



"YOU CAN RESIST AN INVADING ARMY; YOU CANNOT
RESIST AN IDEA WHOSE TIME HAS COME" - VICTOR
HUGO

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Achieving Sustainability in the Workplace: A Qualitative Exploration from the Perspectives of Facilities Managers

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Submitted to the National College of Ireland

17th of August 2022

1. Abstract

While the interest around knowledge of FM has flourished noticeably over the last decade. It has been overlooked and understudied in general. Nowadays it is crucial for organisational effectiveness and assist in reaching sustainable development goals. (SDGs). This paper will highlight the strategical importance FM now plays within the sustainability environment and achieving future sustainable goals. For decades sustainability seems to have contradicted through global behaviours and practices. It is apparent academic research and ideologies are ineffective as politics overrides science within today's society.

Sustainable Development (SD) seems to be a Herculean task and resembles the impossible possibility. Global cohesion within lifestyle, industrial processes and educational aspects need to mirror Pygmalion's master sculpture Galatea. The author has chosen facilities management for their ability to significantly influence how a new sustainable organisation resembles. The perspective views of several FM professionals will be used to for this research. Throughout this dissertation the researcher will refer to themselves as 'the author'.

Literature findings:

Research findings have identified that FM are well ahead of the sustainability curve with relation to green practices and lowering their carbon footprint. Organisations are now realising the importance the profession brings to strategic goals. Without FM and their innovative mindset, the future of attractiveness organisations may be affected by our new generations. It is not without its own problems though as a multitude of threats are being faced both internally and externally currently testing their skillsets and technical prowess.

Objective

The author aims to gather FM perceptions on how sustainability has now become engrained within their workplace positions and the value and obstacles they experience. It will decipher their opinions and identify areas that potentially can be improved.

Methods

Relevant academic literature has been used by the author to identify three important research questions. A Qualitative research approach with the use of semi structured interviews scenarios was chosen which were then analysed with thematic analysis. The author has drawn on comparisons and conclusions which assisted with recommendations for improvement and future research. This potentially could contribute to the existing and future academic research on this subject.

Findings

The research findings have identified that sustainability is now evolving FM into a new broad, cost-efficient and eco efficient position. It has also unearthed various shortcomings both internally and externally that can hamper the progression to net zero targets. Off the research conducted within the Irish FM environment results show the industry is well advanced with strategic operational green practices. Topics worthy of future research were also unearthed and should warrant discussion.

II. Declaration

Declaration of a dissertation submission to the National College of Ireland in part fulfilment of the master's in business administration (MBA).

Name: David Redmond

Educational Institution: The National College of Ireland (NCI)

Award for this dissertation: Master's in business administration

Material submitted:

- (I) I declare this dissertation has been composed by myself
- (II) I declare all extracts contained within this dissertation have been distinguished with quotation marks and the authors acknowledged.
- (III) This dissertation will be uploaded in digital format to Moodle.
- (IV) I declare that no material information within this dissertation has been uploaded in any other submission for any other academic achievement.

Signature of research student:

A handwritten signature in blue ink that reads "Dave Redmond". The signature is written in a cursive, slightly slanted style.

Date: 17th August 2022

III. Submission Form

Submission of Thesis and Dissertation

National College of Ireland
Research Students Declaration Form
(Thesis/Author Declaration Form)

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Title of Thesis: Approaching Sustainability in the Workplace: A Qualitative Exploration
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Date: 17-08-2022

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IV. Acknowledgements

I would like to extend my sincerest gratitude to my employer who gave me the opportunity to pursue my aspirations of career enhancement.

To all my colleagues and friends who supported me and believed in me. To my fantastic classmates that gave me a valuable insight into their business worlds and invited me to their homes during our online lectures.

My supervisor Dr. Katarina Filipovic for her flexibility, valued contributions, calmness, and unwavering support right up to the submission of this paper. I would also like to extend my total appreciation and heartfelt thanks to Professor Colette Darcy who has believed in me since my academic journey began. A special thanks to all the school of business team whose communication and support cannot go unnoticed and to all my lecturers who brought me through this programme and shared their valued academic prowess. My colleague and friend Dave O'Brien for the understanding and enthusiasm he has shown to me during this process.

Within my personal life I would like to thank my mother Ann, sister Antoinette for their encouragement and belief.

My two inspirational twin daughters Sienna and Kate. Their unwavering support, patience, and motivation throughout this journey which at times seemed unending was nothing short of inspirational. You both sacrificed your time and missed adventures with great understanding.

You proved in the face of and during the Covid-19 pandemic strength and maturity beyond your years and at times brought me out of despair. I will be forever grateful in helping me (us) achieve this award. A true team effort.

VI. List of abbreviations

BMS	Building Management System
CFO	Chief Financial Officer
CM	Centre Manager
CSR	Corporate Social Responsibility
ESG	Environmental, Social and Governance
ESB	Electricity Supply Board
FCA	Facilities Condition Assessment
FM	Facilities Manager
HEI	Higher Education Institute
IFMA	International Facility Management Association
KPI	Key Performance Indicators
LCCA	Life cycle cost analysis
LEED	Leadership in Energy & Environmental Design
MBA	Master of Business Administration
PRM	Project Manager
PV	Photovoltaics
ROI	Return on Investment
PwC	Price Waterhouse Cooper
SDG	Sustainable development goals
SE	Sustainability Expert

Table of Contents

1. ABSTRACT	1
II. Declaration	3
III. Submission Form	4
IV. Acknowledgements	5
VI. LIST OF ABBREVIATIONS	6
CHAPTER 1: INTRODUCTION AND REASONING	10
1.1 Motivation for the Chosen Topic	13
1.2 Professional Viewpoints	14
1.3 Research Objectives	14
1.4 Dissertation Structure	15
Chapter 2. Literature Review	17
2.1 Introduction	17
2.2 Testing Sustainable Progress	19
2.3 Facilities Management Through the Years	22
2.4 The function of FM	23
2.6 FROM BASEMENT OFFICE TO C-SUITE STRATEGIES	ERROR! BOOKMARK NOT DEFINED.
2.7 STRATEGIC IMPORTANCE OF FM	26
2.7 Sustainability	28
2.8 The importance of Sustainability	29
2.9 Sustainability Implementation	30
2.10 A Nudge towards a Sustainable Culture	31
2.11 Bottom Line Benefits and Growth Resemblance	32
2.12 Why HEIs are the blueprint	33
	7

2.13 The Prize for a Sustainable Organisations and Educational institutions	33
2.14 Student Expectations	33
2.15 Staff attraction and Retention	36
2.16 Contribution to Society	37
2.17 Conclusion	37
Chapter 3. Research Question	38
3.1 Research and Sub-questions	39
Chapter 4. Research Methodology	41
4.1 Research Framework and Philosophy	41
4.2. Data Collection	42
4.3 Thematic Analysis:	44
4.4 Research Approach	45
4.5 Amendments to Structure	46
4.6 Participants	46
4.6 Industry Experts	46
4.7 Pilot Interviews	47
4.8 Interviews of Participants	47
4.8 Analysis and Findings	48
4.9 Ethics	49
Chapter 5. Findings	50
5.1 Breakdown of Demographics	50
5.2 Coding	51
Chapter 6. Discussion	52
6.1 Introduction	52
CHAPTER 7. CONCLUSION AND RECOMMENDATIONS	65
	8

7.1 Research Question Outcomes	65
7.2 Dissertation Limitations and Opportunities for future Research	67
7.3 Recommendations	68
8. PERSONAL LEARNING FROM THIS JOURNEY	72
9. REFERENCES	73
10. APPENDICES	84

Chapter 1: Introduction and Reasoning

This study is set in the context of sustainable facilities management (SFM). This is namely the set of required operations in controlling and reducing the environmental impacts on facilities management and its strategic operations. It also assists in striving to achieve the highest performance standards possible (Aceves-Avila and Berger Garcia, 2019).

During the recent COP26 Climate Change summit, Taoiseach Michael Martin was stringent in his views concerning the Governments €125 billion Action Plan saying it would have a profound change to Irish lifestyles for decades to come, with workplaces, homes, and communities having to adapt new cultures of sustainable living and reducing their carbon footprints and react to climate change. This is referred to by Farver (2019) as the long-term fluctuation in weather patterns and increased large scale global temperatures, and while climate change has been around before humankind, its meaning is now associated with the damage caused by global human activity. Its impact on the environment, wildlife, marine life has been catastrophic to date. With extreme weather, droughts, forest fires, flooding, ice glaciers melting have all seen a negative reaction to our ecosystems. (Weybrecht, 2014).

The coalition (Irish Government) agreed tactical coercion had now long since passed and the point of change or die has come to the fore. But this will see some serious obstacles ahead. (McGee, 2021). Research by Nielsen et al (2016) had already highlighted these issues. They added climate, energy and sustainability will assist in green growth but poses societal challenges for facilities management professionals, requiring forward thinking and investment. Such is the immediate

need for change that the Irish government has set a series of ceilings and limitations on greenhouse gas emissions for all sectors within the economy for 2030. Environment Minister Eamonn Ryan is quoted *"The targets that have been set today are going to be challenging for all sectors, but they are also fair, appropriate and, importantly, based on what is achievable.* (RTE, 2022). These sectors include buildings, electricity, industry sectors and transport. The slightly ambitious targets are listed below will have a major impact within the FM sector.

Commercial and Public Buildings	45%	Agriculture	25%
Waste, Petroleum, and gases	50%	Transport	50%
Residential Buildings	40%	Electricity	75%
Industry	35%		

McKinsey (2015) weigh into the debate stating a do-nothing approach will result in high losses for organisations longevity. A circular economy is now at the forefront, with the renewable energy market estimated to reach €2.15 trillion by 2025. The adoption of a European wide circular economy could amass an economic benefit of up to €1.8 trillion by 2030. Europe are classed as resource dependent and sustainability champions argue a circular economy offers the chance to increase resource productivity and decrease it's dependent on waste and increased growth unemployment. Innovation through entrepreneurship/intrapreneurship will increase competitiveness and identify uncaptured potential. (Heisbourg, 2021) has argued this point saying

Europe can ill afford the economic cost with organisations and businesses already finding resources and sustainable programs costly. Irelands progression in separating the economy from climate change pressures has fluctuated over the last decade. Greenhouse emissions, pollution and waste generation soared with the economic growth from 2015 onwards and the global covid-19 pandemic. Irelands town and city make up shows a reliance on the road network for commuting journeys. (OECD, 2022).

Current and future transport indicates the need of a fundamental shift in resource consumption to avoid ecological collapse and business risks. The pros to this shift can be of economic benefit compared to the current 'take-make-dispose' economy. Dispelling bloodthirsty consumption models and replacing with environmentally conscious ones. Transitioning to the new model involves three key principles of designing out pollution and waste, keeping materials and products in use and the regeneration of natural systems.

According to the Circle Economy (2019) fossil fuels, minerals, biomass, and metals amount to almost 93 billion tonnes entering the global economy per year. Of this amount only 9% is circular and being reused. FM are positioned centrally in upholding circular economy values. In essence they are the custodians of an organisations-built asset. Materials purchase, usage and reuse can all be influenced. But to perform this successfully requires stringent data recording to ensure the longevity of organisations fixed assets and inventories. (Hodges, 2005).

A perspective change from knowing-to-doing is now an imperative business requirement. Further to this the author will explore the importance of FM regarding future planning and sustainability.

