are aware of the potential risks (if any), and (4) you are taking part in this research study voluntarily (without coercion).

Participant's signature

Participant's Name (Printed)

Moses Eledan
Student Name (Printed)

Student Name signature

Date _____

Appendix 5: Dissertation Meetings with Supervisor.

Name of Student: Moses Eledan	Student No:10345800
Name of Supervisor: John Lamont	Total number of meetings: 4
Date of Meeting:17/05/18	Location of Meeting: DBS Castle House and Aungier Street - Reception, Dublin.
Topics/Issues discussed/addressed at meeting: Action Agreed/Progress:	
<p>Overall Summary/Conclusion of Meetings: Generally, I had a total number of 4 meetings with my supervisor as to discuss the continuous progress of my dissertation and any queries relating to this research study. My meetings with my supervisor was very insightful on how to conduct my dissertation. I was advised to focus on the main research study, by researching on the latest articles for literature review and used the DBS dissertation handbook as a guide. This was also followed with series of advice and ideas on how to conduct the primary and secondary research. He further emphasised on the importance of learning experience and style. Often, I kept my supervisor updated regarding the progress report of my dissertation via text messages, emails and phone calls. Lastly, my meetings with my supervisor was beneficial for the completing of my dissertation.</p>	

Appendix 6: Dissertation Time Plan

Timeline of Dissertation Work												
Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Feb 26-4 Mar	Mar 12-18	Mar 19-25	Mar 26 -1 Apr	Apr 2-8	Apr 9-15	Apr 16 -22	Apr 23 -29	Apr 30 -6 Ma	May 7 -13	May 14 -19	May 20 - 21
Assigned Supervisor												
1 st Meeting with Supervisor - Dissertation guidelines and Review.												
2 nd Meeting with Supervisor – Review of Timeline Plan and Dissertation Proposal Feedback												
Write up Literature Review section of Dissertation												
Develop Theory from Secondary Research												
Develop and Review Interview Questions												
3 rd Meeting with Supervisor and get Interview Questions approved by Supervisor												
Conduct Interviews												
4 th meeting - review progress with Supervisor												
Analysis Interview and survey Data												
Update Dissertation												
Write Up Interview section of Dissertation												
5 th meeting - Review progress with Supervisor												
Final revision of Dissertation												
6 th meeting Review progress with Supervisor												
Submit Dissertation												