May, Clauss, and Salzmann, (2017) suggest that FM is tasked with ensuring environmental efficiency and reduction in carbon emissions. According to Neilsen (2021), building operations contribute to 28%, transport is 22%, industry is culpable for 30% while 20% is made up of building materials and various others shows how much CO₂ is being used by various sectors in society globally. FM now needs to relinquish the shackles of the current inward-looking model. Innovative thinking should be at the forefront for organisation's cost-efficiency, strategic and cultural agendas in achieving best practice. FM should now evolve and become Change Agents for the good. (Gilmer, 2017) The literature review will develop the importance of sustainability and why its application within the context of FM is of utmost importance and warrants future research and discussion.

1.1 Motivation for the Chosen Topic

The author is intrigued by the idea of sustainability and its inevitable growth within the workplace over the coming years. This coupled with the author's construction experience to date, it is hoped that this dissertation will assist the author's future aspirations and career prospects. The author's organisation has provided the opportunity to enhance his personal development and is therefore very conscious of wanting to give something back and believes the chosen topic is something that could serve the organisation in good stead by unearthing some knowledge and experience from FM and industry professionals that can be of useful insight.

1.2 Professional Viewpoints

The author has utilised knowledge and experience from several different areas of the business world through the lens of FM. It was thought that it would bring a broader knowledge base around how FM are performing in the field of SDGs and the problems faced. The author will also utilise his knowledge and observations gained from his profession as to why some organisations and institutions are becoming so integral in sustainability practice, knowledge base and well ahead in terms of their green practices. This will provide an example of how important they are for organisations to use as a template when orchestrating their own strategies. While many organisations have ticked the wellness and diversity boxes. Many organisations are already cemented within the center of the three spheres of sustainability.

1.3 Research Objectives

The aim of the author is to explore sustainability from an FM context and its perception amongst FM professionals. This will mean an explorative process to measure its effectiveness in identifying areas that need redressing or acceleration. It is perceived by the end of this dissertation there will be a series of industry insights that will be deemed knowledgeable within the field of SFM and potentially influence future studies and confirm FM as a driving force to in sustainable practices

1.4 Dissertation Structure

This dissertation has been broken down into seven chapters and are closely followed by the authors personal learnings, reflections, references, and appendices sections.

Chapter 1

outlines the purpose of the research. It contains a brief overview of the topic for discussion – the importance of sustainability within the facilities management context. It provides a brief overview of how sustainability is now no longer a buzzword and should be catapulted to the fore of day to day running of any organisation under the strategic leadership of FM. It highlights where FM currently sits

Chapter 2

provides a detailed overview of FM and sustainability. The literature studied draws from an array of academic books and journals allowing for a comprehensive viewpoint to assist with establishing prevalent themes and topics to focus on.

Chapter 3

concentrates on the methodology and outlines the chosen methodology for this research. Discussed in this chapter are the research philosophy approach, design, data collection and analysis. It communicated why the chosen approach was chosen and was deemed more valuable than other methodologies.

Chapter 4

This chapter unearths the findings and potential recommendations. In depth study of the data collection gathered from semi-structured interviews will be linked to the literature reviewed allowing for recommendation to be proposed on the evaluation of the themes and findings.

Chapter 5

Recommendations are understandably limited due to the timeline faced during this study. FM and sustainability are not as frequently researched as other business topics (leadership for example).

Chapter 6

This chapter involves suggestion and practical implications for future research. Certain areas within this study will require in depth analysis, financial viability, and a broader investigative strategic planning.

Chapter 7

The finale of the research discusses whether the findings support the literature reviewed and analysis gathered.

Chapter 2. Literature Review

The aim of the literature review is to develop an understanding for the reader around the concept, function, and importance of FM. How it now acts as a key driver in sustainable practices and the benefits of its many facets to organisational behaviour and development. The author will also communicate the need for action and exactly why organisations should be placing SDGs within their strategic planning policies.

2.1 Introduction

Rafi, (2021) in an article for Forbes highlights that 90% of executives realise the importance of sustainability, but only 60% of organisations have strategies in place. Lack of implementation and engagement are the main stumbling blocks. Further research by Accenture revealed only 26% of senior executives believe they have reliable and in-depth sustainable measured data to hand. (Irish Times, 2022).

Key barriers to developing sustainability goals (percentage of executives):

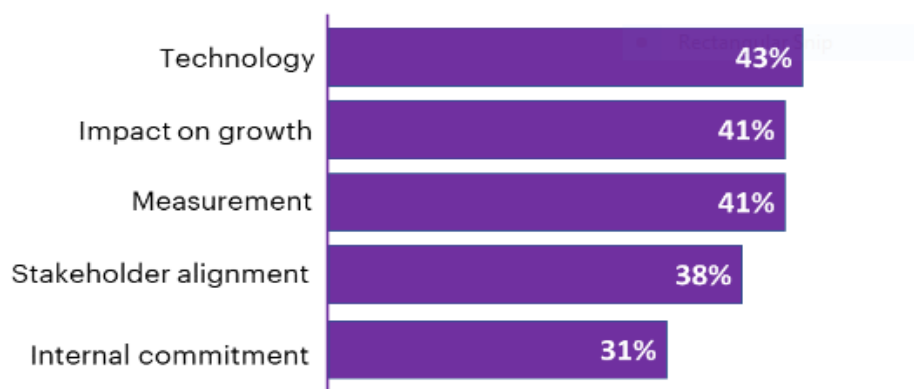


Illustration 1. Accenture 2022.

Sustainable development evolves around five components of entwined, conservation and development, ensuring basic human needs, ecological integrity, social self-actualisation and equality and diversity. (Weybrecht, 2014). Given the everchanging internal and external factors nowadays. Various organisations are still in the infancy stage with sustainability protocols and come up short with quantitative and qualitative data regarding indicators, with most at the starting line of capturing, monitoring, and sharing it for public consumption. (Lacey et. al. 2022).

According to Shriberg and Tallent (2007) organisations struggle to overcome the barriers faced to accurately assess initiatives in a coordinated approach. While most have ticked the box regarding operational approaches including recycling, water, and lighting costs. There is still so much scope to grow by planning and acting effectively. (Taylor et al, 2014) Others use what is known as greenwashing. This is where organisations market themselves as sustainability champions without performing any sustainable initiatives. It is an unethical and deceitful way of appealing to customers who hold sustainability close to their core beliefs. (Griseri and Seppala, 2010).

2.2 Testing Sustainable Progress

Accruent (2022) highlighted every organisation in society today should be able to answer five key questions regarding their sustainability practices.

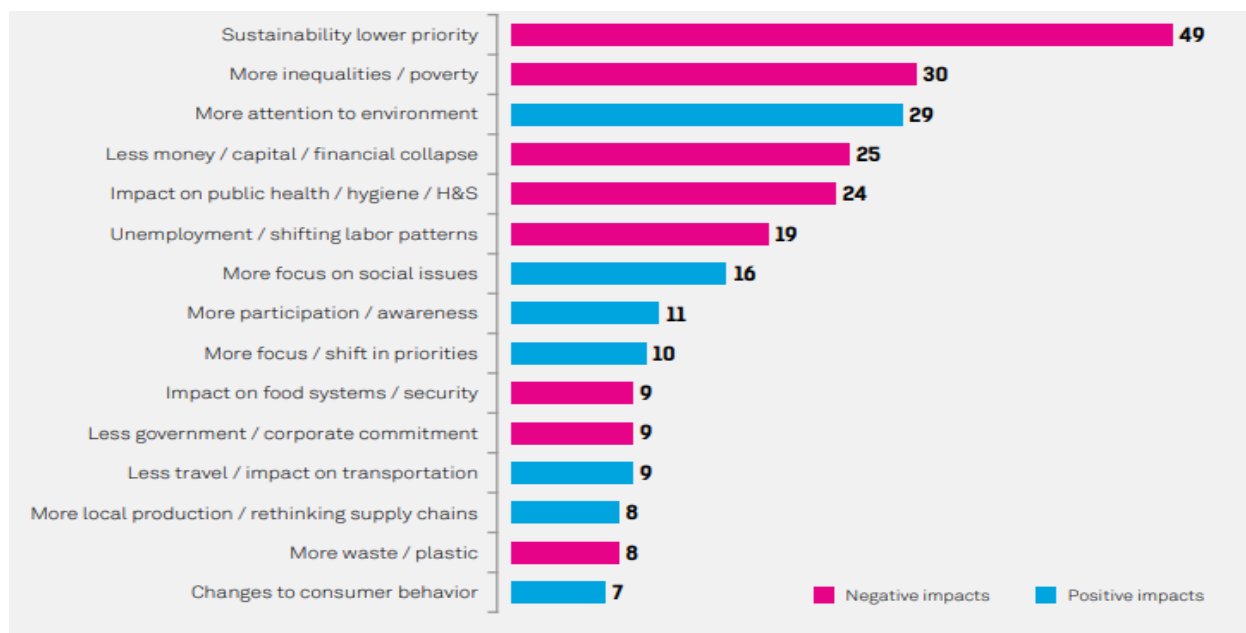
- Is there a sustainable program in place? - This involves how organisations view sustainability and if the components are aligned with the vision and mission.
- What are the challenges faced? - What are the strengths, weaknesses, opportunities, and threats (SWOT). Has there been employee buy in, sustainable initiatives in place and has regular communication helped incentivise participation? Who are the market leaders and how does the organisation compare? – This has become increasingly important as customers now have strong environmental core beliefs and the risk of being left behind is high by existing competitors or new market entrants.
- How is the progress being measured? – Developing a plan is easy but what are the returns on investment (ROI) from the current or past projects and are reporting techniques shared and easily communicated.
- What added value has the organisation gained? – Organisations exist to be profitable. This means a Chief Financial Officer (CFO) needs to see data driven results to ensure his future support in an often-high initial capital outlay sustainable program.

(Table 1.) shows 17% of respondents trust their organisations are fulfilling their sustainable development targets. The private sector has seen a steady decline since its peak in 2018. This has been the opposite for non-for-profit organisation (NGOs) and HEIs who are continually recognised for their superior efforts. Experts also view national Governments as inadequate and lacking in leadership. In combating this and increase their resilience against future systemic shocks organizations are expected to double their efforts towards SG commitments. This will involve organizations reevaluating business models lowering GHG emissions as far as its transformation of the existing supply chains if necessary. Collaboration and partnerships will also ensure a robust and resilient business model. (Lee and Bradley, 2022).



Table 1. The Globescan-Sustainability Survey. (2020).

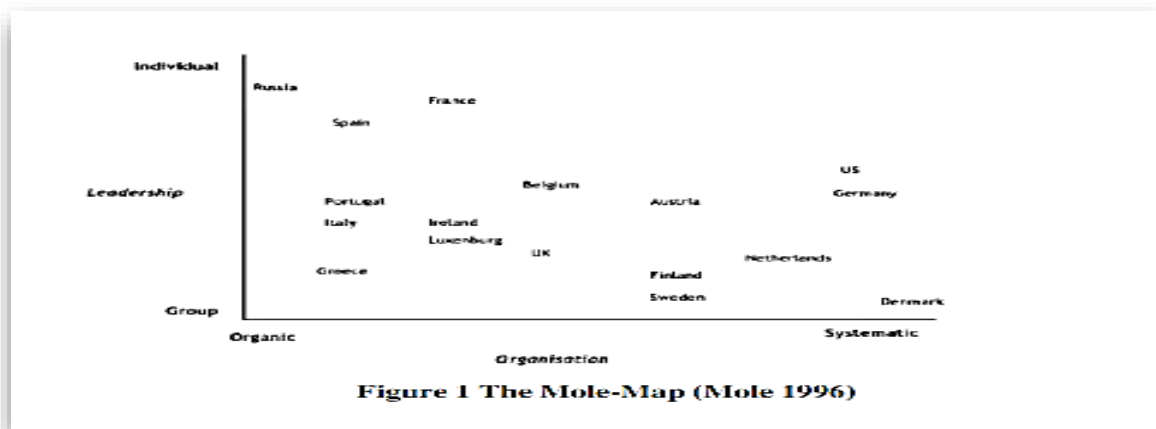
A host of experts believe the Covid-19 global pandemic will continue to wreak havoc on the SD strategies, most people fear sustainability will see negative urgency around the topic. It is also revealed that the global pandemic will aggravate inequalities, poverty, and hunger, while almost a third of respondents are confident the pandemic has led to a renewed passion around environmental issues. (Lee and Bradley, 2022).



The Globescan-Sustainability Survey. (2020).

2.3 Facilities Management Through the Years

The author will give a brief history to show how FM has evolved to its current structure and now needs to reinvent itself again. The background and when FM were first introduced it's quite muddled. (Brooks and Atkin, 2015) It was developed as a need for organizations to have a managed department to help maintain the bricks and mortar assets. The term FM itself was adopted in the United States (US) in 1970 and tasked with the management of the new high-rise buildings that blitzed the skylines. The 80's saw FM regarded as a major component in property management so much so, the FM journal was founded in 1983. The 1990s saw hugely influential Franklin Becker's research concentrated concerning the organizational environment, by managing current equipment and planning for a new wave of technology advancements being developed. The Mole Map developed in 1996 by John Mole deciphered who were the market leaders in FM regarding innovation plus revolutionary policies and procedures. The table showed the US this as systematic leaders. Ireland's organic approach shows a reliance on the United Kingdom (UK) and the US for methodologies on which to apply in the Irish market. (Nor, Mohammed and Alias, 2014).



2.4 The function of FM

Defined by Bröchner, Haugen and Lindkvist (2019) as an organisational function that integrates people, places, and processes with the function of enhancing the quality of life of its employees within its environment. FM is tasked at providing core business services support. According to Prasad and Hall (2004) maintenance and operations are pivotal in providing a positive impact on the Life cycle cost analysis (LCCA) of a built asset as well as minimising its potential hazardous impact on the environment.

The core challenge for FM professionals is to pursue and influence a radical change across the business culture to reap positive long-term profitability. Investing in sustainability can help realise those gains through efficiency and effective collaboration. (Atkin and Brooks, 2015))

FM has emerged from the Covid-19 pandemic as a major cog within organisations current and future strategic vision. Current possibilities of future electricity blackouts will now also catapult self-sufficiency by the means of wind, power and solar to the top of agendas globally. (Hayes, 2021). This understanding has evolved from the FM's humble beginnings to become a key discipline. A well-managed facility can add value and increase awareness amongst its personnel (Atkins and Brooks, 2015). Mays (2015) highlights that the management of a buildings life cycle cost comes second only to employee cost as the highest organisational expense. This has led to a belief that facilities are merely a cost centre adding nothing strategically in the long term. With FM regarded as a multi-disciplinary and diverse role this had led to somewhat of an identity crisis as each role can differ from sector to sector or industry to industry. (Society of Chartered Surveyors Ireland, 2019).

According to Nielsen et al. (2009) a once growing interest amongst FM in flirting with sustainability has now become a more pressing necessity for the management of built assets. Nielsen, Sarasoja and Galamba, (2016) find climate, energy and sustainability will assist in green growth and poses societal challenges for FM professionals requiring forward thinking through innovative practises and smart decision making that will have a positive impact on every genre of sustainability. (Straub, 2011). FM professionals are now key advocates in green environmental practices (Hodges, 2005). Tucker (2013) defines SFM as *“being able to manage, implement and deliver an organisations non-core business service that contribute to the improvement of the economic, social and physical environment, and in turn, to the greater environmental sustainability on an organisations core business objective’s”*. (p.2)

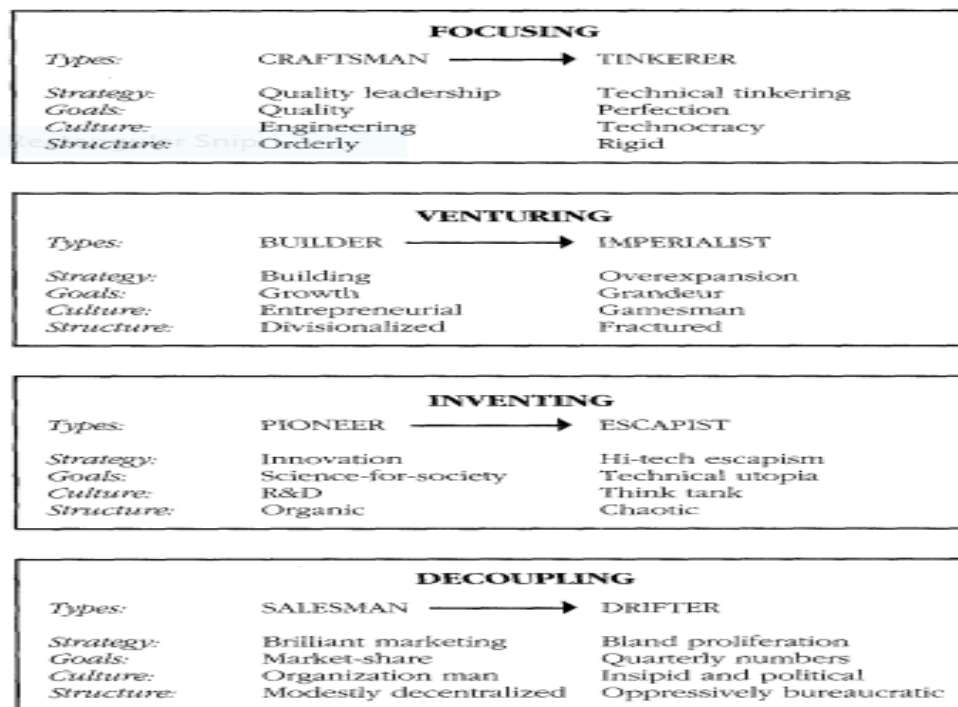
According to Galbreath (2009) green practices can be beneficial in a multitude of areas including, greater financial returns, increased public persona and minimising environmental damage. SFM firstly needs a paradigm shift with a view to technological adoption, management, and team behaviour. In reaching these goals FM must firstly encourage all organisational levels to understand the importance of sustainability and the positive impact in broader terms. (Gailkwad, 2013) The FM role should now encompass waste minimisation, utility reductions, energy conservation and recycling initiatives. (Shah, 2007). Sustainability should be included within all aspects of operational maintenance, repair and retrofit phases of the infrastructural upkeep. (Elmaulin, et al. 2008). This involves sourcing materials with a proven sustainable supply chain that has minimum waste, lowered energy demands and traceability. (Shah, 2008). FM are well placed with the capacity to analyse, examine, and implement sustainable issues as they are

positioned to oversee the entire process from concept to completion which can influence the long-life cycle of a built asset. But to ensure this Hodges (2005) maintains FM and their teams should be armed with the proper knowledge and tools required. Digitalisation has also brought valued knowledge which increases performance (Nutt, 2000). May, Clauss, and Salzmann, (2017) write the application of datamining combined with knowledge discovery can improve maintenance on current and future builds. This data will better future planning leading to a more preventative regime rather the costly reactive model. Eco-efficiency will transform the FM role with higher performance. (Atkin and Brooks, 2015) Building performance and financial implications can be data driven and can minimise unwanted and unneeded energy usage. Building Management System (BMS) deployment to automatically control the airflow, air conditioning, water temperatures, air humidity and warm/cold air streams. Sensors strategically placed allow for the programmed software to monitor and control the usage at the touch of a button. This allows the building to be monitored 24 hours daily and alarms can alert the team to potential risks and maintenance issues while also keeping financial savings to the maximum. (Atkins and Brooks, 2015). This will ensure the planting of lasting values for organisations. But with sustainability in its infancy many FM fail to holistically embrace its complete ideology. (Jensen, 2009, Nutt and McLennan, 2000). Past research has unearthed a lack of knowledge, skillsets, and the apprehension of pursuing new routines and practices for fear of failure and stakeholder participation. (Shaffiti et al. 2006). As FM is a multi-disciplinary service facilities managers are exposed to a diverse range of works.

2.5 Strategic Importance of FM

Khan et al (2015) refers to Greek times when they reiterate Socrates views that leadership is situational. Yukl (2002) states leadership should incorporate the ability to influence organisational goals. There are broad and diverse challenges faced by FM currently and the ability to juggle each component needs multi-functional characteristics. (Rivers, 2017). Strategic development within the FM sector is depicted by the figurehead at the forefront of decision making. (Abell, 1980). In analysing this Miller (1990) reiterates there are four trajectories the builder, craftsman, pioneer, and salesman. (*Illustration 3.*)

The Four Trajectories



(Source, Miller, 1990).

Strategy plays a major role in day-to-day FM. (Atkins and Brooks, 2015). The use of deliberate strategies maintains purpose and direction. Referred to as a strategic planning approach it is set on an annual based analysis and then planned and designed accordingly prior to execution. (Hill and Jones, 2006) On completion the process starts again for the next financial year. The flaw is that its tunnel vision approach can often mean exterior threats and red flags are ignored. (Potential Green Washing).

Emergent strategies follow the line of a constant learning curve in achieving best practice through incessant testing. Dissecting the environment and marketplace allow for rapid tweaks, budgets, and flaws to be rectified and realigned before execution. According to Rivera (2012) it takes the look of an agile approach involving the constant scrutinising of the external environment. Jones (2020) view is that the environment is continuously in motion, and it is the organisations that stay still. Reiterating Mintzberg's views that strategies fail to start due to unforeseen circumstances and emergent planning is now crucial in achieving success. Interweaving the two models into a hybrid approach will ensure FM are masters of their own destiny through robust decision making while also incorporating innovation and forward thinking into their organisational strategies involving scenario planning. (Parks, 1998).

Scenario planning is the formulation of various strategies based upon the 'what-if' assumptions. FM need to incorporate what they envisage to be the best- and worst-case situations that may occur and map around them accordingly with the use of alerts that act as signposts in identifying the need for strategy changes. This ideology according to Courtney, Kirkland and Viguerie (1997)

engrains how complex and turbulent the exterior environment can be and the need to react accordingly. FMs are now tasked with bringing sustainability to a Galatian model as referenced by Caffrey (2020) that can be admired within the business world

2.6 Sustainability

Complex by nature The Brundtland reports (1983) definition of sustainability is “*development that meets the needs of the preset without compromising the ability of future generations to meet their own needs.*” While according to Griseri and Seppala (2010) it is the concept of allowing the natural world to replenish itself while also providing enough resources for humankind. It is split into three parts social sustainability, environmental sustainability, and economic sustainability. They are referred to as "The Three Spheres of Sustainability" and represent the three most vital aspects of sustainability. (Purvis et al,) Each pillar impacts directly and indirectly on each other, and none were conceived to stand alone. They all need consideration when talking about sustainability. Sustainable development goals (SDGs) generated in 2012 during the Sustainable Development Conference in Rio, Brazil. They replaced the Millennium Development Goals (MDGs) which have been created in 2000 to tackle hunger and poverty. (UN, 2022).



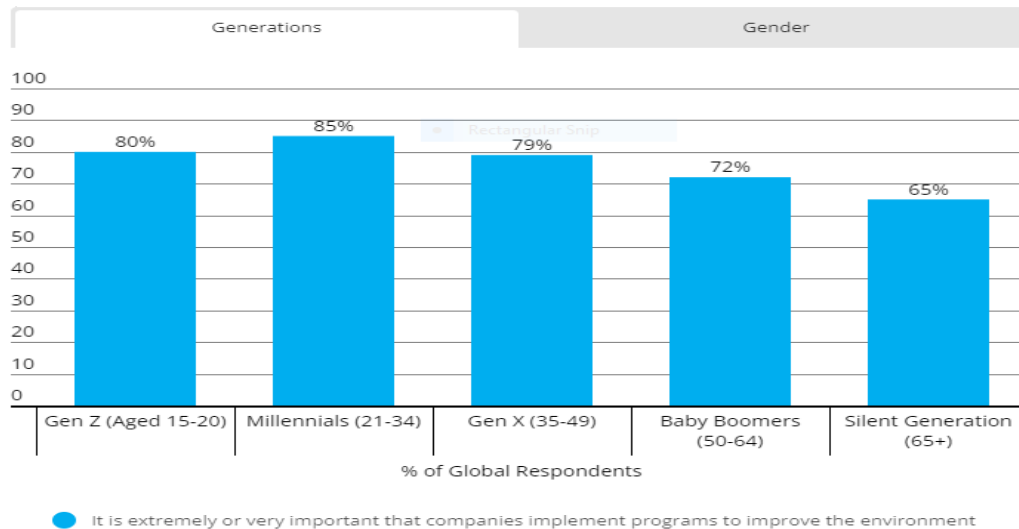
UN 2030 SDGs. (UN, 2015).

The framework is now of fundamental importance globally. The concept became mainstream during the 1980's and its origin has evolved through academic and social research. (Purvis et al, 2019). Issues concerning sustainability arise when processes, objects and value systems come under attack. Sustainability is the balancing act between economic, environmental, or societal issues. Sustainable development is therefore aimed at making people behave in an ethical way that assists in benefiting their environment and its dependence. (Farver,2019). HEI's and NGOs are unique in that they hold a footfall in all three spheres. Therefore, they as research showed earlier both are leaders and first movers when it comes to sustainability.

2.7 The importance of Sustainability

Alongside Corporate Social Responsibility (CSR), sustainability has become cemented within global business strategies. If organisations want to accomplish their sustainability goals, they must have intrinsic motivations to do so. (Weybrecht, 2014) Key components for organisations involve trust and engagement from employees, client base and other stakeholders. This in turn assists with employee retention and attraction. Innovation is encouraged and benefits are seen throughout the organisation. Through this brand recognition is accomplished and community relationships are built through the alignment of customers core beliefs. (Farver, 2019)

The later certainly rings loudly as research by Nielsen (2018) revealed the percentage of respondents between different age cohorts that stated the importance of organisations having a climate plan in place and were environmentally conscious.



(Source, Neilsen.com, 2018).

2.8 Sustainability Implementation

Establishing a sustainability framework is not a “one-size fits all” scenario. There are many different factors that may affect the implementation of a sustainable program. Climate, location, stakeholders, footfall, age, and type of building are all factors to be considered. Community and city initiatives also come into play. (Weybrecht, 2014) A Deutsche Bank report in 2012 highlighted buildings consume 40% of the global primary energy and are culpable for 40% of carbon emissions. Almost 10 years on and the situation is still as bad and getting worse. (The Financial, 2013)

The implementation of sustainable practices within organisations is not merely important from an ecological viewpoint but has become increasingly valued by its stakeholders.

Organisations reliant on Government funding or other channels of investment may now need to report both energy, waste reductions and conservations. This requires professionalism and total commitment from the FM team and communicated clearly and data supported. (Park, 1998)

2.9 A Nudge towards a Sustainable Culture

This entails using a role model approach with Richard Taylor's Nudge theory tailor made for this purpose. (Appendix 4.). A concept rather than model commonly utilised in behavioral science regarding human decision-making, thinking and actions. Famously used in Amsterdam's Schiphol airport what's the blue bottle graphic in toilet urinals to avoid constant slip hazards and potential lawsuits from its customers and time affiliated to cleaning staff (Curtis, 2014). Regarding sustainability the Nudge theory has far more influential purposes. Group motivation and communication are factor's that leadership, change management and education advocate. Organisations use group influencing and practice to filter through all stakeholders to create dramatic positive impacts organizational wide in sustainable thinking and application. Changing processes to education and motivation will represent a better tactic than coercion. The key component will highlight the humans through mental recall can be nudged to act differently and choose the right decisions.

The seven spreadly sins referred to by Fitzsimons (2018) entails (Appendix 5).

- circulating best practice and knowledge gained is implemented after each intervention.
- visual observations to all stakeholders.
- Relative advantage is how the new change benefits and perceived by the organisation.
- Trialability allows changes to be tested and withdrawn if no benefits are gained.
- Simplicity is the perception on how easy the changes are to apply and use.
- Compatibility is how the changes intertwine with the organisation's values.

2.10 Bottom Line Benefits and Growth Resemblance

A recent sustainability report published by NTT a global technological organisation found 44% of organisations surveyed have realised improved profitability through implemented sustainable programs. The survey involving 500 organisations was conducted from September to October in 2021. The key findings were clear as to why sustainability should be an integral part of organisational strategy and development.

69% of respondents stated becoming more sustainable was key to the organisations future thinking. The Covid-19 pandemic elevated the importance to become more sustainable stated 47% while financially 33% experienced a reduction in overall operating costs and 24% gained increased revenue growth. Four out of ten organisations stated that customers, employees, communities, and shareholders now expected their organisations to drive change regarding sustainability. 74% stated the development of six key steps are now top of their strategic thinking. (NTT,2021).

Formation of a sustainability team to help spearhead initiatives and programs
Lay out a clear vision of what sustainability resembles
Communication of desired goals to all stakeholders
Introduce technology to monitor and provide metrics
Re-think all projects to include sustainability
Celebrate every victory and publicise the results

2.11 Why HEIs are the blueprint

Earlier a survey showed how HEI's, and NGOs are frontrunners within the sustainability practices and SDGs. The following headings will outline the benefactors as to why from the view of the author.

2.12 The Prize for a Sustainable Organisations and Educational institutions

Dahle and Neumayer (2001) state college campuses resemble microcosms which endure the same issues faced by broader societies. Building materials, paper, energy resources and food as proven have major impacts on society through water and air pollution, while waste and hazardous chemicals are catastrophic for the environment on a whole. Velázquez, Munguia, Platt and Taddei (2006) define a sustainable educational campus saying *“A higher educational institution, as a whole or as a part, that addresses, involves and promotes, on a regional or a global level, the minimisation of negative environmental, economic, societal, and health effects generated in the use of their resources to fulfil its functions of teaching, research, outreach and partnership, and stewardship in ways to help society make the transition to sustainable lifestyles”*.

2.13 Student Expectations

There has been a noticeable pattern in the way colleges and universities approached campus design. The student viewpoint on education has changed becoming far more focused on knowledge obtained from experience and real-life topics. They now demand extra from their institutions to reach their expected levels of success. Sustainability is now seen as a non-negotiable component for campus facilities. The ability to attract and retain students of all demographics a community and success-oriented environment must be fostered in. Facilities

teams must provide spaces that encourages collaboration and learning and fosters positive experiences. In the past focus was placed under needs of lectures and institutional goals this has now shifted to the students. Students now need a flowing compass to navigate through and this can only be achieved by adopting a new approach regarding student space. Institutions are already in the process of reimagining what the modern lecture hall and classroom resemble. The old-fashioned traditional classroom has become mundane and not fit for purpose, being replaced by student focused high level learning environments. Quiet spaces, libraries, communal group settings, and sensory pods are becoming a mainstay in student expectations.

Sustainability is now of the utmost importance and cannot be overstated. Climate change issues are becoming far more obvious week on week across all continents globally. (Lee, 2022). Implementing green initiatives are an effective strategy to ensure the longevity of campuses and their outdoor spaces. Ensuring stimulation for the society intellectually, civilly, and socially can only be achieved with environmentally focused organisations. (Heslin and Ochoa, 2008).

Moving towards more sustainable designs will result in better operational efficiencies in the long term for organisations. Legacy is at the forefront of their thinking. (Farver, 2018).

HEI's are now the bedrock to educate the importance of sustainability. This will assist in both staff retention and the attracting new talent as well as appealing to institutions and students core beliefs. What better way to promote climate issues and SDG's than in our well renowned and highly regarded educational system? Each college/university graduate will enter the workforce with a post and undergraduate but also an understanding of best practice regarding sustainability that can be utilised in society and brought into their chosen industry.

most institutions HEI's are positioning themselves towards sustainable practice. Materials with long lasting durability can withstand high traffic. And while other organisations are scrambling for sustainable strategies these have become the norm for HEI's and NGOs for almost a decade now. Be it waste management or Leadership in Energy and Environmental Design (LEED) projects colleges and universities have set a standard target year on year and this has become mainstream. HEIs including colleges, universities, research institutions and vocational schools need a high performing setting to stay competitive and ensure attractiveness for the continuous flow of students. FM administrative by nature performs an assistance in driving the institutions towards the *Campus of the Future* model. (Telesford,2010).

Research conducted revealed increased competition coupled with environment/energy are the components that will result in HEIs moving to a greater ecologically sustainable footprint to gain first mover advantage. It also revealed overall quality of the facility impacted on student/staff recruitment and retention. Sustainability particularly with ESG fast becoming the key enabler of the future HEIs. (Telesford,2010)

Achieving this through SFM involves an FM model that sees economic, social, and ecological as the optimal components that will support the organisations core function. (Table 1.). FM professionals should portray the knowledge, ability, and skillsets to move the organisation in achieving a self-reliant and continuous improving ecologically sustainable environment. These skillsets will assist in the process of incorporating and engraining sustainable practices within the HEI environment which will give added value and evolve FM practice yet again.

2.14 Staff attraction and Retention

Peters (2019) refers to research that shows nearly 50% of all respondents including 75% of millennials agreed that they would sacrifice their salary to work for an organization that practices and portrayed sustainability. The survey used the sample size of 1,000 employees within a variety of large United States (US) organisations. 70% of respondents replied that they would choose a company to work for that had strong environmental beliefs. Millennials will shortly make up over three quarters of the global workforce by 2025. 40% said they had already made the choice to work for organisations because of their environmental stance. Again 70% said they would stay long term if they saw a sustainability plan in fruition. 30% said they had left organisations who failed to mirror their core beliefs and values. With competition within the HEA environment so competitive it is now imperative to show visual signs of sustainable awareness and actions to ensure longevity. High staff turnover according to (Peters, 2019) is both monetarily and culturally detrimental to any organisation. As the war for talent continues to dominate the workplace. The cost of replacing an employee now stands at €13,100. A survey of 260 organisations in the Irish market stated there was an expectancy of 11% turnover rate. It now also takes up to six weeks to recruit a replacement but, that depends if a talent crisis develops as the workforce is now nearing full capacity. (Woods, 2018).

2.15 Contribution to Society

Community involvement and development are fundamental components within sustainable development. This is achieved individually or with the assistance of focused associations pursuing the good of the public and the strengthening of societal morals. Organisations that practice this gain positivity and helps enforce civic values and trust. Community involvement and support should value the surrounding community and see itself as a conscious stakeholder. (ISO/DIS 2600, 2009).

2.16 Conclusion

The literature has unearthed that not only is the idea of sustainability growing, but it also seems action is needed exponentially by organisations. Organisations who are possible green washers will see a detrimental result on strategy, financial and employee performance and retention. Organisations are now being asked to think innovatively in wake of a global pandemic, energy crisis, and the speed of climate change calls for action.

Research has shown that organisations are seeing the need of sustainable practice as a priority. It is apparent FM is so diverse there is confusion around how it will adapt over time and look in the future. Sustainability is at times still misunderstood resulting in organisations scrambling for strategies to implement. Without buy in these strategies can result in poorly executed approaches that can affect performance and organisational attraction amongst a new wave of environmentally aware generations. FM are now tasked with ensuring organisations have a new safe, clean, and environmentally aware working environment for clients, staff, and visitors alike.

Chapter 3. Research Question

Area's

Sustainability and Facilities Management

Purpose

To investigate and gain understanding of sustainability and FM roles in achieving SDGs from the perspective of FM.

Title

‘How will sustainability issues affect the evolution of Facilities management in the workplace: A Qualitative Exploration from the Perspectives of Facilities Managers in Ireland

Objectives:

- (a) To gain a broad understanding of the interviewee's views on sustainability.
- (b) To uncover the respondents' views on the future of FM.
- (c) Their opinions on leadership and strategy within the FM role.
- (d) To gain valuable knowledge on how Covid-19 has affected sustainability progression
- (e) To investigate the difficulty in cementing sustainable best practices culturally.

3.1 Research and Sub-questions

Without an idea, research is impossible. (Graziano and Raulin, 2007). According to Lewis and Ritchie (2003) the aim of interviews these two strive for broad coverage in relation to key issues. Research is described as sometimes being applied or basic and solely focused on the goal of solving real life problematic scenarios. (Graziano and Rowling, 2007). The research questions the author chose can be found in appendix (1) and the author used Patton's (2002) ideology that open-ended questions rather than yes or no questions can reveal more interesting, useful, and informative information that was never envisaged.

(1) How do organisations conceptualise the importance of sustainability?

- How does your organisation view and approach sustainability strategically?
- What projects have you in place or under consideration?
- Is there a dedicated sustainability office in your organisation
- Has there been a cultural buy in to sustainable practices
- Do initiatives need constant auditing or have you seen a seamless transition?
- How key are partnerships to your organisation?

(2) Leadership is situational and requires a variety of traits and skills

- What traits are needed to be an FM leader?
- What added value do they bring to organisations? And have you an example?
- What importance does FM play in the broad strategic goals nowadays?
- Are multiple strategies a necessity
- What does an FM leader resemble

(3) How will sustainability effect the facilities management sector in the long term?

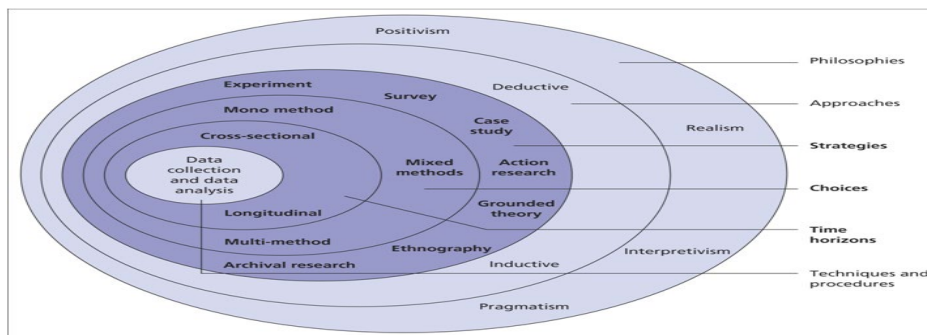
- Will there be a complete overhaul of the FM industry?
- Has innovation become integral in how organisations tackle sustainability?
- Do FMs feel equipped academically to address the area of sustainability?
- What are the main issues encountered in an FMs role regarding sustainability?
- Will Covid-19 mean a complete overhaul in how facilities are managed.?
- Are FMs equipped with the financial aspects of sustainability implementation?

Chapter 4. Research Methodology

Research methodology is best described as strategy used for general research. There is a system of beliefs and philosophical assumptions which assist in the authors choice of method (Goetz and LeCompte, 1984). Mack et al (2005) state qualitative research aim is to explore and gain an understanding regarding behaviors in a specified area. Attride and Stirling (2001) add that there are various approaches to be utilised including focus groups, case studies, interviews or observing. Gaining valuable insight from this sector will assist in expanding and further developing the current understanding through means of onsite viewpoints through the lens of FM.

4.1 Research Framework and Philosophy

The research onion developed by Saunders, Lewis, and Thornhill (2007) is a framework utilised worldwide for developing research. Because of its adaptability it can assist within a multitude of research contexts. The onion metaphorically symbolises the layers researchers need to process before its final draft. In essence it is a step-by-step guide in progressing a concept to completion by peeling each layer of the onion. (Bryman and Bell, 2012). Saunders et al, state for a process to meet its fruition the correct steps must be followed.



Source, Saunders, Lewis, and Thornhill, (2012)

Quinlan (2011) states within research two main philosophies exist – Interpretivism and Positivism. The former is interlocked within qualitative research while the latter relates to its quantitative counterpart. Interpretivists allege that life is subjective, and its subjects (humans) are performing actors. (Saunders et al, 2012). According to positivist researchers argue that reality is built around observations and certainty. Interpretivism uses a small sample size but involves in-depth analysis as an exploratory nature, an approach that this dissertation has utilised. Differing human opinions and their individuality assists in satisfying interpretivism from the view of epistemology. (Bryman and Bell, 2015)

4.2. Data Collection

The author has opted for a qualitative research method through the medium of semi-structured interviews rather than the potentially rigid structured approach. Defined by Denzin and Lincoln (2005) as *“Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world, they turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings and means to the self. At this level, qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them.”*(p.1).

Interviews will provide the author with a sectoral view which can be used to structure work and give an in-depth view on how FM relates to the higher education sector. According to Bryan (2007) its explorative and inductive nature will allow room to alter the interview questions as the process unfolds. It is also multifaceted by design, pivotal in case study research and involves an

interpretivist philosophy. In-depth interviews can shed a light and gather coverage and breath in disclosing key issues that may come to the fore. (Onwuegbuzie and Leech, 2006). It is assumed all interviewees will act with integrity, honesty and factually. Jupp and Sapsford (2006) relay that interviewees act differently under the spotlight of the process so it may be possible that assumptions and gut feelings may hamper the information gathered and effect the researcher's findings. Akintoye and Khan (2018) recommend specific techniques to help build a rapport between both parties and in turn this may motivate them to answer passionately. The data collected will be transcribed and thematically analysed.

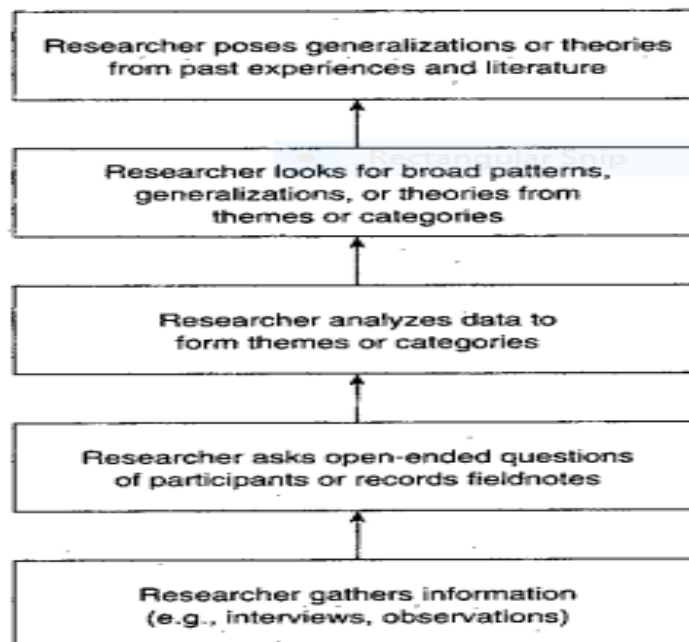


Figure 1. The inductive logic of research in a qualitative study. (Cresswell, 2009) p.6)

4.3 Thematic Analysis:

Boyatzis (1998) argues although widely used in qualitative research. Thematic analysis is poorly advocated and scarcely acknowledged. Flexibility is a core benefit, and it is relatively easy and doesn't rely on the same detailed approach as disclosure analysis (DA) or conversation analysis (CA). Thematic analysis has been chosen due to its usefulness in qualitative analysis which is suited to the integration of new policy developments. This research and data could benefit Company X with a new Climate Action Plan.

The author realises that to avoid an "anything goes" approach there must be clear and concise guidelines in protecting against potential pitfalls.

Thematic analysis is more than just a collection of data slung together. It can help support and sensualise the data. There must be a narrative and a development of emerging themes. (Hutchby and Wooffitt, 1998). The pitfalls associated can be threefold.

Firstly, the failure to analyse the initial data whatsoever or by simply paraphrasing the content. Extracts drawn from the analytic content should be used to support and illustrate specific points that go beyond, and make sense of the content gathered. This gives the reader an insight into its meaning and potential arguments.

Secondly, using the data collection gathered from interviews as the themes shows no analytic work in the identification of emerging themes or patterning of responses from the entire data set has been done.

Finally, unconvincing analysis is deemed weak plus exposes potential overlaps and inconsistencies. All aspects of the theme should be coherent with the proposed ideology. Failure to adequately

capture much of the data or its rich interpretation of one or more striking aspects can mean loss of important emergent themes.

The author found this a very lengthy and at times repetitive process. After the coding and themes were identified the process began in linking them to the relevant research questions.

4.4 Research Approach

The author conducted five interviews in 2022. This gave sufficient time to transcribe and decipher each interview to its fullest. It led to accomplishing a high degree of accuracy from the content gathered. Prior to the scheduled interview each interviewee was given a useful summary of the interview topics. Their written consent was paramount, and they were reminded of their right to end the interview at any given time. All interviews were recorded on two devices, a laptop, and a smartphone. This eliminated any undue likelihood of lost information should there be a problem incurred during the interview. It was envisaged the interviews would last up to 60 minutes but may potentially run longer. Feedback was requested by the author in an informal basis to gain knowledge on the content and the interviewer's effectiveness.

4.5 Amendments to Structure

The author had originally focused on the educational sector (HEI) for this study but after researching and speaking to different FM professionals the dissertation evolved into a perspective of FMs toward sustainability and what the future resembles.

4.6 Participants

The criteria for inclusion are participants who hold senior managerial positions with a minimum of 3 years' experience and a specific responsibility towards sustainability and decipher and mold it to FM scenarios. (*Table 1*) shows how the process will be documented. Participants will be contacted through the authors contacts in the FM and construction arena as well as industry experts within the sustainability field. Several highly qualified and experienced industry experts have been invited to contribute their wealth of knowledge. These participants combined bring over 100 years of experience. This will lead to an in-depth variance of data collection. Participants may withdraw at any stage of the processes and all recordings will be deleted after dissertation submission.

4.6 Industry Experts

One of Irelands leading sustainability experts (SE) was happy to participate in the interview process. They have over 30 years' experience in the sustainability field overseeing more than 160 projects globally. Building upgrades and Life Cycle Assessments (LCA) is their niche and they strive for project conceptions to practical completions. Economic benefits and green results are what make them pioneers within their field. The research will build an inventory regarding environmental impacts associated with building materials, disposal and the atmospheric impacts

that have serious ecological effects. LCA is another way to help in the validation of sustainability strategies and was a welcomed addition for the proposed dissertation.

4.7 Pilot Interviews

The author conducted two initial interviews with two FM managers from different organizations and industries. Neither had any involvement with company X. This proved invaluable and provided an insight into the importance of sustainability within their business context. The interviews also gave the author valuable information about which questions to eliminate, reword or change and with help from my supervisor to alter the wording where necessary.

4.8 Interviews of Participants

The six interviews the researcher used for this dissertation were conducted over a series of months. This was due to Covid-19, maternity leave, and a bereavement amongst interviewees. So, three interviews were conducted far earlier than the others. This had a delayed period of gathering the relevant themes correctly to ensure high levels of accuracy. Before each of the interviews the transcript of questions, a written consent form, and their rights as an interviewee were sent prior to the agreed date. Each interview was recorded on a laptop and an iPad was also used as a secondary device in case of a technological mishap. Two interviews because of Covid-19 restrictions were performed via Microsoft Teams and there was WIFI issue midway through with FM2. The author took notes during each interview and highlighted potential themes or other useful content that had not been envisaged by the author. The duration of each interview varied from 37 minutes to 143 minutes as CM was clearly passionate about sustainability and enjoyed the time to showcase his knowledge. The author requested feedback from the interviewees

informally and their reaction was positive one. - *“After your initial nerves which were clearly evident. I enjoyed the flow of the questions and the informal nature of the interview. Its great to see such an interest in SFM too. Good luck going forward”*. -CM

4.8 Analysis and Findings

Following each interview, the author transcribed the data collected to a series of Microsoft word documents. With 6 interviews conducted the word count amassed to over 12,500 words. This was deemed too much to put in the appendices and far too much density for the reader to absorb. The author is however available for contact should they be needed in the future and over a period of 3 years according to the exam board and the institutional guidelines.

The method chosen by the author was aimed toward gathering as much information around sustainability from the viewpoint of various industry experts. According to Burnard et. al. (2008). It is the sole responsibility of the author to dissect the information gathered. The author relied upon thematic analysis to decipher the data and information gathered.

4.9 Ethics

According to Chapman and McNeil (2005) research can impact on human life which means it is imperative to that the correct strategy is in place. The researcher opinion was that the interviewees had the right to be fully informed as to why the research was being conducted. With the knowledge they could then decide to refuse to participate. The chosen participants gave their unequivocal consent. This gave the author the confidence that due diligence was in place and the dissertation is ethical. The participants will also have the choice to receive a copy of the dissertation on request. The author's aim was to conduct the interviews with thorough diligence, but there may limitations due to certain employees' reluctance to fully disclose certain aspects of their organisation's strategic plans. As this dissertation involved various workplaces this needed to involve a certain amount of discretion and the utmost respect. The author will also ensure that under no circumstances should any interviewee be prejudiced during the process, so a degree of sensitivity was also required. Confidentiality is imperative and all information shared by the participants should remain anonymous and only data gathered will be used objectively. All interviews and scripts are password protected and all names have been edited out for their security. The interviewees remained nameless and were referred to by their status (i.e.) FM, SE, PRM, CM. Guttman (2006) states ethics is a rule of conduct and should be performed with utter professionalism. Interviewees were all volunteers so they were informed that they could leave the process at any time and had the option to skip questions they were not prepared or felt comfortable enough to answer. They were also given the opportunity to integrate any other information they wished to divulge at the end of each interview.

Chapter 5. Findings

Chapter 5 presents an analysis of the research findings from the data retrieved. The main and sub-themes were constructed around the literature review. There was an extremely conversant replies during the interviews and the knowledge gained was paramount for this study.

5.1 Breakdown of Demographics

Regarding the primary research undertaken and given the interviewees were either senior managers or industry experts, it was their opinion rather than fact through life experiences to date. This meant because of the nature of the inductive and thematic analysis the author cannot give 100% accuracy based on empirical evidence and in agreement with Ghauri and Gronhaug (2005). Also, there can unintentionally be a lean towards what observations are deemed valuable and which are irrelevant to the study.

Participant: Number

Age Bracket: (<34) (35-39) (40-44) (45-49) (50-54)

Gender: Female (F) Male (M)

Current Role: Centre manager (CM), Facilities Manager (FM 1, FM 2, FM 3), Project Manager (PRM), Sustainability Expert (SE).

Industry experience: Years

Participant	1	2	3	4	5	6
Age	35-39	55-59	40-44	45-49	40-44	45-49
Gender	F	M	M	M	M	M
Role	FM1	CM	PRM	FM2	SE	FM3
Industry Experience	10	30	40	10	6	10

Demographics of Participants, Word, 2022).

All participants are aged above 35 with 33% aged between 40-44 years old, another 33% go under the age bracket of 45-49, while ages 35-39 and 45-49 represent 17% each. Gender was represented by 83% male and only 17% female. The longest time spent by a participant in an industry was 40 years. In all, the participants amassed to over 100 years of industry experience and life learning.

5.2 Coding

In ensuring absolute confidentiality participants were given abbreviations according to their professional roles. The interviews were also given allotted numbers as to their sequence, an example was FM1 was assigned interview 1 and the sequence followed accordingly.

Chapter 6. Discussion

6.1 Introduction

Chapter 6 outlines the findings in chapter 5 for discussion and are then linked back to the findings within the literature review. A comparison between the data gathered and outcomes of the literature review under the two main themes and the sub themes will be carried out. In summarising the analysis, the author finds that FM and sustainability go hand in hand in ensuring HEIs and support the research question.

Themes Gathered

Theme 1.

The FM arena is now evolving into a sustainable model

Most respondents' views were quite unanimous and startling to boot. The consensus was that the FM role has, needs to, and will become a more streamlined sustainability role built around strategic efficiency, profitability, and on a zero-target carbon emission plan. This agreed with Nielsen, Sarasoja and Galamba, (2016) views but went a lot further and author had not envisaged the questions would unravel comments like - *“One, I don't see a facilities management industry in Ireland I see a sustainability industry in Ireland- CM.*

Other notable replies around the future of facilities management included:

“My own feeling on this is the facilities management role has gone it doesn't exist anymore and it is really more a sustainability management role because that's about looking at future proofing the building linking into environmental and ESGs.” – FM1

“I do think facilities management has been rather pigeonholed as an expensive cost center in the past. But there is a failure by many to see that digitalization and technological advancements has meant day-to-day running has become far more

efficient. Now we have climate change issues and the push for sustainability. Has the word facilities management become dated? I personally think so and a name change to sustainable facilities management or perhaps Green organisational management may be needed. Whether or not it is there is an evident evolution of the role needed and, in some sectors, already happening. ”- PRM

Theme 2.

Confusing perspectives of how to educate sustainability in such a diverse multifaceted FM model.

Respondents all stated that the FM role has always evolved over time due to the needs of their surroundings but instead of a gradual evolution the need was now a necessity and there was tireless work ahead. The respondents were not quite aligned regarding academic upskilling around sustainability. The overall belief was that FM is not a one business model aligning with (Myeda and Pitt, 2014) views and is extremely diverse in its design (Society of Chartered Surveyors Ireland, 2019), so there lies the problem in creating a universal qualification around SFM. This dissertation had educational, retail, commercial professionals so even from a sample of just six participants their roles were unequivocally different regarding their day to roles, sizes of properties and financial firepower and this pointed to a real dilemma with regards to an academic qualification layout. One perspective was *“I think sustainability is a massive area and I still think we're only playing with it; we're only trying to understand it there's a huge mix of courses out there so you can get an 8-week course that gives you something. But I think it's understanding ESG, and it's how we link them together, it's not just sustainability”*. - FM 3

Theme 3.

A new workplace and environment

With views to Covid-19 the respondents view was that organisational footfall will drop significantly. The challenges faced will be unparalleled as differing sectors have varying purposes. It was communicated that operations will be tasked to utilise space to maximise revenue and retrofit and repurpose the surroundings. Work life balance will need new levels of diversity and innovation to make sure the facilities are aligned with new challenges. All respondents claimed Covid-19 has and will be potentially catastrophic for organisations to plan and execute strategies as the chance of transmission will increase over the winter months which will unintentionally hamper the day-to-day running of their built assets. They all claimed their business models existed for high footfalls and were in essence mini communities. This was in line with the research by Dahle and Neumayer (2001)

A major theme gathered from the interviews was that the COVID pandemic has made organisations and FMs in general consider contingency plans going forward for any unforeseen circumstances or threats. This aligns with the literature review of (Courtney, Kirkland and Viguerie, 1997, Caffrey, 2020) scenario planning for organisations must plan for the 'what-if' and best- and worst-case scenarios going forward. The pandemic had obviously never been envisaged to last as long as it is currently but has been an eye opener for the sector.

Theme 4.

Key partnerships and collaboration are now essential components

Collaboration with this was regarded as imperative and a broad viewpoint of all relevant, departments, tenants and stakeholders will be decisive in achieving a new look organisation. (Lee and Bradley, 2022) There was a unanimous feeling that office spaces will be reduced as the hybrid working model will be or has been introduced within the respective organisations, this meant for majority of the respondents organisations there would be a possible reduction in their property portfolios. The exception were retail and the educational sector who said by reconfigurations they could increase their student and tenant footfalls which could see higher profitability and demand for space. There were concurrent views that industry experts, consultants along with infrastructural specialists were needed in future proofing building plans to meet regulations and their knowledge within these areas was essential in bringing the organisations closer to their net zero targets and sustainable footprints.

Theme 5.

Covid-19 will continue as a cost centre and hamper sustainability projects.

The respondents were unanimous that while Covid-19 had been detrimental to sustainable projects. This aligned with Literature review (Lee and Bradley, 2022) views in the sustainability survey conducted. But it had adversely given them the chance to develop contingency plans in cases of new future external threats, which coincided with (Hayes 2021) views that FM are now a major cog within organisations strategic operations.

They all agreed that the pandemic had entailed using innovation, forward thinking, and influencing regarding H&S and infrastructural flow and design. (May, Clauss, and Salzmann, (2017). The necessity for groupthink and leadership amongst the FM teams allowed for emergency committees, ensure FM teams were on split shifts to minimise transmission rates and source the high standard materials that every organisation in the world were scrambling for.

Theme 6.

The chance to showcase their skillsets

A major theme was that respondents claimed they were given the opportunity to influence, orchestrate and manage strategic decisions due to their practical and technical prowess and had to demonstrate a multitude of leadership qualities. This aligns with Socrates' view that leadership is situational and (Gilmer, 2017) view of the qualities FM should demonstrate in the literature review. All were unanimous stating they all now had the opportunity to be involved within the important organisational decision making alongside the managerial hierarchy. They had found in the past FM was understated, undervalued, and underappreciated but their responses during multiple COVID waves have been valued and communicated positively throughout their organisations. The majority also stated their sustainable projects had all been cost saving for the organisation and had been received well amongst the workforces. The projects were then shared on their various social media platforms to gain public exposure and valued feedback.

There has never been a better time for FM professionals to demonstrate our leadership than during the current COVID-19 crisis. As FM's, we are at the forefront of ensuring a safe return to the workplace. We have a rare opportunity to directly influence the immediate success of our organisations. We have the chance to showcase our role in keeping people healthy, comfortable, and productive in the workplace. We have the duty to partner with Corporate Real Estate (Finance), IT and HR to renew focus on people's experience and happiness within the built

environment. It is our moment to lead a positive development for the enterprises we serve and the people within.

Theme 7.

Mental Wellbeing issues amongst frontline workers

Another overriding theme unveiled was team motivation. FM teams are (Bröchner, Haugen and Lindkvist, 2019, Prasad and Hall, 2004) tasked with the day to day running of high footfall buildings. The respondents were clear that keeping their demoralised team members required high levels of emotional intelligence. The recurring covid waves that restricted full capacity buildings have had an adverse effect on team members mental wellbeing and social skills. They blamed working in empty buildings for over 1 year and intermittent months on this. The author recognises that this topic could be worthy of future research and consideration.

Theme 8.

Critical of Governmental Responses to Energy Costs and sustainability issues

With regards to the government's new regulations on climate change all respondents were confident they were all first movers with most sustainability projects in place as early as 2014 resulting in a 30% drop CO2 emissions and future projects including photovoltaics, rain harvesting and further gains on their net zero targets were part of their new strategic plans. This aligned with both (NTT and Courtney, Kirkland and Viguerie, 1997).

Three respondents did put forward the idea of a government regulator to tackle what was assumed to be price gauging by the relevant energy companies within the Irish environment. They implied that the government should introduce a windfall tax, or all the past and present sustainability initiatives would count for nothing. Climate change has now replaced Covid as the new focus of FMs.

There was an overriding viewpoint that the FM industry needs to be more influential in terms of governmental policy and how sustainability projects can be achieved. The respondents all agreed the industry must start the conversation that incorporates influencing government policy and the need for sustainable initiatives to be delivered at speed. There was a fundamental belief that the (SEAL) was flawed and there's a massive change that needs to take place there because they keep changing their stance and were inflexible when it comes to regulations. This involved the planning regulations for major wind, solar and rain harvesting projects. They maintained the government

were saying one thing and SEAL were the opposite. This aligned with (NTT) survey results which showed governments lacked leadership.

The topic of energy costs seemed to dampen the spirits of the respondents. They all cast frustrated figures and explained how past sustainable projects which were bearing impressive financial, environmental and maintenance savings had now been all but absorbed by the current ramifications of the Russia/Ukraine war. An example was that having saved €150,000 in energy costs from a lighting project over 3 years the current this saving had now been reinstated within the energy provider's bill. This saving was envisaged to originally finance a rainwater harvesting project after pay back was achieved for (FM2). (SE) disagreed with this theory as crooked thinking. The view was if the projects had not been done prior to the energy crisis the cost implications would mean the lighting bills would be double the cost nowadays. The mindset within his organisation *"while it might look like we can't afford to do projects, my opinion is actually you can't afford not to do it"*. Most respondents did however state the costs had now escalated so far that projects that had been budgeted for have now been shelved in the short term and are to be revisited. Material costs for retrofitting and supply chain issues mean it is now near impossible to confirm start dates for project management needs and requires constant budget revisiting. This was portrayed as both time consuming and now proving a near worthwhile exercise for all respondents. One of the respondents (FM1) revealed the organisation had put a blanket ban on all capital expenditure building projects until 2024 amidst fear of so much economic uncertainty and the likelihood of scaling down space needs and leasing parts of the building out. This was a theme that was not common to both.

Theme 9.

Some Operational Positives taken from the Global Pandemic

Operationally the respondents claimed a positive from empty buildings. Emission Tests dated equipment and water quality could be addressed. Maintenance regimes that required after hours work could be carried out in normal working hours and sustainability reporting could be updated, realigned and project planned. The general consensus was that although the WFH agreements were in place due to the energy crisis rising costs and gas electricity and oil that footfall within the organizations may increase during the winter months. This could potentially need the readdressing of sustainable practices. This was again not a common marriage between the literature and findings.

Theme 10.

Conflicting perspectives on how sustainability is viewed.

The respondents' views differed greatly on this subject. There was no clear and evident agreement on FM role within sustainable practices. While all agreed with the operational side of FM. There was differing opinions as to what FM is responsible for. Views ranged from just the infrastructural side of the business to one respondent claim which was interesting, she used Maslow's hierarchy of needs as a visualisation, the organisation has completed all levels of the pyramid and achieving sustainability would be the self-actualisation component and involved her organisation giving back to the environment. *"Maslow's pyramid is my go-to model when I picture what sustainability looks like, what businesses provide for its staff should be repaid tenfold to the environment."* Other respondents believed human resources were solely responsible for staff wellbeing, diversity, and inclusion initiatives. *"We operate under a tiered organisational structure spearheaded by an executive board, governing body, and a group of specialised departments, so everyone has their own responsibilities and expectations."* – FM 1. But all agreed FM should give a warm, colorful, and inviting environment cosmetically for positive employee and client experience.

All respondents viewed sustainability as an exciting period to be in and were extremely positive about the challenges that lay ahead. It was viewed that sustainability has introduced a valued purpose to their roles. Nielsen et al (2016) They could now enjoy the challenges of driving their organisations forward. One comment that struck home was - *"Everything that we do sustainability*

is at the middle of whether that's rubbish recycling, bees on the roof or not cutting our grass outside for a month to let the flowers grow, we tell the stakeholders why we're doing it.”-CM

Theme 11.

Cost implications are a major factor in sustainable projects and Covid has been a major hindrance in deferring FM projects.

Cost implications on sustainable projects were clearly a frustrating topic for all respondents. All said they haven't got the financial power like some of the Tech multinationals possess and with gas, electricity, and inflation very much topical, plus the global pandemic. Financials and capital expenditures (capex) are being designated to immediate needs. The interviews unearthed that Covid-19 had resulted in unforeseen expenditure on health and safety precautions including, (Lee and Bradley, 2022). Perspex, signage, sanitizer, masks, and work from home (WFH) equipment for employees. The costs in all respondents' responses were well over the €100,000 mark as the author thought it was inappropriate to ask exact figures due to the difference in organisational size and stature.

The aim of all respondents was to ensure the built assets are future proofed to meet upcoming legislation around climate control. What was extremely evident was the passion they had for sustainability and making a difference was their sole focus.

Theme 12.

Organisational and service providers staff turnover is hampering green practice

Staff turnover as mentioned in the literature review (Farver, 2019) With regards to maintaining sustainable practices there was a unilateral front on the constant need for continuous cleaning audits, the respondents stated staff turnover and workforce shortages were having a detrimental effect on waste segregation protocols as well.

Sub-contractors (construction companies) are now being asked to source sustainable materials from proven merchants with a reliable sustainability focused supply chain (i.e.) recycled carpet tiles (Norwegian company) and electrical cabling. (Now available with most suppliers). There was total agreement that all future retrofits and projects should have sustainability requirements and expectations from concept to completion.

One respondent was extremely critical on the construction work tender process however and highlighted that the lowest quote should not be the only positive and that sustainability conscious companies should be recognised and rewarded. How they source and dispose of materials needs to be documented and requested going forward.

Chapter 7. Conclusion and Recommendations

The penultimate chapter in this dissertation revisits the main research findings of the study. It will highlight correlations between both aims/objectives that were raised at the start of the research journey. The author will advise on potential future research recommendations while also reflecting on the academic journey experienced.

7.1 Research Question Outcomes

The sole objective of this dissertation was gaining an understanding of how FM brings plays a positive role to SDGs.

Since the concept of sustainability is dynamic rather than static. Decision makers need to show a willingness and flexibility to alter their strategies according to environmental and social needs.

The author has found that sustainability needs to be implemented by the majority and cannot be imposed or enforced on small - or large-scale communities. From the view of FM professionals' advice nationally and internationally will aid at crucial crossroads or to progress processes but, fundamentally all stakeholders must be educated and involved across all levels to ensure they become a driving force for sustainable quality of life for staff, students, and future generations.

Organisations must show a deep empathy towards a new green world. CSR is not just a tick box exercise – It is now integral for business. Organisations need to be both open and transparent and collaborative by nature in playing an essential part in employee development, and a strong community presence. Reacting to new regulations, public persona, increased energy prices, and of resources portrays an organisations strong pursuit of ethics and sustainability agendas. This can only be achieved with a strong social viewpoint, wellness, diversity, and an unparalleled sense of

environmental focus. This will be trusted and viewed far more positively and separate the organisation from just a machine for financial gain. The time has come for organisations to place a sustainable purpose as the heartbeat of their strategies.

As mentioned, FM is relatively new and academic research is miniscule to date. But over the last two decades there has certainly been a momentous recognition of its value proposition. This field can offer future researchers a multitude of topics and assist with real life problem solving. This can only fill the gaps with knowledge sharing of practices and successful implementation of SDGs within this field.

Looking to the future there should be a continuation by FM in developing stringent theoretical sustainable frameworks that give a broader understanding of the knowledge base and involve a multidisciplinary mindset. Prioritising key and purposeful projects will ensure the net positive goals for 2030 are achieved. The authors vision for 2030 is one of excitement where there is a restored world that has gradually replenished itself with thriving ecosystems, increased prosperity and a carbon footprint that goes hand in hand with the environment. FMs are without doubt best placed to spearhead this utopian progression.

7.2 Dissertation Limitations and Opportunities for future Research

The author must raise several limitations concerning both validity and reliability through the interpretation of the data gathered. These issues will now be raised and addressed highlighting (Ghauri and Gronhaug, 2005) the ability of the respondents and their willingness has a major impact on the quality of primary research.

With this regard although the interviewees had over 100 years' experience it was their own opinions knowledge and experience that were gathered and could be different to other experienced industry professionals. Hence the author must outline those assumptions cannot be 100% certain. The conclusions were also the author and are completely subjective unlike a quantitative survey.

The author has also chosen to gather themes and data based on six hours of interview time. This raised a dilemma of what was important and what was deemed not. The timeline also played a major role, the chance to cover an extensive genre of participants simply wasn't an option. This has possibly hampered the chance to perform a conclusive report on both sustainability and facilities management. This paper was conducted amidst a global pandemic, Climate change disasters and growing economic uncertainty. With sustainability and climate change so complex it seemed at times circumstances changed daily needing constant readdressing. This meant at times the author had to readdress content within the dissertation. Regarding the use of semi-structured interviews, the author admits the less questions allowed for a free-flowing process which unintentionally resulted in the research evolving over time from the initial question the researcher had planned.

Regarding findings that warrant future studies and exploration, a major theme that developed was the mental health suffered by frontline workers during Covid-19 and the regular governmental restrictions. There was a clear agreement amongst participants that their FM team members had suffered mentally through isolation. This had in turn had an adverse effect on social skills and full capacity surroundings.

Additionally, the subject of FM and its potential evolution, name change and merging into more a sustainable genre was intriguing to unearth. Getting a broader perspective on this topic would serve to bring more academic ideologies around the whole area that is relatively new.

7.3 Recommendations

Recommendation 1.

More Collaboration between industry sectors regarding sustainability projects.

Improved transparency between all sectors with the Irish environment. This would help organisations including small SME businesses about projects, costs, timelines, and benefits of green practices and infrastructural retrofits. Collaboration and partnerships have been proven through literature and research as paramount. The industry tendering and procurement process also need to be realigned to reward companies who have shared beliefs and practices.

Increasing the knowledge base around FM is now crucial in the fight against multiple external and internal threats. The power of social media can nowadays help spread the sustainability movement to all corners and increase organisations PR. Having a broad platform could mean communication between the sector and relevant government bodies would be seamless and beneficial to all

parties. This would also elevate and give exposure the FM sector and its proven march against its climate change battle. Instead of FM allowing FM its title possibly and evolve behind closed doors it should be rubber stamped in the public domain. The industry tendering and procurement process also need to be realigned to reward companies who have shared beliefs and practices.

Recommendation 2.

Benchmarking sustainability standings

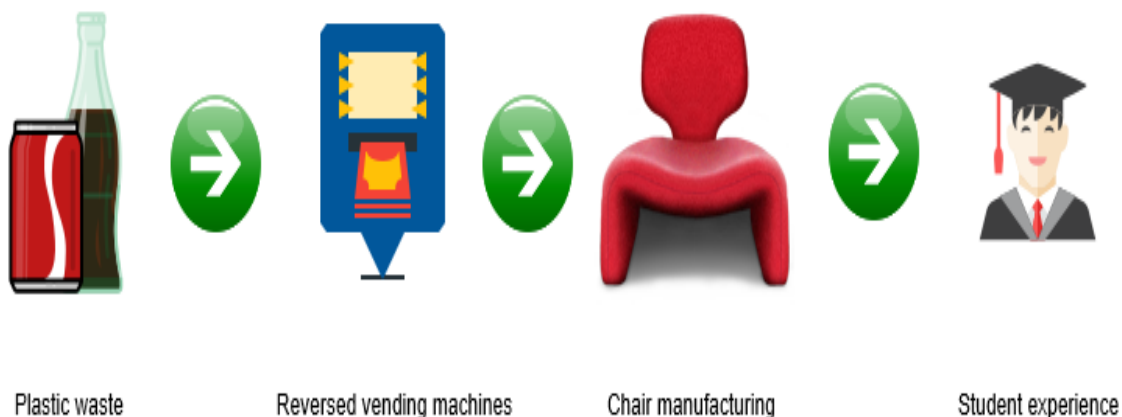
The Princeton Review is considered a useful tool in gauging where organisations stand regarding sustainability and allows comparisons to be drawn against their United States (US) and global counterparts. This could be used by FM managers and their organisations in the future. The structure of ten questions is weighted by an independent panel and ranked accordingly. There are currently over 400 participants, and the top 50 ranks will provide useful case studies to test against in the future. (Princeton Review, 2021).

The Sustainability Tracking Assessment and Rating system (STARS) can also be used by means of self-reporting frameworks for universities and colleges to view how they measure up regarding sustainability efficiency. The framework is designed to assist in the understanding of sustainability within the HE sectors and facilitates information sharing about current practices and performances that can help with creating a more diverse and eco-friendly campus. Participating allows the institutions to earn points which can see Platinum, Gold, Silver, and bronze awards highlighting significant leadership traits in sustainability.

Recommendation 3.

Creative Solutions

This idea would develop how FM can begin to use innovation as a driving force to achieve sustainable practices and plant a new thought process for future generations to follow. Introduce reverse vending machines throughout the organisations. Stakeholders would be rewarded by disposing their single use plastic for rewards by the means of vouchers or discounts from the machine instantly institution and surrounding businesses. The plastic in turn can be used to manufacture new classroom chairs and desks. This is a sustainable project, and it is viewed can help the institution become visual trailblazers within the educational sector and aligning with organisational strategies. This project will unearth the potential of a new work practice to prove how FM can add strategic value to core business thinking. The diagram below is a hypothetical illustration of how plastics can be incorporated into an organisational circular flow to add to its sustainability footprint.



Authors Conceptualisation

Cost Implications:

Smart RVM - CALCULATOR				
Model	No. of units	Unit Price	Annual Fees	TOTAL
UNO		€5,000.00	€1,325.00	€0.00
UNO+		€7,000.00	€1,325.00	€0.00
DUO		€6,000.00	€1,325.00	€0.00
DUO+		€8,000.00	€1,325.00	€0.00
CUPO		€5,000.00	€1,325.00	€0.00
CUPO+		€6,000.00	€1,325.00	€0.00
INFINITY		€7,000.00	€1,325.00	€0.00
INFINITY+			€8,000.00	€1,325.00
TOTAL				€0.00
50% Up-Front				€0.00
50% Pre-Shipping				€0.00

8. Personal Learning from this journey

The author found the MBA journey extremely fruitful and has gained a considerable amount of academic knowledge within the business environment. Notable this dissertation has heightened my interest around the field of sustainability.

At times it seemed overwhelming and challenging. The time involved in investigating research and adapting the findings constructively was also eye opening and gave the author a far broader insight into how different sectors and organisations are adapting.

This dissertation's finding has shown the author how to unearth the correct resources to strive to assist the chosen organisations development through the facilities management lens and with sustainability in mind.

In conclusion, this study will have a lasting effect on the author both academically and professionally. There were times the subject completely absorbed me and times when the finishing line seemed to be vanishing in the distance. The positives taken from this process is it has developed my confidence within myself and enhanced my time management, self-perseverance and shown an inner determination I never knew I possessed. The support from my colleagues was simply staggering and I wanted to repay them all by putting everything into my studies.

It has enhanced the understanding of facilities management and sustainability while also opening an interest in organisational strategic planning. I will look back on the years from 2020-2022 as a part of my life with fondness and like everyone was similarly battling through a global pandemic.

This journey has benefited me both professionally and taught me some important life skills.

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10. Appendices

Appendix 1.

Participant's information form

Summary of the proposed topic:

While the interest around knowledge of FM has flourished noticeably over the last decade. It has been overlooked and understudied in general. Nowadays it is crucial for organisational effectiveness to assist in reaching sustainable development goals. (SDGs). This researcher aims to highlight the strategical importance FM now plays within the sustainability environment and achieving future sustainable goals. For decades sustainability seems to have been diluted to a slogan for the public's consumption with its actual meaning constantly contradicted through global behaviours and practices.

Participation information:

If you agree to participate within this research project, there will be an interview based solely on the summary above and conducted by the researcher David Redmond. It will involve a variety of demographic questions that revolve around the chosen topic. The process should take approximately 40 minutes and the researcher will take notes during the interview which will also be recorded for future interpretation.

The interview is completely voluntary, but on agreement you will be asked to sign a consent form.

There will be complete anonymity and participants will be assigned their professional status. i.e. (FM) for example. Interviewees will from then on only be referred to by their code throughout the

research. The information gathered will then be stored within a password protected file and all hard copies will be disposed of through shredding.

Any information gathered is solely for this research and for the participation of the MBA at the National College of Ireland. My supervisor and external examiners will view this study and the institution may publish it or make it available in the library. The researcher confirms that anonymity will still be guaranteed, and interviewees will remain unidentifiable.

You may withdraw from the process at any stage and are free to stop the interview at any time you wish. During the interview you can also choose to decline answering a specific question meaning the author will just move on to the next question.

If you need or want to discuss anything referring to the chosen topic prior to or during the process, you can contact David Redmond through email at: X18167284@student.ncirl.ie

Appendix 2.

Consent form for participant

Consent Form

Please read through and sign to confirm your agreed participation in this research paper.

Participants Name: _____

- I have read and understand the information provided to me and am free to contact the researcher during the process.
- I agree to the interview being recorded
- My participation is completely voluntary and may withdraw at any time and all material will be deleted.
- I will remain anonymous and my information my will be stored securely
- I understand that putting myself or others at harm will result in the researcher contacting the relevant authorities.
- The Freedom of information Act (2014) allows me to request my information for up to two years from the date of the examination boards review of this research.
- I understand there is no direct benefit to me from my participation in this research paper.
-
- Participants Signature: _____
- The researcher believes the participant has provided his/her informed consent to participate within this research.

Researchers Signature: _____

Appendix 3.

Interview Script

Sustainability

Question 1. How important is sustainability to your organisation? And what does it mean to you?

Question 2. What are the pre-existing barriers in becoming more sustainable?

Question 3. What initiatives if any have you implemented, and have they created added value?

Question 4. How is the progress being measured?

Question 5. What affect has Covid-19 had on planned sustainable projects?

Question 6. What does sustainability look like to you?

Question 7. Who are the market leaders and how does the organisation compare?

Facilities Management

Question 1. How will COVID-19 affect the facilities management industry in the long term?

Question 2. What improvements would you like to see in the industry?

Question 3. Sustainability is now an integral part of operations and warrants a new breed of FM manager - this will require an academic qualification in further enhancing the role. What are your views on this statement?

Question 4. Based on your knowledge where do you see FM in 5 years from now?

Question 5. In your own opinion, do you think there is a need for collaboration between different sectors and industries?

Question 6. What benefits would they bring?

Question 7. Would you think a sustainable web platform where organisations share projects would be beneficial in tackling SDGs and why?

Problems faced in achieving sustainability goals

Question 1. How has the energy crisis affected the FM department financially?

Question 2. What are your opinions on solar energy and Photovoltaics in particular?

Question 3. Have you anything in place and can you give me a summary and costings?

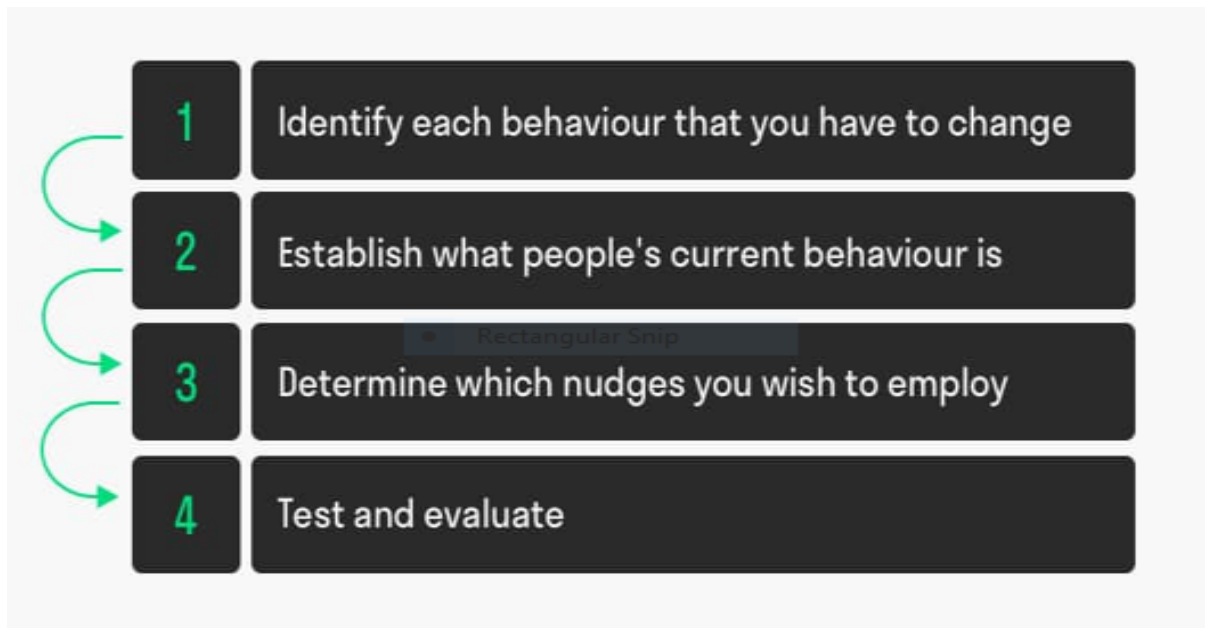
Question 4. What are your overriding issues with maintaining standards and have you a brief example?

Question 5. How can innovative practices further develop sustainability?

Question 6. How dependent is market share on innovation nowadays in your experience? And can you think of an example?

Question 7. In your opinion how can FM bring added value through innovation and possibly technology?

Appendix 4



Appendix 5

